Urbana Kickapoo Rail Trail Extension Study

December 2020

rpc CHAMPAIGN COUNTY REGIONAL PLANNING COMMISSION

RESOLUTION NO. 2020-11

A RESOLUTION ACCEPTING THE URBANA KICKAPOO RAIL TRAIL EXTENSION STUDY

WHEREAS, the staff of the Champaign County Regional Planning Commission (CCRPC) applied for a Statewide Planning and Research (SPR) grant through the Illinois Department of Transportation (IDOT) and received funding to develop the Urbana Kickapoo Rail Trail Extension Study; and

WHEREAS, the Urbana Park District has worked with staff from the Champaign County Regional Planning Commission (CCRPC), a steering committee, and a stakeholder committee to produce the Urbana Kickapoo Rail Trail Extension Study that documents existing conditions and public input to develop a final alternative; and

WHEREAS, the Urbana Park District Strategic Plan sets a goal to promote a regional trail system through study of Kickapoo Rail Trail (KRT) extension into downtown Urbana; and

WHEREAS, the Urbana Park District Strategic Plan set an objective to complete the Urbana Kickapoo Rail Trial Extension Study by the end of 2020; and

WHEREAS, the Urbana Park District will continue to work with the City of Urbana, Champaign County Forest Preserve District, Champaign County Regional Planning Commission, and other stakeholders on efforts to extend the Kickapoo Rail Trail in Urbana.

NOW, THEREFORE, BE IT RESOVLED by the Urbana Park District Board of Commissioners in Urbana, Illinois, as follows:

1. That the 2020 Urbana Kickapoo Rail Trail Extension Study be and is hereby accepted as a guide to extending the Kickapoo Rail Trail west from its current terminus to Lincoln Avenue.

PASSED and ACCEPTED this 8th day of December, 2020.

ACCEPTED

By: _____
Michael Walker, Board President

ATTEST:

_____
Timothy Bartlett, Secretary

CHAMPAIGN COUNTY FOREST PRESERVE DISTRICT
BOARD OF COMMISSIONERS

RESOLUTION 2020-16
A RESOLUTION ACCEPTING THE URBANA
KICKAPOO RAIL TRAIL EXTENSION STUDY

WHEREAS, the staff of the Champaign County Regional Planning Commission (CCRPC) applied for a Statewide Planning and Research (SPR) grant through the Illinois Department of Transportation (IDOT) and received funding to develop the Urbana Kickapoo Rail Trail Extension Study; and

WHEREAS, the Champaign County Forest Preserve District (CCFPD) has worked with staff from the Champaign County Regional Planning Commission (CCRPC), a steering committee, and a stakeholder committee to produce the Urbana Kickapoo Rail Trail Extension Study that documents existing conditions and public input to develop a final alternative; and

WHEREAS, the Urbana Kickapoo Rail Trail Extension Study aligns with the Champaign County Forest Preserve District Strategic Plan outcomes of environmental benefits for the community and planet, and connection to nature; and

WHEREAS, the Champaign County Forest Preserve District will continue to work with the City of Urbana, Urbana Park District, Champaign County Regional Planning Commission, and other stakeholders on efforts to extend the Kickapoo Rail Trail in Urbana.

NOW, THEREFORE, BE IT RESOLVED by the Board of Commissioners of the Champaign County Forest Preserve District, in the County of Champaign, State of Illinois:

1. That the 2020 Urbana Kickapoo Rail Trail Extension Study be and is hereby accepted as a guide to extending the Kickapoo Rail Trail west from its current terminus to Lincoln Avenue.

APPROVED and ACCEPTED by the Board of Commissioners of the Champaign County Forest Preserve District in Champaign County, Illinois, at a Regular Meeting thereof, held on the 17th day of December, 2020.

_____
Andrew Kerins
President, Board of Commissioners
Champaign County Forest Preserve District

ATTEST:

_____
Scott Hays
Secretary, Board of Commissioners
Champaign County Forest Preserve District

RESOLUTION NO. 2020-12-068R

A RESOLUTION ACCEPTING THE URBANA KICKAPOO RAIL TRAIL EXTENSION STUDY

WHEREAS, the City of Urbana is a municipal corporation and a home-rule unit of local government pursuant to Article VII, Section of the Illinois Constitution of 1970; and

WHEREAS, the City of Urbana is authorized cooperate with other units of local government, including but not limited to the Champaign County Regional Planning Commission (CCRPC) pursuant to Section 10 of Article VII of the Illinois Constitution of 1970 and the Illinois Intergovernmental Cooperation Act, 5 ILCS 220/1 *et seq*,, and

WHEREAS, the staff of the Champaign County Regional Planning Commission (CCRPC) applied for a Statewide Planning and Research (SPR) grant through the Illinois Department of Transportation (IDOT) and received funding to develop the Urbana Kickapoo Rail Trail Extension Study; and

WHEREAS, the City of Urbana has worked with staff from the Champaign County Regional Planning Commission (CCRPC), a steering committee, and a stakeholder committee to produce the Urbana Kickapoo Rail Trail Extension Study that documents existing conditions and public input to develop a final alternative; and

WHEREAS, the Urbana City Council and Mayor set a priority goal between 2018 and 2021 to expand the connectivity of the Kickapoo Rail Trail with a focus between Vine Street and Lincoln Avenue; and

WHEREAS, extending the Kickapoo Rail Trail through Urbana will improve transportation, create placemaking opportunities, enhance businesses and neighborhoods, and improve access to parks; and

WHEREAS, the City of Urbana will continue to work with the Urbana Park District, Champaign County Forest Preserve District, Champaign County Regional Planning Commission, and other stakeholders on efforts to extend the Kickapoo Rail Trail in Urbana.

NOW, THEREFORE, BE IT RESOLVED by the City Council, of the City of Urbana, Illinois, as follows:

That the 2020 Urbana Kickapoo Rail Trail Extension Study be and is hereby accepted as a guide to extending the Kickapoo Rail Trail west from its current terminus to Lincoln Avenue.

PASSED BY THE CITY COUNCIL this 14th day of December, 2020.

AYES: Brown, Colbrook, Hursey, Miller, Roberts, Wu

NAYS:

ABSTENTIONS:

Phyllis D. Clark, City Clerk

APPROVED BY THE MAYOR this 15th day of December, 2020.

Diane Wolfe Marlin, Mayor

STUDY FUNDED BY:

Illinois Department of Transportation (IDOT) and

Carle Health System

STUDY PREPARED BY:

Champaign County Regional Planning Commission (CCRPC)
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Urbana, Illinois 61802
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CHAMPAIGN COUNTY
REGIONAL PLANNING
COMMISSION

All photos belong to CCRPC unless otherwise credited.

Cover Page: Kickapoo Rail Trail rendering at the Station Theatre in Urbana, IL (Source: LRTP 2045, CCRPC)

STUDY PREPARED FOR:

URBANA CITY COUNCIL

Diane Wolfe Marlin, Mayor

Maryalice Wu, Ward 1

Shirese Hursey, Ward 3

Bill Brown, Ward 4

Dennis Roberts, Ward 5

William Colbrook, Ward 6

Jared Miller, Ward 7

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Terri Reifsteck, Visit Champaign County

Executive Summary

The KRT in 2020

The Kickapoo Rail Trail (KRT) is a 24.5 mile multi-purpose recreational trail that follows the former CSX railroad from East Urbana to Kickapoo State Park in Vermilion County, acquired and owned by the Champaign County Forest Preserve District (CCFPD) and the Vermilion County Conservation District (VCCD). It is designed for pedestrians and bicyclists to traverse some of the most diverse local ecosystems including woodland, prairie, and wetland.

Trail sections are open between Urbana and St. Joseph, and in Oakwood, with more trail construction planned in the coming years. The west terminus of the KRT is at the intersection of Main Street and University Avenue. The KRT property owned by CCFPD currently ends west of this intersection at Scottswood Drive extended. All railroad land parcels between Scottswood Drive extended and Lincoln Avenue are owned by Norfolk Southern Railroad (NSRR). NSRR considers this an active railroad, although the railtrack no longer crosses Smith Road. Two Urbana companies are currently using the NSRR rail line on a weekly basis: DART Container, and Emulsicoat.

Study Background

The Champaign County Regional Planning Commission (CCRPC) received funding from the Illinois Department of Transportation (IDOT) and Carle Health System to develop this Urbana KRT Extension Study to analyze the potential of extending the existing KRT westward from its current terminus in East Urbana through Downtown Urbana to Lincoln Avenue. The study area is bounded by Scottswood Drive extended on the east, University Avenue on the north, Lincoln Avenue on the west, and Main Street on the south. It spans roughly 2.4 miles through a diverse range of land uses populated with residential neighborhoods, commercial businesses, industrial facilities, and several green spaces. This study was developed by CCRPC, in conjunction with a steering committee comprised of the City of Urbana, Urbana Park District (UPD), and CCFPD, as well as a stakeholder committee of 12 additional agencies: Carle, Champaign County Bikes (CCB), Champaign County Planning & Zoning Department, Champaign-Urbana Mass Transit District (MTD), Edge-Scott Fire Department, Illinois Commerce Commission (ICC), Illinois Department of Natural Resources (IDNR), Illinois Department of Transportation (IDOT), University of Illinois, Urbana Business Association (UBA), Urbana Neighborhood Connections Center (UNCC), and Visit Champaign County (VCC). Developing this study to extend the KRT through Urbana is a 2018-2021 Urbana Mayor and City Council priority, and a goal of the 2020 UPD Strategic Plan. The City of Urbana and UPD are the primary parties charged with extending the trail west into Urbana, with the assistance of all steering and stakeholder committee agencies.

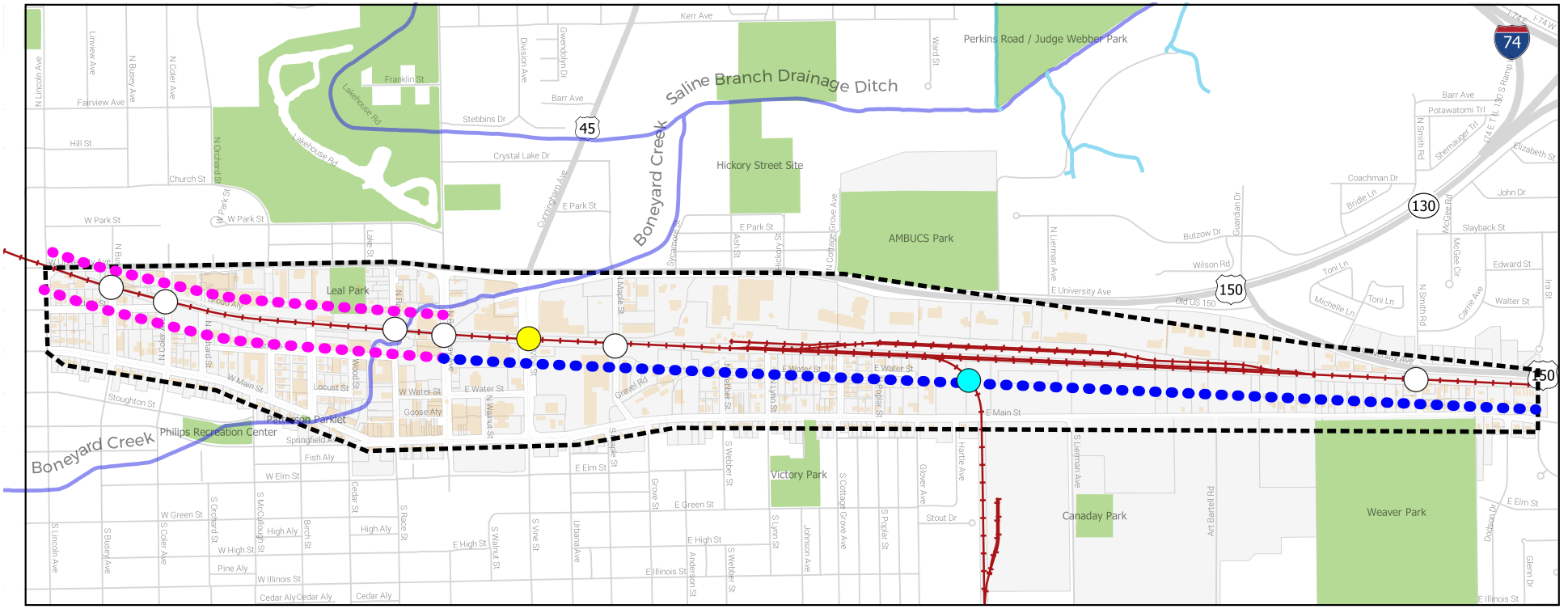
Report Summary

The KRT Extension Study analyzes existing land use, transportation, and environmental conditions within the study area to create a suitability analysis for trail development. Existing conditions analysis was used to identify opportunities and constraints for developing a trail in sections of the study area, and that was used to create a quantitative suitability analysis culminating in a final score for the north and south side of the rail line in each section.

Alternatives were developed and presented to the public during a 30-day public comment period. Proposed alternatives were designed to maximize opportunities, connectivity, and uniformity; as well as to minimize potential constraints, and environmental impacts. The current status of the rail line as active only allows consideration of rail-with-trail alternatives. Based on best practices, the study assumes alternatives will need a 30-foot buffer from the railroad centerline for trail development: the 15 feet closest to the railroad as a buffer, and the next 15 feet to build a 10-foot paved trail with 2.5-foot clear zones. The suitability analysis and public input were used to determine the most suitable alignment to extend the KRT west through Urbana.

The Final Alternative recommends that the KRT be extended as a concrete trail on the north or south side of the railroad between Lincoln and Broadway Avenues (Section 1) depending on the availability of land, and along the south side of the railroad between Broadway Avenue and Scottswood Drive extended (Sections 2-4).

Final Alternative Map



Source: CCGIS

Final Alternatives

- Section 1 (Lincoln Avenue to Broadway Avenue): North or South Side
- Sections 2-4 (Broadway Avenue to Scottswood Drive extended): South Side
- Road Intersections
- Grade Separrated Intersection
- New Railroad Crossing Required

- Railroads
- Roadway
- Structures
- Property Line
- Open Space
- Study Area

0 0.25 mi

CHAMPAIGN COUNTY REGIONAL PLANNING COMMISSION

Next Steps

In order to implement the Final Alternative, the following steps are identified for the City of Urbana, UPD, and study partners to extend the KRT westward through Urbana:

- **Fundraising and Land Acquisition:** These activities can be done simultaneously as they are mutually beneficial tasks or can be done as individual tasks as opportunities arise. In many locations, only an easement is needed to acquire the additional space to build the trail.

- **Engineering and Environmental Surveys:** As part of preliminary engineering, environmental analysis of the study area indicates that both an Environmental Survey Request (ESR) and Preliminary Environmental Site Assessment (PESA) will be necessary before proceeding with trail construction.

- **Phased Construction:** The section between Lincoln Avenue and Vine Street is the first priority for extending the KRT in Urbana, and other trail connections and temporary routes should be considered in this long-term effort to create a connected trail network.

- **Vine Street Bridge:** NSRR and/or the City of Urbana must perform an engineering inspection of the Vine Street bridge to determine its structural integrity for future rail and/or trail use.

