INDIANAPOLIS BICYCLE MASTER PLAN

JUNE 2012

Department of Public Works Indianapolis Gregory A. Ballard, Mayor

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CHAPTER 1

Executive Summary

Bicycling is evolving as an accepted and respected form of transportation in Indianapolis. In addition to the popular and award-winning Monon Rail Trail greenway and the world class The Cultural Trail: A Legacy of Gene & Marilyn Glick, new on-street bicycle infrastructure constructed within the last three years has assisted in advancing bicycling from a recreational activity to a viable transportation option in Indianapolis and Central Indiana.

The City of Indianapolis often cites mobility options and transportation savings costs, public health, improvements to the environment, and social opportunities as the key reasons and benefits to creating, maintaining, and expanding the City's bicycle network. It is for these reasons and because of these benefits, coupled with the City's efforts to conserve resources and become more sustainable, that there is a desire and commitment from civic leaders, public agencies, advocates, and community members to build and enhance a bicycle network that is seamlessly integrated into Central Indiana's transportation system.

Bicycle Master Plan

A bicycle master plan is a strategy for developing the necessary infrastructure and policy in a community to create an environment where bicycling is a safe, practical, enjoyable, and viable transportation choice for citizens. The purpose of the *Indianapolis Bicycle Master Plan* is to establish goals, objectives, and benchmarks that pertain to improving safety, expanding mobility options, and increasing the number of trips taken by bicycle within Marion County through 2020. As the City's first dedicated bicycle master plan, this *Plan* incorporates the relevant findings of previously completed planning efforts and complements the Metropolitan Planning Organization's *Regional Bicycle Plan* (2012).

The *Indianapolis Bicycle Master Plan* is a document that is designed to help the City of Indianapolis in organizing and developing its bicycle network. This *Plan* recognizes bicycling as a legitimate form of transportation, strives to identify ways to improve safety, encourages use of bicycle facilities and participation in events, and provides opportunity for additional national recognition and funding for the City's continuous efforts to advance the bicycle network development within the community. The *Plan's* study area is the City of Indianapolis and Marion County's municipal boundaries.

Since 2009, the City of Indianapolis has been recognized as a Bicycle Friendly Community. Mayor Gregory Ballard accepted this award from LAB President, Andy Clark.

Becoming a Bicycle Friendly Community

Since 2003, the League of American Bicyclists (LAB) has administered the current Bicycle Friendly America program. Through this program, LAB's staff bi-annually evaluates aspiring communities that desire to be considered a "Bicycle Friendly Community." Through the years, more than 400 communities have completed the detailed application to be designated a Bicycle Friendly Community, with 158 applicants achieving the status at either the Bronze, Silver, Gold, or Platinum award level. A community will typically achieve the Bronze award level first with the ambition to work up to Platinum level through continual improvements. Over the years, the program has expanded to apply to states, businesses, and universities in addition to local communities.

Since 2009, the City of Indianapolis has been recognized by LAB as a Bicycle Friendly Community at the Bronze level. It is the intention of the City to next attain Silver, and eventually Platinum, designation and become one of the most bicycle-friendly cities in the United States by 2020. The development of this *Bicycle Master Plan* and successful implementation of its recommendations will contribute to the achievement of this end.

Plan Vision

As a starting point in the development of this *Bicycle Master Plan*, a vision statement was created by City staff and the Mayor's Bicycle Advisory Council. The vision statement is an optimistic view that defines where the City's bicycle system should be in the next eight years or by 2020. It is a source of inspiration and frames clear decision-making criteria while prefacing all principles, goals, objectives, and policies. The 2020 *Bicycle Master Plan* vision is:

> *Indianapolis is a bicycle friendly city. Its bicycle network is a fundamental component of the transportation system, providing safe, convenient, and healthy opportunities for citizens to integrate bicycling into their daily lives.*

Plan Highlights

Supporting this vision statement, six goals, defined by the League of American Bicyclists' Six Es of a Bicycle Friendly Community, organize *Plan* objectives, applicable tools for implementation, and measurable benchmarks to be used to gauge effectiveness of plans, programs, and initiatives. These six goals include:

1. **Engineering:** A safe and efficient system of bicycling facilities that connect destinations.
2. **Education:** An understanding of and respect for the rights and responsibilities of the road for cyclists and motorists.
3. **Encouragement:** Increased bicycle ridership and support for bicycling culture and activity.
4. **Enforcement:** A safe environment for all modes of transportation.
5. **Evaluation & Planning:** Continual review and assessment of the bicycle system's physical, procedural, and programmatic effectiveness.
6. **Equity:** A system that serves the needs of diverse citizens and all users and abilities.

The facilities that comprise the Indianapolis bicycle system have seen a mileage increase of 130 percent since 2008. Currently, this system includes 64 miles of on-street facilities complemented by 59 miles of greenway trails. This *Plan* outlines a strategy to achieve the City's intention of constructing 200 miles of on-street bicycle facilities by 2020. High profile projects like The Cultural Trail: A Legacy

of Gene and Marilyn Glick, the Shelby Street Cycle Track, and the Indy Bike Hub are supported by fundamental miles of sharrows, bicycle lanes, and share the road routes.

Along with the increase in miles of bicycle facilities, the City has set a benchmark to increase the number of residents that use a bicycle for transportation purposes to ten percent of all citizens residing in the Central Business District and one-half of one percent of all other Marion County residents. Increasing the number of cyclists, or mode share, in the City involves more than building additional infrastructure; it involves educating the citizens of Marion County and encouraging use of the facilities. The *Bicycle Master Plan* highlights many programs, events, and organizations that promote, through various ways and activities, bicycling and its benefits. These programs, events, and organizations are instrumental in increasing the mode share both within and outside of the Central Business District.

As the City of Indianapolis has developed its on-street bicycle network over the last few years, the Department of Public Works has selected and evaluated routes based on a systematic, but un-documented set of considerations. These considerations include routes without facilities, but currently traveled by cyclists; desirable routes as identified by cyclists; opportunities to capitalize on adjacent roadway improvement projects; favorable roadway and environmental conditions; and overall City-wide connectivity. This *Plan* documents and formalizes this route selection and suitability process, while recommending two additional evaluation criteria, linking destinations and providing access for underserved populations, that reference and support the goals and objectives stated in the *Bicycle Master Plan*.

Over the next three years, the City plans to construct approximately 40 miles of on-street bicycle lanes. This will bring the total number of on-street facilities to more than 100 miles by 2015. Between 2015 and 2020, the City intends to construct an additional 100 miles to achieve its 2020 vision of a 200-mile bicycle network. This network will connect neighborhoods with places of employment, schools, libraries, and educational facilities, commercial centers, recreational activities, entertainment destinations, and other transportation systems including the City's expansive greenway system. A more complete network, coupled with these connections, is critical to making bicycling an accepted and respected form of transportation in Indianapolis and critical to fulfilling the vision and goals established in this *Bicycle Master Plan*. Planned and potential future routes are highlighted in the *2012-2015 Connectivity Plan*.

New bicycle infrastructure throughout the City is defining cycling as a viable transportation option.

In addition to planned infrastructure projects, this *Plan* outlines the City's intentions to implement several non-infrastructure programs to address components of all the Six Es. These new programs will, in particular, advance the Education, Encouragement, and Enforcement goals of the *Plan*. As stated previously, the City's Department of Public Works currently selects future bicycle routes and constructs facilities based on an un-documented set of considerations. In addition to documenting and formalizing the City's route selection and suitability process, this *Plan* recommends three important policies that the City should pursue to assist in continuous bicycle system development regardless of

the City departments or staff involved, administration changes, or other shifts in personnel, responsibilities, or elected officials.

One of these important policies is the adoption of a Complete Streets ordinance, which is currently under consideration by the Indianapolis-Marion County City-County Council. When adopted, the ordinance will ensure that new road projects or major road reconstruction projects, where appropriate, will accommodate cyclists, pedestrians, and motorists similarly. Currently, the City's Department of Public Works implements projects in a manner than is aligned with the Complete Streets concept. The League of American Bicyclists, in its evaluation of the 2009 application, recommended that the City of Indianapolis pursue this ordinance before the City applies for a Silver level designation.

The adoption of the Complete Streets ordinance is identified as a high priority initiative for 2012. Other high priority initiatives include adoption of a bicycle parking ordinance (recommended new policy), development of bilingual educational materials to reach a more diverse population, and continued engagement of the Indianapolis Metropolitan Police Department to improve communication between the cycling community and law enforcement officers.

The final chapter of the *Bicycle Master Plan* includes a description of the groups responsible for implementation and a work plan with appropriate timeline for completion. The majority of the *Bicycle Master Plan's* work plan "to do" items and future projects are the responsibility of the City's Department of Public Works staff. This is certainly the case with all on-street bicycle lane facility construction and maintenance. The development and maintenance of the City's greenways system is the responsibility of the Indy Parks & Recreation department. Other, non-infrastructure programs will require leadership and active participation from the public (non-City), private, and non-profit sectors. Likely implementing organizations are identified as members of the Mayor's Bicycle Advisory Council as well as the organizations and advocates currently involved in the Indianapolis bicycling community. Additionally, successful *Plan* implementation may require the creative partnerships, coordination, cooperation, and agreements between multiple agencies and organizations, some that may not be currently identified. This flexible work plan should be a part of the monthly Mayor's Bicycle Advisory Council meeting agenda to monitor progress, modify when necessary, and capitalize on opportunities.

In Conclusion

The City of Indianapolis' leadership and staff has declared its desire to make the City one of the most bicycle friendly communities in the United States. This *Bicycle Master Plan* describes the City's success with building on existing efforts while exploring new opportunities. Connecting facilities and people, based on the goals, objectives, and tools outlined in this *Plan*, and supported by the impending Complete Streets ordinance, will reinforce bicycling as an integral part of the Indianapolis and Central Indiana transportation network.

Choices in transportation options influence how people move from place to place. Consideration of all modes of transportation, including bicycling, is an important component for creating a high quality of life in a community where residents and visitors can easily be physically active, reduce congestion, and enjoy the benefits of the environment while traveling from one place to another. The *Indianapolis Bicycle Master Plan* presents a 2020 vision with numerous short- and long-term goals and objectives and implementable recommendations. It is intended that this *Plan* be adopted by the Indianapolis-Marion County City-County Council and used in daily and long-term decision-making and approvals

by City officials and staff. Ultimately, the *Plan's* vision and Indianapolis' designation as a Bicycle Friendly Community is about providing citizens with a viable transportation option that encourages a healthy lifestyle, social interaction, and a more livable and sustainable environment that will induce a sense of civic pride and benefit other community initiatives.

CHAPTER 2

Introduction

Indianapolis's bicycle history is not unlike many other cities at the turn of the 20th century when a bicycle craze engulfed the nation. Indianapolis had a robust bike culture and was part of a nationwide "Good Roads" movement spearheaded by the local chapter of the national League of American Wheelman (now the League of American Bicyclists). Local bike clubs got involved in political campaigns by lobbying for better roads for cycling. Bicycle groups were influential in the presidential campaign and election of President McKinley as well as other statewide and local political races.

The bicycle industry has historically been a prominent economic force in Central Indiana. In 1896, Indianapolis was the home of more than 30 organizations that manufactured, sold, or promoted cycling. Carl Fisher, the founder of the Indianapolis Motor Speedway, ran a successful bicycle repair shop with his brothers during the 1890s. He eventually teamed up with former biking associate James Allison to make his fortune manufacturing gas-fired auto headlamps. Fisher continued to be influential in the American highway movement, promoting and developing the cross country routes of the Lincoln Highway from New York to San Francisco and the Dixie Highway from Indianapolis to Miami.

Bicycle racing was the preeminent national sport in America and the Midwest around 1900. Indianapolis-born Marshall Walter "Major" Taylor was arguably the world's fastest professional cyclist of that time. Major Taylor got his start as a child performing cycling tricks outside of an Indianapolis bicycle shop. He won his first race at age 14, but was subject to racial prejudice that refused him admission to a local YMCA and banned from racing in local velodromes. He relocated to the eastern United States and went on to break several world cycling records. The Major Taylor Velodrome in Indianapolis, constructed in 1982, was the first publicly funded structure in the City to be named after an African-American.

More recently, Indianapolis continues to be the focus of bicycle racing. Marian College (now Marian University) has developed a 12-time national champion bicycle team and is home to the state of the art Marian Cycling Training Center. Their use of the Major Taylor Velodrome for training has been a contributor to their success.

Utilitarian cycling is also on the rise in the region. The City of Indianapolis has come a long way in providing bike commuters safe routes to their destinations with the construction of the Monon Rail Trail, The Cultural Trail: A Legacy of Gene & Marilyn Glick, and other greenways in the last 20 years. In 2001, the City's first

Bicycle club on Monument Circle, circa 1906 (image credit: Bass Photo Co Collection, Indiana Historical Society. Resource file: PG11_Bicycle Club.TIF).

bike plan was adopted. The *Marion County Bike Map* (currently out of print) was published in 2004, based upon the routes identified in that plan. The City installed a few on-street bicycle lanes in the early 2000s; however, the City's current bikeways program started in earnest with the bicycle lanes on New York and Michigan streets in 2008. Since then, facility construction has made the City safer, more accessible, and more attractive for bicycling, both for recreation and commuting purposes.

Bicycling Audience: Interested but Concerned

In research conducted by the City of Portland, Oregon, approximately 60 percent of the City's bicyclists are defined as "interested but concerned." Meaning that these citizens enjoy cycling, are informed of the benefits, and are aware of the available facilities and routes. However, they are worried about their safety primarily because they are afraid to be on a roadway with moving vehicles. It is likely that a significant "interested but concerned" bicyclist population exists in Indianapolis, similar to Portland. It is the desire of the Mayor's Bicycle Advisory Council (MBAC) to reach this audience and make cycling easier for this likely group of users and potential advocates. The goals and objectives of this *Bicycle Master Plan* are written with this audience in mind.

The *Bicycle Master Plan* addresses "interested but concerned" commuting and recreational bicyclists as two basic categories of on-street facility users. Depending on skill level, bicyclists may be further differentiated as either experienced or casual. The intent of the *Bicycle Master Plan* is to improve conditions for experienced cyclists, encourage casual cyclists to ride more often and more skillfully, and attract new people to cycling for both transportation and recreation. This is the "interested but concerned" audience.

Bicycling for transportation includes all utilitarian trips (e.g. work, school, shopping, entertainment, etc.) with specific destinations. Experienced cyclists seek the most direct routes, using streets that require as few stops as possible. They operate like motor vehicles. Casual cyclists typically ride shorter distances and tend to prefer local streets with slower and less vehicular traffic. They may be unfamiliar with the rules of the road.

For recreational cyclists, routes with low or no vehicular traffic and attractive scenery are generally more important than direct routes. In some cases, recreational cyclists, like the users of the Monon Rail Trail, may drive to their starting point because of distance or barriers. Experienced recreational cyclists seek physically challenging routes, riding at high speeds over long distances that may include hills or other types of topographic changes. These cyclists often avoid bicycle paths because of uneven surfaces, conflicts with pedestrians, and limited maneuverability at high speeds. Recreational rides are typically loop routes that return at the ride's starting point.

Casual recreational cyclists include families with children who seek out low or no traffic volume streets or paths in linear parks, such as the Monon Rail Trail and the White River Greenway. Because they travel at lower speeds, casual recreational cyclists tend to share facilities better with pedestrians than do experienced recreational cyclists riding at higher speeds.

Plan Purpose

A bicycle master plan is a strategy for developing the necessary infrastructure and policy in a community to create an environment where bicycling is a safe, practical, enjoyable, and viable transportation choice for citizens. The purpose of the *Indianapolis Bicycle Master Plan* is to establish goals, objectives, and benchmarks that pertain to improving safety, expanding mobility options, and increasing the number of trips taken by bicycle within Marion County. As the City's first dedicated

bicycle master plan, this *Plan* incorporates the relevant findings of previously completed planning efforts and complements the Metropolitan Planning Organization's *Regional Bicycle Plan* (2012).

This plan consolidates and organizes the efforts of the City of Indianapolis' Bicycle Coordinator and the MBAC pertaining to the City's bicycle planning, engineering, and construction activities into this comprehensive document. The *Indianapolis Bicycle Master Plan* is organized into seven chapters covering the plan's purpose, system vision, plan principles, planning context, goals, objectives, and benchmarks, existing conditions, future projects, programs, and policies, and implementation.

The City of Indianapolis applied to the League of American Bicyclists (LAB) to become a Bicycle Friendly Community in 2009. As a result of this application, LAB designated Indianapolis as a Bicycle Friendly Community at the Bronze level. As part of the application process, the LAB provides feedback on each application with the intention of allowing communities to fully understand what they are doing right and what improvements will assist in improving future applications. The application reviewers were most impressed with the potential and commitment to make Indianapolis and Marion County a great place for bicyclists. Potential and commitment were demonstrated by the improved on-street network, a successful first annual Mayor's Bike Ride, the Corporate Commuter Challenge, and recreational riding facilities at the Major Taylor Velodrome and BMX track. The feedback also listed many suggestions to further promote bicycling in Indianapolis and Marion County. Noted suggestions include adopting a Complete Streets Policy and implementing a Safe Routes to School program at all schools.

Using the feedback received by the LAB in 2009 along with this *Bicycle Master Plan*, it is the intention of the City to submit a second application to the LAB in anticipation of the Silver designation award in 2013 and achieve the Platinum level designation by 2020. The City of Indianapolis expects to become one of the most bicycle friendly cities in the United States. The development of this *Bicycle Master Plan* and successful implementation of its recommendations will contribute to the achievement of this end.

System Vision & Guiding Principles

As part of the *Bicycle Master Plan* planning process, a vision was established articulating the desires of the MBAC for the development of an efficient and comprehensive transportation system in Indianapolis over the next eight years. The following statement is the *Indianapolis Bicycle Master Plan* vision for 2020:

> ***Indianapolis is a bicycle friendly city. Its bicycle network is a fundamental component of the transportation system, providing safe, convenient, and healthy opportunities for citizens to integrate bicycling into their daily lives.***

In addition to this vision, several guiding principles are stated as basic philosophies, assumptions, or fundamental rules that direct this *Plan's* goals, objectives, and recommendations. These guiding

A bicycle master plan develops strategies to create an environment where bicycling is a safe, practical, enjoyable, and viable transportation choice for citizens.

principles represent the values of City officials, staff, advocates, and the Indianapolis community.

- Bicycling is a legitimate transportation choice.
- Safety is paramount.
- Network development positively influences public health.
- Mobility for all types of bicyclists at various skill levels will be enhanced in terms of accessibility, efficiency, and overall experience.
- The number of bicyclists will increase.
- Bicyclists will ride on every street in the City, except for interstates.
- Transportation needs of pedestrians, transit riders, freight haulers, motorists, and bicyclists will be balanced.
- Neighborhood input, resident concerns, and business needs are respected.
- Historically underserved populations will require a greater level of outreach.
- Traffic rules and regulations are enforced.
- Infrastructure projects consider capital costs as well as operational and maintenance costs.
- Safe and accessible infrastructure promotes usage.
- Projects and initiatives consider both cost and connectivity.
- Projects and initiatives explore the opportunity for public and private funding.
- The bicycle network is a key community asset.
- The bicycle network connects people with destinations.
- The bicycle network is a part of the City's transportation system.

Planning Process & Community Input

The development of Indianapolis' bikeways program has been a process that has involved community-wide input primarily through the Mayor's Bicycle Advisory Council (MBAC) and its constituency bases. MBAC is comprised of various groups of citizens and organizations that have helped guide the development and promotion of the current and future bicycle system. The MBAC has provided input on the locations of facilities, policy decisions as well as community bicycle events. The MBAC has also been a key participant in the development of this *Bicycle Master Plan* with the establishment of goals and benchmarks alongside the Department of Public Works, Office of Sustainability, Indy Parks & Recreation, and the Metropolitan Planning Organization.

Benefits of Bicycling

The beneficial reasons for bicycling are extensive. Some benefits, such as those associated with health are well known, while others like emissions reduction are less obvious. The City of Indianapolis often cites mobility options and transportation savings costs, public health, improvements to the environment, and social opportunities as the key reasons and benefits to creating, maintaining, and expanding the City's bicycle network.

