



**NORTHWEST MUNICIPAL CONFERENCE**  
**DES PLAINES RIVER**  
**CORRIDOR PLAN**

HOUSEAL LAVIGNE ASSOCIATES | ACTIVE TRANSPORTATION ALLIANCE | GHA  
*DRAFT for NWMC Executive Committee Review* September, 2014







# ACKNOWLEDGMENTS

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September, 2014

**Note to the Reader: This document can be viewed and downloaded electronically by visiting the Northwest Municipal Conference website at <http://www.nwmc-cog.org/>**







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A sepia-toned photograph of a forest path. The path is dirt and leads into a dense forest of tall trees. Sunlight filters through the leaves, creating dappled light on the ground. The text "EXECUTIVE SUMMARY" is overlaid in a bold, green, sans-serif font in the center of the image.

# EXECUTIVE SUMMARY





## INTRODUCTION

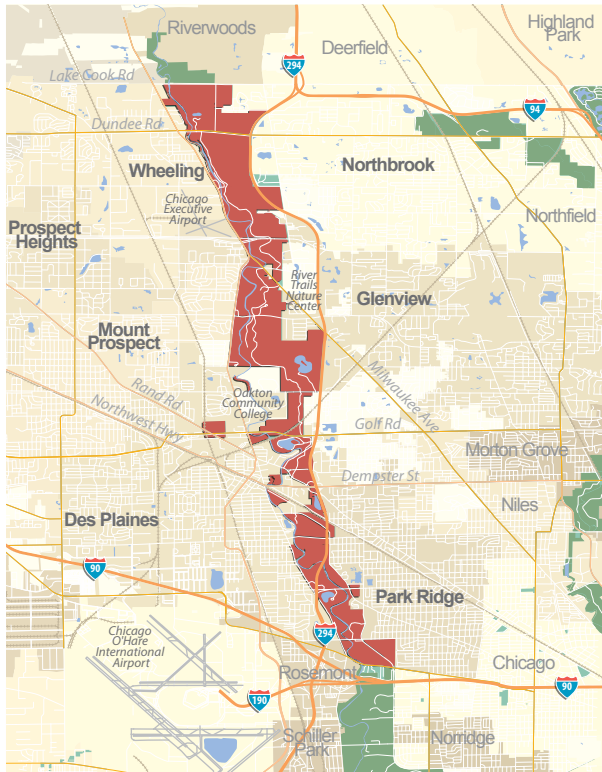
The Des Plaines River Trail is used by many people in many different ways. Bicyclists, walkers, equestrians, kayaker, and others use the trail for recreation, exercise, or simply to go from one community to another. The document, entitled the Des Plaines River Corridor Plan, aims to make these experiences safer and more enjoyable. The Plan considers access to the trail from surrounding communities, as well as mobility along the trail itself. It breaks the user experience along a 15-mile stretch of the trail into its fundamental components – roadways and sidewalks that provide access to the trail, access points and crossing points where the trail interacts with its context, and the trail and amenities within the Des Plaines River corridor. The document is broken into three major sections that establish the context for the corridor, identify key recommendations to enhance access to and throughout the Des Plaines River Trail, and provide technical analysis that supports proposed improvements.

## THE PLANNING PROCESS

One of the primary goals of this Plan is to establish recommendations that reflect real-life challenges, enhance the regional role of the trail, and respond to the actual needs of trail users. The planning effort was funded in large part by a grant from the Chicago Metropolitan Agency for Planning (CMAP) through its Local technical Assistance program. Through this collaboration among CMAP and the Northwest Municipal Conference (NWMC), the Plan provides a regional perspective that will allow local communities to realize the benefits of a unique asset. The planning process was designed with this perspective in mind and included the following components:

- Regular meetings with a Steering Committee made up of NWMC's Bike and Pedestrian Committee, agency representatives, and municipal staff,
- Public outreach to gain the insights of trail users and key implementation partners,
- Technical analysis of corridor conditions,
- The development and review of planning and design solutions to meet relevant goals and objectives, and
- Adoption of the Plan by the NWMC.





*The Des Plaines River Trail Planning Area*

## PUBLIC OUTREACH

Trail users and key implementation partners were engaged throughout the process to ensure plan recommendations would be responsive to local issues and opportunities. Techniques used to engage stakeholders include:

- Key stakeholder interviews with people representing various agencies, municipalities, and interest groups,
- Meetings with IDOT, the Forest Preserve of Cook County, and other agencies identified as key partners in implementation,
- An on-line questionnaire designed to identify issues faced by users and priority improvement areas, and
- sMap, an interactive web-based mapping tool that allows users to geographically locate constraints to safe trail access and mobility, and preferred improvements in the future.

## GOALS & OBJECTIVES

### ***The goals of this plan are:***

- To improve access to the Des Plaines River Trail for people of all ages, all abilities, and all modes of transportation.
- To improve usability of the Des Plaines River Trail for people of all ages, all abilities, and all active modes of transport including, walking, bicycling, equestrian, canoe, and kayak.
- To positively exploit the trail as an economic, transportation, and recreation asset for the communities surrounding the Des Plaines River Trail.

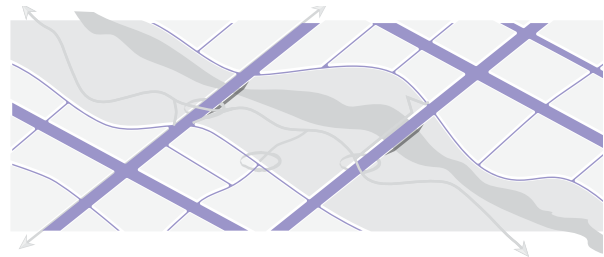
### ***This plan addresses the following objectives:***

- Improve connectivity between the Des Plaines River Trail and adjacent communities, job centers and other trail networks, especially for active modes of transportation such as bicycling, walking and transit.
- Identify specific non-motorized facilities and transit enhancements, where applicable, for each roadway that intersects the Des Plaines River Trail.
- Articulate overall trail design principles.
- Propose ways to increase safety at trail crossings of roadways.
- Engage trail users throughout the corridor.
- Implement wayfinding strategies in order to connect trail users to neighboring communities and their businesses for transportation and economic development benefits.
- Formalize trailheads and accommodations at those trailheads.



# ROADWAY STANDARDS

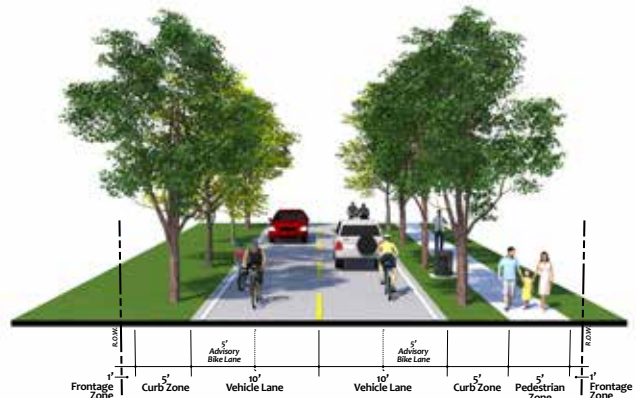
Roadways provide important multi-modal access to the trail corridor. The Plan identifies roadway standards that build on opportunities for bicycle and pedestrian facilities that connect to surrounding development and other regional trail networks.



## Streets

Streets include local roadways that typically accommodate lower traffic volumes and travel speeds. Street standards include:

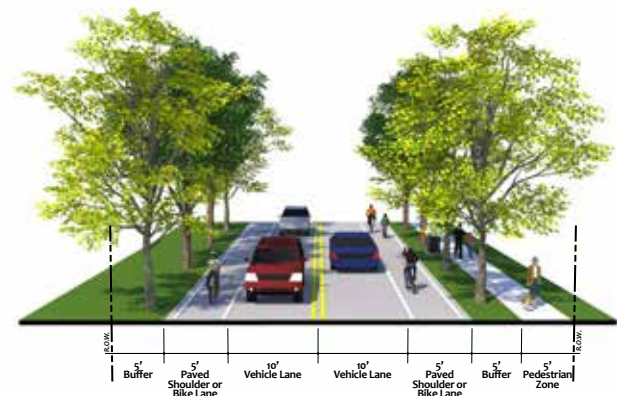
- Wayfinding Signage
- Shared Lane Markings
- Sidewalks (where feasible)



## Avenues

Avenues include roadways that carry a moderate amount of traffic at a higher speed than streets. Avenue standards include:

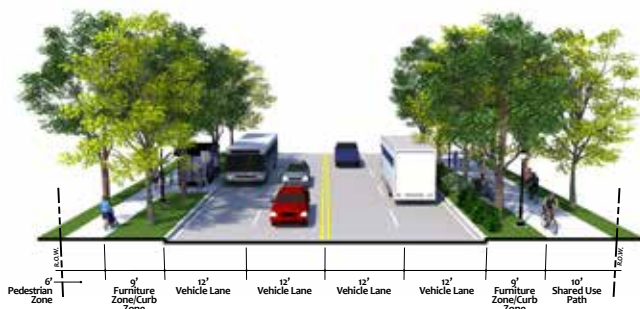
- Wayfinding Signage
- Sidewalks
- Paved Shoulders
- Bike Lanes or
- Buffered Bike Lanes



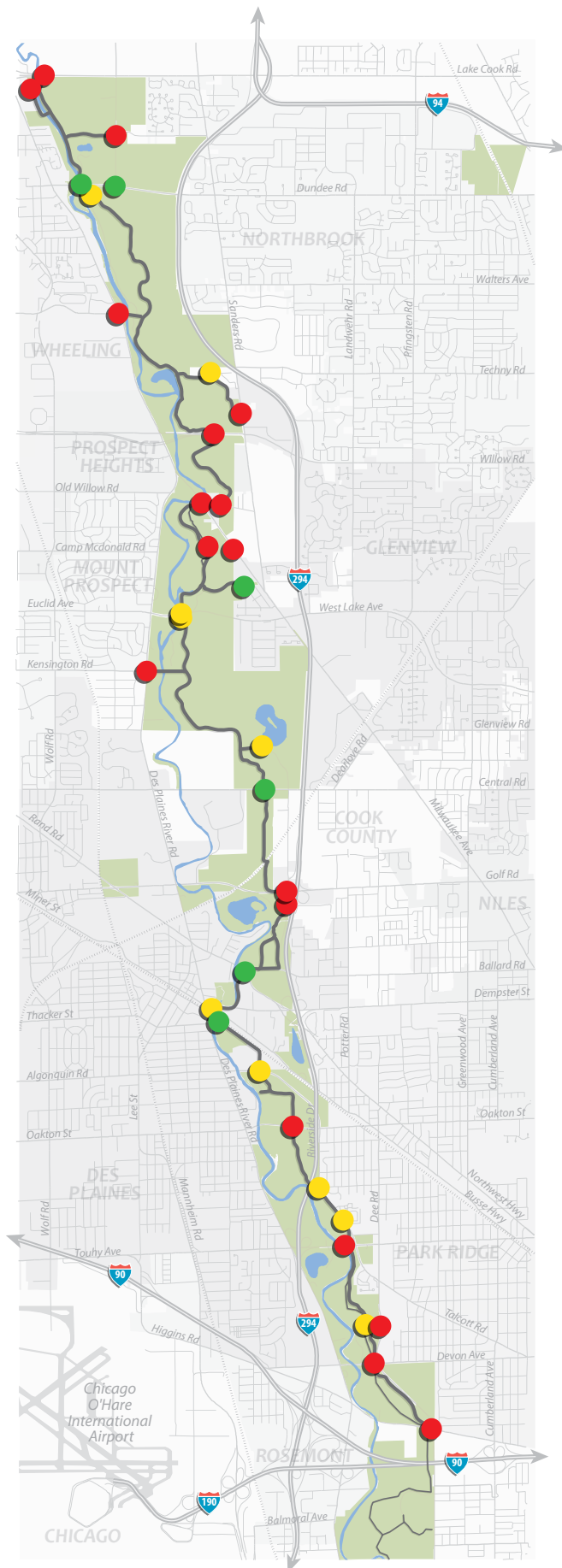
## Boulevards

Boulevards include roadways that carry significant traffic volumes at a relatively high rate of speed. Boulevard standards include:

- Wayfinding Signage
- Sidewalks
- Barrier Protected Bike Lanes
- Sidepaths (if warranted)







# Roadway Improvement Summary

## Status of Existing Roadway Segments

- Meets Recommended Standards
- Needs Minor Improvements
- Needs Significant Improvements



# ACCESS POINT AND CROSSING STANDARDS

Access and crossing points are the interfaces between the surrounding environment and the trail corridor. Improvements related to signage, accessibility, and safety are considered in order to maximize awareness and usability of the trail.

## Access Points

Access points are locations where a user can gain access to the Des Plaines River trail from nearby neighborhoods, business districts, and roadways. These points should include wayfinding and signage that makes users aware of the trail and describes where the trail may lead. Crossing countermeasures should be selected based on roadway standards.

## Street Crossings

Street crossing locations must accommodate the safe crossing on roadways with relatively low vehicular travel speeds and crossing distances. These operational characteristics allow the trail to be more visible in terms of their crossing grade and material. Improvements at these locations should focus on maintaining the existing trail alignment and providing a highly visible pedestrian and bicycle crossing.

## Avenue Crossings

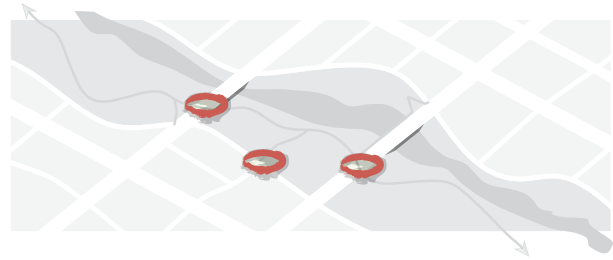
Avenue crossing locations must balance safe trail crossings with increasing crossing distance and vehicular traffic flow. These crossing should incorporate highly visible signage and warning systems that alert motorists to the presence of trail users. Objectives at these location include decreasing the crossing distance and controlling traffic on-demand when trail users are present.

## Boulevard Intersection Crossing Standards

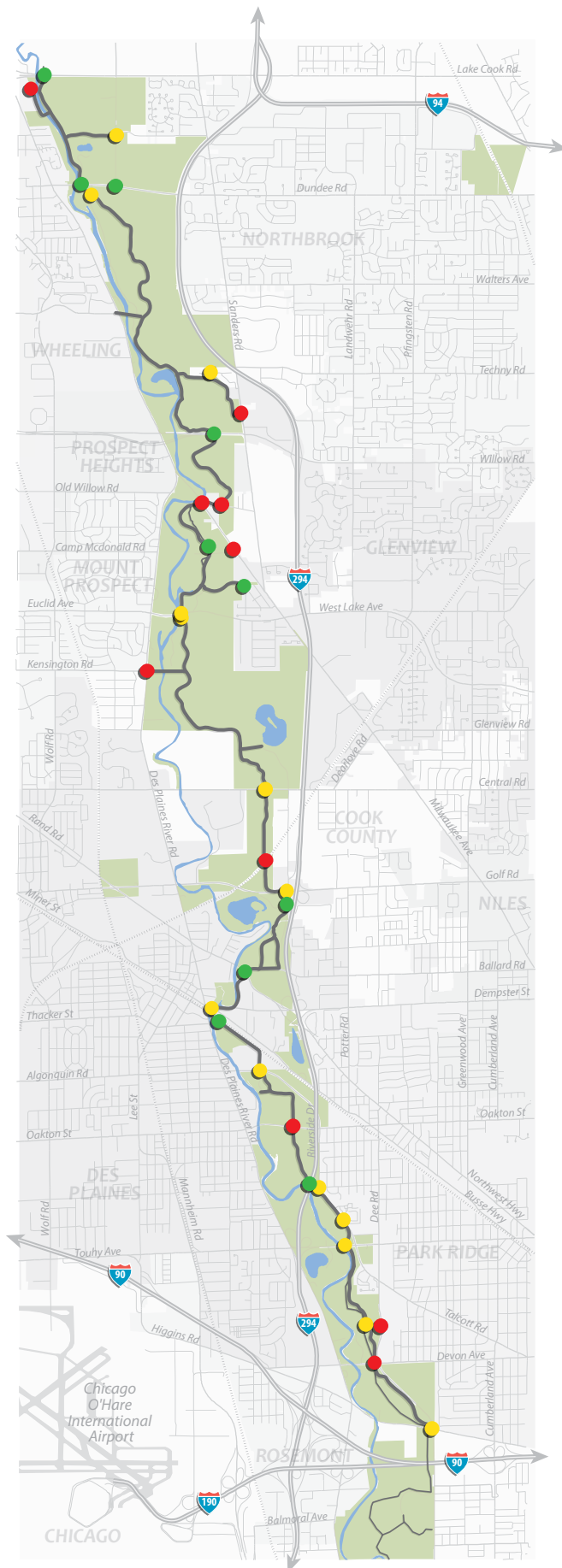
Boulevard intersection crossings take advantage of controlled intersections to allow for safe crossing. However, intersection design and signal phasing are traditionally focused on maximizing vehicular flow through the intersection.

## Boulevard Mid-block Crossing Standards

Boulevard mid-block crossings must provide safe crossing for trail users in locations with significant traffic flow and minimal or no traffic control devices. Due to wide crossing distances and multiple lanes of traffic, crossings should be designed to allow trail users to cross portions of the roadway at a time. Where possible, grade-separated crossings should be provided to maximize safety and traffic flow.







# Access Point and Crossing Improvement Summary

## Status of Existing Access Points and Crossings

- Meets Recommended Standards
- Needs Minor Improvements
- Needs Significant Improvements

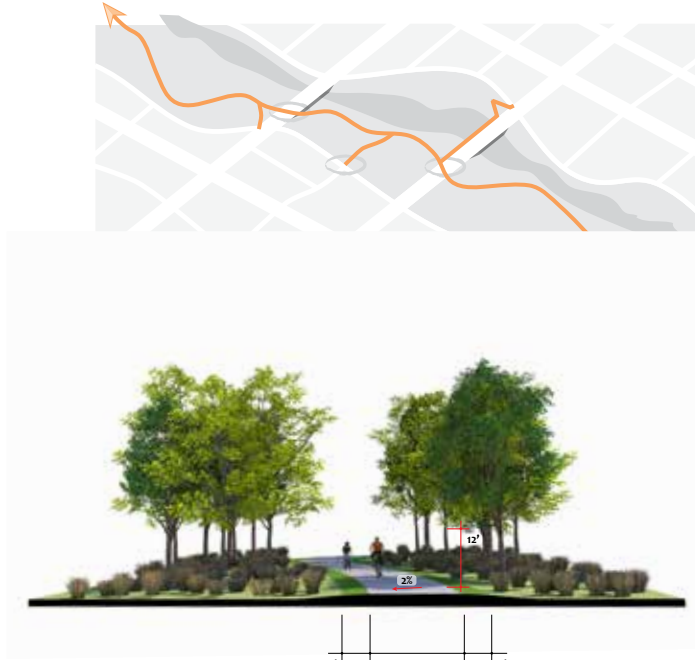


# TRAIL STANDARDS

The trail itself must be comfortable and safe for a variety of potential types of users. The Plan identifies improvements related to width, material, and other characteristics aimed at maximizing the functionality and attractiveness of the trail experience.

## Paved Trail

Paved trails may be installed as part of the Main Trail portion of the corridor. These segments would accommodate the highest levels of trail traffic, and should be used where users are expected to include walkers and runners, and hybrid, road and mountain bicyclists. Paved trails may also be considered for portions of the corridor that are prone to frequent flooding, as they are more resilient to erosion, warping, and other deterioration.



## Stone Trail

Stone trails may be installed as part of the Main Trail portion of the corridor. The stone surface can vary in width and material, and should include a mowed shoulder on either side. Stone trails should be used where expected users include walkers and runners, hybrid or mountain bicyclists, equestrians, and cross-country skiers.

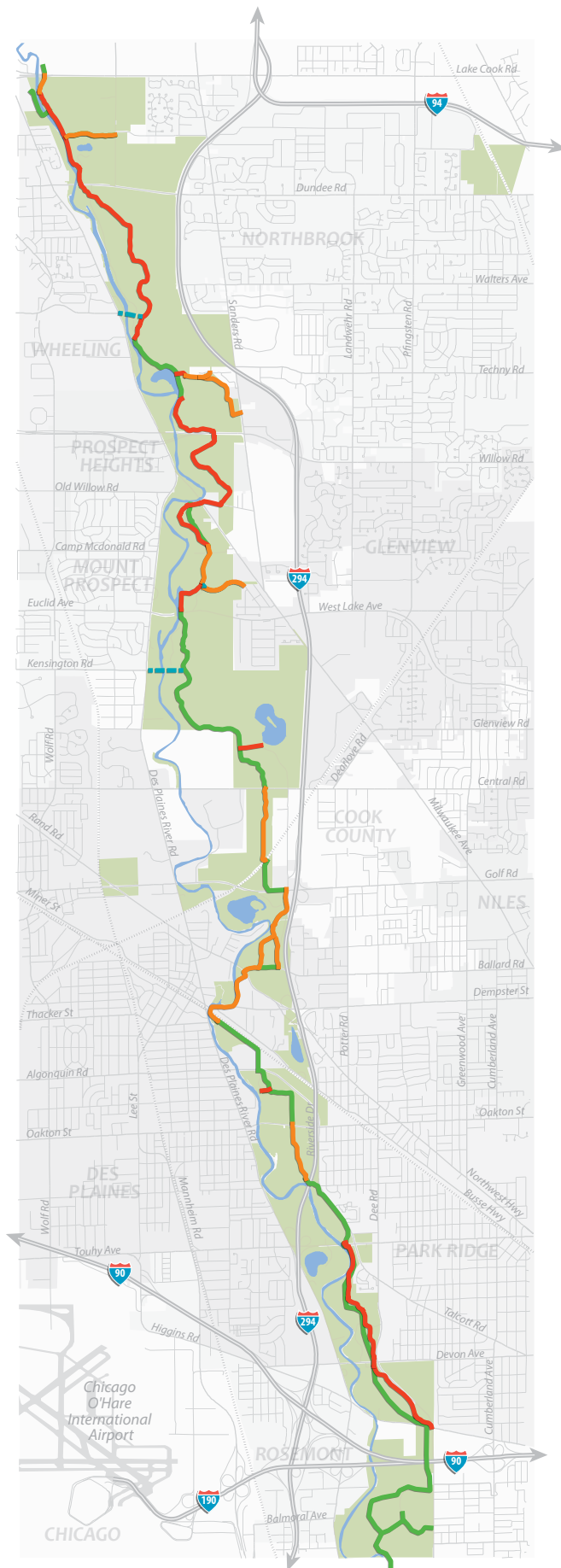


## Natural Surface Trail

Natural surface trails should be installed as access trails that link other portions of the transportation network or surrounding land uses to the Main Trail. The natural surface should include a section of mowed grass with a mowed shoulder on either side. While these segments may provide access to the Main Trail for all users, such as short connections for road bikes, they are best suited for walkers and runners, hybrid or mountain bicyclists, equestrians, and cross-country skiers.







# Trail Improvement Summary

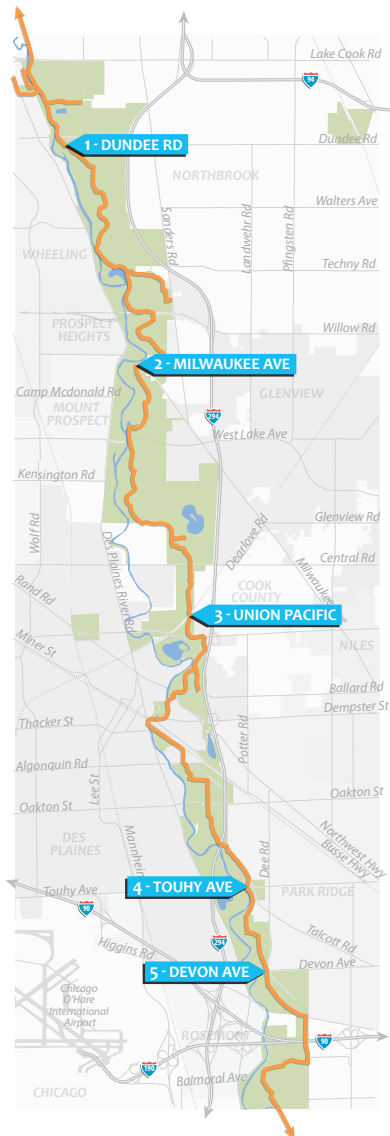
## Status of Existing Trail Segments

- █ Meets Recommended Standards
- █ Needs Minor Improvements
- █ Needs Significant Improvements
- █ Future Projects



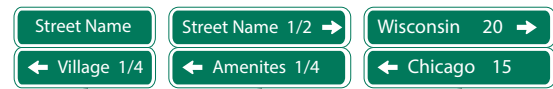
# SPECIAL IMPROVEMENT PROJECTS

There are several site-specific improvements that require unique design solutions in order to overcome barriers to safe access and mobility along the trail. TConcepts have been developed for five specific locations that were identified by trail users and the Steering Committee. These projects are considered high priority based on their ability to offer the greatest potential benefit to increased safety and enjoyment along the Des Plaines River Trail.

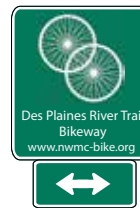


# WAYFINDING IMPROVEMENTS

The Plan includes recommendations related to the use of signage to direct trail users to recreational amenities, highlight destinations in the surrounding area, and create awareness of the trail for motorists and others as they pass through the corridor. The Plan establishes a sign palette that accomplishes these goals, then illustrates how the palette can be applied to various conditions throughout the planning area.



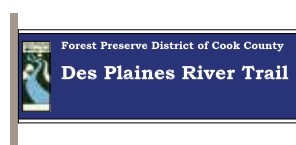
Directional Signage



Custom NWMC Wayfinding Signage



Confirmation Signage



Trail Identification Signage



# PROJECT IMPLEMENTATION

After establishing a detailed set of recommendations, the Plan includes a series of actions to maximize the potential for the implementation of proposed improvements. Given the regional nature of the trail, one of the most critical considerations related to implementation is inter-jurisdictional collaboration. This is especially true in unincorporated areas where control over land or transportation facilities may be unclear. The implementation section discusses the following actions and strategies:

- Policy alignment and programs, including the local adoption of Complete Streets policies, pedestrian and bicycle-friendly crossing and roadway design standards, and the creation of a Friends of the River Trail advocacy group. This section also highlights the importance of education and awareness, and coordination with regional transit agencies to ensure multi-modal access is viable.
- Inter-jurisdictional collaboration among municipalities, agencies, and districts (especially in unincorporated areas of the trail corridor) as it relates to investment in infrastructure and facilities, funding, maintenance, and joint grant pursuits.
- Potential funding sources that relate specific plan recommendations with various types of federal, state, regional, and local capital resources.







A sepia-toned photograph of a forest path. The path is dirt and leads into a dense forest of tall trees. Sunlight filters through the leaves, creating dappled light on the path and ground. The text 'PART 1' is in white and 'PREFACE' is in a large, bold, green font with a wood-grain texture, both overlaid on the right side of the image.

# PART 1 PREFACE



# INTRODUCTION

Public trails are increasingly becoming valued assets and a preferred choice for recreation and transportation. Trails provide the opportunity for people of all ages and abilities to experience the outdoors, enjoy their communities, and explore all the destinations that share trail access. Whether used for recreation or transportation, trail connections to local destinations, neighboring towns, job centers, and local businesses support a healthy quality of life. In partnership with the Chicago Metropolitan Agency for Planning (CMAP), the Northwest Municipal Conference (NWMC) has done extensive work to ensure that trails are an integral element of local and regional community planning. This document, the Des Plaines River Trail Corridor Plan, aims to enhance links between the Des Plaines River corridor and the adjacent communities that benefit from its presence.

The discourse on the benefits of trails is often focused on either the trail user's health or the positive impact on the environment. While the value of these two benefits is commonly accepted, trails provide many more community benefits that are often overlooked:

- ***Trails are the ideal family friendly bikeways.*** Trails provide a dedicated space for people of all ages and abilities to get outside and enjoy the outdoors, away from the hazards of fast moving traffic.
- ***Trails support strong, livable communities.*** People want to live near trails. Trails increase home values in the communities they serve. They encourage new development and help maintain a healthy local economy.
- ***Trails connect people to places.*** Trails are not just for recreation. They serve as non-motorized transportation thoroughfares that can connect people to work, local stores, and activities.
- ***Trails support community health.*** Whether for fitness or for transportation, trails give people an outlet to be physically active by walking and biking.
- ***Trails link people to nature.*** Trails allow people to experience nature with limited impact on the environment.

# THE DES PLAINES RIVER TRAIL

This plan focuses on the 15 mile segment of the trail in northern Cook County between Lake Cook Road and Higgins Road. Three Metra Stations on two different lines, the Chicago Transit Authority (CTA) Blue Line, nine Pace bus routes and more than a dozen major roads provide connections to the Trail for the nearly 64,000 residents and 33,000 people working within one-quarter mile of the trail, in addition the larger population within easy biking distance (source: ESRI 2013 estimates). Given its linkages to neighboring communities and the population density that surrounds it, the Trail is a valuable transportation and recreation asset to the Chicago Region.

Measuring over 50 miles long, the Des Plaines River Trail is one of the longest trails in the Chicago region and is part of the Grand Illinois Trail system. The trail follows the Des Plaines River and is primarily surrounded on both sides by forest preserves. Both the trail and surrounding preserves are owned by Cook County Forest Preserves in Cook County and Lake County Forest Preserves in Lake County. Today the trail is a popular destination for people on foot and bike, with a small number of equestrian users and seasonal cross country skiers.

Plans for the Cook County portion of the trail date back to 1941, and much of it is still routed according to those plans. However, due to flood prevention and encroaching development, some sections have deviated from its original routing, leading to gaps in the trail. Lake County began building segments in the late 1970s. With the exception of a small section in Lincolnshire, the Lake County portion of the Des Plaines River Trail is complete. At Lake Cook Road, a sign notes the end of the Lake County portion of the trail.

Today, the trail provides a direct connection for non-motorized travel between more than 20 communities in Lake and Cook counties and is accessible by seven different rail lines, providing additional connections throughout the Chicago region. Designated as a regional bike route by the NWMC, this trail, along with 16 other regional corridors, is part of a long term plan to provide bicycle connectivity throughout the north and northwest suburbs of Chicago.





*This Plan aims to improve trail usability by improving gaps in trail segments, such as this one on Milwaukee Avenue in Prospect Heights.*

## PURPOSE OF THE PLAN

The Des Plaines River Trail Corridor Plan highlights improvements that aim to enhance two important pieces of the trail experience: 1) how people access the trail from surrounding communities, and 2) how people experience the trail and the amenities offered by the Des Plaines River corridor. The Plan is structured to break the trail experience down into its fundamental pieces so improvements can be implemented in an incremental way that leads to the long-term vision. It includes recommendations for the following elements:

- **Access points** from surrounding development and crossings with roadways,
- **Trail segments** that provide access to or throughout the Des Plaines River corridor,
- **Roadway segments** that support bike and pedestrian mobility,
- **Site-specific improvements** that mitigate unique barriers to mobility,
- **Wayfinding and signage**, and
- **Supporting amenities**.

## CMAP LTA Program

The Des Plaines River Trail Plan was funded by a Local Technical Assistance grant through the Chicago Metropolitan Agency for Planning (CMAP). CMAP's LTA program provides funding for communities or Councils of Government to conduct local community planning that helps implement GO TO 2040, CMAP's regional plan for Chicagoland. GO TO 2040 includes recommendations that support regional sustainability and sound planning. The NWMC was awarded a grant for the Des Plaines River Trail Corridor Plan based on its potential to increase multi-modal mobility and enhance quality of life for residents, visitors, and employees of the northern suburbs in Cook County.



## Relationship to Other Plans

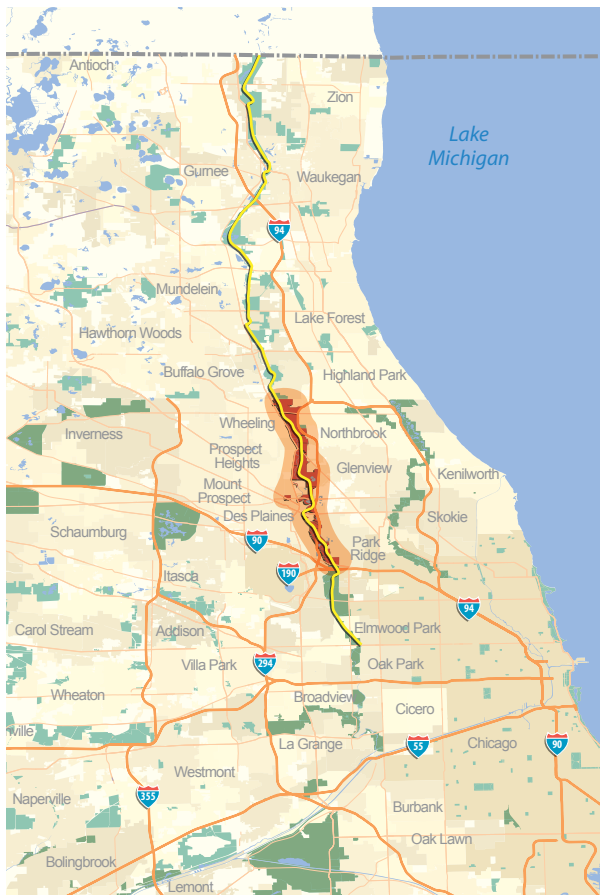
The Des Plaines River Trail Corridor Plan is intended to complement other local planning that has been done in the study area. Part 3: Supporting Information includes a summary of adopted plans and planned projects that will impact the way users access and utilize the trail. Perhaps the most important plan is the Trail Master Plan and Policy adopted by the Forest Preserve of Cook County in March 2014. The Master Plan identifies a series of standards, improvements, and policies that support multi-modal mobility throughout the District's properties. The Des Plaines River Trail Corridor Plan uses the Master Plan as a basis for its recommendations, then builds on it to provide site-specific recommendations and concepts aimed at enhancing access from nearby areas outside of the Forest Preserve jurisdiction or purview.

## PLANNING AREA INFLUENCES AND CONTEXT

The Des Plaines River corridor is a regional amenity that overlaps the jurisdiction of several counties, townships, municipalities, and agencies. The future recommendations for the trail corridor must be reflective of and responsive to existing and anticipated planning influences. Part 3: Supporting Information of this document includes a summary of several factors that influenced the development of recommendations and will serve as the foundation for long-term implementation. These influences include:

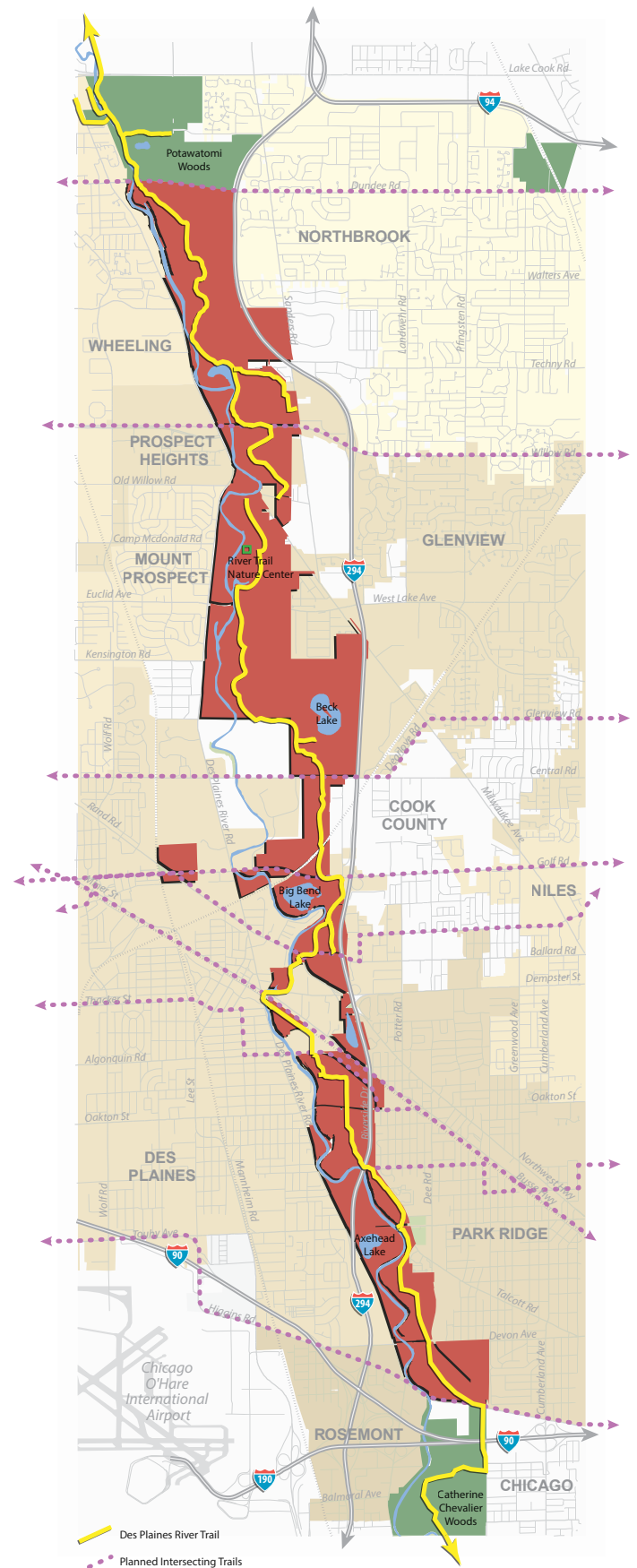
- Existing plans adopted by various municipalities, agencies, and districts
- Upcoming capital improvement projects that are anticipated to impact trail access or functionality
- Public outreach conducted as part of the planning process
- Technical analysis and inventory of trail conditions and usage
- Analysis of other factors that may influence trail mobility (i.e. surrounding land use, traffic volumes and speeds along roadways, etc.)





## Planning Area Context

The study area for the Des Plaines River Trail Corridor Plan includes a 15-mile segment of the trail between Higgins Road and Lake Cook Road. The trail is part of the Des Plaines River corridor, which is primarily under the jurisdiction of the Forest Preserve of Cook County and includes wooded areas, the Des Plaines River, and several recreational amenities. The study area is abutted by 8 municipalities, and includes some unincorporated land. This portion of the Des Plaines River Trail is intersected by several significant transportation corridors and transit services. Just south of Higgins Road, the CTA Rosemont and Cumberland Blue Line stations provide access to the trail via the "L" and several CTA and Pace bus routes that terminate at these stations. The Des Plaines Metra Union Pacific-Northwest station provides access via commuter rail. Along the length of the trail, nine Pace bus line-haul routes and two Metra lines with Dee Road on the Union Pacific-Northwest and Prospect Heights on the North Central Service also with the study area. The Des Plaines River Trail Corridor Plan explores opportunities for enhanced access and quality along the trail and within ¼-mile on either side of the river corridor.









An aerial, sepia-toned photograph of a river trail. The trail is a wide, light-colored path with a darker crosswalk section. Several people are using the trail: two are cycling, one is walking, and another is pushing a stroller. The trail is bordered by trees and vegetation. Overlaid on the right side of the image is the text 'PART 2' in white, and a large, bold, green title 'DES PLAINES RIVER TRAIL IMPROVEMENT PLAN' in the center-right.

## PART 2

# DES PLAINES RIVER TRAIL IMPROVEMENT PLAN

This section of the Des Plaines River Trail Corridor Plan includes recommendations aimed at improving access to the trail and mobility throughout the Des Plaines River corridor. The Improvement Plan begins with a description of the conceptual approach to the plan, then includes recommendations related to:

- Goals and objectives for the river trail,
- Universal design principles,
- Design principles for crossings and access points,
- Design principles for trail segments,
- Design principles for roadways,
- Site-specific project recommendations,
- Wayfinding improvements,
- Supporting amenities, and
- Implementation strategies





## GOALS & OBJECTIVES

### ***The goals of this plan are:***

- To improve access to the Des Plaines River Trail for people of all ages, all abilities, and all modes of transportation.
- To improve usability of the Des Plaines River Trail for people of all ages, all abilities, and all active modes of transport including, walking, bicycling, equestrian, canoe, and kayak.
- To positively exploit the trail as an economic, transportation, and recreation asset for the communities surrounding the Des Plaines River Trail.

### ***This plan addresses the following objectives:***

- Improve connectivity between the Des Plaines River Trail and adjacent communities, job centers and other trail networks, especially for active modes of transportation such as bicycling, walking and transit.
- Identify specific non-motorized facilities and transit enhancements, where applicable, for each roadway that intersects the Des Plaines River Trail.
- Articulate overall trail design principles.
- Propose ways to increase safety at trail crossings of roadways.
- Engage trail users throughout the corridor.
- Implement wayfinding strategies in order to connect trail users to neighboring communities and their businesses for transportation and economic development benefits.
- Formalize trailheads and accommodations at those trailheads.

## CONCEPTUAL FRAMEWORK FOR CORRIDOR IMPROVEMENTS

A ride on the Des Plaines River Trail can be thought of as a series of smaller experiences – a ride on a local street that runs near the river corridor, a crossing at a busy roadway, a stroll down an access path that brings you into the Forest Preserve, the crossing of a driveway near Forest Preserve parking, and finally a merger with the main Des Plaines River Trail. In order to result in a comfortable and safe trip, each of these experiences must provide the user with adequate infrastructure and information.

The Des Plaines River Trail Corridor Plan includes recommendations based on various standards for crossing and access points, trail segments, and roadways. These standards establish a standard set of characteristics related to infrastructure and information. The process for identifying and implementing recommended improvements is generally as follows:

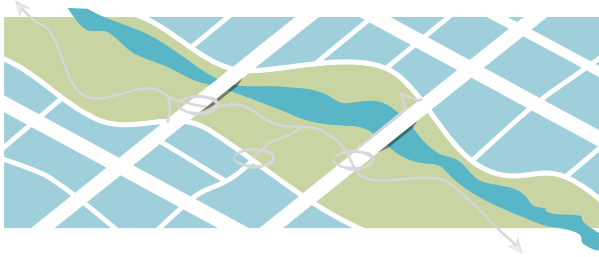
- Each access point, crossing, trail segment and roadway is assigned a standard based on their own characteristics and factors related to their context.
- The existing characteristics of each element are compared against the recommended characteristics for its standard to determine what improvements are needed.
- The location of the element helps determine appropriate implementation partners based on municipal jurisdiction, agency jurisdiction, and other relevant factors.

This approach allows the NWMC and its partners to assess any roadway, access point, crossing, or trail segment based on local factors and determine appropriate improvements to bring it up to the recommendations described in the Improvement Plan.



# Conceptual Framework

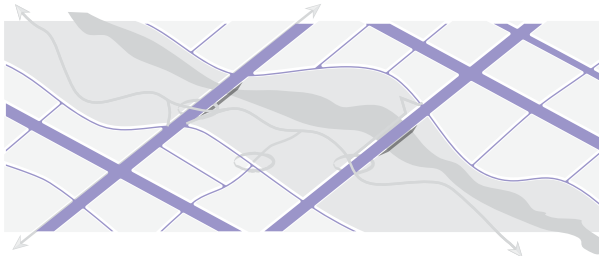
## CONTEXT



### Land Uses Influences

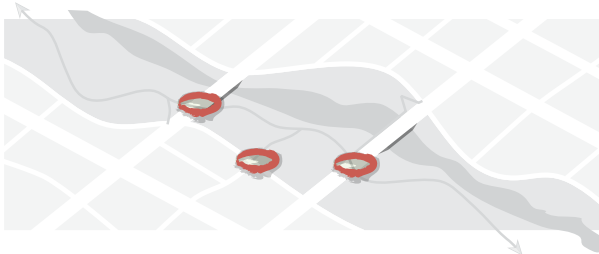
The Des Plaines River Trail exists within the context of surrounding development. Existing and anticipated land use influences are considered when identifying improvements that will enhance access to neighborhoods, commercial goods and services, employment, and recreation.

