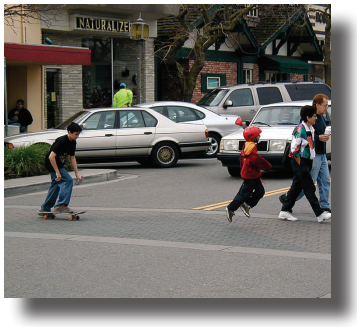
Bike – Walk HP 2030

A Complete Streets Policy and Non-Motorized Transportation Plan for the City of Highland Park



City of Highland Park
Approved September 10, 2012

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Bike – Walk HP 2030

Executive Summary

Bike – Walk HP 2030 is a Complete Streets Policy and Non-Motorized Transportation Plan for the City of Highland Park which supports the Greenways Plan element of the City of Highland Park Master Plan. The current Greenways Plan states that "it is intended to increase enjoyment, safety and access for both walkers and bicyclists, and especially children and senior citizens. Although the (Greenways) Plan focuses on recreational walking and biking, it also encourages more residents to walk or bike to work, school and shopping." Bike-Walk HP 2030 is an evolution and updating of the concepts and policies established in the Greenways Plan and remains consistent with the overall goal and objectives of the Plan, which was adopted in 1994 and updated in 2003 and 2007.

The Bike-Walk HP 2030 Plan including the Complete Streets Policy and Plan recommendations support the above objectives and reflect best practices for bicycle and pedestrian planning, public comment, professional staff expertise and previously approved City Plans. Bike – Walk HP 2030 proposes that the City of Highland Park plan for improvements to the City's street and transportation system that will serve all users: cyclists, pedestrians, the disabled, transit users and users of motor vehicles. The purpose of the Plan is to provide each user with an improved, more enjoyable and safer access to local and regional destinations. Bike – Walk HP 2030 recommendations support programmatic improvements - those involving non-infrastructure means for promoting cycling and walking; and physical improvements to the street, sidewalk, intersection and trail systems. The timeframe for implementation of the Plan is from date of adoption to 2030.

Bike – Walk HP 2030 proposes that Highland Park develop dedicated bicycle lanes, designate shared roadways, sign bicycle routes and shared-use paths; and improve sidewalks and intersections throughout the City for cyclists and pedestrians. These facilities will make it easier to walk or ride around town and offer safe and scenic places for recreation close to home. This Plan responds to these desires by proposing routes that offer both transportation and recreational benefits while respecting and enhancing the environment. The Plan also includes recommendations to make it easier to use existing local public transportation for persons of all abilities. Implementation of Bike – Walk HP 2030 will be overseen by the Departments of Public Works and Community Development with coordinated assistance from other City Departments.

The Plan recommends that scheduling future bicycle and pedestrian improvements be elevated to the level of other street improvements for which infrastructure Master Plans haven been adopted by the City. The City has adopted Master Plans for street surfaces and sanitary and sewer systems; these Master Plans help the City prioritize expenditures for system improvements. In *Bike-Walk HP 2030* an improvement prioritization policy is recommended so that new facility improvements are balanced with lower cost infill or retrofit projects. By incorporating bicycle and pedestrian improvements into an infrastructure Master Plan, these planned improvements will be incorporated in the Capital Improvement Plan that is considered and approved each year by the City Council as part of the City of Highland Park's annual budget.

Finally, the Plan identifies initial projects for the first five years of implementation. These projects were selected to get the Plan off to a quick start and engage community support for implementation of the Plan over its 18 year timeframe. The initial projects will provide the City of Highland Park an opportunity to implement and evaluate different kinds of facility improvements on varying street types (e.g. arterial versus local streets).

While the time horizon of the Plan is to 2030, the Plan should be evaluated and adjusted on a regular basis to address issues and opportunities as they arise.

I. Introduction

Highland Park's beautiful beaches, ravines, lake bluffs, forests, wetlands, and prairies have attracted and delighted residents since the area was first settled nearly 150 years ago. These abundant natural features set the context for and provided an unmatched environment for the development of houses, businesses, churches and synagogues, schools, parks, golf courses, and other facilities during the past century. The focus of Bike-Walk HP 2030 is developing the means to get residents and visitors alike to these varied destinations by bicycle and walking in as safe, efficient and pleasing manner as possible.

Bike – Walk Highland Park 2030 is a Complete Streets Policy (the "Policy") and Non-Motorized Transportation Plan (the "Plan") for the City of Highland Park. Bike – Walk Highland Park 2030 expands upon and supports the Greenways Plan, which is an element of the City's Master Plan adopted in 1995 and revised/updated in 2003 and 2007[1]. Bike – Walk HP 2030 recognizes that non-motorized modes of travel (cycling, walking and access to transit) are important components of Highland Park's transportation system.

Planning and implementing future improvements for the non-motorized transportation system needs to be treated similarly to improvements for motorized transportation. Consequently, Bike – Walk HP 2030 recommends that the design and implementation of the City's trails, streets and sidewalks should accommodate all users and that non-motorized transportation options are important and viable alternatives to automobile travel, both for local and regional trips. Through Bike – Walk HP 2030, the City will promote and plan for a variety of transportation options – options that are needed and beneficial to the community.

To improve non-motorized travel in and along its streets, Highland Park proposes to establish and utilize a Complete Streets Policy. A Complete Streets Policy is a comprehensive approach to street design that allocates right-of-way space for simultaneous use by motorized vehicles, non-motorized vehicles, and pedestrians. The Complete Streets Policy is intended to establish a design process to address needed non-motorized transportation improvements in a timely and cost saving manner – at the same time as when street improvement designs are considered for the motorized component of City streets.

Additionally, the Plan establishes recommendations for street, trail, sidewalk and intersection structural/physical improvements, as well as programmatic elements, that will yield a more convenient and efficient street network. The physical improvements and programmatic elements will

1 Bike-Walk HP 2030 incorporates the 2007 Greenways Plan Amendment recommending the street-end improvement program for selected streets on the Highland Park lakefront (see Appendix).

offer improved safety for motorists, cyclists and pedestrians, and a more regionally connected, sustainable, and energy efficient community.

Bike – Walk HP 2030 sets forth recommendations which respond to the "Five E's" paradigm established by the League of American Cyclists for its Bicycle Friendly Communities certification. The Five E's are: (1) Engineering; (2) Education; (3) Encouragement; (4) Enforcement; and (5) Evaluation & Planning. The 5 Five E's work as well for planning for pedestrians as cyclists and are similarly applied in *Bike-Walk HP 2030. Bike – Walk HP 2030* is cognizant of these Five Es, and with progressive attentiveness to the Policy and Plan the City can improve its prospects for receiving non-local funding (grants) for project implementation. With completion of various recommended programs and improvements, the City will be eligible to become certified as a Bicycle Friendly Community by the League of American Bicyclists. The Certification is an honor presently attained by a handful of localities in Illinois[2] and can be a useful tool in promoting the City throughout the broader region, for economic development and other purposes (e.g. "bikable", "walkable", livable").

The Policy and Plan components of Bike-Walk HP 2030 were the result of researching previous planning documents, present best practices and a broad range of public participation. In addition to reviewing past City planning documents about non-motorized transportation, a review of existing "state of the art" plans from around the country was conducted. In order to gather local public input, an internet-based community survey was conducted and community meetings were held to gather site-specific input from residents and others as to the particular issues and difficulties they experience getting around in Highland Park when they cycle and walk. The information gathered through these activities was used to support the analysis and recommendation that are contained in the Plan.

Finally, Bike-Walk HP 2030 has a long timeframe (18 years) with significant financial implications for the City. This time period recognizes that providing a coordinated system of cycling and walking improvements will require a sustained period of funding for implementation. There will be challenges for the City related to the funding, design and construction of the recommended improvements. Implementation of the recommendations of *Bike-Walk HP 2030* will entail the use of City staff time and the recognition that constructing non-motorized transportation improvements as part of planned roadway projects or as independent projects will have a financial impact on the City's Capital Improvement Program; these bike and walk improvements will compete with other necessary community infrastructure projects. Furthermore, a number of the proposed improvements are under the jurisdiction and improvement programs of other governmental entities including the Illinois Department of Transportation (IDOT) and the Lake County Department of Transportation (LCDOT) and *Bike – Walk HP 2030* implementation will necessitate cooperation and communication with these and other entities.

2 Certified Illinois municipalities include Chicago, Naperville, Schaumburg and Urbana

Finally, for *Bike-Walk HP 2030* to be a success, City staff, advisory commissions, and elected officials will have to be cognizant of the Plan and its recommended improvement program. City staff, commissions and officials will all have a role in seeking funding from a variety of sources, and allocating City funds to accomplish the Plan's vision for a completed biking and walking system.

II. Why Plan for Non-Motorized Transportation?

Highland Park is an urban/suburban community with a number of areas defined by different neighborhood character. On the west side of the City a semi-rural character exists. As in most suburban areas, automobile trips dominate as a transportation choice. However, Highland Park officials and residents recognize the importance of bicycle and pedestrian facilities, not only as a recreational choice, but as a viable transportation choice for getting to shopping, work, or school. This focus was articulated in the City's Greenways Plan and the goals and objectives of that Plan are reiterated and recommitted to in Bike-Walk HP 2030. .

Bike-Walk HP 2030 shares the mission of the Highland Park's Greenways Plan:

"to develop a community-wide system of facilities that will provide opportunities for recreation and fitness activities; protect important natural habitats; promote conservation of open spaces, parks, forests, and wetlands; connect neighborhoods, parks, schools and business areas with facilities to provide a safe, enjoyable alternate form of transportation; educate the community about the opportunities for, and benefits of, walking, running and bicycling; and encourage residents to participate in these activities."

The Greenways Plan overall goal was the following:

The Greenways Plan envisions the development of a comprehensive, connected system of greenways, including both on-street and off-street routes, that will make walking and bicycling safer, more enjoyable, and more viable forms of transportation and recreation in Highland Park; that will preserve natural areas and air quality; and that will meet the needs of bicyclists, runners, and walkers of all ages and abilities.

The objectives of the Greenways Plan are also adhered to. Those objectives sought the following:

- *Promoting Connections* to destinations within Highland Park and in adjacent communities; coordinating efforts with other public and private agencies and ensuring access for recreational and utilitarian trips in making land use transportation planning decisions.

- *Supporting Safety by* creating streets, sidewalks, and paths that are safe for pedestrians, bicyclists, and drivers that supports shared use of these facilities; actively enforcing the rules of the road so that pedestrians, bicyclists, and motorists adhere to state and local traffic laws; and minimizing conflicts between different types of greenways users, drivers, and residents.

- *Utility-* encouraging greater use of non-motorized types of transportation; and to promote using greenways as a healthy alternative to driving cars that will reduce congestion, pollution, and noise while improving the community's quality of life.

- *Aesthetics-* maintaining existing facilities while building new facilities consistent with the community's high aesthetic standards; and to maintain greenways that protect open spaces in harmony with the natural environment.

- *Ordinances-* adopting and enforcing regulations and policies to insure the design, construction and operation of a safe, comprehensive system of greenways and protecting significant natural areas as greenways…

- *Information-* creating public information programs to identify destinations and routes; co create educational materials with the Park District and School Districts to inform pedestrians, bicyclists, and drivers on ways to safely and courteously share streets, sidewalks, and trails; and to promote walking and bicycling for recreation, shopping, and commuting.

- *Finances-* accessing federal, state, private and local funds to build and maintain the greenways recommended in this Plan while using non-local funds as much as possible; and to fund greenways in the Capital Improvements Plans of both the City and Park District.

As City policy, the Greenways Plan mission is consistent with the mobility goal in the Sustainable Community Strategic Plan, which states the following:

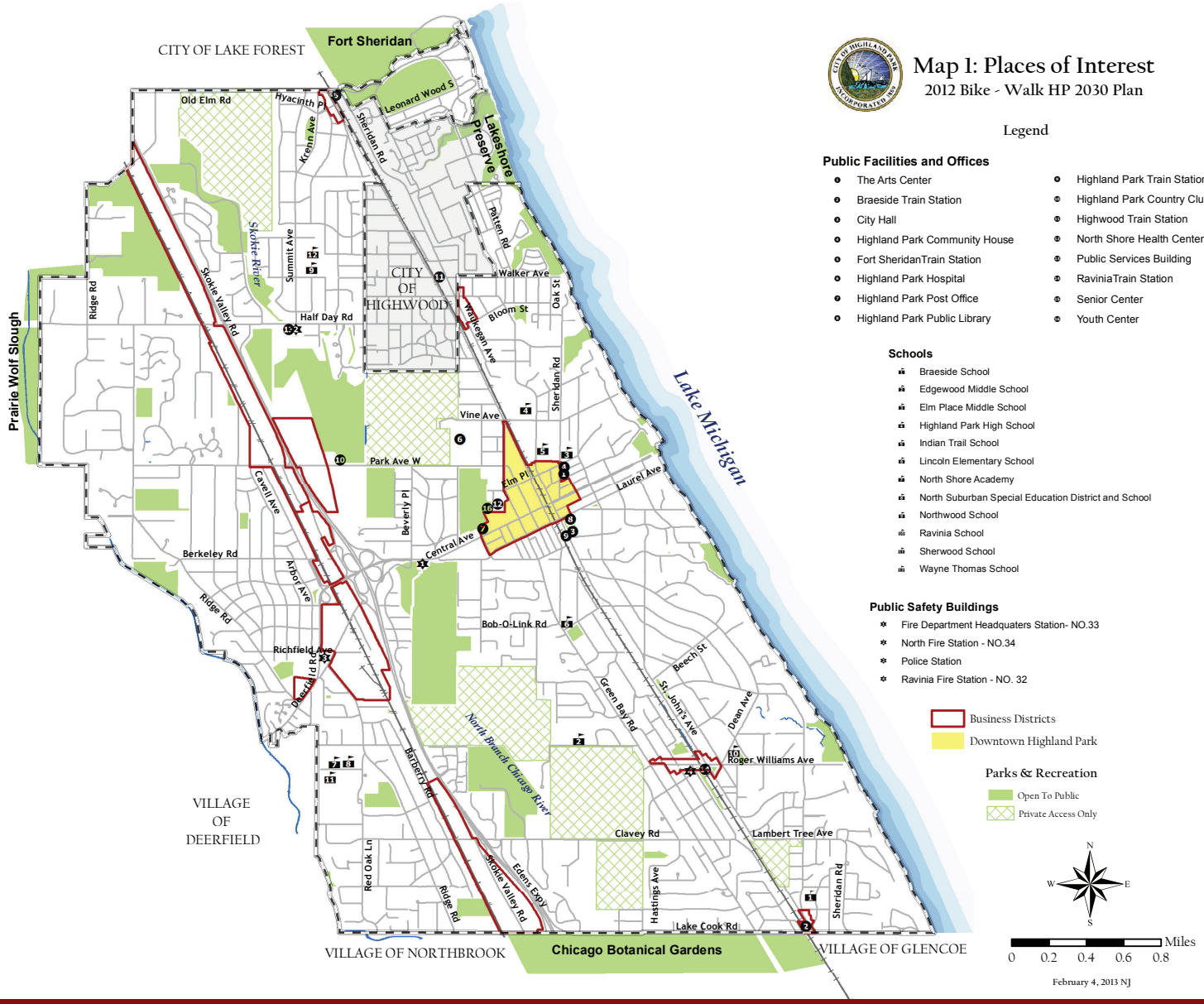
"Satisfy the community's mobility needs with an efficient, safe and accessible intermodal transportation system that relies heavily on public transit, biking, pedestrian traffic, car sharing and clean fuel"

The achievement of this goal can be advanced by the City pursuing the recommendations contained in *Bike-Walk HP 2030.*

Highland Park has an extensive existing street and sidewalk system and is geographically compact enough to be efficiently navigated by cycling or walking, provided that proper facilities and improvements are available. In urban and suburban areas many utilitarian trips are less than two miles and often times are reasonable and feasible for cycling or walking; this situation also exists in Highland Park. Diverting short trips from automobiles to biking and walking will result in reduced traffic congestion and a number of other benefits of lessened use of motorized vehicles. Highland Park drivers are well aware that some major intersections are congested at peak times of the day, including those at Green Bay Road, at Central Avenue, Vine Avenue, and Waukegan Avenue/Bloom Street, and intersections along Park Avenue. Mostly, the congested intersections are those where major arterial streets intersect with collector streets. Local schools are also sites of high traffic congestion at drop-off and pick-up times on school days. By providing opportunities to increase the number of trips to community destinations utilizing non-motorized vehicle or pedestrian modes, there is the potential to reduce traffic congestion in Highland Park. Highland Park has numerous community destinations, including parks, the lakefront, forest preserves, schools, public buildings, and shopping districts that can and should be accessible by cycling and walking (Map 1). In fact, 60 percent of Highland Park is within a 15 minute bicycle ride of the City's downtown (Map 2).