- **Develop Trailheads:** Trailheads are trail access points, and a list of trailhead features and twelve potential trailhead sites are identified that could serve KRT users in Urbana.

Urbana KRT Extension Investment

Now is the time for steering and stakeholder committee agencies to invest in the extension of the KRT through Urbana, to realize many benefits.

- **Anticipated Trail Use Frequency:** During the October 2020 public comment period, 34% of respondents stated they would use the KRT extension monthly in good weather if it were built, and another 22% would use it weekly year-round, regardless of weather.

- **Anticipated Trail Use Purpose:** During the October 2020 public comment period, 100% of respondents stated they would use the KRT extension for recreation, 88% for exercise, and 56% for socializing with friends and family. This indicates that the trail is desired by people for not only physical health benefits, but mental health benefits as well.

- **Crime Reduction:** The results of the Rail-Trails and Safe Communities Report show that not only do rail-trails not increase crime among their corridors, but often result in lower levels of crime after trail installation.

- **Environmental Benefits:** Enhanced vegetation along the KRT extension would prevent soil erosion, filter road runoff pollution, reduce flooding potential, and create wildlife habitats and a safer migration corridor. Increased walking and biking would also reduce vehicle emissions.

- **Health & Wellness:** The Carle Health System's flagship medical campus sits immediately north of the NSRR line between McCullough Street and Lincoln Avenue, and hundreds of employees and visitors are present on the site daily. Extending the KRT would provide an opportunity for people to walk and bike between the medical campus, dining and shopping options in Downtown Urbana, green spaces, and residences.

- **Job Creation:** The Rails-to-Trails Conservancy (RTC) estimates that trail construction creates 17 jobs per $1 million spent, which may equate to 41 jobs for this 2.4-mile KRT extension.

- **Local Business Climate:** New trails generate foot and bike traffic, which makes these locations attractive for new businesses to locate. The KRT extension will improve the local business climate for new and existing businesses to

prosper, especially in the food, hospitality, and retail sectors. Businesses can use the Continental Divide Trail Business Toolkit as a resource for incorporating the KRT into their business.

- **Off-Street Safety:** According to studies done by researchers at Portland State University, 60% of people are interested but concerned about bicycling, so providing an off-street trail with limited street crossings provides a more attractive place to bike and walk compared to busy parallel streets like University Avenue (US 150).

- **Physical Activity:** The Centers for Disease Control and Prevention (CDC) states that immediate health benefits of physical activity for adults include improved sleep quality, less anxiety, and reduced blood pressure; and long-term benefits include improved brain and heart health, cancer prevention, reduced risk of weight gain, improved bone strength, and reduced risk of falls.

- **Property Values:** Studies curated by the University of Delaware show that installing a trail has no adverse effect on property values and ease of sale of nearby properties, many times creating a slight increase on property values.

- **Rails-with-Trails Precedents:** A section of the Constitution Trail in Bloomington, IL is a rail-with-trail, with a fence separating the two. Rails-with-Trails also exist along ten NSRR corridors in seven different states (including Illinois), with trail setback distances between 10-45 feet. NSRR does not maintain or manage any of these trails and has worked effectively with local entities to allow rails-with-trails to exist.

- **University of Illinois Proximity:** The KRT extension would provide a destination close to the University of Illinois campus for its tens of thousands of students to use, especially since many students do not use cars in Urbana.

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Proposed KRT Extension Illustration Near Station Theatre[1]

1

Introduction

1. Introduction

The Kickapoo Rail Trail (KRT) is a 24.5-mile multi-purpose recreational trail that follows the former CSX (Conrail prior to CSX) railroad from East Urbana to Kickapoo State Park in Vermilion County designed for pedestrians and bicyclists to traverse some of the most diverse local ecosystems including woodland, prairie, and wetland[2]. In order to build the trail, the Champaign County Forest Preserve District (CCFPD) and the Vermilion County Conservation District (VCCD) acquired the former railroad property. Area residents and organizations have shown their support in a variety of ways in anticipation of the recreation, transportation, and economic development opportunities the KRT could bring to the region. The local fundraising match was met to build the first six and a half miles of the trail, and fundraising efforts continue to this day through the non-profit Champaign County Forest Preserve Friends Foundation.

The first section of the KRT between Urbana and St. Joseph opened on August 25, 2017. CCFPD and VCCD plan to complete the trail from St. Joseph to Kickapoo State Park in the coming years (Figure 1.3). In 2018, the Champaign County Regional Planning Commission (CCRPC) received funding from the Illinois Department of Transportation (IDOT) to develop the KRT Extension Study to analyze the potential of extending the existing KRT westward from its current terminus in East Urbana through Downtown Urbana to Lincoln Avenue.

Figure 1.1 Norfolk Southern Railroad Line in Urbana

Urbana KRT Extension Study Steering Committee

Urbana Park District

Tim Bartlett
Executive Director

Derek Liebert
Superintendent of Planning & Operations

Kara Dudek
Park Planner

Champaign County Forest Preserve District

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Diane Wolfe Marlin
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Carol Mitten
City Administrator

Kevin Garcia
Principal Planner

Champaign County Regional Planning Commission Staff

Rita Morocoima-Black, Planning & Community Development Director

Ashlee McLaughlin, Planning Manager

Gabriel Lewis, Transportation Planner

Kazi Jahan, Transportation Planner

James Sullivan, Transportation Planner

1.1 Study Area

The KRT Extension Study area is bounded by Scottswood Drive extended on the east, University Avenue on the north, Lincoln Avenue on the west, and Main Street on the south (see Figure 1.3). The KRT Extension Study area spans roughly 2.4 miles through a diverse range of land uses populated with residential neighborhoods, commercial businesses, industrial facilities, and several green spaces.

Important features within the study area are the Carle Hospital Main Campus and Leal Park in the western portion, the Boneyard Creek and Vine Street crossings in the central portion, and the Champaign-Urbana Mass Transit District (CUMTD) headquarters in the eastern portion.

1.2 Property Ownership

The current KRT terminus is at the intersection of Main Street and University Avenue. The KRT property owned by CCFPD currently ends west of this intersection at Scottswood Drive extended. All railroad land parcels in the study area west of Scottswood Drive extended are owned by Norfolk Southern Railroad (NSRR). NSRR considers this an active railroad, although the railtrack no longer crosses Smith Road.

1.3 Study Benefits

Following are benefits that can be realized from this study, extending the KRT westward, and the benefit of rail-trails to residents and railroad companies.

Study benefits:

- Evaluate feasibility of extending KRT bicycle and pedestrian facilities
- Facilitate access from the KRT to East Urbana neighborhoods, employers and services like Carle Foundation Hospital and CUMTD, retail opportunities in Downtown Urbana, and recreation areas such as the Boneyard Crossing greenway and Leal Park
- Improve environmental and cultural resource stewardship within the KRT Extension Study area
- Facilitate implementation through existing conditions analysis
- Improve pedestrian and bicyclist safety considerations

Rail trail benefits:

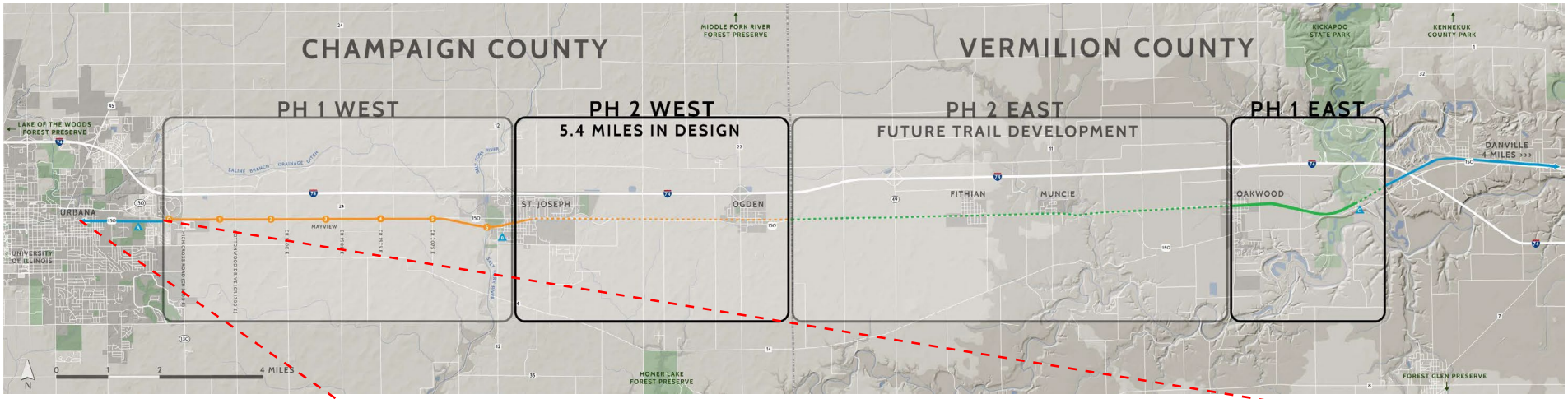
- Increased connectivity and transportation equity
- Access to health and wellness opportunities through active transportation
- Economic benefits for communities and businesses
- Enhancing the environment through wetland preservation and the improvement of air and water quality
- Improved community well-being
- Preserve culturally, historically, and environmentally valuable areas

Rail trails benefit railroad companies, as well:

- Financial compensation for needed railroad parcels
- Reduced railroad liability
- Address trespassing concerns
- Provide improved access to portions of the railroad for maintenance activities

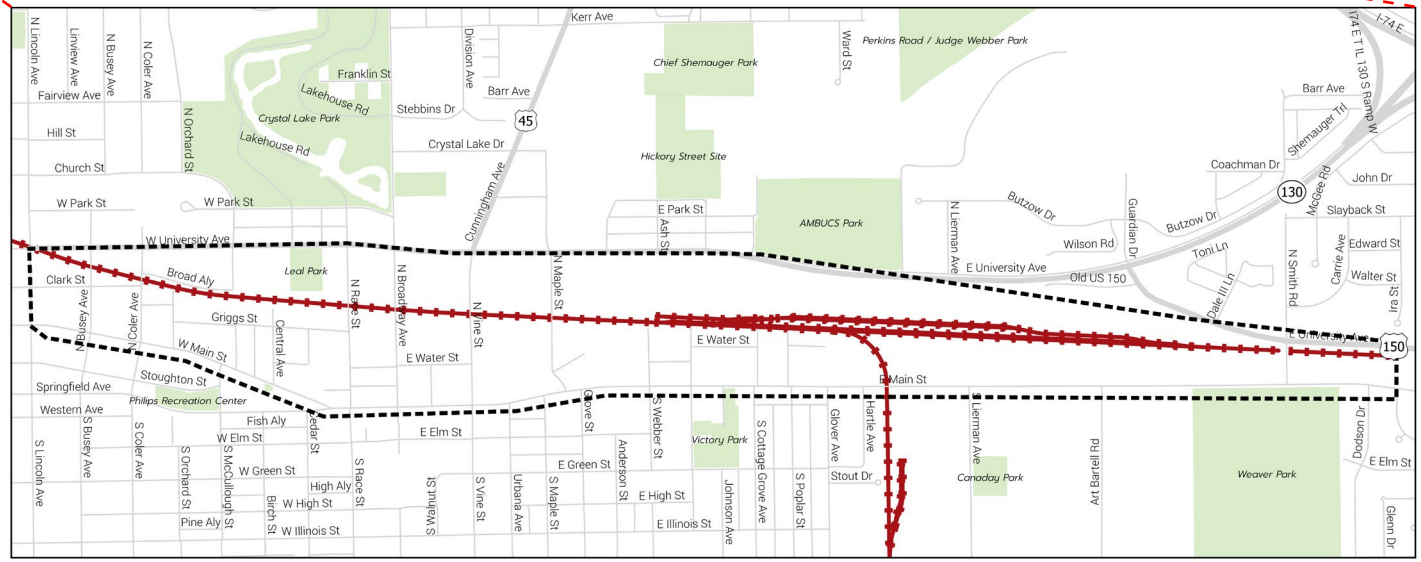
Figure 1.2: NSRR Line South of Emulsicoat Inc.

Figure 1.3: KRT Extension Study Area Maps



Source: www.onekrt.org[3]

KRT Extension Study Area



Source: CCGIS

CHAMPAIGN COUNTY REGIONAL PLANNING COMMISSION

1.4 Study Outline

The KRT Extension Study begins with an overview of the supporting literature that helped shape the analysis performed and considerations addressed. Included with the literature review is a review of prominent peer city rail-trails, and connections to the KRT Extension Study (Chapter 2). The study then discusses the existing conditions found in the study area. Features examined include the current transportation network, land uses, bicycle & pedestrian facilities, traffic volumes, and an analysis of vehicle crashes within the study area (Chapter 3). Following is a network analysis that seeks to determine how well bicyclists and pedestrians are accommodated by the study area's existing transportation network (Chapter 4).

The study next focuses on the current environmental conditions of the study area and how the proposed Urbana KRT extension can maintain and enhance environmental resources that prove crucial to local and regional livability (Chapter 5). Next, design guidelines for rail-trails, trail crossings, and trailheads consistent with national, state, and local plans are outlined (Chapter 6).

CCRPC staff used all of this information to develop five KRT extension alternatives to determine reasonable and practical options that the steering committee should pursue to extend the KRT (Chapter 7). Public input gathered by CCRPC is then considered, giving the community a voice in the KRT extension process (Chapter 8). Finally, combining data analysis and feedback from the public, the steering committee, and stakeholder committee, the study introduces an implementation plan that includes information on how the final alternative will be carried out to improve the transportation network of the area and community well-being (Chapter 9).

Endnotes

1. CCRPC. VIDEO: LRTP 2045 Vision. Retrieved from https://ccrpc.gitlab.io/lrtp2045/overview/introduction/

2. Champaign County Forest Preserve District. Kickapoo Rail Trail. Retrieved from https://www.ccfpd.org/forest-preserve/kickapoo-rail-trail

3. Champaign County Forest Preserve District. Kickapoo Rail Trail. Retrieved from https://167f390a-7f83-4793-84c7-75e5a95a36b1.filesusr.com/ugd/b30b1f_6900e582ed7449838039db4e4712529d.pdf

Norfolk Southern Railroad east of Cottage Grove Avenue

2

Literature and Peer City Reviews

2. Literature and Peer City Reviews

This chapter summarizes local documents related to trail planning in the study area, as well as national best practices and briefly explains their connection to the KRT Extension Study.