## STANDARDS



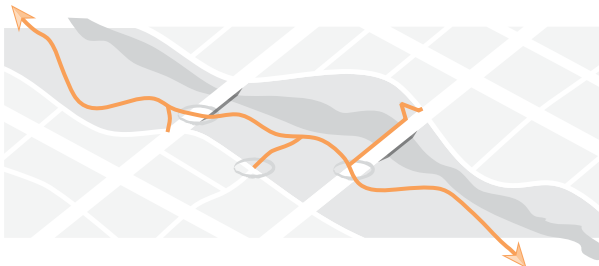
### Roadway Standards

Roadways provide important multi-modal access to the trail corridor. The Plan identifies roadway standards that build on opportunities for bicycle and pedestrian facilities that connect to surrounding development and other regional trail networks.



### Access & Crossing Standards

Access and crossing points are the interfaces between the surrounding environment and the trail corridor. Improvements related to signage, accessibility, and safety are considered in order to maximize awareness and usability of the trail.



### Trail Standards

The trail itself must be comfortable and safe for a variety of potential types of users. The Plan identifies improvements related to width, material, and other characteristics aimed at maximizing the functionality and attractiveness of the trail experience.

## OVERALL IMPROVEMENT PLAN







Roadways, such as Central Road shown above, provide critical access to the Des Plaines River Trail, though consideration must be given to safety and accessibility.

## ROADWAY STANDARDS RECOMMENDATIONS

The design of a roadway has a significant impact on its ability to safely host bicycle and pedestrian activity. Communities throughout the Chicagoland region are becoming increasingly sensitive to the needs of pedestrians and cyclists, as reflected by the Illinois Department of Transportation (IDOT), Cook County, and several municipalities in Illinois, formal adoption of a Complete Streets policy and related design standards. Complete Streets is a policy that considers all roadway users during design and construction. The following table establishes three roadway categories for the study area, and includes general parameters for their operational or physical characteristics.

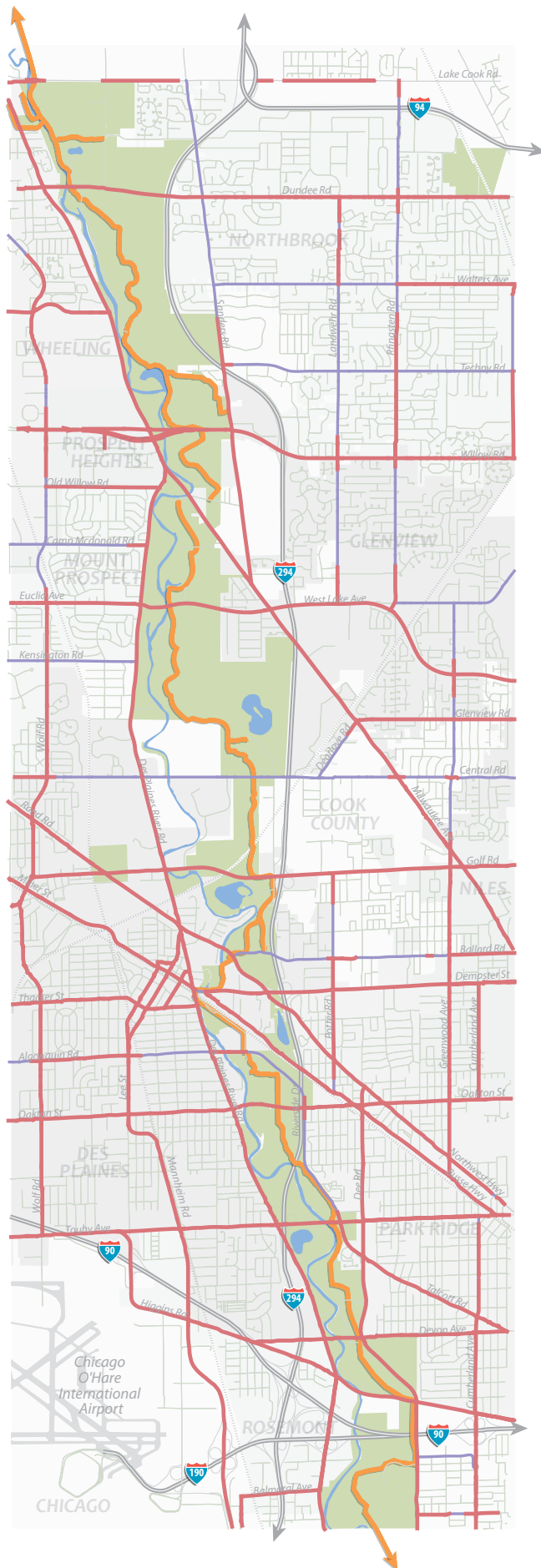
## Roadway Standards Cross Sections

The design of each roadway will influence safety and comfort for non-motorized users. The map on the following page shows the roadway category for each street in the study area, and subsequent pages illustrate cross-section designs for each roadway category that maximize the ability to accommodate all users of the roadway. It should be noted that all improvements illustrated in the cross-sections are intended to be installed within public rights-of-way.

### Roadway Category Characteristics





	Streets	Avenues	Boulevards
<b>General Description or Function</b>	Streets include roads with low traffic volumes and low vehicle speeds, often serving as access drives between arterial roads and parking lots within the forest preserve.	Avenues include roads with moderate traffic volumes and vehicle speeds, and typically warrant designated space for pedestrians and cyclists as well as well-defined crossings.	Boulevards include roads with high traffic speeds and high volume, and typically require designated pedestrian and bicycle space as well as signalized or grade-separated crossings.
<b>Posted Speed limit</b>	30 MPH or less	35-40 MPH	40 MPH or greater
<b>Average Daily Traffic Volume (AADT)</b>	Less than 3,000	3,000-20,000	Greater than 20,000
<b>Number of Travel Lanes</b>	2 or fewer	2-3	3 or more
<b>Curb to Curb Width</b>	Less than 25'	Greater than 25'	Greater than 25'
<b>IDOT Roadway Classification</b>	Local	Major Collector, Minor Arterial	Major Collector, Minor Arterial, Principal Arterial





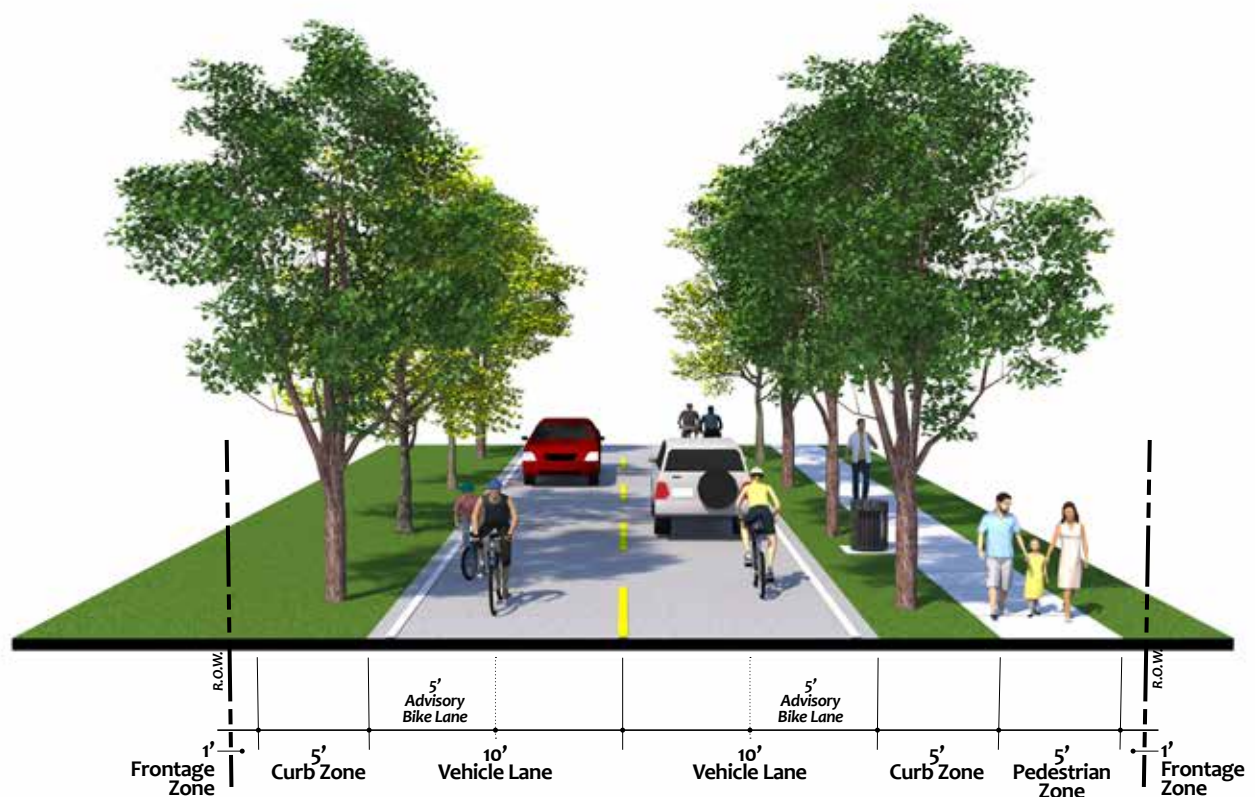
# Roadway Categories

## Legend

-  Des Plaines River Trail Segments
-  Boulevard
-  Avenue
-  Street

Roadway improvement categories establish the framework for improvements related to bike lanes and path connections, crossing improvements, and wayfinding signage. Improvements along these roadways may require coordination with IDOT, Cook County, or local Townships. Recommendations found later in this Plan should be aligned with the standards of the agency that has jurisdiction over a given roadway.





## Street

Streets include local roadways that typically accommodate lower traffic volumes and travel speeds. Given these characteristics, many streets can accommodate bicycles and pedestrians with on-street shared lanes. However, where space allows, a sidepath should be considered in order to provide a buffer between vehicular and pedestrian traffic.

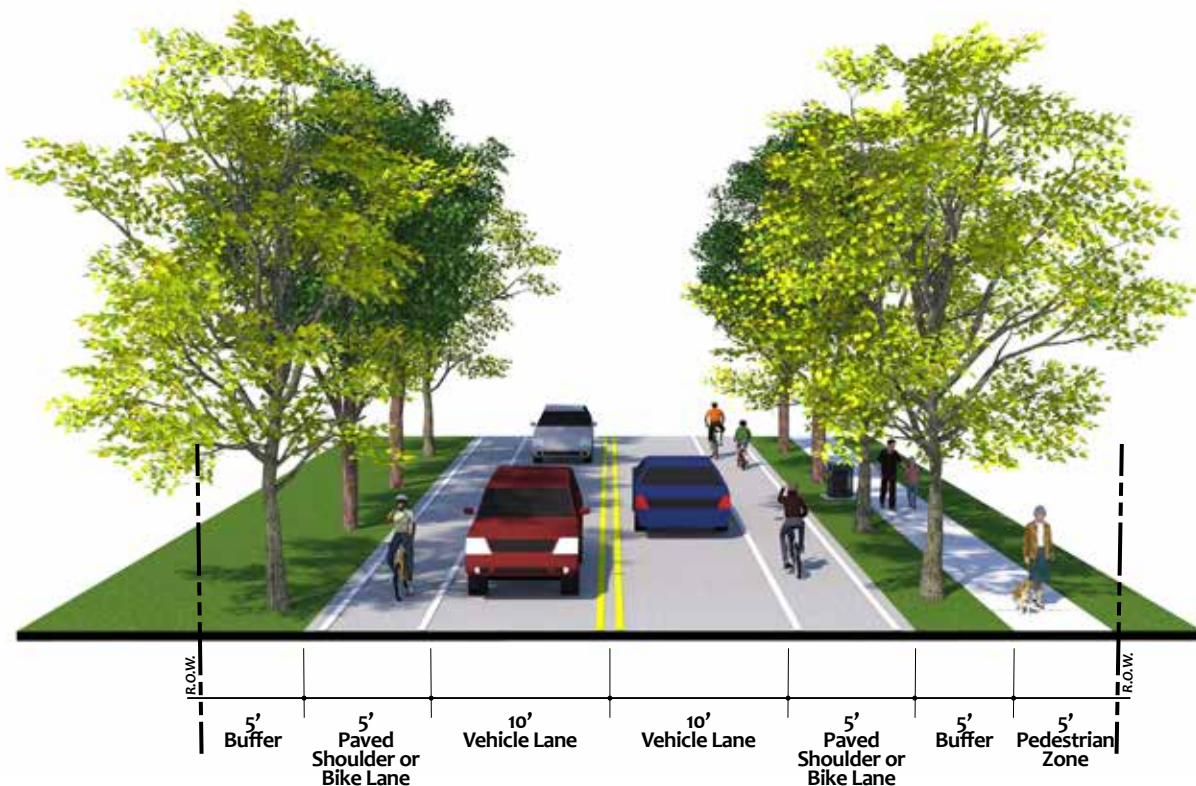
Recommended bicycle and pedestrian accommodations within the public right-of-way include:

- Wayfinding Signage
- Shared Lane Markings
- Sidewalks (where feasible)



*Local Forest Preserve access drives and neighborhood road in adjacent communities are examples of streets that can accommodate both on-street or sidepath bicycle access.*





## Avenue

Avenues include roadways that carry a moderate amount of traffic at a higher speed than streets. These operational characteristics typically warrant a dedicated bicycle lane that is separated from vehicular traffic through striping or a physical barrier. A dedicated sidewalk should be provided in areas where surrounding land uses require pedestrian access. Examples of avenues include Algonquin Road and Central Avenue.

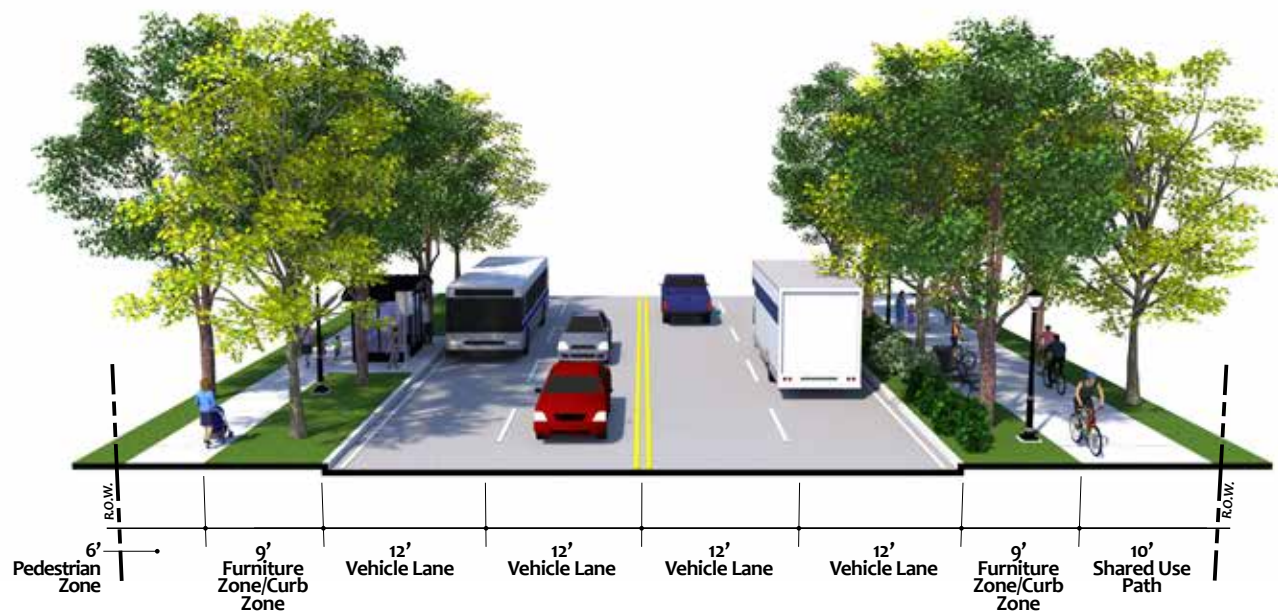
Recommended bicycle and pedestrian accommodations within the public right-of-way include:

- Wayfinding Signage
- Sidewalks
- Paved Shoulders
- Bike Lanes or
- Buffered Bike Lanes



*Avenues, such as Central Road in Des Plaines (shown above), offer important connections between the trail corridor and surrounding communities.*





## Boulevard

Boulevards include roadways that carry significant traffic volumes at a relatively high rate of speed. They are often wider and may host transit services. These factors warrant bicycle and pedestrian facilities that are separated from vehicular traffic. Examples of boulevards include Touhy Avenue, Milwaukee Avenue, and Dundee Road.

Recommended bicycle and pedestrian accommodations within the public right-of-way include:

- Wayfinding Signage
- Sidewalks
- Barrier Protected Bike Lanes
- Sidepaths (if warranted)



*Boulevards should be designed to accommodate vehicular and bicycle mobility, similar to this segment of Golf Road west of River Road.*



# ACCESS & CROSSING STANDARDS RECOMMENDATIONS

Even with a robust system of trail segments in place, one of the most significant challenges in safe trail access is navigating difficult crossings. In many of the communities along the Des Plaines River corridor, automobiles are the predominant form of mobility, and streets are designed to accommodate them. North/south roadway corridors, such as Milwaukee Avenue, I-294 and River Road, parallel the river corridor and pose a barrier to access, while several east-west streets require at-grade crossing that can be difficult or unsafe. This section of the plan identifies techniques for improving crossing conditions when the trail crosses a roadway.

## Universal Design Principles

While all crossings will require a specific design approach, there are several principles that should guide improvements throughout the study area. All proposed design improvements should be weighed against their ability to achieve the following principles:

**All trail crossings and access points should be accessible for all pedestrians and cyclists.** All intersecting streets and crossing points should allow all modes of transportation to access the Des Plaines River Trail.

**All legs of all crossings should be easy to cross for all pedestrians.** Pedestrian signals, fully accessible curb ramp, signal phasing, crosswalk materials, and other characteristics should create safe crossings on all legs of the intersection.

**All crossings should be highly visible to motorists.** This includes clearly painted crossings and appropriate signage to make motorists aware of pedestrians.

**All crossings and trail intersections should include wayfinding signage.** User information is a critical component of the trail experience and should be provided to assist users in navigating the trail and accessing nearby amenities and destinations.

## Context-Based Improvements

Recommended crossing and access point improvements are based on two factors; the local land use context and roadway standards at the crossing location. The following pages demonstrate how specific crossing improvements can be implemented that respond to varying conditions along the trail corridor.



Several existing crossings that provide access to the trail include visible crosswalks, but lack other safety elements.



Trail map illustrating the Cook County portion of the Des Plaines River Trail





## Access Point Standards

Access points are locations where a user can gain access to the Des Plaines River trail from nearby neighborhoods, business districts, and roadways. These points should include wayfinding and signage that makes users aware of the trail and describes where the trail may lead. Crossing countermeasures should be selected based on roadway standards. Key considerations at access points include:

- Crossing accommodations that are appropriate for the roadway type or adjacent land use
- Increased awareness for all users of the trail, surrounding land uses, and nearby destinations

- ❶ ADA-compliant curb ramp
- ❷ Access trail to main trail corridor
- ❸ Pedestrian crossing warning signs
- ❹ Trail access signs
- ❺ Pedestrian refuge island
- ❻ High visibility crosswalks





## Street Crossing Standards

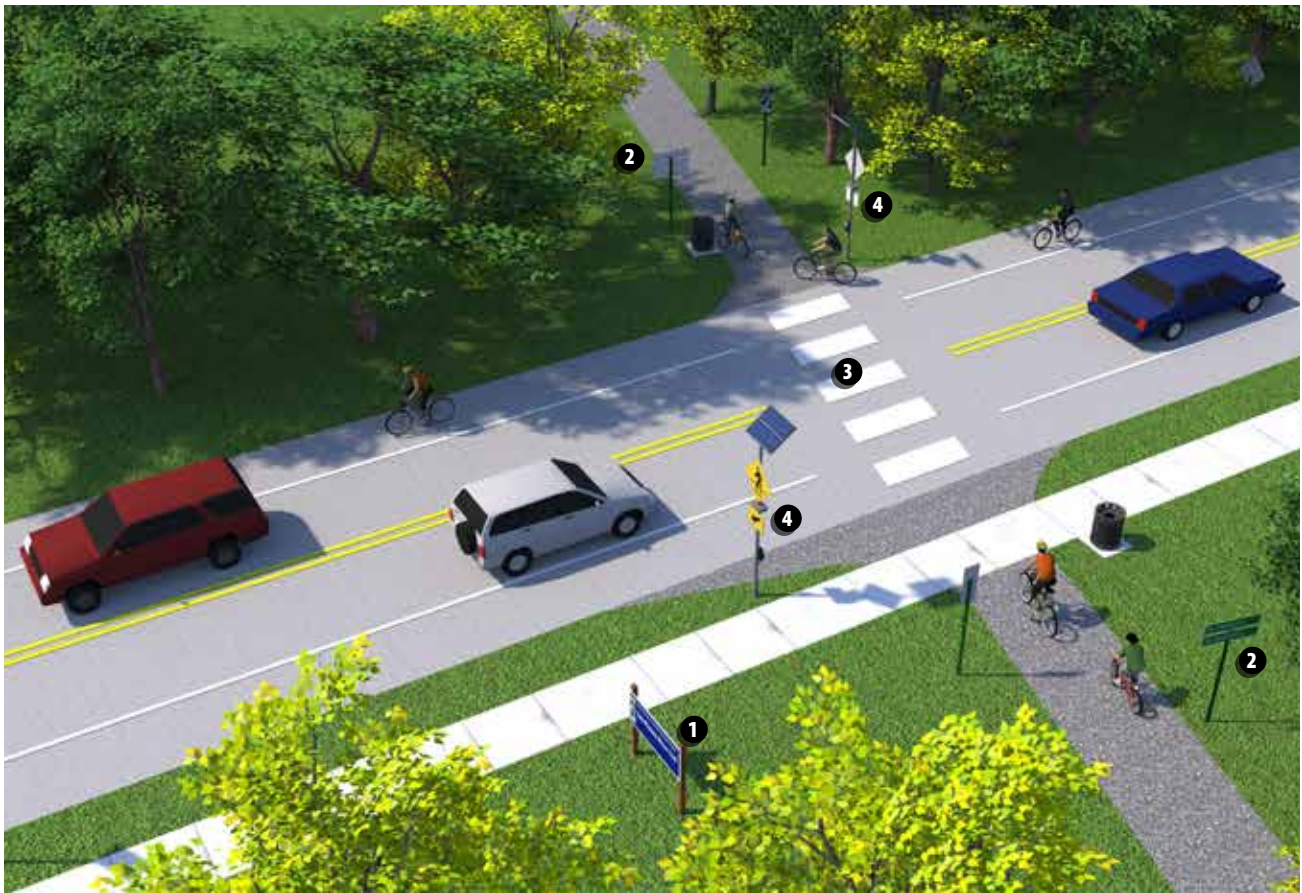
Street crossing locations must accommodate the safe crossing on roadways with relatively low vehicular travel speeds and crossing distances. These operational characteristics allow the trail to be more visible in terms of their crossing grade and material. Improvements at these locations should focus on maintaining the existing trail alignment and providing a highly visible pedestrian and bicycle crossing.

Recommended design elements include:

- Wayfinding signage
- High visibility crosswalks
- Curb ramps
- Trail crossing signage
- "Must Stop for Pedestrians" signs
- Trail crossing advanced warning signs
- Speed humps
- Raised crosswalks

- ❶ Trail Wayfinding signage
- ❷ High-visibility crosswalk or raised crosswalk
- ❸ ADA-compliant curb ramps
- ❹ Pedestrian crossing warning signs
- ❺ "Must stop for pedestrians" signs





## Avenue Crossing Standards

Avenue crossing locations must balance safe trail crossings with increasing crossing distance and vehicular traffic flow. These crossing should incorporate highly visible signage and warning systems that alert motorists to the presence of trail users. Objectives at these location include decreasing the crossing distance and controlling traffic on-demand when trail users are present.

Recommended design elements include:

- Wayfinding signage
- High visibility crosswalks
- Curb ramps
- Trail crossing signage
- Trail crossing advanced warning signs
- Pedestrian refuge islands/medians
- Pork chop islands (at roadway intersection crossing locations)
- Curb extensions
- Bump outs
- Rapid Rectangular Flashing Beacons (RRFB)
- High-intensity Activated crossWalk Beacon (HAWK)

- ❶ Trail identification signs
- ❷ Wayfinding signage
- ❸ High-visibility crosswalk
- ❹ Rapid Rectangular Flashing Beacon (RRFB)





## Boulevard Mid-block Crossing Standards

Boulevard mid-block crossings must provide safe crossing for trail users in locations with significant traffic flow and minimal or no traffic control devices. Due to wide crossing distances and multiple lanes of traffic, crossings should be designed to allow trail users to cross portions of the roadway at a time. Where possible, grade-separated crossings should be provided to maximize safety and traffic flow.

Recommended design elements include:

- Wayfinding signage
- High visibility crosswalks
- Curb ramps
- Pedestrian refuge islands/medians
- Grade-separated configuration where possible
- Rapid Rectangular Flashing Beacons (RRFB)
- High-intensity Activated crossWalk Beacon (HAWK)

- 1 Wayfinding signs
- 2 High-visibility crosswalk
- 3 ADA-compliant curb ramps
- 4 Pedestrian refuge island or median
- 5 Pedestrian Crossing Warning Signs



*Grade-separated trail crossings, like the one shown above at Lake Street, provide the greatest level of safety for trail users and motorists.*





## Boulevard Intersection Crossing Standards

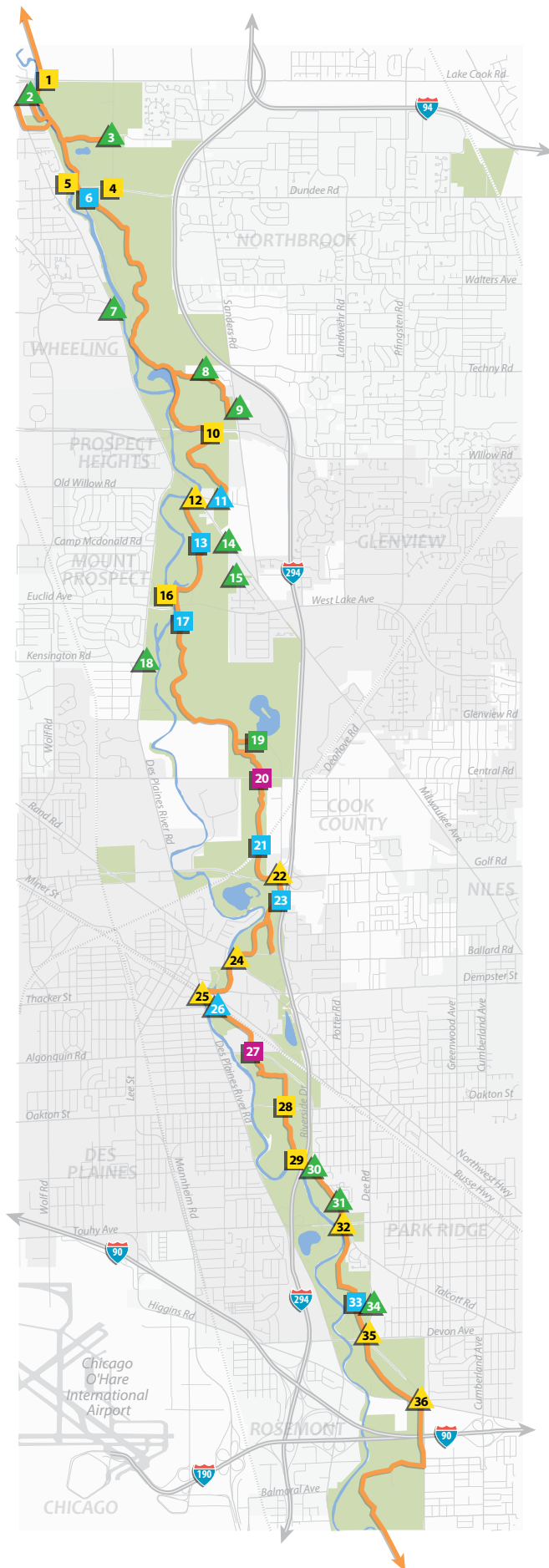
Boulevard intersection crossings take advantage of controlled intersections to allow for safe crossing. However, intersection design and signal phasing are traditionally focused on maximizing vehicular flow through the intersection.

In order to maximize safety of trail users, the following design elements are recommended:

- Wayfinding signage
- High visibility crosswalks
- Curb ramps
- Pedestrian refuge islands/medians
- Pork chop islands
- Grade-separated configuration where possible









- ❶ Wayfinding signs
- ❷ High-visibility crosswalk
- ❸ ADA-compliant curb ramps
- ❹ Trail alignment to controlled crossing point





# Crossing Categories

## Proposed Crossing Typology

-  FPCC Trails
-  Access Point - Greenspace
-  Access Point - Adjoining Land Use
-  Street - Greenspace
-  Street - Adjoining Land Use
-  Avenue - Greenspace
-  Boulevard - Greenspace
-  Boulevard - Adjoining Land Use

Crossing categories help define the scope of potential improvements that would enhance trail user safety and mobility. This map identifies the location of various crossing types to which design elements can be applied. The tables on the subsequent pages provide more information regarding specific enhancements.

Note: Refer to pages 50-62 of this document for greater detail regarding the specific locations of crossing types.







Crossing Recommendations

#	Crossing Name	Recommended Standards	Trail Crossing Recommendations			Roadway Recommendations			Additional Notes	Location	Road Jurisdiction	Other Agencies Affected	Implementation Feasibility (Refer to Section 3 of this Plan for explanation of scale)
			Meets Recommended Crossing Standards?	Needed Improvements	Cost Estimate [1]	Meets Recommended Roadway Standards?	Current Roadway Conditions	Cost Estimate [1]					
1	Lake Cook Rd	Crossing- Boulevard, Green Space	YES	NONE		NO-Needs Significant Improvements	Gaps in bike/ped facility on Lake Cook Road	\$700,000	Wayfinding signage needed for access trail north of Lake Cook Road in Lake County. No trail access from south side of Lake Cook Road. Gaps in bike/ped facility on Lake Cook Road	Wheeling Township- Unincorporated Cook County	IDOT, CCDTH	Forest Preserve District of Cook County, Lake County Forest Preserve District, Northbrook, Wheeling, Buffalo Grove	MED
2	Portwine Rd	Access Point, Adjacent Land Uses	NO-Needs Minor Improvements	Mark and sign crosswalk on Portwine at trail access	\$5,000	NO-Needs Significant Improvements	No bike or pedestrian facilities on Portwine Road and Forest View Drive			Wheeling Township- Unincorporated Cook County	Wheeling Township	Forest Preserve District of Cook County, Wheeling, Northbrook	HIGH
3	Westin Hotel	Access Point, Adjacent Land Uses	NO-Needs Significant Improvements	Wayfinding signage advertising trail access	\$5,000	NO-Needs Significant Improvements	Trail accessible from Wolf/ Milwaukee intersection. Both roadways lack bike facilities, and have gaps in pedestrian accommodations	\$200,000	Project to improve access is planned, but not funded	Wheeling	IDOT	Wheeling, Forest Preserve District of Cook County	MED
4*	Dundee Rd at Portwine Rd	Crossing- Boulevard, Green Space	YES	Traffic Signal (Programmed)		YES	Sidepath or sidewalk on at least one side of Dundee		Signal programmed	Wheeling/Wheeling Township- Unincorporated Cook County	IDOT, CCDTH	Forest Preserve District of Cook County, Wheeling, Northbrook	
5*	Dundee Rd-mid block	Crossing- Boulevard, Green Space	YES	NONE		YES	Sidepath or sidewalk on at least one side of Dundee	\$120,000	Current controlled crossing requires a 1/2 mile detour off the trail. Future realignment south of Dundee Road desired. See priority project "Dundee Road" for additional recommendations.	Wheeling/Wheeling Township- Unincorporated Cook County	IDOT, Wheeling Township	Forest Preserve District of Cook County, Wheeling	
6*	Dam Woods Dr	Crossing- Street, Green Space	NO-Needs Minor Improvements	Near term-mark crosswalks, Long term-trail realignment would close this crossing	\$5,000	NO-Needs Minor Improvements	Paved shoulder	\$18,000	Recommended trail re-route would remove this crossing. See priority project "Dundee Road" for additional recommendations.	Wheeling	Forest Preserve District of Cook County	Wheeling	MED
7	Hintz Rd	Access Point, Adjacent Land Uses	Future	Improve traffic signal at Hintz and Milwaukee for pedestrian crossing	\$60,000	NO-Needs Significant Improvements	No bike/ped facilities on Hintz or Milwaukee	\$250,000	Future Project. Trail not currently accessible from this location. Access trail would need to be constructed from Hintz/Milwaukee intersection across Des Plaines River to main trail.	Wheeling/Wheeling Township- Unincorporated Cook County	IDOT, CCDTH	Wheeling, Forest Preserve District of Cook County, Army Corps of Engineers	LOW
8	Timberlane Dr	Access Point, Adjacent Land Uses	NO-Needs Minor Improvements	Wayfinding signage	\$5,000					Northfield Township- Unincorporated Cook County	Northfield Township	Forest Preserve District of Cook County, Glenview, Northfield Township	HIGH
9	Sanders Rd	Access Point, Adjacent Land Uses	NO-Needs Significant Improvements	Provide mid-block crossing across Sanders Road	\$5,000	NO-Needs Significant Improvements	No bike/ped facilities on Sanders	\$50,000		Glenview/Northfield Township- Unincorporated Cook County	CCDTH	Forest Preserve District of Cook County, Glenview, Northfield Township	HIGH
10	Palatine/ Willow Rd	Crossing- Boulevard, Green Space	YES	NONE		NO-Needs Significant Improvements	No bike/ped facilities on Willow	\$235,000	Willow Road reconstruction programmed	Northfield Township- Unincorporated Cook County	IDOT	Forest Preserve District of Cook County, Northfield Township	MED
11*	Winkleman Rd	Crossing- Street, Adjacent Land Uses	NO-Needs Significant Improvements	Wayfinding signage, crosswalk markings, pedestrian crossing warning signage	\$5,000	NO-Needs Significant Improvements	No bike accommodations, limited pedestrian accommodations	\$190,000	See Priority Project "Milwaukee Avenue" for additional recommendations.	Prospect Heights/ Northfield Township- Unincorporated Cook County	Prospect Heights, Northfield Township	Forest Preserve District of Cook County, Prospect Heights	HIGH
12*	Milwaukee Ave/IL 21	Crossing- Boulevard, Adjacent Land Uses	NO-Needs Significant Improvements	Near term-pedestrian refuge island, Long term-underpass	\$5,000,000	NO-Needs Significant Improvements	Significant gaps in sidewalk network on Milwaukee Ave	\$280,000	See Priority Project "Milwaukee Avenue" for additional recommendations.	Prospect Heights/ Northfield Township- Unincorporated Cook County	Prospect Heights, IDOT	Forest Preserve District of Cook County, Pace	HIGH
13	Nature Center Dr	Crossing- Street, Green Space	YES	NONE		NO-Needs Significant Improvements	2 lane paved road, no pedestrian accommodations	\$36,000		Northfield Township- Unincorporated Cook County	Forest Preserve District of Cook County		HIGH
14	Milwaukee Ave/Nature Center Drive	Access Point, Adjacent Land Uses	NO-Needs Significant Improvements	Install bike/ped crossing accommodations	\$5,000	NO-Needs Significant Improvements	Two lane driveway intersecting with Milwaukee Ave. Trail accessible by car, but not foot or bike from this location.			Glenview/Northfield Township- Unincorporated Cook County	IDOT, Forest Preserve District of Cook County	Glenview	MED
15	Carol Ln	Access Point, Adjacent Land Uses	YES	NONE	\$5,000	YES				Glenview	Glenview	Forest Preserve District of Cook County	HIGH
16	Lake Ave	Crossing- Boulevard, Green Space	NO-Needs Minor Improvements	Wayfinding signage. Signage along trail alerting users to flood informaiton and online resources to check flood levels.	\$5,000	NO-Needs Minor Improvements	Gaps in bike/ped facilities along Lake Ave	\$100,000		Northfield Township and Wheeling Township- Unincorporated Cook County	CCDTH	Forest Preserve District of Cook County, Mount Prospect, Glenview	MED
17	Camp Pine Woods Dr	Crossing- Street, Green Space	NO-Needs Minor Improvements	Mark crosswalk, consider installing stop sign due to sight distance issues	\$5,000	NO-Needs Minor Improvements	Two lane road, low traffic, no pedestrian accommodations	\$20,000		Northfield Township- Unincorporated Cook County	Cook County Forest Preserve District		HIGH
18	Kensington Rd	Access Point, Adjacent Land Uses	NO-Needs Significant Improvements	Improve traffic signal at Kensington and River for pedestrian crossing	\$60,000	NO-Needs Significant Improvements	Gaps in bike/pedestrian network on Kensington and River Roads	\$250,000	Future access point. Access path connecting to main trail would be required.	Mount Prospect/ Unincorporated Cook County	IDOT	Forest Preserve District of Cook County, Mount Prospect, Army Corps of Engineers	MED

\*Note: See special project descriptions on pages 34-38 for more detail.

[1] Cost estimates are intended to be general based on industry-standard unit costs for various types of improvements. More detailed estimates should be developed for the purposes of capital improvement programming.



Crossing Recommendations

#	Crossing Name	Recommended Standards	Trail Crossing Recommendations			Roadway Recommendations			Additional Notes	Location	Road Jurisdiction	Other Agencies Affected	Implementation Feasibility (Refer to Section 3 of this Plan for explanation of scale)
			Meets Recommended Crossing Standards?	Needed Improvements	Cost Estimate	Meets Recommended Roadway Standards?	Current Roadway Conditions	Cost Estimate [1]					
19	Beck Lake	Access Point, Green Space	N/A			NO-Needs Minor Improvements	No pedestrian accommodations along East River Road	\$65,000		Northfield Township- Unincorporated Cook County	Forest Preserve District of Cook County		HIGH
20	Central Rd	Crossing- Avenue, Green Space	NO-Needs Minor Improvements	RRFB, improved crossing signage	\$25,000	YES	Two lane roadway, gravel shoulder		Shoulders programmed west of trail and east to East River Road. Still missing bike/ped accommodations east of East River Road	Northfield Township and Maine Township- Unincorporated Cook County	IDOT	Forest Preserve District of Cook County, Des Plaines, Glenview	HIGH
21*	Railroad	See Priority Project "Union Pacific Railroad trail Gap" for additional recommendations.			\$5,000,000				Officially recognized as a trail gap by Forest Preserve District of Cook County	Maine Township- Unincorporated Cook County	Union Pacific	Forest Preserve District of Cook County, Des Plaines, Commonwealth Edison	MED
22	Golf Rd	Crossing- Boulevard, Adjacent Land Uses	NO-Needs Minor Improvements	include pedestrian accommodations on other 3 legs of Golf/Bender intersection	\$40,000	NO-Needs Significant Improvements	No bike or pedestrian accommodations on Golf Road	\$1,200,000	Railroad viaduct major barrier	Des Plaines	IDOT, CCDTH	Forest Preserve District of Cook County, Des Plaines	MED
23	Big Bend Lake Driveway (S of Golf Rd)	Crossing- Street, Green Space	YES	NONE		YES	NONE			Des Plaines	Forest Preserve District of Cook County		
24	Rand Rd	Crossing- Boulevard, Adjacent Land Uses	YES	Improve sight line for bike and pedestrian crossing, update signal timing to remove conflict with turning traffic.	\$5,000	YES	Pedestrian accommodations on south side of Rand Road.		Improvements programmed	Des Plaines	IDOT	Des Plaines, Forest Preserve District of Cook County	
25	RR/NW Hwy/ Miner St	Crossing- Boulevard, Adjacent Land Uses	NO-Needs Minor Improvements	Signage identifying trail access from Miner Street. Signage along trail alerting users to flood information and online resources to check flood levels.	\$5,000	NO-Needs Minor Improvements	No bike facility on Miner Street	\$70,000		Des Plaines	IDOT	Army Corps of Engineers, Des Plaines, Union Pacific	MED
26	Camp Ground Rd at NW Woods	Crossing- Street, Adjacent Land Uses	YES	NONE		YES				Des Plaines	Des Plaines		
27	Algonquin Rd	Crossing- Avenue, Green Space	NO-Needs Minor Improvements	RRFB	\$25,000	NO-Needs Minor Improvements	Short gaps in sidewalk on north side of Algonquin Road	\$12,000		Des Plaines	Des Plaines	Forest Preserve District of Cook County	3
28	Oakton St	Crossing- Boulevard, Green Space	NO-Needs Significant Improvements	Pedestrian refuge, RRFB (Replace traditional incandescent flashing beacons with modern RRFB)	\$55,000	NO-Needs Significant Improvements	No bike or pedestrian accommodations on Oakton	\$25,000	Install sidewalk/sidepath both sides to west, sidepath one side to east	Maine Township- Unincorporated Cook County	IDOT	Des Plaines, Park Ridge, Forest Preserve District of Cook County	MED
29	I-294	Crossing- Boulevard, Green Space	YES	Signage along trail alerting users to flood information and online resources to check flood levels		N/A				Maine Township- Unincorporated Cook County	IDOT	Forest Preserve District of Cook County, Park Ridge	
30	Sibley Rd	Access Point, Adjacent Land Uses	NO-Needs Minor Improvements	Install crosswalk and wayfinding signage at Sibley/Talcott intersection	\$45,000	NO-Needs Minor Improvements	No bike facilities on Talcott or Sibley, sidewalk gap on Talcott	\$5,000		Park Ridge/ Maine Township- Unincorporated Cook County	IDOT, Park Ridge	Forest Preserve District of Cook County	HIGH
31	Park Ln	Access Point, Adjacent Land Uses	NO-Needs Minor Improvements	Install marked crosswalk, curb ramps and pedestrian warning signage	\$12,000	NO-Needs Minor Improvements	No bike facilities on Talcott	\$1,500		Park Ridge	IDOT, Park Ridge	Forest Preserve District of Cook County	MED
32*	Touhy Ave	Crossing- Boulevard, Adjacent Land Uses	NO-Needs Minor Improvements	Rehabilitate underpass, provide crossing accommodations at Touhy/Talcott intersection. See Priority Project "Touhy Avenue" for detailed recommendations	\$120,000	NO-Needs Significant Improvements	No bike or pedestrian facilities on Touhy	\$300,000		Park Ridge/ Maine Township- Unincorporated Cook County	IDOT, Park Ridge	Forest Preserve District of Cook County	MED
33	Dam No 4 Woods East Dr (MSHS)	Crossing- Street, Green Space	NO-Needs Minor Improvements	Install curb ramps, marked crosswalk, wayfinding signage, crossing warning signage	\$12,000	NO-Needs Minor Improvements	Two lane access drive, pedestrian facility	\$35,000		Park Ridge	Forest Preserve District of Cook County	Forest Preserve District of Cook County	HIGH
34	Dee Rd	Access Point, Adjacent Land Uses	NO-Needs Significant Improvements	Provide pedestrian refuge island and crosswalk	\$40,000	NO-Needs Significant Improvements	Gaps in pedestrian network	\$15,000		Park Ridge	Park Ridge	Forest Preserve District of Cook County	MED
*35	Devon Ave	Crossing- Boulevard, Adjacent Land Uses	NO-Needs Significant Improvements	Re-route trail to Dee/Devon intersection, install pedestrian accommodations	\$300,000	NO-Needs Significant Improvements	Gaps in sidewalk network on Devon	\$224,000	See Priority Project "Devon Avenue" for additional recommendations.	Park Ridge	IDOT, Park Ridge	Forest Preserve District of Cook County	HIGH
36	Higgins Rd	Crossing- Boulevard, Adjacent Land Uses	NO-Needs Minor Improvements	install crosswalks on remaining 3 legs of intersection	\$40,000	NO-Needs Significant Improvements	No bike or ped facilities on Higgins	\$500,000		Park Ridge/Chicago	IDOT	Forest Preserve District of Cook County	HIGH

\*Note: See special project descriptions on pages 34-38 for more detail.