Defined bike lanes, adequate road surface conditions, clearly marked routes, and well connected pedestrian and bicycle facilities will provide convenience for residents as well as potentially reducing crashes and provide harmony on local roadways. A fundamental goal of Bike – Walk HP 2030 is to improve the non-motorized connections between primary destinations, through the linkage of residential neighborhoods to business districts and to community institutions such as schools, parks and government buildings.

Bike – Walk HP 2030



Map 1: Places of Interest

2012 Bike - Walk HP 2030 Plan

Legend

Public Facilities and Offices

- The Arts Center
- Braeside Train Station
- City Hall
- Highland Park Community House
- Fort SheridanTrain Station
- Highland Park Hospital
- Highland Park Post Office
- Highland Park Public Library
- Highland Park Train Station
- Highland Park Country Club
- Highwood Train Station
- North Shore Health Center
- Public Services Building
- RaviniaTrain Station
- Senior Center
- Youth Center

Schools

- Braeside School
- Edgewood Middle School
- Elm Place Middle School
- Highland Park High School
- Indian Trail School
- Lincoln Elementary School
- North Shore Academy
- North Suburban Special Education District and School
- Northwood School
- Ravinia School
- Sherwood School
- Wayne Thomas School

Public Safety Buildings

- Fire Department Headquaters Station- NO.33
- North Fire Station - NO.34
- Police Station
- Ravinia Fire Station - NO. 32

Business Districts

Downtown Highland Park

Parks & Recreation

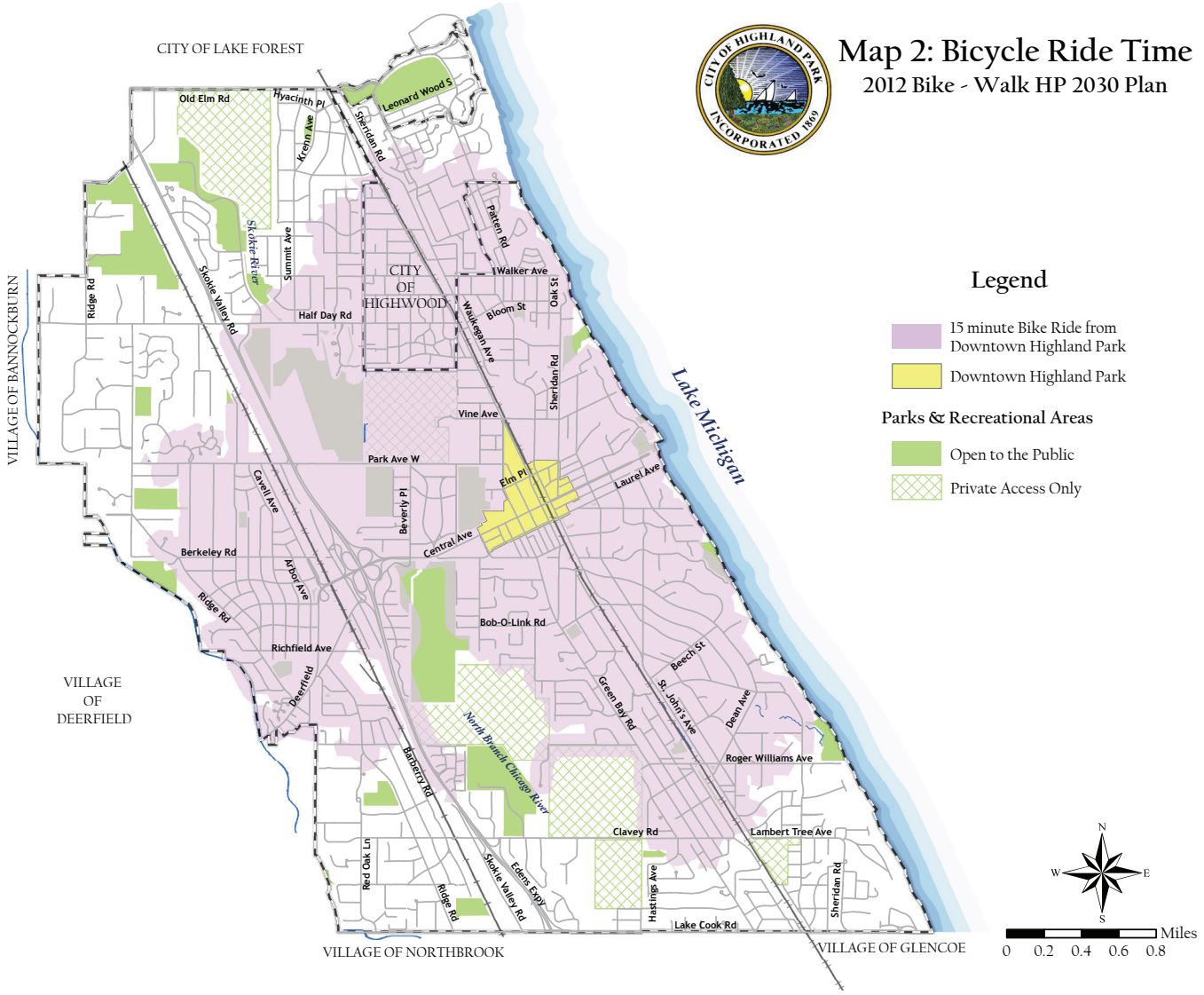
Open To Public

Private Access Only

N W E S

0 0.2 0.4 0.6 0.8 Miles

February 4, 2013 NJ


Map 2: Bicycle Ride Time
2012 Bike - Walk HP 2030 Plan
CITY OF LAKE FOREST
VILLAGE OF BANNOCKBURN
CITY OF HIGHWOOD
VILLAGE OF DEERFIELD
VILLAGE OF NORTHBROOK
VILLAGE OF GLENCOE
Lake Michigan
Skokie River
North Branch Chicago River
Old Elm Rd
Hyacinth Pl
Leonard Wood S
Sheridan Rd
Kreiln Ave
Summit Ave
Ridge Rd
Skokie Valley Rd
Half Day Rd
Patten Rd
Walker Ave
Oak St
Waukegan Ave
Bloom St
Vine Ave
Park Ave W
Elm Pl
Laurel Ave
Cavell Ave
Beverly Pl
Central Ave
Berkeley Rd
Arbor Ave
Richfield Ave
Deerfield
Bob-O-Link Rd
Green Bay Rd
St. John's Ave
Beech St
Dean Ave
Roger Williams Ave
Lambert Tree Ave
Clavey Rd
Lake Cook Rd
Hastings Ave
Sheridan Rd
Edens Expy
Red Oak Ln
Legend
15 minute Bike Ride from Downtown Highland Park
Downtown Highland Park
Parks & Recreational Areas
Open to the Public
Private Access Only
N
W
E
S
Miles
0 0.2 0.4 0.6 0.8

Most of Highland Park is fully developed, with opportunities for infill development only. The opportunity to design and build non-motorized transportation facilities with new development and newly dedicated rights-of-way are few. Consequently, it is critical that the City's review of private development plans and the City Council's approval of new development address the non-motorized transportation needs of residents, employees and visitors to and from the development site. With regard to the existing street system, bicycle and pedestrian facility improvements can be considered and made at the time when streets are being resurfaced or reconstructed, or at other times when a retrofitted or infill development requires a small segment of right-of-way improvements.

III. Benefits of Cycling and Walking

Engaging in the planning, design, and implementation effort of Bike-Walk HP 2030 will change the streets of Highland Park physically, and has the potential to positively impact the health and well being of residents and other community members.

1. **Health:** Improved cycling and walking conditions will provide residents with an opportunity to safely and efficiently walk, run or ride a bicycle in a utilitarian fashion. As community residents age, the opportunities for keeping residents active is an important component of a healthy community. Cycling and walking are excellent ways to improve cardiovascular health. By planning for better cycling and walking in the community, Bike – Walk HP 2030 is consistent with and supports the goals of the City-established Healthy Highland Park Task Force.

2. Quality of Life: Non-motorized transportation facilities provide members of the community with an opportunity to enjoy the natural areas of the community for recreational, utilitarian or pure enjoyment purposes. In addition, improved cycling and walking facilities can provide residents with feelings of safety and comfort regardless of the mode of transportation being used. With improved non-motorized facilities residents will have a choice of options for their mode of travel. Increased usage of biking and walking versus use of motorized vehicles has the potential to reduce traffic and parking congestion and improve air quality. Improved access to public transit enhances the lives of community residents of all ages and may be particularly beneficial to residents as they age and decrease their usage of personal motor vehicles.

3. Infrastructure Preservation: Cycling and walking provides a low-cost mobility option that places fewer demands on local roads. Safe transportation alternatives can result in reduced traffic congestion and the preservation of existing roadways by reducing the average daily traffic counts. In 2008, the average Highland Park household logged 19,527 vehicle miles, which is higher that the northern Illinois regional average[3]. If pedestrian and bicycle travel can be increased, a corresponding reduction in the number of automobile trips may lead to reduced wear-and-tear on local roads and thereby reduced transportation maintenance costs.

4. Increased Transportation Choices: Residents, employees and visitors to Highland Park benefit by having a range of transportation options from which to choose. With a range of transportation choices, any trip by any mode can be a safe and pleasant means to accomplish the desired transportation needs of residents, employees, and visitors. Good pedestrian facility design that includes adequate accessibility features can help ensure that even persons with disabilities or frailties can continue to enjoy some level of mobility. If a range of transportation options are provided, people of all ages and abilities will have access to appropriate transportation services and choices.

Bicycles can be safely and efficiently used for local shopping trips.

3 Center for Neighborhood Technology, 2009

5. **Independent Mobility for Children:** Improved neighborhood walking surfaces and safe routes provide options for children to transport themselves to community destinations; children have the opportunity to lead more active and independent lives dependent on an adult's availability to supply transportation with a motorized vehicles.

6. **Economic Development:** Non-motorized transportation planning is an effective economic development tool from two perspectives. Safe and efficient pedestrian and bicycle facilities allows residents to spend less money on automobile operation and maintenance costs and then spending may shift to other consumer purchases. Secondly, Highland Park and Lake County are popular among recreationists for its lakefront, vibrant downtown, and natural landscape. An improved trail and road network will attract bicycle enthusiasts from across the region to spend more time in the community and contribute to the local economy[4].

7. **Environmental:** Cycling and walking are among the most environmentally efficient modes of transportation. In 2008, more than 22 million gallons of motor fuel were dispensed in Highland Park, which means vehicles produced more than 207,000 tons of carbon dioxide equivalents, or a third of all community-wide emissions. Bike – Walk HP 2030 is consistent with the City of Highland Park *Sustainable Community Strategic Plan* that addresses the need to reduce carbon emissions in the City[5]. In addition, cycling and walking are the best ways to get to and through Highland Park's open spaces, the lakefront, parks and other natural areas and to appreciate the community's resource management and landscape preservation efforts.

The International Bicycle Fund has identified more that 60 benefits (advantages) of cycling, many of them applicable to walking as well, which can be seen at the following web address: http://www.ibike.org/encouragement/benefits.htm.

An example of a local business targeting cyclists as a customer group

4 Several economic impact studies have been performed by the U.S. Department of Transportation and the Transportation Research Board to assess the positive impacts that bicycle planning can have on a local and regional economy.

5 The specific objective in the Sustainability Plan calls for meeting community mobility needs while "decreasing emissions per vehicle mile traveled per household to 50% below 2010 levels by 2030."

IV. Barriers to Biking and Walking

If it is so beneficial for the individual and the community to have opportunities to bicycle and walk, why don't more people engage in these activities? Often there are obstacles or barriers that make it difficult, and sometimes nearly impossible, to safely or conveniently bike or walk as an alternative to driving. The barriers to alternative transportation choices include those affecting the physical environment; personal, social, and perceptual barriers; and organizational and institutional barriers. An awareness and understanding of the barriers that influence people's decision or ability to walk are the first steps for individuals, organizations, and communities to understand the actions that will effectively reduce or eliminate such barriers.
Bike- Walk HP 2030 articulates policies and implementation actions that can be applied to identify and reduce the barriers that prevent or de-motivate the residents and employees in Highland Park from pursuing non-automobile transportation choices.

The community survey revealed that lack of sidewalks, bike lanes, and concern for personal safety are significant barriers to biking and walking in Highland Park. Some of the more common barriers to biking and walking are explained in more detail in the following section.

Physical Barriers:

Physical barriers consist of partial or non-existent sidewalks paths, poor quality walking surfaces, non-existent or inappropriate bicycle and pedestrian crossing treatments, lack of bike lanes and other accommodations, high speed traffic, etc. The barriers may be large, such as inadequate spacing for a cyclist on a busy roadway or as small as the worn away cross-walk and other markings at an intersection. Each obstacle presents a different level of difficulty for pedestrian and cyclist populations. For example, a road with a high volume of fast-moving traffic may present a greater challenge for children or older people than it would for the average adult. Potential bicycle commuters may be deterred from riding to a train station if quality covered and secure bicycle parking is not provided. There are a variety of ways to address these physical barriers through improvements related to engineering, education, maintenance, and enforcement.

Incomplete, disconnected sidewalks, like this one on Ridge Road, are one barrier to an efficient and pleasant walking environment.

Personal, Social and Perceptual: According to a 2008 National Survey , one in five adults age 16 or older had not taken a trip by foot during a thirty-day period in the summer of 2002. The survey reported that the number one reason for not walking is that respondents were either too busy or did not have the opportunity to walk. Other reasons or perceptions for not walking included:

- Not in the habit of walking or cycling
- Walking is boring
- Walking or biking is dangerous; not safe place to walk, drivers are too aggressive
- Other modes of transportation are faster; there is not enough time to walk or bike.
- Walking is painful for me
- Weather conditions preclude walking or biking

It may be impossible to overcome some of these barriers, but those related to dangerous conditions, interaction with motorists and certain perceptions related to biking and walking may be overcome through a combination of planning, engineering, education, encouragement and enforcement.

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6 National Survey of Bicyclist and Pedestrian Attitudes and Behavior, U.S. Department of Transportation's National Highway Traffic Safety Administration and the Bureau of Transportation Statistics, 2008.

V. Bike – Walk HP 2030 Process

In January 2011 the City established a Professional Staff and Commission Working Group to oversee the drafting and preparation of the Complete Streets Policy and Non-Motorized Transportation Plan. Working group members were drawn from the following City Departments, Commissions and other government agencies including:

- Department of Community Development Planning Division
- Department of Public Works
- City Manager's Office
- Park District of Highland Park
- Police Department
- Plan Commission
- Transportation Commission
- Natural Resources Commission

During the course of the plan preparation process, the Working Group met three times and members of the Working Group attended the community meetings held for the purpose of gathering public input.

The process of developing *Bike – Walk HP 2030* has involved a number of research areas and processes:

- Analyzing best practices and consulting with recognized experts in the field of complete streets and non-motorized transportation planning;
- Examining current Greenways Plan policies and the status of recommended improvements;
- Examining existing conditions for bicycle and pedestrian improvements in Highland Park; and
- Soliciting community input via internet surveying and community meetings.

Best practices and consultation with recognized experts in the field of complete streets and non-motorized transportation planning

As part of the planning process, City professional staff reviewed numerous bicycle and non-motorized transportation plans and information from technical websites. Ideas and concepts from the Active Transportation Alliance, the Pedestrian and Bicycle Information Center, and the National Complete Streets Coalition were particularly insightful. For technical information regarding the design of Non-Motorized Transportation Improvements, the American Association of State Highway Transportation Officials (AASHTO) and the National Association of City Transportation Officials (NACTO) websites and design guidelines were consulted.

Current status of Greenways Plan improvements

A review of the recommendations and implementation status of the Greenways Plan was conducted. The status of each of the proposed facility improvement recommendations was considered and the unimplemented priority projects from the Greenways Plan have been incorporated in *Bike-Walk HP 2030.*

Existing conditions for bicycle and pedestrian improvements in Highland Park

A review of the existing conditions relative to shared trails, streets (by classification) and existing sidewalks was conducted. The conditions identified were then used to inform the recommendations for demonstration and long term project improvements.