Mobility & Savings. Consideration of all modes of transportation increases the options for those that do not or choose not to have access to a motor vehicle. Increased mobility options add to a person's quality of life and offer opportunity to increase a household's disposable income. With 20 to 30 percent of a household's budget dedicated to transportation costs, using a bicycle instead of a motor vehicle significantly reduces the amount spent on transportation. Not only is bicycling more economical, bicyclists often experience a more predictable commute time when compared to commuting motor vehicles and are able to avoid such congestion by easily varying their commuting route or simply passing slowed cars in a bicycle lane. Additionally, bicycle parking is free, thus, further reducing transportation costs.

Health. The health benefits of bicycling are well documented. Bicycling is considered a low impact exercise for the body and is a better option than walking for those with arthritis, back problems, or other mobility issues. It assists with personal weight management and is a great initial activity for people who are overweight and struggle with physical activity. Bicycling can reduce stress, improve cardio-vascular and mental health, and build strength and muscle tone and, therefore, reduce health care expenses through improved overall health. According to the U.S. Centers for Disease Control and Prevention (CDC), 30 minutes of moderate exercise (like bicycling) for adults, five days a week, can reduce the risks for illnesses such as high blood pressure, heart disease, arthritis, and depression. These 30 minutes can be found in a commute time.

Environmental. Increased bicycle usage also has benefits for the environment. As a mode of transportation, a bicycle has virtually no carbon footprint. It reduces air pollution compared to driving a car and reduces greenhouse emissions. Because bicycles do not drip brake fluid, anti-freeze, transmission fluid, or toxic dust, it also reduces water pollution that occurs through motor vehicle usage. Travelling by bicycle, instead of a motor vehicle, benefits the environment through reduced noise pollution, creating a quieter, more peaceful, and greener community.

Social. A traveler experiences his/her neighborhood or community differently on a bicycle than in a car. The social benefits of bicycling include a greater sense of community and opportunities to participate in numerous events and activities that involve a bicycle. Community livability is a relevant term that refers to the social and environmental quality of an area as perceived by residents, employees, and visitors. Community livability is largely shaped by the conditions of public spaces, and in particular, by recreational and transportation facilities and choices that offer opportunity for citizens to interact with one another. A livable community is desired by citizens and civic leaders. A livable community that promotes bicycling tends to retain youth, attract new civic-minded residents and business, and increase social capital.

The Five (Six) Es

The League of American Bicyclists' Bicycle-Friendly America communities includes five key elements. These elements are categorized into the commonly known "Five Es": 1) Engineering, 2) Education, 3) Encouragement, 4) Enforcement, and 5) Evaluation. The application to be considered a "Bicycle Friendly Community" asks 70 questions about how a community addresses each of these elements with regard to bicycling. There is an additional category that is unofficially recognized as a sixth "E," which is Equity. This category analyzes equity in access to transportation. The *Indianapolis Bicycle Master Plan* does identify an Equity goal for the City's bicycle system and subsequently outlines two objectives, implementation tools, and benchmarks to achieve this sixth goal.

1. **Engineering.** Infrastructure supporting bicycling is the most visible and often most considered E. To be considered a bicycle friendly community, a wide range of infrastructure accommodations for bicyclists is important. The greater the options, both on-street and off-street, the greater the chances to be awarded a higher level of status. One of the first actions that the League of American Bicyclists considers is whether a community has adopted a Complete Streets Policy. A Complete Streets Policy is one that provides safe, convenient, and comfortable accommodations to all modes of transportation, including bicycling for all ages and abilities. The League of American Bicyclists also looks at how effective the policy is being implemented into the community. An effective Complete Streets Policy ensures that the planners and engineers are trained and applying the best available design standards and maintenance practices that provide for the expanded transportation accommodations.

   Other key factors that are examined include the percentage of main roads with bike lanes, shoulders or parallel trails, good access to bridges, underpasses and other barrier-breaking roads, and a willingness to innovate and embrace new engineering techniques (e.g. cycle tracks, shared lane markings, and bike boxes.) A plan to ensure maintenance of the infrastructure, not just having it in place, is also a critical component to the engineering element. Other components that are considered in the application include bike parking options, available commuter amenities such as showers and lockers, infrastructure that connects to other transportation modes like transit, and infrastructure that supports social and recreational trips.

2. **Education.** Another factor in determining the bicycle friendliness of a community is how well it promotes bicycling through various education methods. Education is less expensive to implement than building infrastructure, but can be rather difficult in terms of convincing the community they need it. There are multiple target audiences to consider when designing bicycling education programs. A first is the motorists and bicyclists on the road. Teaching cyclists to share the road competently and correctly is a vital part of a community's education program. One of the most common complaints from motorists is that bicyclists do not obey the traffic laws. While this cannot be said about most, it is important that bicyclists are aware of their responsibilities, the local traffic laws, and are not feeding into this common misconception. A second audience is school-aged children. This audience can be effectively educated through a strong Safe Routes to School program and other community-based educational initiatives. Engineers and planners who are building the roads and infrastructure are a third targeted education audience. Educating these professionals about the needs and requirements of cyclists is important to the successful development of a connected, viable bicycle network. Once trained, they often gain new appreciation for the complexities of street design and the challenges that cyclists face when such design considerations are not taken into account.

Police bike patrols are critical to a community's Education, Enforcement, and Evaluation & Planning efforts.

3. **Encouragement.** The League of American Bicyclists consider, as part of the BFC application, the effective encouragement activities a community can undertake to build awareness and create a cycling culture that encourages more participation. Activities can include those that provide some sort of financial incentive to people who are willing to change their commuting behaviors like offering bikes, clothing, and other equipment. Other effective activities and programs provide information such as maps, guides, on-line route mapping, improved signage, etc. This information giving helps reduce perceived barriers and, thus, encourages better participation and increased facility usage. Special events create awareness and a sense of community among all levels of cyclists. To further expand the mobility options to all economic levels, Encouragement can make bicycles and other equipment available to those who do not have them. The League of American Bicyclists suggests bike sharing or large urban bike rental programs as a means to reach diverse populations and encourage cycling.

4. **Enforcement.** Enforcement of laws and regulations through local police and the court system increases the safety of the bicycle system and benefits all users. The presence and action of law enforcement officers adds credibility to the community's efforts to encourage bicycling and improve safety. In the BFC application process, the League of American Bicyclists look for indication that the entire judicial system achieves three important indicators, including 1) protecting the rights of cyclists to operate legally on the roads, 2) protecting cyclists against careless, reckless, or dangerous driving, and 3) ensuring cyclists themselves follow the rules and operate safely. Ultimately, communities that treat cyclists equitably and do not discriminate against cyclists are rewarded. In the end, by increasing enforcement efforts, a community increases public safety for both motorists and cyclists, thus making the community more bicycle friendly.

5. **Evaluation & Planning.** Upon achieving Bronze or Silver level status, a community is assessed on how they plan to continue to make progress in the development and promotion of their bicycle system. A plan is needed to measure the success of continued advancement. A bicycle master plan is suggested to take stock of where a community is, determine a vision for where it wants to be, and identify the action steps to achieve the vision. Once that is completed, a community must continue to re-visit the plan to document progress. Another evaluation suggestion is the establishment of a Bicycle Advisory Committee to serve as advocates and champions for a bicycle friendly community. Data collection is fundamental to the Evaluation portion of this E. The BFC application asks for specific information from the American Community Survey Journey to Work Data, which represents a community's percentage of commuters that use their bicycle as their primary mode of transportation to work. Beyond information available through the US Census Bureau, League of American Bicyclists encourages communities to conduct bike counts to acquire baseline data and then continue counts to measure progress on the increased number of users. Bike counts also allow communities to decide what facilities are more of a priority over other routes, and, therefore, where investments should occur.

6. **Equity.** Although, not an official E, Equity in a community's bicycle system includes: 1) accommodating cycling as an essential transportation option at all levels of City planning and engineering, and 2) serving a diverse population and the needs of those that cycle out of necessity and by choice. The League of American Bicyclists considers the previously-described Five Es in its review of BFC applications. It is understood that Equity is an inherent component of Engineering, Education, Encouragement, Enforcement, and Evaluation & Planning. The

Indianapolis Bicycle Master Plan considers Equity separately for the purpose of this *Plan's* goals, objectives, tools, and benchmarks, but it is also assumed that Equity is a part of the other Es. By considering Equity both separately and as part of the official BFC application criteria, the City and Mayor's Bicycle Advisory Council are ensuring that future planning and infrastructure projects classify bicycling as a legitimate transportation option and value all potential users throughout Marion County.

CHAPTER 3

Plan Context

Planning for bicycles and bicyclists has been an ongoing effort in Central Indiana for 20 years. The Indianapolis Metropolitan Planning Organization (MPO), the City of Indianapolis, other local municipalities, county and state agencies, and not-for-profit agencies have all contributed to the planning and development of the region's pedestrian and bicycle system. This *Bicycle Master Plan* incorporates the relevant findings of previous planning efforts including the plans outlined in the following sections.

Regional Planning

***Central Indiana Regional Bikeways Plan* (2012).** Like the 2000 *Indianapolis Regional Bicycle & Pedestrian System Plan*, the 2012 *Central Indiana Regional Bikeways Plan* was developed as part of the Metropolitan Planning Organization's *Long Range Plan*. The *Plan's* study area includes Indianapolis/Marion County and the eight surrounding regional counties (Boone, Hamilton, Hancock, Hendricks, Johnson, Madison, Morgan, and Shelby). The *Plan* lays out two primary goals to measure progress over the next ten years. Goal 1) to increase use of bicycling in the region for all trip purposes; Goal 2) to improve the safety of cyclists throughout the region. The following *Plan* objectives are applicable to both bikeways goals:

- Objective 1: Develop and maintain a safe and extensive network of bikeways throughout the Metropolitan Planning Area (MPA).
- Objective 2: Provide supporting facilities to make bicycle transportation more convenient.
- Objective 3: Identify partners to provide bicycle education, enforcement, and encouragement programs.

The *Central Indiana Regional Bikeways Plan* recommendations focus on expanding the current (2011) 474 miles of bikeways to more than 700 miles, throughout the MPA, by 2035. The recommendations are categorized by facility type (e.g. trails, side paths, bike lanes) and by three separate time periods (2011-2015, 2016-2025, 2026-2035). The greatest increase will be in the number of bike lane miles from 30.4 miles to 153.1 miles. Each project, including the length and cost estimate, is included in the *Plan* along with regional priorities, financial constraints, infrastructure maintenance, and funding opportunities.

The MPO's *Central Indiana Regional Bikeways Plan* recommends expanding the bikeways system to include more than 700 miles of facilities in the Indianapolis region.

***Regional Pedestrian Plan* (2006).** With a vision of metropolitan Indianapolis becoming a regional network of diverse, walkable, bikeable, and transit-

friendly communities linked by a comprehensive multi-modal system that provides access to home, work, education, commerce, transit, and recreation, the 2006 Metropolitan Planning Organization's *Regional Pedestrian Plan* was developed to encourage a connected pedestrian system, crossing county and municipality lines, and providing opportunity for continuous pedestrian activity throughout the eight-county MPA.

The *Regional Pedestrian Plan* documents pedestrian demand and desired facilities for communities within the MPA. The *Plan* reinforces that the implementation and construction of the regional pedestrian system are the responsibility of local jurisdiction dependent upon local priorities, community values, and funding availability. The *Plan* is organized into six chapters with four chapters applicable to all counties within the MPA. Two chapters are county-specific for each of the eight MPA counties, one chapter dedicated to analysis, one chapter dedicated to recommendations.

The *Plan* recommendations are categorized into facility recommendations and land use organization recommendations. Pedestrian facility recommendations include locations for sidewalks, multi-use paths, urban greenways, and crossings. Transportation-related land use designations include the pedestrian corridor and the pedestrian district that connect transportation, economic development, and quality of life initiatives.

Indianapolis Regional Bicycle & Pedestrian System Plan (2000). The 2000 Metropolitan Planning Organization's *Indianapolis Regional Bicycle & Pedestrian System Plan* was developed as a component of the Metropolitan Planning Organization's *Long Range Plan*. The *Bicycle & Pedestrian System Plan* includes both physical design and policy guidelines. The area under study incorporates the 1994 MPA consisting of six counties. Three overarching goals guide the development of the plan, including:

- Provide alternatives to motor vehicle travel (support the goals of the National Bicycling & Walking Study and the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991)
- Design for incremental implementation, building on existing or planned facilities
- Provide a strong regional framework, supporting the development and expansion of local systems

The *Plan* includes five parts. Part 1 is the Regional Bicycle & Pedestrian System Plan outlining the goals and objectives, the planning process, transportation decisions and factors affecting bicycling and walking behavior, a regional analysis, alternatives and recommended regional framework, and design recommendations. Part 2 is the Facility Design Guidelines compiled to meet or exceed federal guidelines. The guidelines include construction elements for facilities and amenities and a design supplement with additional information to assist in the design and construction of the bicycle and pedestrian system. Part 3 is the Application of Design Guidelines, identifying the type of preferred facility for corridors throughout the MPA. Part 4 introduces Model Ordinances for Bicycle and Pedestrian Systems and facility design. Part 5 is the System Funding Plan including funding options analysis (federal, state, and local sources), cost estimates for system implementation, evaluation and applicability of funding to identified project, and administration of the *Plan*.

The 2000 *Indianapolis Regional Bicycle & Pedestrian System Plan* presents three conceptual approaches to the development of a system in the MPA. One concept forms a north/south and east/west regional bike and pedestrian spine using existing or already-designated routes. One alternative extends the well-established Marion County greenways into the counties and communities

within the MPA. One concept creates a loop around the metropolitan area connecting smaller communities along the county road system and eventually to downtown Indianapolis by way of a "spoke in a wheel."

Local policy review of the MPA communities found that standards for the provision of pedestrian and bicycling facilities were either inconsistent or non-existent. Essentially, in 2000, there were no effective policy-based tools for implementing alternative transportation plans. The *Plan* outlines three methods in which local government can provide for alternative transportation:

1. Incorporating the location of planned facilities in planning documents such as the comprehensive plan, greenways plan, or parks and open space plan to give funding direction to decision-makers.
2. Incorporating the location of planned facilities in the thoroughfare plan similar to a roadway.
3. Providing basic construction standards and application for facilities in the subdivision control standards.

Local Planning

Indy Greenways Master Plan (2002). The *Indianapolis Greenways Master Plan* describes a vision for a regional network of linear open space that connects neighborhoods and promotes recreation, fitness, alternative transportation, and conservation. This network, known as the Indianapolis "greenways system" benefits the citizens of Marion County and provides connections to other communities throughout Central Indiana. The *Plan* documented the accomplishments of the 1994 *Greenways Plan* and identified needs (system expansion, links from neighborhoods to destinations, sustainable financial support, environmental stewardship, and partnerships in projects, programs, and activities) and ascertained through a series of public meetings.

The *Plan* identified recommendations (in five and ten year increments) for each of the County's original greenway corridors and for several newly identified corridors. An implementation plan outlined action steps for *Plan* vision and objective realization. The *Indianapolis Greenways Master Plan* will be updated in 2012.

Indianapolis Bikeways Plan (2008). The 2008 *Indianapolis Bikeways Plan* is comprised of a series of maps that highlight the City's plans for bikeway expansion over the next ten plus years. Each map groups the bikeways into three classifications: 1) Active Multi-Purpose, 2) Bike Lane, and 3) Cultural Trail. Maps illustrate the City's (2008) constructed facilities, immediate-term (next two years) bikeway construction plans, short-term (next two to five years) bikeways expansion plans, and long-term (next five to ten years) plans. A final map highlights the entire Indianapolis bikeways system as it is envisioned for the year 2018. The majority of the bikeways expansion is focused on adding bike lanes, with the later years mostly focused on the fringe areas on the City's outer boundaries.

Advisory & Advocacy Groups

Several local and regional advisory and advocacy organizations are constantly engaged in improving bicycling infrastructure, programs, and policies to ensure cycling safety and convenience in Indianapolis. In order for this *Bicycle Master Plan* to be successful, bicycling must be valued by City departments, the private development community, and not-for-profit organizations responsible for its implementation.

Instituting and administering bicycle policies and programs requires external relationships and partnerships with multiple agencies and organizations. Cities and regions that are successful in implementing a comprehensive transportation network that includes bicycle infrastructure work together to solve problems and tackle issues that extend beyond their own boundaries. It is these critical relationships with the following advisory and advocacy groups that the City of Indianapolis will achieve its intention to become a Bicycle Friendly Community at the Silver and, eventually Platinum, level.

Mayor's Bicycle Advisory Council (MBAC) is group of individuals and organizations from the Indianapolis bicycling community assembled to help direct the City's bikeways program. The MBAC has aided in determining bike routes, applying for Bicycle Friendly Community designation, and developing policies to make bicycling safer in Indianapolis. The diverse group is comprised of bicycle advocates, health professionals, recreational cyclists, and public safety officials.

The **Greenways Foundation** is a statewide charitable trust that provides leadership and advocacy in the growth and use of Indiana greenways and trails. Formed in 1991, the Greenways Foundation facilitates partnerships between government and private sector partners, provides technical assistance for community-based efforts, and provides funding for greenway development, enhancement, and operation. Until 2006, the Greenways Foundation operated primarily within Indianapolis and Marion County. After 15 years of success in Indianapolis, the Foundation expanded its geographic focus to include all of Indiana. For more information, http://www.indygreenways.org/.

Formed in 2009, **INDYCOG** is an education and advocacy group with a mission to "promote bicycling as a safe and viable means of transportation and recreation in Indianapolis." The organization is present at a number of events throughout the City, educating the public about bicycle infrastructure, policies, and laws. They also collaborate with a number of other Central Indiana organizations interested in seeing an increased mode-share with bicycles including the Marion County Public Health Department, Health by Design, and the City of Indianapolis' Office of Sustainability. For more information, http://www.theindycog.com/.

Bicycle Indiana, formerly the Indiana Bicycle Coalition, is a statewide advocacy and education non-profit organization with a focus on developing and implementing policies favorable to bicyclists. Bicycle Indiana organized the first Indiana Bike Summit in 2008 and has hosted a number of Traffic Skills 101 classes that are focused on safe riding. For more information, http://www.bicycleindiana.org/.

Central Indiana Bicycling Association (CIBA) is a recreational bicycling club that hosts a number of weekly events. Additionally, CIBA organizes two annual rides (the NITE Ride and the Hilly Hundred) that attract thousands of riders every year. This organization of volunteers has no paid staff and sustains itself with membership dues and donations. Since 1971, CIBA has been extremely important to the Central Indiana bicycle community in the education and encouragement of cyclists. For more information, http://www.cibaride.org/.

Commuter Connect, a service of CIRTA, offers alternative transportation solutions to area employers and commuters in Boone, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, and Shelby counties. With a mission to reduce air pollution and traffic congestion in Central Indiana, Commuter Connect promotes the benefits of carpooling, vanpooling, riding transit, biking, and walking to work and organizes ride sharing opportunities for commuters in Central Indiana. For

bicyclists that commute to a participating employer via bicycle, an average of three days a week, Commuter Connect offers an Emergency Ride Home (ERH), a free taxi ride home, in the event of an emergency or unexpected overtime. Commuter Connect's services are free to commuters. For more information, http://www.commuterconnect.us/ or call 317-327-RIDE.

Freewheelin' Community Bikes is a non-profit earn-a-bike program focusing on education and empowerment through bicycling. Freewheelin' teaches at-risk youth valuable bike repair and maintenance skills. Donated gently-used bicycles are repaired by volunteer mechanics and then sold at reasonable prices to the public. For more information, http://www.freewheelinbikes.org/.

Hoosier Mountain Bike Association (HMBA) is a statewide mountain bike group formed in 2000, which focuses on trail building and mountain biking advocating. The Association has constructed a number of trails both within and outside of the Indianapolis area. HMBA's mission is "to promote responsible mountain biking and work towards the goals of common land access and natural resource protection in Indiana through interaction with policy makers, the cycling industry, race promoters, mountain bikers and other trail users." For more information, http://hmba.org/index.php.

Hoosier Rails to Trails Council (HRTC) is an advocate for trails and greenways, specifically rail-trails, in Indiana. They also promote and encourage walking, bicycling, other non-motor transportation, and environmentally thoughtful land use as a means to healthy living and lifestyles. Since 1987, HRTC has tracked legislation, promoted bills, defeated bills, helped organize statewide and Midwest trail conferences, and maintains the largest, most complete rail-trail library in the State of Indiana. They also publish the Hoosier Pathways newsletter several times a year.