[1] Cost estimates are intended to be general based on industry-standard unit costs for various types of improvements. More detailed estimates should be developed for the purposes of capital improvement programming....





*Des Plaines River Trail north of Lake Cook Road, Lake County*

## TRAIL IMPROVEMENT RECOMMENDATIONS

Trail conditions vary greatly along the Des Plaines River corridor. They vary in terms of material, width, condition, and intended user type. As improvements are implemented over time, trail design should reflect the specific role of each trail segment and the types of users – cyclists, pedestrians, equestrians, etc. – that it is intended or likely to serve. This section includes recommendations aimed at achieving this goal. It should be noted, however, that recommendations in this section are specifically designed to reflect the Trail Master Plan and Policy adopted by the Forest Preserve of Cook County in March 2014. The Forest Preserve has purview over the majority of the trail segments, and, while the Des Plaines River Trail Corridor Plan identifies specific improvements, it is not intended to supersede the Forest Preserve District's capital improvement program.

## Trail Categories

The classification of each trail segment is dependent upon its intended user type and has implication on the design and surface materials of the segment. The following table identifies four primary trail classifications – on-street, paved, stone, and natural surface – and describes appropriate users for each classification.

User	On-Street	Paved	Stone	Natural Surface
<b>Walk</b>	x	x	x	x
<b>Run</b>	x	x	x	x
<b>Bike-Hybrid</b>	x	x	x	x
<b>Bike-Road</b>	x	x		
<b>Bike-Mountain</b>	x	x	x	x
<b>Equestrian</b>			x	x
<b>Cross-country Skiing</b>			x	x



## Trail Design Principles

As described earlier in this document, there are two primary trail categories for the Des Plaines River Trail; Main Trail and Access Trail. The Main trail includes the primary trunk of the Des Plaines River Trail. Access trails includes secondary trail segments that provide access to local amenities within the Forest Preserve or roadways and trail segments that connect to adjacent communities. The following table describes the key design and operational characteristics of these trail categories, while subsequent pages include cross-sections that illustrate the proposed design for paved, stone, and natural surface trails, a map showing the proposed standard designation for all trail segments, and a matrix of proposed improvements along each trail segment.

Trail Characteristic	Main Trail	Access Trail
Relative user traffic volume	High	Low
Intended travel pattern and links	Longer segments connecting multiple communities	Shorter segments connecting to nearby streets & land uses
Trail section identification	Named as the Des Plaines River Trail	Local name (relating to a road, nearby destination, etc.)
Trail Width		
On-street	5' min. in each direction	—
Paved	10-14' trail width, 3' shoulder on each side	—
Stone	8-10' trail width, 3' shoulders on each side	—
Natural Surface	—	5' trail width, 1' shoulders on each side
Trail Material		
On-street	Paved	—
Paved	Paved	—
Stone	Crushed limestone, StaLoc	—
Natural Surface	—	Mowed grass





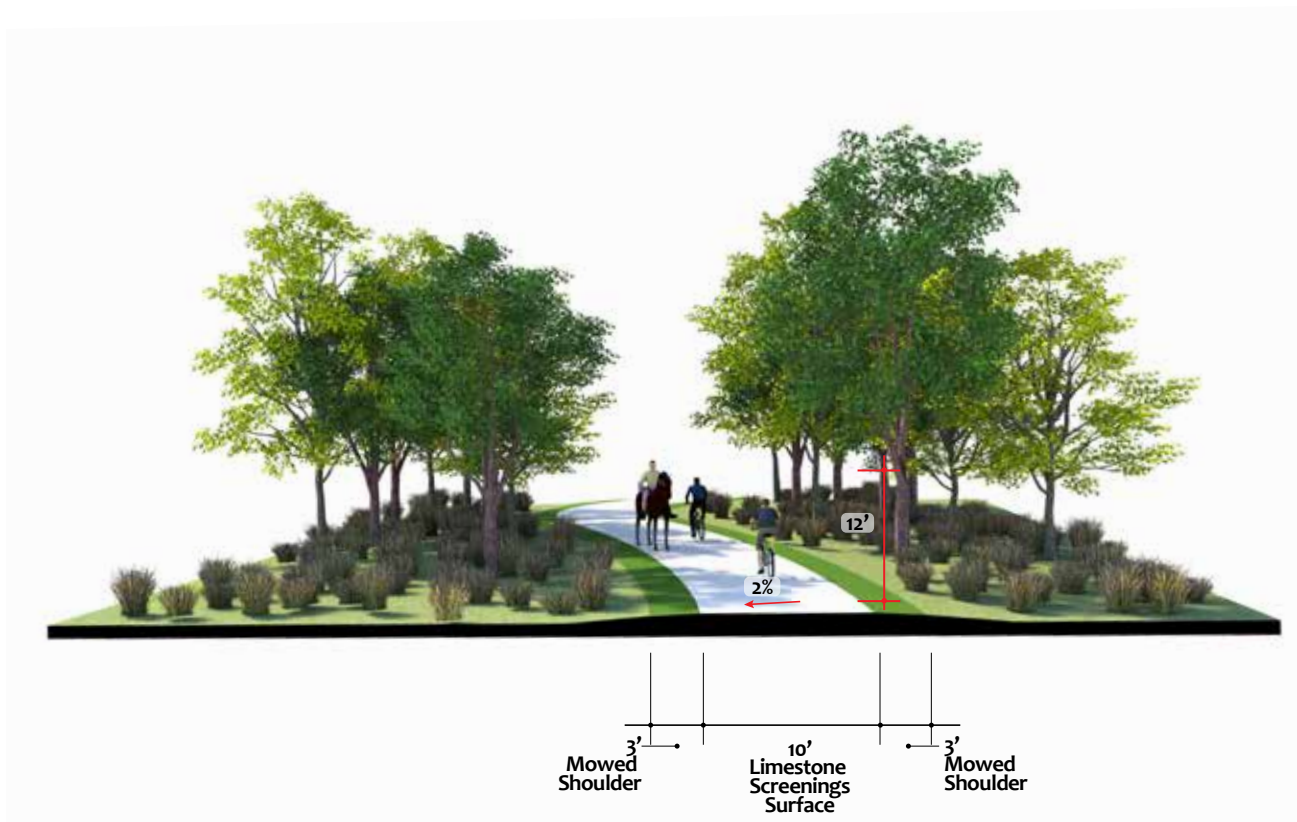
## Paved Trail

Paved trails may be installed as part of the Main Trail portion of the corridor. These trails include a 10' trail cross-section with 3' mowed shoulders on either side. These segments would accommodate the highest levels of trail traffic, and should be used where users are expected to include walkers and runners, and hybrid, road and mountain bicyclists. Paved trails may also be considered for portions of the corridor that are prone to frequent flooding, as they are more resilient to erosion, warping, and other deterioration.



*One of the few paved sections of the Des Plaines River Trail, near the intersection of Rand Road and Ballard Road in Des Plaines*





## Stone Trail

Stone trails may be installed as part of the Main Trail portion of the corridor. The stone surface can vary from 8' to 10', and may be made of crushed limestone or StaLoc, a product currently being used by the FPCC in other portions of its system. Stone trails should include a 3' mowed shoulder on either side. Stone trails should be used where expected users include walkers and runners, hybrid or mountain bicyclists, equestrians, and cross-country skiers.



*A crushed limestone section of the Des Plaines River Trail near Des Plaines*





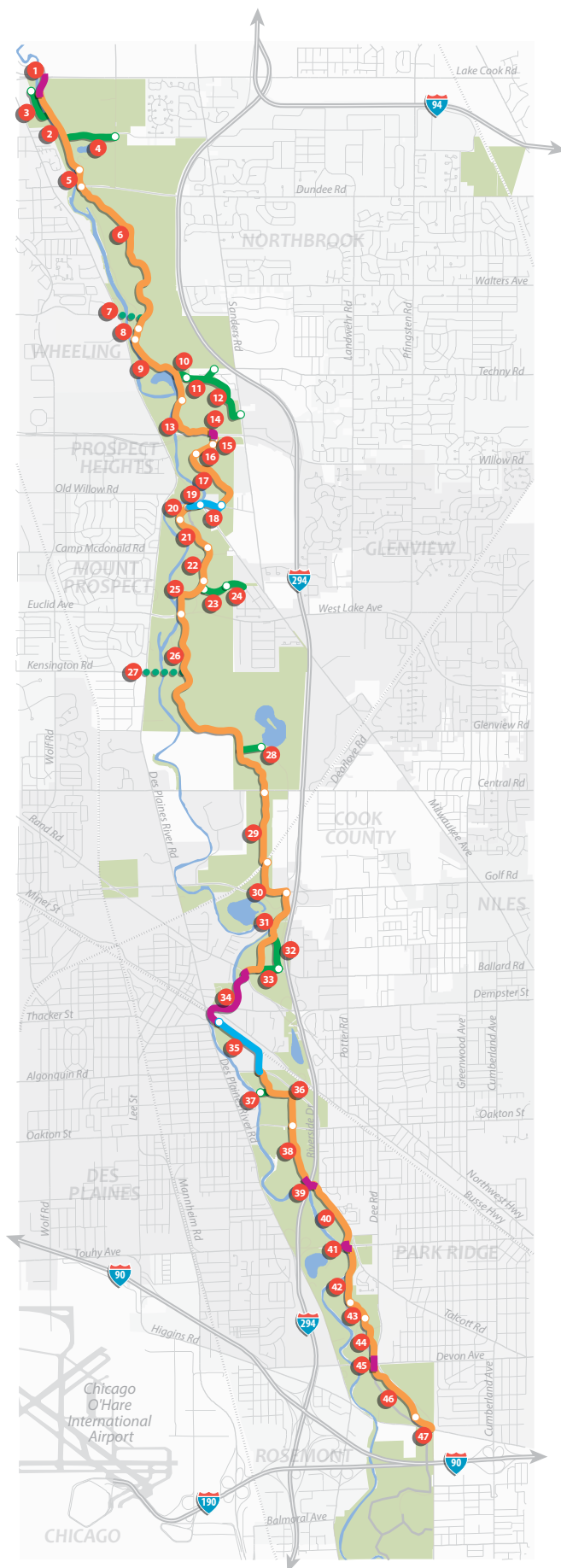
## Natural Surface Trail

Natural surface trails should be installed as access trails that link other portions of the transportation network or surrounding land uses to the Main Trail. The natural surface should include a 5' wide section of mowed grass with a 1' mowed shoulder on either side. While these segments may provide access to the Main Trail for all users, such as short connections for road bikes, they are best suited for walkers and runners, hybrid or mountain bicyclists, equestrians, and cross-country skiers.



*Natural surface trail providing access between the main trail and a picnic shelter along the Des Plaines River Trail*





# Trail Categories

## Legend

- # Trail Segment
- Access Trail - Proposed
- Access Trail
- Stone
- Paved
- On-Street
- Other FPCC Trails

Trail categories establish a framework for improvements that aim to ensure an enjoyable and safe trail experience for all types of users, and align with Forest Preserve of Cook County standards. This map identifies the location and category of each segment along the trail. The tables on the subsequent pages provide additional detail regarding specific types of improvements and considerations related to implementation.

Note: Refer to pages 50-62 of this document for greater detail regarding the specific locations of crossing types.



Trail Recommendations

#	Segment Begins (north)	Segment ends (south)	Trail Type	Current Surface and Conditions	Recommended Trail Surface	Meets Recommended Trail Standards?	Improvements Needed	Approximate Length (ft)	Estimated Cost [1]	Location	Other Affected Agencies	Implementation Feasibility (Refer to Section 3 of this Plan for explanation of scale)
1	Lake Cook Road Overpass	Lake Cook Road Overpass	Main	Overgrowth	Paved	NO- Needs Minor Improvements	Maintenance, Localized work	811	\$30,000	Wheeling Township-Unincorporated Cook County	IDOT, FPCC, Forest Preserve District of Lake County	HIGH
2	Lake Cook Overpass	Potawatomi Woods Parking Lot	Main	Gravel	Stone	NO- Needs Significant Improvements	Stone Trail Reconstruction	3881	\$300,000	Wheeling Township-Unincorporated Cook County	FPCC	MED
3	Westin Hotel	Main Trail	Access	Gravel/dirt mix	Natural Surface	YES	NONE	1700		Wheeling	FPCC	
4	Main Trail	Portwine Road @ Forest View	Access	Gravel/dirt mix	Natural Surface	NO- Needs Minor Improvements	Local Natural Surface Grading	2270	\$30,000	Wheeling Township-Unincorporated Cook County	FPCC	MED
5	Potawatomi Woods Parking Lot	Dundee Road	Main	Very narrow, gravel/dirt mix	Stone	NO- Needs Significant Improvements	Stone Trail Reconstruction	783	\$300,000	Wheeling/Unincorporated Cook County	FPCC	MED
6	Dundee Road	Dam Woods Drive	Main	Gravel/dirt mix	Stone	NO- Needs Significant Improvements	Stone Trail Reconstruction	3842	\$300,000	Wheeling	FPCC	LOW
7	Milwaukee Avenue @ Hintz	Main Trail	Access	N/A	Natural Surface	NO-Future Project	New trail & overpass	500	LS	Wheeling/Unincorporated Cook County	FPCC	MED
8	North end of Dam Woods Drive	South end of Dam Woods Drive	Main	Gravel	Stone	NO- Needs Significant Improvements	Stone Trail Reconstruction	8422	\$300,000	Wheeling	FPCC	MED
9	Dam Woods Drive	Access Trail	Main	Dirt	Stone	NO- Needs Significant Improvements	Stone Trail Reconstruction	512	\$300,000	Wheeling Township-Unincorporated Cook County	FPCC	MED
10	Main Trail	Timberlane Drive Horse Trail	Access	Gravel	Natural Surface	NO- Needs Significant Improvements	Natural Surface Grading	445	\$120,000	Northfield Township-Unincorporated Cook County	FPCC	HIGH
11	Access Trail	Timberlane Drive	Access	Grass/dirt mix, Not FPCC recognized. On-street parking available.	Natural Surface	NO- Needs Minor Improvements	Local Natural Surface Grading	800	\$30,000	Northfield Township-Unincorporated Cook County	FPCC	HIGH
12	Access Trail	Sanders Road	Access	Grass	Natural Surface	NO- Needs Minor Improvements	Natural Surface Grading	3638	\$120,000	Glenview, Northfield Township-Unincorporated Cook County	FPCC	MED
13	Access Trail	North side of Willow Road	Main	Gravel, overgrowth	Stone	NO- Needs Significant Improvements	Stone Trail Reconstruction	2854	\$300,000	Northfield Township-Unincorporated Cook County	FPCC	MED
14	Willow Road Overpass	Willow Road Overpass	Main	8' max asphalt	Paved	NO- Needs Significant Improvements	Overpass bridge rebuild (Programmed)	324		Northfield Township-Unincorporated Cook County	FPCC, IDOT	MED
15	Willow Road	South of overpass	Main	Gravel	Stone	NO- Needs Significant Improvements	Stone Trail Reconstruction	279	\$300,000	Northfield Township-Unincorporated Cook County	FPCC	LOW
16	South of overpass	Creek	Main	Gravel/dirt mix	Stone	NO- Needs Significant Improvements	Stone Trail Reconstruction	854	\$300,000	Northfield Township-Unincorporated Cook County	FPCC	MED
17	Creek	Winkleman Road	Main	Gravel/dirt mix	Stone	NO- Needs Significant Improvements	Stone Trail Reconstruction	3367	\$300,000	Prospect Heights/Unincorporated Cook County	FPCC	MED
18	Winkleman Road	Milwaukee Avenue	Main	Along Winkleman Road	On-Street	NO- Needs Significant Improvements	Near term paved shoulder (assumes full depth replacement & widening)	1005	\$1,000,000	Prospect Heights	FPCC	HIGH
19	Milwaukee Avenue	Allison Woods	Main	Access Drive	On-Street	NO- Needs Significant Improvements	Pavement marking	592	\$1,600	Northfield Township-Unincorporated Cook County	FPCC	HIGH
20	Allison Woods	South of Allison Woods	Main	Narrow, gravel/dirt mix	Stone	NO- Needs Significant Improvements	Stone Trail Reconstruction	490	\$300,000	Northfield Township-Unincorporated Cook County	FPCC	MED
21	South of Allison Woods	Nature Center Drive	Main	Gravel/dirt mix	Stone	NO- Needs Significant Improvements	Stone Trail Reconstruction	2108	\$300,000	Northfield Township-Unincorporated Cook County	FPCC	MED
22	Nature Center Drive	Lake Avenue Woods - East	Main	Narrow	Stone	NO- Needs Minor Improvements	Stone Trail Reconstruction	1681	\$300,000	Northfield Township-Unincorporated Cook County	FPCC	MED
23	Main Trail	Lake Avenue Woods Parking Lot	Access	NONE	Natural Surface	NO-Future Project	New Trail	200	\$120,000	Northfield Township-Unincorporated Cook County	FPCC	HIGH

[1] Cost estimates are intended to be general based on industry-standard unit costs for various types of improvements. More detailed estimates should be developed for the purposes of capital improvement programming.



Trail Recommendations

#	Segment Begins (north)	Segment ends (south)	Trail Type	Current Surface and Conditions	Recommended Trail Surface	Meets Recommended Trail Standards?	Improvements Needed	Approximate Length (ft)	Estimated Cost [1]	Location	Other Affected Agencies	Implementation Feasibility (Refer to Section 3 of this Plan for explanation of scale)
24	Lake Avenue Woods-East Parking	Carol Lane	Access	Not currently FPCC recognized	Natural Surface	NO- Needs Minor Improvements	Local Natural Surface Grading	1800	\$120,000	Glenview/Unincorporated Cook County	FPCC	MED
25	Lake Avenue Woods-East Parking	Lake Avenue	Main	Gravel/dirt mix	Stone	NO- Needs Significant Improvements	Stone Trail Reconstruction	1914	\$300,000	Northfield Township-Unincorporated Cook County	FPCC	MED
26	Lake Avenue	Central Road	Main	Good, New Condition	Stone	YES	NONE	11324		Northfield Township-Unincorporated Cook County	FPCC	
27	Main Trail	River Road	Access	NONE	Natural Surface	NO-Future Project	New trail & overpass	1700	LS	Mount Prospect/Wheeling Township-Unincorporated Cook County/Northfield Township-Unincorporated Cook County	FPCC	LOW
28	Main Trail	Beck Lake	Access	Dirt	Natural Surface	NO- Needs Significant Improvements	Natural Surface Grading	930	\$120,000	Northfield Township-Unincorporated Cook County	FPCC	HIGH
29	Central Road	UP Railroad	Main	Limestone, narrow	Stone	NO- Needs Minor Improvements	Stone Trail Widening	3377	\$300,000	Maine Township-Unincorporated Cook County	FPCC, Union Pacific, Commonwealth Edison	LOW
30	UP Railroad	Golf Road	Main	Limestone	Stone	YES	NONE	2231		Des Plaines/Maine Township-Unincorporated Cook County	FPCC	
31	Golf Road	Rand Road	Main	Minor maintenance to areas affected by flooding	Stone	NO- Needs Minor Improvements	Local Stone Grading	4796	\$30,000	Des Plaines	FPCC	HIGH
32	Main Trail	Ballard Road Sidepath	Access	Narrow, dirt	Natural Surface	NO- Needs Significant Improvements	Natural Surface Grading	1460	\$120,000	Des Plaines	FPCC	MED
33	Main Trail	Bender Road (SE River Road) along Rand Road	Access	Ballard Road Sidepath to Bender Road	Stone	YES	None	869		Des Plaines	FPCC	
34	Rand Road	Camp Ground Road	Main	Pavement markings deteriorated. Potential seating area between Rand Road and Camp Ground Road. Seating would need to be flood resistant since it is located inside flood walls	Paved	NO- Needs Minor Improvements	Restripe pavement markings	3676	\$5,000	Des Plaines	FPCC	
35	Camp Ground Road	Algonquin Road	Main	Bike lanes along Camp Ground Road	On-Street	YES	None	3151		Des Plaines	FPCC	
36	Algonquin Road	Oakton Street	Main	Limestone	Stone	YES	None	3481		Des Plaines	FPCC	
37	Main Trail	Camp Ground Road Parking Lot	Access	Drainage issues, surface condition	Natural Surface	NO- Needs Significant Improvements	Natural Surface Grading	351	\$120,000	Des Plaines	FPCC	MED
38	Oakton Street	I-294	Main	Small erosion issues due to a lack of shoulder support	Stone	NO- Needs Minor Improvements	Local Grading	2618	\$30,000	Maine Township-Unincorporated Cook County	FPCC, IDOT	MED
39	I-294 Underpass	I-294 Underpass	Main	Newly constructed	Paved	YES	None	485		Park Ridge/Maine Township-Unincorporated Cook County	FPCC	
40	I-294	Touhy Avenue	Main	Limestone	Stone	YES	None	3239		Park Ridge	FPCC	
41	Touhy Avenue Underpass	Touhy Avenue Underpass	Main	Significant flooding, drainage and surface condition issues	Paved	NO- Needs Significant Improvements	Reconstruct Underpass Shelf	389	\$800,000	Park Ridge	FPCC	LOW
42	Touhy Avenue	Dam No. 4 Woods - East	Main	Poor condition, surface material erosion	Stone	NO- Needs Significant Improvements	Stone Trail Reconstruction	2389	\$300,000	Park Ridge	FPCC	MED
43	Dam No. 4 Woods - East	Parking Lot	Main	Narrow, mixed gravel and dirt surface	Stone	NO- Needs Significant Improvements	Stone Trail Reconstruction	903	\$300,000	Park Ridge	FPCC	MED
44	Parking Lot	Devon Avenue	Main	Poor condition, surface material erosion	Stone	NO- Needs Significant Improvements	Stone Trail Reconstruction	2282	\$300,000	Park Ridge	FPCC	MED
45	Devon Avenue Underpass	Devon Avenue Underpass	Main	Narrow, impassable underpass with significant drainage issues, ADA compliance	Paved	NO- Needs Significant Improvements	Close/Fill	390	\$200,000	Park Ridge	FPCC, IDOT, Army Corps of Engineers	MED
46	Devon Avenue	Just north of Higgins Road	Main	Very wide trail from erosion, mixed gravel and dirt surface	Stone	NO- Needs Significant Improvements	Stone Trail Reconstruction	3026	\$300,000	Park Ridge	FPCC	MED
47	North of Higgins Road	Higgins/Dee intersection	Main	Narrow, gravel	Stone	NO- Needs Significant Improvements	Stone Trail Reconstruction	912	\$300,000	Park Ridge	FPCC	MED

[1] Cost estimates are intended to be general based on industry-standard unit costs for various types of improvements. More detailed estimates should be developed for the purposes of capital improvement programming.





*Investment in key projects and improvements will enhance mobility to and along the Des Plaines River Trail corridor.*

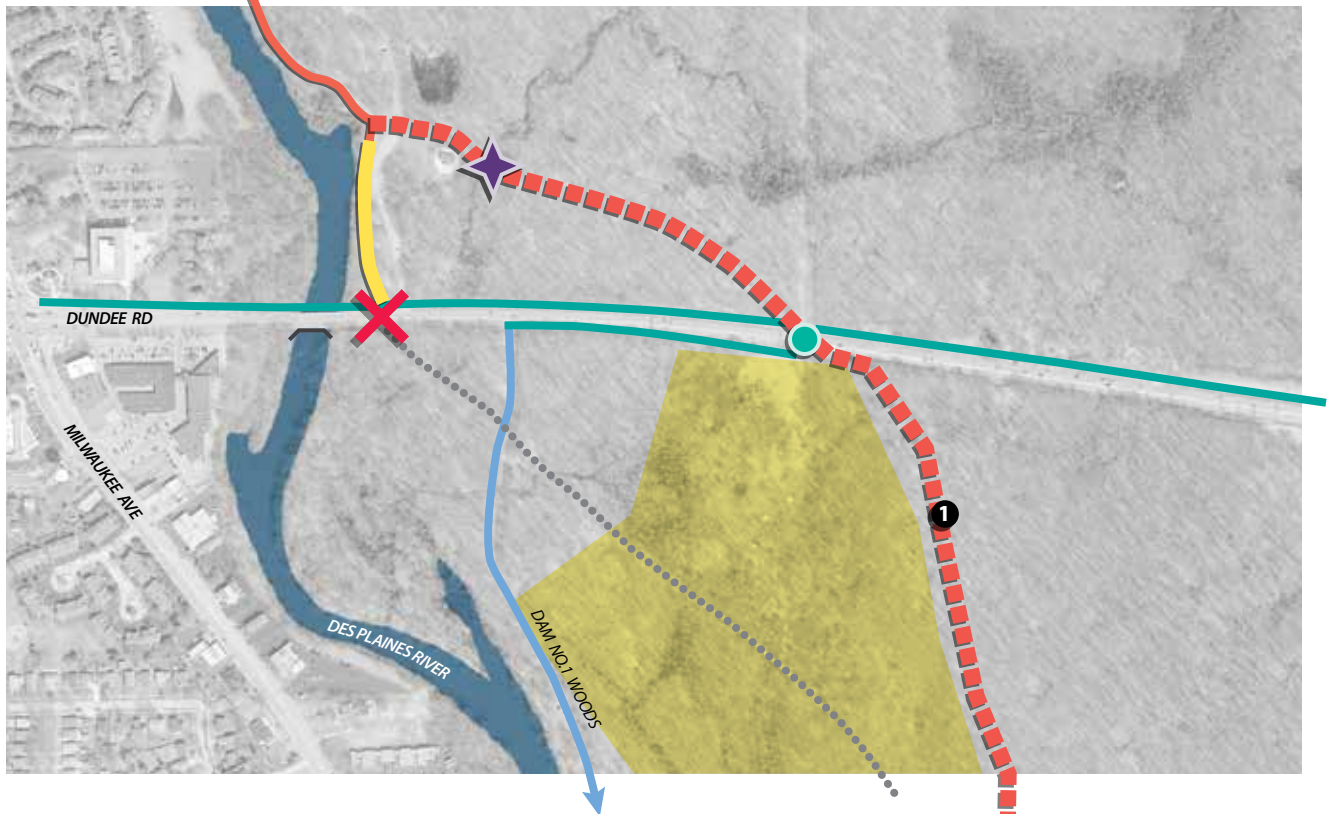
## SPECIAL IMPROVEMENT PROJECTS

The standards-based improvements described in the previous section can be applied to the majority of the study area. However, there are several site-specific improvements that require unique design solutions in order to overcome significant barriers to safe access and mobility along the Des Plaines River Trail. This section describes five such key improvements. These projects were identified by the planning team with assistance of the public and project Steering Committee. These projects are considered high priority based on their ability to offer the greatest potential benefit to increased safety and enjoyment along the Des Plaines River Trail.





# Dundee Road



## Recommendations

- |  |                            |
|--|----------------------------|
| Traffic Signal Improvement                       | Existing Trail Upgrade     |
| Trail Realignment to Minimize Distance to Signal | Existing Sidepath          |
| Existing Trail                                   | Creek Crossing Improvement |
| Vacate & Let Existing Trail Overgrow             | Crosswalk Removal          |
|  | Restoration Area           |

## Notes

- 1 Realign main trail to avoid ecosystem restoration area

Dundee Road is a high speed, heavily utilized arterial roadway and the trail currently crosses Dundee Road uncontrolled at-grade. A new traffic signal is programmed at the intersection of Portwine Road and Dundee Road, approximately 900 feet east of where the existing trail alignment intersects Dundee Road. The Village of Wheeling recently constructed a sidepath along Dundee Road to connect trail users to the future signal location, creating a connected off-street bicycle and pedestrian route between Wheeling and Northbrook. A marked crosswalk and pedestrian crossing warning signage has been installed at the site of the future signal. The future traffic signal is the best alternate crossing location that would allow users to cross under a much safer condition. To improve conditions, a trail realignment is recommended that will direct trail users to cross at the traffic signal.

**Crossing Typology:** Boulevard-Greenspace

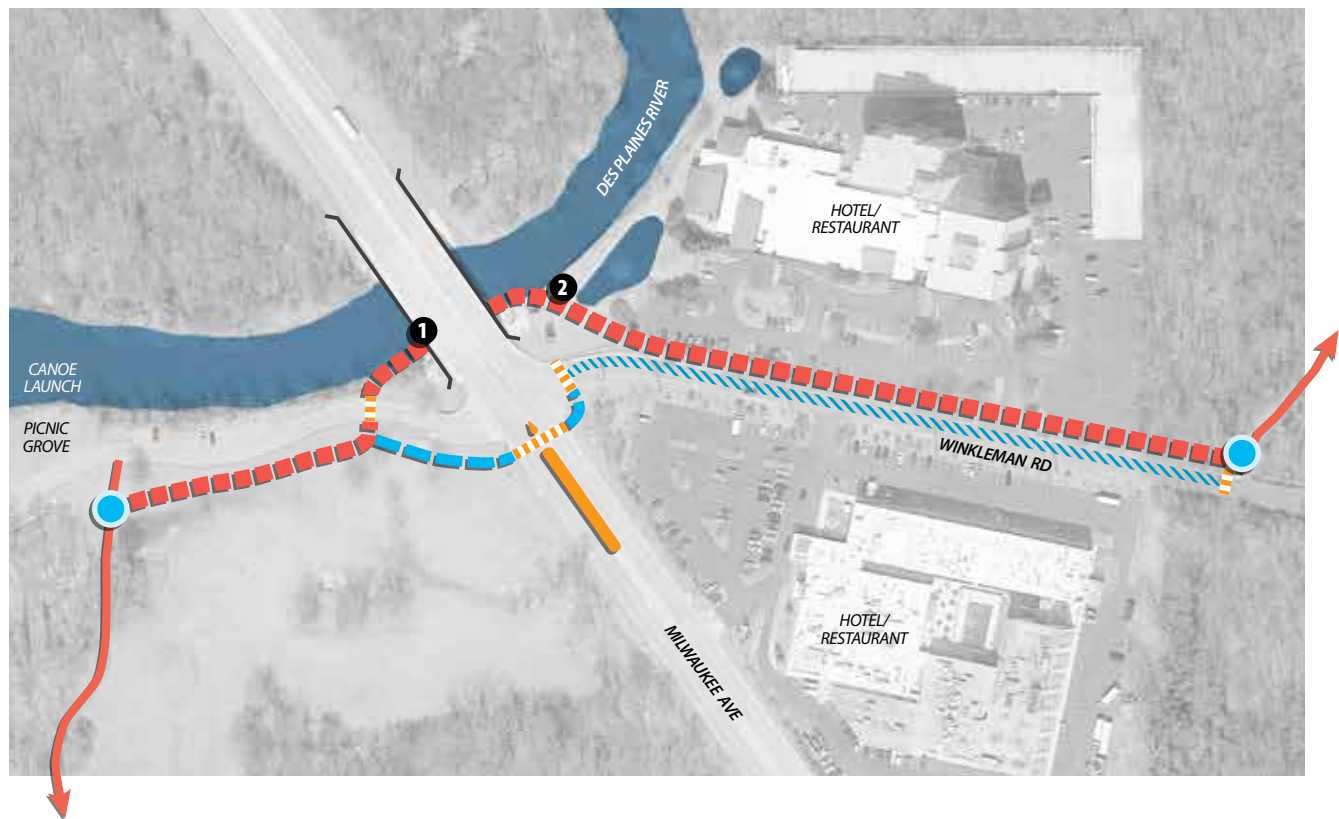
**Crossing Treatment Recommendation:** Traffic Signal

## Description:

- South of Dundee Road, vacate a portion of the existing trail and realign the main trail to intersect Dundee at Portwine.
- Install signage at the Dam Woods Drive entrance and picnic shelter informing visitors that trail access is at the south end of Dam Woods Drive.
- On the north side of Dundee Road, realign main trail to generally connect from the picnic shelter to the Dundee/Portwine intersection.
- Maintain the existing trail segment extending north from Dundee Road as an access trail connecting to the Dundee Road sidepath.
- Alignment shown is for planning level purposes and engineering should avoid FPDCC habitat areas in the vicinity.



# Milwaukee Avenue



## Recommendations

- Wayfinding Improvement
- New Trail (Short-term Rerouting)
- Marked Shared Lane and/or paved shoulder (Short-term Trail Rerouting)
- Trail Realignment (Long-term Improvement)
- Existing Trail
- New/Upgraded Crosswalk Markings
- Pedestrian Refuge Islands & Lane Narrowing to 11' & 12' (Short-term)
- 1. Realign trail under bridge structure
- 2. Coordinate with private property owner for trail connection

In the area of Milwaukee Avenue and Winkleman Road, there is currently a quarter-mile gap in the trail network with Milwaukee Avenue – a high speed, wide arterial roadway – separating the north segment of the trail with the south segment. On the FPDCC trail map, these segments are illustrated as separate trails. Access to and connectivity of the trail is limited with the disjointed trail segments, minimal wayfinding, no crossing accommodations on Milwaukee, and no direct bike and pedestrian facilities connecting to nearby destinations such as the Pace bus stop, Allstate corporate headquarters, hotels, restaurants and industrial parks. To improve conditions, a phased approach is suggested with lower cost improvements for the short-term, but ultimately working toward grade separating the trail under Milwaukee Avenue.

**Crossing Typology:** Boulevard-adjacent land uses

**Crossing Treatment Recommendation:** Grade-separated crossing

**Crossing Treatment Recommendation:** Traffic Signal

## Short Term Improvements:

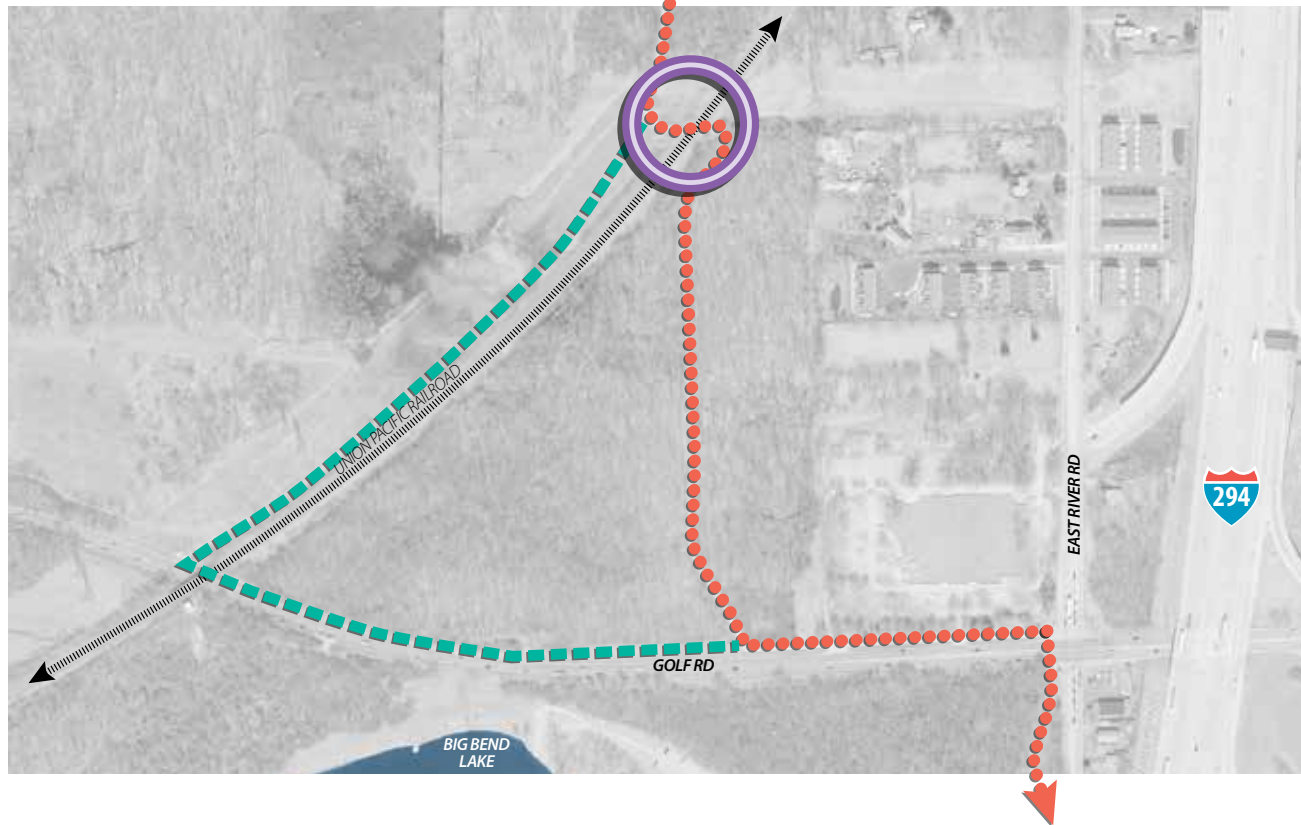
- Use wayfinding signage to inform people on the trail how to access the next trail segment
- Install a crosswalk on the south leg of the Milwaukee Avenue intersection
- Narrow travel lanes on Milwaukee Avenue to slow traffic and construct a pedestrian refuge island within the crosswalk to allow crossings to occur in phases
- Monitor traffic volumes and install a traffic signal when warranted. In the meantime, implement push-button activated warning signage.
- Widen Winkleman Road to provide a paved shoulder or mark the roadway with shared lane pavement markings

## Long Term Improvements:

- Realign the trail to cross under the existing Milwaukee Avenue bridge structure. This will require coordination with several agencies and private property (Hilton Chicago Northbrook), as well as an engineering solution that limits fill in the floodplain such as a cantilever structure, cut and fill, etc.
- Extend the trail as a sidepath along Winkleman Road between the underpass and the north segment of the trail
- Bike/ped facilities should extend along Winkleman Road to Sanders Road to connect with Allstate



# Union Pacific Railroad Crossing



## Recommendations

-  Existing Trail
-  Short-Term Trail Realignment using existing Golf Rd Underpass
-  Construct Trail Viaduct under the Railroad Tracks (in collaboration with Union Pacific Railroad)

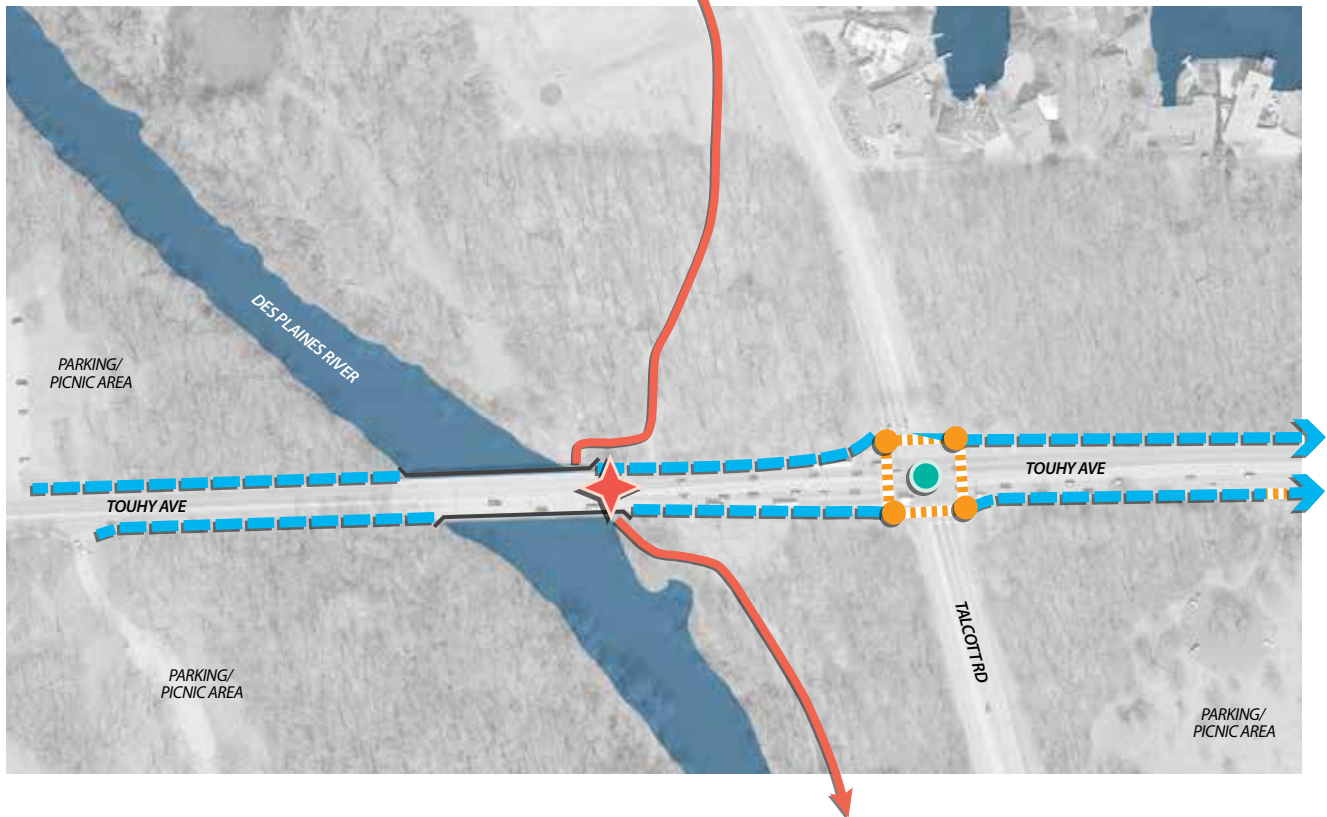
North of Golf Road, there is a short gap in the Trail where it is separated by the Union Pacific Railroad tracks. Bike riders dismount at the tracks and walk their bikes up and over the tracks, creating an unsafe crossing with a steep grade and no visual or audible warning of trains. The following alternatives should be considered in order to improve this crossing, taking into consideration project phasing, cost, and other important factors:

## Improvements:

- Work with Union Pacific to construct a trail viaduct under the railroad tracks at the current crossing location,
- Re-grade trail to cross the tracks at-grade and improve with actuated pedestrian gates and audible lights, or
- As a short-term solution or if the other alternatives are not viable as long-term options, explore the possibility of extending the existing trail sidepath along the north side of Golf Road toward the west. Though this is the least preferable trail experience, it may be the most cost-effective solution since the existing viaduct on Golf Road may be retrofitted to accommodate a bike trail on the north side of the bridge structure.