Community input via internet surveying and community meetings

To gather input from the community, an online survey was disseminated and two community meetings were held in June 2011. The online survey gathered public opinions for approximately two months and 518 persons completed the survey. Residents of Highland Park accounted for 86% of the survey responses. The survey yielded the following findings:

- 73% walk intentionally either daily or weekly for recreation, to perform errands or go to work
- 69% believe that all local roads, to the greatest extent practicable, should be designed to provide safe access for biking and walking
- 56% would be encouraged to bike more if facilities were improved

- 55% bike daily or weekly
- 43% identified street/path conditions and traffic safety as the biggest barriers to biking more frequently
- 38% would be encouraged to walk more if facilities were improved
- 37% have walked to a Metra station up to 10 times in the last year
- 34% identified lack of sidewalks and traffic safety as the biggest barriers to walking more frequently
- 34% desire to bike to shopping areas

The results of the survey show that a majority of respondents favor pedestrian and bicycle improvements in the community. The full survey results are contained in the Appendix of this Plan.

Additional input to the Non-Motorized Transportation Plan was provided at two public meetings held in June 2011. More than 75 attendees were presented with information regarding pedestrian and bicycle facilities and were given the opportunity to speak to City staff about their interest in improved bicycle and pedestrian facilities and desired improvements. Attendees were asked to provide information about community destinations they visit and trails, streets, sidewalks and intersections that they used and to identify which of these that may need some level of improvement.

The input gathered from correspondence to the Planning Division, from the community survey and the public meetings have been vital in the development of this plan and are summarized below:

Table 1: Summary of Public Input from Community Survey and Public Meetings

Public Input	Survey / Meetings
Community destinations needing improved access include: Botanic Gardens, Rosewood Beach, Central Business District and the shopping district at Park Ave West and Rte. 41	Survey
Downtown Intersections are dangerous for pedestrians	Meetings
Bike lanes would discourage bicycle and automobile conflicts	Meetings
East / West pedestrian and bicycle access across Rt. 41 is limited and difficult and needs to be improved particularly along Clavey Road and Park Avenue West; More effective pedestrian signals needed at Rt. 41 intersections	Survey / Meetings
Improved signage for bike paths, pedestrian paths and trails is needed	Meetings
Multi-use paths (bicycle trails) and sidewalks need to be maintained and kept clear for year round use	Meetings
Safety concerns including traffic and road surface conditions inhibit bicycle and pedestrian activity	Survey

All of the documentation and public comment from the planning process is provided in the Appendix.

The collected information and input were used to support the recommendations for the Complete Streets Policy and the Non-Motorized Transportation Plan of Bike- Walk HP 2030.

VI. Types of Cyclists, Pedestrians and Facility Needs

Improved cycling and walking conditions accrue a range of benefits to the community and its visitors. Users of these improved facilities may be classified according to their non-motorized mode and experience level.

Cyclists

It is generally recognized that cyclists may be divided into two experience categories: (Group A) Advanced and (Group B) Basic. There is a Group C – children, who share certain characteristics with basic cyclists, and consequently their needs are sometimes classified together. The recommendation set forth in this plan deal with the needs of Groups A and B. With regard to Group C (ages pre-teen and younger) cyclists, they should ride under supervision, close to home and on the sidewalk. The needs of the Group C cyclist are addressed through the recommendations for improved sidewalks with continuous pedestrian connections to local parks and schools.

Group A: Advanced:
Group A is composed of experienced riders who can operate a bicycle under most traffic conditions. This group includes bicycle commuters, cycling sport riders and other cyclists who understand and follow the rules of the road and are comfortable riding on all or most streets and roadways with or without bicycle facility improvements

Group B Casual:

Group B is composed of new adult and teenage riders who are less confident of their ability to operate in traffic without special provisions for bicycles. Some of these riders will transition into the A group but there are always many basic cyclists who desire comfortable access to destinations and well-defined separation of bicycles and motor vehicles.

Bicycles can safely share roadways with motor vehicles when appropriate consideration is made during the design and construction of new, rehabilitated or reconstructed roadways. Numerous types of bicycle accommodations can be considered based on the context, the surrounding land use, existing conditions and characteristics of specific roadways. Accommodations can be any facility intended to improve bicycle travel or interaction between bicycles and motorists, and can include a range of options along a continuum including signed bicycle routes, shared roadways and striped bicycle lanes.

Group A cyclists can be served by making streets bicycle-friendly. A bicycle-friendly street has hazards removed and smooth pavement surfaces that are patched, swept, and striped/painted. Group B riders can be served in key travel corridors with designated facilities including signed and striped bicycle lanes, shared roadways, and off-road trails.

Sidewalks are not a recommended route for cyclists as they are primarily pedestrian spaces and cyclists crossing driveways and intersections along a sidewalk increase the risk of accidents. Group C riders (children) are the only authorized Group permitted to ride a bicycle on the sidewalk according to the Highland Park Municipal Code.

Group A

Group B

Group B and C

The recommendations for bicycle facility improvements contained in this Plan are primarily targeted for cyclists contained in Group B.

Pedestrians

People walk places because they want to or may have to. The purpose of walking can be both utilitarian and recreational. While everyone is a pedestrian at one time or another, there are groups of people that walk because they have no other transportation options. In that category are households without cars, senior citizens that have given up a driver's license, children and the disabled. Planning for a high quality walkable community includes the design, implementation and maintenance of convenient and safe sidewalks, intersections and crosswalks, and support features such as directional signage, benches, and water fountains. An additional key aspect of pedestrian planning is to consider and assure comfortable access to public transportation facilities. Highland Park recognizes that there is a growing need and responsibility to provide options that give people the opportunity to walk—to walk more often, to walk to more places, and to feel safe and secure while doing so.

VII. Highland Park's Transportation System

This section examines the existing roadway system in Highland Park, the nature and categorization of streets, and the function that they provide.

The Highland Park Transportation System is an interconnected network of right-of-way improvements. With respect to roadways and intersections, the City of Highland Park has jurisdiction over most local streets but other governmental units also have jurisdiction over some. The following governmental entities have jurisdiction over specific roadways in Highland Park and the City will need to coordinate with these entities on projects where there is a jurisdictional interconnection:

- Illinois Department of Transportation: U.S. Highway 41, Sheridan Road, Deerfield Road, Illinois Route 22
- Cook County: Lake Cook Road (east of Green Bay Road and West of Winona)
- City of Lake Forest: Old Elm Road

The following section briefly describes Highland Park's transportation system.

Streets: by type (road classification) (see map)

- **Arterials** are streets that provide for (a) traffic movement between areas, through, and across portions of the City of Highland Park; (b) di rect connections to principal activity centers; and (c) connections to the freeway/expressway network. Arterials typically have the greatest volume of traffic of all streets but for highways.

- **Arterials in Highland Park include** Deerfield Road; Green Bay Road; Lake Cook Road; Old Elm Road; Park Avenue West; and portions of Central Avenue; Half Day Road; Laurel Avenue; Roger Williams; Sheridan Road; and St. Johns Avenue

- **Collectors** are streets that provide for (a) direct connections from arterial streets to residential areas as the principal entrance and (b) the principal circulatory element within a neighborhood or activity center for collection and distribution of traffic to local streets

- **Collectors in Highland Park** include Berkeley Road; Beverly Place; Clavey Road; Old Trail Road; Summit Avenue; Sunset Road; Walker Avenue; Vine Avenue; and portions of Central Avenue; Laurel Avenue; Ridge Road; Sheridan Road; and St. Johns Avenue

- **Primary Locals** are streets that provides for direct access to abutting land (a) connections to collector streets and/or to secondary arterials (approximately 1 mile long or more)

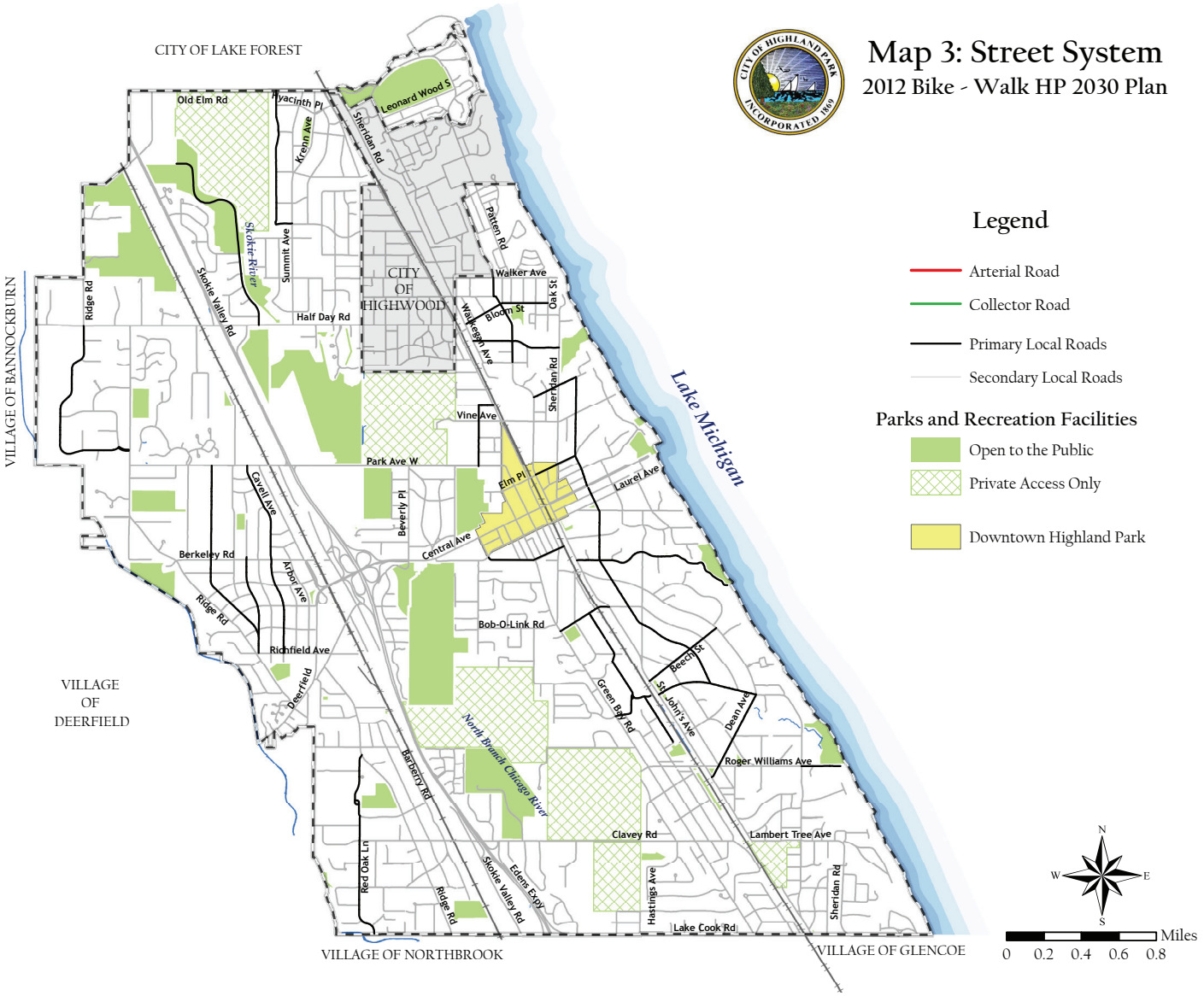
- **Primary Locals in Highland Park** include Beech Street; Bloom Street Burton Avenue; Cavell Avenue; Dean Avenue; Eastwood Av enue; Forest Avenue; Lincoln Place; Linden Avenue; Midlothian Avenue; Moraine Road; Park Avenue East; Ravinia Road; Ravine Drive; Red Oak Lane; Ridgewood Drive; Sunnyside Avenue; Tennyson Lane; Trail Way; University Avenue

- **Secondary Locals** are streets that provide direct access to abutting land (a) connections to collector streets and/or to secondary arte rials. These are the lowest traffic volume residential streets in the City.

- **Secondary Locals in Highland Park** include all Highland Park streets not classified within one of the above categories.

The map on the following page illustrates the Highland Park street system by functional category.

Bike – Walk HP 2030



Sidewalks

Sidewalks are paved pedestrian ways on the parkway of a street. Sidewalks are an integral part of transportation corridors in that they allow pedestrians to be safely separated from motorized vehicles. Sidewalks make pedestrian travel practical and easy, provide access to public transportation and provide access to a range of destinations. Many streets in Highland Park were built without sidewalks, which has resulted in a mixed impact on the community's character. While creating an environment where natural vegetation and landscaped yards abut the streets without interruption, thus establishing a "leafy" neighborhood ambiance, the lack of sidewalks also creates hazards for pedestrians who must use streets for walking and running alongside motorized vehicles. These hazards are particularly severe for children, the elderly, and the disabled.

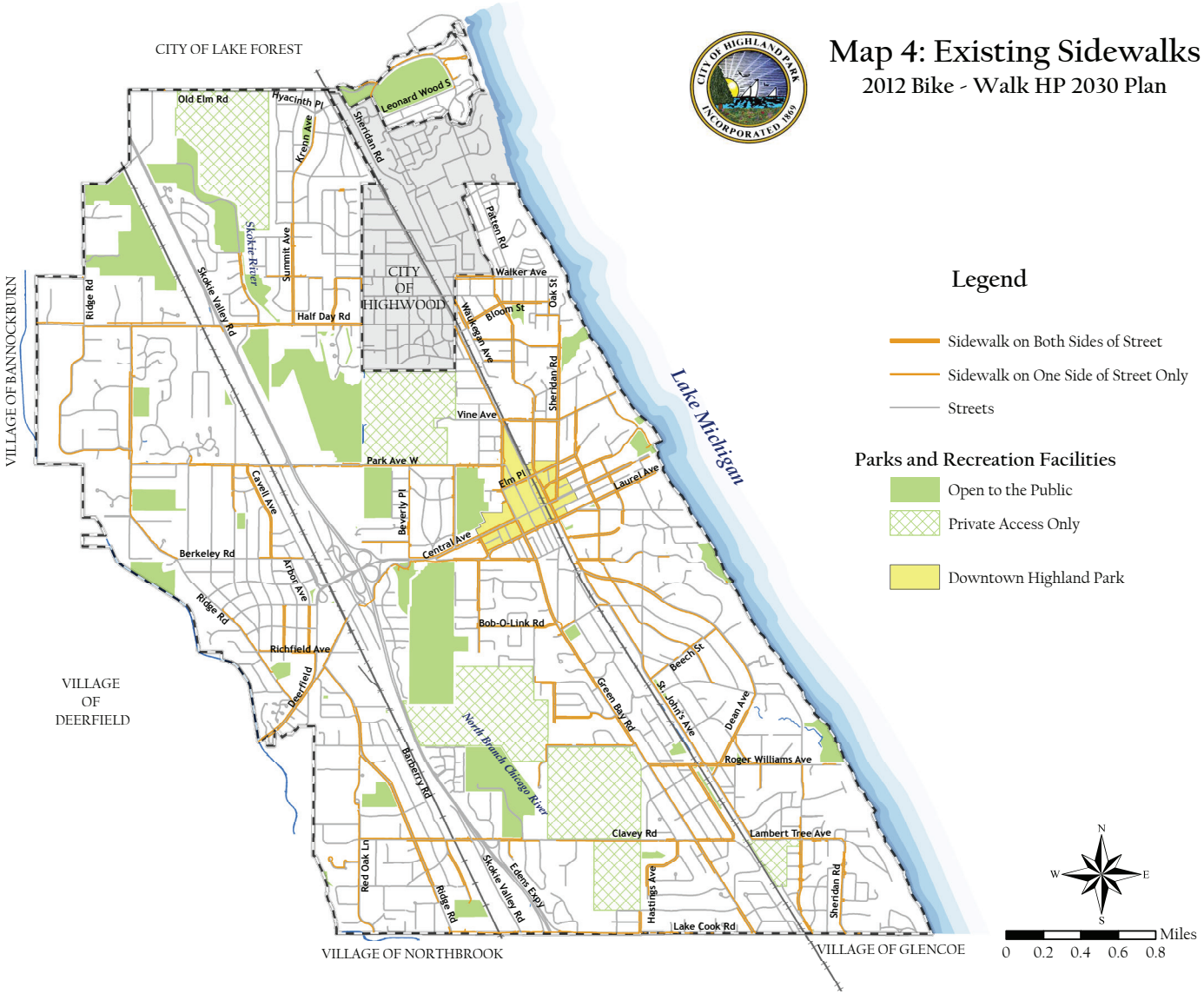
The City's Greenways Plan established a principle that there should be a continuous sidewalk along one or both sides of all major streets, especially on the designated Bicycle Routes, or where gaps occur in the sidewalks. Due to the natural vegetation, landscaping, and topography found along some of these streets, the proposed sidewalks must be carefully built to reduce the visual and physical effects on adjacent areas. It is a fact that while many residents want and need access to sidewalks, many residents do not want sidewalks installed where none are present, and feel perfectly safe walking in

the street, and would reject the installation of sidewalks due to the impact on the character of the street. Therefore, the Greenways Plan recommended that the City hold a public meeting before each sidewalk is designed so that the design team could gather comments from affected residents. The Department of Public Works has developed a protocol for neighborhood input on sidewalk construction and alternative sidewalk designs, such as crushed stone walkways that have been used in select locations, such as on Ridge Road, south of Park Avenue West and on the north side of Berkeley Road, near Ridge Road.