Health by Design (HbD) is an advocacy group that focuses on the built environment and the positive impact that transportation options have on public health. HbD is a coalition comprised of partners throughout the State of Indiana. HbD has been instrumental in organizing partners on the governmental, nonprofit and private sectors to work on policy level issues. For more information, http://healthbydesignonline.org/.

Marion County Public Health Department views bicycling and active transportation as a means to increase physical activity and decrease the occurrence of chronic diseases in the community. The Health Department is a sponsor of the Mayor's Bike Ride and a supporter of the Alliance for Health Promotion/Health by Design. In recent years the U.S. Centers for Disease Control and Prevention (CDC) has declared obesity as an epidemic. Obesity has been linked to increased risk of heart disease, cancer, stroke, respiratory illnesses and diabetes. According to the CDC, as of 2008, more than 29 percent of Marion County residents were considered obese. The CDC has linked "urban sprawl" and the lack of multi-modal transportation alternatives such as walking and bicycling to the increase in obesity within the U.S. For more information, http://www.mchd.com/ and http://www.cdc.gov/Features/HealthyCommunities/.

Applicable Policies

In 2000, the *Indianapolis Regional Bicycle & Pedestrian System Plan* reviewed the region's codes and ordinances for relevance to the provision of pedestrian and bicycle facilities. This *Plan* found that standards in the region for pedestrian and bicycle facilities were inconsistent and often non-existent. The *Plan* outlined three methods in which local governments can provide for "alternative" transportation:

1. Identifying locations of facilities in a comprehensive plan, greenways plan, parks and open space plan, etc.
2. Identifying locations of facilities and defined standards in a thoroughfare plan.
3. Providing basic construction standards and application in a subdivision control ordinance.

The 2000 *Plan* provides model ordinances for sidewalks, multi-use paths, and bicycle parking. The Indianapolis Metropolitan Planning Organization's *Regional Pedestrian Plan* (2006) emphasizes the responsibility of local governments to approve, adopt, and implement the *Plan's* recommended connectivity system. Policies to support and advance the development of the pedestrian/bicycle system are also of local concern, in development ordinances and zoning.

The City of Indianapolis currently has requirements for sidewalks reinforcing pedestrian connectivity. There has been discussion about creating a similar bicycle facility ordinance for the City that uses the sidewalk requirements as a template. Following are the City's zoning ordinances pertaining to the construction and development of sidewalk infrastructure. It is important that the City remain steadfast and uphold its requirements of existing and future regulations that are critical to the development of pedestrian and bicycle infrastructure.

Revised Code of the Consolidated City of Indianapolis and Marion County, Title III, Public Health and Welfare

Sec. 731-323. Improvements and installations.

(e) Sidewalks. All sidewalks shall be designed and constructed in accordance with the Standards for Street and Bridge Design and Construction (G.O. 49, 1972/Standards for Acceptance of Streets and Bridges of the City-County Council of Indianapolis and Marion County, Indiana) and Chapter 691 of this Code. Sidewalks shall be provided along all streets internal to the subdivision, as well as any existing or proposed perimeter streets which border the subdivision.

Sec. 732-214. Special regulations.

(c) Street requirements:
  (4) Sidewalk requirements in the C-1, C-2, C-3, C-3C, C-4, C-5, C-6, C-7, and C-ID districts. On any freestanding lot or integrated center that is not served by either an existing public sidewalk or a public sidewalk alternative authorized by the City of Indianapolis, sidewalks shall be provided in compliance with the following regulations.

    a. Placement.
    b. Construction.
    c. Site considerations.
    d. Compliance with the Americans with Disabilities Act (ADA).
    e. Requirements for sidewalks for new development.
    f. Internal accessibility for new development.
    g. Requirements for sidewalks for redevelopment or additions.

A similar type of ordinance is desired for the installation of multi-use paths in locations determined by previous planning efforts, such as the 2006 *Regional Pedestrian Plan*. Multi-use path improvements and installations could become requirements for developers in a manner similar to the sidewalk

requirements. Considerations for new construction of multi-use paths should complement and correspond with the considerations outlined in the sidewalk ordinance.

A 2009 general ordinance (118, § 3) adds new provisions regarding traffic restrictions for use of bicycle facilities:

Sec. 441-371. Limitation on conveyances and vehicles on bicycle paths and lanes.

(a) Bicycle paths and lanes shall be used exclusively for the operation of bicycles unless signage specifies joint use with pedestrians.
(b) With the exception of a moped being operated exclusively with human muscular power, no person shall operate any other conveyance in a designated bicycle path or lane.
(c) A person may operate a motor vehicle upon a bicycle lane for the limited purpose of making a turn, entering or leaving an alley, private road, or driveway.

Sec. 441-372. Duty to yield to bicycle operator; minimum passing distance.

(a) The driver or operator of any vehicle shall yield the right-of-way to an individual operating a bicycle on a designated bicycle path or lane.
(b) The driver or operator of a vehicle overtaking a bicycle must pass the bicycle at a safe distance of not less than three (3) feet between the vehicle and the bicycle.

Sec. 441-373. Driving, standing, or parking on bicycle paths or lanes prohibited.

(a) The driver or operator of any vehicle shall not drive, unless entering or exiting a legal parking space, or stand, or park the vehicle upon any path or lane designated by official signs or markings for the use of bicycles, or otherwise drive or place the vehicle in such a manner as to impede bicycle traffic on such path or lane.
(b) The driver or operator of any vehicle shall not stand or park the vehicle upon any lane designated by pavement markings for the shared use of motor vehicles and bicycles, or place the vehicle in such a manner as to impede bicycle traffic on such lane.
(c) A vehicle parked or standing in violation of this section shall be subject to immediate removal.

Sec. 441-374. Enforcement.

A violation of this division shall constitute a violation of the Code.

A City ordinance prohibits motorists from diving in a bike lane unless entering or exiting a legal parking space.

CHAPTER 4

Goals, Objectives & Benchmarks

As stated in "Chapter 2: Introduction," a vision was established articulating the desires of the Mayor's Bicycle Advisory Council for the development of an efficient and comprehensive transportation system in Indianapolis over the next eight years.

> *Indianapolis is a bicycle friendly city. Its bicycle network is a fundamental component of the transportation system, providing safe, convenient, and healthy opportunities for citizens to integrate bicycling into their daily lives.*

With this vision, a series of six goals organize:

- plan objectives
- applicable tools for implementation
- measurable benchmark metrics

The following goals, objectives, and tools reflect input from the Mayor's Bicycle Advisory Council, feedback from the League of American Bicyclists (LAB) on Indianapolis' 2009 Bicycle Friendly America application, and a review of peer cities' bicycle master plans. The benchmarks assist the City and stakeholders in measuring the effectiveness of plans, programs, and initiatives and support policy creation efforts.

The goals are structured around the Six Es of a Bicycle Friendly Community – engineering, education, encouragement, enforcement, evaluation & planning, and equity. Communities are awarded a designation by the LAB when they have achieved demonstrated success in two or more of the six categories. It is intended that this list and successful achievement of the stated benchmarks will become a significant component of the City's next application to the LAB for a Silver level award.

Goals of this *Plan* are intended to help Indianapolis become one of the most bicycle friendly communities in the country.

Engineering Goal: A safe and efficient system of bicycling facilities that connect destinations.

Objectives:

1. Make it easier for citizens to choose bicycling as a preferred mode of transportation.
   - Tool a. Complete the *Connectivity Plan 2011 & 2012-2015*.
   - Tool b. Fill in the network gaps.
   - Tool c. Connect on and off-street bikeways throughout the City.

Tool d. Expand the construction of cycle tracks to include connections between the Cultural Trail and the City's greenways.

Tool e. Increase the amount of secure bicycle parking.

Tool f. Coordinate connections among all transportation modes.

Tool g. Ensure that new and improved facilities to accommodate bicyclists conform to current best practices and guidelines provided through Indiana Department of Transportation, the American Association of State and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities, and the National Association of City Transportation Officials' (NACTO) Urban Bikeway Design Guidelines.

2. Establish City-led commitments or policies that advance the bicycle network's infrastructure development.

   Tool a. Adopt a Complete Streets ordinance.

   Tool b. Adopt an ordinance that allows for 24 hour access to trails and greenways.

   Tool c. Review and modify, if necessary, the Department of Public Works' design standards to allow for integration of bicycle facilities into road design.

   Tool d. Integrate bicycle facility consideration into all City planning, engineering, decision-making, development review, and approval processes.

   Tool e. Include a representative from the City's Department of Metropolitan Development on the Mayor's Bicycle Advisory Council.

   Tool f. Incorporate bicycle facilities into road resurfacing and reconstruction projects where appropriate.

   Tool g. Require bicycle parking and/or facilities in all new development projects where appropriate.

   Tool h. Provide incentives for developers to include bicycle parking and/or facilities in new development projects where appropriate.

Engineering Benchmarks:

- Adopted Complete Streets ordinance.
- 200 miles of bicycle lanes constructed.
- 20 miles of cycle tracks constructed.
- 24 hour access to trails and greenways.
- 1,500 available secure bicycle parking spaces available in the public right-of-way.
- Pedestrian/bicycle infrastructure installed within two miles of every school.
- Inclusion of bicycle facilities considered in all road resurfacing/reconstruction projects.
- Inclusion of bicycle facilities and/or amenities in all new commercial, industrial, and institutional developments.
- Inclusion of bicycle access in all future transit projects, incorporating bicycle amenities on transit vehicles and at stops.
- Representative from Department of Metropolitan Development participating on the Mayor's Bicycle Advisory Council.

Education Goal: An understanding of and respect for the rights and responsibilities of the road for cyclists and motorists.

Objectives:

1. Develop a strategy to routinely communicate a consistent message about the safety and benefits of bicycling and the availability of facilities throughout the City.
   - Tool a. Recruit and train bicycling ambassadors.
   - Tool b. Increase the number of certified League Cycling Instructors (LCI) through LAB.
   - Tool c. Provide training, through the National Highway Traffic Safety Administration or other means, for IMPD officers on all laws pertaining to bicycling and bicycle facilities.
   - Tool d. Work with Indiana Bureau of Motor Vehicles to incorporate all laws pertaining to bicycling and bicycle facilities into driver education courses.
   - Tool e. Offer the League of American Bicyclists *Smart Cycling* and Traffic Skills 101 courses.
   - Tool f. Develop "on-the-bike" workshops for City staff, public safety officers, City-County Councillors, and other decision-makers.
   - Tool g. Work in partnership with community organizations to develop and implement a pedestrian and bicycling rules and safety program for elementary, middle, and high school curricula.
   - Tool h. Support and partner with non-profit organizations, such as Freewheelin' Community Bikes, that are involved with youth bicycling, bicycle-related education, and skill development.
   - Tool i. Encourage all schools to participate in Safe Routes to School.
   - Tool j. Explore the opportunity to hire one staff person, or contractor, to administer and facilitate the City's Safe Routes to School initiative.
   - Tool k. Include safety tips and rules of the road on all printed and digital materials related to bicycling.

2. Remain current on trends, opportunities, and best practices.
   - Tool a. Maintain memberships in bicycle advocacy and professional organizations.
   - Tool b. Invest in continuing education/professional development training for bicycle coordinator and other key City staff.
   - Tool c. Participate in peer exchange with other cities of similar size and character to share information.

Education Benchmarks:

- At least one League Cycling Instructors certified class offered per year.
- At least 12 programs offered per year pertaining to bicycling safety and skill development.
- All IMPD officers educated each year on bicycling safety and laws.
- 10,000 adult bicyclists and motorists educated per year on bicycling safety and laws.
- 10,000 children educated per year on bicycling safety and laws.
- All new motorists educated on bicycling safety and laws through driver education courses.
- 100% participation in Safe Routes to School, or similar program, for all public and private schools.

- One, dedicated staff person to administer and facilitate the City's Safe Routes to School initiative.
- Five City staff attending six professional development training sessions, seminars, conferences, exchanges, etc. per year.

Encouragement Goal: Increased bicycle ridership and support for bicycling culture and activity.

Objectives:

1. Publicize the convenience, health, environmental, and cost-savings benefits of bicycling.
   - Tool a. Designate one paid professional, agency, or organization to manage the bicycling community's communications.
   - Tool a. Create public service announcements to raise awareness about bicycling.
   - Tool b. Create, maintain, and distribute a comprehensive printed and digital bikeways map.
   - Tool c. Create a Smart Trips/Travel Smart transportation demand management program to encourage short trips to be made by bicycle.

2. Increase business community's involvement in the development of the bicycle network and increased ridership.
   - Tool a. Provide incentives to business owners that accommodate the needs of bicyclists and offer amenities.
   - Tool b. Create a campaign for local businesses to be designated a "Bicycle Friendly Business."
   - Tool c. Continue to promote the Pedal & Park program for all high-profile special events occurring in the City.

3. Expand existing and develop new regularly occurring events that advocate bicycling.
   - Tool a. Establish an event planning committee with oversight provided by the communications manager.
   - Tool b. Support the expansion of the bike share program that is scheduled to launch in spring 2013.
   - Tool c. Partner with a professional sports team to host special events.
   - Tool d. Establish a sustainable and dedicated revenue or funding source to pay for events, educational programs, promotional materials, and, in limited instances, infrastructure.

Encouragement Benchmarks:

- Continuation of community interest and participation in bicycling events such as the Mayor's Bike Ride, Polar Bear Pedal, Bike to Work Day, 2 Wheels 1 City, and N.I.T.E. Ride.
- Number of media events (radio, television, Internet, or print) increased to four occurrences per month.
- 30,000 printed maps distributed each year.
- 10,000 visits to www.indy.gov/bikeways website each year.
- Increased number of creative partnerships to finance the development of the bicycle network, additional amenities, and/or future programming initiatives.

Enforcement Goal: A safe environment for all modes of transportation.

Objectives:

1. Improve bicyclist safety.
   - Tool a. Host re-occurring Enforcement for Bicycle Safety seminars.
   - Tool b. Promote a Share the Road campaign.
   - Tool c. Encourage IMPD to create an annual report on number of documented bicycle-related citations and accidents.
   - Tool d. Identify most dangerous areas for cyclists and use collected data and analysis to create bicycle safety campaigns.

2. Hold motorists and cyclists accountable for the rules of the road.
   - Tool a. Increase the number of police bicycle patrols.
   - Tool b. Provide police officers with training about bicycling and bicycle safety issues.
   - Tool c. Incorporate traffic laws and acknowledgement of penalties into bicycling education programs.
   - Tool d. Incorporate traffic laws and acknowledgement of penalties into driver education programs.
   - Tool e. Review and modify, if necessary, laws affecting bicyclists to be consistent with transportation plans and/or road development.
   - Tool f. Select random enforcement days that are targeted for increased enforcement activity and driver/cyclist awareness programs.

Enforcement Benchmarks:

- Continual decrease in the number of crashes and/or enforcement violations, as identified by IMPD, involving bicyclists in designated facilities.
- Continual decrease in the number of crashes and/or enforcement violations, as identified by IMPD, involving bicyclists in non-designated facilities.
- One dedicated bicycle patrol unit located in each IMPD district.
- All IMPD officers educated annually on bicycling safety and laws.
- All IMPD cadets educated on bicycling safety and laws.
- 10,000 adult bicyclists and motorists educated per year on bicycling safety and laws.
- 10,000 children educated per year on bicycling safety and laws.

Evaluation & Planning Goal: Continual review and assessment of the bicycle system's physical, procedural, and programmatic effectiveness.

Objectives:

1. Create a reliable system that monitors usage and allows accurate counts of facility users.
   - Tool a. Document crash data and traffic violation incidents involving bicyclists.
   - Tool b. Survey citizens before and after public awareness campaigns.
   - Tool c. Record attendance at bicycling events and programs.

2. Integrate the development of the bicycling network into larger planning efforts and development projects.
   - Tool a. Adopt this *Bicycle Master Plan*.
   - Tool b. Update the *Bicycle Master Plan* as goals are accomplished and as conditions change.
   - Tool c. Educate directors and key staff in applicable City departments on the vision, goals, and objectives of this *Plan* and solicit implementation support and assistance.
   - Tool d. Evaluate *Plan* benchmarks and goal realization annually and provide update to all City departments, partners, and bicycling advocates.

3. Identify and secure funding to implement this *Bicycle Master Plan*.
   - Tool a. Commit percentage of annual City budget, general fund, capital improvement program, etc. to the development and maintenance of the bicycle system.
   - Tool b. Review, annually, potential bicycle projects that can be incorporated into the capital improvement program.
   - Tool c. Pursue funding partnerships and opportunities with multiple agencies and City departments.
   - Tool d. Acquire maximum funding available from state and federal sources.

Evaluation Benchmarks:

- At least one permanent counter installed on each major roadway with a bike lane supplemented by portable counters used throughout the City's bicycle system.
- Manual counts of bicycle facility usage on key routes conducted twice a year.
- Silver Level Bicycle Friendly Community designation obtained from the League of American Bicyclists by 2013.
- Platinum Level Bicycle Friendly Community designation obtained from the League of American Bicyclists by 2020.
- Mode share increased to 10% of the population riding bicycles for transportation in the Central Business District.
- Mode share increased to 2% of the population riding bicycles for transportation in Marion County, outside of the Central Business District.
- 100% of City staff informed of this *Plan* and its vision, goals, and objectives.
- 5% of City budget, general fund, capital improvement program, etc. allocated to the development and maintenance of the City's bicycle network.
- At least two grant application(s) submitted annually, assuming availability, for *Plan* implementation.
- One annual meeting with bicycling community stakeholders to solicit feedback on bicycling issues, maintenance, and facilities and provide an update on the *Plan's* implementation progress.

Equity Goal: A system that serves the needs of diverse citizens and all users and abilities.

Objectives:

1. Ensure that bicycle programs, facilities, and amenities are planned for and constructed in underserved neighborhoods.
   - Tool a. Evaluate locations of future facilities and prioritize facilities connecting under-resourced neighborhoods, where appropriate.
   - Tool b. Offer opportunities for free bicycling education and safety courses in under-resourced neighborhoods.
   - Tool c. Provide free, or low cost, bicycles, helmet, and other safety equipment for children in economically disadvantaged neighborhoods.

2. Ensure that bicycle programs, facilities, and amenities are planned for and constructed to address the needs of underserved populations.
   - Tool a. Partner with social service agencies to offer opportunities for free bicycling education and safety courses for agency clients.
   - Tool b. Partner with social service agencies to provide free, or low cost, bicycles, helmet, and other safety equipment for agency clients.
   - Tool c. Provide bilingual educational materials for non-English speaking residents.

Equity Benchmarks:

- Connection of all Marion County's under-resourced neighborhoods to the bicycle network.
- At least 10 bicycle programs/activities held in under-resourced neighborhoods annually.
- At least 10 bicycle programs/activities held in social service agencies annually.
- All bicycle promotional materials available in Spanish.

CHAPTER 5

Existing Conditions & Analysis

Indianapolis is the 12th largest city in the United States. With more than 820,000 people living in 361.43 square miles, the City comprises more than 90 percent of Marion's population and 91 percent of its land area. For a city of its size and density, 2,270 persons per square mile, Indianapolis' population is widely spread out when compared to cities known for their bicycle friendliness, such as Portland (4,375.2 persons per square mile), Minneapolis (7,088.3 persons per square mile), Boulder (3,948.3 persons per square mile), and Seattle (7,250.9 persons per square mile) *(Source: US Census, 2010)*.

Central Indiana's relatively flat terrain and pleasant spring and fall temperatures, the City's numbered grid streets, and the region's extensive park and greenway system all contribute to an environment favorable to bicyclists of all ages and abilities. However, the City's comparative low density, moderate congestion levels, access to private automobiles, and a mindset of many citizens that bicycling is not a viable commuting choice all create a challenge to gaining full support for cycling activity and needed facilities. Through this *Bicycle Master Plan* and continued efforts to inform and educate the public of the many economic, health, social, and environmental benefits of bicycling, obstacles to a complete bicycle network and to becoming a Silver, Gold, or Platinum Bicycle Friendly Community will be minimized.