# Touhy Avenue



## Recommendations

- |  |   |
|--|---|
| Upgrade Pedestrian Signals & Phasing               | New/Upgraded Crosswalk Markings           |
| New Sidepath Connections in existing Rights-of-Way | Pedestrian Refuge Islands                 |
| Existing Trail                                     | Rehabilitate Existing Touhy Ave Underpass |

The Trail crosses Touhy Avenue grade-separated via an existing underpass. The underpass is generally in poor condition and frequently floods, becoming impassable. During flood events, the best alternative crossing location is at the traffic signal at Talcott Road less than 300 feet east, but no access is currently provided between the trail and the signalized intersection. Forest Preserve picnic groves and parking are located less than ¼-mile east and west of the Trail including access to Axehead Lake just to the west. These amenities are inaccessible from the trail and visibility of the trail from the surrounding area is limited. To improve conditions, rehabilitation of the existing trail underpass structure is recommended in combination with improvements for an alternate crossing location for flood events at the Talcott Road traffic signal and improved access along Touhy Avenue.

**Crossing Typology:** Boulevard-green space

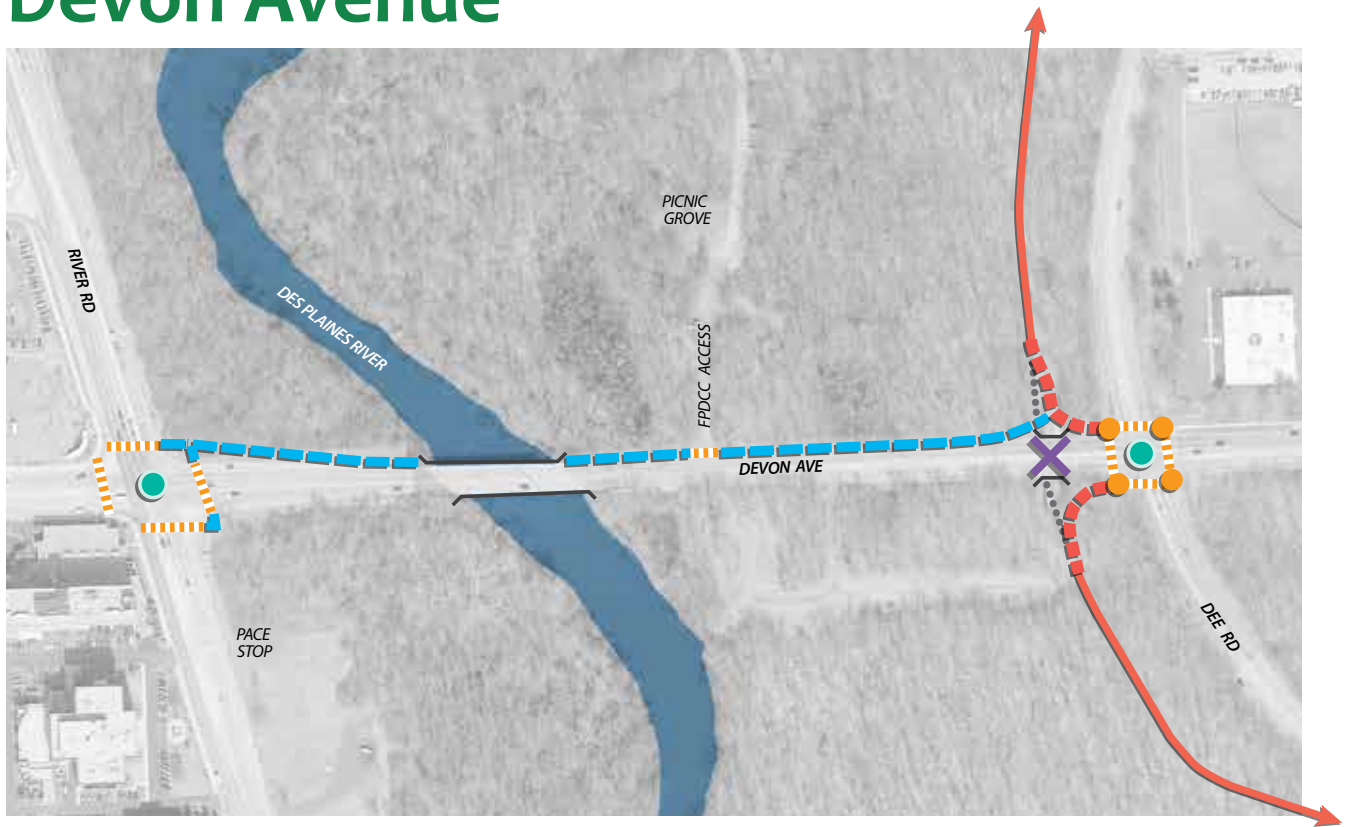
**Crossing Treatment Recommendation:** Grade-separated crossing

## Improvements:

- Rehabilitate/upgrade the trail underpass to address poor surface condition and flooding issues.
- Improve access to the traffic signal at Talcott Road by installing a sidepath along both sides of Touhy Avenue between the trail and Talcott Road.
- Additionally, sidepath/sidewalk should be installed along both sides of Touhy Avenue extending west to the parking and picnic areas and east to connect with existing sidewalks. This will connect the trail with nearby recreation and other destinations.
- Upgrade the signalized intersection with high visibility crosswalk markings and countdown pedestrian signal heads, as well as pedestrian refuge islands where possible.
- If a high number of pedestrian crossings continue to occur midblock when the underpass is occasionally flooded, a midblock crosswalk and pedestrian refuge island may be appropriate on Touhy Avenue west of the traffic signal.



# Devon Avenue



## Recommendations

- |  |  |
|--|--|
| Upgrade Pedestrian Signals & Phasing               | Vacate/Remove Existing Trail             |
| New Sidepath Connections in Existing Rights-of-Way | New/Upgraded Crosswalk Markings          |
| Trail Realignment                                  | Pedestrian Refuge Islands Where Possible |
| Existing Trail                                     | Fill In Existing Devon Ave Underpass     |

The Trail crosses Devon Avenue grade-separated via an existing underpass. However, the underpass is impassable during periods of rain due to flooding and poor drainage. The best alternative crossing location is at the traffic signal at Dee Road approximately 100 feet away, but no access is currently provided between the trail and the signalized intersection. Key destinations less than ½ -mile from the trail that remain inaccessible include Maine South High School, offices and neighborhoods in Park Ridge, major employment centers in Des Plaines and Rosemont, and Rivers Casino. To improve conditions, realignment of the main trail to the traffic signal at Dee Road and closure/fill of the Devon Avenue underpass is recommended, as well as improved access along Devon Avenue.

**Crossing Typology:** Boulevard-adjacent land uses

**Crossing Treatment Recommendation:** Traffic Signal

## Improvements:

- Realign trail to cross Devon Avenue on the west leg of the Dee Road intersection.
- Upgrade the Devon Avenue/Dee Road signalized intersection with high visibility crosswalk markings and countdown pedestrian signal heads, as well as pedestrian refuge islands where possible.
- Install sidepath along the north side of Devon Avenue extending west to River Road where space allows.
- Pedestrian upgrades are also recommended at the Devon Avenue/River Road signalized intersection which provides access to major employment centers, a casino and a Pace bus stop.





*Trail identification signage in Des Plaines*

## WAYFINDING IMPROVEMENTS

Wayfinding signage provides people on the trail with information about where they are, what destinations are nearby, and how to get to those destinations. Signage helps people on the trail know how far they have traveled, where they are in relation to the surrounding community, and what major destinations or amenities can easily be reached from the trail. In case of emergencies, signage with mile markers can assist victims in reporting their location.

Signage used along the Des Plaines River Trail should reflect federal standards for bike route signage as described in the Manual on Uniform Traffic Control Devices (MUTCD) Section 9-Traffic Control for Bicycle Facilities. Each sign should convey three key pieces of information; distance, destination and direction. Because the trail is used by people on foot, bike and horse, the bicycle symbol should not be included on the signs. Similar signs have been installed in several communities throughout the study area, and throughout the Chicago region. Installing them on the trail would show how the trail system connects into the greater regional bicycle and pedestrian network.

On the trail, when approaching a crossing, a decision sign should be installed. This sign informs a person on the trail what are the nearby destinations they may access from the crossing, which direction to travel for those destinations, and how far away are the destinations. After a crossing, a confirmation sign should be installed, informing a person on the trail that they are continuing along the trail, and their direction of travel. Unique trail identity signs with the trail name and logo should be used as a confirmation sign. These unique trail identity signs should be utilized throughout the Des Plaines River Trail.



# Sign Palette



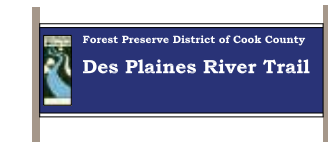
Directional Signage



Custom NWMC Wayfinding Signage



Confirmation Signage

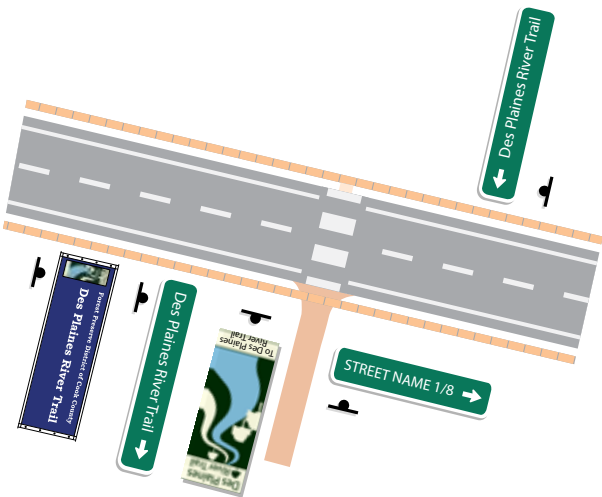


Trail Identification Signage

# Wayfinding Scenerios

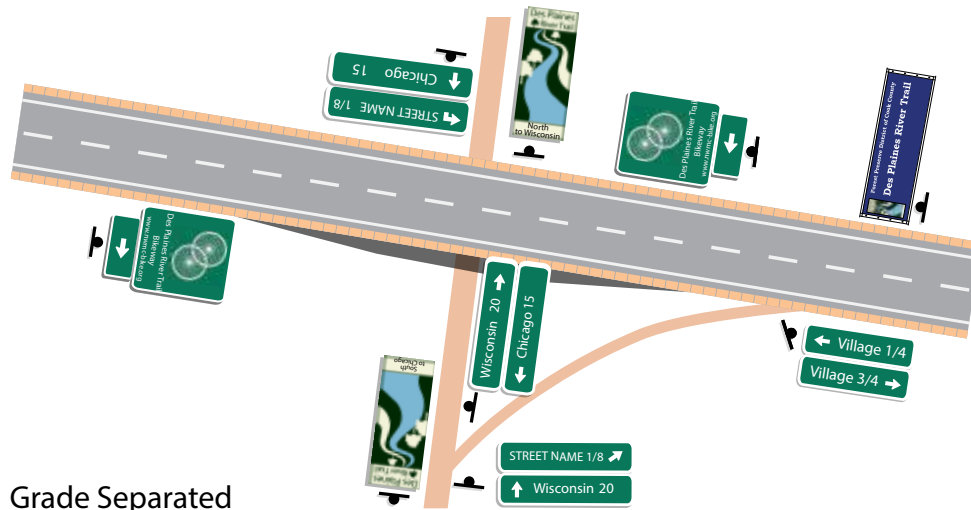


Access Trail

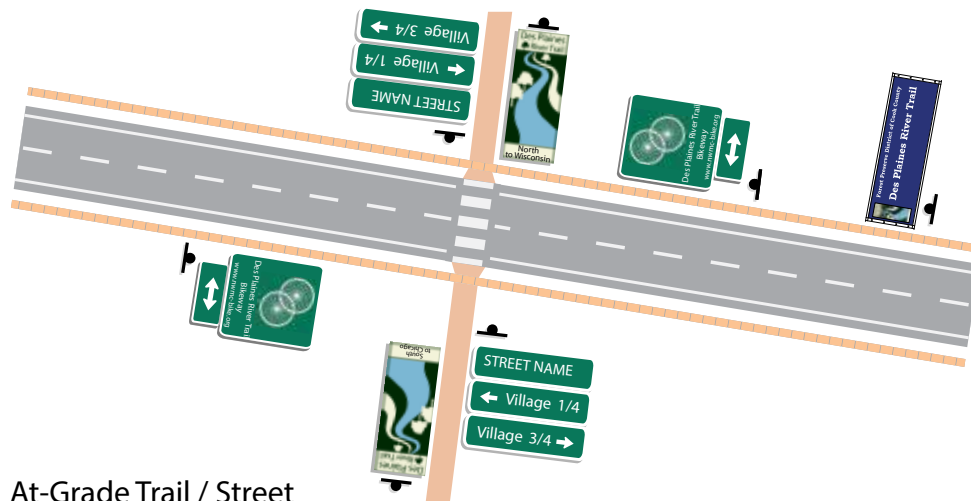


Access Point

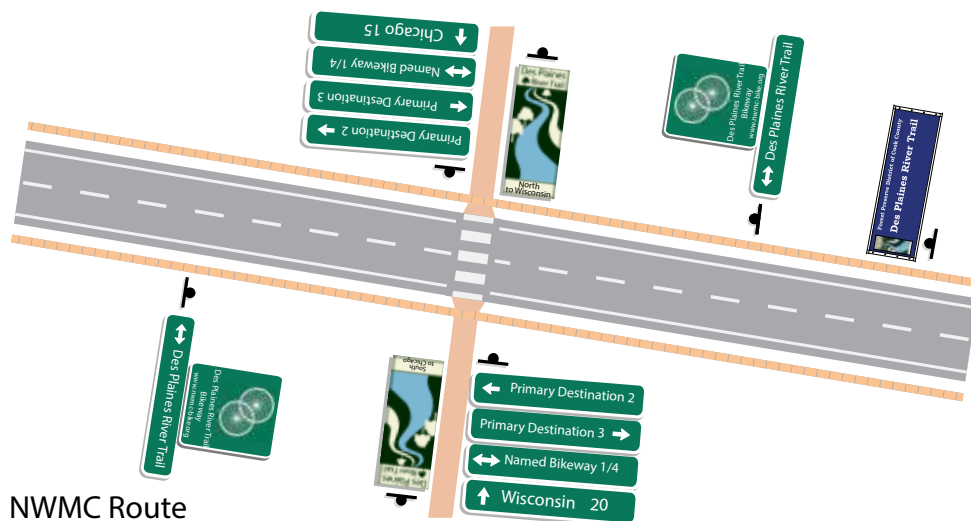




Grade Separated



At-Grade Trail / Street



NWMC Route





*Bicycle parking at a shopping center adjacent to the trail in Wheeling*

## SUPPORTING AMENITIES

Amenities along a trail enhance the user's experience and make the trip more enjoyable. They also encourage users to take a longer trip or stop and enjoy other facilities and amenities along the Des Plaines River Trail, and provide the opportunity for a greater connection to nature. The Forest Preserve of Cook County Trail Master Plan & Policy recommends the inclusion of bike parking, water fountains, and restrooms along trails, at trailheads, and at destinations along the trail. This plan supports those recommendations and has identified recommended locations for these amenities. Generally, these amenities should be provided in highly visible locations along the main trail, near activity areas, and at trail access points. Information about the locations of bike parking, water fountains, and restrooms can be provided to trail users on a website or on a map to help inform route planning. Signage directing trail users to amenities that are not visible from the main trail could also improve the user experience.

- **Bike Parking:** Bike parking can improve access to the Des Plaines River Trail in two ways. First, it can motivate visitors of destinations along the trail to bike instead of drive, and secondly it can encourage cyclists using the trail to stop, secure their bicycle, and explore Forest Preserve destinations or participate in activities. Bike racks are currently available for trail users at the Nature Center, but not in other locations within the study area. Additional racks could be installed at trailheads, near picnic areas, near vehicle parking lots, at restrooms, and at campgrounds. One to three inverted U racks could be installed at each location.

- **Water Fountains and Hand Pumps:** Access to drinking water makes trails more convenient for all users. Carrying adequate water can be difficult for walkers, runners, and even equestrians and cyclists, particularly on long trips, and convenience stores are often too far from the trail for users to access. Water fountains are currently available at many of the permanent restroom facilities and many of the picnic groves have hand pumps. Where feasible, water fountains and hand pumps should be provided at public restrooms, picnic groves, at trailheads, and at high traffic areas along the trail.
- **Restrooms:** The availability of restrooms greatly enhances the experience for all trail users. The Forest Preserves of Cook County uses both permanent and temporary restrooms. Permanent restrooms should be provided in more developed parts of the trail, such as nature centers and campgrounds, and temporary or portable restrooms should be provided at trailheads, parking areas, and picnic areas.
- **Trailheads:** Trailheads are ideal locations for supporting amenities and for the placement of maps and wayfinding signage. This plan supports the recommendations included in the Forest Preserve District's Master Plan and its Trail Master Plan & Policy to develop trailhead standard designs for trailheads providing a varying level of services, develop a wayfinding system to be used at trailheads, and include amenities at primary trailheads, such as bike rentals, concessions, seating, and the supporting amenities listed above.



## PROJECT IMPLEMENTATION

This Improvement Plan provides a comprehensive set of recommended crossing improvements, roadway enhancement, and trail upgrades aimed at enhancing access to and throughout the Des Plaines River Trail corridor. Implementation of these improvements will require the careful coordination of municipal policies and regulations, agency standards and capital improvements, strategic partnerships, and funding. This section describes several key actions that can be taken by NWMC to engage its implementation partners and increase the likelihood that the actions of individual municipalities and agencies help accomplish important regional goals related to trail development.

## Policy Alignment and Program Recommendations

There are several policies or programs that can be implemented with relatively little cost, but can significantly influence the way long-term improvements are designed.

### Complete Streets Policies

Complete Streets Policy is a way for communities to communicate their commitment to building and maintaining roads that meet the needs of all users of all ages and abilities in a meaningful and efficient way. Plans and policies that spell out a community's Complete Streets commitment can be used to leverage additional funding for projects and can be used as supporting documentation for Complete Streets projects on State and County roads. Complete Streets policies can take a variety of forms, including ordinances, resolutions, and plans. Most of the communities within the Des Plaines River Trail Study Area have either a bicycle plan or a Complete Streets policy. These plans should be referenced when roadway improvements are implemented within the study area to ensure that the recommendations are addressed.

Communities with a plan should update it every 5-10 years to make sure it is in line with current standards and approaches. Where feasible, plans should include safety and infrastructure improvements that build increased connectivity to the Des Plaines River Trail. Communities with no current plans or policies that address Complete Streets should make an effort to develop a plan and integrate the recommendations included in this document.



## Crossing Standards

Municipalities along the Des Plaines River Trail corridor should assess the local applicability of the crossing standards identified in this plan and include them in local design standards wherever possible, including zoning regulations, subdivision regulations, and public works standards. Through adoption, municipalities can provide documentation to the Illinois Department of Transportation and the Cook County Department of Transportation and Highways that supports these recommendations and their inclusion in future roadway projects.

## Friends of the Des Plaines River Trail

Friends groups provide support and stewardship for trails in a variety of ways. They can advocate for trail access points, help keep trails clean and maintained, raise money for small capital projects, and organize events to promote use of the trail. Friends groups can also take on the education, encouragement, and awareness strategies outlined above. The NWMC should work with local stakeholders to mobilize a Friends of the Des Plaines River Trail group that can act as an advocate for the implementation of this Plan and the Forest Preserve Trail Master Plan & Policy.

## Education, Encouragement, and Awareness

The Des Plaines River Trail is an important asset to its surrounding communities, but many people are unaware of how to access it. Municipalities can help to educate and encourage residents to use the Des Plaines River Trail in the following ways:

- Include the Des Plaines River Trail as a destination in local bicycle wayfinding signage,
- Provide a link to the Forest Preserve of Cook County Des Plaines River Trail map on municipal websites,
- Make paper copies of the map available at City and Village halls.
- Promote use of the trail and Forest Preserve programs in community publications,
- Organize bike rides on the trail or rides to Forest Preserve activities,
- Encourage local offices in corporate parks that surround the trail to participate in Bike to Work Week and use the trail,
- Develop educational materials that explain trail etiquette and bicycle and pedestrian safety when using trails



## Connectivity to Transit

A combination of physical improvements and policy changes can improve connectivity between Pace stops and Metra stations and the Des Plaines River Trail and increase the service area of the Des Plaines River Trail for people without access to cars and encourage fewer vehicle trips taken for those who do have cars. Recommendations to achieve this include:

- Municipalities should provide sidewalk and bicycle facility connections between transit stops near the Des Plaines River Trail and trail access points. This can be done by referencing Pace's Transit-Supportive Guidelines for the Chicagoland Region. Pace adopted these guidelines in 2013 in an effort to work with suburban communities to improve access to transit. The guidelines include standards for public and private realm design, as well as information about Pace's Design Review Assistance for Transit (D.R.A.F.T.) program that provides design review for proposed improvements.
- Local municipalities, Metra and Pace should collaborate to educate residents and trail users about Metra and Pace policies regarding bikes on board transit vehicles.
- The NWMC should work with Metra to use social media to create additional awareness for weekend bicycle capacity on trains. For example, there are often multiple transit lines that serve the same trail. Trail users can make informed decisions about which train to take to and from the trail if up to date information on bike capacity were available on Twitter and other popular social media sites.

## Unrecognized Trails

Throughout the study area there are several narrow trails connecting neighborhoods to the main Des Plaines River Trail. Some of these trails are officially recognized trails, while others have developed over time from use by both people and wildlife living in the area. While these trails may provide convenient access to a neighborhood near the trail, they also can cause confusion to people on the trail, as many are not signed or mapped. A small number of unrecognized trails have been identified in this plan. The NWMC should work with local municipalities and community groups to formalize these trails and include them on regional trail maps.



## Inter-jurisdictional Collaboration

The Des Plaines River Trail intersects infrastructure under the jurisdiction of several stakeholders, including the State of Illinois, Cook County, multiple municipalities and townships, and the Union Pacific Railroad. The trail also crosses or parallels rights-of-way belonging to the Cook County Forest Preserve District and local utility companies. This makes coordination amongst multiple agencies imperative to address each agency's needs and accomplish broader objectives. Agencies can collaborate in a variety of ways to successfully implement the recommendations in this plan.

## Implementation in Unincorporated Areas

Some of the recommended improvements in this plan are located in unincorporated areas or on roads that fall under IDOT's jurisdiction. IDOT's Complete Streets policy requires local transportation agencies (typically a municipality) to request Complete Streets facilities during roadway reconstruction projects, provide a 20% match to cover the cost of the Complete Streets project, and bear the responsibility of maintaining the facility in perpetuity. In unincorporated areas, Townships would be the default local roadway jurisdiction, but they typically lack both the resources to provide a 20% match and take on maintenance, and the capacity to advocate for Complete Streets projects on state roads. Thus an alternate agency must be identified to respond to IDOT's Complete Streets projects. For Complete Streets projects and crossings in unincorporated areas, the following options should be explored. (It should be noted that, as part of the planning process, discussions were held with various stakeholders regarding their potential role in project implementation. While various potential approaches were discussed, no formal agreements or commitments were established. Rather, this Plan should serve as the basis for on-going discussions among various groups to determine the appropriate roles in long-term implementation.)

- **Work with the Cook County Department of Transportation and Highways:** The Cook County Department of Transportation and Highways could take on the responsibility of advocating for Complete Streets and providing the local match at Des Plaines River Trail crossings, wherever possible. This recommendation is consistent with Cook County's Complete Streets Policy and Design Standards. Should this recommendation be implemented, a communication chain and internal policy directive should be established with IDOT, The Forest Preserve District of Cook County and the Cook County Department of Transportation and Highways to ensure that the proper agencies are notified when a roadway project is being considered on a roadway that intersects the Des Plaines River Trail.



- **Establish an Intergovernmental Agreement:** Municipalities that fall within the Des Plaines River Trail Study Area, the Cook County Forest Preserve District, and the Cook County Department of Transportation and Highways should consider entering into a Joint Management Agreement to provide a consistent policy regarding the trail's use, protection, management, and to provide uniform rules and regulations. This would be a voluntary agreement that is enabled through the Illinois State Constitution, Article VII, Section 10 for that allows units of local government to contract and share services, credit, revenues, and other resources. This would allow local governments to share the responsibilities of trail crossing and trail access construction and maintenance. An example of an Intergovernmental Trail Management Agreement used for the Old Plank Road Trail in Will County is included in the Appendix of this document.
- **Work with the Forest Preserve of Cook County:** The Forest Preserve of Cook County maintains a Capital Improvement Program (CIP) that prioritizes upcoming capital projects. NWMC staff and local municipalities can request improvements to individual trail segments during the Forest Preserve's budgeting cycle. While this offers no assurance that improvements will be included in the Forest Preserve's CIP, this is the recommended way to bring potential improvements to the Forest Preserve's attention.
- **Connectivity along full-length of the trail:** While this study looks specifically at the portion of the Des Plaines River Trail in Cook County, the remainder of the trail runs through Lake County to the north and into west-central Cook County to the south. The Forest Preserve District of Cook County and the Lake County Forest Preserve District should coordinate to create a system of mile markers for the entire length of the Des Plaines River trail. Trail users benefit from knowing the distance they have travelled and the distance that remains to reach their final destination.

## Grant Pursuits

Municipalities and Cook County Department of Transportation and Highways should pursue grant funding to complete the recommendations in this plan. Some of the recommendations included in this plan are low-cost and easy to implement, while others may require collaborative programming from multiple agencies. This plan will help communities submit competitive grant applications to obtain the additional funds necessary to complete the large-scale projects recommended. Wherever possible, municipalities should coordinate on projects to leverage additional funds and streamline trail improvements.

## Potential Funding Sources

This plan includes a variety of recommended projects focused on improving safety and accessibility for users of the Des Plaines River Trail and its surrounding area. Some of the projects are relatively small and low-cost, while other projects will require more time and capital to complete. The following is a list of funding sources available to support the projects recommended in this plan. It should be noted that the sources listed in this plan include programs available at the time of plan adoption. NWMC staff and local communities should continue to monitor changes in federal, state, and local policies that may discontinue programs, change their parameters for how funds can be used, or introduce new programs that fund certain types of improvements.

### Transportation Alternatives Program (TAP)

Transportation Alternatives is a federal grant program jointly administered by the state departments of transportation and metropolitan planning organizations in large metropolitan areas. The program funds a variety of bicycle and pedestrian improvement strategies including trail enhancements, pedestrian network improvements and bike facilities.

### Congestion Mitigation and Quality Program (CMAQ)

The CMAQ program funds transportation projects that improve air quality. These include bicycle ways, pedestrian network improvements and transit facilities. Locally, the program is administered by the Chicago Metropolitan Agency for Planning, which emphasizes projects of regional significance. CMAQ funds generally cannot be used for preliminary engineering.



## Surface Transportation Program (STP)

These federal funds are distributed locally by the various Councils of Government. STP supports improvements to local roads that benefit the federal highway network. Among other uses, STP funds can be used for traffic calming, pedestrian facilities and bike routes. Each Council of Government has its own procedures for evaluation of project proposals. STP generally is one of the most flexible funding sources.

The Northwest Council of Mayors (which includes Wheeling, Prospect Heights, Mount Prospect, Des Plaines, Niles and Park Ridge) funds all STP projects at an 80 percent federal/20 percent local matching ratio. The North Shore Council of Mayors (which includes Northbrook and Glenview) funds all STP projects at a 70 percent federal/30 percent local matching ratio. Both Councils provide funding for bicycle and pedestrian projects. Application materials for both Councils are available on the NWMC website.

## Highway Safety Improvement Program (HSIP)

The Illinois Department of Transportation provides grants to improve facilities with documented crash problems. These projects can be focused on auto crash locations, or those involving pedestrians or cyclists. HSIP generally provides 90% of the project funds with a 10% local match. Funding is usually available for all phases of the project.

## Grade Crossing Protection Fund

This fund, administered by the Illinois Commerce Commission, assists local governments pay for improvements at highway-railroad crossings. Eligible uses include pedestrian gates, pedestrian signals and grade separations.

## Other Federal Funds

Federal agencies sometimes make grants available for energy efficiency, sustainability or obesity-prevention projects that could include active transportation initiatives. An up to date listing of all federal grants is available at [www.grants.gov](http://www.grants.gov). The Legislative Research Unit of the Illinois General Assembly also publishes lists of state and federal grants.

## County and Local Funding

Many federal and state funding sources require local match funds. Coalitions can be built between jurisdictions to prioritize the implementation of shared objectives. Many counties and local governments have access to motor fuel tax and other transportation revenue sources. They may also have economic development programs that can fund projects. School and park districts can also be sources of funds.

## Private or Not-for-Profit Foundations

Organizations with a 501(c)3 tax status are eligible to apply for grants offered by private foundations. Foundations typically fund either small capital projects or programs and equipment. If a Friends of the Des Plaines River Trail group is established and incorporates, these additional funding sources will be available to put towards implementation. Forming partnerships with other local and regional 501(c)3 organizations, may open additional doors to funding. For example, the Chicago Area Mountain Bikers (CAMBR) often receives grants to help build and reconstruct local trails of their choosing.

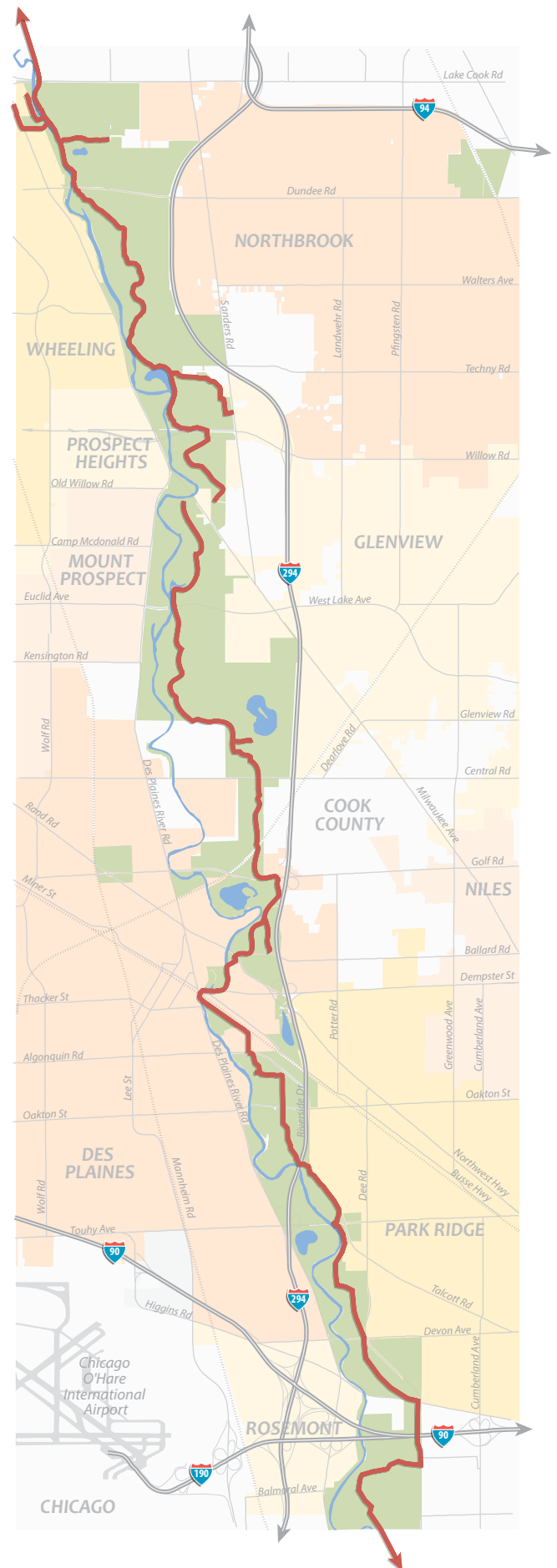


## IMPROVEMENTS BY COMMUNITY

This Plan includes recommendations along a corridor that abuts or is overlapped by several municipalities and unincorporated areas of Cook County. This section provides a summary of the relevant recommendations for each municipality along the Des Plaines River Trail corridor. The following map illustrates the municipal boundaries of the communities adjacent to the corridor. Subsequent pages include a summary of the recommended trail, crossing, and access improvements for each municipality.

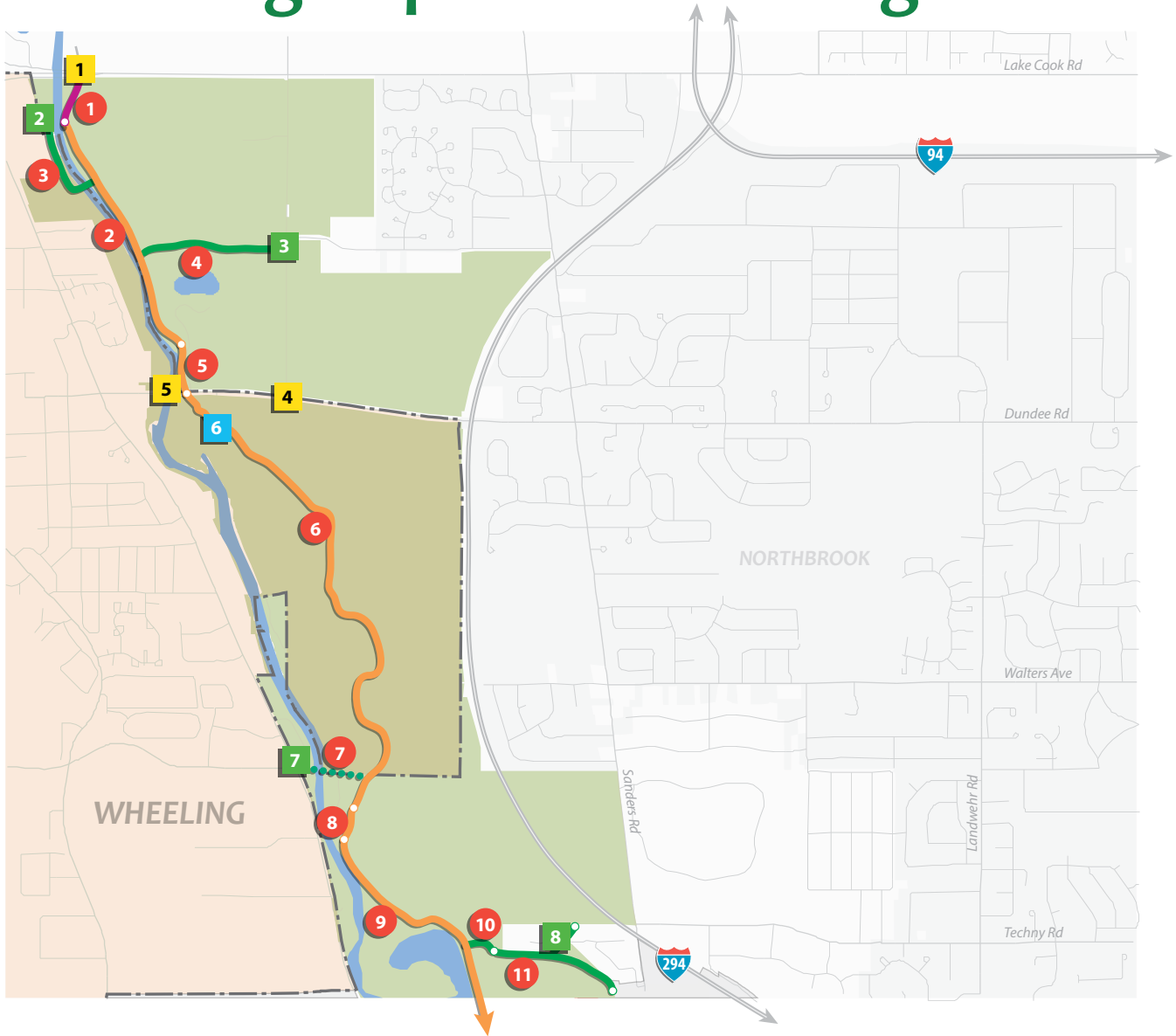
It should be noted that several of the improvements are shown on maps for multiple communities since they fall in unincorporated areas that could fall under several planning jurisdictions. This reinforces the importance of collaboration and cooperation in assessing the need for and key implementation partners involved in corridor improvements.

It should also be noted that no summary maps or tables are provided for Rosemont or Niles since Plan recommendations do not occur within their municipal boundaries. These summaries also highlight recommendations that lie in unincorporated areas of Cook County. This does not imply that a municipality may be responsible for improvements in these areas, but rather highlights the need for intergovernmental and interagency collaboration among many local stakeholders.





# Wheeling Improvement Program



## Legend of Improvements

- Trail Crossings
- Access Point
- Street Crossing
- Avenue Crossing
- Boulevard Crossing

- Trail Segments
- Trail Segment Number
- Access Trail - Proposed
- Access Trail
- Stone
- Paved
- On-Street
- Other FPCC Trails



## Wheeling Trail Crossing Recommendations

#	Crossing Name	Needed Crossing Improvements	Needed Roadway Improvements	Additional Notes	Location	Road Jurisdiction	Implementation Feasibility (Refer to Section 3 of this Plan for explanation of scale)
1	Lake Cook Rd	NONE	Complete gaps in bike/ped facility along Lake Cook Road	Wayfinding signage needed for access trail north of Lake Cook Road in Lake County. No trail access from south side of Lake Cook Road. Gaps in bike/ped facility on Lake Cook Road	Wheeling Township-Unincorporated Cook County	IDOT, CCDTH	MED
2	Portwine Rd	Mark and sign crosswalk on Portwine at trail access	Install bike and pedestrian facilities on Portwine and Forest View		Wheeling Township-Unincorporated Cook County	Wheeling Township	HIGH
3	Westin Hotel	Wayfinding signage advertising trail access	Install bike facilities on Wolf Road, complete gaps in sidewalk network on Milwaukee Ave, Improve wayfinding signage visible from Milwaukee Ave	Project to improve access is planned, but not funded	Wheeling	IDOT	MED
4	Dundee Rd at Portwine Rd	Traffic Signal (Programmed)	NONE	Signal programmed	Wheeling/Wheeling Township-Unincorporated Cook County	IDOT, CCDTH	
5	Dundee Rd-mid block	NONE	NONE	Current controlled crossing requires a 1/2 mile detour off the trail. Future realignment south of Dundee Road desired. See priority project "Dundee Road" for additional recommendations.	Wheeling/Wheeling Township-Unincorporated Cook County	IDOT, Wheeling Township	
6	Dam Woods Dr	Near term-mark crosswalks, Long term-trail realignment would close this crossing	Provide sidewalk or walking path for pedestrians away from drive	Recommended trail re-route would remove this crossing. See priority project "Dundee Road" for additional recommendations.	Wheeling	Forest Preserve District of Cook County	MED
7	Hintz Rd	Improve traffic signal at Hintz and Milwaukee for pedestrian crossing	Install bike and pedestrian accommodations on Hintz Road and Milwaukee Avenue	Future Project. Trail not currently accessible from this location. Access trail would need to be constructed from Hintz/Milwaukee intersection across Des Plaines River to main trail.	Wheeling/Wheeling Township-Unincorporated Cook County	IDOT, CCDTH	LOW
8	Timberlane Dr	Wayfinding signage			Northfield Township-Unincorporated Cook County	Northfield Township	HIGH

For additional detail on trail crossing recommendations, see the table on pages 23 and 24 of this document.

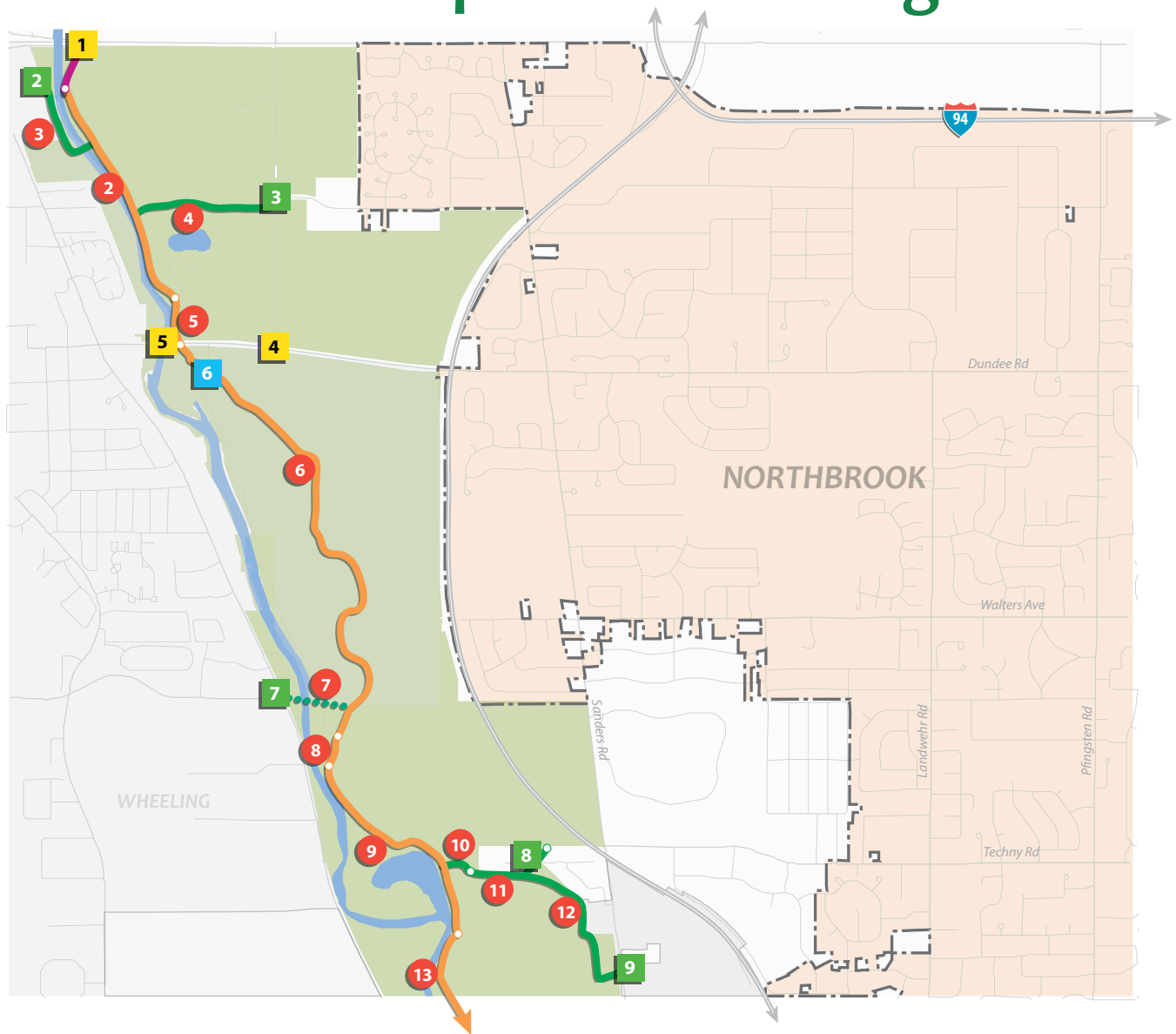
## Wheeling Trail Segment Recommendations

#	Segment Begins (north)	Segment ends (south)	Trail Type	Current Surface and Conditions	Recommended Trail Surface	Improvements Needed	Location	Implementation Feasibility (Refer to Section 3 of this Plan for explanation of scale)
3	Westin Hotel	Main Trail	Access	Gravel/dirt mix	Natural Surface	NONE	Wheeling	
4	Main Trail	Portwine Road @ Forest View	Access	Gravel/dirt mix	Natural Surface	Local Natural Surface Grading	Wheeling Township-Unincorporated Cook County	MED
5	Potawatomi Woods Parking Lot	Dundee Road	Main	Very narrow, gravel/dirt mix	Stone	Stone Trail Reconstruction	Wheeling/Unincorporated Cook County	MED
6	Dundee Road	Dam Woods Drive	Main	Gravel/dirt mix	Stone	Stone Trail Reconstruction	Wheeling	LOW
7	Milwaukee Avenue @ Hintz	Main Trail	Access	N/A	Natural Surface	New trail & overpass	Wheeling/Unincorporated Cook County	MED
8	North end of Dam Woods Drive	South end of Dam Woods Drive	Main	Gravel	Stone	Stone Trail Reconstruction	Wheeling	MED
10	Main Trail	Timberlane Drive Horse Trail	Access	Gravel	Natural Surface	Natural Surface Grading	Northfield Township-Unincorporated Cook County	HIGH
11	Access Trail	Timberlane Drive	Access	Grass/dirt mix, Not FPCC recognized. On-street parking available.	Natural Surface	Natural Surface Grading	Northfield Township-Unincorporated Cook County	HIGH

For additional detail on trail segment recommendations, see the table on pages 31 and 32 of this document.