Ideally, it is desirable to have concrete sidewalks on both sides of a street. If sidewalks are present on both sides of a street the need for a pedestrian to cross back-and-forth between street sides is minimized; a pedestrian is safer when the number of street crossing points is as few as possible from beginning to end of a walking trip. The City Code requires sidewalks to be provided on one or both sides of most streets except for those in the lowest density single family districts; most streets have sidewalks on at least one side. Nevertheless, there are numerous examples in Highland Park where a sidewalk ends mid-block or a sidewalk is absent in a critical location making it difficult to walk to a community destination.

Map 4: Existing Sidewalks

2012 Bike - Walk HP 2030 Plan



Legend

- Sidewalk on Both Sides of Street
- Sidewalk on One Side of Street Only
- Streets

Parks and Recreation Facilities

- Open to the Public
- Private Access Only
- Downtown Highland Park

Street Crossings: Intersections and Cross-Walks

Sidewalks provide appropriate pedestrian mobility until the sidewalk ends at a curb and the pedestrian must enter the street surface to cross the street. A good pedestrian network provides safe and convenient crossing opportunities. The intent of a well-designed and marked crosswalk is to increase pedestrian safety and promote pedestrian traffic.

Designing an effective pedestrian crossing involves the correct layout of a variety of elements including:

- Information/signs, signals and markings;
- The turning radius;
- Crosswalks;
- Crossing times;
- Medians;
- Refuge islands and slip lanes;
- Curb ramps;
- Sight lines;
- Traffic patterns; and
- Onset of signal phases

A design that carefully considers each of these elements is the first step in the creation of an effective pedestrian crossing. Equally important, however, is the way in which these elements are combined. Sometimes variations in the design will be necessary in order for elements to be combined appropriately.

At crosswalks that are controlled by a traffic signal, pedestrian activated controls can be incorporated and the amount of "walk" time can be adjusted to accommodate slower users. At certain high volume and notably difficult pedestrian intersections such as in downtown or those crossing U.S. Highway 41, countdown pedestrian signals have been installed to inform the pace of a crossing pedestrian. Signals may be supplemented with audible or other messages to make crossing information accessible for all pedestrians, including those with vision impairments.

Well-designed crosswalks relate to the physical context in which they are located. In lower density residential locations, a clearly striped crosswalk may be sufficient. In more densely developed areas, or near schools and parks, additional measures may need to be incorporated to improve safety.

The goal of good crosswalk design is to:

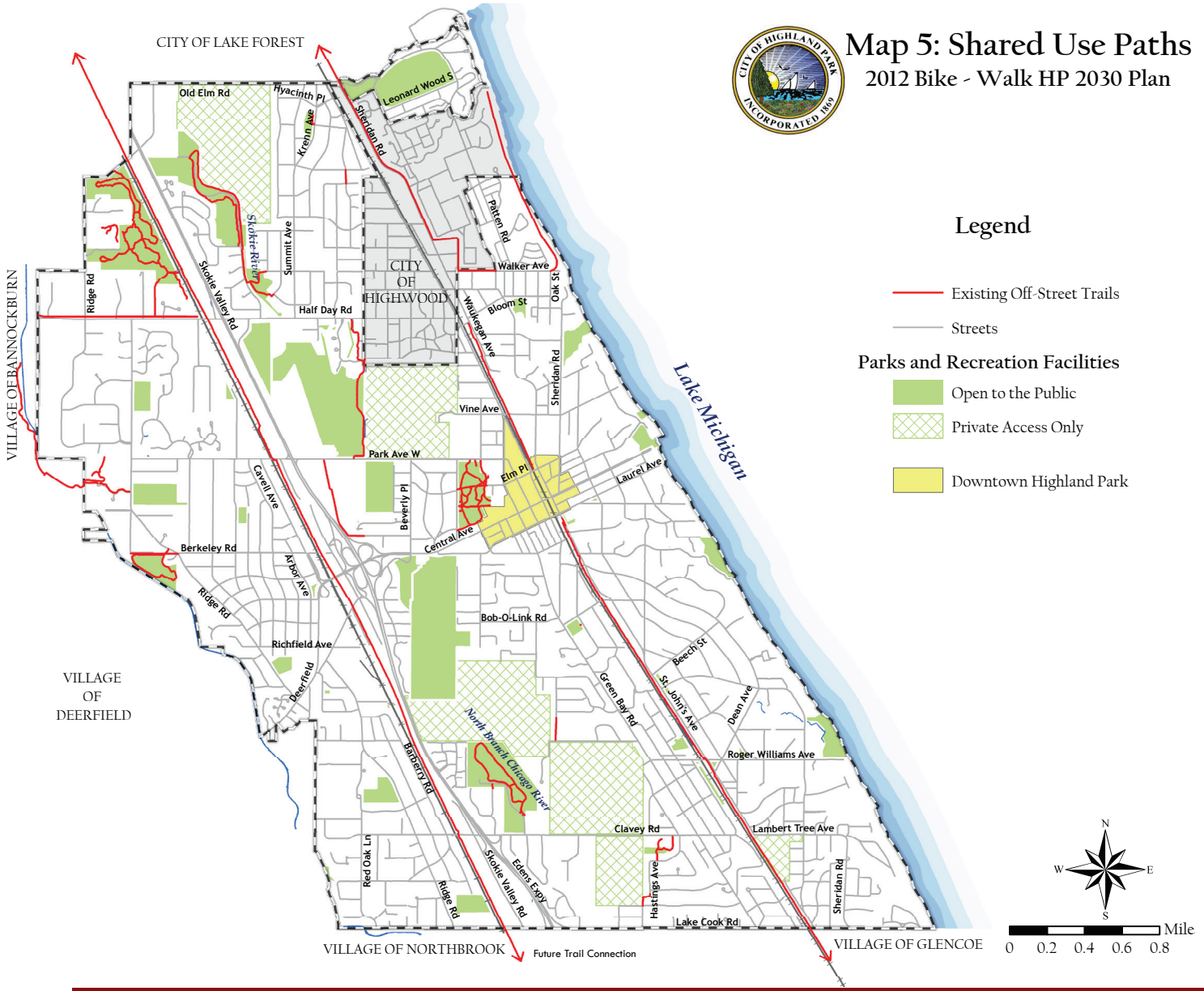
1) limit the wait time for a crossing opportunity;
2) make it clear to the pedestrian where they should be walking while crossing;
3) assure that the pedestrian can clearly see vehicles and be seen by motorists;
4) limit the time crossing the street; and,
5) assure that there is a pedestrian destination or route on the other side of the crosswalk. To achieve these goals pedestrian intersection enhancement measures may include: high visibility crosswalk markings and advance yield lines, pedestrian signage, median refuge islands, street and cross-walk illumination, curb extensions to shorten crossing distance, raised crosswalks, pedestrian activated flashing beacons, and others, as warranted. Additional accommodations such as audible countdown indicators can assist visually impaired pedestrians.

Shared-Use Paths (Off-street trails)

Shared-Use paths provide transportation and recreation opportunities for cyclists and pedestrians. In Highland Park the most notable Shared-Use paths are the Robert McClory Bike Path (formerly the Green Bay Trail in Highland Park) and the Skokie Valley Trail. These trails and others in Highland Park provide many valuable benefits including: transportation links, recreation venues, habitat corridors, economic development attractors and outdoor fitness facilities. These Shared-Use paths not only provide transportation in the City but connect Highland Park to an extensive system of other paths throughout the region. Historically, three entities have been responsible for Shared-Use Path planning in Highland Park. At the regional level, the Lake County Department of Transportation has developed parts or all of certain off-street regional trails including the Skokie Valley Trail, and the McClory Bike Path. The Skokie Valley Trail in Highland Park is maintained by Lake County, the other trails are maintained by the City. The Park District of Highland Park is responsible for portions or entire sections of Shared-Use Paths that are located within its parks. In addition, other agencies have developed Shared-Use paths including the not-for-profit organization, Open Lands, which has developed a lakefront shoreline trail in the Highland Park portion of Fort Sheridan. The City of Highland Park is responsible for the balance of trails Highland Park. Bike-Walk HP 2030 supports expanding the network of Shared-Use Paths in the community in order to increase access to natural areas along the Skokie River corridor and to connect a variety of community destinations in the central part of the City. The Shared-Use Paths identified in the Greenways Plan (Lakefront, McClory Path, Shokie River, North Shore Trail and Middlefork Trail) are all referenced herein and identified as existing or future improvements to the overall system.

In 2011, Open Lands constructed a lakefront trail along the Lake Michigan shoreline at Fort Sheridan.

Open Lands lakefront trail at Fort Sheridan.


CITY OF LAKE FOREST
VILLAGE OF BANNOCKBURN
VILLAGE OF DEERFIELD
VILLAGE OF NORTHBROOK
VILLAGE OF GLENCOE
CITY OF HIGHWOOD
Lake Michigan
Skokie River
North Branch Chicago River
Old Elm Rd
Hyacinth Pl
Krenn Ave
Sheridan Rd
Leonard Wood S
Summit Ave
Ridge Rd
Skokie Valley Rd
Half Day Rd
Patten Rd
Walker Ave
Oak St
Bloom St
Waukegan Ave
Vine Ave
Park Ave W
Elm Pl
Laurel Ave
Beverly Pl
Covell Ave
Berkeley Rd
Central Ave
Arbor Ave
Richfield Ave
Deerfield
Bob-O-Link Rd
Green Bay Rd
Beech St
St. John's Ave
Dean Ave
Roger Williams Ave
Lambert Tree Ave
Clavey Rd
Hastings Ave
Lake Cook Rd
Sheridan Rd
Red Oak Ln
Edens Expy
Bannockburn Rd
Future Trail Connection
Map 5: Shared Use Paths
2012 Bike - Walk HP 2030 Plan
Legend
Existing Off-Street Trails
Streets
Parks and Recreation Facilities
Open to the Public
Private Access Only
Downtown Highland Park
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Public Transit

Transit as a mode of transportation includes public bus service, commuter rail and van pools. The xpansion and improvement of access to transit and transit facilities is complementary to promoting pedestrian travel as a non-motorized transportation mode and is therefore relevant.

The success of transit as a mode of transportation is dependent upon pedestrian access to transit stations and bus stops. People with disabilities and able persons may rely on transit as their primary source of transportation; transit facilities and pedestrian connections to these facilities should be designed to meet the needs and abilities of all persons.

Public transit service in Highland Park is provided by Pace suburban bus service and Metra, the commuter rail agency in northeast Illinois. There are three Pace routes that run in Highland Park. Pace operates its Highland Park routes with both fixed stop locations and on a "flag stop" basis; riders are able to board or exit a bus at any intersection along the route. Metra has three stations in Highland Park and two in Highwood (Downtown and Fort Sheridan) that provide commuter rail service to Highland Park residents and employees.

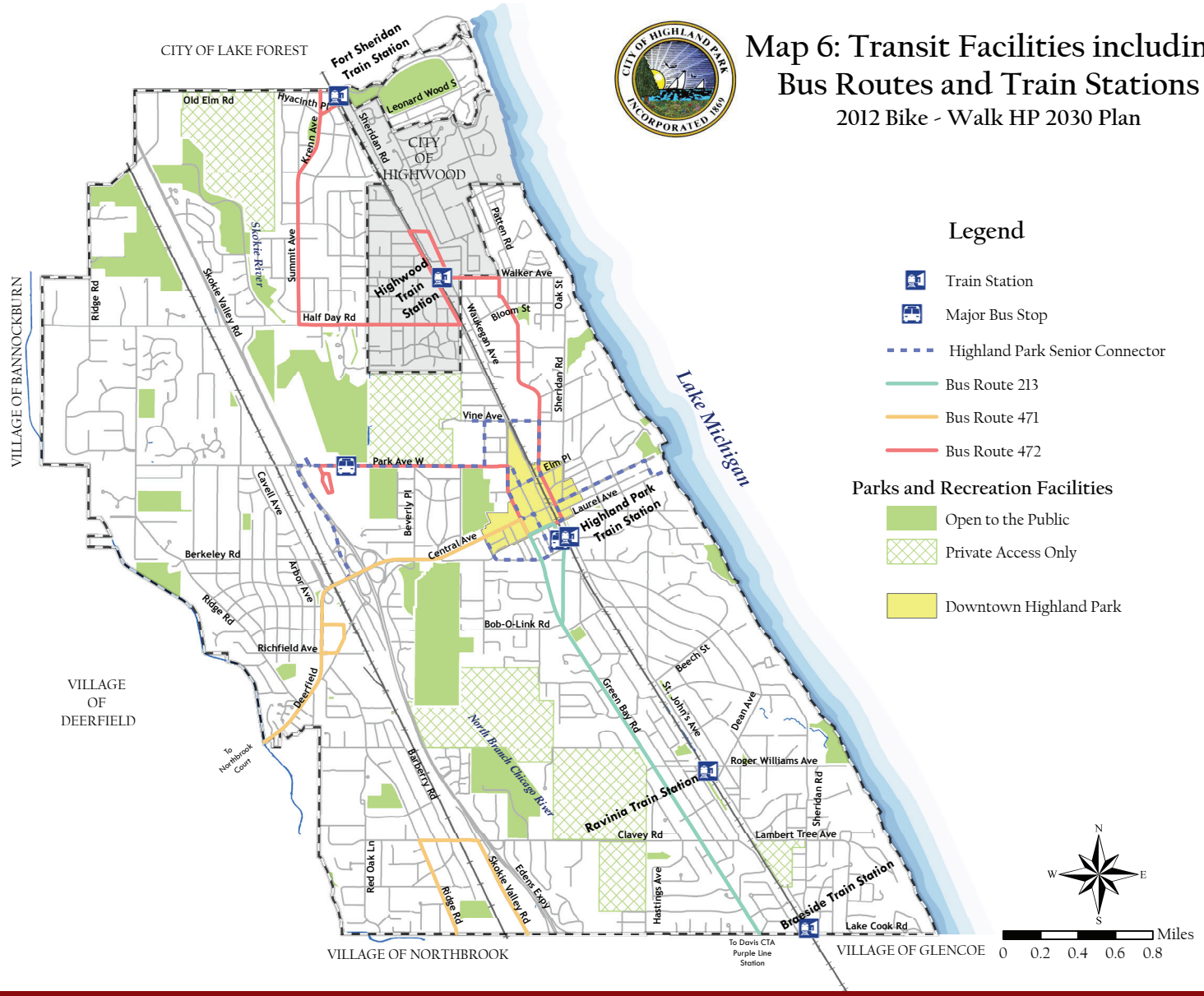
Highland Park Senior Connector

The City operates the Highland Park Senior Connector, a free bus service for people age 50 or more. The Senior Connector runs on fixed routes primarily within downtown Highland Park and to nearby senior-oriented residential developments, shopping locations, and to community institutions such as the senior center and the public library. The bus is wheelchair accessible. The senior connector runs Monday through Friday between the hours of 9 a.m. and 2 p.m. Due to funding constraints, in Spring 2011 the hours of Senior Connector operation were reduced by approximately two hours per day.

Moraine Township Para-Transit Door-to-Door Vans

Moraine Township initiated a local van transportation service in 2006 that offers qualified residents (seniors, disabled, and/or low income) to travel even outside Township boundaries to medical appointments (as far as a 15 mile radius) for a nominal charge of $4 per trip. The Township operates two para-transit vans that have wheelchair lift service. The Township employs the drivers, and staff schedule advance appointments for rides on "Moraine Door-to-Door" vans. Hours of operation are Monday through Friday: 8:30 a.m. to 4:00 p.m.

Based on the previous assessment of Highland Park's transportation system, the following are examples of improvements that may be considered for the implementation of Highland Park's Non-Motorized Transportation Network. The specific improvements that may be implemented at a particular location will be determined based a variety of factors considered during the design phase of a project.