The planning for a community's bicycle system should be approached comprehensively, from a network connectivity standpoint. The construction of each bicycle facility should be completed with the next facility in mind. In addition to infrastructure development, connectivity includes the integration of programs and policies. The League of American Bicyclists' Bicycle Friendly Communities demonstrate success in the Six Es of bicycle planning; one of the Es pertains to physical infrastructure, the remaining five pertain to programmatic and political support that facilitates fully functional, connected network development.

Routes selected for bicycle facilities were determined by four major criteria.

Data Review & Needs Analysis

An inventory and evaluation of the bicycle network's existing conditions validates the plan for future development of facilities and programs that will continue the bicycling momentum and advance the transportation system in Indianapolis.

Route Selection & Suitability

Locations for the connections highlighted in the 2011 *Current Bikeways Plan* and the *2012-2015 Connectivity Plan*, maps presented later in this chapter,

were selected by the City of Indianapolis based on the following considerations:

1. Routes, without facilities, currently traveled by cyclists
2. Desirable routes, without facilities, identified by cyclists
3. a. Known opportunity for facility construction, coupled with a roadway improvement project based on the capital improvement program
   b. Roadway conditions and environment, in particular vehicular speed and traffic volume
4. Opportunity to connect to the larger bicycle system

These considerations led to the construction of the 64 miles of on-street bicycle lanes, share the roads, and/or cycle tracks and the 59 miles of greenway trails that are currently functioning as part of Indianapolis' transportation system. These routes link major destinations, connect to the extensive off-street greenway system, and offer opportunity for connections to future facilities. The City is planning for an additional 40 miles of bicycle facilities to be constructed between 2012 and 2015. These routes have been evaluated using the above-described consideration factors. Results from this evaluation process are presented later in this chapter as part of the *2012-2015 Connectivity Plan*.

Central Indiana Travel Study

The Indianapolis Metropolitan Planning Organization's *Central Indiana Travel Survey* (March 2011) was created to obtain travel behavior data from residents in the nine-county region of Central Indiana and supports updates for regional travel demand models. The *Survey* sampled 3,929 households in Central Indiana and reports demographic information and detailed travel information.

Bicycle Ownership. The *Survey* found that in the sampled Marion County households, less than half of all households (43.5 percent) owned at least one bicycle. More than 17 percent owned one, more than 12 percent owned two, and approximately 13 percent owned three or more bicycles. Households in rural and residential areas owned the most bicycles with 1.41 bicycles per household in rural areas and 1.23 bicycles per household in residential areas.

Non-Motorized Trips. More than 66 percent of Marion County households have at least one member that takes a non-motorized (walk or bicycle) trip lasting at least ten minutes per week. Residents living in or near the Central Business District are most likely to report non-motorized travel. When traveling to work or school, 12.4 percent of Marion County households indicated that the mode of transportation is non-motorized. Households living in or near the Central Business District are more likely to travel to work or school by walking or biking.

Bike Use & Purpose. Respondents older than ten years who had at least one bicycle available in the home were asked how frequently they rode a bicycle. In Marion County, 32.6 percent of survey respondents never ride a bike and 25.3 percent ride two or three times a week. With approximately ten percent riding a bicycle daily and nearly 40 percent riding a bicycle two or three times a month, Central Business District households are more likely to use their bicycles than residents in other areas. Of the Marion County respondents who reported riding a bicycle at least once per month, more than 64 percent said that they rode for exercise or recreation, nearly 12 percent rode to visit friends or relatives, and approximately ten percent rode to run household errands. Bicyclists living in or near the Central Business District are more likely to ride to eat a meal or snack, to go to school or work, and to run household errands than residents were in other area types.

Mode Choice. Travel by automobile is the most dominant mode throughout the nine-county Central Indiana region with nearly 91 percent of all trips using a motorized vehicle. In Marion County, more than 88 percent of all trips occurred with an automobile with less than one percent of trips using a bicycle. In the Central Business District/CBD fringe, nearly nine percent of all trips used a bicycle.

Characteristics of Non-Motorized Household. Nearly 700 of the households participating in the *Survey* reported walk or bike trips. Of these households, household sizes are larger than the regional average and report fewer vehicles owned by the householders. More than 25 percent of these households report an income of less than $25,000 and 45 percent own two or more bicycles. Most live within areas just outside the Central Business District and in residential neighborhoods.

Commuter Mode Share

The 2008-2010 American Community Survey, shown in the chart below, estimates that one percent of Marion County commuting employees, working outside of their home, travel to and from work by means other than personal vehicle, carpool, public transportation, or walking. Commuting by bicycle is in the "other means" category. More specifically, commuting employees residing in Center and Washington townships are more likely to commute to work by "other means" than residents of other townships in the County.

The "other means" mode category includes several additional types of transportation other than bicycle. It cannot be assumed that all 2.2 percent of Center Township "other means" commuters travel to and from work by bicycle. This fact is considered when establishing the mode share benchmarks for bicycle usage.

The townships of Indianapolis/Marion County. Downtown Indianapolis, the Central Business District, is located in Center Township.

		Commuter Mode Share					
Township	Commuting to Work	Car, Truck, Van -Drove Alone	Car, Truck or Van - Carpooled	Public Transportation (including taxicab)	Walked	Other Means	Worked at Home
Center	56,753	74.30%	10.80%	5.20%	4.70%	2.20%	2.80%
Pike	38,969	79.90%	12.40%	2.50%	1.70%	0.80%	2.60%
Washington	69,635	81.60%	8.30%	1.80%	2.60%	1.40%	4.20%
Lawrence	55,909	82.90%	9.70%	1.40%	1.20%	0.70%	4.10%
Wayne	61,031	83.30%	10.90%	1.20%	1.80%	0.90%	1.80%
Warren	42,962	81.90%	11.10%	2.10%	1.90%	0.70%	2.20%
Decatur	14,786	83.70%	12.30%	0.90%	0.10%	0.10%	2.90%
Perry	50,353	86.60%	9.10%	0.30%	0.90%	0.50%	2.40%
Franklin	25,791	90.10%	5.60%	0.30%	0.50%	0.30%	3.20%
Marion County	416,089	82.10%	10.00%	1.90%	2.00%	1.00%	3.00%

Source: 2008-2010 American Community Survey, 3-Year Estimate

Crash Data

Police incidents provided by Indiana State Vehicle Crash record system reported the following collisions involving bicycles during the last eight years:

- 2011 – 162 total collisions, 3 resulting in fatality
- 2010 – 177 total collisions, 2 resulting in fatality
- 2009 – 163 total collisions, 1 resulting in fatality
- 2008 – 156 total collisions, 0 resulting in fatality
- 2007 – 161 total collisions, 1 resulting in fatality
- 2006 – 122 total collisions, 3 resulting in fatality
- 2005 – 145 total collisions, 3 resulting in fatality
- 2004 – 169 total collisions, 1 resulting in fatality

The number of collisions in the last five years has remained fairly consistent with no more than three fatalities occurring during this time period. Ultimately, the City would like to see a significantly reduced number of collisions and no fatalities in designated bicycle facilities. In order to achieve this, additional educational programs are needed along with enforcement of traffic laws and correct usage of facilities.

Future Data Collection

As part of the goals and measurable benchmarks articulated in this *Plan*, the City of Indianapolis is planning to conduct bicycle counts along the City's dedicated bicycle lanes to determine the level of bicycle usage. These counts will support analysis pertaining to mode share, most traveled routes, and demonstrated need for additional dedicated facilities. These counts will be collected from a series of manual and automated counters. Some of these will be on the bike routes permanently, while others will have the ability to be moved to other bikeway sections. This automated counting equipment will allow the City to monitor bicycle facility usage during various times of day, in varying weather conditions, and on a more consistent basis.

Analysis

As shown in the *Current Bikeways Plan* and *2012-2015 Connectivity Plan*, the City of Indianapolis and the MBAC have selected future routes for new bikeways based on location of current facilities and levels of usage, identified desired routes, and opportunities to capitalize on concurrent road construction projects. The result is the 64 miles of on-street facilities complemented by the 59 miles of greenway trails, all of which form the Indianapolis bicycle system.

The evaluation of current facilities along with selection of future facilities has typically been informal and occurs on an as-needed basis. Future evaluation should consider using the leading national method, the Bicycle Level of Service (BLOS) Model. BLOS is method of assessing the bicycle compatibility of existing roadways. It uses the same measurable traffic and roadway factors that transportation planners and engineers use for other travel modes. Balancing a quantifiable measurement with less objective decision-making criteria, such as windshield surveys or public input on desired routes, creates a more accurate, reliable evaluation system in the development of future routes and in the prioritization of future projects.

A BLOS analysis considers several variables including:

- Number of through vehicle travel lanes per direction
- Vehicle travel lane widths
- Paved shoulder or bicycle lane widths
- Average Daily Traffic (ADT) counts
- Posted speed limit
- Amount of truck or commercial traffic
- Pavement condition ranking (1=worst, 5= best)
- Percentage of road with occupied on-street parking
- On-street parking time limits

BLOS scores resulting in the categories of A, B, C, D, E, and F to reflect a road segment's level of service for bicycle travel. A roadway segment must score at a level A, B, or C to be considered as a bicycle compatible roadway. Many urban cities and state highway departments are using this method of evaluating their roadway networks. Indianapolis should consider this technique in future planning.

The purpose of reviewing the needs of commuter and recreational bicyclists is to plan for future facilities for both user groups. Data collected and analyzed can also be used as documentation when pursuing funding opportunities and to justify expenditures and use of resources. In assessing the needs for additional bicycle infrastructure and non-infrastructure programs, public input, gap analysis through field research, and identification of barriers along existing routes should all be considered to determine the most efficient and logical means to connect networks gaps, remove barriers, and make other improvements to enhance the bicycle system and encourage additional use. Thus, providing the opportunity to increase the mode share, a benchmark and evaluation tool to measure the success of this *Bicycle Master Plan* and the entire network.

Existing & In-Process Facilities (Engineering)

The "Engineering E" of the Six Es of bicycle planning is the most tangible, objective, and perhaps the most common. It is the infrastructure that is on the ground. This section documents the City of Indianapolis' existing and in-process facilities that are either currently in-place or will be in-place by 2015. The City's bicycle network features several types of facilities and treatments. Facility type and application decisions are situational with a variety of factors that influence the decision. Considerations include:

- Users (age, skill level, ability) and purpose (transportation, recreation)
- Available space and adjacent environment
- Cost
- Best practices and recent successes

Documented facilities include: on-street (sharrows and bicycle lanes), two-way cycle tracks, The Cultural Trail: A Legacy of Gene & Marilyn Glick, greenways, multi-use paths, and off-road trails.

On-street facilities make up the majority of the bikeway network in Indianapolis. There are two types of these facilities throughout the City:

a. Sharrows, also known as "Share the Road" markings, are pavement markings that illustrate a bicycle and two chevron arrows. Sharrows are typically used in the cases when a roadway

cannot accommodate dedicated striped bike lanes. The presence of sharrows does not change how an automobile operates on the roadway, rather they alert motorists that bicyclists may be nearby and notify bicyclists of a designated bikeway. Examples of sharrow use in Indianapolis include:

- Shelby Street, between Raymond Avenue and Troy Avenue
- Broad Ripple Avenue, between College Avenue and the Monon Trail
- For more information, http://nacto.org/cities-for-cycling/design-guide/bikeway-signing-marking/shared-lane-marking/

b. **Bicycle lanes** are a minimum of five feet wide and are usually located on the right side of the roadway, except for instances when they are shifted to the left side of a right-only turn lane. These shifts in the bicycle lanes are painted green in areas where the facility crosses with the vehicle travel lane. Examples of on-street bicycle lanes in Indianapolis include:

- New York and Michigan Streets
- Shelby/Madison Street
- Lafayette Road
- For more information, http://nacto.org/cities-for-cycling/design-guide/bike-lanes/conventional-bike-lanes/

Two-way cycle tracks are bicycle facilities separated from moving vehicular traffic with a physical barrier. This separation provides an additional level of cyclist protection and safety. There are a variety of treatments that can be used in cycle track design, including curbs, bollards, or elevating the facility above grade. In most cases, both directions of bicycle traffic are included on one side of the street. Green paint is used at times when the vehicle travel lane crosses over the cycle track facility. One example of a two-way cycle track in Indianapolis is:

- Shelby Street from Prospect Street to Pleasant Run Greenway
- For more information, http://nacto.org/cities-for-cycling/design-guide/cycle-tracks/two-way-cycle-tracks/

The Cultural Trail: A Legacy of Gene and Marilyn Glick is an amenity unique to Indianapolis. It is a world-class urban bicycle and pedestrian path that connects neighborhoods, locally designated cultural districts and entertainment venues, and serves as the Downtown Indianapolis hub for the entire central Indiana greenway system. In a sense, the Cultural Trail is a cycle track in that bicyclists are physically separated from moving vehicles. However, it is not a true cycle track because there are sections of the facility where bicyclists share space with pedestrians. The Cultural Trail is considered a hybrid of a two-way cycle track and a raised cycle track. The Cultural Trail's route and description of its adjacent amenities is listed at http://www.indyculturaltrail.org/about.html.

The Monon Rail Trail is Indianapolis' most well-known and frequently-travelled greenway.

Greenways are a prominent feature of Indianapolis' bicycle and pedestrian network. The term "greenway" describes both the facility and its environment. The facility itself is typically a ten foot asphalt paved path that is used for both recreational and commuting purposes. Facilities are often located along natural features, utility lines, or rail lines. The absence of adjacent vehicle traffic makes these bicycle and pedestrian ways "green." Greenways receive a high level of usage from all ages and abilities because of the infrequent interactions with vehicular traffic.

The Indy Greenways System features 59 miles of trails. When complete, the Greenways system will have more than 200 miles of trails with an estimated two million annual visits. Examples of greenways in Indianapolis include:

- Central Canal Towpath (unpaved, compacted limestone)
- Monon Rail Trail
- Pennsy Rail Trail
- Pleasant Run Greenway
- White River Greenway

Multi-use paths or side paths are similar to a greenway in facility design; however, they are typically located within a road right-of-way. When space allows, multi-use paths offer an alternative to sidewalks accommodating both pedestrians and bicycles. In denser urban centers, multi-use paths are rare due to limited right-of-way. In less dense suburban and rural areas, multi-use paths paralleling roadways are common and desired amenity. Examples of multi-use paths in Indianapolis include:

- Michigan Road, 38th Street to I-465
- 62nd Street, Keystone Avenue to Allisonville Road
- 71st Street, Binford Boulevard to Hague Road

Off-road trails are primarily used by mountain bikers and other recreational trail riders. These facilities are often located parks or in natural settings and are developed and maintained through collaborations among not-for-profit organizations and local, state, and/or federal governments. Examples of off-road trails in Indianapolis include:

- Town Run
- Soutwestway Park
- Fort Benjamin Harrison

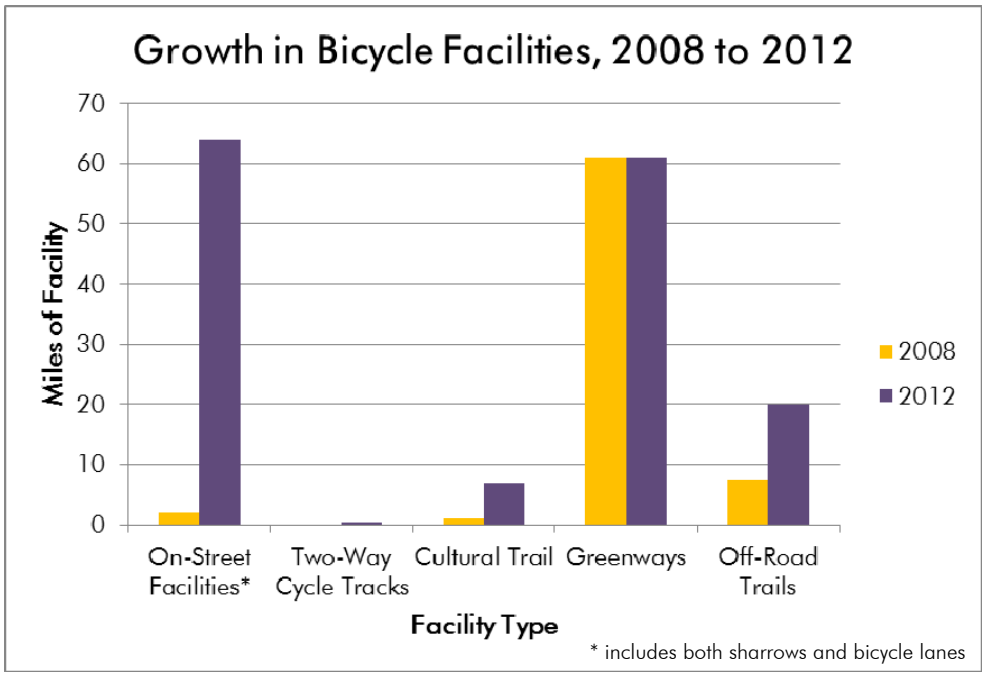
Through cooperations and partnership, the development of Indianapolis' mountain biking trail system can be integrated with on-street facilities.

Through cooperation and partnership between the City's Department of Public Works and Indy Parks & Recreation, the development of Indianapolis' mountain biking trail system can be integrated with the City's on-street bicycle facilities. Like the Six Es of a Bicycle Friendly Community, similar considerations should be given to make a community more mountain bike friendly. These include:

- Natural surface trails should meet standard for sustainability, difficulty, and user type.

- All trail work and consulting should be done by qualified contractors.
- Parks staff should be trained on natural surface trail design, trail maintenance, and trail management.
- The public should be educated on trail rules and ethics.
- Mountain biking should be promoted within Parks Department activities.
- Partnerships with advocacy groups should be explored and utilized.
- Parks staff and rangers should engage users while on the trails to educate and, when needed, enforce trail rules.
- Existing natural surface trail systems should be reviewed for compliance with current specifications for sustainability, difficulty, and user type.
- Natural surface trail master plans should be developed that include mountain biking, trail designers, and public input.

The chart below illustrates the growth in Indianapolis' bicycle facilities between 2008 and 2012.



Within four years, there has been significant growth in the City's bicycle network. Prior to 2008, most of the City's facilities were multi- or shared use paths, such as the extensive greenway system. Starting in 2008, the City advanced the system to include on-street facilities dedicated to bicyclists. By the end of 2011, approximately two percent of all of the City's roadways included a bicycle lane. With the addition of these facilities, usage of bicycles for commuting or transportation purposes is becoming more common and the mode share is increasing. The following plans and maps locate each of the previously identified facility types in areas throughout the City.