# Northbrook Improvement Program



## Legend of Improvements

- Trail Crossings
- Access Point
- Street Crossing
- Avenue Crossing
- Boulevard Crossing

- Trail Segments
- Trail Segment Number
- Access Trail - Proposed
- Access Trail
- Stone
- Paved
- On-Street
- Other FPCC Trails



## Northbrook Trail Crossing Recommendations

#	Crossing Name	Needed Crossing Improvements	Needed Roadway Improvements	Additional Notes	Location	Road Jurisdiction	Implementation Feasibility (Refer to Section 3 of this Plan for explanation of scale)
1	Lake Cook Rd	NONE	Complete gaps in bike/ped facility along Lake Cook Road	Wayfinding signage needed for access trail north of Lake Cook Road in Lake County. No trail access from south side of Lake Cook Road. Gaps in bike/ped facility on Lake Cook Road	Wheeling Township-Unincorporated Cook County	IDOT, CCDTH	MED
2	Portwine Rd	Mark and sign crosswalk on Portwine at trail access	Install bike and pedestrian facilities on Portwine and Forest View		Wheeling Township-Unincorporated Cook County	Wheeling Township	HIGH
8	Timberlane Dr	Wayfinding signage			Northfield Township-Unincorporated Cook County	Northfield Township	HIGH

For additional detail on trail crossing recommendations, see the table on pages 23 and 24 of this document.

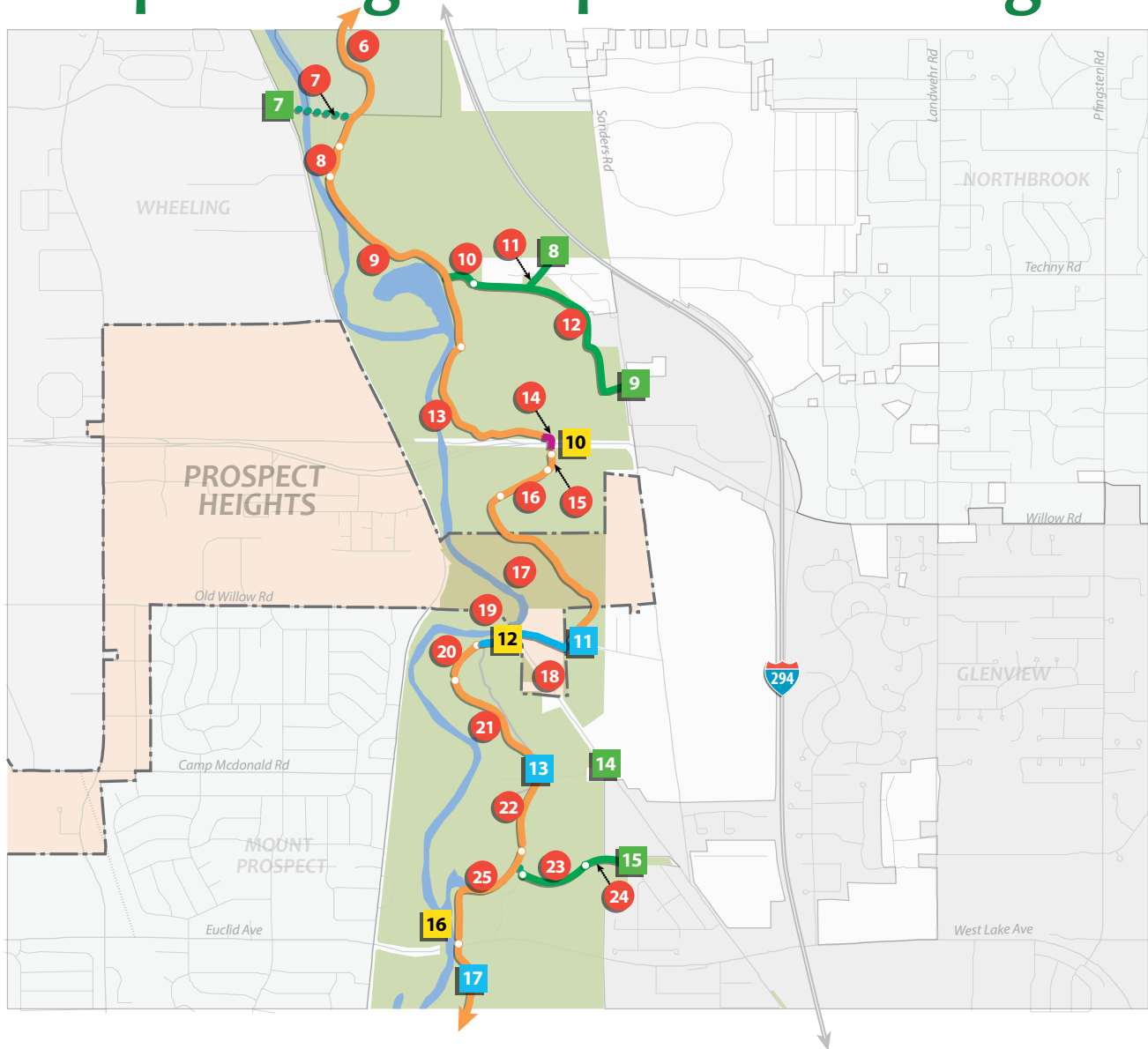
## Northbrook Trail Segment Recommendations

#	Segment Begins (north)	Segment ends (south)	Trail Type	Current Surface and Conditions	Recommended Trail Surface	Improvements Needed	Location	Implementation Feasibility (Refer to Section 3 of this Plan for explanation of scale)
4	Main Trail	Portwine Road @ Forest View	Access	Gravel/dirt mix	Natural Surface	Local Natural Surface Grading	Wheeling Township-Unincorporated Cook County	MED
5	Potawatomi Woods Parking Lot	Dundee Road	Main	Very narrow, gravel/dirt mix	Stone	Stone Trail Reconstruction	Wheeling/Unincorporated Cook County	MED
10	Main Trail	Timberlane Drive Horse Trail	Access	Gravel	Natural Surface	Natural Surface Grading	Northfield Township-Unincorporated Cook County	HIGH
11	Access Trail	Timberlane Drive	Access	Grass/dirt mix, Not FPCC recognized. On-street parking available.	Natural Surface	Local Natural Surface Grading	Northfield Township-Unincorporated Cook County	HIGH
12	Access Trail	Sanders Road	Access	Grass	Natural Surface	Natural Surface Grading	Glenview, Northfield Township-Unincorporated Cook County	MED
13	Access Trail	North side of Willow Road	Main	Gravel, overgrowth	Stone	Stone Trail Reconstruction	Northfield Township-Unincorporated Cook County	MED

For additional detail on trail segment recommendations, see the table on pages 31 and 32 of this document.



# Prospect Heights Improvement Program



## Legend of Improvements

### Trail Crossings

- # Access Point
- # Street Crossing
- # Avenue Crossing
- # Boulevard Crossing

### Trail Segments

- # Trail Segment Number
- Access Trail - Proposed
- Access Trail
- Stone
- Paved
- On-Street
- Other FPCC Trails



## Prospect Heights Trail Crossing Recommendations

#	Crossing Name	Needed Crossing Improvements	Needed Roadway Improvements	Additional Notes	Location	Road Jurisdiction	Implementation Feasibility (Refer to Section 3 of this Plan for explanation of scale)
8	Timberlane Dr	Wayfinding signage			Northfield Township-Unincorporated Cook County	Northfield Township	HIGH
9	Sanders Rd	Provide mid-block crossing across Sanders Road	Install bike and pedestrian accommodations on Sanders		Glenview/Northfield Township-Unincorporated Cook County	CCDTH	HIGH
10	Palatine/Willow Rd	NONE	Install sidewalk or sidepath on north side of Willow Road & upgrade Sanders/Willow intersection	Willow Road reconstruction programmed	Northfield Township-Unincorporated Cook County	IDOT	MED
11	Winkleman Rd	Wayfinding signage, crosswalk markings, pedestrian crossing warning signage	Assume paved shoulder. See Priority Project "Milwaukee Avenue" for additional recommendations	See Priority Project "Milwaukee Avenue" for additional recommendations.	Prospect Heights/Northfield Township-Unincorporated Cook County	Prospect Heights, Northfield Township	HIGH
12	Milwaukee Ave/IL 21	Near term-pedestrian refuge island, Long term-underpass	Complete gaps in sidewalk network on both sides of Milwaukee Avenue (River Rd -Existing sidewalk)	See Priority Project "Milwaukee Avenue" for additional recommendations.	Prospect Heights/Northfield Township-Unincorporated Cook County	Prospect Heights, IDOT	HIGH
13	Nature Center Dr	NONE	Provide accommodations for pedestrians from Milwaukee Ave to Nature Center		Northfield Township-Unincorporated Cook County	Forest Preserve District of Cook County	HIGH

For additional detail on trail crossing recommendations, see the table on pages 23 and 24 of this document.

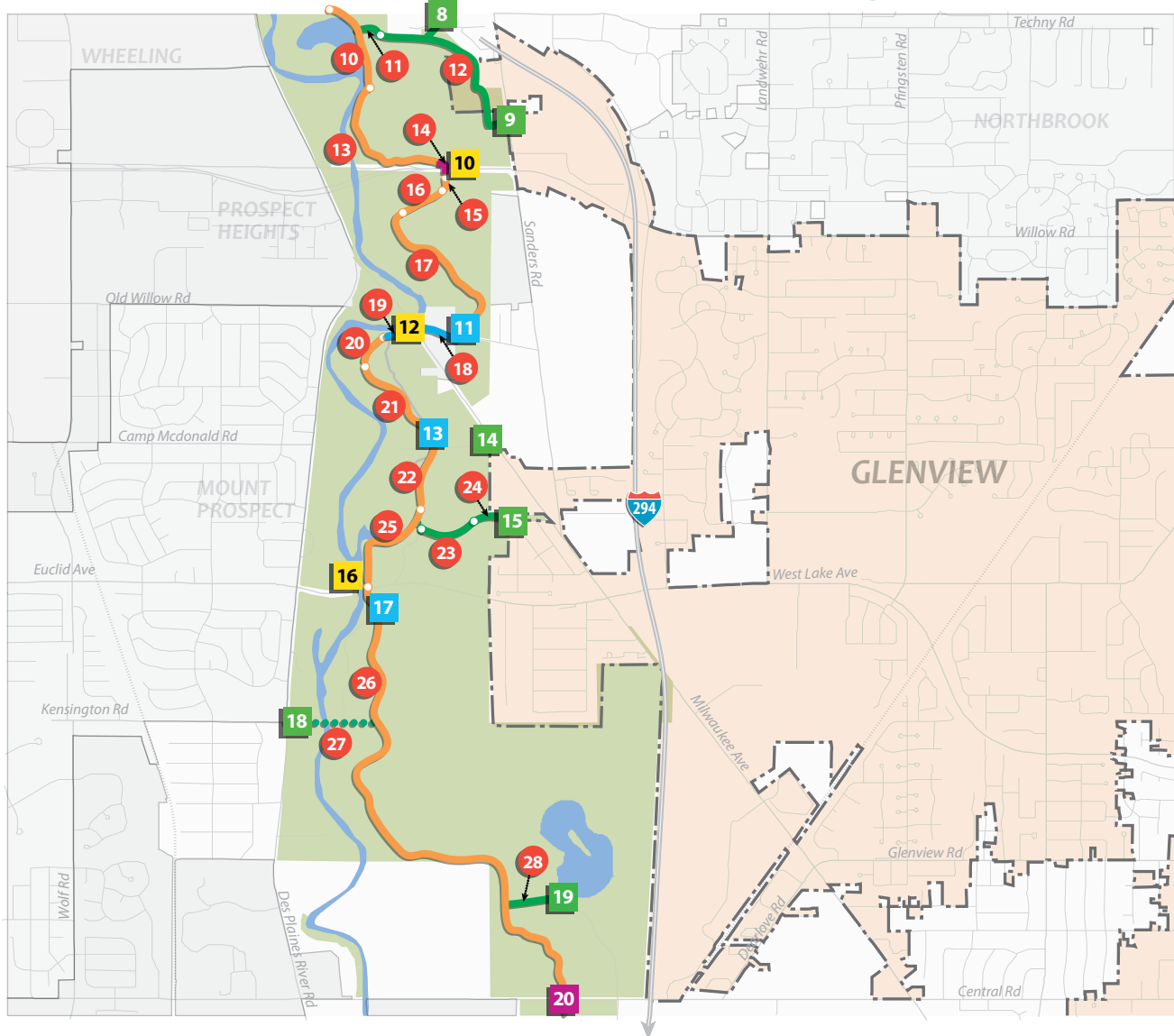
## Prospect Heights Trail Segment Recommendations

#	Segment Begins (north)	Segment ends (south)	Trail Type	Current Surface and Conditions	Recommended Trail Surface	Improvements Needed	Location	Implementation Feasibility (Refer to Section 3 of this Plan for explanation of scale)
11	Access Trail	Timberlane Drive	Access	Grass/dirt mix, Not FPCC recognized. On-street parking available.	Natural Surface	Local Natural Surface Grading	Northfield Township-Unincorporated Cook County	HIGH
12	Access Trail	Sanders Road	Access	Grass	Natural Surface	Natural Surface Grading	Glenview, Northfield Township-Unincorporated Cook County	MED
13	Access Trail	North side of Willow Road	Main	Gravel, overgrowth	Stone	Stone Trail Reconstruction	Northfield Township-Unincorporated Cook County	MED
14	Willow Road Overpass	Willow Road Overpass	Main	8' max asphalt	Paved	Overpass bridge rebuild (Programmed)	Northfield Township-Unincorporated Cook County	MED
15	Willow Road	South of overpass	Main	Gravel	Stone	Stone Trail Reconstruction	Northfield Township-Unincorporated Cook County	LOW
16	South of overpass	Creek	Main	Gravel/dirt mix	Stone	Stone Trail Reconstruction	Northfield Township-Unincorporated Cook County	MED
17	Creek	Winkleman Road	Main	Gravel/dirt mix	Stone	Stone Trail Reconstruction	Prospect Heights/Unincorporated Cook County	MED
18	Winkleman Road	Milwaukee Avenue	Main	Along Winkleman Road	On-Street	Near term paved shoulder (assumes full depth replacement & widening)	Prospect Heights	HIGH
19	Milwaukee Avenue	Allison Woods	Main	Access Drive	On-Street	Pavement marking	Northfield Township-Unincorporated Cook County	HIGH
20	Allison Woods	South of Allison Woods	Main	Narrow, gravel/dirt mix	Stone	Stone Trail Reconstruction	Northfield Township-Unincorporated Cook County	MED
21	South of Allison Woods	Nature Center Drive	Main	Gravel/dirt mix	Stone	Stone Trail Reconstruction	Northfield Township-Unincorporated Cook County	MED

For additional detail on trail segment recommendations, see the table on pages 31 and 32 of this document.



# Glenview Improvement Program



## Legend of Improvements

- Trail Crossings
- Access Point
- Street Crossing
- Avenue Crossing
- Boulevard Crossing

- Trail Segments
- Trail Segment Number
- Access Trail - Proposed
- Access Trail
- Stone
- Paved
- On-Street
- Other FPCC Trails



## Glenview Trail Crossing Recommendations

#	Crossing Name	Needed Crossing Improvements	Needed Roadway Improvements	Additional Notes	Location	Road Jurisdiction	Implementation Feasibility (Refer to Section 3 of this Plan for explanation of scale)
9	Sanders Rd	Provide mid-block crossing across Sanders Road	Install bike and pedestrian accommodations on Sanders		Glenview/Northfield Township-Unincorporated Cook County	CCDTH	HIGH
10	Palatine/Willow Rd	NONE	Install sidewalk or sidepath on north side of Willow Road & upgrade Sanders/Willow intersection	Willow Road reconstruction programmed	Northfield Township-Unincorporated Cook County	IDOT	MED
13	Nature Center Dr	NONE	Provide accommodations for pedestrians from Milwaukee Ave to Nature Center		Northfield Township-Unincorporated Cook County	Forest Preserve District of Cook County	HIGH
14	Milwaukee Ave/Nature Center Drive	Install bike/ped crossing accommodations	Install bike/ped facility along Milwaukee Ave (included in Milwaukee Ave improvements)		Glenview/Northfield Township-Unincorporated Cook County	IDOT, Forest Preserve District of Cook County	MED
15	Carol Ln	NONE			Glenview	Glenview	HIGH
16	Lake Ave	Wayfinding signage. Signage along trail alerting users to flood information and online resources to check flood levels.	Complete 500' sidewalk gap on north side of Lake Ave west of trail, Complete 500' gap in sidewalk network on south side of Lake Ave		Northfield Township and Wheeling Township-Unincorporated Cook County	CCDTH	MED
17	Camp Pine Woods Dr	Mark crosswalk, consider installing stop sign due to sight distance issues	Install pedestrian accommodations connecting Lake Ave to trail		Northfield Township-Unincorporated Cook County	Cook County Forest Preserve District	HIGH

For additional detail on trail crossing recommendations, see the table on pages 23 and 24 of this document.

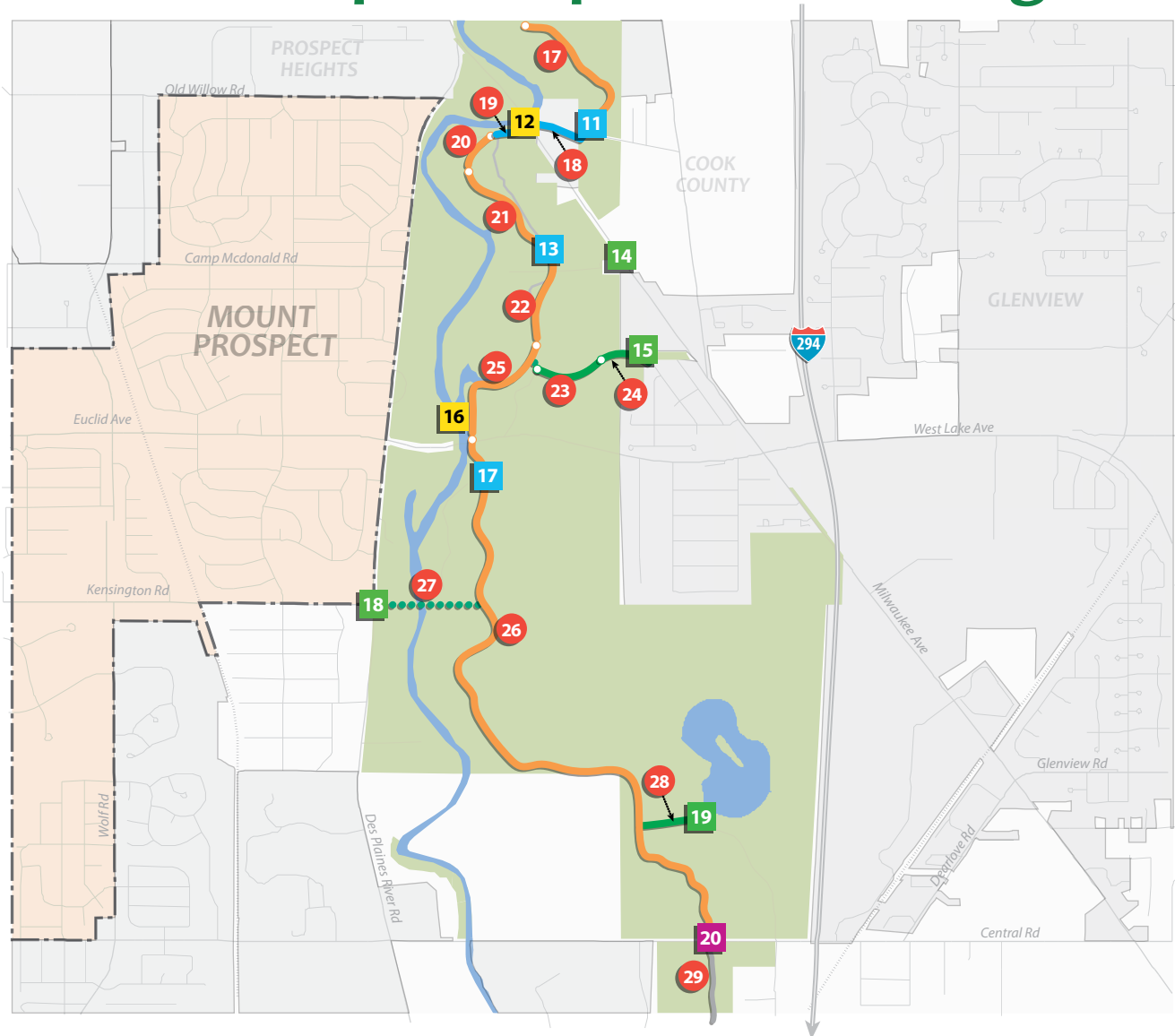
## Glenview Trail Segment Recommendations

#	Segment Begins (north)	Segment ends (south)	Trail Type	Current Surface and Conditions	Recommended Trail Surface	Improvements Needed	Location	Implementation Feasibility (Refer to Section 3 of this Plan for explanation of scale)
12	Access Trail	Sanders Road	Access	Grass	Natural Surface	Natural Surface Grading	Glenview, Northfield Township-Unincorporated Cook County	MED
13	Access Trail	North side of Willow Road	Main	Gravel, overgrowth	Stone	Stone Trail Reconstruction	Northfield Township-Unincorporated Cook County	MED
14	Willow Road Overpass	Willow Road Overpass	Main	8' max asphalt	Paved	Overpass bridge rebuild (Programmed)	Northfield Township-Unincorporated Cook County	MED
15	Willow Road	South of overpass	Main	Gravel	Stone	Stone Trail Reconstruction	Northfield Township-Unincorporated Cook County	LOW
16	South of overpass	Creek	Main	Gravel/dirt mix	Stone	Stone Trail Reconstruction	Northfield Township-Unincorporated Cook County	MED
17	Creek	Winkleman Road	Main	Gravel/dirt mix	Stone	Stone Trail Reconstruction	Prospect Heights/Unincorporated Cook County	HIGH
19	Milwaukee Avenue	Allison Woods	Main	Access Drive	On-Street	Pavement marking	Northfield Township-Unincorporated Cook County	HIGH
20	Allison Woods	South of Allison Woods	Main	Narrow, gravel/dirt mix	Stone	Stone Trail Reconstruction	Northfield Township-Unincorporated Cook County	MED
21	South of Allison Woods	Nature Center Drive	Main	Gravel/dirt mix	Stone	Stone Trail Reconstruction	Northfield Township-Unincorporated Cook County	MED
22	Nature Center Drive	Lake Avenue Woods - East	Main	Narrow	Stone	Stone Trail Reconstruction	Northfield Township-Unincorporated Cook County	MED
23	Main Trail	Lake Avenue Woods Parking Lot	Access	NONE	Natural Surface	New trail	Northfield Township-Unincorporated Cook County	HIGH
24	Lake Avenue Woods-East Parking	Carol Lane	Access	Not currently FPCC recognized	Natural Surface	Local Natural Surface Grading	Glenview/Unincorporated Cook County	MED
25	Lake Avenue Woods-East Parking	Lake Avenue	Main	Gravel/dirt mix	Stone	Stone Trail Reconstruction	Northfield Township-Unincorporated Cook County	MED
26	Lake Avenue	Central Road	Main	Good, New Condition	Stone	NONE	Northfield Township-Unincorporated Cook County	

For additional detail on trail segment recommendations, see the table on pages 31 and 32 of this document.



# Mount Prospect Improvement Program



## Legend of Improvements

- Trail Crossings
- Access Point
- Street Crossing
- Avenue Crossing
- Boulevard Crossing

- Trail Segments
- Trail Segment Number
- Access Trail - Proposed
- Access Trail
- Stone
- Paved
- On-Street
- Other FPCC Trails



## Mount Prospect Trail Crossing Recommendations

#	Crossing Name	Needed Crossing Improvements	Needed Roadway Improvements	Additional Notes	Location	Road Jurisdiction	Implementation Feasibility (Refer to Section 3 of this Plan for explanation of scale)
11	Winkleman Rd	Wayfinding signage, crosswalk markings, pedestrian crossing warning signage	Assume paved shoulder. See Priority Project "Milwaukee Avenue" for additional recommendations	See Priority Project "Milwaukee Avenue" for additional recommendations.	Prospect Heights/ Northfield Township- Unincorporated Cook County	Prospect Heights, Northfield Township	HIGH
12	Milwaukee Ave/IL 21	Near term-pedestrian refuge island, Long term-underpass	Complete gaps in sidewalk network on both sides of Milwaukee Avenue (River rd -Existing sidewalk)	See Priority Project "Milwaukee Avenue" for additional recommendations.	Prospect Heights/ Northfield Township- Unincorporated Cook County	Prospect Heights, IDOT	HIGH
13	Nature Center Dr	NONE	Provide accommodations for pedestrians from Milwaukee Ave to Nature Center		Northfield Township- Unincorporated Cook County	Forest Preserve District of Cook County	HIGH
17	Camp Pine Woods Dr	Mark crosswalk, consider installing stop sign due to sight distance issues	Install pedestrian accommodations connecting Lake Ave to trail		Northfield Township- Unincorporated Cook County	Cook County Forest Preserve District	HIGH
18	Kensington Rd	Improve traffic signal at Kensington and River for pedestrian crossing	Complete gaps in bike/ped facilities on Kensington	Future access point. Access path connecting to main trail would be required.	Mount Prospect/ Unincorporated Cook County	IDOT	MED
19	Beck Lake		Install pedestrian accommodations along East River Road parking		Northfield Township- Unincorporated Cook County	Forest Preserve District of Cook County	HIGH

For additional detail on trail crossing recommendations, see the table on pages 23 and 24 of this document.

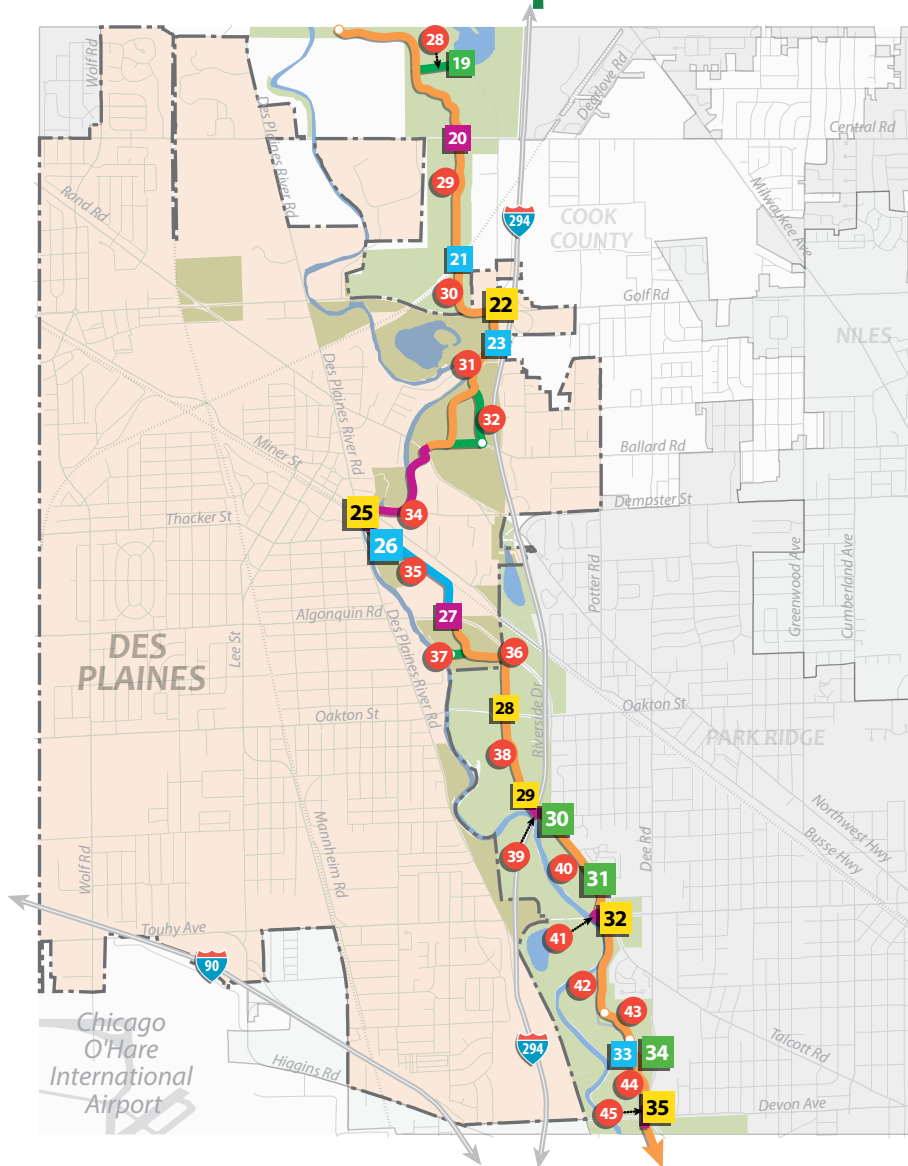
## Mount Prospect Trail Segment Recommendations

#	Segment Begins (north)	Segment ends (south)	Trail Type	Current Surface and Conditions	Recommended Trail Surface	Improvements Needed	Location	Implementation Feasibility (Refer to Section 3 of this Plan for explanation of scale)
19	Milwaukee Avenue	Allison Woods	Main	Access Drive	On-Street	Pavement marking	Northfield Township-Unincorporated Cook County	HIGH
20	Allison Woods	South of Allison Woods	Main	Narrow, gravel/dirt mix	Stone	Stone Trail Reconstruction	Northfield Township-Unincorporated Cook County	MED
21	South of Allison Woods	Nature Center Drive	Main	Gravel/dirt mix	Stone	Stone Trail Reconstruction	Northfield Township-Unincorporated Cook County	MED
22	Nature Center Drive	Lake Avenue Woods - East	Main	Narrow	Stone	Stone Trail Reconstruction	Northfield Township-Unincorporated Cook County	MED
23	Main Trail	Lake Avenue Woods Parking Lot	Access	NONE	Natural Surface	New Trail	Northfield Township-Unincorporated Cook County	HIGH
25	Lake Avenue Woods-East Parking	Lake Avenue	Main	Gravel/dirt mix	Stone	Stone Trail Reconstruction	Northfield Township-Unincorporated Cook County	MED
26	Lake Avenue	Central Road	Main	Good, New Condition	Stone	NONE	Northfield Township-Unincorporated Cook County	
27	Main Trail	River Road	Access	NONE	Natural Surface	New trail & overpass	Mount Prospect/Wheeling Township-Unincorporated Cook County/Northfield Township-Unincorporated Cook County	LOW
28	Main Trail	Beck Lake	Access	Dirt	Natural Surface	Natural Surface Grading	Northfield Township-Unincorporated Cook County	HIGH

For additional detail on trail segment recommendations, see the table on pages 31 and 32 of this document.



# Des Plaines Improvement Program



## Legend of Improvements

- Trail Crossings
- Access Point
- Street Crossing
- Avenue Crossing
- Boulevard Crossing

- Trail Segments
- Trail Segment Number
- Access Trail - Proposed
- Access Trail
- Stone
- Paved
- On-Street
- Other FPCC Trails



## Des Plaines Trail Crossing Recommendations

#	Crossing Name	Needed Crossing Improvements	Needed Roadway Improvements	Additional Notes	Location	Road Jurisdiction	Implementation Feasibility (Refer to Section 3 of this Plan for explanation of scale)
20	Central Rd	RRFB, improved crossing signage	Pave shoulders (programmed)	Shoulders programmed west of trail and east to East River Road. Still missing bike/ped accommodations east of East River Road	Northfield Township and Maine Township-Unincorporated Cook County	IDOT	HIGH
21	Railroad			Officially recognized as a trail gap by Forest Preserve District of Cook County	Maine Township-Unincorporated Cook County	Union Pacific	MED
22	Golf Rd	include pedestrian accommodations on other 3 legs of Golf/Bender intersection	Install bike and pedestrian accommodations on Golf Road (Sidepath River Rd -Potter)	Railroad viaduct major barrier	Des Plaines	IDOT, CCDTH	MED
23	Big Bend Lake Driveway (S of Golf Rd)	NONE	NONE (runs parallel to trail)		Des Plaines	Forest Preserve District of Cook County	
24	Rand Rd	Improve sight line for bike and pedestrian crossing, update signal timing to remove conflict with turning traffic.		Improvements programmed	Des Plaines	IDOT	
25	RR/NW Hwy/Miner St	Signage identifying trail access from Miner Street. Signage along trail alerting users to flood information and online resources to check flood levels.	Widen sidewalk to 8' min (River Rd -Mason)		Des Plaines	IDOT	MED
26	Camp Ground Rd at NW Woods	NONE			Des Plaines	Des Plaines	
27	Algonquin Rd	RRFB	Complete sidewalk gaps		Des Plaines	Des Plaines	MED
28	Oakton St	Pedestrian refuge, RRFB (Replace traditional incandescent flashing beacons with modern RRFB)	Install sidewalk/ sidepath both sides to west, sidepath one side to east	Replace traditional incandescent flashing beacons with modern RRFB	Maine Township-Unincorporated Cook County	IDOT	MED
29	I-294	Signage along trail alerting users to flood information and online resources to check flood levels			Maine Township-Unincorporated Cook County	IDOT	

For additional detail on trail crossing recommendations, see the table on pages 23 and 24 of this document.

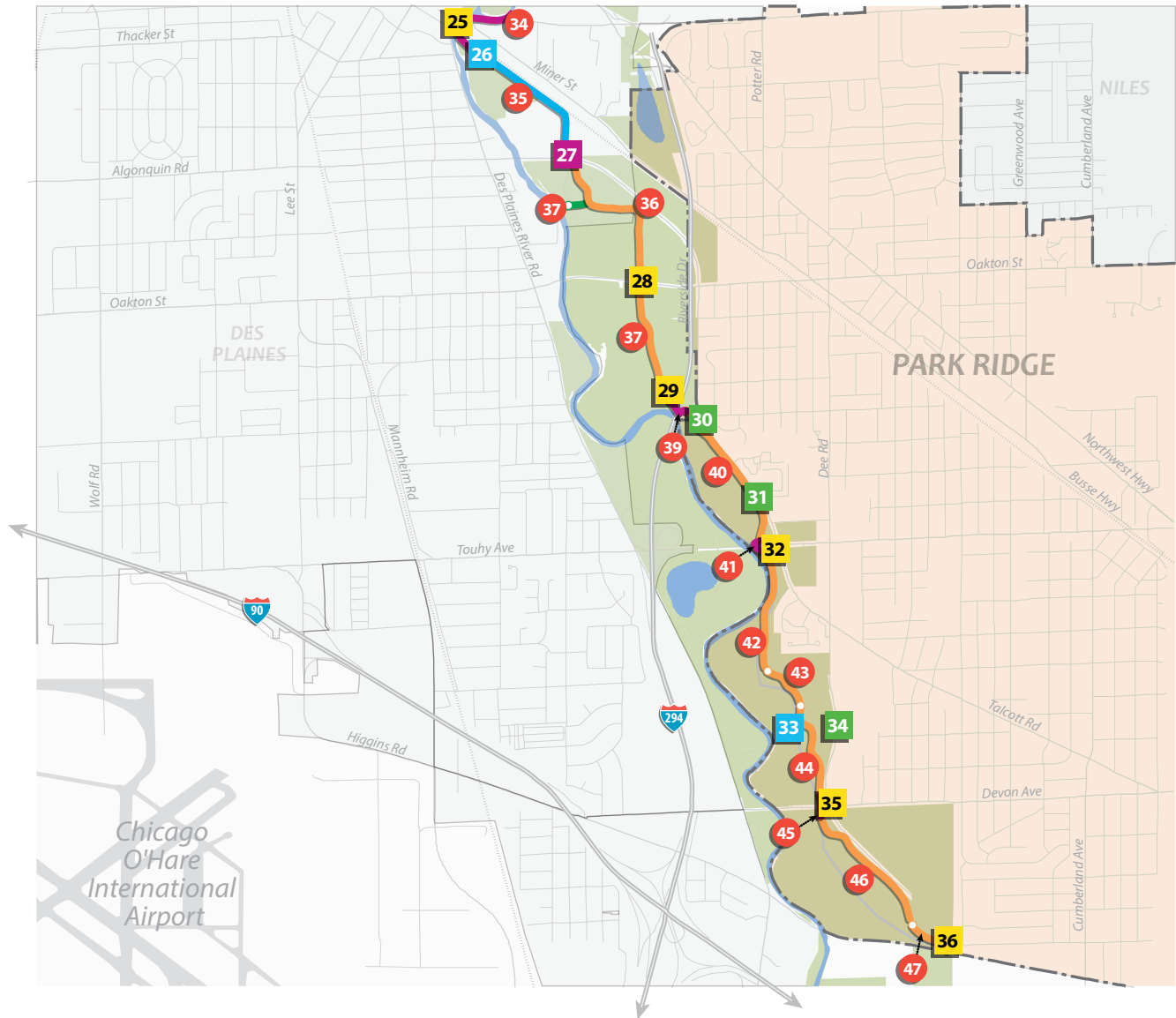
## Des Plaines Trail Segment Recommendations

#	Segment Begins (north)	Segment ends (south)	Trail Type	Current Surface and Conditions	Recommended Trail Surface	Improvements Needed	Location	Implementation Feasibility (Refer to Section 3 of this Plan for explanation of scale)
29	Central Road	UP Railroad	Main	Limestone, narrow	Stone	Stone Trail Widening	Maine Township-Unincorporated Cook County	LOW
30	UP Railroad	Golf Road	Main	Limestone	Stone	NONE	Des Plaines/Maine Township-Unincorporated Cook County	
31	Golf Road	Rand Road	Main	Minor maintenance to areas affected by flooding	Stone	Local Stone Grading	Des Plaines	HIGH
32	Main Trail	Ballard Road Sidepath	Access	Narrow, dirt	Natural Surface	Natural Surface Grading	Des Plaines	MED
33	Main Trail	Bender Road (SE River Road) along Rand Road	Access	Ballard Road Sidepath to Bender Road	Stone	NONE	Des Plaines	
34	Rand Road	Camp Ground Road	Main	Pavement markings deteriorated. Potential seating area between Rand Rd and Camp Ground Rd. Seating would need to be flood resistant since it is located inside flood walls	Paved	Restripe pavement markings	Des Plaines	
35	Camp Ground Road	Algonquin Road	Main	Bike lanes along Camp Ground Road	On-Street	NONE	Des Plaines	
36	Algonquin Road	Oakton Street	Main	Limestone	Stone	NONE	Des Plaines	
37	Main Trail	Camp Ground Road Parking Lot	Access	Drainage issues, surface condition	Natural Surface	Natural Surface Grading	Des Plaines	MED
38	Oakton Street	I-294	Main	Small erosion issues due to a lack of shoulder support	Stone	Local Grading	Maine Township-Unincorporated Cook County	MED

For additional detail on trail segment recommendations, see the table on pages 31 and 32 of this document.



# Park Ridge Improvement Program



## Legend of Improvements

- Trail Crossings
- Access Point
- Street Crossing
- Avenue Crossing
- Boulevard Crossing

- Trail Segments
- Trail Segment Number
- Access Trail - Proposed
- Access Trail
- Stone
- Paved
- On-Street
- Other FPCC Trails



## Park Ridge Trail Crossing Recommendations

#	Crossing Name	Needed Crossing Improvements	Needed Roadway Improvements	Additional Notes	Location	Road Jurisdiction	Implementation Feasibility (Refer to Section 3 of this Plan for explanation of scale)
28	Oakton St	Pedestrian refuge, RRFB (Replace traditional incandescent flashing beacons with modern RRFB)	Install sidewalk/sidepath both sides to west, sidepath one side to east		Maine Township-Unincorporated Cook County	IDOT	MED
29	I-294	Signage along trail alerting users to flood information and online resources to check flood levels			Maine Township-Unincorporated Cook County	IDOT	
30	Sibley Rd	Install crosswalk and wayfinding signage at Sibley/Talcott intersection	Shared lane bike facilities on Sibley, sidewalk connection at intersection		Park Ridge/ Maine Township-Unincorporated Cook County	IDOT, Park Ridge	HIGH
31	Park Ln	Install marked crosswalk, curb ramps and pedestrian warning signage	Shared lane bike facilities on Talcott to north		Park Ridge	IDOT, Park Ridge	MED
32	Touhy Ave	Rehabilitate underpass, provide crossing accommodations at Touhy/Talcott intersection. See Priority Project "Touhy Avenue" for detailed recommendations	Sidewalk/sidepath to east & west picnic areas		Park Ridge/ Maine Township-Unincorporated Cook County	IDOT, Park Ridge	MED
33	Dam No 4 Woods East Dr (MSHS)	Install curb ramps, marked crosswalk, wayfinding signage, crossing warning signage	Install path from Dee Road to trail and amenities		Park Ridge	Forest Preserve District of Cook County	HIGH
34	Dee Rd	Provide pedestrian refuge island and crosswalk	Complete gaps in sidewalk network on east side of Dee Road		Park Ridge	Park Ridge	MED
35	Devon Ave	Re-route trail to Dee/Devon intersection, install pedestrian accommodations	Complete gaps in sidewalk network	See Priority Project "Devon Avenue" for additional recommendations.	Park Ridge	IDOT, Park Ridge	HIGH
36	Higgins Rd	install crosswalks on remaining 3 legs of intersection	Install sidepath one side on Higgins		Park Ridge/Chicago	IDOT	HIGH

For additional detail on trail crossing recommendations, see the table on pages 23 and 24 of this document.

## Park Ridge Trail Segment Recommendations

#	Segment Begins (north)	Segment ends (south)	Trail Type	Current Surface and Conditions	Recommended Trail Surface	Improvements Needed	Location	Implementation Feasibility (Refer to Section 3 of this Plan for explanation of scale)
38	Oakton Street	I-294	Main	Small erosion issues due to a lack of shoulder support	Stone	Local Grading	Maine Township-Unincorporated Cook County	MED
39	I-294 Underpass	I-294 Underpass	Main	Newly constructed	Paved	NONE	Park Ridge/Maine Township-Unincorporated Cook County	
40	I-294	Touhy Avenue	Main	Limestone	Stone	NONE	Park Ridge	
41	Touhy Avenue Underpass	Touhy Avenue Underpass	Main	Significant flooding, drainage and surface condition issues	Paved	Reconstruct Underpass Shelf	Park Ridge	LOW
42	Touhy Avenue	Dam No. 4 Woods - East	Main	Poor condition, surface material erosion	Stone	Stone Trail Reconstruction	Park Ridge	MED
43	Dam No. 4 Woods - East	Parking Lot	Main	Narrow, mixed gravel and dirt surface	Stone	Stone Trail Reconstruction	Park Ridge	MED
44	Parking Lot	Devon Avenue	Main	Poor condition, surface material erosion	Stone	Stone Trail Reconstruction	Park Ridge	MED
45	Devon Avenue Underpass	Devon Avenue Underpass	Main	Narrow, impassable underpass with significant drainage issues, ADA compliance	Paved	Close/Fill	Park Ridge	MED
46	Devon Avenue	Just north of Higgins Road	Main	Very wide trail from erosion, mixed gravel and dirt surface	Stone	Stone Trail Reconstruction	Park Ridge	MED
47	North of Higgins Road	Higgins/Dee intersection	Main	Narrow, gravel	Stone	Stone Trail Reconstruction	Park Ridge	MED

For additional detail on trail segment recommendations, see the table on pages 31 and 32 of this document.