Map 6: Transit Facilities including Bus Routes and Train Stations
2012 Bike - Walk HP 2030 Plan
CITY OF LAKE FOREST
CITY OF HIGHWOOD
VILLAGE OF BANNOCKBURN
VILLAGE OF DEERFIELD
VILLAGE OF NORTHBROOK
VILLAGE OF GLENCOE
Fort Sheridan Train Station
Highwood Train Station
Highland Park Train Station
Ravinia Train Station
Braeside Train Station
Lake Michigan
Skokie River
North Branch Chicago River
Old Elm Rd
Hyacinth Pl
Leonard Wood S
Sheridan Rd
Krehn Ave
Summit Ave
Ridge Rd
Skokie Valley Rd
Half Day Rd
Patten Rd
Walker Ave
Bloom St
Oak St
Waukegan Ave
Vine Ave
Park Ave W
Elm Pl
Laurel Ave
Cavell Ave
Beverly Pl
Berkeley Rd
Central Ave
Airport Ave
Richfield Ave
Deerfield
Bob-O-Link Rd
Green Bay Rd
St. John's Ave
Beech St
Dean Ave
Roger Williams Ave
Lambert Tree Ave
Clavey Rd
Hastings Ave
Barberry Rd
Red Oak Ln
Edens Expy
Lake Cook Rd
To Northbrook Court
To Davis CTA Purple Line Station
Legend
Train Station
Major Bus Stop
Highland Park Senior Connector
Bus Route 213
Bus Route 471
Bus Route 472
Parks and Recreation Facilities
Open to the Public
Private Access Only
Downtown Highland Park
N
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Miles
0 0.2 0.4 0.6 0.8

VIII. Proposed Bicycle and Pedestrian Facilities

Shared-Use Paths: These facilities, designed for a range of activities and users, are physically separated from motorized traffic except at intersections and road crossings. Examples in Highland Park of shared-use paths include the McClory Bike Path and the Skokie Valley Trail. Ideally, new Shared-use paths should be designed and constructed for use by both cyclists and pedestrians. To the greatest extent feasible given site specific conditions, such facilities should be paved 8 to 12 feet wide with 4 feet of adjacent soft surface treatments on each side. When designing a specific route, site specific conditions including the natural aesthetics of the location will need to be assessed and community input considered in developing a final design solution. Additional facilities and amenities can be incorporated such as benches, water fountains and route maps. Shared-use paths should be kept clear of snow and ice in winter and encroaching trees and shrubs and surface debris in other seasons so that they can provide year round functionality.

Sidepaths are shared-use paths that run directly adjacent to and parallel to a roadway. Sidepaths may be considered an extra wide sidewalk. Sidepaths are best used along roadways that have high traffic volumes and speeds and that do not have a lot of intersection and driveway crossings. One existing sidepath located in Highland Park and Highwood is to the north of Walker Avenue

A soft surface Shared-Use path similar to the McClory Bike Path in Highland Park.

A hard surface Shared-Use path.

Sidepath along the north side of IL Route 22 west of IL Route 41.

and on the east side of Sheridan Road adjacent to Fort Sheridan. The photo at right is of another sidepath which was installed in 2011 on IL Route 22 immediately west of Highway 41 in Highland Park.

Bicycle Lanes:

A Bike Lane is defined as a portion of the roadway that has been designated by striping, signage, and pavement markings for the preferential or exclusive use of bicyclists. Bike lanes enable bicyclists to ride at their preferred speed without interference from prevailing traffic conditions and facilitate predictable behavior and movements between bicyclists and motorists.
There are a variety of bicycle lane types including dedicated bike lanes and buffered bike lanes. Dedicated bike lanes are appropriate for collector and arterial streets with moderate to high automobile travel demand. Buffered bike lanes provide a greater separation from motor vehicle traffic. Buffered bike lanes are intended to be implemented on arterial roadways with high automobile traffic.
Dedicated bike lanes run curbside when no parking is present, and adjacent to parked cars on the right-hand side of the street or on the left-hand side of the street in specific situations.

Example of a standard bike lane

Example of a buffered bike lane.

Bike Lane Benefits

- Increases bicyclist comfort and confidence on busy streets.
- Creates separation between bicyclists and automobiles.
- Increases predictability of bicyclist and motorist positioning and interaction.
- Increases total capacities of streets carrying mixed bicycle and motor vehicle traffic.
- Visually reminds motorists of bicyclists' right to the street

The configuration of a bike lane requires a thorough consideration of existing traffic levels and behaviors, the need for safety buffers to protect bicyclists from parked and moving vehicles, and enforcement capacity to prohibit motorized vehicle encroachment and double-parking. Bike Lanes may be distinguished using color, lane markings, signage, and intersection treatments.

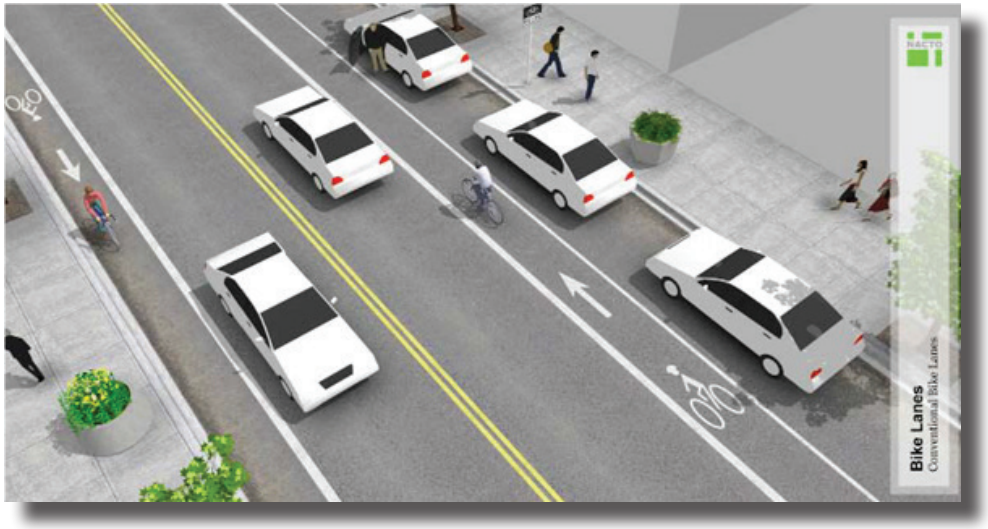
Typical Applications

- Bike lanes are most helpful on streets with ≥ 3,000 motor vehicle average daily traffic.
- Bike lanes are most helpful on streets with a posted speed ≥ 25 mph.
- On streets with high transit vehicle volume.

At the present time there are no dedicated on-street bicycle lanes in Highland Park.

The following illustrations are taken from the National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide.

Bike – Walk HP 2030



Source: NACTO, 2011

Source: NACTO, 2011

Shared Roadways are streets where the traffic lane is shared by bicycles and motor vehicles and are marked with pavement marking and signage. The typical shared lane marking is called a "sharrow". Shared roadways are defined by wider pavement widths and lower traffic volumes and speeds. Pavement markings provide information to cyclists on where to be riding in a lane of traffic and inform motorists of the presence of cyclists. Shared roadways are typically implemented on arterials, collector and primary local streets when speed limits are below 35 miles per hour. Low to moderate automobile traffic and lack of pavement width sufficient to install a dedicated bike lane are characteristics associated with the implementation of shared lanes.

At the present time there are no on-street marked shared roadways in Highland Park.

Utilizing shared lane markings may be applicable in the following scenarios:

- In a shared lane with adjacent on-street parallel parking with adjacent on-street parallel parking, to assist cyclists with appropriate positioning that reduces the chance of a cyclist impacting the open door of a parked vehicle.
- On wide outside lanes, to indicate safer positioning away from the curb or edge of the roadway.
- To fill a gap between two sections of roadway that have bike lanes or to fill a gap between a Shared-use path and a nearby destination.

Typical Shared Roadway Pavement markings – the "sharrow"

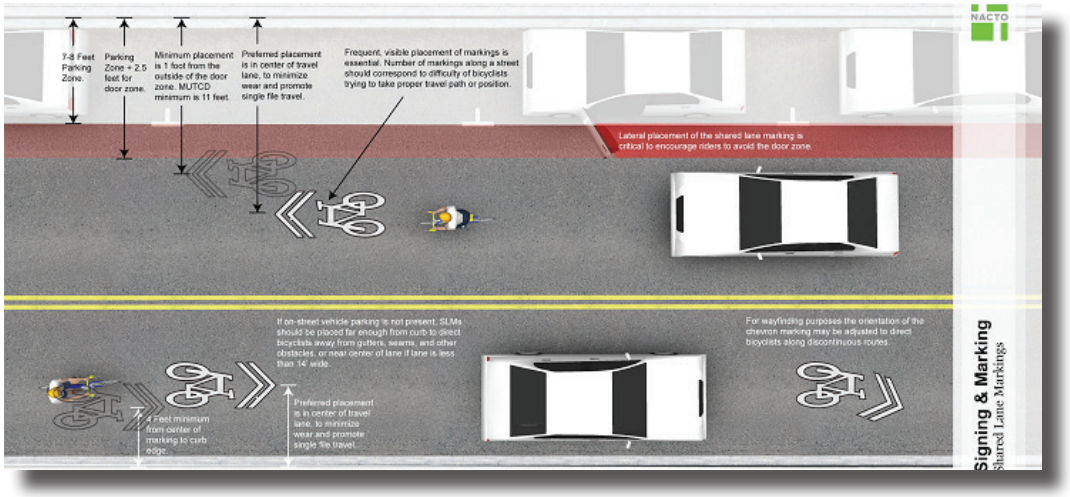
W11-1

W16-1P

Exhibit 4.1. SHARE THE ROAD Sign Assembly

Potential Sign Assembly for Shared Roadways (Manual of Uniform Traffic Control Devices)

- On a section of roadway where the lanes are too narrow for a bicyclist and a motorist to travel side by side in the lane.
- At multi-lane intersections where there is insufficient width to provide a bike lane, and conflicts make it desirable to indicate proper positioning.



Source: NACTO, 2011

Signed Routes are streets that are shared by cyclists and motor vehicles and have bike route signage. Signage is an important component of informing cyclists of destinations that are accessible by bike. Signage should be placed at intersections and decision points along bicycle routes. Best practices state that utilizing the "3 D" concept of signage: distance, destination and direction will maximize the impact of signed routes.

Signed bike routes can be used to identify a preferred route to or between destinations; especially in cases when there is not sufficient pavement width or a demonstrated need for a bicycle lane. A signed bike route may incorporate other improvements including bike lane markings or sharrows or may stand alone.

An added benefit of signage is that motorists see the signs, too, which informs and heightens their awareness of cyclists on the road.

The Northwest Municipal Conference has developed a Bicycle Signage Plan for North and Northwest Cook County. In advance of the City of Highland Park implementing a signage program, it should confer with the Conference and determine if their in an intention of expanding the Signage Plan to Lake County member communities.

Pedestrian Facilities

Roadway Narrowing and Roadway Diets

Pedestrians improvements will result in a safer, more enjoyable and utilitarian experience for residents and visitors of Highland Park. While not everyone uses a bicycle, nearly everyone walks or uses the community's pedestrian system. Enhanced pedestrian facilities may include modification and enhancements to roadways, sidewalks and intersections, and other types of improvements can be implemented at locations identified through public input, analysis of accident data and surveys of existing conditions.

Example of modifications that can be made to roadways is roadway narrowing and lane reductions. Roadway narrowing can be achieved in several different ways:

1. Lane widths can be reduced to 10 or 11 ft and excess asphalt striped with a bicycle lane or shoulder.
2. Travel lanes can be removed.
3. On-street parking lanes can be added.
4. Curbs can be moved to narrow the cross section and extend the width of sidewalks and landscape areas.

Roadway narrowing in conjunction with reduced speed limits along a roadway section can enhance movement and safety for pedestrians.

Some roads may have more travel lanes than are necessary to adequately accommodate current and future traffic volumes and may be difficult for pedestrians to cross because of their width. Reducing the number of lanes on a multi-lane roadway, frequently called a "road diet" can reduce cross-

ing distances for pedestrians and may slow vehicle speeds. For example, a four-lane undivided road can be converted to one through lane in each direction, with a center left-turn

lane or with a raised median, and turn pockets and bicycle lanes on both sides of the roadway. Turning pockets may be needed only at specific locations.

Depending on conditions, it may also be possible to add on-street parking while allowing for bicycle lanes on both sides of the street—instead of a center turn lane. If no sidewalks exist along the roadway, these should be added. If sidewalks exist, and there is adequate room, a landscaped buffer, commonly referred to a as a parkway, is desirable to separate pedestrians from the travel lane.

Potential roadway diet locations in Highland Park are limited, but both Green Bay Road and Central Avenue west of Green Bay Road warrant consideration and study based on the input related to the pedestrian experience along and crossing those streets in and near the downtown.

Sidewalks

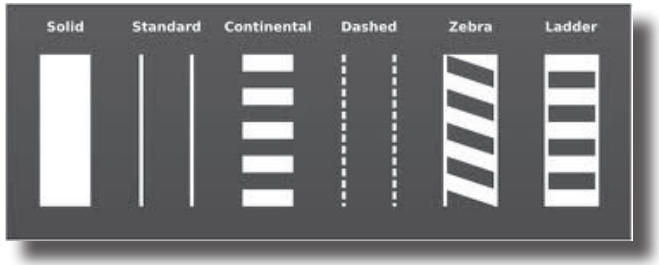
Sidewalks are the backbone of the pedestrian system and should be provided on a minimum of one side of most streets. The City width-standard for sidewalks is 5 feet, with wider sidewalks provided in business districts and other locations of heavy pedestrian activity.

The primary types of enhanced Pedestrian Facilities to be implemented are shown below:

Crosswalk Striping and Signalization

On-street striping to delineate the pedestrian crosswalk can take many forms from minimal to more extensive. At unsignalized intersections, a combination of crosswalk striping and signage may be necessary to assure pedestrian safety. In special circumstances near parks and schools, additional on-street pavement markings can be provided to inform motorists of upcoming crosswalks with a high level of activity, including children.. Specific crosswalk design solutions need to evaluate the land use and street context of the particular location in question.

Advanced crosswalk design may incorporate in ground lighting as well as more visible striping patterns to highlight the pedestrian route.



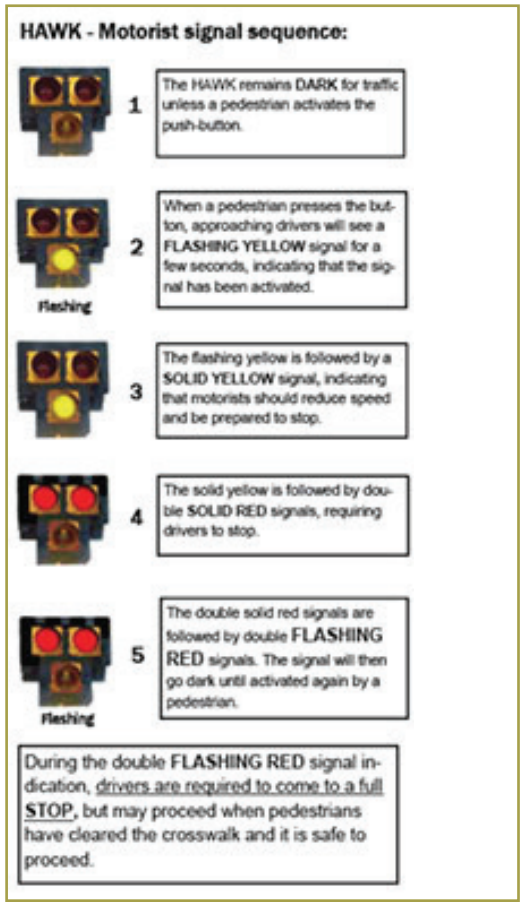
Examples of a variety of crosswalk marking designs.
Source: Federal Highway Administration

Pedestrian Signalization

Highland Park has 35 signalized intersections. All of these intersections are equipped with pedestrian activated controls. At present, a number of these signals are also equipped with countdown indicators which allow pedestrians to know the amount of cross time they have within the walk phase of the signal. The City's goal is to equip all of its signals with countdown indicators.

Additional pedestrian signal improvements that can be considered on a case-by-case basis include installing audible countdown signal timers to assist pedestrians with visual impairments.

One additional tool to enhance pedestrian safety is the HAWK beacon (High-Intensity Activated crossWalK beacon). A HAWK beacon is a traffic signal used to stop road traffic and allow pedestrians to cross safely. It is officially known as a "pedestrian hybrid beacon". The purpose of a HAWK beacon is to allow protected pedestrian crossings, stopping road traffic only as needed. While different in appearance to the driver, to the pedestrian this signal works the same as any button-activated traffic signal in the District. It stops traffic with a red signal allowing pedestrians to cross safely. HAWK beacons may be appropriate for consideration at pedestrian access points for community destinations such as schools, parks or civic buildings.