2.1 Local Plans

2.1.1 Active Choices: Champaign County Greenways and Trails Plan, 2014

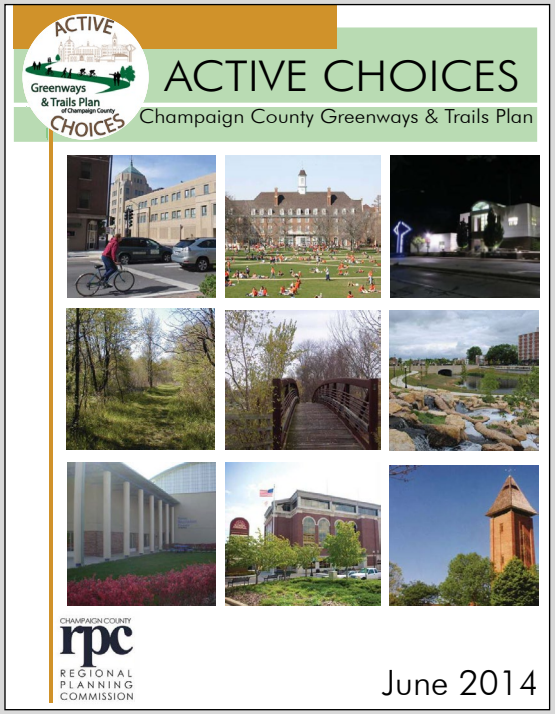
The Active Choices: Champaign County Greenways and Trails Plan analyzes the current status of bike and trail facilities, green spaces, and popular destinations that visitors may travel to by the active modes of bicycling or walking. This plan reflects the desires of Champaign County residents and community leaders to improve mobility through a safe, efficient, and well-connected multi-modal transportation system designed to be sensitive to the surrounding land uses as well as to protect environmental assets, both for their ecological functions and as key elements of community character and livability.

Standardized design guidelines across Champaign County jurisdictions for greenways, trails, and bicycle facilities are detailed in this plan for consistency and as a method to help achieve higher levels of active transportation in the county. The design guidelines include information for both off-street and on-street bicycle facilities. This plan also establishes potential projects, funding mechanisms, and an implementation schedule to facilitate interagency cooperation for developing a regional system of greenways and trails in the County.

Connection to the KRT Extension Study:

- The Greenways and Trails Plan sets countywide design guidelines for greenways, trails, and bicycle facilities (including on- and off-street bicycle facilities) and ensures these systems are standardized and user-friendly across the county.
- This plan includes potential funding sources for trail construction.

Figure 2.1: Champaign County Greenways & Trails Plan, 2014



2.1.2 Long Range Transportation Plan (LRTP) 2045, 2019

The LRTP is a federally-mandated plan that administers federal and state funding to various transportation projects in the Champaign-Urbana metropolitan planning area. This plan recognizes that bicycling has become a more viable choice of transportation over time, and the metropolitan planning area needs a well-connected and efficient bicycle network. In addition to providing increased and improved bicycle parking facilities, improving bicycle safety and education is crucial to ensuring an effective bicycle network in the Urbana-Champaign area.

The LRTP 2045 analyzed resident input regarding transportation strengths and weaknesses by mode, in addition to proposed future projects. Out of seven overarching trends in transportation, residents selected "Walking and Biking for Health" more often than any other as one of the most important factors influencing transportation in our community in the next 25 years.

Connection to the KRT Extension Study:

- The LRTP 2045 vision includes extending the Kickapoo Rail Trail from Kickapoo State Park westward through Urbana-Champaign to the Village of Mahomet.
- This plan documents the public's opinion that "Walking and Biking for Health" is one of the most important factors influencing transportation in our community in the next 25 years.

2.1.3 Urbana Park District Trails Master Plan, 2016

The Urbana Park District manages a total of approximately 16 miles of trails split between roughly 11 miles of paved trails distributed in 18 parks, and about five miles of soft trails found within five parks. This framework will help guide the creation of linkages for existing, proposed, and future trail facilities for walking and bicycling within the community. The Urbana Park District Trails Master Plan (UTMP) also establishes goals, objectives, and performance measures that guide the implementation of proposed recommendations that will further enhance the connectivity of area trails for the enjoyment of area residents and visitors. A steering committee and multiple public workshops, in addition to 1,371 local pedestrian and bicycle survey (PABS) respondents, guided the recommendations listed in the plan.

Connection to the KRT Extension Study:

- The UTMP highlights the community desire for public trails and potential funding opportunities.
- This plan outlines a potential timeframe for proposed trail projects, which includes two extensions of the KRT in Urbana.
- One-third of PABS respondents cited regularly using Urbana park trails to walk, followed by biking (15%), nature hiking (14%), and running (11%).

Figure 2.2: Long Range Transportation Plan (LRTP) 2045

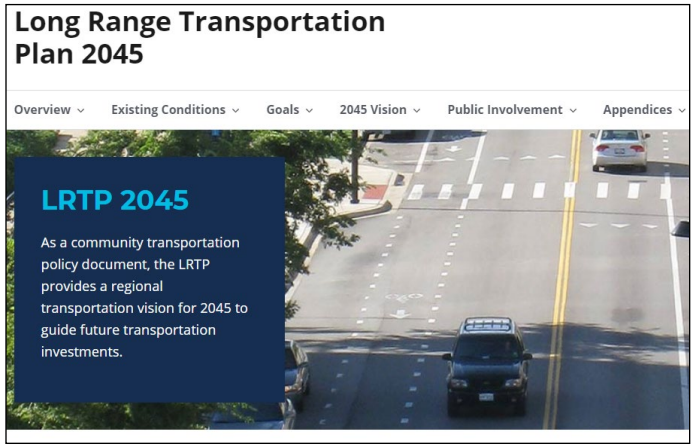


Figure 2.3: Urbana Park District Trails Master Plan, 2016

2.1.4 Urbana Bicycle Master Plan, 2016

The 2016 City of Urbana Bicycle Master Plan (UBMP) is an update of the 2008 plan by the same name. Both plans examine the current status of bicycle facilities in Urbana, in addition to the conditions that must be met for higher bicycle usage in the community. The plans also introduced a variety of bicycle facilities and design standards and provided comprehensive recommendations where bicycle improvements are needed in the City of Urbana.

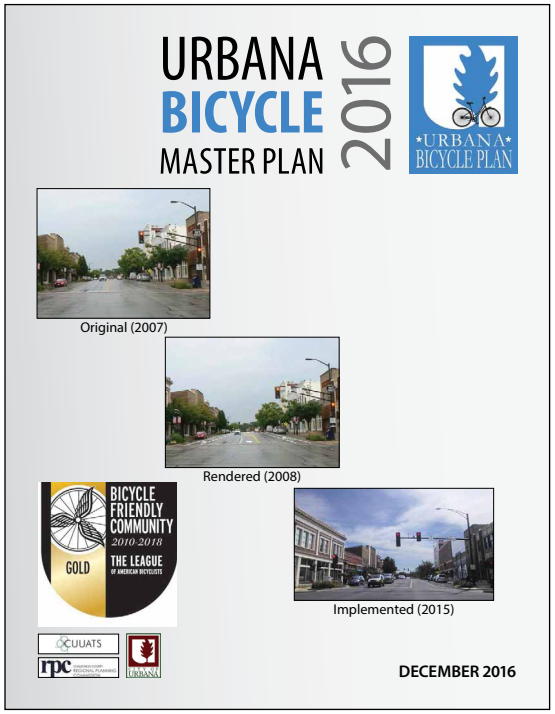
The UBMP outlined two national studies that showcased bicyclist behavior and community conditions that lead to higher bicycle usage. People are more likely to take trips on bike when facilities are safe and convenient, and when bike access is plentiful and socially accepted. Another study identified that about 60 percent of cyclists fall under the "interested but concerned" category, meaning an individual would like to ride more, but they have safety concerns.

With those studies in mind, the UBMP was developed to emphasize the need for accessible bicycle facilities that make cyclists feel safe. The development of the UBMP included public workshops in neighborhoods, schools, and municipal buildings where Urbana residents provided feedback on existing bicycle facilities and requested new ones. The most popular destinations where people requested new facilities were parks and other local green spaces followed by top employers and shopping areas.

Connection to the KRT Extension Study:

- Extending the KRT into Urbana is identified as a regional and community bikeway connection in this plan, while the railroad itself is identified as a constraint to bicycling in Urbana.
- The UBMP includes infrastructure and signage recommendations to be used in the creation of the proposed KRT extension.

Figure 2.4: Urbana Bicycle Master Plan, 2016



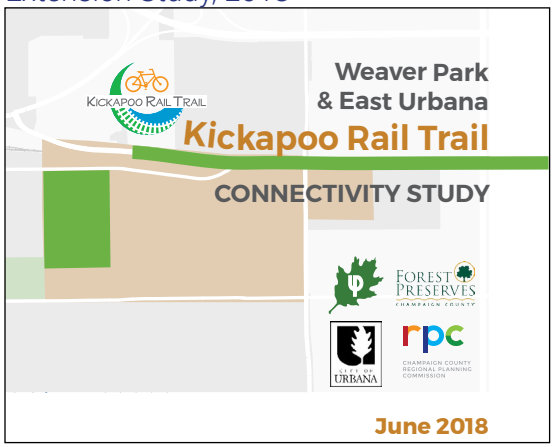
2.1.5 Weaver Park and East Urbana Kickapoo Rail Trail Extension Study, 2018

This study analyzes the existing bicycle and pedestrian infrastructure and usage along the Norfolk Southern Railroad (NSRR) and KRT corridor in east Urbana between Weaver Park and Walmart. The Champaign County Forest Preserve District, the Urbana Park District, the City of Urbana, and CCRPC conducted this study to determine ways to connect the KRT to the proposed trailhead at Weaver Park. Nine alternatives for implementing better connectivity between Weaver Park and the KRT are outlined in the plan, as well as their benefits and drawbacks.

Connection to the KRT Extension Study:

- This study explains how a KRT extension and new trailhead could be implemented for better connectivity and accessibility through east Urbana.

Figure 2.5: Weaver Park and East Urbana Kickapoo Rail Trail Extension Study, 2018



- This study documents ways that new and/or improved bicycle and pedestrian facilities in east Urbana can improve safety and increase access to green space for KRT users.

2.1.6 Urbana Bicycle Wayfinding Plan, 2020

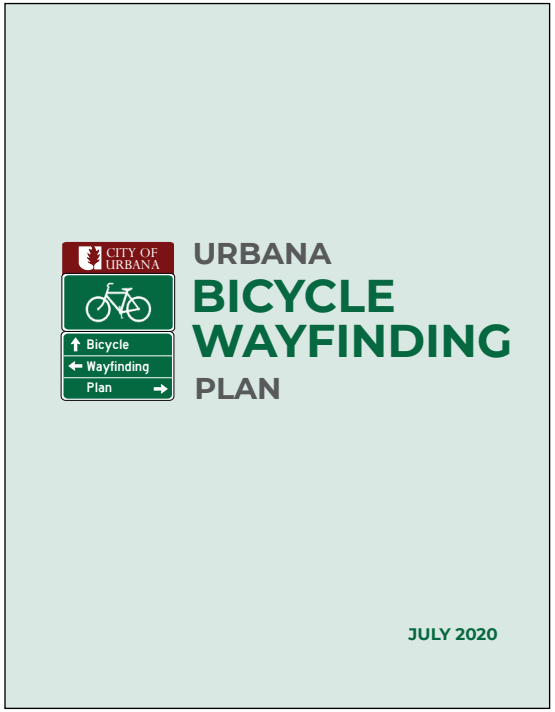
The 2020 City of Urbana Bicycle Wayfinding Plan (UBWP) builds on the 2016 Urbana Bicycle Master Plan (UBMP), both completed by CCRPC. One major UBMP recommendation is to install bikeway and trail wayfinding signs to supplement existing and proposed bike route and trail signs in Urbana. The purpose of the Urbana Bicycle Wayfinding Plan is to facilitate bicycle navigation to riders' destinations while conveying the community's identity and encouraging people to ride.

The UBWP begins with an introduction, and includes sections on peer area comparisons, existing signs and destinations, public input, sign designs and placement, and implementation. There is also a public input report and route sign details list.

Connection to the KRT Extension Study:

- The KRT and Downtown Urbana are identified as primary destinations to be listed on bike wayfinding signs in Urbana, as they are regional destinations. Other community and neighborhood destinations like Carle Hospital, CUMTD, parks, and shopping areas are identified as secondary and tertiary destinations for wayfinding signs.
- Based on public input, the KRT is identified as a Priority 3 Bikeway for bike wayfinding sign implementation in Urbana. Main and Race Streets are identified as Priority 1 Bikeways, and Broadway Avenue is identified as a Priority 2 Bikeway.
- Trail wayfinding sign designs with the KRT logo were developed for this plan, as well as those with the City of Urbana, Urbana Park District, Champaign County Forest Preserve District, Carle, and CUMTD logos.

Figure 2.6: Urbana Bicycle Wayfinding Plan, 2020



2.1.7 Urbana Pedestrian Master Plan, 2020

The 2020 City of Urbana Pedestrian Master Plan (UPMP) provides guidance to improve walking in Urbana, and was guided by community input and best planning practices. The plan begins with an introduction, and includes sections on goals and objectives, existing conditions, infrastructure types, public input, recommendations, and implementation.

The UPMP is a guide to help the City of Urbana plan for infrastructure and programs to create a more walkable community. The plan sets goals and objectives to address accessibility and connectivity, equity, safety, and vibrancy. The condition and compliance with the Americans with Disabilities Act (ADA) of sidewalks and shared-use paths, curb ramps, crosswalks, and pedestrian signals are analyzed. Prioritization criteria were developed to create recommendations for all existing and planned pedestrian facilities.

Connection to the KRT Extension Study:

- An equity objective in this plan is for Urbana to invest in the extension of the KRT to at least one Urbana neighborhood with predominately low- or moderate-income households by 2030. A vibrancy strategy in this plan is to extend the KRT to more Urbana neighborhoods.
- The KRT corridor from East Main Street to Maple Street received the most public comments where people most want to see pedestrian infrastructure improvements.
- The KRT study area between Cottage Grove Avenue and Maple Street is identified as a Top Priority Trail Project in the Central Urbana neighborhood.
- This plan recommends installing a shared-use path through the entire KRT extension study area, as well as trail connections to adjacent streets and neighborhoods.

Figure 2.7: Urbana Pedestrian Master Plan, 2020

2.1.8 Urbana Park District Strategic Plan, 2020

The Urbana Park District Strategic Plan 2020 updates the previous version, written in 2007, to set priorities and focus district-wide resources on publicly supported initiatives. These common initiatives are referred to as the four plan pillars: You Belong Here, Placemaking, Health & Wellness, and Trails & Connectivity. These pillars represent efforts to reach underrepresented residents, create engaging spaces for recreation and health, review the need for indoor recreation spaces, and expand the current trails network.

The UPD Strategic Plan reviews Urbana's diverse demographics to understand who is being served and who can still be reached. The Plan then discusses the formation of its four pillars before transitioning into the goals and objectives of the Plan to make strides towards what is important and impactful for the community. Timeframes for this plan's goals are five years, unless otherwise noted. The goals and objectives include strategies, performance measures, and responsible staff groups for achieving the UPD Strategic Plan vision. Relative estimated costs and potential sources of funding are listed for each goal followed by a general implementation strategy.

Connection to the KRT Extension Study:

- Goal #3 of the Trails & Connectivity Pillar is to promote a regional trail system through study of Kickapoo Rail Trail (KRT) extension into downtown Urbana.
- Objective A states that completing the *Urbana Kickapoo Rail Trail Extension Study* by the end of 2020 is a priority.
- Objective B aims to develop a plan to guide stakeholder groups in next steps for future years of KRT development. This speaks directly to both the goals of the *Urbana Kickapoo Rail Trail Extension Study* and extending the KRT as a whole.
- Objective C seeks to further the implementation of the *Weaver Park & East Urbana KRT Connectivity Study*. That study's goals align with objectives of this study, including connecting the KRT to Weaver Park, developing a primary trailhead at Weaver Park, and improving east Urbana access.