# PART 3 SUPPORTING INFORMATION

This section of the Des Plaines River Corridor Plan includes background information and analysis that provide the context for plan recommendations. This information should be used to supplement the recommendations of the Plan and provide additional detail or rationale regarding specific design elements or policies. Items summarized in this section include:

- A visual toolbox describing the physical characteristics of improvements included throughout the Plan
- A description of the methodology for assigning priority rankings to various plan recommendations
- Adopted plans or policies that may influence access to or mobility along the trail corridor
- Upcoming capital improvement projects that may either enhance or inhibit access to or mobility along the trail corridor
- Public outreach conducted as part of the planning process, including stakeholder interviews, web-based questionnaires, and sMap, an on-line mapping software that allows users to identify specific points of interest or concern
- Technical inventory of trail conditions and contextual influences
- A sample Intergovernmental Agreement





## IMPROVEMENT TOOLKIT

To ensure the safety and integration of bicycle and pedestrian access to the Des Plaines River Trail and connectivity with the regional transportation network, a special set of tools can be used. These tools are intended to accommodate pedestrians and cyclists of all ages and abilities. Some of these tools create awareness for cyclists on shared roadways, other tools help to create space for cyclists separated from traffic, but still on the roadway. Other tools create shared space for cyclists and pedestrians off the roadway. The following series of tools will help connect users of the Des Plaines River Trail to the surrounding community, and people living and working in the community to the trail.

Intersections and crossings are a key component of any walking or bicycling trip along the Des Plaines River Trail. Without safe crossings, a person's trip along the trail can be limited. To create a better connected trail, the following elements should be considered at trail crossings and trail access points.

Detailed guidance for placement and selection of accommodations can be found in the Manual on Uniform Traffic Control Devices (MUTCD), American Association of State Highway and Transportation Officials (AASHTO) bike and pedestrian guides, and the Illinois Department of Transportation (IDOT) Bureau of Local Roads (BLR) Guide.



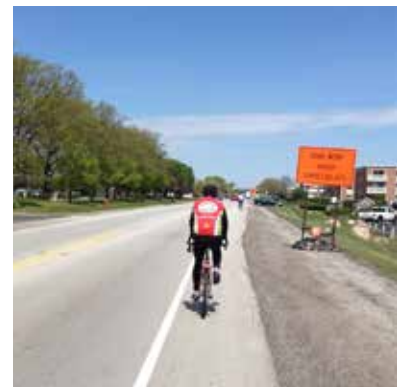


### **Wayfinding Signage**

Wayfinding signage raises all users awareness of the most bike-and pedestrian friendly routes in their communities. Signs are appropriate on any roadway that provides an essential link in a non-motorized network, and can increase driver awareness of people on foot and bike. Wayfinding signs that provide directions to major destinations are more effective than “Bike Route” signs. These types of signs provide useful information and directions for cyclists, drivers, and pedestrians alike. The most effective signs include distance, direction, and destination. Communities adjacent to the Des Plaines River Trail have installed bike route signage, and signs along the trail increase awareness for non-motorized connections.

### **Sidewalks**

A well-designed sidewalk has minimum 5' of unobstructed paved width to allow pedestrians and people in wheelchairs to maneuver comfortably. A minimum 5' buffer separates pedestrians from vehicular traffic, such as street trees or other landscaping. Sidewalks are typically too narrow to accommodate bike and pedestrian traffic. A sidepath should be considered instead of a sidewalk if cyclists cannot safely be accommodated on-street.



### **Shared Lane Markings**

Shared lane markings use a double chevron and bicycle marking, or “sharrow,” in a lane intended for the joint use of motorized and bicycle traffic. Chevron symbols direct bicyclists to ride in the safest location within the lane, outside of the door zone of parked cars and areas where debris collect.

### **Bike Lanes**

Bike lanes create a dedicated space for cyclists on a roadway. They are appropriate on streets with moderate to heavy traffic. Bike lanes are indicated by on-street markings or delineated with signage. Bike lanes reinforce proper roadway etiquette, raise the visibility of bicyclists, and help both bicyclists and drivers behave predictably when on the road.

### **Paved Shoulders**

Paved shoulders are the paved areas adjacent to motor vehicle travel lanes. They can be considered for roads where demand for bike lanes is limited, or on roads where there is no curb and gutter.





### **Buffered Bike Lanes**

Buffered bike lanes utilize a painted area to separate vehicle travel lanes and bike lanes. This buffer, usually 2 to 3 feet wide, provides sufficient separation that improve cyclists' comfort and safety on arterial or collector corridors. Where there is sufficient space within the curb-to-curb area, buffered bike lanes provide a more affordable solution than a shared-use path.



### **Protected Bike Lanes**

Protected bike lanes are similar to buffered bike lanes, but use a physical barrier to separate vehicle traffic from the bike lane, rather than a painted buffer.



### **Sidepath**

Sidepaths are paved concrete or asphalt paths wide enough to accommodate both pedestrians and cyclists. They are typically a minimum of 8-foot wide with 2 feet of clearance on either side of the path. Sidepaths offer cyclists a safe place to bike off-street when there is no space for a bike lane or it is unsafe to bike on the street. They are installed parallel to the roadway where there are few driveways.



### **Curb Ramps with Tactile Strips**

Curb ramps with tactile strips alert people in wheelchairs, the visually impaired, children, and people with strollers of the presence of a sidewalk crossing.



### **Marked Crosswalks**

Painted crosswalks alert drivers where people might be crossing. A "zebra stripe" or "continental" crosswalk draws more attention to the crossing and tends not to wear away as quickly.



### **Pedestrian Refuge Island, Median or Pork Chop Island**

Crossing islands reduce crossing distance and allow pedestrians to cross one direction of traffic at a time. Pedestrian refuge islands and medians are most beneficial at non-signalized pedestrian crossings, and pork chop islands can be useful to shorten crossing distances at signalized intersections.





### **Rapid Rectangular Flashing Beacon (RRFB) and High Intensity Activated CrossWalk Beacon (HAWK)**

Pedestrian beacons are user activated signals used to control traffic and create additional awareness for people wishing to cross the street at non-signalized crossings. When a person activates a beacon, they begin to flash, alerting drivers of a crossing pedestrian. They are usually dark, allowing traffic to flow. When inactive they are unlit, allowing traffic to flow.



### **Bump Outs/Curb Extensions**

A curb bump-out is an extension of the sidewalk into the parking lane, reducing roadway width and creating a shorter crossing distance for pedestrians. Curb extensions slow vehicular traffic and increase awareness of pedestrians. Bump-outs do not extend into travel space for bicycles.



### **Pedestrian Signals**

Pedestrian signals indicate when a pedestrian is allowed to walk across a street. In a complete pedestrian network, all intersections with traffic signals have pedestrian signals at every corner.



### **Pedestrian Crossing Signage**

Crossing warning signage alerts drivers when to expect cyclists or pedestrians crossing a roadway. Typically warning signs or must stop are installed in combination with a marked crosswalk in order to raise awareness for the crosswalk or trail crossing. These signs are most effective when they also include an arrow pointing down to the crosswalk. On roadways with higher speed traffic advanced warning signs can be used.



### **Underpass or Overpass**

Underpasses and overpasses provide a grade separated crossing, allowing people on the trail to cross a roadway without stopping to wait for a gap in traffic.



# METHODOLOGY FOR DETERMINING IMPLEMENTATION FEASIBILITY

The tables throughout this document that summarize trail, roadway, and crossing improvements include a column entitled “Implementation Feasibility.” The intent of this column is to identify which improvements face minimal barriers to implementation and/or warrant investment based on their potential benefits to trail users. In order to determine each improvement’s feasibility, the following factors were considered, using a scale of 1 to 5 for each factor then creating and aggregate score that was translated into a ranking of “high,” “medium,” or “low” feasibility for each improvement.

## Trail User Feedback

During the summer and fall 2013, more than 400 trail users responded to an online survey about how they access the trail and which parts of the trail they thought need improvements. Segments, access points and crossings that a high portion of respondents identified as “needs improvement” were considered a priority and received higher scores for this factor.

## Cost

Recommendations identified in this plan range in cost from under \$10,000 to over \$1,000,000. Typically, lower cost projects can be implemented by a local municipality or agency, while higher cost projects are likely to require grant funding or long-term capital commitments. Low cost improvements received higher scores for this factor since they are more viable in a shorter timeframe.

It should be noted that cost estimate provided in the plan are intended to be general. Estimates were developed using industry standards for various types of improvements, and may not account for localized issues that could significantly influence actual design and construction costs. The estimates included in this plan should not be used for detailed municipal or agency capital programming. Rather, they should be used as a general reference for the purposes of demonstrating the anticipated magnitude of various improvements. More specific cost estimates should be developed for each improvement through future design and engineering.

## Connectivity

The Des Plaines River Trail has the potential to enhance access to amenities and facilities within the Forest Preserve, employment centers, and retail for the people that live and work near the trail. Recommended projects located near key regional destinations and/or completed gaps in the trail network received a high score for this factor.

## Safety

Trail safety is a key consideration in many of the plan recommendations. Locations along the trail with a history of crashes involving pedestrians and cyclists, as well as trail crossings at roadways with high traffic volumes, high vehicle speeds and limited crossing countermeasures, received a high score for this factor.

## Coordination

Improvements that are under the jurisdiction of a single entity require little coordination compared to improvements that may require collaboration among several municipalities, agencies, districts or other forms of local government. This does not imply that these improvements should not be addressed. It does, however, reflect a barrier to implementation feasibility that must be overcome. For the purposes of this plan, improvements that require little coordination received a high score for this factor.

The following table explains in more detail how the prioritization methodology was applied to each recommendation. Ratings also considered on the ground conditions and level of support for specific projects.



# Implementation Feasibility Ranking Factors

TRAIL USER FEEDBACK	POINTS
Very high –more than 80% of survey respondents reported trail segment or crossing needs improvement	5
High – 61-80% of survey respondents reported trail segment or crossing needs improvement	4
Medium – 41-60% of survey respondents reported trail segment or crossing needs improvement	3
Low- 21-40% of survey respondents reported trail segment or crossing needs improvement	2
Very low-less than 20% of survey respondents reported trail segment or crossing needs improvement	1
COST	
Very low – Under \$10,000; typically pavement markings, signage and/or short sidewalk gap connections	5
Low – Between \$10,000 and \$50,000; short segments or localized stone trail resurfacing/grading, pedestrian actuated RRFB or ped refuge island	4
Medium – Between \$50,000 and \$150,000; examples include ped upgrades at signalized intersections, ped refuge island with other at-grade crossing enhancements such as RRFB, sidewalk/sidepath installation	3
High – Between \$150,000 and \$300,000; may include longer segments of sidepath, paved roadway shoulder/widening, or long stretches of stone trail resurfacing/realignment	2
Very high – Over \$300,000; mostly projects involving grade separated crossings and/or long stretches of sidepath construction or stone trail resurfacing	1
CONNECTIVITY	
Very High-Provides direct access to a job center, high density housing, retail, and/or forest preserve amenities within ¼ mile AND completes a gap in the existing trail network	5
High-Provides direct access to a job center, high density housing, retail, and/or forest preserve amenities within ¼ mile	4
Medium- Provides direct access to a job center, high density housing, retail, and/or forest preserve amenities within ½ mile	3
Low-few destinations within ½ mile	2
Very Low- very few destinations within ½ mile	1
SAFETY	
Very High-More than one crash involving a pedestrian or cyclist has occurred AND countermeasures at on arterial roadways that do not meet standard recommendations for a boulevard.	5
High-More than one crash involving a pedestrian or cyclist has occurred OR countermeasures at on arterial roadways that do not meet standard recommendations for a boulevard.	4
Medium--One crash involving a pedestrian or cyclist has occurred OR countermeasures at a collector street that do not meet standard recommendations for an avenue.	3
Low- Countermeasures at a local street do not meet standard recommendations for a street.	2
Very Low- no history of crashes and countermeasures meet recommended standards	1
COORDINATION	
Very Low-Project complete or programmed	5
Low-Project can be implemented by a single local agency such as a municipality or township	4
Medium- project implementation requires involvement from State, County, and local agencies	3
High- project implementation requires involvement from State, County, and local agencies AND is within an unincorporated area OR requires involvement from a Federal agency	2
Very high- project implementation requires involvement from State, County, and local agencies AND is within an unincorporated area AND requires involvement from a Federal agency	1



# ADOPTED PLANS AND POLICIES

This section includes a summary of relevant plans and projects that were considered in the development of recommendations for the Des Plaines River Trail Corridor Plan. The intent of the Trail Corridor Plan is to align with planning and capital improvements already being discussed. In some instances, the Trail Corridor Plan may propose modifications to previous plans in order to better respond to a number of goals and objectives. While specific improvements will require detailed engineering and design, they should consider this Plan as well as others already adopted by various municipalities and agencies. This will increase the likelihood that investment in capital improvements will result in multiple benefits for residents, visitors and businesses.

## Relevant Plans

### **Northbrook Bicycle Plan (2003)**

The Village of Northbrook formed a Bicycle Task Force in 2001, which wrote and adopted a bicycle plan in 2003. Connecting to regional trails is stated as one of the plan's overall objectives. Sanders Road, a north-south street just east of the DPRT was recommended as a bike route with an on-street facility. Willow and Dundee Roads, which intersect the DPRT were recognized for their high vehicle speeds, high traffic volumes, and regional connectivity. The plan recognizes the need for bike facilities on these streets, but recommends a bike facility separated from traffic.

### **Park Ridge Bike Map (2006)**

The City of Park Ridge has a bike route map which identifies local bike routes and a future planned bike facility parallel to the UP-Northwest Metra tracks. The map does not show any current or future planned routes connecting to the Des Plaines River Trail.

### **Glenview Bicycle and Sidewalk Master Plan (2007)**

Adopted in 2007, the Glenview Bicycle and Sidewalk Master Plan consists of more than 50 miles of bicycle facility and 15 miles of sidewalk recommendations. Plan priorities include connecting to regional trails and neighboring villages. The plan recommends off-street paths for Lake Street/Euclid Ave and Central Road to connect to the DPRT.

### **Northwest Municipal Conference Bike Plan (2010)**

The NWMC adopted a bicycle plan in 2010. It includes 16 regional priority corridors, 7 of which cross the Des Plaines River Trail. These corridors provide east-west connectivity to major regional destinations through the 42 municipalities in the north and northwest suburbs of the Chicago Region.

### **Mount Prospect Bicycle Plan (2012)**

Adopted in 2012, the Mount Prospect Bike Plan has identified a Phase I network of bike routes that includes mostly local routes, and a Phase II routes on locally owned arterial and collector streets. Euclid, Mount Prospect's only connecting road to the DPRT does not have a specific recommendation for a bike facility, but could be considered as part of a larger roadway project.

### **Des Plaines Active Transportation Plan (2012)**

The Des Plaines Active Transportation Plan identifies both local and regional bike and pedestrian connections. All roadways, regardless of jurisdiction have been recommended for some type of bicycle facility, including the east-west roadways that intersect with the DPRT. The City has already installed a bike signage network, on-street markings and made improvements to segments of the Des Plaines River Trail within the municipality.

### **NWMC North and Northwest Cook County Regional Corridor Bicycle Signage Plan (2012)**

The Northwest Municipal Conference conducted a detailed signing and branding plan for the corridors included in the 2010 bike plan. The plan includes detailed information on bike route signs, turning signs, and bike destination signs for the system of regional corridors in North and northwest Cook County. The Des Plaines River Trail and four intersecting regional corridors, including Dundee, Willow, Oakton, Golf, and Howard/Sibley, were studied.

### **Wheeling Active Transportation Plan (2013)**

The Village of Wheeling adopted an Active Transportation Plan in early 2013. The plan includes bike facility recommendations for all arterial and collector roadways in the municipality, a local bicycle signage network informing users of the best bike routes to key destinations, and pedestrian improvements at intersections. The plan calls for improved connectivity to the DPRT via Dundee Road, as well as exploring opportunities to create a trail connection via Hintz Road, where Dam 1 currently exists.



### **Forest Preserve of Cook County Trail Master Plan (March 2014)**

Developed as an implementation of the Forest Preserve District's recreation master plan, the Trails Master Plan is a county-wide look at current practices of the FPCC, recommendations for new policies and future projects.

The key recommendations from the plan are as follows:

- Update current trail classification system
- Develop a process and criteria for recognizing currently unrecognized trails
- Improve existing trail signage and wayfinding system to enhance user experience
- Create a process for prioritizing capital investment for trails
- Improve trail facilities at trailheads and overlooks

### **Illinois Department of Transportation Bicycle Transportation Plan (2014)**

IDOT released its first ever state-wide Bicycle Transportation plan in April 2014. The plan identifies policies, best practices and strategic direction for implementing a sustainable multimodal transportation system throughout the State. Action items suggested in the plan include updating the State's data and information system to integrate existing and planned regional bikeways into current State data.

### **Niles Bicycle and Pedestrian Plan (2014)**

The Village of Niles is currently in the process of drafting a bicycle and pedestrian plan. Public engagement took place in fall 2013. A draft of the plan has not yet been released to the public.

### **Prospect Heights Comprehensive Plan (in progress)**

Prospect Heights does not currently have a bicycle or active transportation plan. The community is currently undergoing a planning process for a new comprehensive plan which is expected to have an in-depth section on transportation.

## **Relevant Plans**

Municipality/Agency	Bicycle & Pedestrian Plans
Northbrook	Northbrook Bicycle Plan (adopted 2003)
Park Ridge	Bicycle Map (2006)
Glenview	Bicycle and Sidewalk Master Plan (adopted 2007)
Northwest Municipal Conference	Bicycle Plan (adopted 2010)
Mount Prospect	Bicycle Plan (adopted 2012)
Des Plaines	Active Transportation Plan (adopted 2012) Complete Streets Policy (adopted 2012)
Northwest Municipal Conference	NWMC North and Northwest Cook County Regional Corridor Bicycle Signage Plan (2012)
Wheeling	Active Transportation Plan (adopted 2013)
Forest Preserve District of Cook County	Trails Master Plan (2014)
Illinois Department of Transportation	State of Illinois Bike Plan (2014)
Niles	Multimodal Plan (2014)
Prospect Heights	None, will be large part of future Comprehensive Plan (in progress)

Adjacent to Study Area	Bicycle & Pedestrian Plans
Riverwoods	Bicycle Facility Plan (2003)
Buffalo Grove	Bike Plan (2008, update in progress)
Rosemont	None, will be large part of future Comprehensive Plan (in progress)





*Trail Crossing at the intersection of Golf Road and River Road*

## UPCOMING CAPITAL IMPROVEMENT PROJECTS

This section includes a summary of programmed capital improvements that may impact multi-modal access to or along the Des Plaines River trail.

### **Upper Des Plaines River Restoration**

The Army Corps of Engineers has Ecosystem Restoration Plans that involve new floodwalls on the west side of the river, as well as the extension of existing ones. Four existing dams in the study area will be removed and new levees and reservoirs are planned for construction. The project will reduce flood damages in the watershed and provide many acres of ecosystem restoration of native habitat. A recreational trail segment is proposed as part of the plan on the west side of the river between Oakton Street and Algonquin Road. Road closures will be required on Oakton Street and Algonquin Road during construction.

### **Governor's Dam Removal Initiative**

In addition to the Army Corps' plans, Governor Quinn's office, in partnership with the FPCC, has an initiative funded by Illinois Jobs Now! that will ultimately remove eight dams on the Des Plaines River and improve conservation, water quality and outdoor recreation. Three dams have already been removed and five more are targeted for removal over the next two years, including the four in the study area Dam 2, Dam 4, Dempster Street Dam, and Touhy Ave Dam.

### **Willow Road**

Willow Road will be reconstructed from Culligan Parkway to Milwaukee Avenue by IDOT. As part of the project, the DPRT overpass structure will be reconstructed. The trail will be slightly realigned in order to create a more gradual grade differential for ADA requirements. The current plans do not show pedestrian facilities extending along Willow Road west of Sanders Road. There is an immediate opportunity to upgrade the plans to incorporate a sidewalk connection to and from the major employment centers east of the DPRT.

### **Dundee Road at Portwine**

A traffic signal has recently been installed at this intersection and trail users are directed to cross Dundee Road at this location. The former at-grade DPRT crossing on Dundee Road was removed after the traffic signal was installed. FPCC has requested that IDOT reestablish the midblock crossing for equestrian use.





*Wayfinding signage near the Lake Avenue Underpass*

### **Central Road Bike Shoulder**

Phase I preliminary engineering has been completed for Central Road to provide a paved shoulder between Wolf Road and East River Road. The project has been funded by a CMAQ grant and is in Phase II Design Engineering. Construction is expected in 2015.

### **Des Plaines River Trail at I-90**

Though outside the study area, the trail will be closed over I-90 south of Higgins Road in order for IDOT to reconstruct the East River Road bridge. Preliminary Phase I Design has been completed for the bridge reconstruct and includes new facilities for the trail.

### **Rand Road at Des Plaines River**

IDOT's Preliminary Phase I Design shows that the Rand Road bridge over the Des Plaines River will be widened to provide 5 lanes, a 10-foot sidepath on the south side of the street, and a 5-foot sidewalk on the north side of the street. There may be an opportunity to connect the trail under the bridge structure. IDOT is checking if there would be adequate clearance under the structure to allow for a trail connection. Again, a potential trail addition will also be an Army Corps issue since fill will be required within the floodplain which creates a hydraulic issue.

### **Des Plaines River Road Reconstruction**

Des Plaines River Road will be reconstructed with additional travel lanes and curb and gutter between Touhy Avenue and Rand Road. The roadway plans include a new traffic signal at the Miner Street/Busse Highway intersection which could provide a preferred crossing location during flooded conditions when the Miner Street underpass is impassable. Construction may begin around 2016.

### **Ballard Road**

Phase I design plans have been approved for a sidewalk/sidepath between Bender Road and Good Avenue in Des Plaines which provides a missing DPRT connection to and from the east. The project was funded by a CMAQ grant and is proceeding to Phase II Engineering.





*Wheeling community members and elected officials tour a section of the trail in Wheeling*

## PUBLIC OUTREACH SUMMARY

Extensive public outreach was used throughout the Des Plaines River Trail Corridor Plan process in order to ensure that recommendations are truly responsive to the unique needs of trail users, aligned with the vision of several communities and agencies, and implementable through the given capacities of the NWMC, local municipalities, and other partners.

This section summarizes the findings of the public outreach program that included the following tools and techniques:

- Key stakeholder interviews with people representing various agencies, municipalities, and interest groups,
- Meetings with IDOT, the Forest Preserve of Cook County, and other agencies identified as key partners in implementation,
- An on-line questionnaire designed to identify issues faced by users and priority improvement areas, and
- sMap, an interactive web-based mapping tool that allows users to geographically locate constraints to safe trail access and mobility, and preferred improvements in the future.

## Key Stakeholder Interviews

In September 2013, the project team, along with staff from NWMC interviewed 9 stakeholders, representing groups that use the trail for recreational biking, paddling, biking for transportation, people that live near the trail, and several public agencies that provide transportation to the trail. Agencies or groups that participated in the interviews include:

- Friends of the Forest Preserve
- Illinois Department of Transportation (IDOT)
- Wheeling Park District
- Prospect Bikes and Trains
- Illinois Paddling Council
- Oakton Community College
- Pace Suburban Bus
- Lake County Forest Preserve





*Planners and engineers from communities adjacent to the trail prepare for a bike tour of the study area*

The paragraphs below summarize the input from each participant. However, there were several themes that were consistent among many of the interviewees, including:

- Groups recognize that the trail is used for both transportation and recreation.
- All groups acknowledge that accessing the trail is perceived to be unsafe.
- There is no clear preference between paving the trail and maintaining it as a soft surface trail, although certain uses, like jogging and equestrian uses, generally have a strong preference toward unpaved trails.
- The Lake County portion of the Des Plaines River Trail was cited several times as a model trail.
- Many that visit the trail enjoy and would like to maintain its bucolic surroundings.
- Some public agencies are more proactive about connectivity and coordination than others.
- General public awareness for the trail could be improved.

## Friends of the Forest Preserve

Friends of the Forest Preserve works towards protecting existing forest preserve land. The organization believes that trails are assets and that the linear trails offer a great way for people to be exposed to the forest preserve. They see the trail as an opportunity to provide non-motorized connections to campsites and other nearby destinations, and recognize that multimodal access to the forest preserves is a big problem in Cook County, but would discourage using forest preserve land to provide that access. From a maintenance perspective, a paved trail would be preferred because gravel is more likely to runoff into the river or wash away during a storm.

## IDOT

IDOT has a Complete Streets Policy in Chapter 17 of the Bureau of Design and Environment (BDE) that guides the agency's accommodation of pedestrians and cyclists. Staff occasionally uses AASHTO guidance as well. For resurfacing, the agency will improve ADA curb ramps, but typically will not review local plans for proposed bike or pedestrian accommodations because resurfacing projects do not go through Phase I engineering. The agency has found right-of-way acquisition from the FPCC to be contentious and as a result there are often no sidewalks along roads going through the forest preserve. Two successful examples of right-of-way acquisition are in Orland Park and Wheeling. Both communities acquired right of way, or built within existing right-of-way adjacent to the forest preserve, to accommodate sidewalks and have agreed to maintain them. The agency does not currently define or make special consideration for regional trails, but that might change based on future agency bike policies. For underpasses and overpasses, typically they are only constructed as part of a larger roadway project. IDOT staff noted several projects are currently underway in the study area.





*Planners and engineers share ideas about how to improve the trail near Mount Prospect*

## Wheeling Park District

Biking and walking paths are the top priority for Wheeling residents, according to a survey conducted by the Wheeling Park District. However, community members feel that Wheeling, in general, is not bike friendly, which is a barrier for them to access the trail. Staff believes that residents are unaware of the places in Wheeling where they can access the DPRT, and better signage and maps could improve awareness. Residents may be more likely to use the Prospect Heights Bike Path, which is located in the southern portion of the village because that trail is more visible to residents.

## Prospect Bikes and Trains

Owners of Prospect Bikes and Trails, a private business located in Mount Prospect, stated that customers enjoy using the trail but many are concerned with the crossings. They recommend customers use the trail at off-peak travel times when car traffic is lighter. After the trail was widened a few years ago, the store noticed more users. Staff noted that many people believe the trail ends at Allison Woods and Milwaukee Avenue, so they turn around there. From his home in Des Plaines, the manager of the store prefers going north because there are fewer streets to cross. Going south, he often encounters muddy sections of the trail. His perception is that people who put their bike on a car and drive to a trail are more likely to visit Busse Woods, Stone Grove or the Fox River Trail, which are all paved and often more crowded. He enjoys the gravel sections because it feels more natural. The store would like to see bike lanes on the east-west roads that intersect the trail in order to make safer connections to the trail and increase the number of people that ride it. There are people who use the trail to commute to work at office parks in Glenview and Northbrook. Commuters prefer the trail to roads because they do not have to compete with cars, especially in the winter months when people are often bicycling in the dark.

## Illinois Paddling Council

Ideal canoe/kayak launches have a clearing with an easy to walk down to the river where a person can put their boat in the water and start paddling. More difficult launch locations require a person to walk through tall grass or forested areas before accessing the river. Due to the nature of paddling, many paddlers are often entering the Des Plaines River at one location and exiting downstream at another location. To do this as a solo trip, a person has to drop off his/her boat upriver, drive downriver, park, and then bike back upriver to the launch site. Most people use the launches at Independence Grove, Oak Spring Road and Rivershire Park in Lake County. Potawatomi Woods off Dundee Road also has a nice launch site with good parking. The bigger dams are a barrier and sometimes have to be portaged. The removal of Ryerson Woods Dam was a major improvement, but the Council would like to ensure water levels remain high enough to paddle, after dams are removed.

## Oakton Community College

Staff reported that students, staff and faculty would like to use the trail as a way to commute to the Oakton Community College Campus, but currently many of the cross streets are too dangerous. The viaduct over Central Road is a major hazard for students walking or biking from Glenview to campus. Many students take the #209 Pace Bus along Golf Road, but find it difficult to walk along Golf Road and into campus.





*Village staff and advocates discuss the trail in Wheeling*

## Pace Suburban Bus

Pace encourages and supports pedestrian connectivity to transit stops and throughout the community. They offer development review for projects on or near Pace routes. However, Pace typically does not fund or construct sidewalks. Typically shelter locations are selected based on boarding and alighting counts. Nine Pace bus routes run through the study area. Route 272, which runs along Milwaukee Avenue between Niles and Vernon Hills will be converted into an ART route, but stop locations have not yet been determined. As development or transportation improvements occur, they could follow Pace's Transit Supportive Guidelines for the Chicagoland Region.

## Lake County Forest Preserve

The Lake County Forest Preserve District (LCFPD) has found a helpful partner in IDOT thanks to the State's Complete Streets Policy and Lake County DOT and LCFPD's active level of participation in IDOT project steering committee meetings. At street crossings, they frequently use underpasses. Currently they are experimenting with solar powered Rectangular Rapid Flashing Beacons (RRFBs) at Wadsworth Road, Oak Spring Road and IL-173. The LCFPD uses a 12' wide trail design standard for regional trails, and use narrower widths for connecting trails. Larger kiosks with maps as well as smaller signs with street names and mileage markers are used to inform people on the trail of their location. Staff stressed the importance of partnership and pursuing grants like ITEP, CMAQ and Recreational Trails to leverage funds because regional trails rank very high on grant applications.

## Forest Preserve of Cook County & IDOT Focus Group Meeting

In November 2013, the project team presented their existing conditions findings at a coordinating meeting of the Forest Preserve of Cook County (FPCC) and Illinois Department of Transportation (IDOT). The team presented a summary of community input, field research and available traffic data. Below are comments received as a result of that meeting.

### IDOT Comments

IDOT staff mentioned that having a plan is very useful for their agency. The most important part of a plan for IDOT is identification of the local municipality or public agency that may be impacted by or be a partner in an improvement project and having a specific facility request that meets IDOT's design guidance. There are several projects currently being designed in the study area, and IDOT offered to coordinate bike or pedestrian accommodations on those projects.

### Forest Preserve Comments

The Forest Preserve of Cook County (FPCC) mentioned that they currently had funding for crossing improvements throughout the County and would be interested in reviewing the survey responses from the public to identify high priority crossings. However, typically municipalities fund access improvements. The Forest Preserve is also interested in wayfinding and branding for signage as well as trailhead accommodations.

### Future Involvement

Both the Forest Preserve and IDOT are interested in learning about which projects identified through this plan are a high priority. The agencies would also like to review the draft plan when it becomes available to ensure consistency with their standards.





Representatives from the Wheeling Wheelmen discuss the trail

## On-Line Questionnaire

To understand how the public uses the Des Plaines River Trail and how the trail is perceived by users, an on-line questionnaire was made available during the Fall of 2013. Throughout that period, more than 400 people responded to questions through an online survey. The survey was distributed electronically through the Northwest Municipal Conference and member municipalities, local bike clubs in the study area, and regional bicycle and pedestrian groups.

## Respondent Demographic Profile

### Place of Residence

Survey respondents primarily lived within the study area with nearly 100 respondents residing in Des Plaines, and at least 20 responses from residents of Park Ridge, Mount Prospect and Chicago. Between 10 and 20 responses were received from people living in Arlington Heights, Glenview, Northbrook and Wheeling.

### Age and Gender

Respondents were generally older and male. More than half of all respondents were age 50 or older. Slightly less than one third were 35-49 years old, and less than 15 percent were under 35 years old. Over two thirds were male. Although survey responses do not necessarily reflect the true demographics of the study area, it is likely that the demographics are representative of frequent trail users.

## Typical Usage Patterns

### Frequency of Use

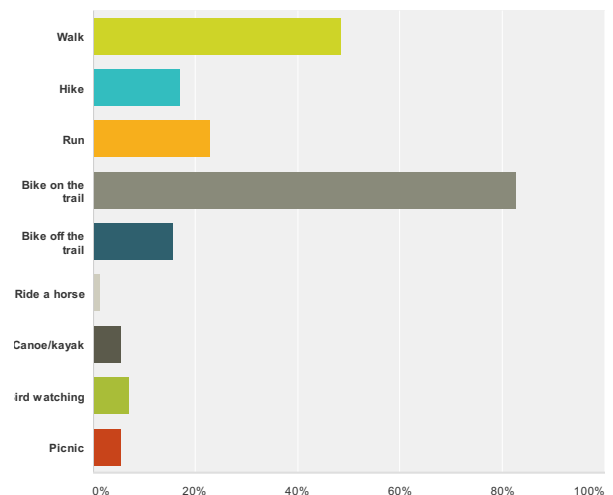
Respondents were somewhat evenly split between frequent trail users and infrequent trail users, with slightly more infrequent users. About 40 percent reported using the trail daily or weekly and 60 percent used the trail monthly, a few times per year or never.

### Types of Use

Biking on the trail was the most common type of trail use. Running and walking were second most common. Less than 10 respondents reported off road biking, horse riding, canoe/kayak, bird watching or picnicking as their primary use for the trail. A few people responded that they also use the trail for cross country skiing, snowshoeing or fishing.

Q2 Which activities do participants participate in while using the Des Plaines River Trail? (select all that apply)

Answered: 295 Skipped: 20







Gravel section of the Des Plaines River Trail

## Accessing the Trail

### Current Mode of Travel

Bicycling was the highest reported mode of transportation people currently use to access the trail. Cars were also reported to be used frequently to access the trail, and walking/running were occasionally used. Only 16 people reported that they use a bus or train to access the trail and two people mentioned that they ride their horse from the barn to the trail. A few people commented that they drove to the trail because they lived further away.

### Preferred Mode of Travel

The preferred mode of travel for accessing the trail was by bike. Cars were next most preferred and walking/running was next. A small but measurable portion of respondents preferred transit.

### Intersecting Roadways

Throughout the study area there are 18 roadways that intersect the Des Plaines River Trail. Respondents were asked to rate their level of satisfaction for accessing the trail via each roadway. Roads where rated with the highest level of satisfaction were Algonquin, Ballard/Rand and Miner/Northwest Highway. Roads that were rated with the lowest rate of satisfaction were Devon, Touhy, Portwine, and Milwaukee Ave at Winkelman. Respondents were also asked which roads were most in need of accommodation for people wishing to access the trail on foot or bike. The roads most in need of accommodation are:

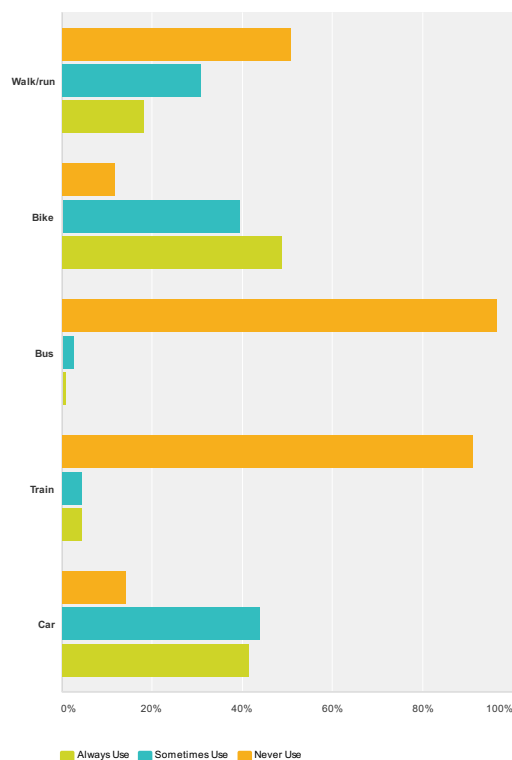
- Oakton
- Lake/Euclid
- Central
- Touhy
- Algonquin
- Devon
- Milwaukee
- Miner/Northwest Highway
- Rand
- Dundee

### Other barriers to access

A lack of safe, family-friendly bike facilities on arterial roadways leading from nearby residential neighborhoods to the trail, hazardous crossings where the trail intersects the street, and muddy trail conditions were cited as barriers to accessing the trail. Lake/Euclid, River Road, Golf Road Milwaukee Ave, Central Road, Touhy and Oakton were cited for their high speed traffic and lack of bikeways. A few respondents mentioned limited wayfinding information about where to access the trail and where the trail goes. Others commented that there was no connecting trail, path or route from surrounding neighborhoods to the trail. Several people mentioned the Lake County portion of the DPRT as a model for crossings and trail maintenance. A very small number of people mentioned a parking shortage.

Q4 How do you travel from your home to the trail?

Answered: 282 Skipped: 33







*Des Plaines River Trail, north of Central Road*

## Trail Segments

Trail segments were defined as a section of the trail between two access points. The trail was divided into 14 segments with segment breaks usually occurring where arterial roadways intersect the trail. Respondents were asked to rate each segment as good or needs improvement. The segments of the trail between Lake/Euclid and Touhy were rated “good” by a majority of respondents. That section of the trail was reconstructed in 2011. Several respondents commented on the barrier created by an at-grade railroad track crossing on the segment between Central road and Golf Road. The segments on the northern and southern parts of the study area were generally rated as “needs improvement.” These segments include segments between Lake/Euclid and Lake Cook Road and segments between Touhy and Higgins.

Numerous respondents commented on the trail condition and the need for better signage along the trail and at crossings. Comments were generally positive about the sections that were newly resurfaced with crushed limestone. However, people commented that many sections of the trail are still susceptible to flooding and/or have potholes that degrade their trail experience. Most people preferred the crushed limestone like the trail in Lake County, but a few requested that the trail be paved. A few people mentioned that there were blind curves in the trail that cause visibility issues for people on the trail. Some of the underpasses remain flooded well after a rain storm. A few people mentioned that there were missing curb cuts at some of the at-grade crossings.

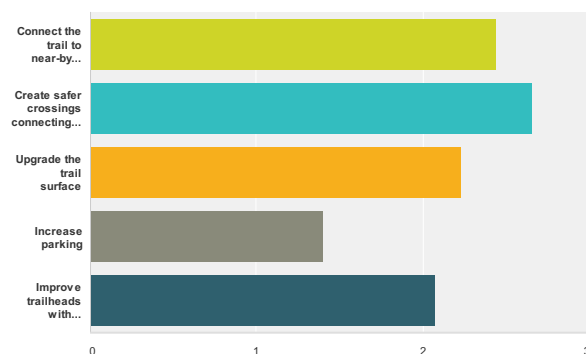
Other comments included segment or mile markers to assist in reporting trail issues such as fallen trees, more frequent trail cleaning to manage horse droppings, and more water fountains/pumps and bathrooms.

## Education, Encouragement and Enforcement

Respondents were also asked about their priorities for education, encouragement and enforcement of safe behaviors on the trail. Education programs for youth, encouragement programs for adults and enforcement of safe travel behaviors for people on bikes are the types of programs respondents would most like to see. Lack of enforcement of leash laws and an increase in visibility and posting of rules for the trail were also mentioned as issues by respondents. Several people commented on the need to improve interaction between animal owners and other trail users, the interaction between people on bikes and people in cars, and the environmental impact of trail users. One person mentioned that they enjoyed group rides lead by local leaders.

**Q14 Which of these policies do you think are important for the communities around the Des Plaines River Trail to pursue in order to make your trail experience better?**

Answered: 215 Skipped: 100



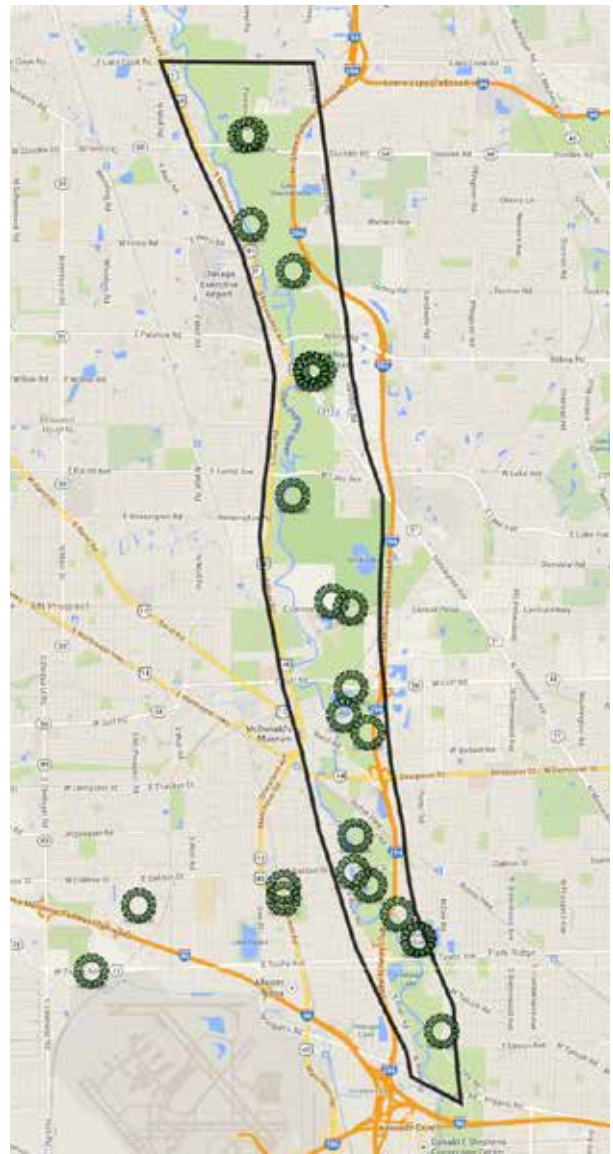


## sMap Summary

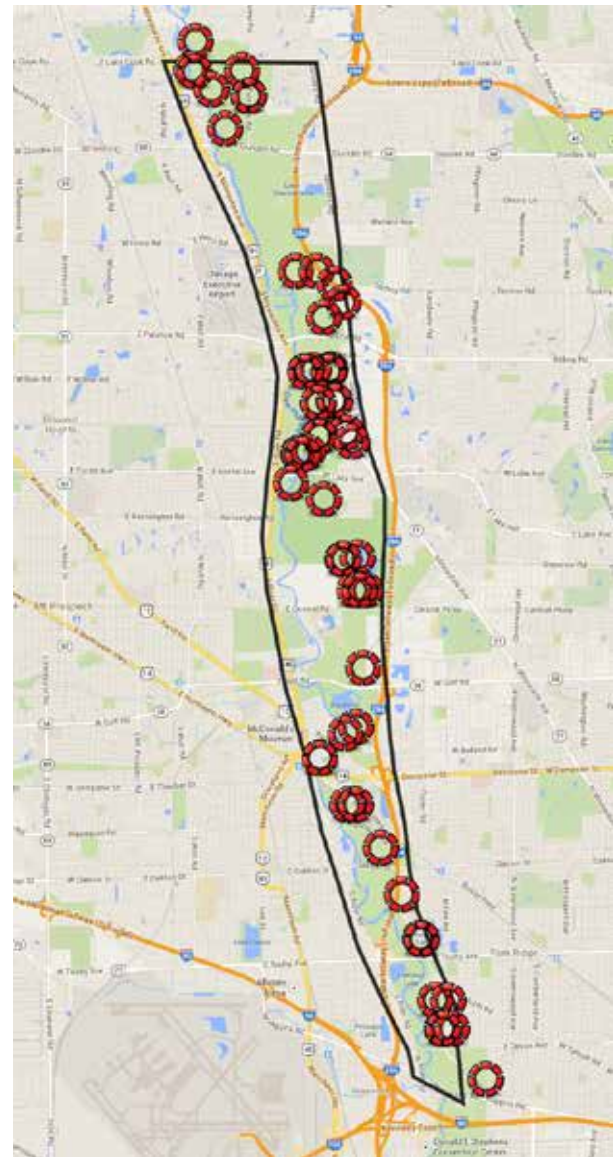
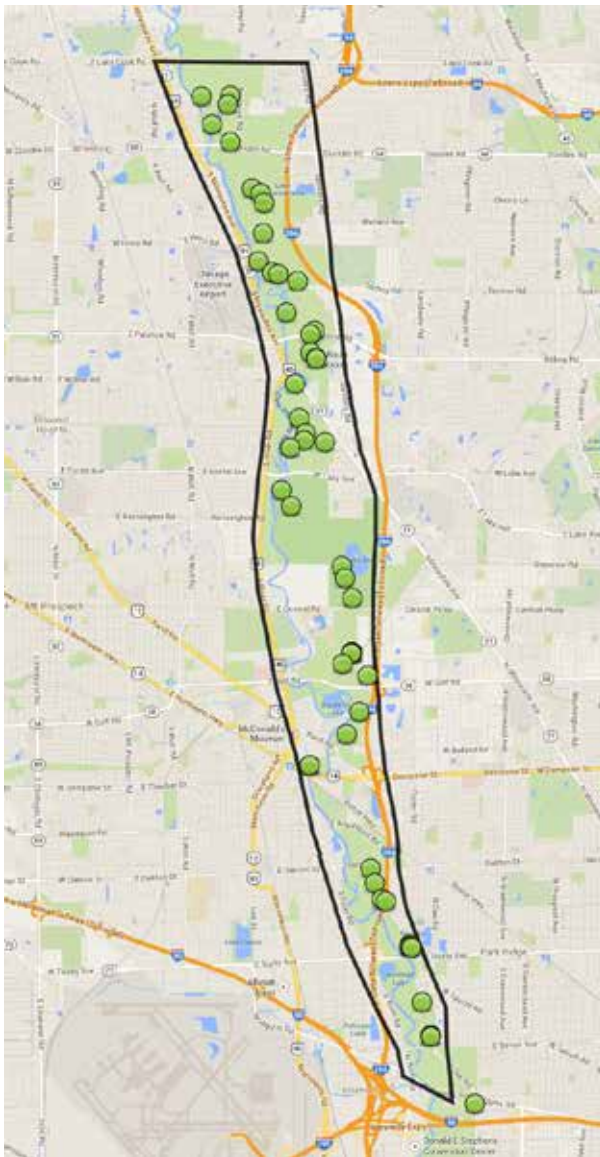
sMap is an on-line software application that allows users to create their own map of issues and opportunities based on point types established by the planning team. In total, 22 people made maps on sMap, which included a total of 275 data points, many of which include comments about specific ideas for a given location. The input was aggregated and a summary of comments under each point type is provided in this section.