Current Bikeways Plan (2011). Currently, the City of Indianapolis has 64 miles of on-street bike lanes, share the roads, and/or cycle tracks, displayed on the map on the following page. The routes identified in red indicate current bicycle lanes. The routes identified in green indicate current greenways. The routes identified in purple indicate the completed portions of the Cultural Trail. The

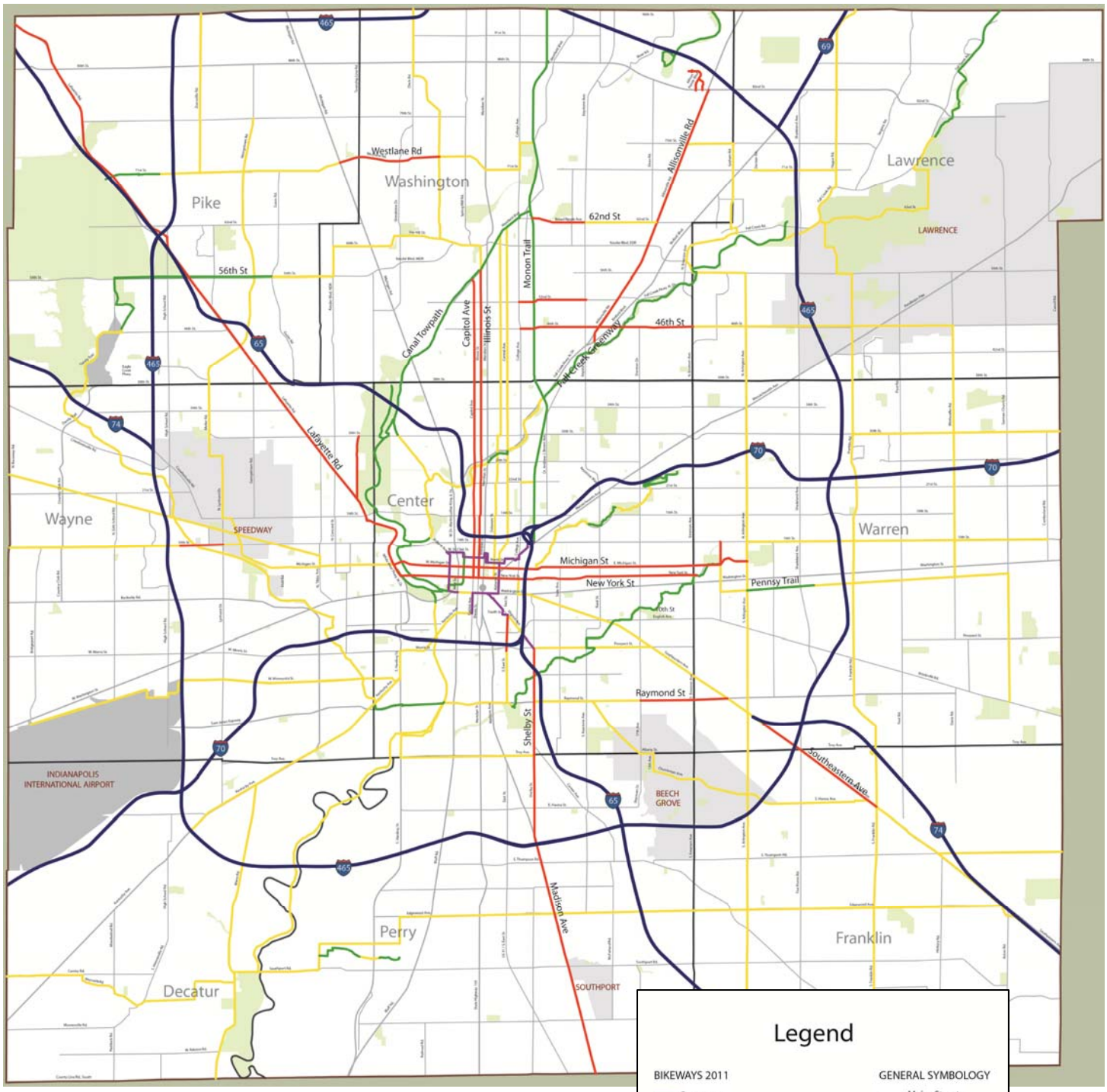
routes identified in yellow indicate future ideal locations of bicycle facilities, which are also noted on the *2012-2015 Connectivity Plan*.

The New York/Michigan Street and Allisonville Road bike lanes were developed under a Federal Transportation Enhancement Grant while the Westlane Road, 52nd Street, Allison Pointe, East Street, Illinois Street (from New York to 16th Street), Lafayette Road (71st Street to County Line), Raymond Street, 10th Street, 52nd Street, and Ritter Avenue bike lanes were included as part of the City's resurfacing program. Southeastern Avenue and Cold Springs Road were part of a sanitary sewer project. The Illinois Street (16th to Towpath)/Capitol Avenue were funded through a public/private partnership with a federal Transportation Enhancement (TE) grant and the McKinney Family Foundation, a private family foundation, providing the match. The Lafayette Road (New York to 71st streets) and Madison Avenue/Shelby Street bike lanes were funded through a Department of Energy Grant for design, construction and inspection. The 46th Street and Broad Ripple Avenue segments were constructed as part of resurfacing projects.

- New York and Michigan Street bike lanes – 11.0 miles – Arlington Avenue to White River Parkway West Drive (April 2009)
- 52nd Street – 1.0 mile – Monon Greenway to Keystone Avenue (August 2008)
- Westlane Road – 1.41 miles – Michigan Road to Ditch Road (October 2008)
- Ritter Avenue – 0.43 miles – East Pleasant Run Parkway South Drive to 10th Street (April 2009)
- Southeastern Avenue – 1.81 miles – Franklin Road to Five Points Road (June 2009)
- Allison Pointe – 0.90 miles – 82nd Street to dead end (June 2009)
- Allisonville Road – 5.5 miles – Binford Boulevard to 82nd Street (November 2009)
- East Street – 0.72 miles – Sanders Street to Fletcher Avenue (November 2009)
- Illinois Street – 5.8 miles – New York Street to Canal Towpath (October 2011)
- Capitol Avenue – 5.63 miles New York Street to Canal Towpath (October 2012)
- Cold Springs Road – 0.88 miles – Lafayette Road to Granada Circle (August 2010)
- Lafayette Road – 13.06 miles – West New York Street to County Line (November 2011)
- Madison Avenue/Shelby Street bike lanes – 8.14 miles – Virginia Avenue (Shelby Street) to County Line Road (Madison Avenue) (October 2011)
- Southeastern Avenue – 0.57 miles – South Sheridan Avenue to Hunter Road (August 2010)
- Raymond Street – 1.64 miles – Sherman Drive to Southeastern Avenue (November 2010)
- 46th Street – 3.29 miles – College Avenue to Emerson Ave (August 2011)
- 10th Street – 0.81 miles – I-465 to Lynhurst Drive (July 2011)
- 52nd Street – 0.28 miles – Monon Trail to College Avenue (August 2011)
- Broad Ripple Avenue – 1.02 miles – Monon Trail to Keystone Avenue (November 2011)

On-street bicycle lanes are now the most common form of bicycle facilities in the City (image credit: Jeremy Albert).

Current Bikeways Plan 2011



2012-2015 Connectivity Plan. The City has planned for an additional 40.16 miles of on-street bicycle lanes to be constructed between 2012 and 2015, as illustrated on the following map. Like the *Current Bikeways Plan,* the routes identified in red indicate current bicycle lanes. The routes identified in green indicate current greenways. The routes identified in purple indicate the completed portions of the Cultural Trail. The routes identified in yellow indicate future locations of bicycle facilities. The dashed sections are projects planned to be completed by 2015. Dashed sections along red routes indicate future on-street bicycle lanes and dashed sections along green routes designate future greenways. These identified future routes do not preclude other projects not identified from taking place should favorable conditions emerge.

Funding for the Cold Springs Road bike lanes is made available through the City's sanitary sewer section construction projects. The 71st Street segments will be completely funded by Citizens Energy Group (CEG). The 22nd Street, East Street, and Prospect/Southeastern Avenue segments do not currently have funding, but potential sources have been identified and are being pursued.

Using the route selection and suitability considerations, outlined earlier in this chapter, as an evaluation and prioritization tool, the following on-street bicycle facility connections are planned for completion between 2012 and 2015. These new connections contribute to the City's fulfillment of the "E"ngineering goal described in "Chapter 4: Goals, Objectives & Benchmarks." In addition to bicycle facilities, other infrastructure is critical to the function of the bicycle system. This infrastructure includes bicycle signals (lights), through bicycle lanes, colored bicycle facilities, and a wayfinding system.

ENGINEERING GOAL: A safe and efficient system of bicycling facilities that connect destinations.					
	Route Selection & Suitability Considerations				
	1	2	3a	3b	4a
Identified Routes (2012-2015)	Routes, without facilities, currently traveled by cyclists	Desirable routes, without facilities, identified by cyclists	Known opportunity for facility construction, coupled with a roadway improvement project based on the capital improvement program	Roadway conditions & environment, in particular vehicular speed and traffic volume	Opportunity to connect to the larger bicycle system
22nd St. – 0.25 miles – Monon Trail to College Ave. (2010)	x	x			x
Prospect Ave./ Southeastern Ave. – 3.10 miles – Shelby St. to Southeastern Ave.; Southeastern Ave. – Prospect Ave. to Pleasant Run Greenway (2011)	x	x	x	x	x
East Street – 0.99 miles – Morris St. to Raymond St. (2011)	x	x			x
Cold Springs Rd. – 0.28 miles – Granada Circle to 30th St. (Fall 2011)	x	x	x	x	x

	Route Selection & Suitability Considerations				
	1	2	3a	3b	4a
Identified Routes (2012-2015)	Routes, without facilities, currently traveled by cyclists	Desirable routes, without facilities, identified by cyclists	Known opportunity for facility construction, coupled with a roadway improvement project based on the capital improvement program	Roadway conditions & environment, in particular vehicular speed and traffic volume	Opportunity to connect to the larger bicycle system
71st St./75th St. – 6.74 miles – Lafayette Rd. to Monon Trail	x	x	x		x
North Perimeter Rd./ Pierson Dr./Minnesota St. – 6.80 miles – Bridgeport Rd. to Eagle Creek Greenway	x	x		x	x
46th St. – 4.9 miles – Emerson Ave. to Mitthoefer Rd.	x	x		x	x
Southeastern Ave. – 6.4 miles – New York St. (College Ave.) to I-74	x	x	x	x	x
Southeastern Ave. – 3.6 miles – Franklin Rd. to Acton Rd.	x	x	x	x	x
Raymond St. – 2.0 miles – Shelby St. to Sherman Dr.		x			x
Troy Ave. – 2.5 miles – Shelby St. to Bluff Rd.		x			x
Bluff Rd. – 0.46 miles – Troy Ave. to South White River Greenway	x	x		x	x
62nd St. Multi-Purpose Path – 1.34 miles – Keystone Ave. to Allisonville Rd.	x	x		x	x
71st St. Multi-Purpose Path – 1.58 miles – Cricklewood Circle to Hague Rd.	x	x		x	x

2012-2015 Connectivity Plan

Bicycle signals (lights) are electrically powered traffic control device that are used in combination with an existing conventional or hybrid signal. Bicycle signals are typically used to improve identified safety or operational problems involving bicycle facilities. Bicycle signal heads may be installed at signalized intersections to indicate bicycle signal phases and other bicycle-specific timing strategies. In the United States, bicycle signal heads typically use standard three-lens signal heads in green, yellow, and red lenses. They provide guidance for bicyclists at intersections where they may have different needs from other road users (e.g., bicycle-only movements, leading bicycle intervals). Indianapolis has one of these to coordinate bicyclists on the Shelby Street cycle track. For more information, http://nacto.org/cities-for-cycling/design-guide/bicycle-signals/bicycle-signal-heads/.

Through bike lanes or bicycle pockets are opportunities for bicyclists to correctly position themselves at intersections to avoid conflicts with turning vehicles. They are used on streets with right-side bike lanes and right-turn only lanes at intersections, on streets with left-side bike lanes and left-turn only lanes at intersections, on streets with bike lanes and where the right or left travel lane terminates in a turn lane, and on streets with bike lanes and a parking lane that transition into a turn lane at intersections. These transition lanes are typically four to six feet wide and provide bicyclists with guidance to follow the preferred travel path and alerts motorists to expect and yield to merging bicycle traffic. The City of Indianapolis has used this treatment in numerous situations as a way to minimize bicycle-vehicle conflicts, specifically along New York Street, Illinois Street, and Lafayette Road.

Combined bike lane/turn lane places a suggested bike lane within the inside portion of a dedicated motor vehicle turn lane. A dashed line either delineates the space for bicyclists and motorists within the shared lane or indicates the intended path for through bicyclists. This treatment maintains bicyclist comfort and priority without a dedicated bicycle through lane and reduces the risk of collisions at intersections. The City of Indianapolis has used this treatment along Illinois Street and Broad Ripple Avenue.

Colored bicycle facilities, including colored pavement, increases the visibility of the dedicated facility, identifies potential areas of conflict, and reinforces priority to bicyclists in conflict areas and in areas with pressure for illegal parking. Colored pavement is commonly applied at intersections, driveways, conflict areas, and along non-standard or enhanced facilities such as cycle tracks. Though rarely done in North America, color can be applied along the entire length of bicycle lanes to increase the overall visibility of the facility. Motorists are expected to yield right-of-way to bicyclists at these locations. Along bikeway corridors, color should be consistently applied either in intersection conflict areas, between conflict areas, or both. The City of Indianapolis has used green paint in a number of different situations to signal a lane shift and to bring extra attention to areas where bike lanes intersect with vehicle travel lanes. Green paint has also been used on the cycle track to mark entrances/exits to parking lots and connecting roads. Specific examples of colored bicycle facilities include:

- New York Street
- Lafayette Road
- Illinois Street
- Shelby Street Cycle Track

Wayfinding systems consist of comprehensive signing and/or pavement markings to guide bicyclists to their destinations along preferred bicycle routes. Signs are typically placed at decision points along bicycle routes, such as at the intersection of two or more bikeways and at other key locations leading to and along bicycle routes. A bicycle system's wayfinding program is vital to creating an efficient and

understandable network that can offer a viable transportation option to the automobile. It directs users to destinations and could also include mileage and estimated travel times. Currently, the City has signage at some critical intersections and for major destinations and is working towards a more comprehensive and consistent system.

Bicycle parking is necessary to support the use of bicycles for transportation purposes. Like the importance of parking for automobiles, the availability of safe and convenient bicycle parking is just as critical to bicyclists. Parking for bicycles is critical in a building's site design and should be located in an accessible, protected, and well-lit area. In response to the increased interest in bicycling activity, communities are adopting specific bicycle parking design, location, and installation requirements.

Indy Bike Hub YMCA complements the bicycle network infrastructure. This recently opened bicycle port facility located in Downtown Indianapolis' historic City Market offers practical support and convenient accommodations for bicyclists that commute to work. Through a partnership with the YMCA, the Indy Bike Hub further advances the community's commitment to making bicycling a reasonable transportation choice for the City's commuters. The Bike Hub is located along the Cultural Trail and features secure indoor bicycle parking, a locker room, showers, a full-service bicycle shop, and YMCA wellness programming. Some bicycle advocacy groups mentioned in Chapter 3 of this document also have offices in the building. For more information, http://indybikehub.org/.

Existing Programs (Education, Encouragement, Enforcement, Evaluation & Planning, Equity)

The remaining Five Es are more programmatic and less tangible when compared to Engineering. These Es are the critical support mechanisms for successful and correct use of the bicycle network. They include the Education of the rules of the road for both cyclists and motorists, Encouragement of bicycling activity through promotional events, organizations, and items, Enforcement of the rules of the road by local police, and Evaluation & Planning of the amount of safe cycling taking place in a community and plans for the future. Equity is not an official E, as designated by the League of American Bicyclists. Equity is an essential quality present in all Es of bicycle planning. Equity pertains to balance in a transportation system – planning for all modes equally. Equity also pertains to social or environmental justice, meaning equal consideration of all citizens and geographies in the development of a bicycle system.


SECTION B • SUNDAY, APRIL 8, 2012

metro+state

Surprised by the attention

Retiring Justice Frank Sullivan would rather talk about his office.

See what everyone's talking about in Conversations

Professor says that much of Indiana may see a long-term economic decline. B7

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Matthew Tully
COMMENTARY

Daniels doesn't break a sweat over stray $526 million

Here, what's a half-billion dollars or so?

These days, it's about the size of a Mega Millions jackpot or the collective amount of the Daniels' administration's screw-ups!

In recent months, the administration has announced misplacing $320 million in tax collections and, now, shortchanging cash-strapped local governments by a whopping $304 million. I should probably help the administration do the math here: that's $624 million worth of oops.

That's a lot of oops. Or as Democratic gubernatorial candidate John Gregg said Thursday, as he understandably exploited the situation: Where else will Joy in Cross, a half-billion dollars is a ton of money.

In Marion County, where police radios are too thin and lane counters have spent years desperately trying to close budget gaps, the latest mistake means local governments above the start of 2011 received almost $54 million less in local income tax disbursements from the state than it deter-

» See TULLY, Page B2

Erika D. Smith
COMMENTARY

Growing support for the arts is encouraging

I was only a little after 6:30 p.m., but from the window of the Primary Colors gallery in the Murphy Building, the crush of the crowd wearing through construction barrels in Fountain

THE YEAR OF THE BIKE?

RULES OF THE ROAD

Indianapolis drivers — and those in some suburban cities and towns, including Fishers — are still getting acclimated to increasingly prevalent bicycle lanes. But bicyclists have long been permitted under state law to use normal traffic lanes on any city street that is not a freeway, access freeway. They must follow the same traffic laws as motorists. Here are rules:

1 2 3

WHAT DO THE MARKINGS MEAN?

• 1. BIKE LANES: These lanes, set off by solid stripes, typically are near the right side of the road. Motorists should avoid bike lanes and should yield to bicyclists.

• 2. GREEN LANES: Green shading is used sometimes to call attention to places where dedicated bicycle lanes cross paths with regular traffic lanes, particularly near intersections with right-turn lanes next to the lane. The idea is to move a vehicle to the turn lane before a bicyclist is in the driver's blind spot.

• 3. "SHARROW" LANES: Shared roadway markings in a normal traffic lane show an arrow with a bicycle. The street is a designated bicycling route, but has no dedicated bike lane. Bicyclists should stay to the right except to pass, to prepare to make a left turn or to avoid unsafe conditions. Motorists should give bicyclists the right of way if they move to the left.

• PARKING: Don't park in bicycle lanes. If you're parked on the street next to a bicycle lane, check behind you before opening the car door or pulling out.

• PASSING: Leave at least 3 feet of clearance and no danger from oncoming traffic before passing a bicyclist.

A lone cyclist heads along a bike lane on West Michigan Street, with some

Now that it has built the bike lanes, the city is waiting for the riders to come

By Jon Murray

You may have biked the grooves throughout winter as Indianapolis drivers navigated around slivers of streets marked off for miles and miles with freshly painted bike lanes.

And, often, not a bicyclist in sight.

As prime cycling weather looks bold — and as motorists grapple with what the sometimes-confusing markings and symbols all mean — now comes the test for the city's newly expanded bicycle network of on-street bikeways. Will bicyclists start using them?

City leaders, tapping into a growing bicycle culture, are betting they will. Plans are in the works to continue the rapid expansion of bike lanes, which doubled last year, as well as greenway paths, which meander through the city for 60 miles.

The city is aiming for 75 miles more of lanes and trails by 2015.

Mayor Greg Ballard, an avid bicyclist, has made adding more bike lanes a top goal. The evidence: Refurbished pa-

» See ROAD, Page B2

Educating the public and enforcing the "rules of the road" are efforts that need to be continually pursued.

Education & Encouragement

In "Chapter 3: Plan Context," numerous advisory and advocacy groups are mentioned as entities engaged in efforts to improve bicycling infrastructure, programs, and policies to ensure cycling safety and convenience. Creating, facilitating, and sponsoring programs, policies, and events require external relationships and partnerships with multiple agencies and organizations.

Indianapolis has a growing range of Education and Encouragement initiatives and activities that support and advance bicycling throughout the community.

These initiatives and activities involve various organizations, City and County government, and the private business community. The following programs and events contribute to the Indianapolis bicycle community's efforts to Educate citizens and Encourage bicycling in the City.

Mayor's Bike Ride is a collaboration among the City of Indianapolis' Office of Sustainability, the Marion County Public Health Department, and local bicycling groups. The event is typically held during the first week of June and features a tour of the most recently installed bicycle lanes. With leadership and participation from the Mayor's office, the City's continued commitment to its bicycle network and community is demonstrated. The event was started in 2009 and attracts 500 to 1,000 participants.

Polar Bear Pedal is a new event for the City that takes place in the winter as a way to continue the enthusiasm for bicycling in the City. The inaugural 12-mile ride took place on January 2, 1012, with close to 400 bicyclists in attendance.

N.I.T.E. (Navigate Indy This Evening) Ride is an annual event coordinated by the Central Indiana Bicycle Association. Since 1994, this event has invited cyclists to bike 20 miles through Indianapolis starting at 11:00pm. This ride attracts 2,000 to 3,000 participants. For more information, http://www.niteride.org/.

Bike to Work Day is the signature event for Indianapolis' cycling community and for INDYCOG. Held in May, national Bike Month, bicycle commuters ride to the center of downtown Indianapolis and receive information about commuting by bicycle, giveaways, and breakfast. Additionally, a Commuter Challenge is part of the festivities where business and individual commutes are tracked during Bike Month and Bike to Work Day and participants are rewarded. This event promotes bicycle commuting as a viable mode of transportation in Indianapolis.

2 Wheels 1 City is a fundraiser for INDYCOG and Freewheelin' Community Bikes. Since 2010, this event has celebrated bicycles and bicycle culture in Indianapolis with fun competitions, group rides, music, and food.

Bicycle Friendly Community (BFC) provides incentives, hands-on assistance, and award recognition for communities that actively support bicycling. A BFC welcomes cyclists by providing safe accommodation for cycling and encouraging people to bike for transportation and recreation. Indianapolis has been a BFC at the Bronze level since 2009. For more information, http://www.bikeleague.org/programs/bicyclefriendlyamerica/communities/.