Pedestrian and Mid-Block Crossing Islands

Pedestrian and mid-block crossing islands may be utilized on collector and arterial roadways and can create safe pedestrian zones away from automobiles. Typically placed mid-block crossings and pedestrian islands reduce the distance that a pedestrian must walk before reaching a safe stopping point prior to crossing the balance of the street.

Raised Crosswalk

Raised crosswalks are at grade with the sidewalk but act as a reminder to automobiles that they have entered a pedestrian crosswalk. Raised crosswalks are typically installed to reinforce stop signs.

Bicycle and Transit Support Facilities

In addition to improving the bicycle network, additional infrastructure can be provided to encourage more cycling around the community and to important destinations. Providing safe and secure bicycle parking in convenient and visible locations encourages use and deters theft. It is important to provide facilities that connect cycling to transit; a combination of cycling and transit helps to reduce motorized traffic. Improved bike parking at Metra stations and bus shelters, and paved or hard surfaces at selected locations along Pace bus routes can make bicycle and bus commuting more attractive, comfortable and easy. The Ravinia and Downtown Highland Park Metra stations already provide covered bike parking and the City's Sustainability Plan recommends the construction of a bike station at the downtown train station.

Covered bike parking
at the Ravinia Metra station

Example of covered bike parking.

Bus shelters provide protection from the elements and may be strategically located along bus routes. Bus shelters provide protection from the elements and may be strategically located along bus routes.

Bicycle Facilities

The City's decisions about how to improve a roadway for cyclist use, and the specific nature of the improvement, will take into consideration a variety of factors: right-of-way and traffic lane width, the presence of on-street parking and average daily traffic volume. There are a number of analytical tools that can be used to assess the bicycle related improvement needs of a specific roadway. This Plan recommends the use of the Bicycle Level of Service Model (BLOS). BLOS is being utilized in many jurisdictions, and can be used to determine the appropriate level of improvement for a specific roadway segment. Once a decision is made as to the appropriate level of accommodation to use, the design of the improvement must be addressed. A number of national and governmental organizations such as the American Association of State Highway and Transportation Officials (AASHTO), the National Association of City Transportation Officials (NACTO), and the Federal Highway Administration (FHWA) have developed guidelines and standards for the design, implementation and maintenance of bicycle facility improvements. The guidelines and standards comprehensively address design factors such as facility width, slope, striping, surface materials, and signage. This Plan recommends that the City incorporate the use of BLOS and these design standards to guide the future development of non-motorized transportation improvements.

Bicycle Level of Service (BLOS) Model

Bicycle Level of Service (BLOS) Model is a statistical formula used by planners, designers and engineers to evaluate a cyclist's perception of safety and comfort along a roadway. The BLOS model is based on the research documented and published by the Transportation Research Board of the National Academy of Sciences[7]. State and local transportation departments across the country have used this model to assist in non-motorized transportation planning and to help establish an implementation plan.

The following table identifies the information needed and how the information is utilized to determine the appropriate improvements for a particular roadway location.

Model Inputs	Applications
Average Daily Traffic	1) Conduct a benefits comparison among proposed bikeway/roadway cross-sections
Number of Through Traffic Lanes	
On-Street Parking	2) Identify roadway restriping or reconfiguration opportunities to improve cycling conditions
Pavement Condition	
Pavement Width	3) Prioritize and program roadway corridors for bicycle improvements
Percent of Heavy Vehicles	
Speed Limit	4) Create bicycle suitability maps
	5) Document improvements in corridor or system-wide cycling conditions over time

7 http://www.trb.org

The City of Highland Park can use BLOS scores, in conjunction with accident (crash) data, public input, and proximity to points of interest to establish a pattern of implementation and to determine which roadways are most in need of bicycle improvements and the nature of the bicycle accommodation to be provided.

The addition of bicycle facilities in Highland Park will create an environment where cyclists can ride comfortably, safely and efficiently throughout the community. It should be noted that improving the conditions for pedestrians and cyclists has the potential to impact automobile traffic flow in certain locations. For example, increasing the "walk" time for pedestrians at a busy signalized intersection can reduce the amount of left hand turning time available for automobiles.

Another example is that installing a bicycle lane will reduce the available lane width on a street. With these examples in mind, balancing the requirements of motorized and non-motorized users will be one of the many factors that will need to be taken into account as part of the implementation of Bike-Walk HP 2030.

Bike parking can be added on-street in areas of high demand.

Bike racks facilities can be unique and aesthetically pleasing like this Roanoke Virginia bike rack designed and fabricated by Knowhow Shop LA.

IX. Policy and Plan Recommendations

Bike- Walk HP 2030's recommendations for program and facility implementation begin with the Complete Streets Policy. The Policy is intended to be fundamental to decision making relative to street improvements in the City. The Policy has been developed to be comprehensive, but flexible, and to provide the necessary guidance to the public and private sectors to assure that the needs of all users are considered when street improvements are considered. The Complete Streets Policy in this Plan has been reviewed and recommended for adoption by the City's Transportation Commission.

Proposed City of Highland Park Complete Streets Policy (as recommended by the Transportation Commission)

Complete Streets are streets that safely accommodate street users of all ages and abilities including: pedestrians, cyclists, transit riders, and motorists. Through the Complete Streets Policy, the City of Highland Park affirms its commitment to planning, funding, designing, constructing, operating and maintaining its public streets and right-of-ways according to the Complete Street principles in order to support the City's Sustainability Plan and enhance the Public Street Standards within the Highland Park Code with the goal of creating a safe, sustainable, attractive and utilitarian multimodal network that balances the needs of all users within the community.

By adopting the Complete Streets Policy, the City of Highland Park:

- Affirms that street improvements throughout the community will improve Highland Park's commercial and residential environment by providing a safe, enjoyable and attractive atmosphere for street users of all ages and abilities

- Recognizes that the development of well-designed pedestrian and bicycle facilities enhances and encourages recreational and transportation opportunities, thus promoting active, healthy lifestyles, reducing the depletion of natural resources, improving safety and access, and reducing traffic congestion

- Appreciates the positive role that well-designed pedestrian and bicycle facilities play in attracting economic development and sustainable economic growth

- Values the long-term cost savings of developing pedestrian and bicycle infrastructure as they relate to improving public health, environmental stewardship, reducing fuel consumption, and reducing the demand for motor vehicle infrastructure

By adopting this policy, the City's Commissions will consider and require, as a function of their development review authority, the incorporation of Complete Streets improvements in new development in addition to considering requests from residents and property owners, prior to making recommendations to the City Council following the appropriate public meetings. Furthermore, Complete Streets improvements will be considered and included, in accordance with this policy, during the reconstruction or rehabilitation of existing roadways.

Objectives and Intentions

The Highland Park City Council hereby declares that the City's objectives and intentions for developing a Complete Streets Policy are to:

1. Use this Policy and the City of Highland Park Master Plan, Non-Motorized Transportation Plan (A.K.A Bike-Walk HP 2030), Sus tainability Plan and City Code to guide the planning, funding, designing, implementation and operation of new and reconstructed streets while remaining flexible to the unique land use contexts of different neighborhoods where sound engineering and planning judgment will produce appropriate improvements

2. Maintain the minimum safe street pavement width and radii and sidewalk pavement width to accommodate emergency and freight vehicles as specified in Section 94 of the Highland Park Code

3. Adopt and follow contemporary national and/or state standards and statutes affecting implementation and maintenance of Com plete Streets

4. Support the PACE and METRA transit systems by providing and maintaining facilities for their users and encouraging usage of mass transit

5. Fund the implementation and maintenance of Complete Streets improvements

6. Maximize the transportation options available within the public right-of-way

7. Develop a street system that supports inter-municipal and regional connectivity

Policy Implementation

The City of Highland Park will implement the Complete Streets Policy by:

1. Incorporating this Complete Streets policy into the Highland Park Municipal Code

2. Reviewing and amending, as necessary, the applicable codes, standards, details, policies or practices needed to ensure that design components for all new or modified streets follow the intent of City policy and the Municipal Code

3. Recommending Complete Streets improvements and solutions that harmonize with the surrounding land uses

4. Identifying and pursuing funding sources to augment City of Highland Park revenues in order to implement Complete Streets improvements

5. Continuing inter-departmental project support and coordination focusing on activities occurring within public right-of-ways in order to better use fiscal resources

6. Developing mechanisms recommended by the Transportation Commission by establishing an ongoing Complete Streets and Non-Motorized Transportation Subcommittee, approved by the City Council, to oversee the implementation of the Complete Streets policy and consider input from the public, other Commissions, and City professional staff on related matters. The Complete Streets and Non-Motorized Transportation Subcommittee shall be comprised of members of the Plan or Transportation Commissions or Highland Park residents

7. Reporting to the City Council and informing the public on an annual basis of the implementation of Complete Streets related im provements

8. Recognizing that Complete Streets may be achieved through single projects and incrementally through a series of smaller improvements or maintenance activities over time, and that all sources of transportation-related funding be drawn upon to implement Complete Streets, and

9. Developing evaluation measures, Bicycle Level of Service, inventory gaps in the sidewalk network, inventory the length of streets with bicycle or pedestrian friendly enhancements relative to the Complete Streets policy

Exceptions

Exceptions to the Complete Streets Policy shall only be granted by the City Council pending the Complete Streets and Non-Motorized Transportation Subcommittee's review and recommendation of a report from City professional staff addressing how the Complete Streets Policy is deemed unreasonable or infeasible due to the following circumstances:

1. The proposed roadway prohibits non-motorized transportation

2. Location specific topographic or other natural or man-made physical conditions

3. The financial impact of constructing or maintaining the proposed improvement is exorbitant relative to the potential benefit of the improvement

4. There is a documented absence of need for the proposed improvement and

5. Absence of jurisdictional authority. City staff will contact the appropriate jurisdictional authority in order to request and encourage Complete Streets improvements within Highland Park

Staff Oversight

To assure project compliance with the Complete Streets Policy and implementation through administration of the City Code, the Director of Public Works should designate a Non-Motorized Transportation Plan Coordinator to review all projects for compliance with the Policy and the Plan .

Bike – Walk HP 2030 System Plan

The proposed Complete Streets framework recommends that Highland Park strive for a standard level of improvement for the streets in the City with the goal of achieving consistency with the proposed Complete Streets Policy. The timeframe of this Plan, to the year 2030, is an acknowledgement that to achieve full implementation of the recommended improvements will require on-going effort and funding that spans a number of years. While being cognizant of existing conditions and financial resource constraints, the City's goal should be to achieve, over time, the highest level of improvement possible for each street classification. Consistent with the Complete Street Policy, implementation of recommended improvements can and should occur as a matter of course when City streets are resurfaced or as stand alone projects, when warranted.

The improvements listed are in descending order of complexity, so, for example, bicycle lanes are a higher level of improvement as compared to a shared lane. The framework is not rigid, but recommends a variety of accommodations that can be considered for each roadway by type and context. In terms of context, selecting the appropriate accommodation for a specific situation shall be guided by various conditions such as: the roadway type, adjacent land uses, right-of way and traffic lane widths, and the presence of on-street parking.

Table 2: Complete Streets Matrix and Framework – Preliminary*				
	Street Classification			
	Arterial	**Collector**	**Primary Local**	**Secondary Local**
Automobile Lanes	Provide adequate traffic lanes	Provide adequate traffic lanes	Provide adequate traffic lanes	Provide adequate traffic lanes
Bicycle Improvement	Bike lanes (separated or sidepath); shared lanes; signed routes	Bike lanes (separated or sidepath); shared lanes; signed routes	Shared lanes or signed route	No improvements warranted unless pending a specific resident request
Pedestrian Improvement	Sidewalks – both sides of street; cross-walks marked at intersections; mid-block crossings; pedestrian islands incorporated at selected intersections; pedestrian improved crossing signals	Sidewalks – both sides of street; Cross-walks marked at intersections; pedestrian improved crossing signals	Sidewalks – at least one side; sidewalks do not terminate mid-block; cross-walks marked at intersections w/collectors and arterials	Sidewalks – at least one side; Sidewalks do not terminate mid-block; cross-walks marked at intersections w/collectors and arterials
Transit Related Improvements	Protected shelters and paved bus stops provided; Bicycle parking (protected) provided at transit stations	Protected shelters and paved bus stops provided; Bicycle parking (protected) provided at transit stations		
*The recommendations set forth in this table do not constitute design requirements but are guidelines related to the generally appropriate improvement by type of street and do not preclude the application of alternatives solutions on a given street segment.				
Preliminary Potential Improvements *(will be impacted by local street conditions)*				

Bike Lanes: w/curb and gutter = 5 feet; w/out curb and gutter = 4 feet **Shared Lanes**: include sharrows and signage

Trails: See AASHTO, NACTO or other guidelines for specific improvement designs

Intersections: enhancements can include but are not limited to: high visibility crosswalk markings; advance yields lines; median refuge islands; street, cross-walk and signage illumination; curb extensions to shorten crossing distance; ped-activated lights; audible traffic signals, etc.

Transit Related Improvements: See PACE Development Guidelines

Developing Solutions for Cycling and Walking

Bike – Walk HP 2030 is a Plan to address the barriers to cycling and walking in the community. As stated previously, Bike – Walk HP 2030 seeks to build on and refine previous planning efforts and provide the elements that will lead to solutions that will benefit Highland Park residents seeking a better cycling and walking system. Recommendations will address the following by areas:

- **Engineering**
  - Update City Codes related to non-motorized transportation improvements
  - Utilize nationally recognized standards for the design and operation of bicycle and pedestrian improvements
  - Design and engineer safe and accessible roadways and pedestrian facilities
  - Improve connectivity and access to major community destinations
  - Find funding to support and sustain the improvements long-term

- **Education**
  - Educate roadway users about rules, rights, and responsibilities
  - Provide bicycle education opportunities for community residents
  - Involve municipal and community resources to cycling and walking activity

- **Enforcement**
  - Amending City Code pertaining to the regulation of cyclists on the roads
  - Enforcing proper behaviors and use of roadway facilities by motorists, cyclists and pedestrians

- **Encouragement**
  - Maintain trails, streets and sidewalks in a clean and clear condition so they are usable year-round by cyclists and pedestrians
  - Provide appropriate facilities for cycling and walk throughout the community
  - Promote walking and physical activity throughout the community year-round
  - Partner with local school districts on Safe Routes to Schools programs
  - Partner with the Park District and other governmental entities on developing facilities and activities

- **Evaluation and Planning**
  - Develop baseline data to measure the outcome of planning and implementation efforts
  - Evaluate the outcomes of the planning and implementation efforts

X. Recommendations and Implementation

Bicycle and Pedestrian Facility Planning in Highland Park

This section sets forth the policy and facility recommendations of Bike – Walk HP 2030. There are five Policy recommendations each of which has a number of associated objectives. A time period for accomplishing the objectives is proposed and the City Department that will be responsible for, and lead the implementation of each objective has been identified (Public Works = PW; Community Development = CD; Police = Pol; City Manager's Office = CMO). Recommendations noted as "Continue and Ongoing" indicate that once initiated the action will be continued or is already part of standard City practice.

The Facility Improvement recommendations are divided between Initial Projects, which are planned to occur in years 1 through 5 of Plan implementation and Long Term Projects which will occur beyond year 5. Some of the initial project recommendations are for improvements to designated on-street routes The Long-Term Projects are further divided between Shared-Use Path; Sidewalk; and Intersection, Crosswalk and Pedestrian Bridge Improvements. The nature, extent and estimated cost for each of the Facility Improvement recommendations is provided.

As previously described, designated on-street route improvements should be developed by street classification type. *Bike – Walk HP 2030* recommends that on-street routes be comprehensively developed as suggested in the Complete Streets matrix. On-street route improvements include the development of dedicated bicycle lanes, shared lanes and signed routes. Consistent with the Complete Streets Policy, on-street route improvements should be designed as integral parts of future planned street improvement projects. If route improvements are consistently included in street design, over time, as the City improves its streets, facilities for cyclists and pedestrians will be incrementally provided. Furthermore, implementing retrofit improvements to streets that have recently been improved and where the pavement condition is suitable for restriping, can be a high priority. One set of retrofit improvements that can be addressed initially is signing all of the designated on-street routes. Appendix Table A provides preliminary recommendations for the nature and extent of improvements, and cost estimates for the implementation of the recommended on-street routes.