Figure 2.8: Urbana Park District Strategic Plan, 2020

2.2 State Documents

2.2.1 Illinois Bike Transportation Plan, 2014

The Illinois Department of Transportation (IDOT) released the Illinois Bike Transportation Plan in 2014, the first statewide bicycle plan in Illinois history. The plan serves as a transportation alternatives chapter of the 2012 Illinois State Long Range Transportation Plan, and follows the long range plan's theme of Transforming Transportation for Tomorrow. It provides IDOT with policies, best practices, and strategic direction for implementing a sustainable, multimodal transportation system in Illinois. The Illinois Bike Transportation Plan is built upon five foundational principles: access, choices, connectivity, safety, and collaboration.

Connection to the KRT Extension Study:

- The KRT corridor from Danville, through Urbana-Champaign, to Bloomington-Normal is identified as a regional trail corridor recommendation in this plan.
- This project's public input results summary lists off-road trails as the most comfortable bicycle facility by Illinoisans. People identified the top two barriers to bicycling in Illinois as traffic safety and lack of facilities, which a trail in the KRT extension study area would resolve.

Figure 2.9: Illinois Bike Transportation Plan, 2014

2.2.2 Illinois Department of Transportation (IDOT) Bureau of Design and Environment (BDE) Manual, Chapter Seventeen, Bicycle and Pedestrian Accommodations, 2019

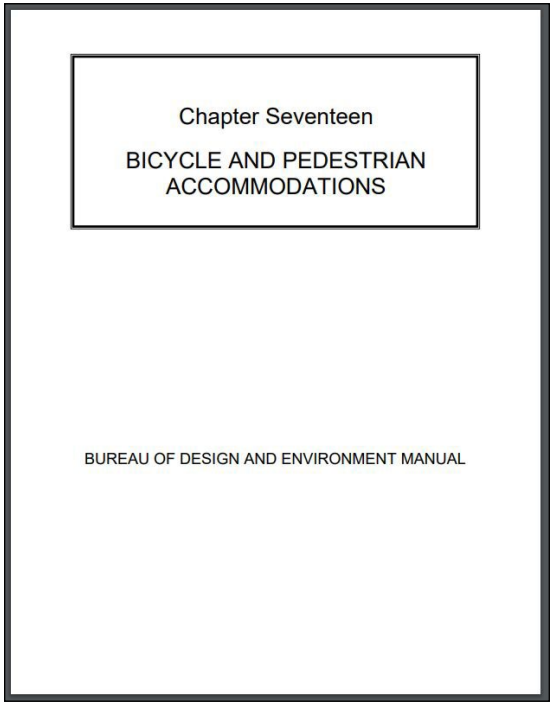
When sufficient bicycle and pedestrian demand is indicated in a planned transportation improvement, the Illinois Department of Transportation (IDOT) provides the appropriate accommodations using its Bureau of Design and Environment (BDE) Manual. Guidelines are applied from Chapter 17, Bicycle and Pedestrian Accommodations, last updated in August 2019.

BDE Section 17-2.03(d), Additional Safety Considerations, states: The determination of the separation distance between a path and an active railroad is dependent on the speed and frequency of the rail service, the amount of access available to the railroad from the surrounding area, and the requirements of the railroad company. For low speed and low frequency service, the separation may be as little as 10-15 ft (3.0-4.6 m), with no physical barrier (e.g. fencing, landscaping). As railroad speeds and frequencies increase, the requirements for increased separation and a physical barrier increase as well. An 8 ft (2.4 m) high chain link fence or other barrier type may be required to satisfy the railroad company that path users will be adequately separated from the hazards of the trains.

Connection to the KRT Extension Study:

- A rail-with-trail along the KRT corridor is allowed by IDOT.
- Based on low train speeds and frequency, this study will use a working assumption of a 15 foot separation from the railroad centerline to the edge of a proposed trail right-of-way along the KRT corridor.

Figure 2.10: IDOT BDE Chapter 17, 2019



2.3 National Documents

2.3.1 America's Rails-with-Trails, 2013

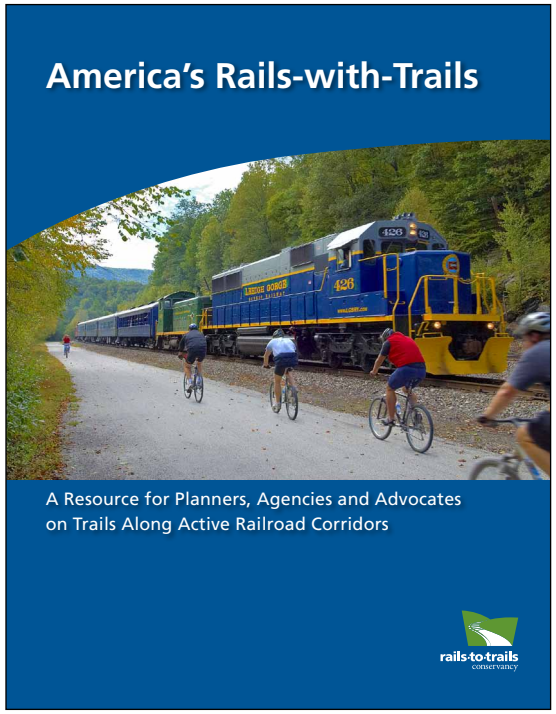
Americans increasingly demand the type of safe, accessible trails for recreation and connectivity to economic centers that rails-with-trails can provide. Rails-with-trails have a proven record of security and have not been shown to be any more or less safe than other off-road bike facilities. Only one rails-with-trails user has died since 1992. Data suggests that robust trail planning and communication between partners greatly reduces the chances of injury or death.

In general, railroad and trail managers have good relationships when developing rails-with-trails agreements, according to this study. Some railroad companies required the addition of common design elements such as setbacks, separation (fencing), and crossings to increase safety. One-third of trail managers interviewed for this study reported that they indemnified the railroad of any liabilities associated with the trail as part of their agreement. Several trail managers also reported setback requirements (distance between the centerline of the nearest track and the nearest edge of the trail or the separation feature) enforced by the railroad, usually ranging from a 25 to 30-foot minimum.

Connection to the KRT Extension Study:

- Safety measures contribute to higher trail use and better partnerships among railroad companies, trail managers, and trail users.
- Feasibility studies, such as the KRT Extension Study, provide a useful framework and easier implementation then if a trail was constructed without a study previously conducted.
- Adherence to generally accepted design standards and/or best practices in designing the trail will generally protect the trail manager or municipality from liability.

Figure 2.10: America's Rails-with-Trails, 2013



2.3.2 Rails-with-Trails: Lessons Learned, 2002

This report details Americans' desire for safe trails that directly connect to popular community locations. Also discussed are some of the documented benefits experienced by railroad companies that have collaborated on rails-with-trails such as reduced trespassing, reduced vandalism, and financial compensation for land. Both trail proponents and railroad companies can seek new sources of funding to improve railroad safety and support railroad freight and passenger services.

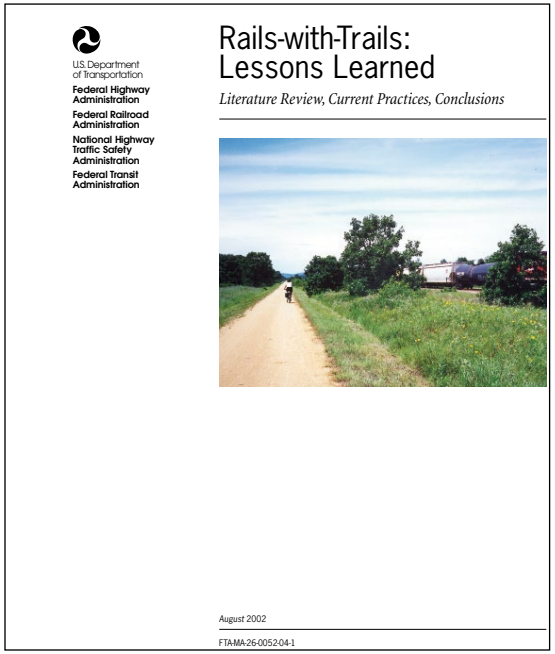
The study also lists trail construction best practices and policies regarding liability and financial compensation. Some railroad companies may require safety features such as signs, bridges, gates, fences, ditches, and road markings, as part of an agreement. All stakeholders should develop trail use regulations regarding hours of use, pets, alcohol, and trail perimeters. Most police

departments respond “as needed” to trespassing and vandalism, rather than having regular patrols.

Connection to the KRT Extension Study:

- Local stakeholders should undertake a comprehensive feasibility analysis of proposed rails-with-trails.
- Trail managers should have open and exhaustive communication with railroad companies detailing the benefits, consequences, and construction involved with developing rails-with-trails.
- This study sets engineering standards for setbacks, separations, road markings, trail size, and other relevant features for successful rails-with-trails implementation.
- Trail setback varies from less than 2.1 m (7 ft) to 30 m (100 ft) with an average of almost 10 m (33 ft) from the centerline of the nearest track depending on factors such as train speed and frequency, maintenance needs, applicable state standards, separation techniques, historical problems, track curvature, topography, and engineering judgment.

Figure 2.11: Rails-with-Trails: Lessons Learned, 2002



2.3.3 Rail-Trails and Safe Communities: Experience on 372 Trails

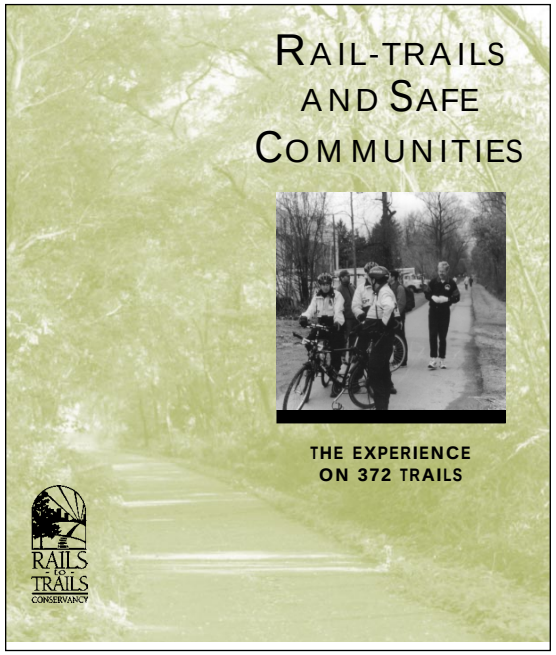
The Rail-Trails and Safe Communities[1] report seeks to address questions over the safety of rail-trails that managers and designers often face from residents. These concerns, while genuine, are perpetuated by trail opponents with only a handful of newspaper headlines to back up their assertions rather than empirical research. Produced by the Rails-to-Trails Conservancy in cooperation with the National Park Service, the Safe Communities report presents the results of a survey of rail-trail managers from 372 trails across the country. The results show overwhelmingly that not only do rail-trails not increase crime along their corridors, but often result in lower levels of crime after installation.

The report documents the level of crime on trails and identifies mitigation measures used by trail designers and managers. The objectives of the study were threefold: 1) to document the levels of crime on urban, suburban and rural rail-trails with current statistics and comprehensive data, 2) to examine trail management strategies that can mitigate crime and improve trail safety, and 3) to put crime on trails in perspective. The report includes a summary of past studies, methodology, results, recommendations, and several case studies.

Connection to the KRT Extension Study:

- Despite concerns that extending the KRT along the NSRR ROW would increase criminal activity, residents of the area can expect to see a decrease in both major and minor crimes should a rail-trail be installed versus the volume currently being reported. This improves the overall safety of neighboring property, strengthening the case for trail installation.

Figure 2.11: Rail-Trails and Safe Communities, 1998



2.3.4 Project Report for Property Value/Desirability Effects of Bike Paths Adjacent to Residential Areas

This 2006 report[2] utilized existing case studies and a hedonic pricing model to assess the property value impacts of new bicycle paths on nearby housing values. In addition, the report presents information about the relationship between crime and new bicycle and pedestrian paths.

The majority of the case studies indicated that a shared-use trail has a slight increase on property values and ease of sale on nearby properties, with some showing no effect. No real evidence supported trail opponent assertions that property values would be adversely affected. Conclusions show that the strongest factor indicating increases in nearby property values is the successful integration of the trail into neighborhood development by developers and planners. Essentially, the better the planning and management, the higher the property value increase on nearby properties. One strategy to preserve adjacent property values is designing the trail to minimize potential homeowner/park user conflicts. Furthermore, the hedonic pricing model developed in this project examined factors affecting property values in Delaware and concluded that a bicycle path would be expected to slightly increase property values by about $8,800.

Connection to the KRT Extension Study:

- Benefits to adjacent homeowners of extending the KRT is the potential for an increase in property value and desirability.
- Homeowners near the proposed KRT extension could see their properties sell faster, due to higher rates of perceived favorability of properties near recreational sites.
- Some case study residents who were originally opposed to trail construction near their homes indicated that, upon completion of the trail, it was actually a positive influence in the community.
- The findings of this report suggest crime around the NSRR ROW should not increase based on the installation of a rail-trail.

2.4 Neighboring Cities

2.4.1 Indianapolis, IN: Monon Trail

This 10.4 mile long rail-to-trail follows the old Monon Railroad, an important Union supply line during the Civil War. One of the oldest rail trails in Indiana (1999)[3], this shared-use trail has asphalt paving and serves an estimated 1.3 million users a year.[4] This trail runs north from Downtown Indianapolis to neighboring Carmel. Both rail-with-trail and rail-to-trail sections can be found along the Monon Trail. Trail crossings are marked at street intersections. Connections to major interstates, the Indiana State Fairgrounds, Broad Ripple Village, Marot Park and Nature Preserve, and Butler University have contributed to the trail's success and strong support from the community.

Connection to the KRT Extension Study:

- Connectivity is a key feature of the Monon Trail, especially with the proximity to arts, cultural, and tourist attractions. Proposed KRT extension connections such as historic Downtown Urbana and the University of Illinois campus offer similar connectivity options, which can lead to greater community use and support.
- Urban street crossings can be dangerous, but appropriate trail crossing signage and treatments can increase safety.