### Trail Needed

- Dundee Rd: over pass, under pass, or new signal
- Bridge connection from Hintz Road to the trail
- Trail gap and dangerous crossing between Winkelman Rd. and Milwaukee Ave.
- To create or improve trail spurs to major destinations along the trail corridor, including the Forest Preserve, the Nature Center, and Beck Lake, Oakton Community College, Big Bend Lake)
- Provide/improve trail running north-south between the parking lot at Oakton St and extending south
- Trail needed at Everett Ave. to Oakton to the trail
- Connecting Howard Ave. to the trail
- Improve existing Touhy underpass
- Devon Underpass is in poor condition







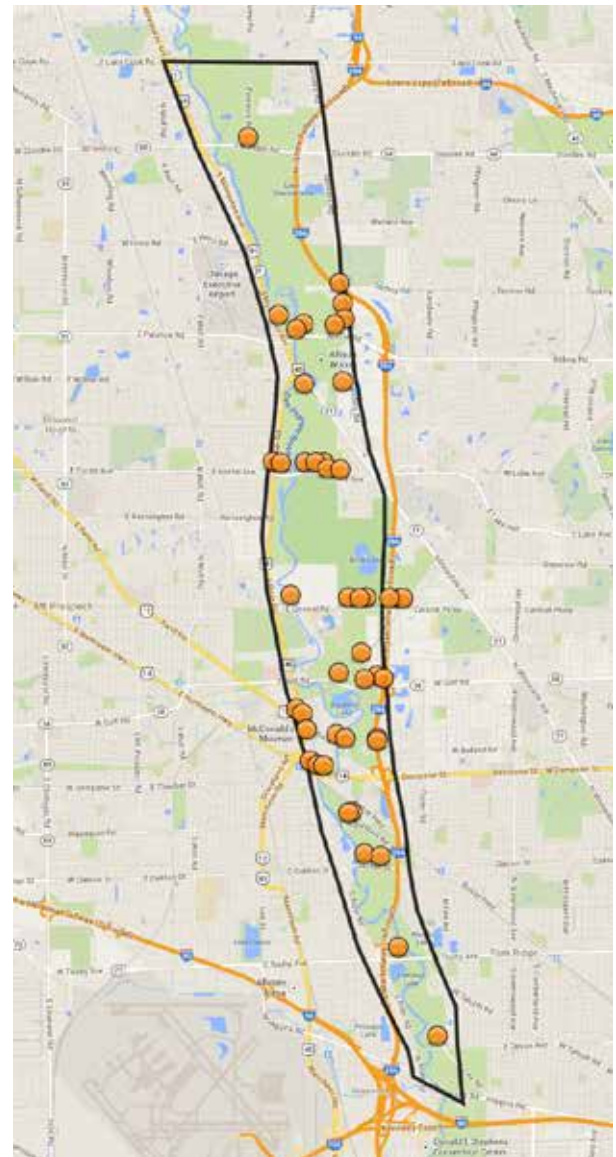
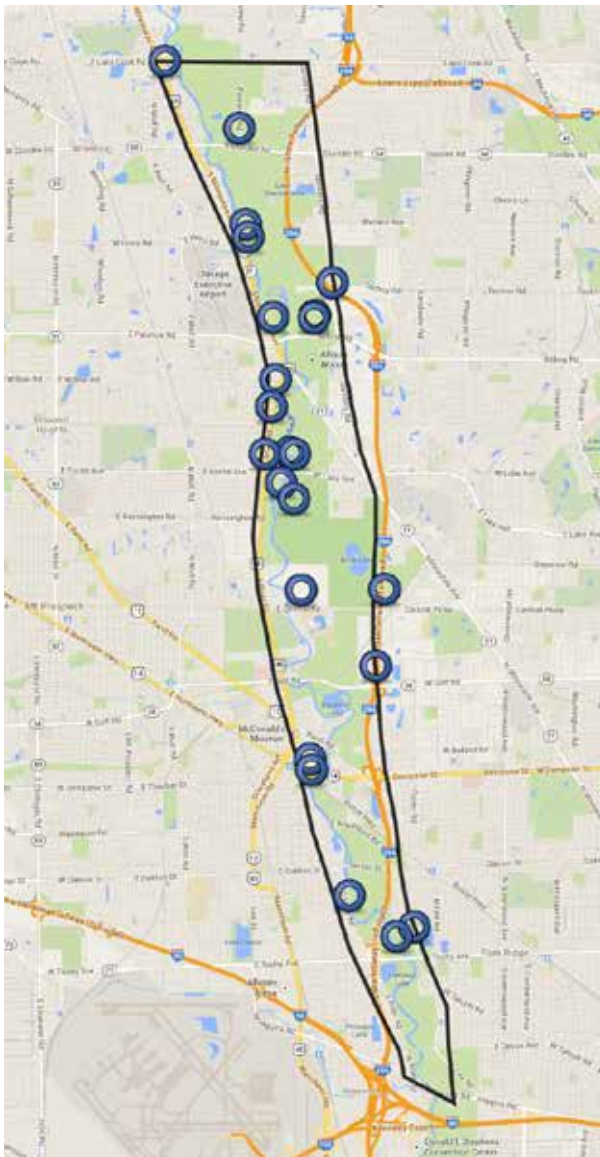
## Bad Trail Conditions

- Poor and inconsistent trail materials like mud, gravel, deteriorating asphalt make travelling difficult
- Segments of the trail are prone to chronic flooding due to the Des Plaines River or small streams that decreases accessibility and the conditions of the trail
- Unmarked spur trails
- Condition of spur trails as compared to the main trail
- Need for signs and other safety features at the Canadian Pacific rail crossings
- Need for safer crossings, especially at Golf Road, Central Road, Ballard Road
- The conditions of the Touhy Avenue and Devon Avenue underpasses prompt many bikers and pedestrians to cross the roads at grade.

## Access Point Improvement

- Access points are generally well placed throughout the trail corridor
- Need for better sidewalk and bicycle facilities leading to trail entrances
- No signage or trailhead markers at major access points (especially trail heads at Portwine Road, Sanders Road, Winkelman Road, Carol Lane, Lake Avenue, Central Road)
- Differentiation of between trail spurs and the main Des Plaines trail
- Algonquin Road has exemplary trail access points
- Need for curb cuts at trail entrances





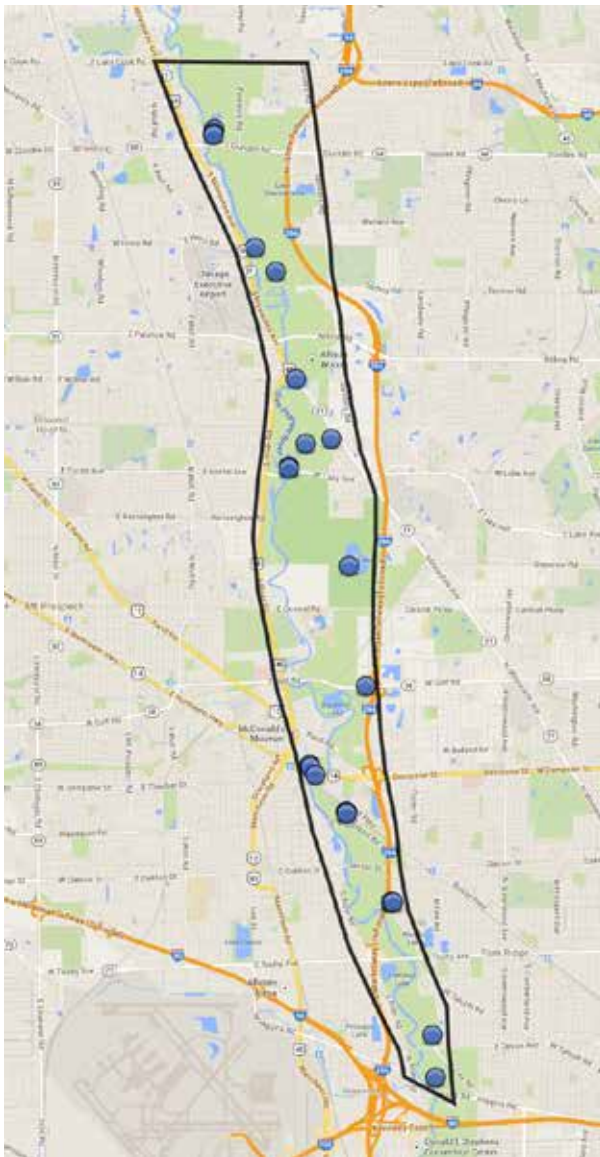
## Desired Access Point

- Trail extensions desired to connected to parking areas along the trail corridor
- Generally, a need for more trail connections from the west
- Trail connections desired at Camp McDonald Road, bridge at Hintz Road, Willow and Sanders, and Central Avenue near Glenview
- Access from east of Interstate 294
- Desire to move trail access at Dundee Road to Portwine Road

## Missing Trail or Sidewalk

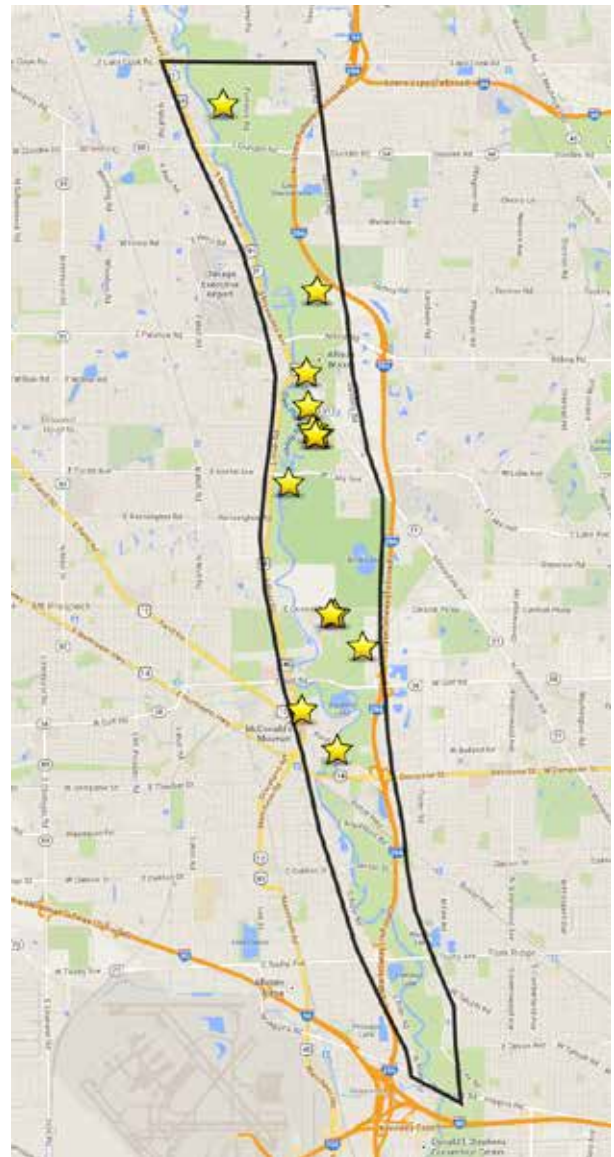
- Trail connection to Howard Road
- Bike facilities to Connect trail gap at Winkelman Road
- Moving Dundee Road trail access to Portwine Road and creating a trail connection to the main trail





## Trail Access Points

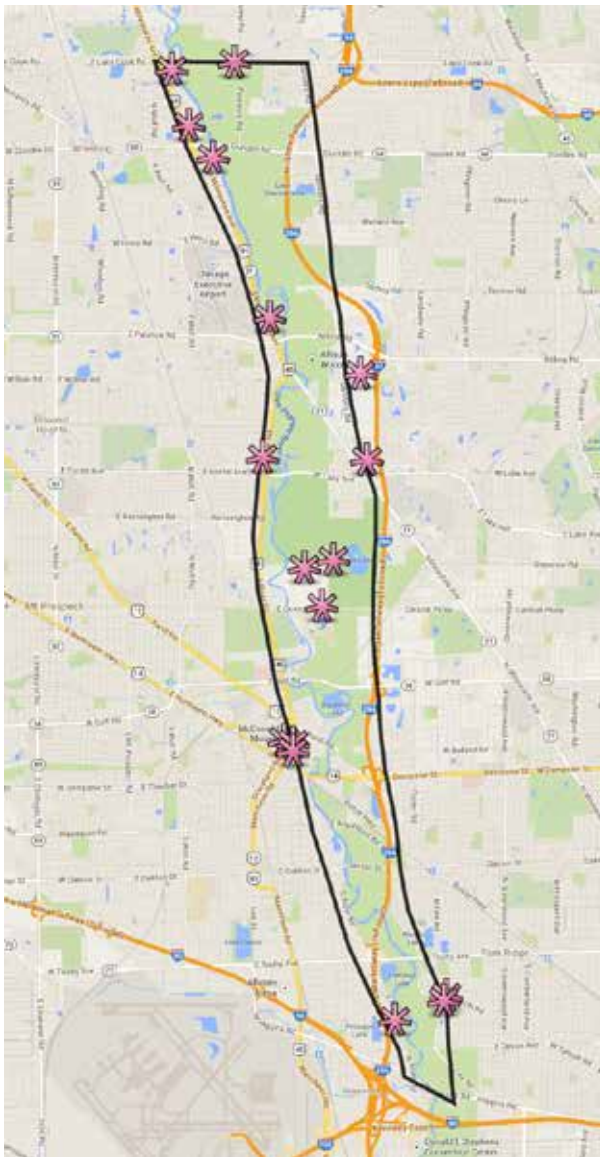
- People like access locations that are connected to or located near parking lots
- Dundee road access point is popular
- Popular access points include those at Sibley Street, Camp Pine Woods, Lake Avenue Woods, Allison woods, Dam 1 Woods, and Potawatomi Woods.



## Trail Destination/Amenity

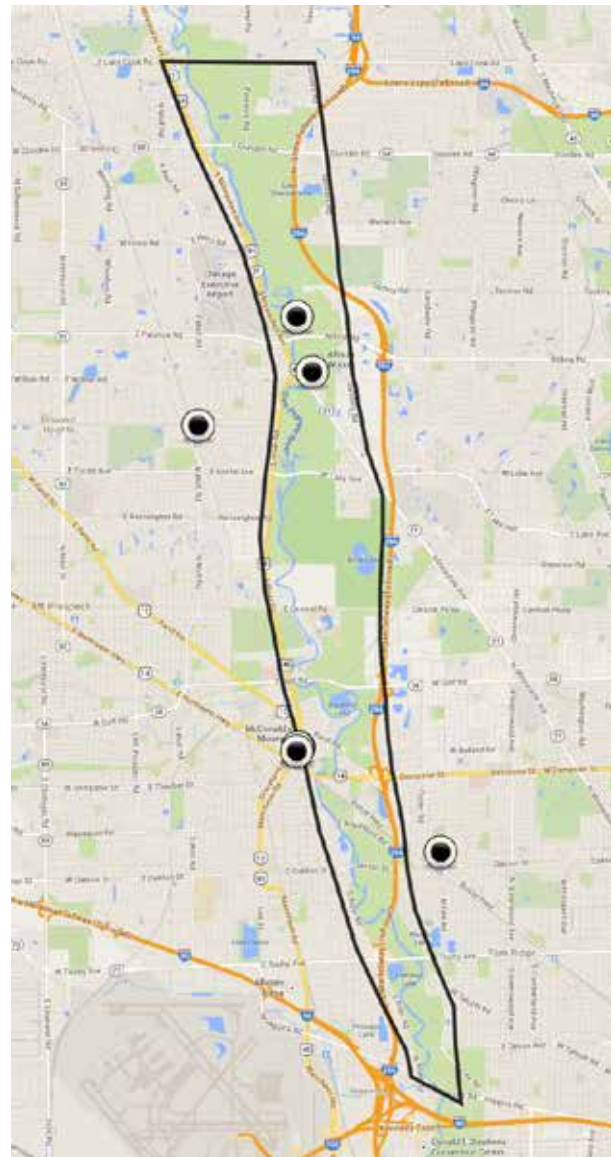
- Lake Potawatomi and boating
- Willow and Sanders prairie
- Canoe launch near Allison Woods Picnic Grove
- River Trails Nature Center
- Nature Center Trail
- Lake Avenue Woods
- Multiple water pumps
- Oakton Community College
- Five Points Area in Des Plaines





## Near-by Destinations

- Downtown Des Plaines
- Restaurants and retail options along Milwaukee
- Main South High School
- Boy Scout Camp
- Rivers Casino
- Allstate Campus
- Beck Lake
- Oakton Community College



## Transit Connections

- Desire for trail connections to the area's major Metra Stations including the Des Plaines, Prospect Heights, and Dee Road Metra Stations.
- Need for direct trail connections to Pace bus stops



# ANALYSIS OF EXISTING TRAIL & ACCESS CONDITIONS

In the Fall of 2013, the planning team conducted a technical review of on-site conditions throughout the study area. The intent of this analysis was to identify relevant barriers or issues related to multi-modal access to the Des Plaines River Trail, and challenges related to movement along the trail. The following is a summary of the key findings of this analysis. The Appendix of this document includes a more detailed inventory of each of the access points, crossings, and trail segments in the study area.

## Built Environment Findings

### Crossings

- Approximately 1/3 of crossings are grade separated – under or overpasses
- Underpasses frequently flood and become impassible. Research needs to be conducted to determine and quantify at what flood stage and how frequently this occurs
- Most grade crossings occur midblock on wide busy roads and are uncontrolled
- Many crossings are missing ADA curb ramps
- Pavement markings & signage are substandard or basic and unremarkable
- Limited signage and markings at parking lot drive crossings

### East-West Access

- Evidence of “desire line” dirt trails
- Most roads intersecting the trail have high traffic volumes and speeds, making it difficult for cyclists and pedestrians to cross
- Most roads intersecting DPRT lack sidewalks, bike lanes, sidepaths, paved shoulders or other non-motorized facilities

### Main trail

- Dirt/gravel portions of trail in generally good to fair condition with some potholes, areas susceptible to flooding
- Limestone portions generally in excellent to good condition
- Varies in width from 6’ to 14’
- Gets very narrow near some picnic groves
- Many stone bridge structures in fair to poor condition

### Unrecognized, side or access trails

- Lots of narrow dirt and gravel trails
- Fair to poor condition
- Some recognized by FPCC, some not
- No information about where these trails connect



## Wayfinding signs

- Limited signage indicating street names, nearby destinations to people on the trail
- No bicycle route signs, including destination and directional signs, currently installed
- Limited signage advertising trail, forest preserve to people driving by
- Lack of distinct “brand” for the DPRT in Cook County or the trail overall
- No routing information when trail crosses Milwaukee Ave.
- Trail map signs confusing, inconsistent
- Few historical/informational markers

## Amenities

- Few canoe/kayak launches
- No bike parking at picnic shelters, bathrooms, and other destinations along the trail
- Limited availability of water fountains/pumps

## Hazardous bollards

- Bollards placed to prevent motor vehicles from entering the trail are hazardous to cyclists, when opened bollards block path of travel on the trail

## Safety & Policy Findings

### Coordination

- Large number of stakeholders including municipalities, FPCC, IDOT, Cook County, Townships, railroads, Army Corps, and others make projects difficult

### Design Standards

- No standard cross-section for main trail
- No standard cross-section for adjoining trails
- No standard design for crossings
- No standard design for triggering Complete Streets policy on IDOT roads
- Difficult to distinguish main trail from minor recognized and unrecognized trails

### Maintenance

- Trail appears to be groomed infrequently
- Trail quality inconsistent between segments within the study area
- Areas within 10 feet of trail get overgrown and may require mowing
- Horse droppings present
- No “Friends of the DPRT” group

### Trail Counts

- Per CMAP trail counts, 100-200 people per day will visit a segment of the trail.

### Regional Trails

- Connections to other NWMC trails, the Lake County portion of the Des Plaines river trail, and other regional segments is critical

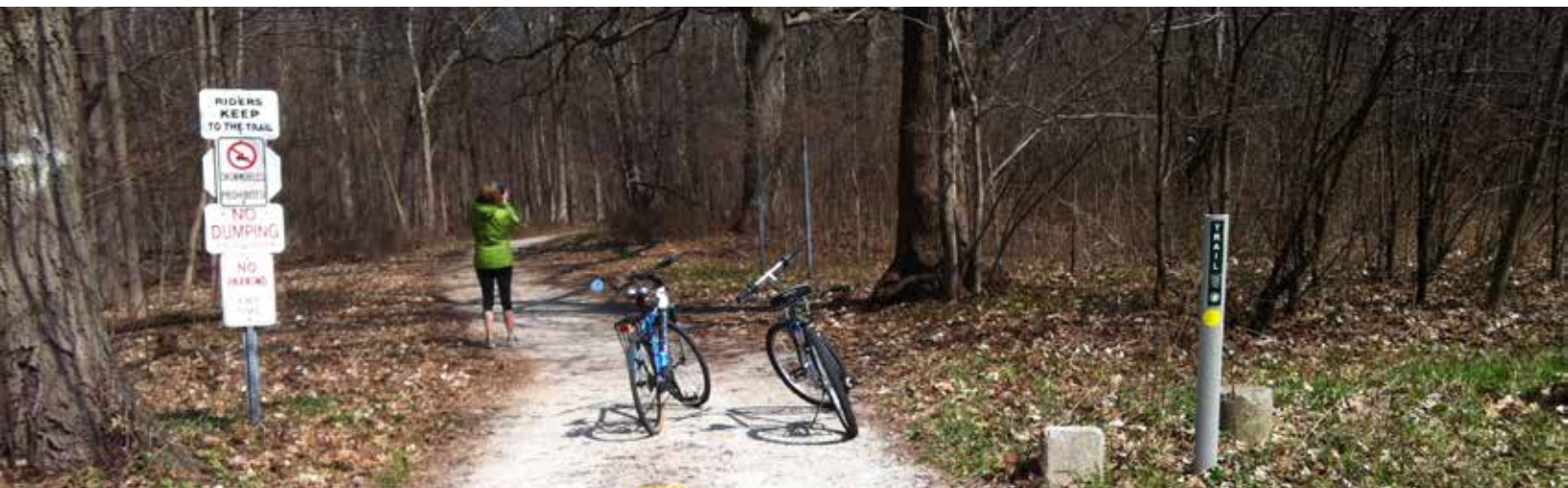
### Crashes

- There were seven crashes involving a pedestrian or cyclist at a trail crossing between 2006 and 2011

### Education/encouragement/enforcement

- Rules for the trail posted at FPCC map kiosks
- Trail users reported rules not observed





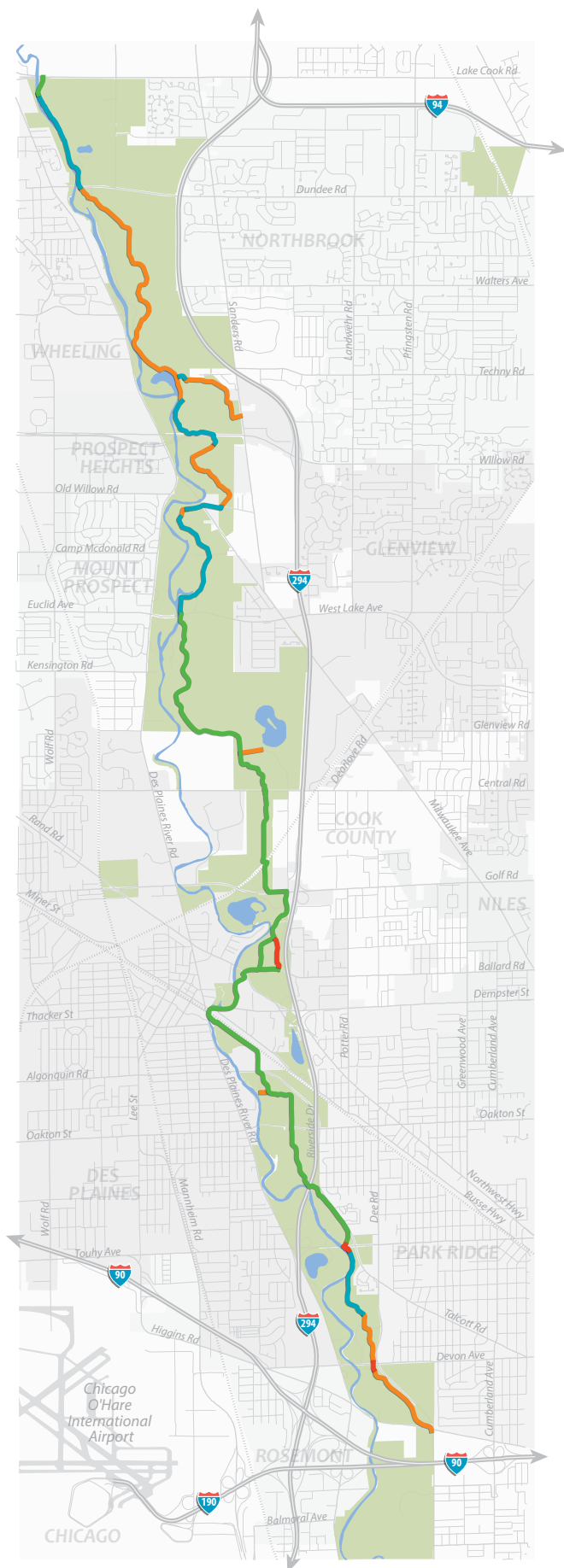
*Des Plaines River Trail, north of Central Road*

## TECHNICAL ANALYSIS/ INVENTORY

This section includes a summary of observations made by the planning team as part of an on-site technical inventory of the planning area. Includes are maps and general findings related to:

- Trail condition
- Trail width
- Trail material
- Crossing type and distance
- Bike and pedestrian crashes (2006-2011)
- Annual average daily traffic
- Speed limit
- Transit routes
- Land use





# Trail Condition

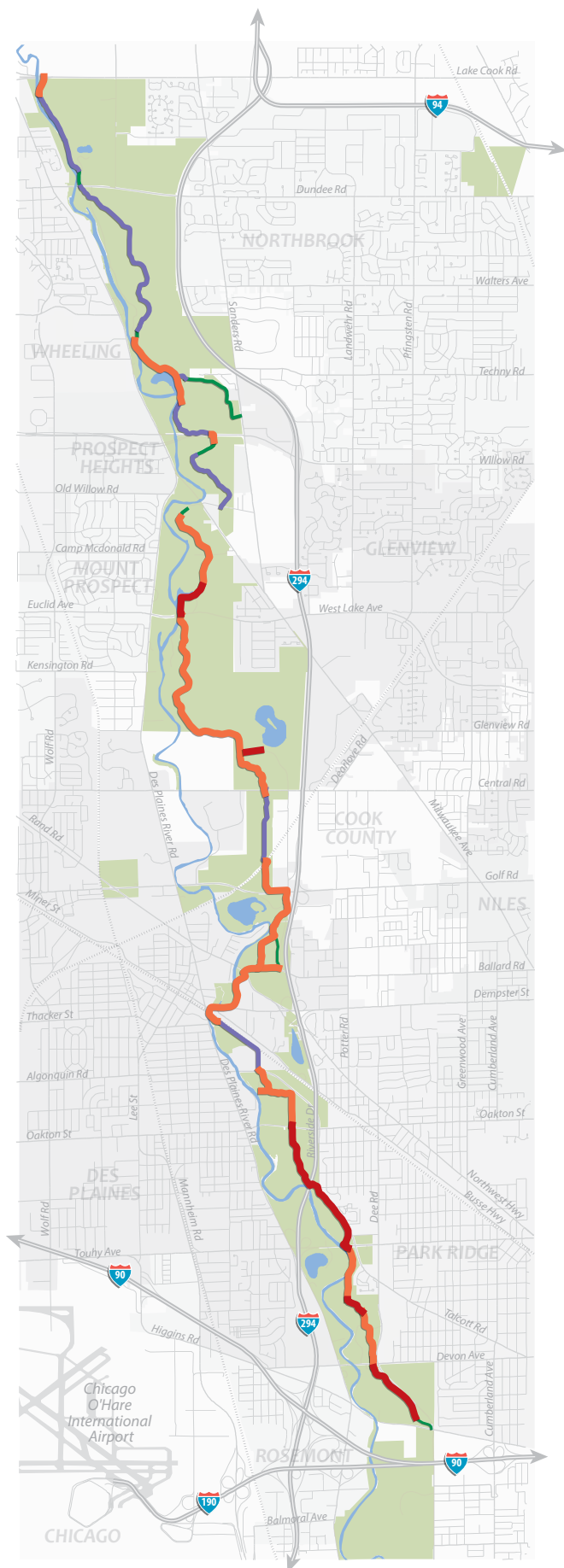
## Trail Condition

- █ Excellent
- █ Good
- █ Fair
- █ Poor

## Findings





- Some trail portions include dirt/gravel portions of trail in generally good to fair condition
- Limestone portions in excellent to good condition
- Bollards placed to prevent motor vehicles from entering the trail are sometimes hazardous to cyclists
- Trail appears to be groomed infrequently
- Areas within 10 feet of trail get overgrown, need to be mowed
- There are some horse droppings along the trail





# Trail Width

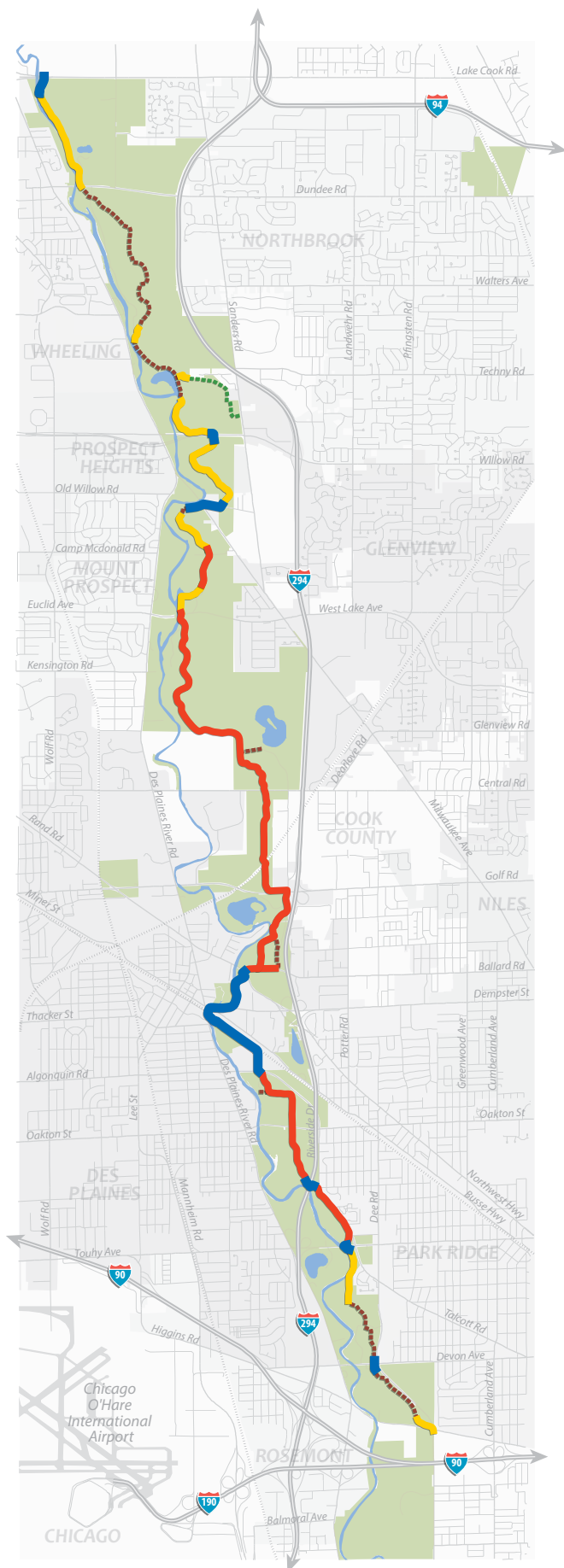
## Trail Width

-  Less than 5 ft.
-  5 ft. to 8 ft.
-  8 ft. to 10 ft.
-  Greater than 10 ft.

## Findings






- Varies in width from 6' to 14'
- Gets very narrow near some picnic groves
- Several narrow dirt and gravel trails
- No standard cross-section





# Trail Material

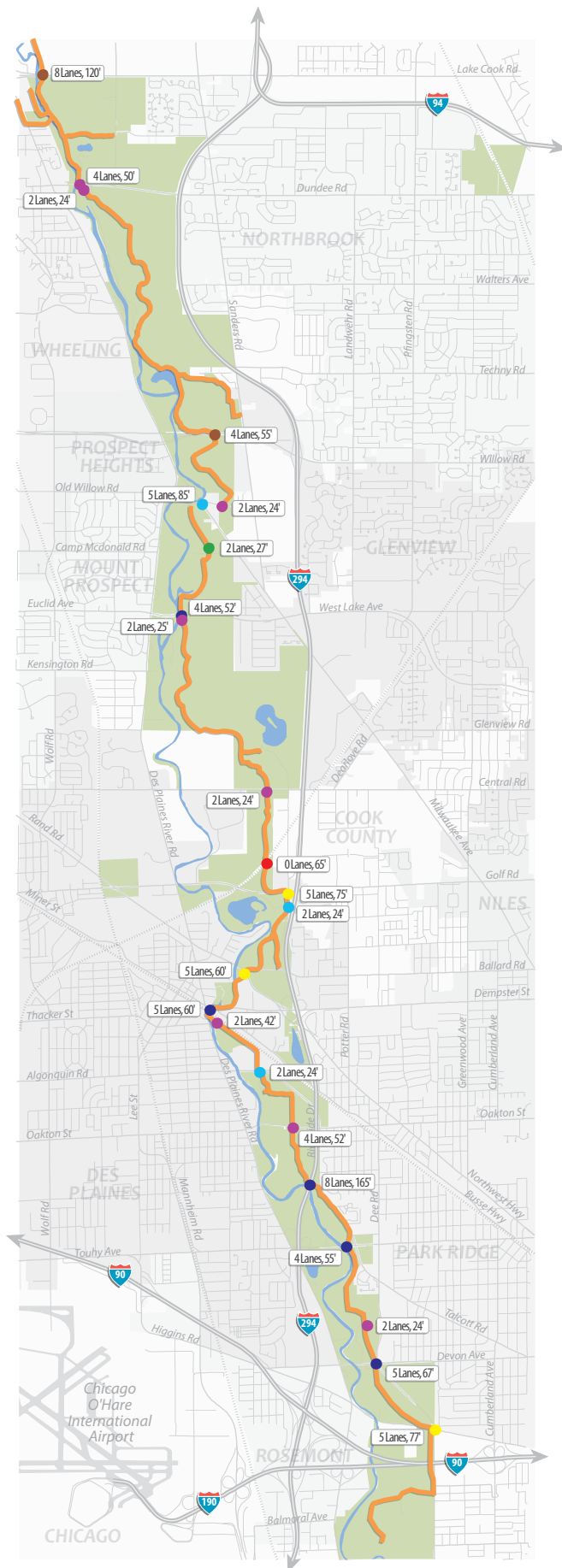
## Trail Material

-  Paved-asphalt or concrete
-  Limestone
-  Gravel or gravel mix
-  Dirt or dirt mix
-  Grass

## Findings

- Trail includes a variety of materials (i.e. dirt/gravel, limestone, etc.)