Project cost estimates are based on year 2012 unit costs. The project estimates incorporate a 25 percent contingency[8] factor but do not incorporate cost estimates for land control or acquisition (if necessary), project design and engineering, and associated labor cost if City –staff is tasked with specific aspects of project implementation. It should be noted that some projects are multi-jurisdictional, so the full cost of implementing the project may not be borne by the City of Highland Park.

In addition to the cost of the facility improvements, there will be additional costs associated with implementing Bike-Walk HP 2030. These costs relate to the staff time to implement the policies and programs recommended herein. The Policy recommendations identify implementation tasks across numerous City Departments including the City Manager's Office, the Police Department and the Departments of Community Development and Public Works. At present, it is not anticipated that additional staff would be required to implement Bike-Walk HP 2030, but that the work items would be incorporated into the work of existing employees.

8 The 25 percent contingency accounts for the fact that the proposed improvements have not had an engineering design, do not specifically account for field conditions and that many of these projects are slated for future implementation at a time when the cost of installing the recommended improvements will be higher.

1. The City of Highland Park will develop and adopt policies, plans and guidelines to assure that cycling and walking are an integral part of City life and will reach out to other agencies so that this goal is incorporated in their projects and facilities in the community.			
	Short-Term (0 – 2 Years)	**Mid-Term (2 – 4 Years)**	**Long-Term (4+ Years)**
Adopt the Complete Streets Policy.	√ (PW)		
Accept the Complete Streets Matrix and Framework as a guideline for future road improvement projects.	√ (PW)		
Develop and update a Complete Streets Improvement Master Plan program.	√ (PW)	Continue and Ongoing	
Apply appropriate national model design standards for cycling, pedestrian and public transportation facilities.	Continue and Ongoing (PW)		
Amend Chapter 75 Bicycle Regulations of the City Code.	√ (PW and POL)		
Incorporate bicycle parking requirements in the zoning code for all multiple family residential and commercial land uses and provide on-street bike parking throughout the community.	√ (CD)		
Provide facilities for two levels of bicycle riders: basic and advanced.	Continue and Ongoing (PW)		
Design, develop and operate sidewalks as pedestrian spaces first and as bicycle facilities for children.	Continue and Ongoing (PW and Pol)		
Coordinate efforts with Pace and Metra to provide or improve appropriate bicycle and pedestrian facilities along bus routes and at train stations.	Continue and Ongoing (CD and PW)		

	Short-Term (0 – 2 Years)	Mid-Term (2 – 4 Years)	Long-Term (4+ Years)
Work with local school districts on Safe Routes to School programs to increase the number of students that walk or bicycle to school.		√ (CD and Pol)	
Work with and encourage/support the development of Park District and Forest Preserve District facilities and encourage linkages to the City's facilities. Meet at least annually to discuss and review potential or planned projects.	Continue and Ongoing (CD and PW)		
Work with the Northwest Municipal Conference on planning for and developing the designated routes identified in its Bicycle Plan that are located within Highland Park.	Continue and Ongoing (CD and PW)		

2. The City of Highland Park will develop and maintain a continuous, interconnected cycling and pedestrian system that accommodates short and long distance trips and provides connections and access to major community destinations.

	Short-Term (0 – 2 Years)	Mid-Term (2 – 4 Years)	Long-Term (4+ Years)
Regularly assess street, trail and sidewalk maintenance needs and make spot improvements as part of the City's asset management program.	Continue and Ongoing (PW)		
Develop the bicycle and pedestrian system through implementation of capital improvements for new and retrofitted facilities including sidewalks, bicycle facilities, and intersections.	Continue and Ongoing (PW)		

	Short-Term (0 – 2 Years)	Mid-Term (2 – 4 Years)	Long-Term (4+ Years)
Develop the bicycle and pedestrian system through implementation of other improvements including street striping and signage.	Continue and Ongoing (PW)		
Clear paved multi-use trails in winter as part of the City snow plowing program.	√ (PW)	Continue and Ongoing	
Plan for and improve the arterial, collector streets, and primary residential streets as either capital or retrofit improvements when implementing roadway improvement projects, so that they provide a primary cycling and walking system through the City.	√ (CD and PW)	Continue and Ongoing	
Plan for and improve the arterial, collector and primary residential streets with striping and signage as needed so that they provide a secondary cycling and walking system and a link to the primary system.	√ (CD and PW)	Continue and Ongoing	
Plan for and implement Shared-use path improvements at the same time as making street route improvements in order to provide riding and walking opportunities for all types of bicyclists and pedestrians.		√ (CD and PW)	Continue and Ongoing)
Work with the School and Park Districts to ensure that schools and parks are safely connected into the bicycle and pedestrian systems.	Continue and Ongoing (CD and PW)		

3. The City of Highland Park will include funding of bicycle and pedestrian-related improvements into capital funding requests for street improvement related projects, where appropriate.			
	Short-Term (0 – 2 Years)	**Mid-Term (2 – 4 Years)**	**Long-Term (4+ Years)**
Identify a dedicated funding source for implementation of capital improvement projects.	√ (Fin and City Council)	Continue and Ongoing	
Identify and apply for grant funding for bicycle and pedestrian related improvement projects.	Continue and Ongoing (CD and PW)		
Allocate and balance funding between projects designed to improve conditions for automobiles and those that accommodate cyclists and pedestrians.	Ongoing (PW, Fin and City Council)		

4. The City of Highland Park will supplement engineering improvements by implementing bicycle and pedestrian education, encouragement and enforcement and evaluation programs.			
	Short-Term (0 – 2 Years)	**Mid-Term (2 – 4 Years)**	**Long-Term (4+ Years)**
Establish a Non-Motorized Transportation Advisory Group of Transportation Commission members to support implementation of *Bike – Walk HP 2030.*	√ (Transportation Commission Chair to designate members)		

	Short-Term (0 – 2 Years)	Mid-Term (2 – 4 Years)	**Long-Term (4+ Years)**
Establish an on-going staff working group tasked with implementation of Bike – Walk HP 2030.	√ (CMO)		
Initiate a regular semi-annual bicycle count to establish base and on-going data on cycling in Highland Park.	√ (PW and CD)		
Adopt requirements that property owners shovel snow and keep sidewalks clear for pedestrians.	√ (PW)		
Provide an annual update that tracks the implementation progress of the Non-Motorized Transportation Plan.		√ (PW and CD)	
Collaborate with bicycle advocacy groups and other entities on the implementation of *Bike – Walk HP 2030* and other initiatives.	Continue and Ongoing (CD)		
Pursue certifications as a Bicycle and Pedestrian Friendly Community.		√ (PW and CD)	√
Enforce motor vehicle and pedestrian laws at high volume intersections in downtown and other Highland Park locations on a regular basis.	Continue and Ongoing (Pol)		
Once or twice per year, close off selected streets for a specific time period to automotive traffic to promote biking and walking.		√ PW and CD)	√

Promote cycling and walking in Highland Park through the Healthy Highland Park Task Force.	√ (CD and CM)		
Promote Pace bus service and the local routes in order to increase local awareness of bus transit options and ridership.	Continue and Ongoing (CD, PW and CMO)		

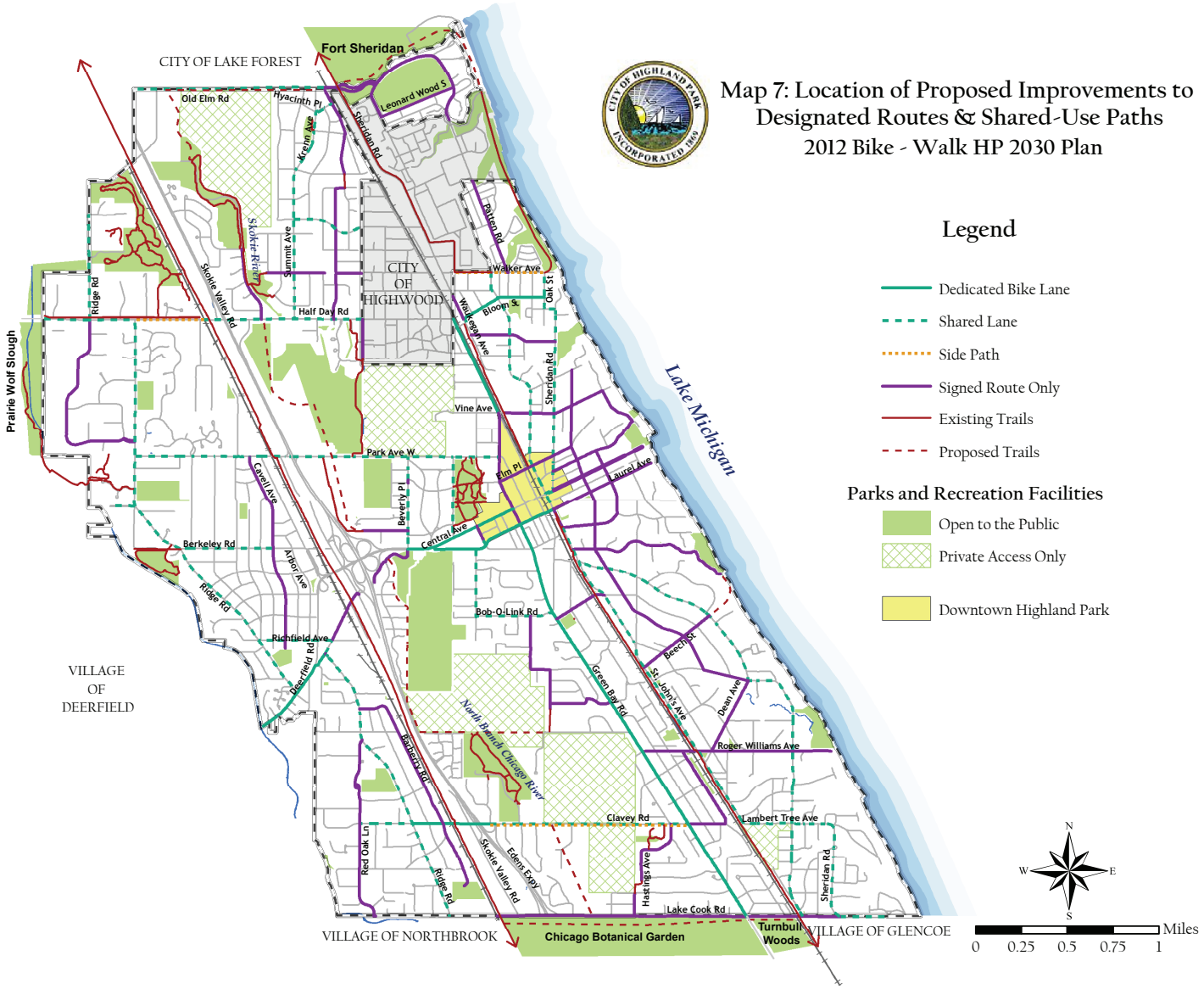
5. The City of Highland Park will work with adjacent municipalities and regional transit agencies to promote and implement improved regional connections.			
	Short-Term (0 – 2 Years)	**Mid-Term (2 – 4 Years)**	**Long-Term (4+ Years)**
Make improvements to corridors identified as regionally significant bicycle routes and coordinate planning and implementation with surrounding jurisdictions and through regional agencies, as necessary.		Continue and Ongoing (PW and CD)	
The City of Highland Park will seek to expand availability of and access to public transportation.Improve bike and public transit connectivity by providing secure and improved protected bicycle storage at Metra Rail Stations.		Continue and Ongoing (PW)	
Provide hard –surface and protected bus shelters at to be determined locations along Highland Park bus routes.		√ (PW)	
Continue seeking opportunities to expand the service areas and hours of operation of the Senior Connector for persons 50 years or older and develop it as a Highland Park Connector that could be used by persons of any age.		√ (PW and CD)	

Facility Improvement Recommendations

With the implementation of facility improvements, Bike-Walk HP 2030 will improve pedestrian and cycling conditions and connections throughout the City. The proposed on-street routes will better link the east and west sides of the community and improve access to downtown. Access to schools and parks will be safer and easier. The further development of the community's shared-use path system and sidewalk system will further improve the ability of pedestrians and cyclists to get around Highland Park. Overall, by providing improved facilities, Highland Park will become a place where residents and visitors of all ages may choose to walk and use bicycles for everyday transportation and enjoyment. Map 7 illustrates the proposed improvement of the designated on-street bicycle routes by facility type and the further development of shared-use paths. Map 8 illustrates the location of proposed sidewalk improvements.

As implementation of Bike – Walk HP 2030 proceeds, the Departments of Public Works in coordination with the Community Development and Finance Departments will implement the plan to bring all streets into conformity with the Complete Streets Policy, to the extent possible, within the 18 year timeframe of the Plan.

At the outset of implementation of the Plan a number of initial project recommendations have been identified that can illustrate the benefits of route improvements and will allow the City to understand the dynamics of implementing on-street improvements and other bicycle accommodations. The streets suggested for the initial projects were chosen because they are located in a variety of neighborhoods throughout the City, are located on a range of street types and will incorporate a range of facility improvements. In this way, the City can evaluate the implementation issues and opportunities and the outcomes of a variety of projects at the outset of Plan implementation. These proposed initial and long-term projects are set forth in the following tables.


CITY OF LAKE FOREST
Fort Sheridan
Old Elm Rd
Hyacinth Pl
Leonard Wood S
Sheridan Rd
Green Ave
Patten Rd
Skokie River
Skokie Valley Rd
Summit Ave
Ridge Rd
CITY OF HIGHWOOD
Walker Ave
Bloom St
Oak St
Half Day Rd
Waukegan Ave
Sheridan Rd
Prairie Wolf Slough
Vine Ave
Park Ave W
Elm Pl
Laurel Ave
Lake Michigan
Gavell Ave
Beverly Pl
Central Ave
Berkeley Rd
Arbor Ave
Ridge Rd
Bob-O-Link Rd
Richfield Ave
Deerfield Rd
VILLAGE OF DEERFIELD
Beech St
St. John's Ave
Green Bay Rd
Dean Ave
North Branch Chicago River
Roger Williams Ave
Barberry Rd
Clavey Rd
Lambert Tree Ave
Red Oak Ln
Skokie Valley Rd
Edens Expy
Ridge Rd
Hastings Ave
Sheridan Rd
Lake Cook Rd
VILLAGE OF NORTHBROOK
Chicago Botanical Garden
Turnbull Woods
VILLAGE OF GLENCOE
Map 7: Location of Proposed Improvements to Designated Routes & Shared-Use Paths
2012 Bike - Walk HP 2030 Plan
Legend
Dedicated Bike Lane
Shared Lane
Side Path
Signed Route Only
Existing Trails
Proposed Trails
Parks and Recreation Facilities
Open to the Public
Private Access Only
Downtown Highland Park
N
W
E
S
Miles
0
0.25
0.5
0.75
1

INFRASTRUCTURE IMPROVEMENT RECOMMENDATIONS

The time frames recommended for Project completion are divided into two periods: short and mid-term time frames (up to 5 years from Plan adoption) and long-term (begin 5 years after Plan adoption). However, consistent with the Complete Streets Policy, whenever pedestrian and bike projects can be incorporated into a larger project, the work should be done at that time.

Table 3: Initial Project Recommendations (Years 1 – 5 of Plan Implementation)

Location	Proposed Improvement	Estimated Cost
All On-Street bicycle routes	Signage only option: Install bike route signage in appropriate locations	$27,000
Robert McClory Path On-Street connection from Lincoln Avenue to Vine Avenue/Highland Park High School	Improve routing utilizing bike lanes, shared lanes and signage	$7,000 - $12,000 (Sharrows) $500 (Signage)
Green Bay Road (entire length of City)	On-street route including bike lanes, shared lanes and signage and missing sidewalk segments	$21,000 to $23,000 (Bike Lane) $1,000 (Signage) $126,000 (Sidewalk)
Ridge Road/Richfield Road from Lake-Cook Road (s) to City limits on (n)	On-street route including bike lanes, shared lanes and signage and missing sidewalk segments	$41,000 - $67,000 (Sharrows) $2,500 (Signage) $240,000 (Sidewalk)

Clavey Road/Blackstone/ Burton Red Oak Lane (w) to Roger Williams (n)	Develop on-street route including shared lanes and signage and install missing sidewalk segments (may include sidepath)	$10,000 to $130,000 (Bike Lane & Sharrows) Low end = Bike Lane, Shared Lane markings and Signage, High end = Bike Lane, Sidepath and signage) $1,000 (Signage)
Dean/Cedar/Linden from Roger Williams (s) to Maple Ave. (n)	Develop in-street route including shared lanes and signage and missing sidewalk on Cedar	$1,100 (Signage) $40,000 (Sidewalk)
Pedestrian Bridge @ Old Deerfield Road & Old Skokie Road	Signage and appropriate street markings to lead cyclists and pedestrians to or from the bridge and the Skokie Valley Trail	$9,000
Estimated Cost of Initial Projects (rounded to nearest $1,000)		**$527,000 - $680,000**
Average Annual Costs of Initial Projects (Years 1 – 5) (rounded to nearest $1,000)		**$105,000 - $136,000**

Longer Term Projects and Goals

The projects identified in this section are long-term goals of Bike – Walk HP 2030, meaning that planning might begin in the near term but implementation and completion of many projects is not likely to begin until five years after Plan adoption. To a greater or lesser extent, these projects involve multiple governmental jurisdictions and a few may involve private property owners. Furthermore, funding for the proposed improvements may only be partially supported by City of Highland Park revenues and will require financial participation of other units of government and grant funds from a range of sources. Bike – Walk HP 2030 recommends that the Departments of Community Development and Public Works prioritize the projects, develop an action plan for implementation of the highest priority projects, and report to the City Council within the short-term time horizon of 0 – 2 years of Plan adoption.