Figure 2.12: Pollinator along the Monon Trail in Indianapolis, IN

Figure 2.13: Restaurant along the Monon Trail in Indianapolis, IN

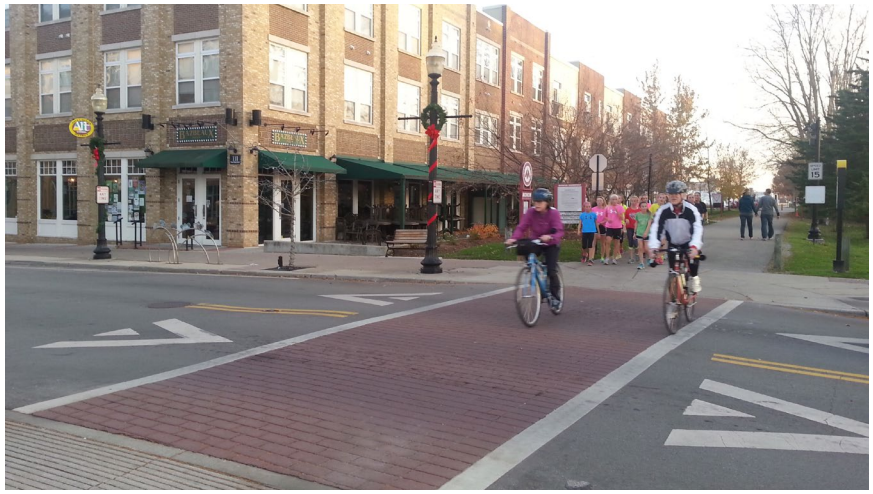
2.4.2 Carmel, IN: Monon Greenway

This 5.2 mile shared-use path extends through the city of Carmel from E. 146th Street to E. 96th Street.[5] This asphalt trail follows the abandoned Monon Railroad and was completed in 2002.[3] Cyclists and pedestrians enjoy connectivity to the popular Monon Trail, Civic Square, and Monon Center at Central Park. Residents and business owners benefit from the Greenway, and adjacent streets offer shops and restaurants. On Saturday mornings during the summer season, the Carmel Farmers Market on Carter Green is open along the Monon Greenway trail.

Connection to the KRT Extension Study:

- Economic growth can be a significant benefit of developing urban rail trails.
- Smaller sections of a larger trail network can be feasible, popular, and connect communities.

Figure 2.14: Monon Greenway in Carmel, IN



2.4.3 Bloomington, IN: B-Line Trail

This 3.1 mile long rail-to-trail follows the former CSX Railroad line from the north to south side of Bloomington, Indiana.[6] This shared-use trail features a 12' paved surface that connects to various destinations including four major plazas; the Wonderlab Museum of Science, Health, and Technology; Kroger grocery store; Bloomington Community Farmers' Market; and Downtown Bloomington. Surveys show that physical exercise is the most popular use of the trail which continues to have a positive impact on overall exercise levels of local residents.

Connection to the KRT Extension Study:

- Community options for safe and enjoyable physical activity are a strong driver of rail-trails' success.
- Rail-trails improve health and safety by providing an off-street facility for people to walk or bike from residential neighborhoods to access healthy food. This includes retailers such as Schnucks, Save-A-Lot, and Best of Africa along the rail line in Urbana.

Figures 2.15: B-Line Trail in Bloomington, IN near Kroger

2.4.4 Chicago, IL: The 606 Trail

This 2.7 mile long rail-to-trail runs along Bloomingdale Avenue, from Ashland Avenue on the east to Ridgeway Avenue on the west. Originally used as an elevated rail line for the industrial Bloomingdale Line in the late 1800s, and then abandoned by the mid 1990s, the 606 project began in 2004 and construction finished in 2015.[7] The project budget was $95 million with funding coming from federal, state, county, city, and private sources. The 606 consists of a 10' wide shared-use path managed by the Chicago Park District. The national non-profit, Trust for Public Land, was integral in developing the trail that serves 80,000 residents across four city neighborhoods.[5]

Connection to the KRT Extension Study:

- Funding and support can come from a diverse resource-pool, including engaged citizens.
- Despite high costs of installation, urban trails can present opportunities for significant community, economic, and environmental benefits.

Figures 2.16: The 606 Trail in Chicago, IL

2.4.5 Normal, IL: Constitution Trail

The 42+ mile Constitution Trail runs through the Twin Cities of Bloomington and Normal, Illinois. It is a hard-surface shared-use path, that follows the abandoned Illinois Central Gulf Railroad.[8] Dedicated to the 200th anniversary of the United States Constitution, the trail began as a 4.3-mile linear park, but since opening in 1989 the trail has grown into an impressive network of trails across the region.[6] Despite initial reservations and concerns from public officials and residents over the steadily increasing cost (originally estimated at $450,000, but increased to $738,000 following final construction bids) and encroachment on private property, community members quickly changed their opinions on the trail upon the completion of Phase 1.[9] Now the trail serves an average of 5,000 residents per day and is a keystone feature in the community.[10]

Connection to the KRT Extension Study:

- Initial concerns over price and feasibility could be diminished once the benefits of rail-trails are realized in practice.
- Many professionals and Illinois State University college students rely on the Constitution Trail to commute to work and school.

Figure 2.17: Constitution Trail in Normal, IL

2.4.6 Bloomington, IL: Constitution Trail

Sections of the 42+ mile Constitution Trail are found throughout Bloomington and Normal, Illinois. Because the trail is not continuous, limitations exist for bicycle transportation. However, according to the Bloomington Bicycle Master Plan, a survey of Bloomington residents lists the trail as one of the most important park and recreation amenities in the city.[11] The roughly 4-mile Southtown Branch in Bloomington runs along an active railway for a brief section. This railway is separated by a chain link fence to prevent people from trespassing or crossing the railroad illegally.[6]

Connection to the KRT Extension Study:

- A disconnected trail network, such as the Constitution Trail, still offers plenty of transportation and recreational opportunities.
- Regardless of its length, the rail-with-trail section of the Constitution Trail sets a precedent that rails-with-trails can be built in Central Illinois.

Figure 2.18: Constitution Trail in Bloomington, IL

2.4.7 Rantoul, IL: Ryan Park Path

This 1.5 mile rail-to-trail runs along the former alignment of the Fisher Farmers Railroad, which connected the north side of Rantoul to farming communities to its east and west.[12] The Ryan Park Path was acquired from the Illinois Central Gulf Railroad and built in 2013, and is now owned and maintained by the Village of Rantoul. This path runs east-west along the Clark Street corridor, from the Canadian National Railroad to the Lon Drive corridor shared-use path in northeast Rantoul. It passes Ryan Park, hence the name. The path also passes two of Rantoul's four elementary schools: Northview School, and Eastlawn School. This rail-trail is landscaped, and has lights for nighttime use. The Ryan Park Path is part of an almost 9 mile connected trail system in Rantoul, linking to Downtown Rantoul, residential neighborhoods, local schools, and other community facilities.

Connection to the KRT Extension Study:

- In addition to the KRT, the Ryan Park Path is another example of a rail-to-trail project completed in Champaign County in the last 10 years.
- The Ryan Park Path proves that a rail-trail can exist within an urban community near residential homes in Champaign County, providing an integral connection to schools, businesses, parks, and other trails.

Figure 2.19: Ryan Park Path in Rantoul, IL

Table 2.1: Neighboring Cities Trail Review

Trail Name	Location	Mileage	Type of Trail	Surface Type	Setback (Distance from railroad centerline)
Monon Trail	Indianapolis, IN	10.4	Rail-to-Trail, Rail-with-Trail	Paved	14 feet along Rail-with-Trail section.
Monon Greenway	Carmel, IN	5.2	Rail-to-Trail	Asphalt	N/A
B-Line Trail	Bloomington, IN	3.1	Rail-to-Trail	Asphalt	N/A
The 606 Trail	Chicago, IL	2.7	Rail-to-Trail	Asphalt, concrete	N/A
Constitution Trail	Normal, IL	43	Rail-to-Trail	Asphalt, concrete	N/A
Constitution Trail	Bloomington, IL	43	Rail-to-Trail, Rail-with-Trail	Asphalt, concrete	50-138 feet along the Southtown Branch.
Ryan Park Path	Rantoul, IL	1.5	Rail-to-Trail	Asphalt	N/A

2.5 Norfolk Southern Rails-With-Trails

The Norfolk Southern Railroad Company (NSRR) is no stranger to rails-with-trails (RWT) or rails-to-trails. The Rails-to-Trails Conservancy (RTC) identified 10 different trails in seven different states totaling over 31 miles, that follow active or converted NSRR lines. Five of these trails are in the Midwest, and have become integral recreation and transportation facilities in their communities.

NSRR has allowed setback distances ranging from 10-45 feet along the rails-with-trails listed in Table 2.2, similar to the 25-30 foot minimums reported in the 2013 America's Rails-with-Trails report (see Section 2.2.1 above). Rail-to-trail and rail-with-trail segments along these Midwest NSRR lines average 3.8 miles and cross a diverse range of land uses, from urban centers home to universities near Ann Arbor and Ypsilanti, to highways such as Route 4 in Illinois, to expanses of agriculture fields. This average length is over a mile longer than the proposed KRT extension, meaning that a 2.4 mile trail through the existing east Urbana land uses (see Chapter 3) is a more than a reasonable and feasible distance to implement.

Many of these trails do not have physical barriers between the rail line and the trail besides a vegetation buffer, and negative interactions with railroad operations have been a non-issue for these trails. Norfolk Southern Railroad does not maintain or manage any of the trails, and has worked effectively with a host of organizations including Madison County Transit, the City of Wabash, Ann Arbor Parks and Recreation Department, Mercer County, and Rails to Trails of Wayne County.

With such a rich history of rails-to-trails and rails-with-trails in the Midwest and across the country, the NSRR has shown the ability to work amicably with trail managers and organizations to reach beneficial outcomes for all involved. The trails listed in Table 2.2

set precedents for how the proposed KRT extension can move forward in a safe, and efficient manner, while cementing NSRR as a community pillar within the Champaign County area, advancing popular transportation and recreation opportunities.

Table 2.2: Norfolk Southern Railroad Midwest rail-with-trail corridors

Trail Name	Location	Rail-with-Trail Length	Total Trail Length	Surface Type
Madison County Transit Quercus Grove Trail	Madison & Macoupin Counties, IL	6.56 miles	18.4 miles	Asphalt, Crushed Stone
Paradise Spring Riverwalk Trail	Wabash County, IN	0.75 miles	0.75 miles	Asphalt
Border-to-Border Trail	Washtenaw County, MI	2.5 miles	19.7 miles	Asphalt, Boardwalk, Crushed Stone
Celina Coldwater Bikeway	Mercer County, OH	4.61 miles	4.61 miles	Asphalt
County Line Trail	Wayne County, OH	4.42 miles	6.75 miles	Asphalt

Endnotes

1 Rails-to-Trails Conservancy. Retrieved from https://safety.fhwa.dot.gov/ped_bike/docs/rt_safecomm.pdf

2 Rails-to-Trails Conservancy. Retrieved from https://www.railstotrails.org/resourcehandler.ashx?id=4482

3. Indiana Trails. Retrieved from https://www.indianatrails.com/monon-trail-indianapolis

4. Rails-to-Trails Conservancy. Retrieved from https://www.railstotrails.org/trailblog/2009/march/01/indianas-monon-trail/

5. Indiana Trails. Retrieved from https://www.indianatrails.com/monon-greenway-carmel

6. Rails-to-Trails Conservancy. Retrieved from https://www.traillink.com/trail/b-line-trail/

7. Trust for Public Land. Retrieved from https://www.the606.org/

8. Rails-to-trail Conservancy. Retrieved from https://www.traillink.com/trail/constitution-trail/

9. Town of Normal Parks and Rec. Retrieved from https://www.normal.org/1121/Constitution-Trail

10. Town of Normal, IL. Retrieved from https://www.youtube.com/watch?v=T5ozjnKZdKM&feature=youtu.be

11. City of Bloomington. Retrieved from https://www.cityblm.org/Home/ShowDocument?id=8344

12 Trail Link, Rails-to-Trails Conservancy, Village of Rantoul Trail. Retrieved from https://www.traillink.com/trail/village-of-rantoul-trail/

Figure: Norfolk Southern Railroad Line in Urbana

3

Existing Conditions

3. Existing Conditions

Planning for the future of the Kickapoo Rail Trail requires an acute understanding of current conditions found within the Urbana KRT Extension study area. This chapter provides an in-depth look at existing land uses, the transportation network, traffic volumes, and recent crash data in and around the study area.

3.1 Existing Land Uses

The KRT extension would pass through an urban section of Urbana that includes a wide variety of land uses. The roughly 313-acre study area, from Lincoln Avenue to just north of Scottswood Drive, is dominated by commercial land use (Figure 3.2). Institutional land uses are found interspersed throughout the study area, including a large section devoted to the Champaign-Urbana Mass Transit District (CUMTD) administrative and maintenance facilities, and the Champaign County Sheriff's Office. To the southeast and west lay the majority of the residential housing in the study area, made up of primarily single-family homes with multi-family residences mixed in. Several open spaces are found in the study area, including Leal Park and the Boneyard Creek Crossing. Table 3.1 shows the percentage of land use types within the study area.

Figure 3.1: Carle Hospital Main Campus & NSRR

Table 3.1: Composition of existing land uses

Land use	Area (acres)	Percentage
Commercial	94.33	30.20%
Other	84.79	27.14%
Institutional	47.50	15.20%
Single Family Residential	39.70	12.71%
Industrial	13.28	4.25%
Multi-Family Residential	13.27	4.25%
Agriculture	9.63	3.08%
Open space	7.41	2.37%
Utilities	1.44	0.46%
Mobile Homes	1.06	0.34%
Total	**312.40**	**100%**

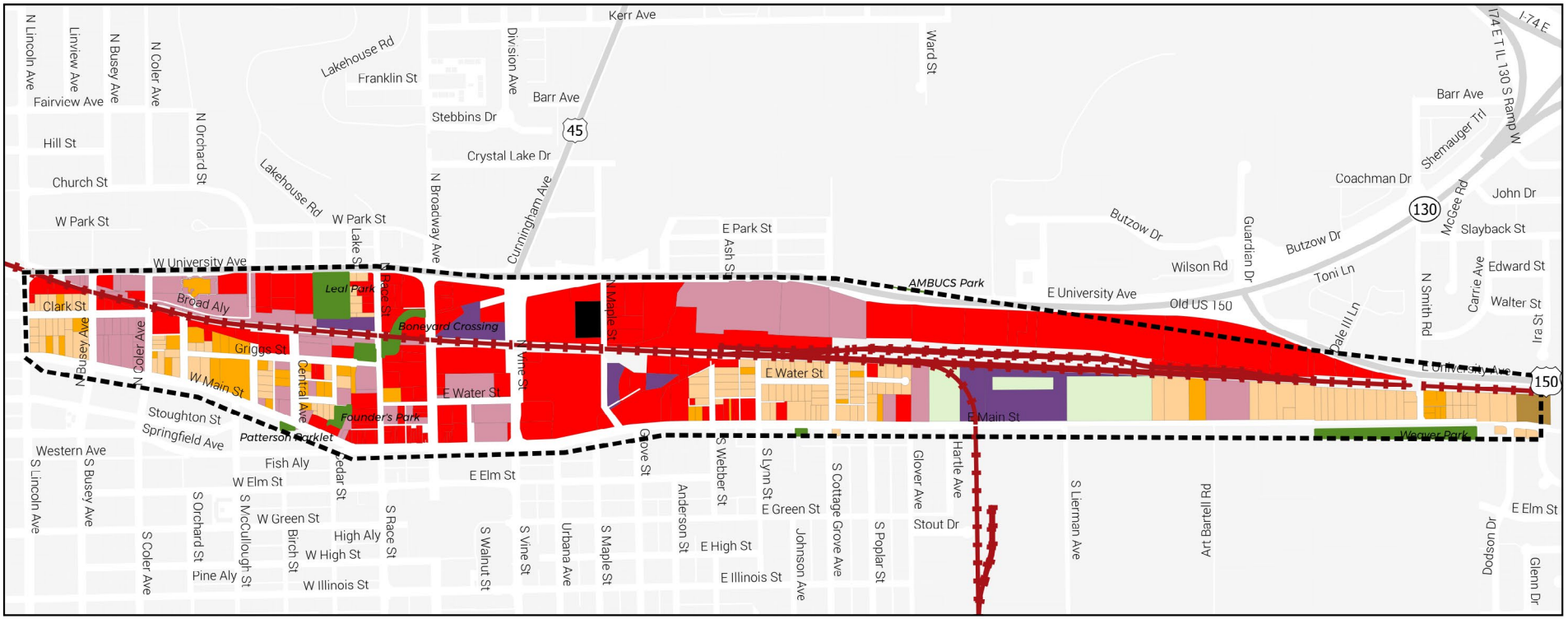
a. Commercial

Commercial land uses account for the largest percentage of land area in the study area, accounting for 95 acres (30.20 percent). With businesses ranging in size from the small Super Pantry in the northwest corner of the study area, to the mid-sized 25 O'Clock Brewing Company in the south-central portion, to the larger Schnucks in the eastern portion, the KRT extension study area hosts a wide variety of businesses. Input from business stakeholders of all sizes is a crucial aspect to trail success. Increased pedestrian and bicycle traffic resulting from the proposed KRT extension could benefit many of the businesses in the study area.

b. Other

Accounting for 84.79 acres (27.14 percent) of the KRT extension study area, this designation accounts for land covered by railroads, streets, and public rights-of-way. All railroad land in the study area is owned by Norfolk Southern Railroad (NSRR). These areas are not specifically shown on the map as a land use.