Bicycle Friendly Business (BFB) program recognizes employers' efforts to encourage a more bicycle friendly atmosphere for employees and customers. The program honors innovative bike-friendly endeavors and provides technical assistance and information to help companies and organizations become even better for bicyclists. This new initiative complements the League's Bicycle Friendly Community program. Indianapolis has a number of BFB's and sees more applicants every year. Business leaders include (spring 2012):

- Bicycle Garage Indy (Gold level) – approximately 80 employees
- Freewheelin' Community Bikes (Silver level) – one full-time employee, 15 to 20 volunteers
- City of Indianapolis, City-County Building (Bronze level) – approximately 2,500 employees
- Eli Lilly and Company (Bronze level) – approximately 10,000 employees

- Indiana State Department of Health (Bronze level) – approximately 630 employees
- Keep Indianapolis Beautiful (Bronze level) – 18 employees
- Storrow Kinsella Associates (Bronze level) – 10 employees
- Sun King Brewing Co. (Bronze level) – 19 employees
- Butler Fairman & Seufert, Inc. (Honorable Mention) – 85 employees
- IndyGo (Honorable Mention) – approximately 475 employees
- The Broadbent Company (Honorable Mention) – approximately 100 employees

Traffic Skills 101 gives cyclists the confidence they need to ride safely and legally on roadways or along a trail. The course covers bicycle safety checks, fixing a flat, on-bike skills, and crash avoidance techniques and includes a student manual. Recommended for adults and children above age 14, this nine-hour course prepares cyclists for a full understanding of cycling. Bicycle Indiana and other League Certified Instructors offer Traffic Skills 101 courses in Indianapolis. There are plans to offer these classes on a regular basis and to reach an increasingly diverse audience.

Safe Routes to School (SRTS) is a national initiative that focuses on providing safe alternatives to driving and busing children to school. Schools are encouraged to apply for grants that address both infrastructure and non-infrastructure (programming) projects. Several Indianapolis-area schools, representing Indianapolis Public Schools (IPS), Marion County townships, charter schools, and private schools, have received grants that have been allocated to walking and biking to school programs.

Third Generation Bike Share Program is planned to launch in 2013 through a partnership among the Central Indiana Community Foundation, the Indianapolis Cultural Trail, Inc., and the City of Indianapolis. The program targets Downtown Indianapolis Downtown and the extents of the Cultural Trail. It will include up to 24 bikes stations equipped with up to 300 bikes. The program is intended to be functional by the end of 2013. This program covers a relatively small portion of the Indianapolis area, and could potentially be the initial phase of a citywide program. Subsequent phases could include cultural resource connections with outlying facilities, as well as economic justice connections with underserved residential areas.

Enforcement

Traffic law enforcement is critical to improving safety and educating motorists and bicyclists about the rules of the road. By holding bicyclists and motorists accountable for their actions, they will be more inclined to follow the rules to create a safe and inviting environment for all modes of transportation. Enforcement involves the participation of local law enforcement and educating officers on applicable local and state bicycling laws.

There is a liaison between the Indianapolis Metropolitan Police Department (IMPD), the Department of Public Works, and the bicycling community. This liaison provides contact and planning for all bicycling events, education, and outreach. Bicycle traffic laws are covered in the IMPD training academy while specific training is offered at the International Police Mountain Bike Association (IPMBA) cyclist school also through IMPD. The City of Indianapolis has more than 250 IPMBA trained police officers and four IPMBA instructors on staff. Some officers are on routine patrol, some are assigned to special projects, and all districts utilize bike patrols in situations where bicycles provide an advantage, better visibility, and ability to approach areas quietly. Currently, two districts have dedicated bicycle patrol officers. It is the intention of the City to have at least one, full-time bicycle patrol officer in each of the City's six police districts.

Evaluation & Planning

The creation of this *Bicycle Master Plan* is a significant component of the Evaluation & Planning E. Evaluation & Planning involves the collection, evaluation, and publishing of bicycle related data to monitor the progress of the bicycle planning efforts, implementation success, and project prioritization. Establishing a vision for the bicycle network and creating goals and objectives are fundamental to the evaluation process and create community awareness about the City's efforts to incorporate bicycling into the overall transportation system. This E has two distinct, yet related considerations.

1. Data Collection for Evaluation

   As indicated in the Indianapolis MPO's *Central Indiana Travel Survey*, referenced earlier in this chapter, less than half of all Marion County households owned a bicycle. Those living within the Central Business District are more likely to use a bicycle than other households in the County. When traveling to work or school, 12.4 percent of Marion County households indicated that the mode of transportation is non-motorized. A majority of these households are located within the Central Business District.

   The 2008-2010 American Community Survey estimates that one percent of Marion County commuting employees, working outside of their home, travel to and from work by means other than personal vehicle, carpool, public transportation, or walking. Commuting by bicycle is in the "other means" category which also includes several additional types of transportation other than bicycle. It cannot be assumed that all 2.2 percent of Center Township "other means" commuters travel to and from work by bicycle. This fact is considered when establishing the mode share benchmarks for bicycle usage. Although this existing data is ambiguous, it does demonstrate the need for the City of Indianapolis to develop a means to count the number of commuting cyclists to establish reasonable benchmarks and other evaluation metrics. The information from the Central Indiana Travel Survey and the American Community Survey serves as confirmation that significant progress must be made in encouraging commuters to alter their transportation mode of choice.

   Between 2004 and 2011, the Indiana State Vehicle Crash record system has more than 1,200 collisions involving bicycles documented, averaging approximately 158 per year. Fourteen of these collisions resulted in a fatality. In the reporting of collisions, it is not known how these crashes have occurred, if the cyclist was in a dedicated bicycle facility, if the cyclist was using the facility properly and obeying traffic laws, or the party at fault (motorist or cyclist).

   The City of Indianapolis' Bicycle Coordinator and engineering staff are working on a way to calculate crash rates for bicycle-vehicle incidents in order to identify the highest ratio intersections. Ultimately, the City would like to see a significantly reduced number of collisions and no fatalities in designated bicycle facilities. In order to achieve this, additional educational programs are needed along with enforcement of traffic laws and correct usage of facilities along with infrastructure improvements. Crash data is also used to evaluate the transportation network and prioritize bicycle improvements based on need and known or potential hazards.

2. Planning

   This *Bicycle Master Plan* is the City of Indianapolis' first comprehensive plan dedicated to the development of its bicycle network. It was created over six months in late 2011 and early 2012 through a partnership among the City's Department of Public Works, the Mayor's Office of Sustainability, and the Metropolitan Planning Organization with significant input from the

Mayor's Bicycle Advisory Council. It is anticipated that the plan will be adopted by the Indianapolis-Marion County City-County Council in 2012. In addition to the development of the *Bicycle Master Plan*, the existing 2002 *Greenways Master Plan* will receive an update in 2012. Created by the City's Parks Department, this plan will continue the vision for a regional network of linear open space that connects neighborhoods and promotes recreation, fitness, alternative transportation, and conservation.

There are several local and regional plans that highlight bicycle facilities as key components in the City's transportation system and emphasize connectivity. These plans are discussed in "Chapter 3: Plan Context." In terms of built infrastructure, the City of Indianapolis has identified the spines of the bicycling network providing Countywide connectivity. For instance, the Monon Trail and the New York and Michigan streets bike lanes provide north/south and east/west backbones, respectively. Future routes will build from these established facilities. The Indianapolis Cultural Trail creates a downtown loop, providing connections to major residential and historic neighborhoods, sporting, concert, and convention venues and Fortune 500 companies throughout the Central Business District and identified Cultural Districts throughout the City. Future planned routes to the northwest, northeast, and south will directly connect to the existing network spine to provide bicycle access to more densely populated areas of the City, adjacent counties, as well as parks, commercial districts, educational campuses, and other neighborhoods.

The Metropolitan Planning Organization is developing a *Multimodal System Plan* which identifies key, higher density areas throughout the region and is promoting multimodal connectivity into these nodal areas. The plan includes linking bikeways and greenways into these areas, along with transit improvements, to help promote more sustainable, mixed use bicycle and pedestrian friendly developments throughout the region. All IndyGo buses are equipped with bicycle racks to promote intermodal travel. With the completion of the recommendations outlined in existing and in-process plans along with identified projects, such as the Cultural Trail, there will be numerous locations where facilities intersect and opportunity for intermodal transfers.

Public input is critical in the development and improvement of the City's transportation system. In particular, Indianapolis' bicycling community is involved in matters pertaining to bicycling safety, route selection, and government policies that provide balance among all transportation modes. Additionally, the City of Indianapolis has several ways for bicyclists and other citizens to submit ideas and concerns to public officials including the Mayor's Action Center's phone and online hotline, the Metropolitan Planning Organization's series of public meetings on the use of federal funding for transportation projects, and the City's Bicycle Coordinator, a staff position dedicated to the development of the City's bicycle network and facilitator of the monthly Bicycle Advisory Council meetings.

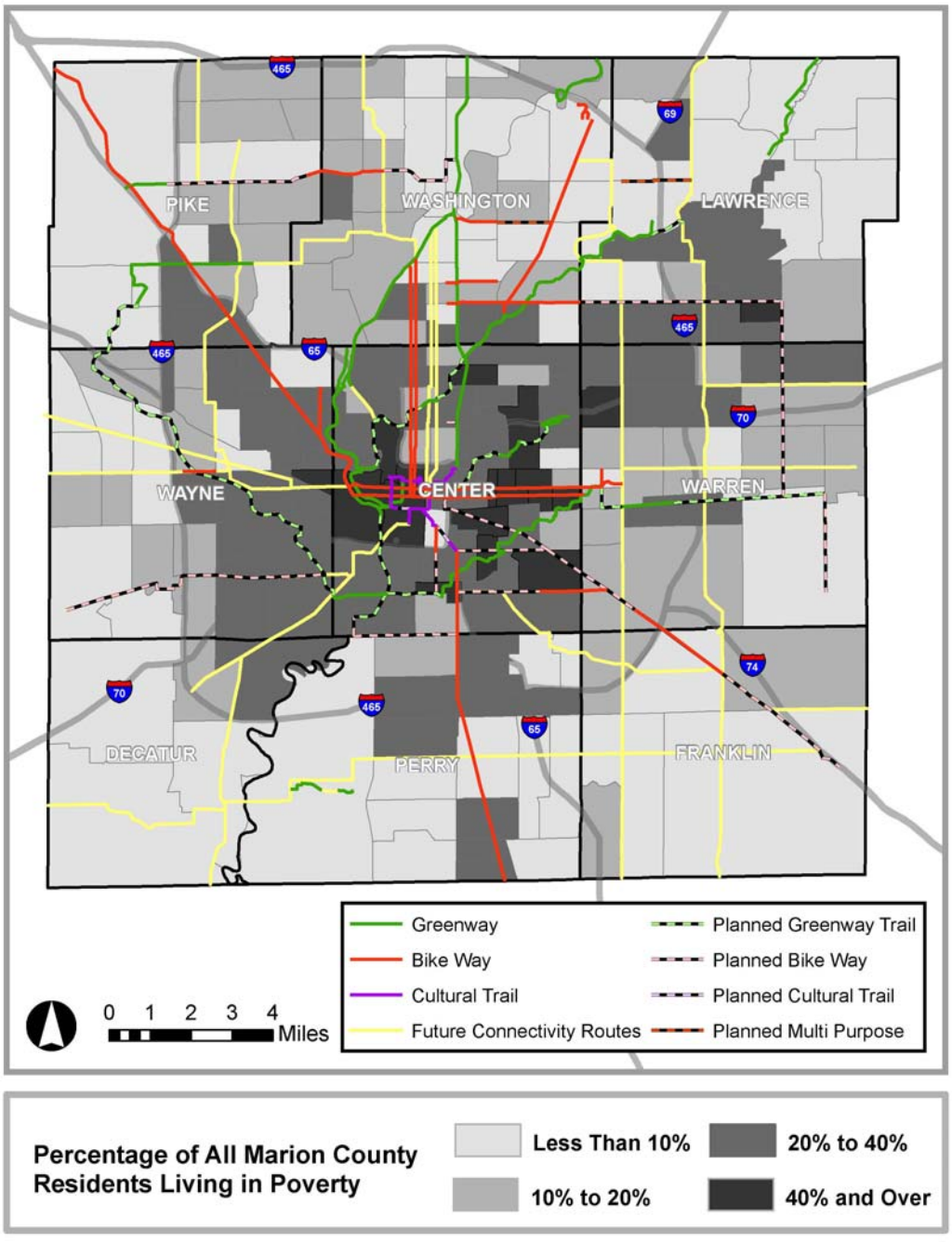
Equity

Equity is unofficially recognized as the sixth E which creates a transportation system that values the needs of all users – balancing all modes of transportation while meeting the needs of those that bicycle by choice and because of necessity.

Equity in access to transportation is an important step in creating a sustainable city. Riding a bicycle can be extremely modest in cost compared to owning a vehicle, offering a more affordable

transportation that still provides door-to-door service. The proposed network of bikeways will provide Indianapolis residents and their families with the choice to cycle to access workplaces, schools, medical facilities, shopping areas, parks, and transit.

The following map was developed to show how the bikeways system is developing to provide affordable transportation choices to those living in poverty in Indianapolis. Census block groups are shown in varying shades of gray or black, denoting the percentage of people living in that block group that are living in poverty. Nearly all block groups that have poverty levels greater than 40 percent will be connected to the bikeways system by those routes that are planned through 2015. Completion of the remaining future connectivity routes will expand that access to nearly all block groups that have a poverty level above 20 percent.



CHAPTER 6

Project, Program & Policy Identification

Bicycling is a mode of transportation with considerable health, economic, environmental, and social benefits. Planning for bicyclists should occur when planning for all modes of transportation. It can be assumed that bicycles will be ridden on all roadways, except where prohibited by law. This assumption is highlighted in this *Plan's* guiding principles described in "Chapter 2: Introduction." As such, all new roadways should be designed and constructed under the assumption that they will serve a variety of transportation modes including bicycles.

Incorporating accommodations for bicycles in future planning, development, and policy initiatives greatly increases the chances for safe bicycle infrastructure and a complete bicycle system, which reduces the risk to cyclists while increasing their mobility options. The following sections outline the intentions of the City of Indianapolis in its future development of its bicycle system and the further expansion of its initiatives pertaining to the Six Es of a Bicycle Friendly Community.

Planned Infrastructure Projects

By 2015, the City of Indianapolis is planning to construct 40.16 miles of on-street bicycle lanes. This will bring the total of on-street facilities to more than 100 miles. In addition to these new facilities and planning for the years between 2015 and 2020, the City intends to initiate three key projects intended to build upon the *2012-2015 Connectivity Plan* and enhance the overall bicycle network.

1. **Complete** the vital connections to and between existing on-street bicycle facilities and greenways.
2. **Construct** bicycle boulevards in selected, demonstration neighborhoods and corridors. Bicycle boulevards are sometimes called a neighborhood greenway. It is a street where all types of vehicles are allowed, but the roadway is modified as needed to enhance bicycle safety and convenience. Typically, these modifications will also calm vehicular traffic and improve pedestrian safety. Indianapolis is in the process of identifying potential locations for bicycle boulevards, including the King Park Neighborhood with a 17th Street connection to the Monon Trail and 46th Street from College Avenue to Butler University.
3. **Install** bike boxes at key signalized intersections. A bike box is a designated area at the head of a vehicle travel lane at

The City intends to construct bicycle boulevards in selected neighborhoods (image credit: www.pedbikeimages.org/ AdamFukushima).

a signalized intersection. It provides bicyclists with a safe and visible way to get ahead of queuing vehicular traffic during the red signal phase. As part of the *Connectivity Plan*, the City plans to install numerous bike boxes by 2020. For more information, http://nacto.org/cities-for-cycling/design-guide/intersection-treatments/bike-box/.

Bikeways Plan 2015-2020. To specifically address the three project initiatives outlined above, the City of Indianapolis has approximately 100 additional miles of on-street bicycle lanes planned for many well-traveled primary corridors throughout the City. This increase in miles of infrastructure will occur between 2015 and 2020. With the construction of these facilities, the entire Indianapolis bicycle network will feature approximately 200 miles of on-street bicycle lanes that connect neighborhoods with places of employment, schools and educational facilities, commercial centers, recreational activities, entertainment destinations, and other transportation systems including the City's expansive greenway system. A more complete network, coupled with these connections, is critical to making bicycling an accepted and respected form of transportation in Indianapolis and critical to fulfilling the vision and goals established in this *Bicycle Master Plan*.

This future phase of the *Bikeways Plan* is not funded and will become a priority once currently funded projects, identified in the *2012-2015 Connectivity Plan*, are developed. Identified future (2015-2020) routes include needed connections between on-street bicycle lanes and greenways. Some of these routes are shown in yellow in the *2012-2015 Connectivity Plan* featured in "Chapter 5: Existing Conditions & Analysis."

Planned Non-Infrastructure Programs

It can be expected that as the number of bicycle facilities increase in the City, the number of users will also increase. As the number of bicyclists increase, there will be a need to create and facilitate additional programs and events that support, encourage, and celebrate cycling in Indianapolis. With future infrastructure projects planned for initiation between 2015 and 2020, several non-infrastructure programs are also planned to advance the City's efforts of the development of the Education, Enforcement, Evaluation & Planning, and Equity Es. Future programs include:

Ciclovia/Open Streets Project. City leaders and staff, along with bicycle advocacy groups, have shown interest in organizing an event that will close a stretch of roadway(s) to vehicular traffic for use by bicycles and pedestrians only. Most likely, this event would take place on a Sunday and could be paired with other types of bicycle promotion activities. Ciclovias provide an innovative way to achieve public health, environmental, social, and economic goals for communities.

Regularly scheduled 101 classes. As demand for more educational programs increase, there is a desire to create regularly scheduled Traffic Skills 101 classes including monthly classes over the summer season.

Coffee for Commuters. As an outreach opportunity to socialize and network, Coffee for Commuters is an event that provides coffee to bicycling commuters along commuter routes (e.g. greenways, bike lanes, Bike Hub) and representatives from the cycling community will host a presentation and discussion on the City's bicycle program and other relevant topics.

Expanded business involvement. Involving more businesses, especially those located along bicycle routes, in the support and development of Indianapolis cycling requires outreach to the private-sector community. This outreach includes an educational component and highlighting the economic benefits

of bicycling, from a commercial perspective, to business owners and managers. An example includes encouraging selected retailers to stock bike supplies (e.g. tire levers, pump, tubes, etc.) on hand and available to passing cyclists in need.

Bilingual bicycle educational materials. All printed materials will be offered in English and Spanish to reach and involve the City's diverse population.

Bike Rodeo. This event is a bicycle safety clinic featuring inspections, quick tune-ups, and short presentations on the rules of the road. This is followed by a ride on a miniature "chalk street" course set up in a parking lot where young cyclists are shown where and how to apply the rules. Optional activities include helmet fitting, prizes and drawings, and a bicycle vendor fair. Indianapolis has seen a number of these events hosted by a variety of groups, however, events reaching a broader audience is an identified need.

Continued involvement by IMPD. Public safety is working to improve involvement and communication between the bicycling community and IMPD officers. IMPD is a resource for organizing, hosting, and facilitating educational events that focus on safety for motorists and bicyclists.

Policy Recommendations

Policies are the City's protocol or commitments that guide decisions about future projects and programs pertaining to the *Bicycle Master Plan* and future bicycle planning activities. Policies communicate to citizens, government agencies, and developers the desired role of bicycle transportation in the City of Indianapolis.

This *Bicycle Master Plan* will be presented to the Indianapolis-Marion County City-County Council for adoption. City staff will use the *Plan* adoption process as an opportunity to educate the Councillors on the progress and success of the City's commitment to bicycle transportation. Additionally, City staff and MBAC members will reinforce, through this education process, the need to embrace and apply the *Plan's* recommendations for full realization of the vision. To ensure implementation, ordinances that support the vision, goals, and objectives will need to be revised or created and enforced. Below are descriptions of ordinances that should be developed to facilitate implementation of this *Plan* and assist the City and bicycle advocacy groups in achieving the established *Plan* benchmarks.

A Complete Streets ordinance will ensure that new road projects, where appropriate, will accommodate all modes of transportation (image credit: www.pedbike images.org/JenniferCampos).