# Crossing Type & Distance

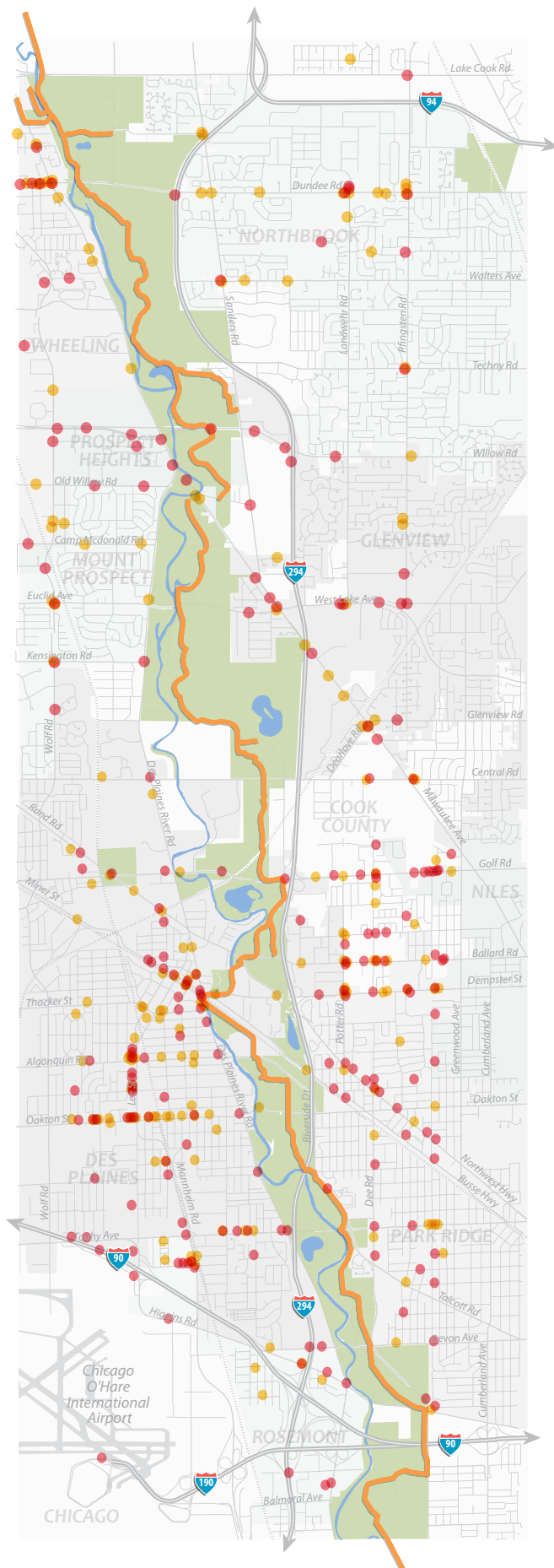
## Crossing Type, Lanes, & Distance

-  FPCC Trails
-  At Grade Railroad
-  Overpass
-  Stop Controlled
-  Two-way Stop Controlled
-  Traffic Signal
-  Uncontrolled
-  Underpass

## Findings




- Total of 23 crossings in the planning area
- Approximately 1/3 of crossings are grade separated – under or overpasses
- Underpasses frequently flood and become impassible
- Most grade crossings occur midblock on wide busy roads and are uncontrolled
- Many crossings missing ADA curb ramps
- Pavement markings & signage substandard or basic and unremarkable
- Limited signage and markings at parking lot drive crossings
- No standard design for crossings





# Bike & Pedestrian Crashes (2006-2011)

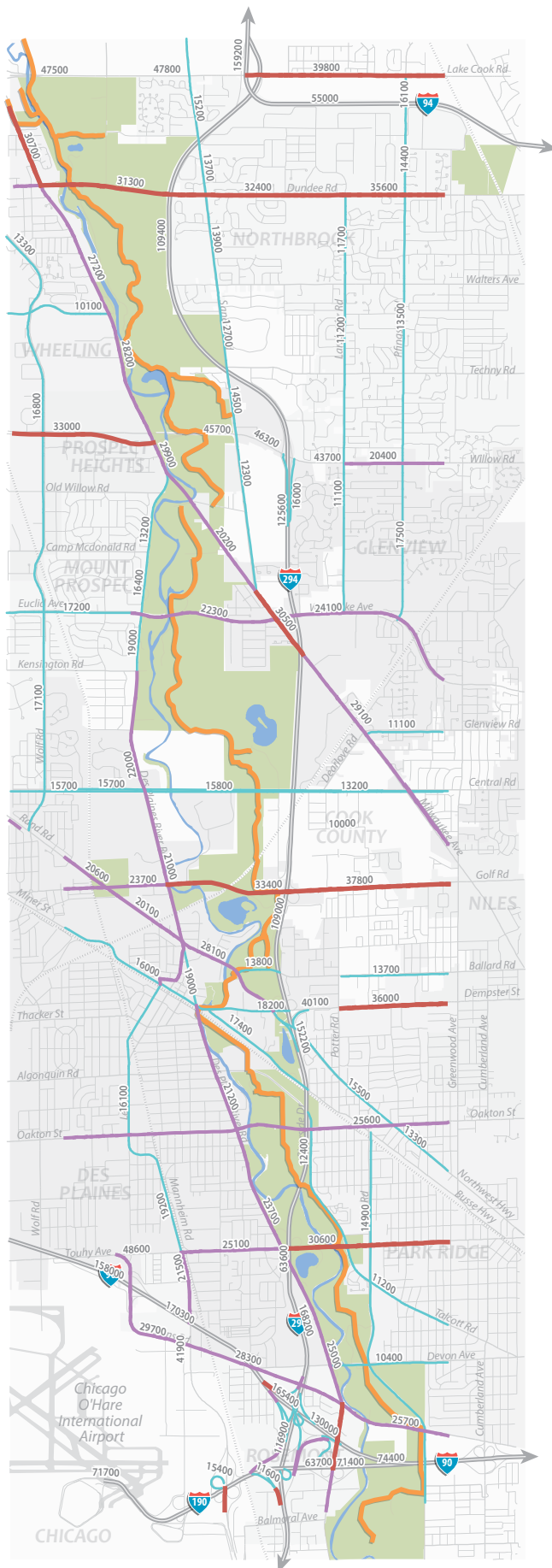
## Crash Type

-  FPCC Trails
-  Pedestrian Crash
-  Bicycle Crash

## Findings

- A total of 7 crashes involving people walking or on bike occurred 2006-2011





# Annual Average Daily Traffic

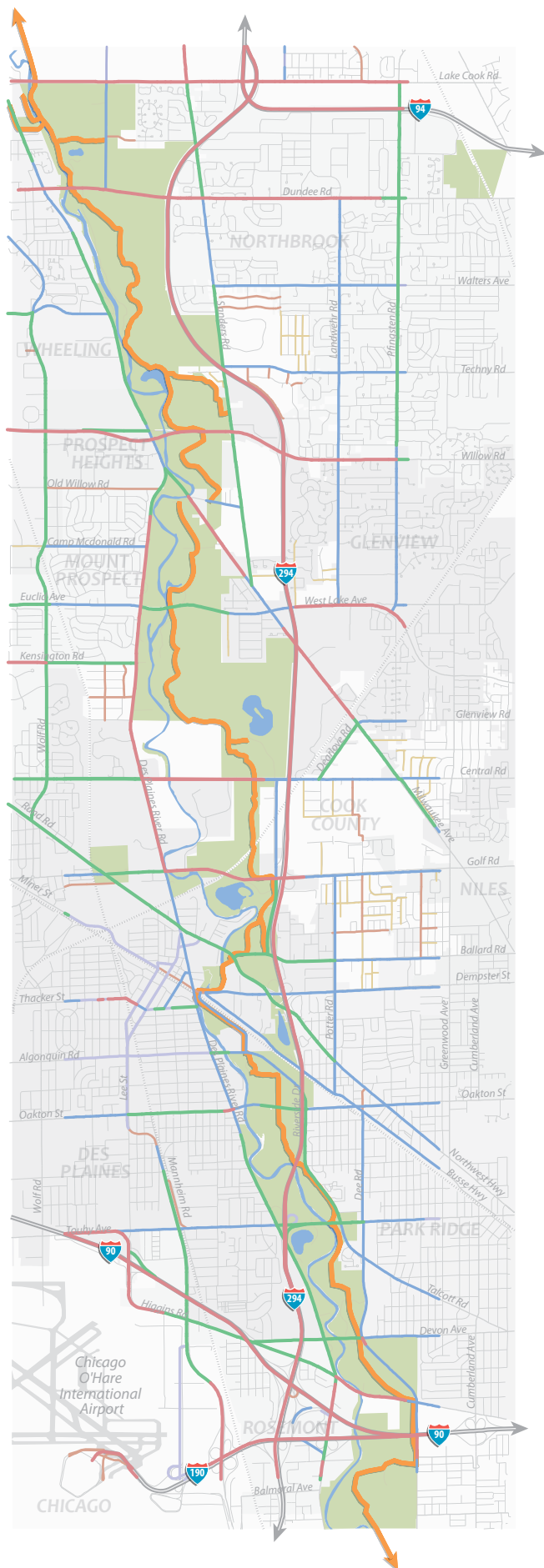
## Annual Average Daily Traffic

- FPCC Trails
- Less than 10,000
- 10,001-20,000
- 20,001-30,000
- Greater than 30,000
- Annual Average Daily Traffic

## Findings





- There are several at-grade, uncontrolled crossings on roads with ADTs over 20,000:
  - Dundee Rd
  - Milwaukee Ave
  - Central Rd
  - Golf Rd
  - Oakton St





# Speed Limit

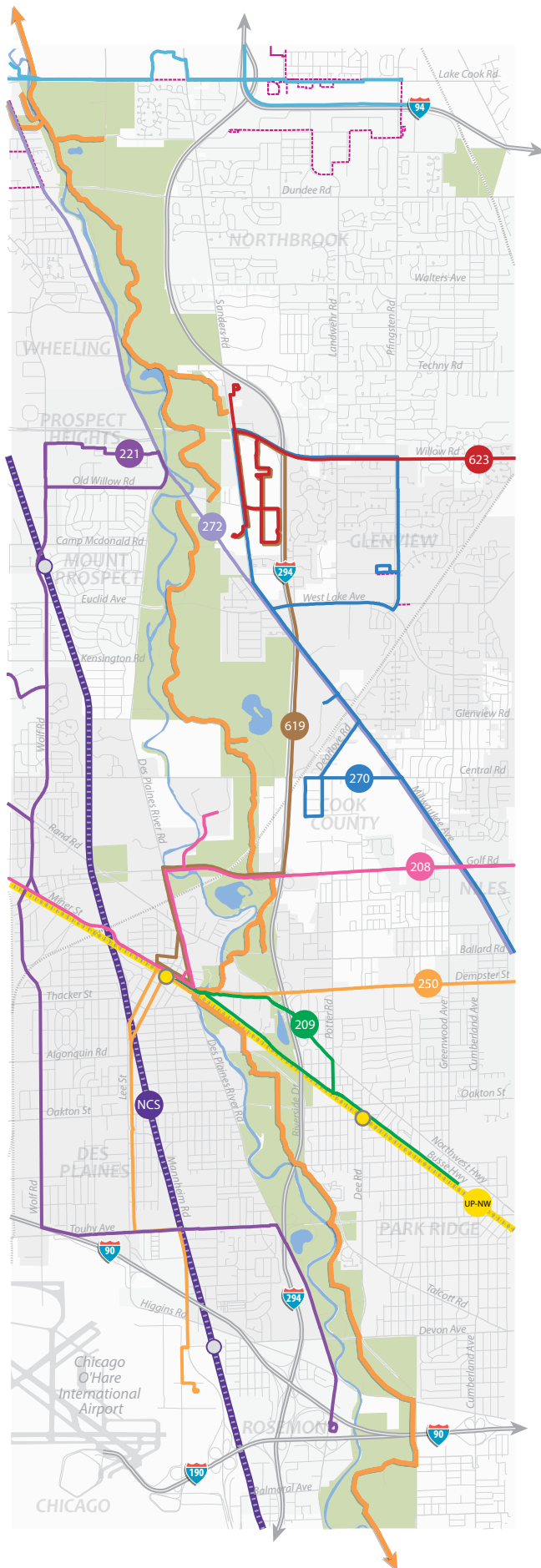
## Speed Limit

-  FPCC Trails
-  20 MPH
-  25 MPH
-  30 MPH
-  35 MPH
-  40 MPH
-  45 MPH or Higher

## Findings



- Most roads intersecting DPRT have too much traffic and high speeds that impact safe walking and cycling
- Most roads intersecting the trail lack sidewalks, bike lanes, paths, or other non-motorized facilities to separate users from high-speed traffic






# Transit Routes

## Metra System

-  North Central Service (NCS)
-  Union Pacific Northwest (UP-NW)

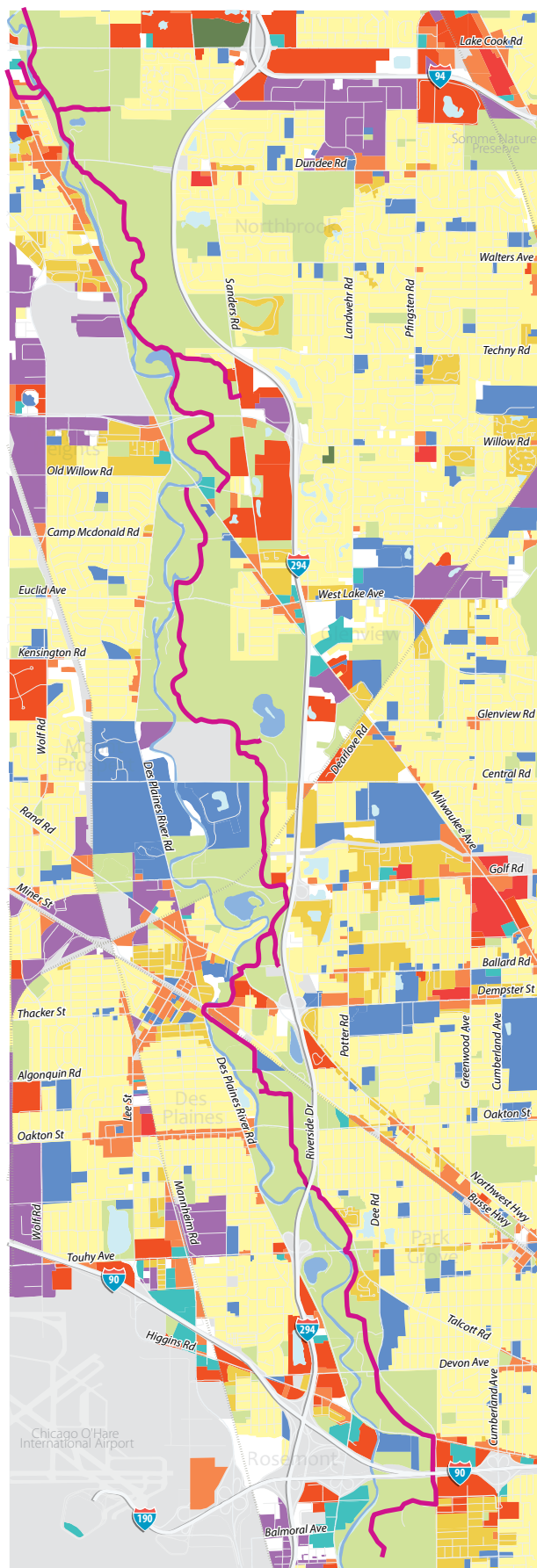
## Pace Bus Routes

-  208
-  209
-  221
-  250
-  270
-  272
-  619
-  623
-  626
-  Other Routes

## Findings

- 9 Pace routes provide service in the study area
- 2 Metra lines and the CTA blue line stop within 2 miles of the study area





# Land Use

## Land Use

- FPCC Trails
- Single Family Residential
- Multi-Family Residential
- Urban Mixed-Use
- Retail/Service
- Office/Professional
- Cultural, Entertainment & Lodging
- Institutional
- Industrial, Warehousing & Wholesale
- Transportation, Communications & Utilities
- Agricultural Land
- Open Space
- Vacant, Wetland & Under Construction
- Water



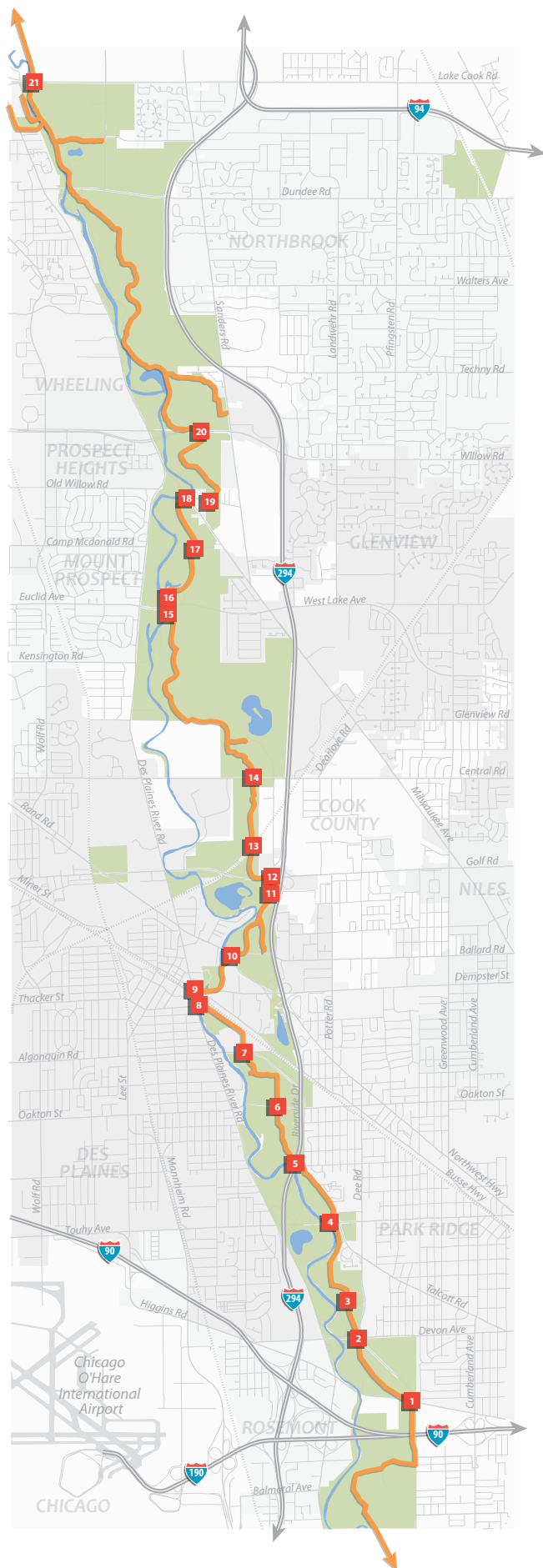


*Lake Avenue underpass near Mount Prospect*

## TRAIL CROSSING INVENTORY


This section includes a detailed inventory of existing trail segments and crossings. This inventory establishes the existing physical conditions of the trail, and sets the foundation for recommendations aimed at improving them to meet the standards identified in this Plan.





# Trail Crossing Inventory

## Legend

-  FPCC Trails
-  Trail Crossing Points



## Trail Crossing 1



### Crossing Characteristics

Street Name	Higgins Road
Curb Ramps	No
Type of Marking	Line (Faded)
Safety Signs	None
Type of Control	Signal

### Best Alternative Crossing

Distance to trail	n/a
Curb Ramps	n/a
Type of Marking	n/a
Type of Control	n/a
Access way	Partial sidewalk/Goat-trail

The DPRT crosses Higgins Road under traffic signal control at its intersection with East River Road. The crossing occurs on the west leg of the intersection where a pedestrian signal head and walk phase are provided, but curb ramps or connecting sidewalks are not provided. The condition of the trail at this point is poor as it is only a narrow dirt goat-trail. No other legs of the intersection have pedestrian accommodation.

## Trail Crossing 2



### Crossing Characteristics

Street Name	Devon Avenue
Curb Ramps	Yes
Type of Marking	n/a
Safety Signs	None
Type of Control	Underpass

### Best Alternative Crossing

Distance to trail	150'
Curb Ramps	No
Type of Marking	None
Type of Control	Signal
Access way	Goat-trail

The trail crosses Devon Avenue grade-separated via an underpass that is in poor condition. The viaduct was impassable at the time of fieldwork due to ankle-deep mud. The signalized intersection of Devon Avenue and Dee Road is only 150 feet east and would provide the best alternative crossing when the underpass is out of commission.

## Trail Crossing 3



### Crossing Characteristics

Street Name	Dam No. 4 Woods East Drive
Curb Ramps	No
Type of Marking	None
Safety Signs	None
Type of Control	Uncontrolled

### Best Alternative Crossing

Distance to trail	n/a
Curb Ramps	n/a
Type of Marking	n/a
Type of Control	n/a
Access way	Parking Lot/Street

The trail crosses the internal access drive at Dam No. 4 Woods with no provision of curb ramps, pavement markings, connecting sidewalks, or directional/warning signage.



## Trail Crossing 4



Crossing Characteristics	
Street Name	Touhy Avenue
Curb Ramps	Yes
Type of Marking	n/a
Safety Signs	None
Type of Control	Underpass

Best Alternative Crossing	
Distance to trail	400'
Curb Ramps	No
Type of Marking	None
Type of Control	Signal
Access way	Goat Trail

The underpass at Touhy Avenue is in poor condition with large potholes and flood prone areas. Since Touhy Avenue carries over 30,000 vehicles per day at speeds of +40mph, a grade-separated crossing is recommended. However, if the underpass is impassable, the best alternative crossing is at the traffic signal at Talcott Road approximately 400 feet away. People will likely still cross here or at grade unless the alternate are made appealing and the underpass crossing is closed. It may be possible to install a median to make it safe to cross touhy in an uncontrolled location close to the current trail alignment.

## Trail Crossing 5



Crossing Characteristics	
Street Name	I-294
Curb Ramps	Yes
Type of Marking	n/a
Safety Signs	None
Type of Control	Underpass

Best Alternative Crossing	
Distance to trail	n/a
Curb Ramps	n/a
Type of Marking	n/a
Type of Control	n/a
Access way	None (Expressway)

DPRT crosses I-294 via an underpass in excellent condition. There is no preferred alternative crossing location. The underpass is prone to flooding and it would be prudent to establish the river stage at which the trail is impassible and find a route for the best potential detour.

## Trail Crossing 6



Crossing Characteristics	
Street Name	Oakton Street
Curb Ramps	Yes
Type of Marking	Diagonal
Safety Signs	Equestrian Warning & Actuated Beacon (RRFB)
Type of Control	Uncontrolled

Best Alternative Crossing	
Distance to trail	1/4 mile
Curb Ramps	No
Type of Marking	None
Type of Control	Signal
Access way	Goat-trail

The crossing on Oakton Street has been updated to provide curb ramps and detectable warning pads. There is also advanced warning signage and an infrared bicycle and pedestrian detector that activates a flashing beacon to warn drivers of trail users crossing the street. The photo shows the bollard in the middle of the trail at the crossing. The nearest intersection is 1/4 mile away and it is not immediately adjacent to the Forest Preserve.



## Trail Crossing 7



Crossing Characteristics	
Street Name	Algonquin Road
Curb Ramps	Yes
Type of Marking	Ladder
Safety Signs	Advanced Equestrian Warning
Type of Control	Two-Way Stop

Best Alternative Crossing	
Distance to trail	n/a
Curb Ramps	n/a
Type of Marking	n/a
Type of Control	n/a
Access way	Shoulder/Bike Lanes

The trail crosses Algonquin Road on the east leg of the intersection with Camp Ground Road. Crossing warning signage is in place both east and west of the crossing on Algonquin Road. Algonquin Road to the east provides 4-foot shoulders and is a decent on-street access route, but vegetation needs to be trimmed. Due to the sight line advanced warning signs would also benefit the safety of the crossing. The crossing has been updated to provide a curb ramp and detectable warning pads on the south side of the street. North of Algonquin Road, DPRT is an on-street bike route with 5-foot bike lanes along Camp Ground Road. The bend in Algonquin Road east of the crossing limits sight distance for the crossing.

## Trail Crossing 8



Crossing Characteristics	
Street Name	Camp Ground Road @ NW Woods
Curb Ramps	Yes
Type of Marking	Diagonal
Safety Signs	Advanced Trail Warning
Type of Control	Uncontrolled

Best Alternative Crossing	
Distance to trail	n/a
Curb Ramps	n/a
Type of Marking	n/a
Type of Control	n/a
Access way	Shoulder/Bike Lanes

A crossing is located mid-block on Camp Ground Road as the on-street bike lanes transitions to an off-street sidepath. The crossing is oriented diagonally which lengthens the crossing distance.

## Trail Crossing 9



Crossing Characteristics	
Street Name	RR/Northwest Hwy/ Miner Street
Curb Ramps	Yes
Type of Marking	n/a
Safety Signs	Slow/Walk Bike
Type of Control	Underpass

Best Alternative Crossing	
Distance to trail	n/a
Curb Ramps	n/a
Type of Marking	n/a
Type of Control	n/a
Access way	Sidewalk

The DPRT crosses the Union Pacific railroad tracks along Camp Ground Road via an underpass and continues under Northwest Highway/Miner Street. Access to the trail from Northwest Highway/Miner Street is provided by sidewalk and stairs on the north side of the street. It was noted that no bike ramp is located at the stairs making bike access difficult. Some cyclists enter this trail segment by turning south off Miner Street. A cut in the guard rail could provide safe, and more convenient, access to/from the south side of Miner Street to the trail. Finally, the underpass here is quite prone to flooding, at flood stage 2.0 per the dam # 2 gauge. Detours to avoid this underpass are long and not very bikeable.



## Trail Crossing 10



### Crossing Characteristics

Street Name	Rand Road
Curb Ramps	Yes
Type of Marking	Ladder
Safety Signs	None
Type of Control	Signal

### Best Alternative Crossing

Distance to trail	500'
Curb Ramps	No
Type of Marking	None
Type of Control	Underpass
Access way	Sidewalk

DPRT crosses Rand Road under traffic signal control at its intersection with Ballard Road. The crossing occurs on the north leg of the intersection where a pedestrian signal head, countdown timers and a ped-actuated walk phase are provided. Approximately 500 feet to the northwest, the Rand Road Bridge over the DPR will be rebuilt (a programmed IDOT project). This intersection will be improved as part of the current Rand Road project plans. It will be moved closer to the intersection to improve sight lines. A Lead pedestrian Interval (LPI) at the signal could further improve safety. Integrating pedestrian and cyclist accommodation into the bridge redesign will provide a safer, dedicated route for trail access. There is a potential to create a linear park on the vacated road bed running along the east side of the River between Rand Road and Big Bend Lake. Finally, the bollard at the south side of the intersection could be a safety hazard for cyclists.

## Trail Crossing 11



### Crossing Characteristics

Street Name	Access Drive south of Golf
Curb Ramps	Yes
Type of Marking	Ladder
Safety Signs	Stop
Type of Control	Stop

### Best Alternative Crossing

Distance to trail	n/a
Curb Ramps	n/a
Type of Marking	n/a
Type of Control	n/a
Access way	Sidewalk

This updated crossing is located at the Forest Preserve access drive off of Bender Road immediately south of Golf Road. Curb ramps and detectable warning pads are in place. The photo shows foldable bollards on the trail as well. Motor vehicle traffic and trail activity is stop controlled at the crossing.

## Trail Crossing 12



### Crossing Characteristics

Street Name	Golf Road
Curb Ramps	Yes
Type of Marking	Diagonal
Safety Signs	Advanced Equestrian Warning
Type of Control	Signal

### Best Alternative Crossing

Distance to trail	800'
Curb Ramps	No
Type of Marking	None
Type of Control	None
Access way	Sidewalk

DPRT crosses Golf Road under traffic signal control at its intersection with Bender Road. The crossing occurs on the west leg of the intersection where a pedestrian signal head, countdown timers and a ped-actuated walk phase are provided, as well as curb ramps and detectable warning pads. There are currently no pedestrian accommodations on the north, south or east sides of this intersection, nor is there any bike or pedestrian accommodation along Golf Road connecting to the trail. The crossing is appropriately located under traffic signal control. However, the trail is routed along Golf Road for 800 feet to access the signal. To enhance the trail-like experience, a grade separated crossing could be constructed, but since the current crossing is at a controlled intersection, this would be a low priority.



## Trail Crossing 13



Crossing Characteristics	
Street Name	Railroad Tracks
Curb Ramps	No
Type of Marking	None
Safety Signs	Advanced/Crossing/None
Type of Control	None

Best Alternative Crossing	
Distance to trail	1/3 mile
Curb Ramps	No
Type of Marking	None
Type of Control	None
Access way	None

To cross the tracks, riders must dismount. Pedestrian upgrades or a grade separated crossing are needed. This crossing is not recognized in the National Railroad Inventory.

## Trail Crossing 14



Crossing Characteristics	
Street Name	Central Road
Curb Ramps	No
Type of Marking	Diagonal
Safety Signs	Advanced Equestrian Warning
Type of Control	Uncontrolled

Best Alternative Crossing	
Distance to trail	1,000'
Curb Ramps	No
Type of Marking	None
Type of Control	Signal
Access way	Shoulder

The crossing at Central Road is diagonal oriented and does not provide curb ramps. A wide loose-gravel shoulder creates an unsafe surface for cyclists in close proximity to traffic. The planned bike shoulders on Central Avenue, which will be constructed in 2015, will better connect the trail to Des Plaines. The intersection of Central Road and East River Road is 1,000 feet to the east and could provide an alternative crossing location under traffic signal control. Alternatively, a traffic signal exists 1,000 feet west at Circle Drive, an entrance to Oakton College, but does not currently have any pedestrian accommodation. Rerouting the trail to allow for a crossing at the signal would also create the potential for a direct connection from the Oakton campus to the trail.

## Trail Crossing 15



Crossing Characteristics	
Street Name	Camp Pine Woods
Curb Ramps	No
Type of Marking	None
Safety Signs	Advanced Crossing
Type of Control	Uncontrolled

Best Alternative Crossing	
Distance to trail	n/a
Curb Ramps	n/a
Type of Marking	n/a
Type of Control	n/a
Access way	Parking Lot/Drive

The trail crosses Camp Pine Woods, an internal access drive, just south of Lake Avenue. Trail crossing signs are present but no pavement markings or advanced warning signage. Due to sight lines issues, this should be a stop controlled location.



## Trail Crossing 16



Crossing Characteristics	
Street Name	Lake Avenue
Curb Ramps	Yes
Type of Marking	n/a
Safety Signs	None
Type of Control	Underpass

Best Alternative Crossing	
Distance to trail	n/a
Curb Ramps	n/a
Type of Marking	n/a
Type of Control	n/a
Access way	Goat-trail

A grade separated underpass is provided at the Lake Avenue bridge. The trail crossing is in good condition at this location. The Lake Avenue Bridge over the Des Plaines River has wide sidewalk in good condition and there is only a short (500') gap before connecting back to existing sidewalk in Mount Prospect. There is no signage informing trail users of the street name or potential connection into the nearby community.

## Trail Crossing 17



Crossing Characteristics	
Street Name	Nature Center Drive
Curb Ramps	No
Type of Marking	Diagonal
Safety Signs	None
Type of Control	Stop

Best Alternative Crossing	
Distance to trail	n/a
Curb Ramps	n/a
Type of Marking	n/a
Type of Control	n/a
Access way	Sign indicated "Pedestrians use footpath"

The crossing at Nature Center Drive is diagonally oriented and does not provide any indication to visually impaired people that they are crossing a roadway. A loose-gravel shoulder creates an unsafe surface for cyclists in close proximity to traffic. The pavement markings are substandard and faded. Traffic is stop controlled- an appropriate measure at an internal drive such as this.

## Trail Crossing 18



Crossing Characteristics	
Street Name	Milwaukee Avenue (IL 21)
Curb Ramps	No
Type of Marking	None
Safety Signs	None
Type of Control	Uncontrolled

Best Alternative Crossing	
Distance to trail	100'
Curb Ramps	No
Type of Marking	None
Type of Control	Potential Underpass
Access way	None

One of the most challenging parts of the study area, the trail crossing at Milwaukee Avenue occurs at the intersection with Winkleman Road. Milwaukee Avenue carries over 20,000 vehicles per day at high speeds. There are no pavement markings, warning signs or traffic control at this intersection. The Milwaukee Avenue bridge over the Des Plaines River was rebuilt in 2011. There is an opportunity to connect the trail under the new bridge structure as there is adequate clearance underneath the structure. A potential trail addition will be an Army Corps issue, however, as fill will be required within the floodplain which creates a hydraulic issue. If implemented underneath the structure, the Forest Preserve will need to be responsible for trail maintenance and they will have to agree to occasional IDOT closures for bridge maintenance. The nearest controlled intersection is over 1/4 mile northwest at Milwaukee and River Road. Once across Milwaukee, there is no indication that the trail continues 900' east.



## Trail Crossing 19



Crossing Characteristics	
Street Name	Winkleman Road
Curb Ramps	Yes
Type of Marking	Ladder
Safety Signs	Advanced Equestrian Warning
Type of Control	Two-Way Stop

Best Alternative Crossing	
Distance to trail	n/a
Curb Ramps	n/a
Type of Marking	n/a
Type of Control	n/a
Access way	Shoulder/Bike Lanes

DPRT utilizes Winkleman Road as an on-street facility connection between the north and south portions of our study area. Trail users share the travel lanes with traffic. The access point from Winkleman Road to the trail is loose gravel and does not provide a safe surface. No signage indicating that the trail continues 900' to the west is present. An alternate location could be a sidepath on the north side of the road which might connect with the Milwaukee Avenue bridge. In the near term, installing shared lane markings on the road may increase awareness for the connecting trail and alert drivers to the presence of people on bike.

## Trail Crossing 20



Crossing Characteristics	
Street Name	Willow Road
Curb Ramps	No
Type of Marking	None
Safety Signs	None
Type of Control	Uncontrolled

Best Alternative Crossing	
Distance to trail	On-Street Gap In Trail
Curb Ramps	No
Type of Marking	None
Type of Control	Stop
Access way	Shoulder/Sidepath potential

The Willow Road overpass is in fair condition with a steep grade, uneven surface, and overgrowth. This overpass will be rebuilt as part of an upcoming IDOT project, currently in the design phase. There are currently no sidewalk or bike facilities along Willow Road. The Northwest Municipal Conference is looking into inclusion of a sidewalk connecting the new overpass to the Willow/Sanders intersection as part of the IDOT project.

## Trail Crossing 21



Trail Characteristics	
Street Name	Lake Cook Road
Curb Ramps	Yes
Type of Marking	n/a
Safety Signs	None
Type of Control	Overpass

Best Alternative Crossing	
Distance to trail	n/a
Curb Ramps	n/a
Type of Marking	n/a
Type of Control	n/a
Access way	None (Expressway)

The Lake Cook Road overpass provides separation for equestrian and pedestrian/cyclists





## SEGMENT CONDITIONS ASSESSMENT

### Trail Condition

The consultant team conducted a conditions assessment of the trail segments based on field observations. Photo's and data points were taken and the information was used to generate a GIS file of the trail condition. Trail condition was grouped into the following four categories based on the descriptions/definitions provided below:

**Excellent:** Trail in like new condition with even, packed surface and generally no evidence of erosion, pitting or wet/muddy areas.

**Good:** Trail in suitable condition for riding with a safe, overall even surface and only occasional smaller trail pits, trenches or muddy spots.

**Fair:** Trail is wet or has evidence of flooding and standing water. It has many pits with large areas of uneven surface. It is passable but trail is widened from users avoiding problem areas.

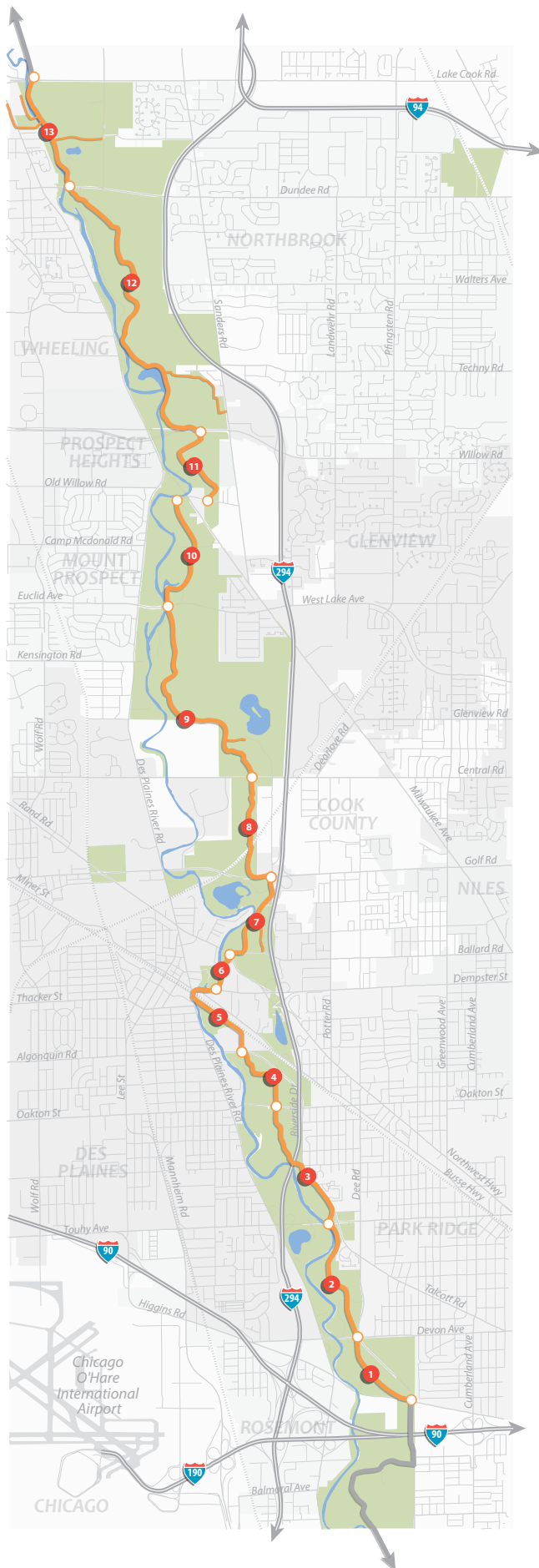
**Poor:** Trail is generally not passable with muddy or eroded/rough conditions or flooding.

### Key Issues

The consultant team also identified five key issue areas that consistently need to be addressed in each of the segments. The team assessed the level of important for each issue by segment as either low, moderate, or high. The issues and indication criteria for level of importance are as follows:

- East-west connectivity – indicated by the importance of creating connections to the neighborhoods and destinations east and west of the trail
- Unrecognized/spider/link trails – indicated by the number of off-shooting trails in each segment
- Wayfinding signs – indicated by the number of adjacent destinations and crossing conflicts in each segment
- Canoe/Kayak issues – indicated by the number of launches in a given segment
- Amenities – indicated by the number of amenities in a segment, like parks, parking lots, benches, picnic areas, etc...





# Trail Segment Inventory

## Legend

-  FPCC Trails
-  Segment Points



## Trail Segment 1



Segment Characteristics	
Segment Name	Higgins/Devon
Trail Width	More than 10
Trail Surface	Dirt
Trail Condition	Fair
Highlights	No connection to CTA Rosemont station

Key Issues	
East-West Connections	Moderate
Unrecognized/Spider/Link Trails	Low
Wayfinding Signs	High
Canoe/Kayak	Low
Amenities	Low

This segment is the gateway to the north area of the trail from Chicago area. The CTA Rosemont station is a bikeable distance but no wayfinding exists to get to/from the access points.

## Trail Segment 2



Segment Characteristics	
Segment Name	Devon/Touhy
Trail Width	8-10
Trail Surface	Gravel/Dirt
Trail Condition	Good/Fair/Poor
Highlights	Poor connection/wayfinding at Devon

Key Issues	
East-West Connections	Moderate
Unrecognized/Spider/Link Trails	Low
Wayfinding Signs	High
Canoe/Kayak	Low
Amenities	Low

The trail entrance appears to be closed at Devon.

## Trail Segment 3



Segment Characteristics	
Segment Name	Touhy/Oakton
Trail Width	More than 10
Trail Surface	Limestone
Trail Condition	Excellent
Highlights	Neighborhood connections along Talcott

Key Issues	
East-West Connections	High
Unrecognized/Spider/Link Trails	Low
Wayfinding Signs	Low
Canoe/Kayak	Low
Amenities	Moderate

A portion of the trail runs parallel to Talcott road suggesting potential to improve access to the neighborhoods to the east.



## Trail Segment 4



Segment Characteristics	
Segment Name	Oakton/Algonquin
Trail Width	8-10
Trail Surface	Limestone
Trail Condition	Excellent
Highlights	Wayfinding signs

Key Issues	
East-West Connections	Low/Moderate/High
Unrecognized/Spider/Link Trails	Moderate
Wayfinding Signs	Low
Canoe/Kayak	Low
Amenities	Moderate

The recently improved trail segments in Des Plaines are the only segments with interpretive signs.

## Trail Segment 5



Segment Characteristics	
Segment Name	Algonquin/Dempster
Trail Width	8-10/More than 10
Trail Surface	Paved
Trail Condition	Excellent
Highlights	Access point to Des Plaines

Key Issues	
East-West Connections	High
Unrecognized/Spider/Link Trails	Low
Wayfinding Signs	High
Canoe/Kayak	Moderate
Amenities	High

This segment has the most direct access to downtown Des Plaines and Metra; the stair case could potentially be retrofitted to include a bike tire ramp to improve trail access for people with bikes. There is a canoe/kayak launch proposed at this location from the parking lot at Northwestern Woods/JJ Schwab Road. The City of Des Plaines has a strong interest in creating a better connection between the downtown and the Trail and river. A cut in the guard rail on the south side of Miner Street is needed to improve bike and pedestrian access between the trail and the south side of Miner Street.

## Trail Segment 6



Segment Characteristics	
Segment Name	Dempster/Rand/Ballard
Trail Width	More than 10
Trail Surface	Limestone
Trail Condition	Excellent
Highlights	Parallel segment along Ballard

Key Issues	
East-West Connections	Low
Unrecognized/Spider/Link Trails	Moderate
Wayfinding Signs	High
Canoe/Kayak	Moderate
Amenities	Low

This segment runs parallel to Ballard Road.



## Trail Segment 7



Segment Characteristics	
Segment Name	Ballard/Golf
Trail Width	8-10
Trail Surface	Limestone
Trail Condition	Excellent/Good/Fair/Poor
Highlights	Signal

Key Issues	
East-West Connections	High
Unrecognized/Spider/Link Trails	Moderate
Wayfinding Signs	High
Canoe/Kayak	Low
Amenities	High

This segment running parallel to Golf Road is not significantly buffered from vehicle traffic but could be improved or extended to link to the southern entrance to Oakton Community College. A split trail fence is usually in place to create a separation between the trail and the surrounding area. Parts of this segment were affected by a major flood in April 2013 and are in need of maintenance.

## Trail Segment 8



Segment Characteristics	
Segment Name	Golf/Central
Trail Width	5-8/8-10
Trail Surface	Limestone
Trail Condition	Excellent
Highlights	Bucolic setting, Oakton College

Key Issues	
East-West Connections	High
Unrecognized/Spider/Link Trails	Moderate
Wayfinding Signs	High
Canoe/Kayak	Low
Amenities	High

Portions of this segment are less than 8 feet wide. The trail setting, condition and potential to link into Oakton Community College make this an ideal segment for priority improvements. Additionally, there is an unimproved rail crossing in this section.

## Trail Segment 9



Segment Characteristics	
Segment Name	Central/Lake
Trail Width	8-10
Trail Surface	Limestone
Trail Condition	Excellent
Highlights	Connection to Beck Lake

Key Issues	
East-West Connections	Moderate
Unrecognized/Spider/Link Trails	High
Wayfinding Signs	Moderate
Canoe/Kayak	Moderate
Amenities	Moderate

Beautiful tree covered section with room to expand in sections, connections to amenities like Beck Lake. There is an underpass at Lake Avenue.



## Trail Segment 10



Segment Characteristics	
Segment Name	Lake/Milwaukee
Trail Width	8-10/More than 10
Trail Surface	Limestone/Gravel
Trail Condition	Good/Fair
Highlights	Nature Center, Allison Woods, Lake Ave Woods

Key Issues	
East-West Connections	High
Unrecognized/Spider/Link Trails	High
Wayfinding Signs	High
Canoe/Kayak	High
Amenities	High

This segment has parking access at Lake Ave Woods on the south and Allison Woods on the north. There is a water fountain, covered pavilion, canoe launch, and the Nature Center all along the route. The crossing at Milwaukee is a significant barrier to overall trail connectivity. There is a goat path at lake road indicating demand for improved connectivity.

## Trail Segment 11



Segment Characteristics	
Segment Name	Milwaukee/Palatine
Trail Width	Less than 5/5-8
Trail Surface	Gravel/On-street
Trail Condition	Fair/Poor
Highlights	On-street section

Key Issues	
East-West Connections	Moderate
Unrecognized/Spider/Link Trails	Low
Wayfinding Signs	Moderate
Canoe/Kayak	Moderate
Amenities	Low

This segment is gravel and has some drainage issues. Areas that wash away in floods present potential hazards to cyclists. There is a potential on for better east-west connectivity both sides of Palatine bridge to connect to Milwaukee Ave and a potential on north side to connect east to Sanders.

## Trail Segment 12



Segment Characteristics	
Segment Name	Palatine/Dundee
Trail Width	Less than 5/5-8/8-10
Trail Surface	Gravel/Dirt
Trail Condition	Good/Fair
Highlights	Proximity to river

Key Issues	
East-West Connections	High
Unrecognized/Spider/Link Trails	Moderate
Wayfinding Signs	Low
Canoe/Kayak	High
Amenities	High

This segment travels close to the river and is the longest continuous stretch that could be improved with portions of the trail being less than 5 feet wide. There are three options to improve east- west connectivity (1) Timberlane - Sanders – Techny, (2) Willow (3) Meadow connects to Sanders. All three options lead west to the main trail and potential Hintz Road bridge (Dam 1 location). This section of the trail also is proximate to many trail amenities including the Willow/ Sanders meadow, All-State, CVS office, and Astellas. New residential developments and a large fitness center are coming soon.



## Trail Segment 13



### Segment Characteristics

Segment Name	Dundee/Lake Cook
Trail Width	Less than 5/5-8
Trail Surface	Gravel
Trail Condition	Good
Highlights	Access trail to Portwine Road and Milwaukee Ave

### Key Issues

East-West Connections	Moderate
Unrecognized/Spider/Link Trails	Moderate
Wayfinding Signs	High
Canoe/Kayak	Moderate
Amenities	High

*This segment is the link to the Lake County portion of the Des Plaines River Trail and has connections into businesses along Milwaukee Ave and residences off Portwine Road. There is an access trail leading to the Westin Hotel parking lot which has the potential to become a key access point. There is some potential to improve the minor east-west trails (Camp Dan Beard, Portwine). Portwine is a major cycling street, as is Forest View. The village of Wheeling has an Intergovernmental agreement with the CCFPD to develop the CCFPD lot across the bridge as a trail head with a canoe launch.*





## **SAMPLE INTERGOVERNMENTAL AGREEMENTS**

Given the inter-jurisdictional nature of this Plan, several recommendations may require intergovernmental or interagency agreements (IGA's) related to installation, maintenance, and the procurement of funding. The following list highlights examples of other regional trails that have benefited from intergovernmental agreements between municipalities, counties, and agencies. Where possible, links have been provided to facilitate downloading of the agreement, though links may have changed since the drafting of this Plan.

### **Salt Creek Trail in DuPage and Cook Counties**

Participants in the Salt Creek Trail IGA include DuPage County Forest Preserve District, Cook County Forest Preserve District, and several municipalities and Park Districts. More information can be found at:

[http://www.dupageco.org/EDP/Bikeways\\_and\\_Trails/29856/](http://www.dupageco.org/EDP/Bikeways_and_Trails/29856/)

<http://www.epd.org/parks/salt-creek-greenway-trail>

### **Centennial Trail in Cook, DuPage and Will Counties**

Participants in the IGA include Forest Preserve Districts from Cook, DuPage and Will Counties. The trail is on land owned by Metropolitan Water Reclamation District, but the trail is managed by the Forest Preserves.

### **Old Plank Road Trail in Will County**

Participants in the IGA include Forest Preserve District of Will County, Rich Township, Village of Matteson, Village of Park Forest, and Village of Frankfort, and describes the relationship among entities related to the development and maintenance of the trail.