Figure 3.2: Existing Land Uses



Parcel-Level Land Use

- Single Family Residential
- Multi-Family Residential
- Commercial
- Mobile Homes
- Industrial
- Utilities
- Agriculture
- Institutional

- Roadway
- Railroads
- Open space
- Study Area

Source: CCGIS

0 0.25 mi

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c. Institutional

Accounting for 47 acres (15.20 percent) across the study area, institutional land uses include a large section of Champaign-Urbana Mass Transit District property south of AMBUCS Park and University Avenue as well as sections of Carle Hospital, the Urbana Civic Center, and several churches. Carle Hospital's Care Clinic Ob/gyn and Radiation Oncology Center are immediately adjacent to the proposed KRT extension which could offer patients, families, and staff excellent recreational opportunities.

d. Single-Family Residential

Accounting for 39.70 acres (12.71 percent) across the study area, single-family residences make up approximately three quarters of residential land use in the study area. Occurring mainly in the southeastern portion of the study area paralleling the heavily residential East Main Street, much of the housing either backs up to the Norfolk Southern Railroad (NSRR) property or faces few land-use barriers in traveling to the railway.

e. Industrial

Industrial land uses total 13.28 acres (4.25 percent) in the study area, and occur mostly between Central Avenue and Webber Street and along Main Street where the railroad tracks turn south. Industrial land uses present the potential for industrial waste and the movement of heavy machinery which might not be compatible with a recreational trail. Special waste is considered in more detail in Chapter 5.

f. Multi-Family Residential

Accounting for 13.27 acres (4.25 percent) across the study area, multi-family residences follow similar location patterns as single-family residences but on a smaller scale. The majority of this land use comes from the Element on Main Apartments on McCullough Street south of Griggs Street and the railway. Almost all multi-family residences within the KRT extension study area will be within walking distance of the proposed KRT extension.

g. Agriculture

Accounting for 9.6 acres (3.08 percent) across the study area, agricultural land use centers around three small plots on the north side of Main Street between Hartle Avenue and Art Bartell Road.

h. Open Space

Open space land uses occupy 7.41 acres (2.37 percent) within the study area and include recreational trails, woodlands and wildlife habitats. Leal Park, Boneyard Crossing, Founder's Park, Patterson Parklet, a portion of Weaver Park and two wooded areas lie within the study area while AMBUCS Park, Weaver Park, and Victory Park lie just outside and adjacent to the study area. The proposed KRT extension has the potential to serve as a connection between these different open spaces for people and wildlife in and around the study area.

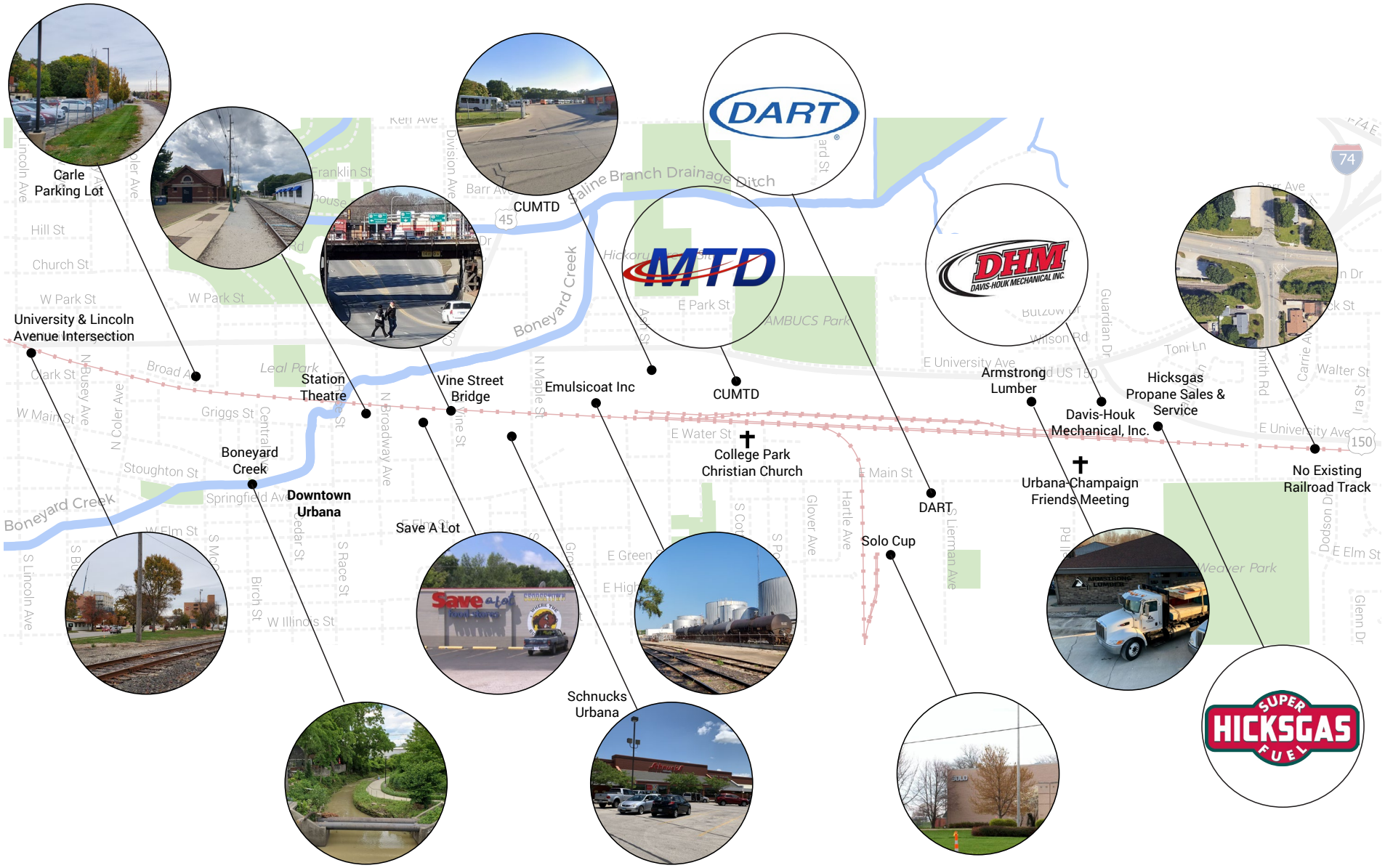
i. Utilities

Accounting for only 1.44 acres (0.46 percent) at one location in the study area, the utilities land use includes a small electrical station on Maple Street south of University Avenue. The station sits more than 60 feet away from the railroad center line, reducing potential land use conflicts with the proposed KRT extension. However, proposed KRT extension users should be aware of live electrical conduits and avoid any contact with the station.

j. Mobile Homes

Accounting for less than 1 percent of the study area, the only mobile home properties exist on the eastern edge of the study area in the Trailside Mobile Home Park. Immediately adjacent to the proposed KRT extension, Trailside Mobile Home residents would gain a direct walking/biking connection to all the destinations located on the proposed KRT extension.

Figure 3.3: Land uses in KRT extension study area



3.2 Transportation Network

Existing features of selected roadways were measured to gather information for analysis of the alternatives. This section describes the following aspects of roadways and intersections in the study area:

- Roadway Functional Classification
- Road Width
- Number of Thru Lanes
- Intersection Control Type
- Posted Speed Limit
- Road Edge Marking Type

3.2.1 Roadway Functional Classification

Roadway functional classification delineates the range of mobility and access functions that roadways serve. Based on Federal Highway Administration (FHWA) classifications, roadways are classified as follows:

i. Interstate

- Provide mobility over long distances with minimal access to adjacent properties.
- No interstates exist within the study area, but I-74 can be accessed to the northeast from University Avenue.

Figure 3.4: NSRR crossing at Race Street

ii. Principal Arterial

- High capacity urban road leading to interstates.
- The only principal arterial road within the study area is University Avenue. The University Avenue and Lincoln Avenue intersection is where two major arterials intersect, and facilitates north-south traffic movement along the west edge of the study area and east-west traffic circulation within the study area.

iii. Minor Arterial

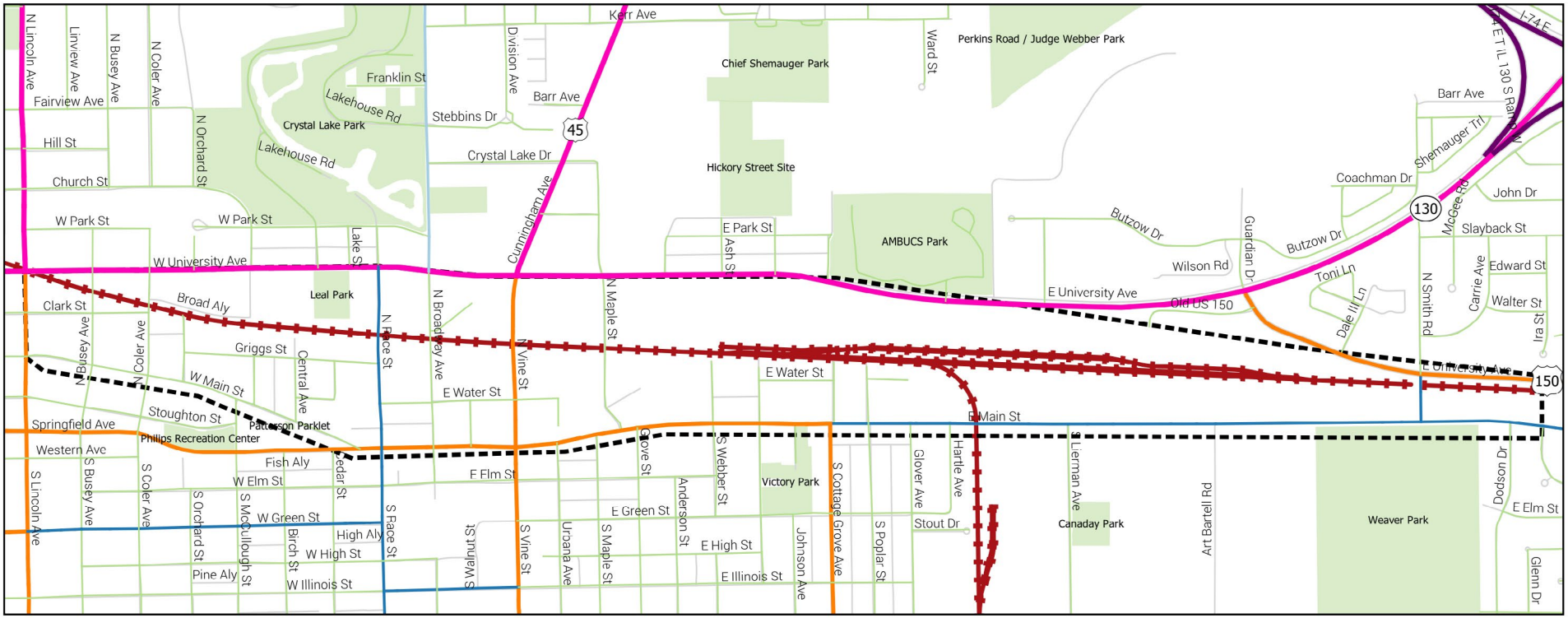
- Moderate-high capacity urban road.
- Several minor arterials exist within study area, including Vine Street, Main Street between Cottage Grove Avenue and Springfield Avenue, and the section of University Avenue that intersects with Smith Road. While these roadways have lower traffic volumes than the rest of University Avenue, they still act as important east-west and north-south routes often receiving traffic volumes from University Avenue.

iv. Major Collector

- Low-moderate capacity road moving traffic to arterials.
- There are three collector roads within the study area: Race Street, Smith Road, and Main Street east of Cottage Grove Avenue. Race Street and Smith Road intersect the railway corridor, presenting options for proposed trail access.

Figure 3.5: Carle Hospital along University Avenue

Figure 3.6: Roadway Functional Classification



Functional Classification

- Interstate
- Other Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Local Road or Street
- Roadway
- Railroads
- Open Space
- Study Area

Source: CCGIS, IDOT

0 0.25 mi

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v. Minor Collector

- Low capacity road moving traffic to arterials.
- No minor collectors exist within the study area, but Broadway Avenue north of University Avenue, paralleling the eastern edge of Crystal Lake Park, is a local example that borders the northern boundary of the study area.

vi. Local Road or Street

- Provide direct land access but are not designed to serve through traffic.
- Most of the roadways within the study area are classified as local roads or streets. Broadway Avenue and Maple Street offer north-south transportation options that intersect the railway corridor, while West Main Street and Water Street aid in east-west traffic flow. Local roads and streets provide direct access and traffic circulation within residential neighborhoods and commercial areas, and provide access to higher order roadways.