Complete Streets. The City recognizes the importance that infrastructure plays in developing a comprehensive multi-modal network. A citywide Complete Streets ordinance reinforces the City's commitment to bicycling as a critical and viable component of its transportation system with a tangible procedure for implementation. The City's Office of Sustainability along with the Mayor's Bicycle Advisory Council and other bicycle advocacy groups is in the process of developing a Complete Street ordinance for the City of Indianapolis. When adopted by the City-

County Council, the ordinance will ensure that new road projects or major road reconstruction projects, where appropriate, will accommodate cyclists, pedestrians, and motorists similarly. Currently, the City's Department of Public Works implements projects in a manner that is aligned with the Complete Streets concept. The impending ordinance formalizes the Department's efforts to ensure continued development of the City's multi-modal system and the realization of this *Bicycle Master Plan's* vision. The League of American Bicyclists, in its evaluation of the 2009 application, recommended that the City of Indianapolis pursue this ordinance before the City applies for a Silver level designation.

As mentioned in "Chapter 3: Plan Context," the City of Indianapolis currently has requirements for sidewalks reinforcing pedestrian connectivity. There has been discussion about creating a similar bicycle facility ordinance for the City that uses the sidewalk requirements as a template. A summary of that ordinance, in particular the construction and development of sidewalk infrastructure, is provided in "Chapter 3." Additionally, the City intends to expand its ordinances that advance and enhance the bicycle system including ordinances that relate to bicycle parking and development of the bicycle system by the private sector.

Bicycle Parking. The City of Indianapolis has reviewed the City of Carmel, Indiana's zoning ordinance and is considering incorporating similar bicycle parking elements into its own ordinance. The City of Carmel requires bicycle parking in new development and/or building expansions requiring Commission or Board approval (Ordinance No. Z-485-05). Sample requirements include:

- A minimum of one bicycle parking space required for every three multi-family residential dwelling units.
- At commercial or retail venues, five bicycle parking spaces per 100 required automobile parking spaces, unless it is determined that less bicycle parking is needed.
- At recreational areas, 30 bicycle parking spaces per 100 required automobile parking spaces.
- Parking device must be an inverted U-type or an A-type structure unless otherwise approved.
- All racks must be coated with a Thermoplastic powder coating and color must be approved.
- Bicycle parking areas must have adequate separation from motor vehicle parking areas to protect parked bicycles from damage by the motor vehicles and to prevent damage to motor vehicles. The separation can come from grade differences, landscaping, poles, physical barriers or other similar features.
- Bicycle parking areas must be installed on a hard dustless surface that allows the parking structure to be securely fastened to the ground.
- Bicycle racks must be placed within 50 feet of the entrance designated as the main entrance of the building for which the racks are required. The bicycle parking areas should be located in a clearly safe and convenient location as to not discourage their use.
- Bicycle parking areas must be easily accessible from all trails, sidewalks, and other alternative transportation facilities.

The creation of a bicycle parking ordinance has been identified as a high priority initiative.

- Bicycle racks should be placed so as to not impede the flow of pedestrian traffic, but still possess the ability to be visually monitored.
- Bicycle parking areas shall be placed in a location that is visible from the building entrance and with proper lighting to ensure security.

Multi-Use (or Side) Path Ordinance. The construction and maintenance of Indianapolis' bicycle system infrastructure is primarily the responsibility of the City's Department of Public Works and the Parks Department. The Department of Public Works is responsible for on-street bicycle lanes and the Parks Department is principally responsible for greenways (most often multi-use paths). On-street bicycle lanes are located on City-owned and maintained streets. In areas of the City, for example in less dense, suburban, or single-family residential areas, multi-use paths along major vehicular thoroughfares may be a more appropriate facility for shared use by both bicyclists and pedestrians. Multi-use paths are a more preferred facility by cyclists who are less experienced and confident in their cycling abilities. The installation and maintenance of these multi-use paths could be the responsibility of the property owner or developer. In the cases where the property is being considered for development or redevelopment, a multi-use path facility could be included in the site development plan, considered in the site plan review, and installed by the developer. This type of requirement is similar to the requirements outlined in the City's sidewalk ordinance discussed in "Chapter 3." Additionally, developers should coordinate with City planners early in the site design process to ensure coordination with other planned transportation improvements.

Along with the creation of a multi-use or side path ordinance, the development of facility design guidelines should also be considered. Design guidelines should communicate the required or preferred design elements important to improving bicycle safety and comfort level. Providing designers, engineers, developers, and planners with these guidelines will help to assure that new and improved bicycle facilities reflect the vision, goals, objectives, and overall intentions of this *Bicycle Master Plan*.

24 Hour Access Ordinance. A City ordinance that allows 24 hour access to trails and greenways for commuting and transportation purposes will generate more bicycle trips if off-street facilities are more fully integrated with the on-street system and are accessible at all times like roadways and sidewalks. In many instances, Indianapolis' greenway system provides a more direct and safer route than the City's roadway network. By allowing full access to these greenways, without time restrictions, the City is reaffirming its commitment to bicycling as a viable, legitimate form of transportation. As this policy is under development, some potential issues related to 24 hour access should be addressed including lighting, jurisdictional changes, patrolling and resource availability, possible liabilities, and others. Ideally, the greenway and trail system would be seamlessly interconnected with the rest of the County's transportation system.

Other Considerations. Numerous policies exist at the federal, state, and regional levels that promote the accommodation of bicyclists in transportation projects. Typically, policies emphasize infrastructure development and support amenities. Policies should also address key education and enforcement programs and provide a framework for implementation. Factors to consider in the developing either bicycle-specific or bicycle-related ordinances or other City policies or commitments should reflect the guiding principles of this *Plan*, described in "Chapter 2: Introduction," and include the following points:

- Bicycle infrastructure:
  - bicycle lanes
  - bicycle routes (on streets only when bicycle lanes are not feasible)
  - bicycle boulevards
  - comprehensive signage system
  - key connections through neighborhoods
  - removal of dedicated right turn lanes along identified bicycle routes
  - discouragement of angle parking along identified bicycle routes (with the exception of "back-in" angle parking)
  - regular maintenance and street cleaning of facilities
  - connections to regional networks outside of Marion County

- Bicycle safety and access in design and maintenance:
  - inclusion of bicycle facilities in all roadway resurfacing, realignment, and reconstruction projects
  - inclusion of bicycle facilities in all bridge projects
  - reduction of conflict points (e.g. at interstate ramps, railroad crossings, drainage gates, on-street parking, etc.)
  - continuation of bicycle lanes or bicycle traffic during road construction/maintenance projects with appropriate signage

- Bicycle parking:
  - installation of bicycle racks in the public right-of-way where appropriate
  - replacement of parking meters, due to central pay stations, with bicycle racks
  - adoption of ordinance that would require new development to include bicycle parking
  - incentives to reduce automobile parking requirements in exchange for provision of bicycle facilities in new development

- Bicycle programming and enforcement:
  - involvement of school districts and community organizations in the development of youth cycling curriculums
  - incentives for City employees that commute by bicycle
  - development of fine structure for violations
  - expanded use of bicycle patrol officers

- *Plan* implementation:
  - dedication and education of City staff in all relevant departments
  - use of local resources to leverage other funding opportunities
  - integration of bicycle facilities and costs into other streetscape and roadway resurfacing projects

Prioritization

"Chapter 5: Existing Conditions & Analysis" describes the Department of Public Works-applied methodology in which the routes were selected for the 2011 *Current Bikeways Plan* and the *2012-2015 Connectivity Plan*. This methodology includes the following considerations: 1) routes, without facilities, currently traveled by cyclists; 2) desirable routes, without facilities, identified by cyclists; 3a) known opportunity for facility construction, coupled with a roadway improvement project based on the

capital improvement program; 3b) roadway conditions and environment, in particular vehicular speed and traffic volume; and 4) opportunity to connect to the larger bicycle system.

To better incorporate the goals, objectives, and Six Es outlined in this *Plan*. It is recommended that this prioritization methodology be expanded to include two additional criteria (4b and 4c) when evaluating future bicycle facility construction projects. In total, there are seven considerations that the City and other implementers should factor into facility construction decision-making.

1. Routes, without facilities, currently traveled by cyclists
2. Desirable routes, without facilities, identified by cyclists
3. a. Known opportunity for facility construction, coupled with a roadway improvement project based on the capital improvement program
   b. Roadway conditions and environment, in particular vehicular speed and traffic volume
4. a. Opportunity to connect to the larger bicycle system
   b. Opportunity to connect to destinations
   c. Opportunity to connect to underserved populations

The *2012-2015 Connectivity Plan* featured in Chapter 5 identifies future on-street bicycle connection routes delineated in yellow. These routes may become bicycle lane construction projects between 2015 and 2020. As each of these routes is assessed, the above-listed measures, including current use by bicyclists, desirability, economies of scale possibility, favorable context and environmental conditions, and connectivity, should be taken into account. These considerations, and the subsequent route evaluation process, are intended to assist decision-makers and *Plan* implementers with project development and allocation of resources. For instance, a proposed route meeting all seven considerations should be deemed a higher priority than a proposed route that meets only two or three considerations. However, it is important to note that priorities can change with changes in circumstances, responsibilities, and resources. As such, this evaluation method and prioritization process should be used only as a guide and the methodology and assessment process should be reviewed and updated as needed.

Additionally, it is essential to solicit the thoughts and concerns of community citizens in the planning and development of future bicycle facilities. Public input offers valuable insight and validation in the identification of needed connections and project prioritization. The finalization of the planned routes slated for construction between 2015 and 2020 should include community participation and feedback. The route finalization process should include a public input gathering event, organized by the City and bicycle advocates, to confirm route selection and generate additional public awareness and support for the Indianapolis bicycle system.

As new bicycle infrastructure projects are initiated and completed throughout the City, the implementation of future bicycle programs and policies should also be prioritized using evaluation criteria that are consistent with *Plan* goals and the Six Es. The chart below is intended to assist decision-makers and *Plan* implementers with program and policy development and allocation of resources. For instance, a proposed program or policy meeting all listed Es should be deemed a higher priority than a proposed program or policy that meets only one or two Es. However, it is important to note that priorities can change with changes in circumstances, responsibilities, and resources. As such, this prioritization chart should be used only as a guide and the methodology and evaluation process should be reviewed and updated as needed. It is assumed that on-street bicycle lane construction and maintenance will be conducted by the City's Department of Public Works.

Conversely, the following identified future programs may be undertaken by community members, organizations, and bicycling advocates, which may or may not involve the City of Indianapolis in a leadership capacity.

FUTURE PROGRAMS & POLICIES						
Identified Future Program (2015-2020)	ENGINEERING GOAL: A safe & efficient system of bicycling facilities that connect destinations.	EDUCATION GOAL: An understanding of & respect for the rights & responsibilities of the road for cyclists & motorists.	ENCOURAGE-MENT GOAL: Increased bicycle ridership & support for bicycling culture & activity.	ENFORCEMENT GOAL: A safe environment for all modes of transportation.	EVALUATION & PLANNING GOAL: Continual review & assessment of the bicycle system's physical, procedural & programmatic effectiveness.	EQUITY GOAL: A system that serves the needs of diverse citizens & all users & abilities.
Ciclovia/Open Streets Project		x	x		x	x
101 classes		x	x		x	x
Coffee for Commuters		x	x			
Expanded business involvement	x	x	x			
Bilingual educational materials		x	x			x
Bike Rodeo		x	x			x
Continued IMPD involvement		x		x	x	
Identified Future Policy (2015-2020)	ENGINEERING GOAL: A safe & efficient system of bicycling facilities that connect destinations.	EDUCATION GOAL: An understanding of & respect for the rights & responsibilities of the road for cyclists & motorists.	ENCOURAGE-MENT GOAL: Increased bicycle ridership & support for bicycling culture & activity.	ENFORCEMENT GOAL: A safe environment for all modes of transportation.	EVALUATION & PLANNING GOAL: Continual review & assessment of the bicycle system's physical, procedural & programmatic effectiveness.	EQUITY GOAL: A system that serves the needs of diverse citizens & all users & abilities.
Complete Streets ordinance	x	x		x	x	
Bicycle parking ordinance	x		x		x	x
Multi-use path ordinance	x		x		x	
24 hour access ordinance	x		x	x	x	x

Using this assessment process, each program and policy is further classified with a high, medium, or low final priority rating. A high priority program or policy may be initiated, and possibly completed, before 2015. This program or policy addresses a majority of the route selection and suitability considerations or goals. A medium priority program or policy is likely to be initiated after 2015 and addresses half of the route selection and suitability considerations or goals. A low priority program or policy is likely to be initiated after 2018 and addresses only a few of the route selection and suitability considerations or goals. These programs and policies are categorized based upon present circumstances. As mentioned previously, these priorities could be adjusted as conditions and funding opportunities change. Funding availability may affect the order in which projects are completed and other projects not classified as high priority should not be prevented from implementation if the opportunity arises.

PRIORITY INITIATIVES					
HIGH		MEDIUM		LOW	
Program	Policy	Program	Policy	Program	Policy
Bilingual educational materials	Complete Streets ordinance	Ciclovia/Open Streets Project	Multi-use path ordinance	Coffee for Commuters	
Continued IMPD involvement	Bicycle parking ordinance	101 classes			
	24 hour access ordinance	Bike Rodeo			
		Expanded business involvement			

CHAPTER 7

Implementation

In "Chapter 2: Introduction," this *Plan* documents several guiding principles that represent the bicycle system-related values of City officials, staff, advocates, and the Indianapolis community. The recognition of these guiding principles and subsequent commitments by decision-makers are vital to the successful implementation of the recommendations outlined in this *Bicycle Master Plan*. In addition to these principles, there needs to be an overall dedication by City leaders and staff to continuously improve and maintain the bicycling environment and allow sufficient funding and other resources to support the recommended projects and programs.

Identified future (2015-2020) bicycle routes, programs, and policies are provided in Chapters 5 and 6. Future programs and policies have been prioritized based on relevance to the Six Es of a Bicycle Friendly Community. A prioritization methodology is outlined that includes a list of seven decision-making criteria for the evaluation and construction of future routes. Future facilities, programs, and policies and the prioritization methodology are flexible and serve as guidelines for those responsible for implementation. These recommended routes, programs, and policies may change over time as a result of changing conditions, opportunities, and constraints. Department of Public Works staff, along with the Mayor's Bicycle Advisory Council, should review these recommendations periodically to ensure that they reflect the City's most current priorities, needs, and opportunities, that implementation can occur in a logical and efficient way, and that available funding can be leveraged with other resources or funding opportunities.

This chapter contains a description of the groups responsible for *Plan* implementation, funding options, a work plan with appropriate timeline for completion, and explanation of the *Plan* adoption procedure. The work plan restates the goals, objectives, tools (the "to do" items to achieve the objectives), and measurable benchmarks to be used to evaluate the success of this *Plan*. The work plan should be a part of the monthly Mayor's Bicycle Advisory Council meeting agenda to monitor progress. As with facility, program, and policy prioritization, this work plan is not static and should be modified on a regular basis.

A successful city bicycle system involves the coordination and cooperation of many organizations and multiple modes of transportation.

Roles & Responsibilities

As stated earlier, a comprehensive bicycle system should go beyond facility construction. Adding bike lanes to a street or multi-use paths to a greenway are key components, but a successful system is not complete without considering how these improvements

will be managed and utilized. To be a successful system, management should increase awareness and use, improve safety, and foster personal ownership of the system.

The majority of the *Bicycle Master Plan's* work plan "to do" items and future projects are the responsibility of City's Department of Public Works staff. Nearly all listed tools under each objective identify the City with the lead implementation responsibility. This is certainly the case with all on-street bicycle lane facility construction and maintenance. Other, non-infrastructure programs will require leadership and active participation from the public (non-City), private, and non-profit sectors. Likely implementing organizations (or the "usual suspects") are identified as members of the Mayor's Bicycle Advisory Council as well as the organizations and bicycling advocates profiled in "Chapter 3: Plan Context." However, successful *Plan* implementation may require the creative partnerships, coordination, cooperation, and agreements between multiple agencies and organizations, some that may not be listed. As each tool and recommendation is considered for implementation, Department of Public Works should first consult this roles and responsibilities list and then solicit the assistance of others, as needed, based on prudence.

Funding Opportunities

Funding for the complete development of the 2020 Indianapolis bicycle system will require creative use of resources, partnerships, leveraging opportunities, and judicious timing. Identifying potential funding sources is relatively straightforward, but obtaining money can be difficult. Funds are limited and competitive. For these reasons, it is essential that implementation of bicycle projects be accomplished in a way to maximize efficiency and return on investment. Funding for bicycle facilities and programs come from a variety of sources, including transportation and non-transportation federal funds as well as local resources such as tax revenue and voter-approved bonds. It is unrealistic to rely on a single source of funds. Funding and cooperation from the public, private, and non-profit sectors is critical to a successful funding and implementation strategy.

In the past, the City has utilized funds from the Congestion Mitigation and Air Quality Improvement (CMAQ) program, the Federal Highway Administration's Transportation Enhancements (TE), Recreational Trails Program (RTP), Safe Routes to School (school led initiatives with City support), Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grant program, RebuildIndy, the capital improvement program, and public-private partnerships to develop the City's on- and off-street bicycle system. Funding from many of these sources is expected to continue, although not guaranteed, through 2020, but additional sources are also needed.

The Congestion Mitigation and Air Quality Improvement (CMAQ) Program was created to support the goals of improving air quality and reducing congestion and was most recently reauthorized in 2005 under the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). Funds are programmed by the Federal transportation bill and can be used for a broad variety of bicycle and pedestrian facilities and programs. The funds can be used for constructing bicycle and pedestrian facilities that are not exclusively recreational and reduce vehicle trips, non-construction outreach related to safe bicycle use, and establishing and funding State bicycle/pedestrian coordinator positions for promoting and facilitating non-motorized transportation modes through public education, safety programs, etc. To be eligible, a project must be identified in the MPO's current transportation plan and Transportation Improvement Program (TIP).

Transportation Enhancement (TE) activities offer funding opportunities to help expand transportation choices and enhance the transportation experience. To be eligible, TE activities must qualify under one or more of the 12 eligible categories. Categories include: provision of facilities for pedestrians

and bicycles; provision of safety and educational activities for pedestrians and bicyclists; and preservation of abandoned railway corridors (including the conversion and use of the corridors for pedestrian or bicycle trails). Funds are distributed directly by the state TE office and require a minimum 20 percent local match. Current year (2012) funds are only available for existing projects that are within two years of letting and can demonstrate a reasonable plan to meet the letting date. Newly identified projects cannot apply for TE funds in 2012.

Recreational Trails Program (RTP) is a matching assistance grant that provides funding for the acquisition and/or development of multi-use recreational trail projects and is sponsored by the US Department of Transportation's Federal Highway Administration. RTP funding represents a portion of the revenue received by the Federal Highway Trust Fund from the federal motor fuel excise tax paid by users of off-road recreational vehicles and are made available from Indiana's share of funds from the SAFETEA-LU. Indiana RTP will provide 80 percent matching reimbursement assistance for eligible projects. Applicants may request grant amounts ranging from a minimum of $10,000 up to a maximum of $150,000. RTP funds can be used for development and rehabilitation of trailside, trailhead facilities, and trail linkages; construction of multi-use trails; acquisition of easement or property for trails; construction of bridges, boardwalks and crossings; and signage.

Safe Routes to School (SRTS) is a federal program designed to make walking and bicycling to school safe and routine. The Indiana Department of Transportation (INDOT) is responsible for administering the Indiana SRTS program. A SRTS Advisory Committee reviews applications and make recommendations to fund infrastructure projects and non-infrastructure activities. Eligible infrastructure improvements, within two miles of school, include construction or striping of on-street bicycle lanes, construction of off-street shared use paths, and installation of bicycle parking facilities and racks. Non-infrastructure improvements may be in the form of bicycle and pedestrian encouragement activities and incentive purchases (e.g. reflective tags, high-visibility wristbands, shoelaces, shoe stickers or pant cuff bands, and bicycle lights, helmets, bells, or locks).