Table 4: Shared-Use Paths Improvement Recommendations

Location	Project Description	Project Length	Estimated Cost (to nearest $1,000) (Year 2012 Cost) Includes 25% Contingency)
Walker Avenue (north side of street)/(collector) from St. Johns Avenue to Oak Street	Sidepath (Work in cooperation with IDOT to extend existing sidepath to connect to Open Lands Lakefront Trail.)	1,500 feet (0.3 miles)	$50,700
Skokie River Trail from Old Elm Road south to Half Day Road	Trail from Old Elm Road to Cuniff Park and on street route from south end of Sleepy Hollow Park to Half Day Road and road crossing improvements at Half Day Road. Coordination with Park District.	Trail: 1,800 feet On-street route: 850 feet	$50,700
Skokie River Woods to Highland Park Recreation Center at Park Avenue West (part of Skokie River greenway)	Shared-use path between Half Day Road and Park Avenue West in conjunction with the Park District of Highland Park	4,600 feet (0.86 miles)	$129,000

Location	Project Description	Project Length	Estimated Cost)
Taylor Avenue/Park Avenue West Trail (part of Skokie River greenway)	Park Avenue West to Taylor Avenue and then on-street connection to Central Avenue. Bridge over Skokie River may be required depending upon specific trail routing. Coordination with IDOT, Army Corps and private property owners	2,800 feet	$78,000 (exclude potential bridge cost)
Hidden Creek Aqua Park to Fink Park Trail (part of Skokie River greenway)	Hidden Creek Aqua Park along western edge of Sunset Valley G. C. and Bob O'Link C. C. to Edgewood Ave. right of way and Fink Park. Coordination w/Park Dist. and property owners incl. Country Clubs	10,000 feet (1.9 miles)	$281,000
Northshore Sanitary District Trail (part of Skokie River greenway)	Route from Clavey Road to Lake-Cook Road (adjacent to NSSD facility) Coordinate with NSSD	2,800 feet (0.53 miles)	$78,000

Location	Project Description	Project Length	Estimated Cost)
Old Elm Road	Develop sidepath or on-street route from Skokie River to the McClory Bike Path (possibly in conjunction with City of Lake Forest)	4,800 feet	$135,000
Beech Street	Build shared path to lakefront Park District of Highland Park	1,400 feet	$39,000
McClory Bike Path	Study feasibility (including soliciting community input) of redesigning the trail for enhanced year round functionality for cyclists and pedestrians.	12,300 feet	Not estimated at present time
Total Estimated Cost: Shared Use Path Project Recommendations			$1,190,000

Sidewalks

High priority sidewalk projects include those recommended in the current Greenways Plan, but not yet implemented; those that fill a small gap of missing sidewalk; and those that facilitate access to a school, park, commercial area or transit facility. The goal for sidewalk projects shall be to provide continuous sidewalks along arterial streets and at least one continuous sidewalk on collector and primary local streets.

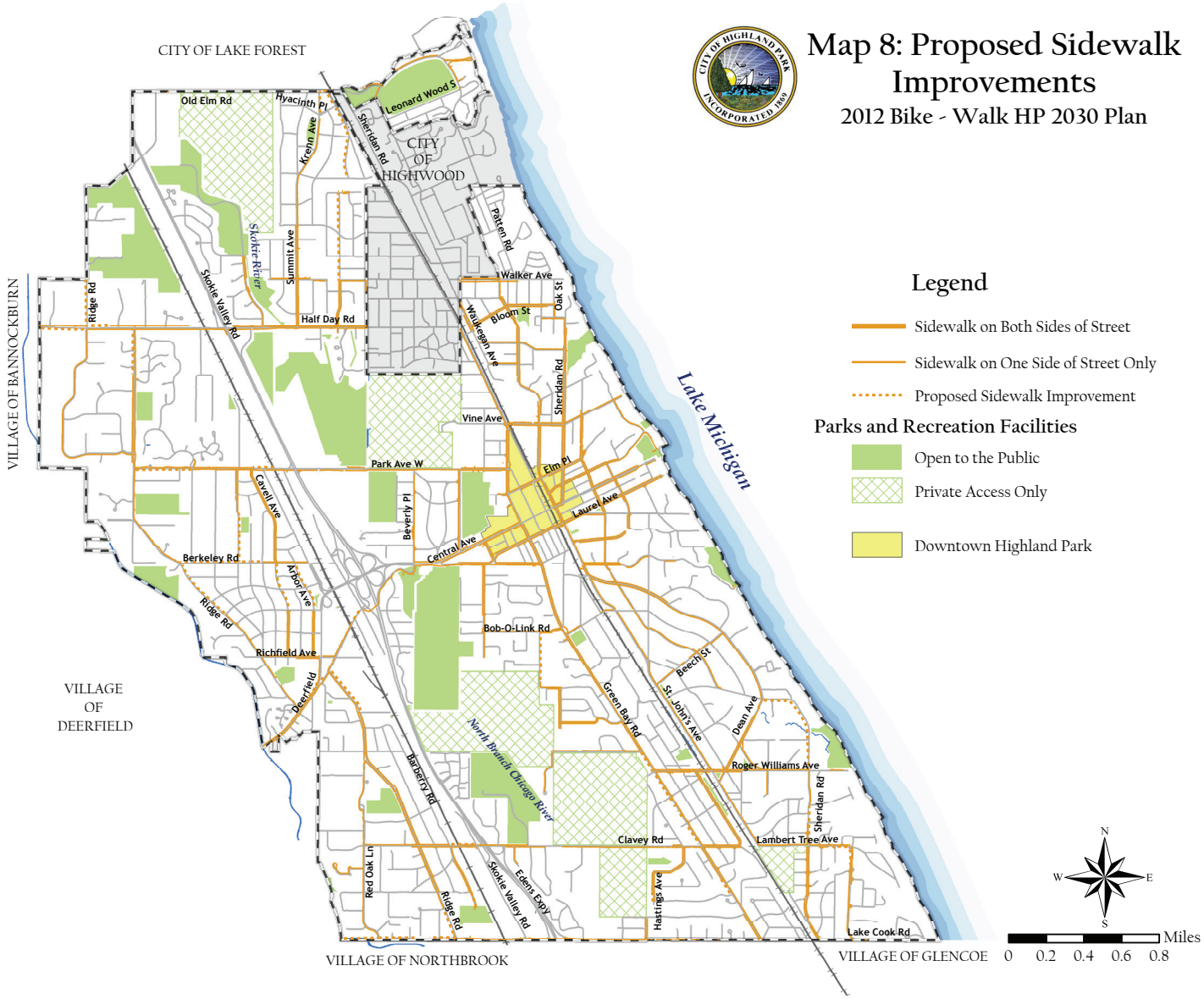
Bike – Walk HP 2030 recommends that where there is a demonstrated need for a sidewalk, that need should take precedence over the aesthetic impact of the sidewalk construction. Nevertheless, careful planning and input from impacted residents should be a primary goal when implementing a sidewalk project.

Sidewalk improvements should be implemented in conjunction with roadway repair projects, and as with on-street bicycle improvements, the construction of sidewalks should likewise be incorporated into adjacent roadway and development projects; this is consistent with the recommended Complete Streets Policy. The 2012 estimated cost to develop new five-foot-wide sidewalk is $35 per lineal foot.

Table 5: Sidewalk Improvement Recommendations

Location/Street Classification	Project Description	Project Length	Estimated Cost (to nearest $1,000) (Year 2012 Cost) Includes 25% Contingency)
City-wide	Complete gaps in existing sidewalk system not herein identified	Dependent upon length of missing sidewalk segment	Not estimated at present time, based on extent of the length of the missing sidewalk segment
Sheridan Road /Arterial	Complete sidewalks on one side to fill in gaps, especially in Rosewood Beach area (coordination with IDOT required)	4,900 feet	Not estimated at present time due to site specific related physical conditions
Green Bay Road	Complete gaps on west side of road between Lake Cook and Edgewood Roads	3,600	158,000
Park Avenue West/ Arterial	Complete sidewalk on south side from Ridge Road to Spruce Avenue	1,550 feet	$68,000
Ridge Road/Collector	Complete sidewalks (2) Ridgelee to Lake Cook Road (west side), (3) Route 22 to Park Avenue West (west side), (4) Route 22 to City limits (west side)	Ridgelee to Lake-Cook: 735 feet North of Rte 22 to City Limits: 1,300 feet	$90,000

Lake Cook Road (coordination with Cook County Highway Department required)	Build sidewalk on north side from Ridge Road to City limits	2,080 feet	$91,000
Warbler Lane, Brook Road, Western Avenue from Old trail to Old Elm Road /Secondary Local	Build sidewalk connecting neighbor-hood to south to Old Elm Road	2,800 feet	$123,000
Krenn Avenue from Hyacinth to Old Elm Road/ Secondary Local	Build sidewalk on east side of Krenn Avenue	600 feet	$26,000
Cloverdale Avenue/ Primary Local	Complete sidewalk from Cloverdale Park to Berkeley Road	811 feet	$35,000
Arbor Avenue/Secondary Local	Complete sidewalk on east side from Midland to Berkeley Road (access to Sherwood Park)	1,300 feet	$57,000
Crofton Avenue/Secondary Local	Build sidewalk on east side from Bob O'Link Road to Saxony Road	1,300 feet	$57,000
Total Estimated Cost: Sidewalk Project Recommendations			704,000


Map 8: Proposed Sidewalk Improvements
2012 Bike - Walk HP 2030 Plan
CITY OF LAKE FOREST
CITY OF HIGHWOOD
VILLAGE OF BANNOCKBURN
VILLAGE OF DEERFIELD
VILLAGE OF NORTHBROOK
VILLAGE OF GLENCOE
Lake Michigan
North Branch Chicago River
Skokie River
Old Elm Rd
Hyacinth Pl
Leonard Wood S
Sheridan Rd
Krehn Ave
Summit Ave
Ridge Rd
Skokie Valley Rd
Half Day Rd
Patten Rd
Walker Ave
Bloom St
Oak St
Walkegan Ave
Vine Ave
Park Ave W
Elm Pl
Laurel Ave
Central Ave
Beverly Pl
Cavell Ave
Berkeley Rd
Arbor Ave
Richfield Ave
Deerfield
Bob-O-Link Rd
Green Bay Rd
St. John's Ave
Beech St
Dean Ave
Roger Williams Ave
Clavey Rd
Lambert Tree Ave
Barberry Rd
Red Oak Ln
Edens Expy
Hastings Ave
Lake Cook Rd
Legend
Sidewalk on Both Sides of Street
Sidewalk on One Side of Street Only
Proposed Sidewalk Improvement
Parks and Recreation Facilities
Open to the Public
Private Access Only
Downtown Highland Park
N
W
E
S
Miles
0 0.2 0.4 0.6 0.8

Intersections, Crosswalks, Pedestrian Bridges

The selection of appropriate pedestrian crossing implementation measures shall be incorporated into the engineering analysis of future projects. In addition, as a long-term goal, a second bicycle and pedestrian overpass across U.S. Highway 41 needs to be provided; funding should be sought when opportunities arise. Project cost estimates have not been included since the specific engineering improvement has not been determined for these recommended projects.

Table 6: Intersection, Crosswalk, and Pedestrian Bridges Improvement Recommendations

Location(s)	Project Description	Project Length
Central Avenue at Second Street; First Street; St. Johns and Sheridan Road	Examine signage and street markings	Not applicable
Elm Place and First Street	Examine signage and street markings	Not applicable
Roger Williams Avenue and Sheridan Road	Improve crosswalk across Sheridan Road and sidewalk access to park and beach	Ravinia Business District and Rosewood Park and Beach
Crosswalks adjacent to parks and schools	On-going maintenance and restriping as needed	City-wide
Park Avenue and Illinois Route 41	Provide for grade separation between motorists and cyclist and pedestrians.	Not applicable
Half day Road and Illinois Route 41	Provide for grade separation between motorists and cyclist and pedestrians.	Not applicable

Facility Development Costs

Based on the foregoing, the preliminary estimate to implement the facility improvement recommendations of *Bike-Walk HP 2030* are illustrated in the following table.

Table 7: Preliminary Cost Estimate of Proposed Bike-Walk HP 2030 Improvements	
Category of Improvement	**Preliminary Cost Estimate**
Designated On-Street Routes (Appendix Table A)	$145,000 to $533,000
Shared Use-Paths (Table 4)	$866,000
Sidewalks (Table 5)	$704,000
Intersections, Crosswalks, Pedestrian Bridges (Table 6)	Not Estimated
Total	**$1,715,000 to $2,103,000**
Average Annual Expenditure (2012 – 2030)	**$95,000 to $117,000**

XI. Key Elements of Plan Implementation

The most important recommendations relative to implementation of Bike -Walk HP 2030 is a commitment of Department staff time and local funding over the timeframe of the Plan. The multi-year timeframe of this Plan and the guidance provided by the Complete Streets Policy will produce incremental improvements that, when completed, will result in functional and safe cycling and pedestrian systems in Highland Park.

Development of Complete Streets Master Plan

Following adoption of the Complete Streets Policy and *Bike-Walk HP 2030,* the City's Departments of Public Works and Community Development will complete a Bicycle Level of Service (BLOS) analysis of City streets and an inventory and assessment of sidewalk, crosswalk and intersection conditions. Based on this analysis, the Departments will develop a list of recommended improvements. This information would become the basis for the previously cited Complete Streets Master Plan that is to used to guide the allocation for budgeting capital improvement funds for the identified bicycle and pedestrian projects in accordance with the Plan timeframes. Approval of the Master Plan and establishment of a schedule for its implementation will increase the City's ability to secure funding from county, state and federal grants; these outside sources often require a grant-ready list of improvement projects.

Designate a Complete Streets Staff Coordinator and Oversight Committee

A City staff person should be designated as the Complete Streets Coordinator. This staff member would participate in plan and project reviews to assure compliance with the Complete Streets Policy and Plan recommendations. The Coordinator will also be the City's liaison with other governmental entities with regard to non-motorized transportation improvements in Highland Park. The selected staff person should be provided with, and trained to utilize the most current technical information related to bicycle and pedestrian facility improvements.

Furthermore, it is recommended that the City Council establish an Advisory Group of the Transportation Commission to monitor and provide input related to Policy and Plan implementation. The subcommittee would benefit from the expertise of non-voting staff members from the Departments of Community Development, Public Works and Police.

Balancing Retrofit, Small Scale and New Projects

Bike-Walk HP 2030 contains recommendations for a variety of improvements that have a broad range of potential funding implications for the City of Highland Park. New facilities such as a Shared-use path or buffered bicycle lane may be a major capital project with a multi-year time-frame. A signed bike route or restriping crosswalks for pedestrians and cyclist are lower cost, shorter term improvements that may be completed in the first several years after Plan adoption. The Complete Streets Policy relies upon the premise that bicycle and pedestrian improvements will be incorporated into larger projects on a regular basis, thus the cost of these improvements is absorbed and becomes a much smaller component of the overall project cost. Nevertheless, the City will balance larger projects with smaller retrofit ones in order to make "spot" improvements that can benefit and improve the entire system.

Pursue "Bicycle Friendly Community" Status

With the adoption of the Complete Streets Policy and implementation of the recommendations in this Plan, the City of Highland Park should be well-positioned to achieve recognition as a Bicycle Friendly Community from the League of American Cyclists. This designation would place Highland Park in a select group of Illinois communities that have already been recognized as Bicycle Friendly Communities.