3.2.2 Road Width

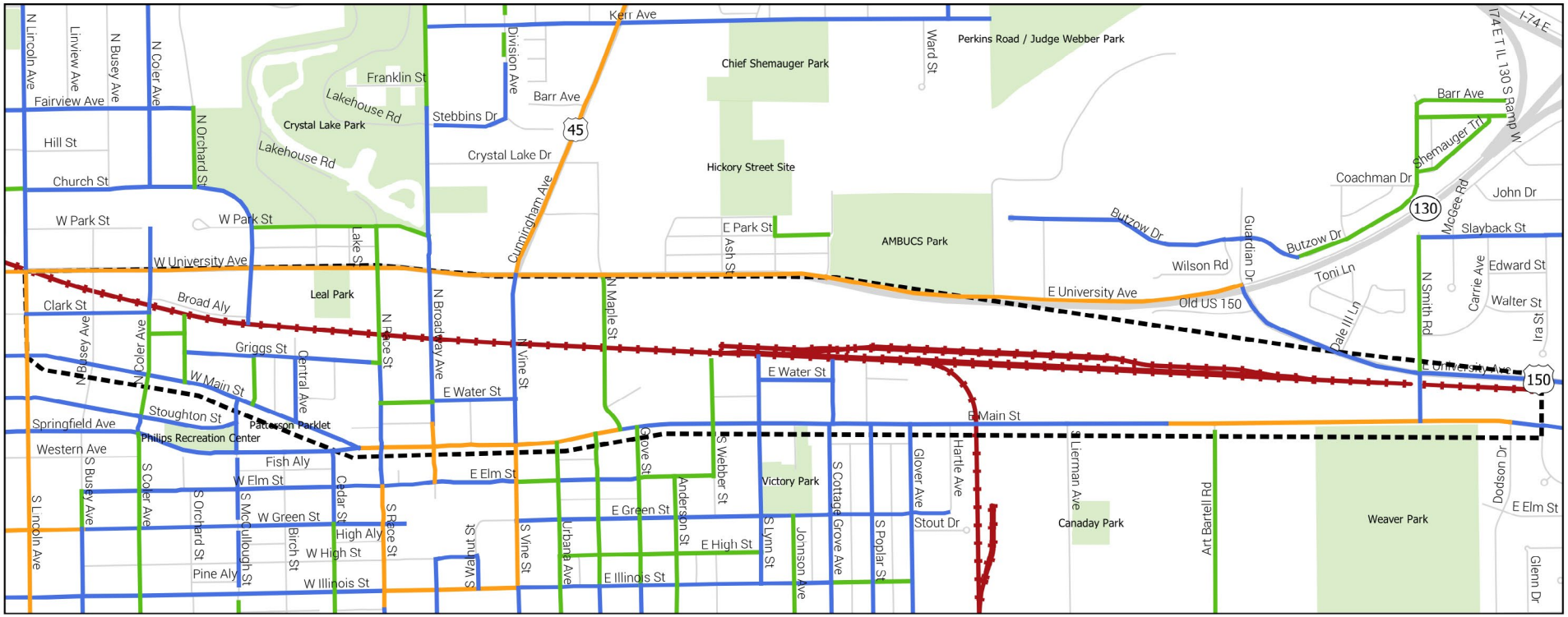
The purpose of measuring road width is to analyze how long trail users will be exposed to vehicles when crossing a road, as well as to evaluate the potential of a road to be restriped to include bicycle facilities to connect to the existing bicycle network and/or the proposed KRT extension. The widest road in the study area is University Avenue with the widest sections (70 feet) located east of Cottage Grove Avenue (Figure 3.3). University Avenue also has the highest traffic volume, fastest speed limits, and least amount of space for pedestrians and cyclists in the study area, resulting in the highest levels of traffic stress for pedestrians and bicyclists. The Illinois Department of Transportation (IDOT) is currently widening sidewalks along University Avenue west of Maple Street to provide more space for pedestrians and bicyclists to use. The next widest road is Main Street between Race Street and Maple Street and between Art Bartell Road and Dodson Drive, which varies between 50 and 65 feet wide. However, in recent years these sections have received road diets, which is when the number of travel moving travel lanes on a roadway are reduced to utilize the extra space for other uses and travel modes. This section of Main Street now has three travel lanes and bike lanes. Cunningham Avenue and Vine Street also vary in width up to 60 feet in some locations.

Most of the roads surrounding the Norfolk Southern Railroad corridor are between 25 and 50 feet wide in the study area, with the exception of the wider roadways of University Avenue, Cunningham Avenue, and Vine Street mentioned above. This means that when crossing or riding along streets, users will often face two to three lane roads with 30 mph speed limits.

The minimum recommended width to install bike lanes on a two-lane road is 30 feet. Some of the narrower streets within the study area, such as a section of Coler Avenue, Cottage Grove Avenue, and Maple Street all have widths less than 25 feet. With widths between 20-25 feet, there is not enough space to install bike lanes in these sections. However, all three of these streets provide sidewalks, and Coler Avenue even offers a signed bike route that crosses Main Street (where it is 50 feet wide) at an all-way stop before connecting to the railway corridor. The Coler Avenue bike route offers access opportunities to the railway corridor from both the north and south, as it connects to Crystal Lake Park and the Fairview Avenue bike route through shared-use paths.

Figure 3.7: Broadway Avenue bike lanes

Figure 3.8: Total Road Width



Street Width

- < 25ft
- 25ft - 50ft
- > 50ft

- Roadway
- Railroads
- Open Space
- Study Area

Source: CCGIS

0 0.25 mi

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3.2.3 Number of Thru Lanes

Thru lanes are defined as a typical travel lane where vehicles are driving straight. These differ from turning or other lanes designated specifically for vehicles entering and exiting the main thoroughfare. Looking at the number of thru lanes on roads within the study area determines how many lanes of traffic pedestrians and bicyclists may have to cross when accessing or leaving the proposed KRT trail.

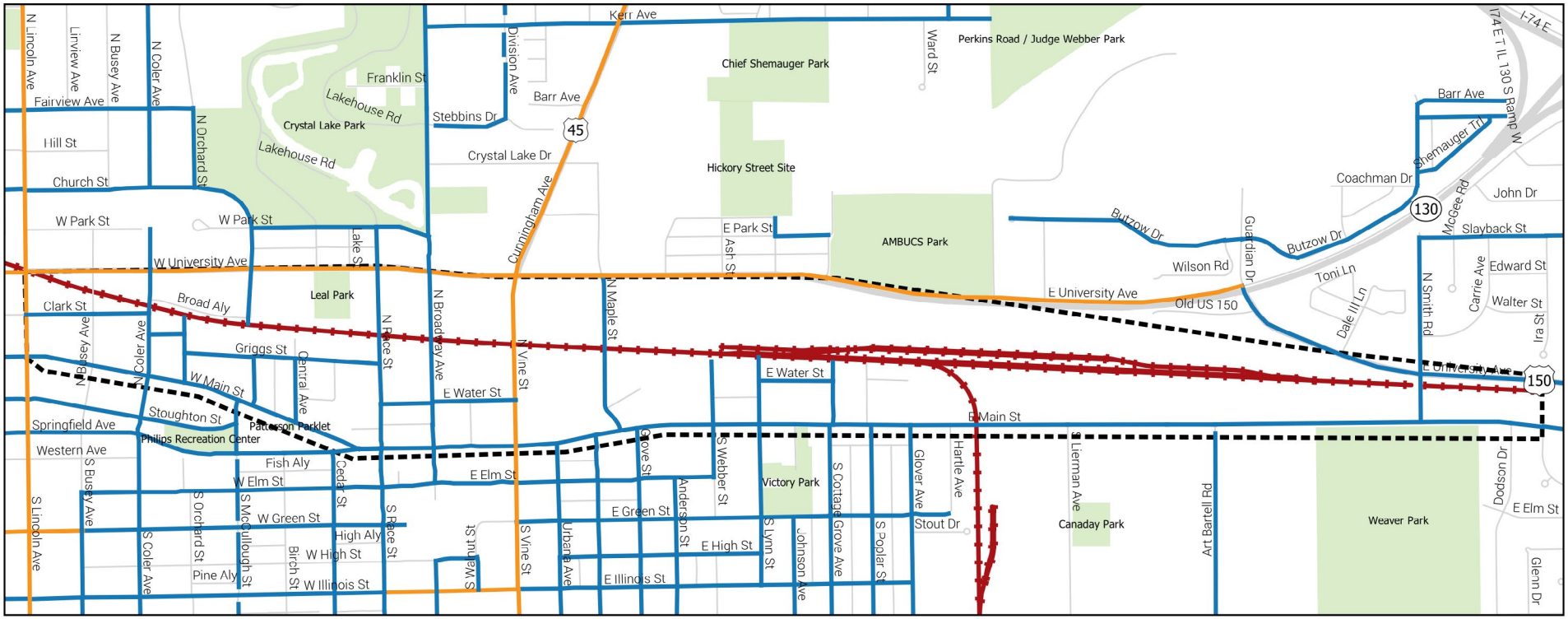
Almost all roads in the study area have one thru travel lane for vehicles, except for University Avenue, Cunningham Avenue, Vine Street, and Lincoln Avenue. These roads all have two thru lanes in each direction (Figure 3.11).

Vine Street is one of the widest and most heavily trafficked streets intersecting the study area but has sidewalks on both sides. There are two signalized intersections with pedestrian signals on Vine Street in the study area: at University Avenue on the northern border of the study area, and at Main Street on the southern border of the study area.

Figure 3.9: Maple Street south of NSRR has two travel lanes

Figure 3.10: Pedestrians crossing four travel lanes of Vine Street in front of Schnucks in Urbana

Figure 3.11: Number of Thru Lanes



Number of Thru Lanes

- 1
- 2

- Roadway
- Railroads
- Open Space
- Study Area

Source: CCGIS

0 0.25 mi

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3.2.4 Intersection Control Types

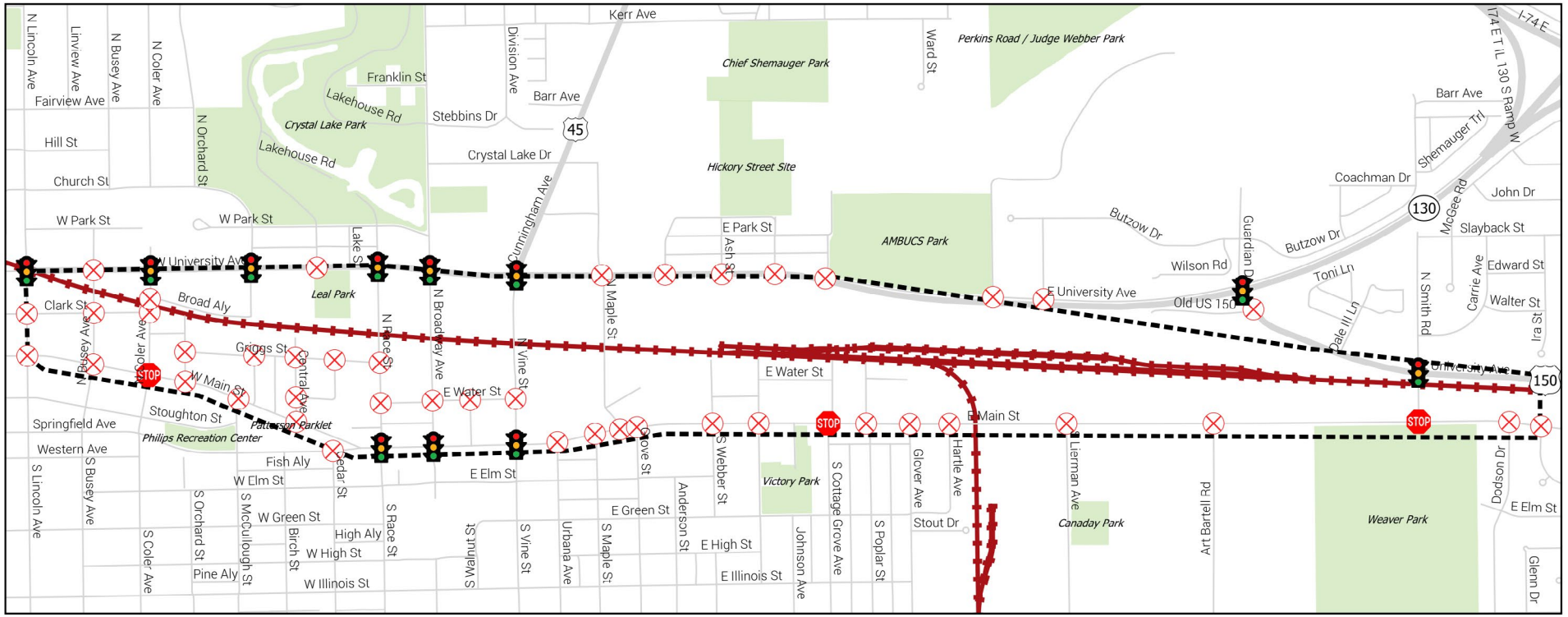
The study area has a mix of intersection controls that vary from one-way stop control to fully signalized intersections (Figure 3.14). University Avenue and Main Street have the most signalized and all-way stop intersections within the study area, partially due to the higher speeds and higher volumes of traffic on those roadways. University Avenue has six signalized intersections, all west of Cunningham Avenue that help moderate traffic around Carle Hospital, commercial businesses, and more heavily foot-trafficked areas. On University Avenue east of Cunningham Avenue, there are no intersection controls until Guardian Drive (outside the study area) and Smith Road. Due to this lack of traffic control, it is currently safest to access the proposed KRT extension from the south between Vine Street and Smith Road.

Main Street has three signalized intersections at Race Street, Broadway Avenue, and Vine Street in the study area. Three all-way stops occur on Main Street in the study area at Smith Road, Cottage Grove Avenue, and Coler Avenue. Main Street also has several stops at minor approaches in the study area to limit traffic entering Main Street from smaller roadways.

Figure 3.12: Traffic Signals at University Avenue and Lincoln Avenue intersection

Figure 3.13: Stop sign on Water Street at Broadway Avenue

Figure 3.14: Intersection Control Types



Intersection Control Type

- Signal
- All Way Stop
- Minor Approach Stop

- Roadway
- Railroads
- Open Space
- Study Area

Source: CCGIS

0 0.25 mi

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3.2.5 Posted Speed Limit

Understanding the posted speed limit patterns help determine how fast vehicles are likely to travel on roads shared with cyclists and pedestrians. Within the study area, University Avenue (US 150) has the highest speed limit of 40 miles per hour (mph) east of Maple Street, and 45 mph east of Cottage Grove Avenue (Figure 3.17). Main Street just east of Lierman Avenue has a 35 mph posted speed limit, as does Cunningham Avenue just outside the study area. The rest of the roadways within the KRT study area have 30 mph posted speed limits. IDOT and the City of Urbana reduced the speed limit on University Avenue west of Maple Street to 30 mph in 2020. The proposed KRT extension would run parallel to both University Avenue and Main Street using the railroad corridor, providing a safer option than those fast-paced roadways for pedestrians and cyclists.