Authorized by the American Recovery and Reinvestment Act of 2009, the Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grant program provides funding for road, rail, transit, and port projects that promise to achieve national objectives. Congress dedicated $1.5 billion for TIGER I, $600 million for TIGER II, and $526.944 million for the FY 2011.The FY 2012 Appropriations Act appropriated $500 million, available through September 30, 2013, for national infrastructure investments. This appropriation is similar, but not identical to the appropriation for the "TIGER" program but because of the similarity in program structure, the Department of Transportation will continue to refer to the program as "TIGER Discretionary Grants." As with previous rounds of TIGER, funds for the FY 2012 TIGER program are to be awarded on a competitive basis for projects that will have a significant impact. Priority is given to projects which will significantly impact desirable, long-term outcomes, and create jobs and economic stimulus. Secondary selection criteria are innovation and partnership. The Indianapolis Bicycle and Pedestrian Network was awarded $20.5 million for the development of The Cultural Trail: A Legacy of Gene & Marilyn Glick as part of the TIGER I program.

RebuildIndy is Mayor Ballard's current initiative to improve infrastructure throughout the City of Indianapolis. Projects have focused on restoring deteriorated thoroughfares, residential streets, sidewalks and bridges, as well as address neighborhood drainage and flooding issues and demolish unsalvageable abandoned homes that pose a public safety threat to neighborhoods. Projects are selected based on resident requests to the Mayor's Action Center and the Mayor's Neighborhood Liaisons, City-County Councillors input, and open houses and neighborhood meeting presentations

conducted as part of the RebuildIndy process. Bicycle projects already funded by the RebuildIndy initiative include the Indianapolis Cultural Trail, Illinois Street and Capitol Avenue bike lanes, Arlington Avenue bike lane, and the 62nd Street multi-use trail.

The City's **Capital Improvement Program (CIP)** is a short-range plan identifying capital projects and equipment purchases. It is an important management tool for the City and provides information on leveraging available resources through improved timing of projects and coordination of city led projects with those of other public or private entities. In addition to identifying projects, the CIP typically includes project ranks, plans for financing, timetables for construction, and justification of expense.

Public-Private Partnerships is cooperation between the public and private sectors is critical to the successful implementation of this *Plan*. This cooperation comes in the form of a partnership between government and the private sector for the purpose of more effectively proving services and infrastructure traditionally provided by the public sector. Public sector efforts can be leveraged with private sector funding sources including monies contributed by small businesses, corporations, and grant foundations, civic organizations, and citizens. Successful use of private funds for Indianapolis' bicycle system development includes The Cultural Trail: A Legacy of Gene and Marilyn Glick and a portion of the Capitol and Illinois streets bike lanes.

Other communities have successfully used the **Transportation, Community and System Preservation Program (TCSP)** to fund bicycle system development. This program is authorized by SAFETEA-LU and provides funding for a comprehensive initiative including planning grants, implementation grants, and research to investigate and address the relationships among transportation, community, and system preservation plans and practices and identify private sector-based initiatives to improve those relationships. States, metropolitan planning organizations, and local governments are eligible for grants for projects that improve the efficiency of the transportation system; reduce environmental impacts of transportation; reduce the need for costly future public infrastructure investments; ensure efficient access to jobs, services, and centers of trade; and examine community development patterns and identify strategies to encourage private sector development patterns and investments that support these goals.

The private development community is an important partner in facility construction. There is an interest in pursuing ways to encourage or require developers to install facilities, primarily multi-use paths paralleling major thoroughfares, and include facilities in an overall development or redevelopment plan. This means of bicycle system funding correlates with the creation of a multi-use path ordinance described in "Chapter 6: Project, Program & Policy Identification." If the ordinance is in place, then the City has the ability to enforce the requirements on the developer, similar to the enforcement of the current sidewalk ordinance.

Building on the involvement of the private sector in bicycle system development, a tool listed under the third objective of the Encouragement goal (Chapter 4)

Construction of bicycle lanes along Illinois Street involved the private sector.

is to, "Establish a sustainable and dedicated revenue or funding source to pay for events, educational programs, promotional materials, and, in limited instances, infrastructure." A benchmark for this goal is five percent of the bicycle network, amenities, or programs to be financed by private sources. Leadership from the Mayor's Bicycle Advisory Council is critical in securing private funds to achieve this objective.

The third objective listed under the Evaluation & Planning goal (Chapter 4) states to, "Identify and secure funding to implement this Bicycle Master Plan." Tools to accomplish this objective include committing a percentage of the annual City budget for development and maintenance of the bicycle system, pursuing funding opportunities with multiple agencies and City departments, and acquiring maximum funding available from state and federal sources. Ideally, at least five percent of the City's budget, general fund, and/or capital improvement program will be dedicated to advancing and maintaining the City's bicycle network.

Work Plan

Below is a work plan, organized by the Six Es, that assigns responsibility and a timeline to each tool; listed tools are the City's "to do" items. On an annual basis, minimally, the Department of Public Works and the Mayor's Bicycle Advisory Council should review this work plan and the program and policy prioritization chart in Chapter 6 to develop a strategy for moving these "to do" items forward. It is important that this is completed prior to City budgeting time in order to ensure adequate funding is in place if City funds are anticipated. Review of this work plan should continue through 2020 as this *Plan's* vision is realized. This review should consider new information and circumstances and incorporate changing conditions into decisions. Noting benchmark achievements helps to build support for future projects, programs, and policies. The identification of less successful components of the *Plan* may suggest a need for refinement and/or amendment.

As stated earlier in this chapter, the majority of the *Bicycle Master Plan's* work plan "to do" items and future projects are the responsibility of City's Department of Public Works staff. Other, non-infrastructure programs will require leadership and active participation from the public (non-City), private, and non-profit sectors. Responsibilities are organized by the following entities:

- City (C), primarily the Department of Public Works, but may also involve other departments such as the Office of Sustainability, Metropolitan Planning Organization, Department of Metropolitan Development, and/or others.
- Public sector includes government agencies outside of the City of Indianapolis.
- Private (P) sector includes the business community, volunteers, or quasi-public organizations.
- Non-profit (NP) sector includes advocacy organizations, charities, foundations, and associations involved with the community's bicycling efforts.

The City's Department of Public Works is responsible for implementing the on-street bicycle facility projects identified in this *Plan*.

ENGINEERING		
Goal: A safe and efficient system of bicycling facilities that connect destinations.		
Objective: 1. Make it easier for citizens to choose bicycling as a preferred mode of transportation.	Responsibility	Timeline
Tool a. Complete the *Connectivity Plan 2011 & 2012-2015*.	C, NP, P	2015
Tool b. Fill in the network gaps.	C	Ongoing
Tool c. Connect on and off-street bikeways throughout the City.	C	Ongoing
Tool d. Expand the construction of cycle tracks to include connections between the Cultural Trail and the City's greenways.	C, NP, P	Ongoing
Tool e. Increase the amount of secure bicycle parking.	C, NP, P	Ongoing
Tool f. Coordinate connections among all transportation modes.	C, NP, P	Ongoing
Tool g. Ensure that new and improved facilities to accommodate bicyclists conform to current best practices and guidelines provided through INDOT, AASHTO Guide for the Development of Bicycle Facilities, and NACTO Urban Bikeway Design Guidelines.	C, NP, P	Ongoing
Objective: 2. Establish City-led commitments or policies that advance the bicycle network's infrastructure development.	Responsibility	Timeline
Tool a. Adopt a Complete Streets ordinance.	NP, C, P	2013
Tool b. Adopt an ordinance that allows for 24 hour access to trails and greenways	NP, C, P	2013
Tool c. Review and modify, if necessary, the Department of Public Works' design standards to allow for integration of bicycle facilities into road design.	NP, C, P	2015
Tool d. Integrate bicycle facility consideration into all City planning, engineering, decision-making, development review, and approval processes.	C, NP	Ongoing
Tool e. Include a representative from the City's Department of Metropolitan Development on the Mayor's Bicycle Advisory Council.	C	2012
Tool f. Incorporate bicycle facilities into road resurfacing and reconstruction projects where appropriate.	C	Ongoing
Tool g. Require bicycle parking and/or facilities in all new development projects where appropriate.	C, NP, P	2013 initiation-2020
Tool h. Provide incentives for developers to include bicycle parking and/or facilities in new development projects where appropriate.	C, NP, P	2013 initiation-2020

Engineering Benchmarks:

- Adopted Complete Streets ordinance.
- 200 miles of bicycle lanes constructed.
- 20 miles of cycle tracks constructed.
- 24 hour access to trails and greenways.
- 1,500 available secure bicycle parking spaces available in the public right-of-way.
- Pedestrian/bicycle infrastructure installed within two miles of every school.
- Inclusion of bicycle facilities considered in all road resurfacing/reconstruction projects.
- Inclusion of bicycle facilities and/or amenities in all new commercial, industrial, and institutional developments.
- Inclusion of bicycle access in all future transit projects, incorporating bicycle amenities on transit vehicles and at stops.
- Representative from Department of Metropolitan Development participating on the Mayor's Bicycle Advisory Council.

EDUCATION		
Goal: An understanding of and respect for the rights and responsibilities of the road for cyclists and motorists.		
Objective: 1. Develop a strategy to routinely communicate a consistent message about the safety and benefits of bicycling and the availability of facilities throughout the City.	Responsibility	Timeline
Tool a. Recruit and train bicycling ambassadors.	NP, C, P	Ongoing
Tool b. Increase the number of certified League Cycling Instructors (LCI) through LAB.	NP, C, P	Ongoing
Tool c. Provide training, through the National Highway Traffic Safety Administration or other means, for IMPD officers on all laws pertaining to bicycling and bicycle facilities.	NP, C	2013 initiation-2020
Tool d. Work with Indiana Bureau of Motor Vehicles to incorporate all laws pertaining to bicycling and bicycle facilities into driver education courses.	C, NP	2013 initiation-2020
Tool e. Offer the League of American Bicyclists Smart Cycling and Traffic Skills 101 courses.	NP	Ongoing
Tool f. Develop "on-the-bike" workshops for City staff, public safety officers, City-County Councillors, and other decision-makers.	NP, C	2013 initiation-2020
Tool g. Work in partnership with community organizations to develop and implement a pedestrian and bicycling rules and safety program for elementary, middle, and high school curricula.	NP, C	2014 initiation-2020
Tool h. Support and partner with non-profit organizations, such as Freewheelin' Community Bikes, that are involved with youth bicycling, bicycle-related education, and skill development.	NP, C, P	Ongoing
Tool i. Encourage all schools to participate in Safe Routes to School.	NP, C	Ongoing
Tool j. Explore the opportunity to hire one staff person, or contractor, to administer and facilitate the City's Safe Routes to School initiative.	C, NP	2013 initiation-2020
Tool k. Include safety tips and rules of the road on all printed and digital materials related to bicycling.	C, NP	2014 initiation-2020
Objective: 2. Remain current on trends, opportunities, and best practices.	Responsibility	Timeline
Tool a. Maintain memberships in bicycle advocacy and professional organizations.	C, NP	Ongoing
Tool b. Invest in continuing education/professional development training for bicycle coordinator and other key City staff.	NP, C	Ongoing
Tool c. Participate in peer exchange with other cities of similar size and character to share information.	C, NP, P	Ongoing
Education Benchmarks: • At least one League Cycling Instructors certified class offered per year. • At least 12 programs offered per year pertaining to bicycling safety and skill development. • All IMPD officers educated per year on bicycling safety and laws. • 10,000 adult bicyclists and motorists educated per year on bicycling safety and laws. • 10,000 children educated per year on bicycling safety and laws. • All new motorists educated on bicycling safety and laws through driver education courses. • 100% participation in Safe Routes to School, or similar program, for all public and private schools. • One, dedicated staff person to administer and facilitate the City's Safe Routes to School initiative. • Five City staff attending six professional development training sessions, seminars, conferences, exchanges, etc. per year.		

ENCOURAGEMENT		
Goal: Increased bicycle ridership and support for bicycling culture and activity.		
Objective: 1. Publicize the convenience, health, environmental, and cost-savings benefits of bicycling.	Responsibility	Timeline
Tool a. Designate one paid professional, agency, or organization to manage the bicycling community's communications.	NP, CP, P	Ongoing
Tool b. Create public service announcements to raise awareness about bicycling.	C, NP	Ongoing
Tool c. Create, maintain, and distribute a comprehensive printed and digital bikeways map.	NP, C	2013 initiation-2020
Tool d. Create a Smart Trips/Travel Smart transportation demand management program to encourage short trips to be made by bicycle.	NP, C	2015 initiation-2020
Objective: 2. Increase business community's involvement in the development of the bicycle network and increased ridership.	Responsibility	Timeline
Tool a. Provide incentives to business owners that accommodate the needs of bicyclists and offer amenities.	C, NP, P	2013 initiation-2020
Tool b. Create a campaign for local businesses to be designated a "Bicycle Friendly Business."	NP, C, P	2013 initiation-2020
Tool c. Continue to promote the Pedal & Park program for all high-profile special events occurring in the City.	NP, C	Ongoing
Objective: 3. Expand existing and develop new regularly occurring events that advocate bicycling.	Responsibility	Timeline
Tool a. Establish an event planning committee with oversight provided by the communications manager.	NP, C, P	2013 initiation-2020
Tool b. Support the expansion of the bike share program that is scheduled to launch in spring 2013.	C, NP, P	2013 initiation-2020
Tool c. Partner with a professional sports team to host special events.	NP, C, P	2014 initiation-2020
Tool d. Establish a sustainable and dedicated revenue or funding source to pay for events, educational programs, promotional materials, and, in limited instances, infrastructure.	C, NP, P	2015 initiation-2020
Encouragement Benchmarks: • Continuation of community interest and participation in bicycling events such as the Mayor's Bike Ride, Polar Bear Pedal, Bike to Work Day, 2 Wheels 1 City, and N.I.T.E. Ride. • Number of media events (radio, television, Internet, or print) increased to four occurrences per month. • 30,000 printed maps distributed each year. • 10,000 visits to www.indy.gov/bikeways website each year. • Increased number of creative partnerships to finance the development of the bicycle network, additional amenities, and/or future programming initiatives.		

ENFORCEMENT		
Goal: A safe environment for all modes of transportation.		
Objective: 1. Improve bicyclist safety.	Responsibility	Timeline
Tool a. Host re-occurring Enforcement for Bicycle Safety seminars.	NP, C	2014 initiation-2020
Tool b. Promote a Share the Road campaign.	C, NP	Ongoing
Tool c. Encourage IMPD to create an annual report on number of documented bicycle-related citations and accidents.	C, NP	2013 initiation-2020
Tool d. Identify most dangerous areas for cyclists and use collected data and analysis to create bicycle safety campaigns.	C, NP	Ongoing
Objective: 2. Hold motorists and cyclists accountable for the rules of the road.	Responsibility	Timeline
Tool a. Increase the number of police bicycle patrols.	C, NP	2013 initiation-2020
Tool b. Provide police officers with training about bicycling and bicycle safety issues.	NP, C	2014 initiation-2020
Tool c. Incorporate traffic laws and acknowledgement of penalties into bicycling education programs.	NP, C	2013 initiation-2020
Tool d. Incorporate traffic laws and acknowledgement of penalties into driver education programs.	NP, C	2013 initiation-2020
Tool e. Review and modify, if necessary, laws affecting bicyclists to be consistent with transportation plans and/or road development.	C, NP	2013 initiation-2020
Tool f. Select random enforcement days that are targeted for increased enforcement activity and driver/cyclist awareness programs.	C, NP	2013 initiation-2020
Enforcement Benchmarks: • Continual decrease in the number of crashes and/or enforcement violations, as identified by IMPD, involving bicyclists in designated facilities. • Continual decrease in the number of crashes and/or enforcement violations, as identified by IMPD, involving bicyclists in non-designated facilities. • One dedicated bicycle patrol unit located in each IMPD district. • All IMPD officers educated annually on bicycling safety and laws. • All IMPD cadets educated on bicycling safety and laws. • 10,000 adult bicyclists and motorists educated per year on bicycling safety and laws. • 10,000 children educated per year on bicycling safety and laws.		

EVALUATION & PLANNING		
Goal: Continual review and assessment of the bicycle system's physical, procedural, and programmatic effectiveness.		
Objective: 1. Create a reliable system that monitors usage and allows accurate counts of facility users.	Responsibility	Timeline
Tool a. Document crash data and traffic violation incidents involving bicyclists.	C, NP	2012 initiation-2020
Tool b. Survey citizens before and after public awareness campaigns.	NP, C	2014 initiation-2020
Tool c. Record attendance at bicycling events and programs.	NP, C	Ongoing
Objective: 2. Integrate the development of the bicycling network into larger planning efforts and development projects.	Responsibility	Timeline
Tool a. Adopt this *Bicycle Master Plan*.	C	2013
Tool b. Update the *Bicycle Master Plan* as goals are accomplished and as conditions change.	C, NP	2013 initiation-2020
Tool c. Educate directors and key staff in applicable City departments on the vision, goals, and objectives of this *Plan* and solicit implementation support and assistance.	NP, C	2013 initiation-2020
Tool d. Evaluate *Plan* benchmarks and goal realization annually and provide update to all City departments, partners, and bicycling advocates.	C, NP	2014 initiation-2020
Objective: 3. Identify and secure funding to implement this *Plan*.	Responsibility	Timeline
Tool a. Commit percentage of annual City budget, general fund, capital improvement program, etc. to the development and maintenance of the bicycle system.	C	2015 initiation-2020
Tool b. Review, annually, potential bicycle projects that can be incorporated into the capital improvement program.	C, NP	2013 initiation-2020
Tool c. Pursue funding partnerships and opportunities with multiple agencies and City departments.	NP,C, P	Ongoing
Tool d. Acquire maximum available from state and federal sources.	C, NP	2012 initiation-2020

Evaluation & Planning Benchmarks:

- At least one permanent counter installed on each major roadway with a bike lane supplemented by portable counters used throughout the City's bicycle system.
- Manual counts of bicycle facility usage on key routes conducted twice a year.
- Silver Level Bicycle Friendly Community designation obtained from the League of American Bicyclists by 2013.
- Platinum Level Bicycle Friendly Community designation obtained from the League of American Bicyclists by 2020.
- Mode share increased to 10% of the population riding bicycles for transportation in the Central Business District.
- Mode share increased to 2% of the population riding bicycles for transportation in Marion County, outside of the Central Business District.
- 100% of City staff informed of this *Plan* and its vision, goals, and objectives.
- 5% of City budget, general fund, capital improvement program, etc. allocated to the development and maintenance of the City's bicycle network.
- At least two grant application(s) submitted annually, assuming availability, for *Plan* implementation.
- One annual meeting with bicycling community stakeholders to solicit feedback on bicycling issues, maintenance, and facilities and provide an update on implementation progress.

EQUITY		
Goal: A system that serves the needs of diverse citizens and all users and abilities.		
Objective: 1. Ensure that bicycle programs, facilities, and amenities are planned for and constructed in underserved neighborhoods.	Responsibility	Timeline
Tool a. Evaluate locations of future facilities and prioritize facilities connecting under-resourced neighborhoods, where appropriate.	C, NP	Ongoing
Tool b. Offer opportunities for free bicycling education and safety courses in under-resourced neighborhoods neighborhoods.	C, NP, P	2013 initiation-2020
Tool c. Provide free, or low cost, bicycles, helmet, and other safety equipment for children in economically disadvantaged neighborhoods.	C, NP, P	Ongoing
Objective: 2. Ensure that bicycle programs, facilities, and amenities are planned for and constructed to address the needs of underserved populations.	Responsibility	Timeline
Tool a. Partner with social service agencies to offer opportunities for free bicycling education and safety courses for agency clients.	C, NP	2013 initiation-2020
Tool b. Partner with social service agencies to provide free, or low cost, bicycles, helmet, and other safety equipment for agency clients.	C, NP	2014 initiation-2020
Tool c. Provide bilingual educational materials for non-English speaking residents.	C, NP	2013 initiation-2020
Equity Benchmarks: • Connection of all Marion County's under-resourced neighborhoods to the bicycle network. • At least 10 bicycle programs/activities held in under-resourced neighborhoods annually. • At least 10 bicycle programs/activities held in social service agencies annually. • All bicycle promotional materials available in Spanish.		

Adoption

This *Plan* will be presented to the Indianapolis-Marion County City-County Council for adoption. City staff will use the *Plan* adoption process as an opportunity to educate the Councillors on the progress and success of the City's commitment to bicycle transportation. *Plan* adoption will ensure the continuation of the City's bicycle-friendly efforts and achievement of the 2020 vision throughout administration and personnel changes.