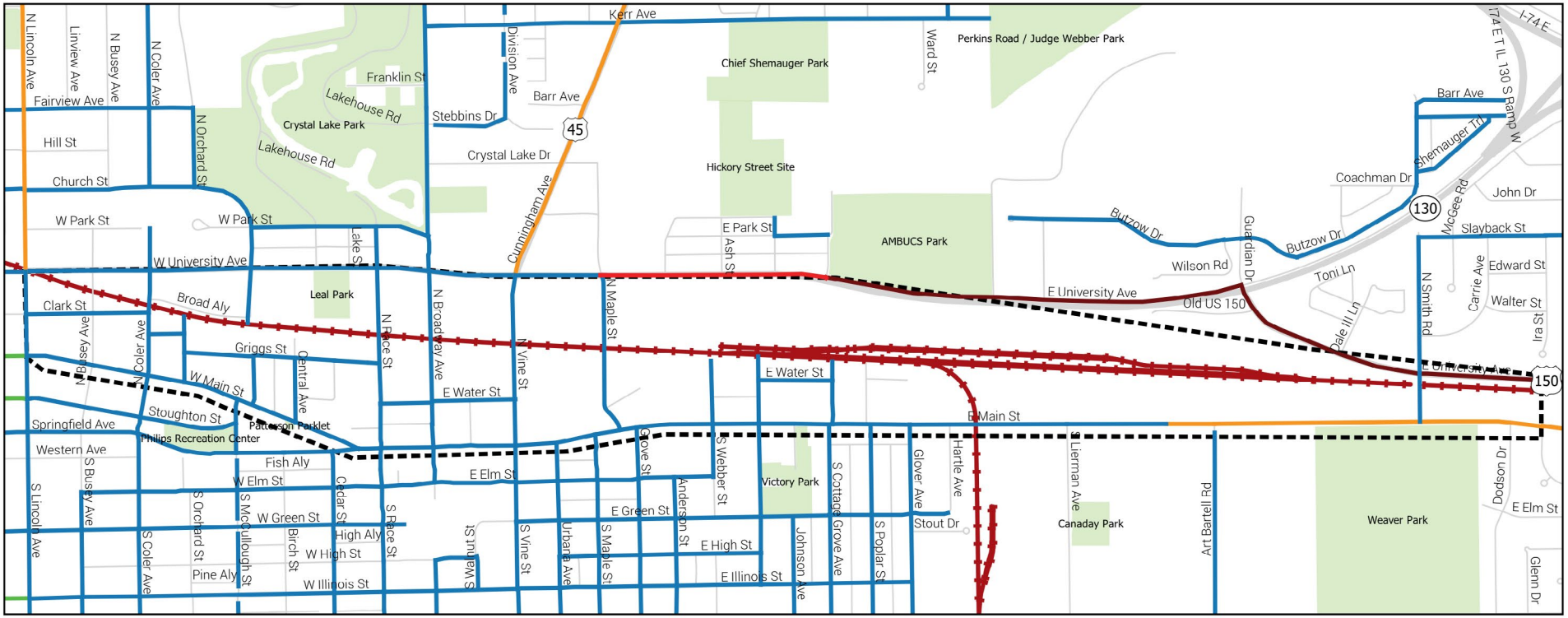
As discussed in the Number of Thru Lanes section, most of the roads in the study area have only one thru lane. When street width proves too narrow, cyclists will have to share the road, usually in 30 mph zones. This lower speed reduces the likelihood for crashes and injuries to cyclists, however all roadway users must follow the rules of the road to maximize safety.

Figure 3.15: Posted speed limit on University Avenue at Cottage Grove Avenue

Source: Google Street View

Figure 3.16: Posted speed limit on University Avenue east of Lincoln Avenue

Figure 3.17: Posted Speed Limits



Posted Speed Limit
- 25
- 30
- 35
- 40
- 45

- Roadway
- Railroads
- Open Space
- Study Area

Source: CCGIS

0 0.25 mi

CHAMPAIGN COUNTY REGIONAL PLANNING COMMISSION

3.2.6 Road Edge Marking Type

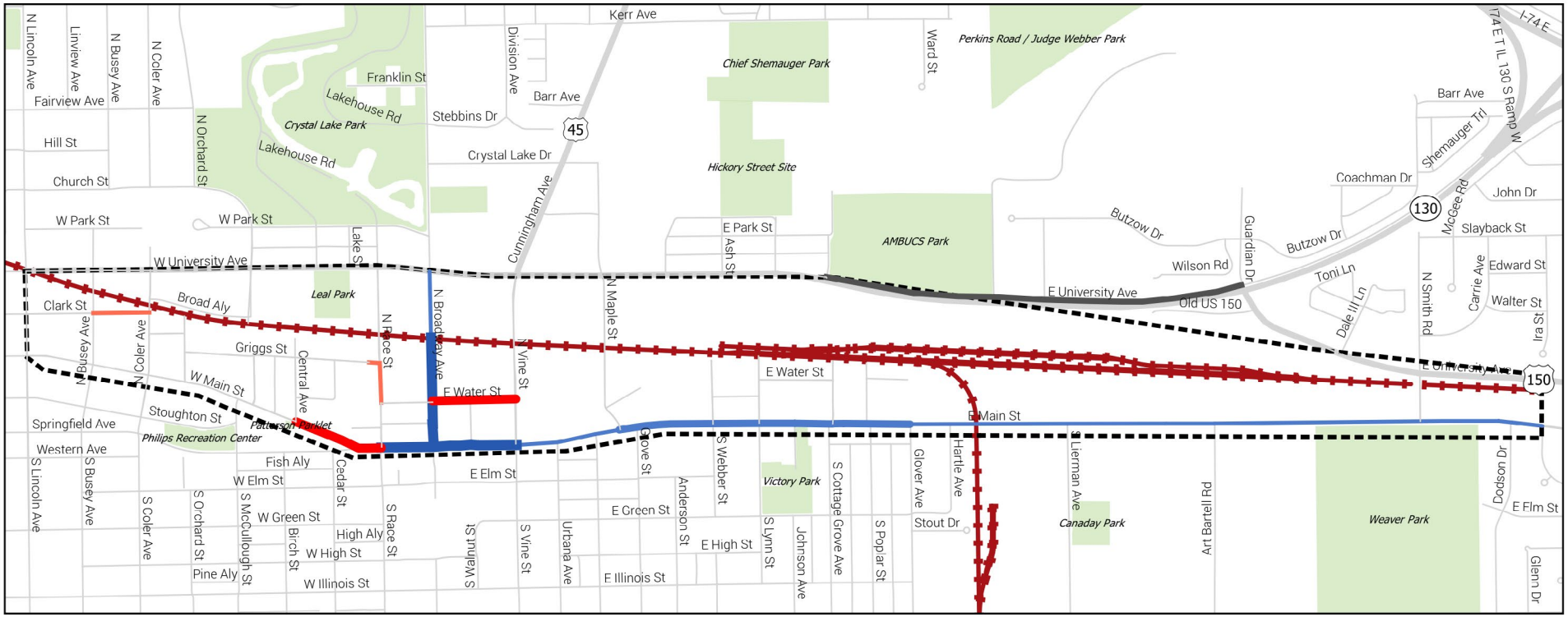
The purpose of analyzing the type of marking at the edge of the road is to see if there is any extra space that bicyclists and/or pedestrians can use to access the proposed KRT trail without traveling in vehicle lanes. Sidewalks exist on at least one side of most streets for pedestrians to travel within the study area, however for roadways without road edge markings, bicyclists will have to share road space with vehicles. Almost all the road edges in the study area are unmarked, with the exception of Broadway Avenue, and Main Street east of Springfield Avenue (Figure 3.20).

Main Street has road edge markings to designate a bike lane between Springfield Avenue and Scottswood Drive. There is one small transition with sharrows at Lierman Avenue, intended to increase driver awareness of potential cyclists without a designated space, but it transitions back to a bike lane after the intersection. Road edge markings to delineate parking on both sides of Water Street exist in between Vine Street and Broadway Avenue. Road markings to delineate parking on one side of the street exist on Main Street between Springfield Avenue and Central Avenue, Race Street between Water Street and Griggs Street, Griggs Street just west of Race Street, and Clark Street between Coler Avenue and Busey Avenue by Carle Hospital.

Figure 3.18: Existing parking on both sides of Water Street

Figure 3.19: Existing parking on one side of Griggs Street

Figure 3.20: Road Edge Marking Types



Road Edge Marking Types

- Bike Lanes
- Bike Lanes, Parking (one side)
- Bike Lanes, Parking (both sides)
- Parking on one side
- Parking on both sides
- Paved shoulders
- None
- Roadway
- Railroads
- Open Space
- Study Area

Source: CCGIS

0 0.25 mi

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3.2.7 Existing Transit Routes

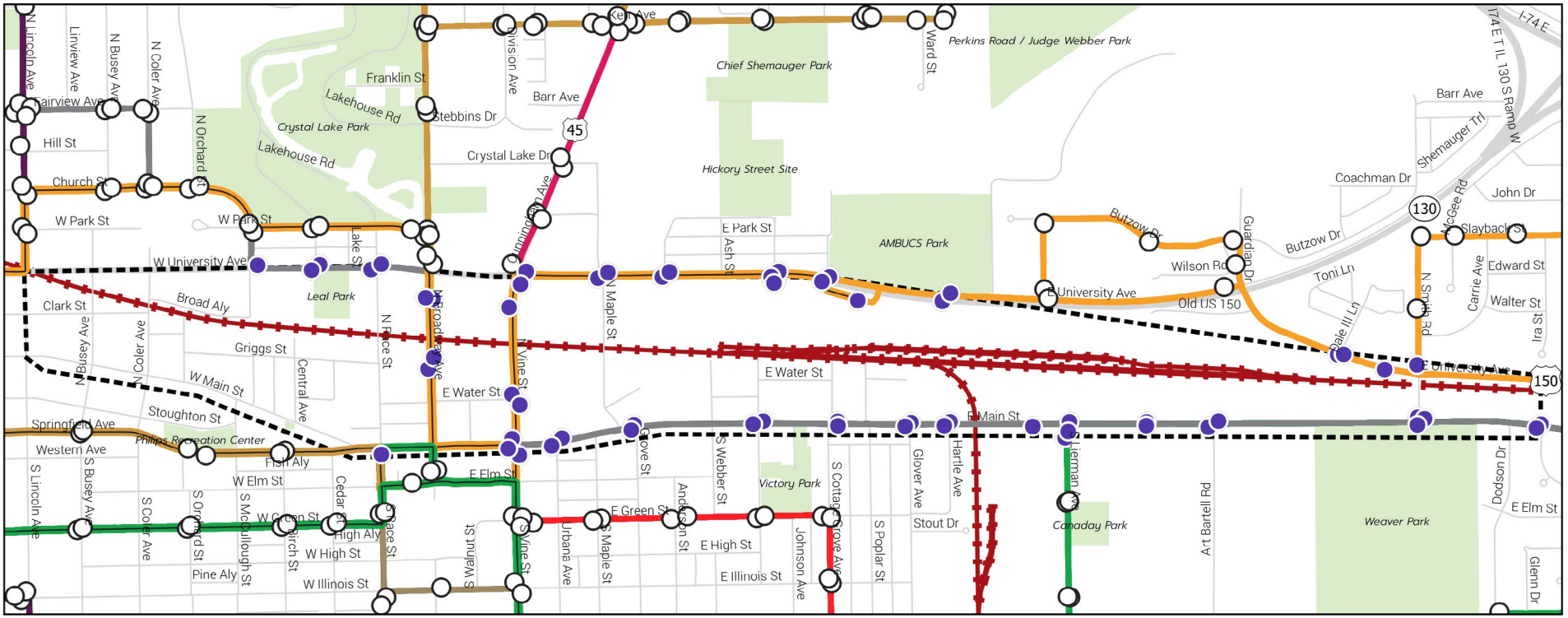
There are a host of existing transit routes throughout the KRT extension study area. The Champaign-Urbana Mass Transit District (CUMTD) operates 17 different bus routes in and around the study area, and 60 bus stops exist within the study area.

Three routes transect the study area from north to south: the Orange/Orangehopper, Gold, and Ruby Lines. The Orange/Orangehopper Line enters the study area on Broadway Avenue, traveling down to Main Street before looping back up Vine Street and continuing east on University Avenue. The Gold Line also uses Broadway Avenue, while the Ruby Line uses Vine Street to travel to and from Downtown Urbana.

All of the other lines run around the borders of the study area. On the southern border of the study area, the Gold/Goldhopper Line uses Main Street west of Broadway Avenue, before leaving the study area to follow Springfield Avenue. The Grey Line runs along Main Street east of Race Street. The Green/Greenhopper Line runs along Main Street between Race Street and Broadway Avenue, and also between Lierman Avenue and Brady Lane.

Of the 60 bus stops that are within the study area, only a handful are within the interior. These stops follow the Orange/Orangehopper and Gold Lines on Broadway Avenue, and the Orange/Orangehopper and Ruby Lines on Vine Street. These stops would provide the best access to the proposed trail, as they are clustered just north and south of the NSRR rail line. The rest of the bus stops are located along University Avenue and Main Street. Most of them lie east of Vine Street along those two roads. Only one stop exists on Main Street west of Vine Street, and only five are west of Broadway Avenue along University Avenue. Users of the proposed trail would be best served accessing it from Vine Street or Broadway Avenue on the Orange/Orangehopper, Gold, or Ruby Lines. However, the stops along University Avenue and Main Street are no more than a few blocks from the proposed trail and would not hinder access substantially.

Figure 3.21: Existing Transit Routes



Weekday Daytime
(2020-2021 Service Year)

- Bronze
- Gold
- Green
- Grey
- Illini
- Orange
- Raven
- Red
- Ruby
- Silver
- Teal
- Goldhopper
- Greenhopper
- Orangehopper

- Bus Stops
- Bus Stops within Study Area
- Roadway
- Railroads
- Open Space
- Study Area

Source: CUMTD, CCGIS

0 0.25 mi

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3.2.8 Existing Bicycle and Pedestrian Facilities

The primary purpose of the KRT extension study is to expand safe, convenient, and functional bicycle and pedestrian facilities linking parks, major destinations, and residential areas of the City of Urbana. Bike lanes, bike routes, shared-use paths, sharrows, and sidewalks are all part of the robust bicycle and pedestrian transportation infrastructure of Urbana, and their presence within the study area will increase usage, convenience, and safety for those wishing to access the proposed KRT extension. Off-street facilities increase safety by separating bicyclists and pedestrians from vehicles. Most often, these facilities are for pedestrian use only, except for shared-use paths.

- Bike Lane – Road lane dedicated for bicycle travel, alongside vehicle travel.
- Bike Route – Road with bikeway signage that provides for easy/safe bicycle travel with no designated lane for bicycles.
- Shared-Use Path – Off-street trail, sometimes alongside a road, closed to vehicle traffic but open for non-motorized pedestrian and bicycle travel.
- Sharrow – Symbol of a bicycle and two chevrons on top. Indicates that bikes and vehicles may use a full lane and is employed when a street is too narrow for a designated bike lane and vehicle lane.
- Sidewalks – Pathway along the side of the road, primarily for pedestrians.

On-street facilities within the study area consist of bike lanes, bike routes, and sharrows (Figure 3.24). Main Street has five-foot bike lanes between Scottswood Drive and Springfield Avenue with the exception of a short section of sharrows at its intersection with Lierman Avenue. The Main Street bike lanes connect to two more bike lanes in the study area: one on Broadway Avenue between Elm Street and University Avenue, and the other on Race Street south of Main Street. The Broadway Avenue bike lanes cross the NSRR corridor.

Off-street facilities within the study area consist of sidewalks and shared-use paths (Figure 3.24). Most streets within the study area offer sidewalks on at least one side of the street, which are typically four to six feet wide. While not prohibited, it is encouraged that cyclists do not use sidewalks as they are too narrow to accommodate side by side travel of both modes. Cyclists who choose to use sidewalks have the same rights as pedestrians but must yield to pedestrians. The availability of sidewalks within the study area makes pedestrian travel easy to access the proposed KRT extension at multiple locations.

Figure 3.22: Broadway Avenue bike lanes

Figure 3.23: Coler Avenue bike route

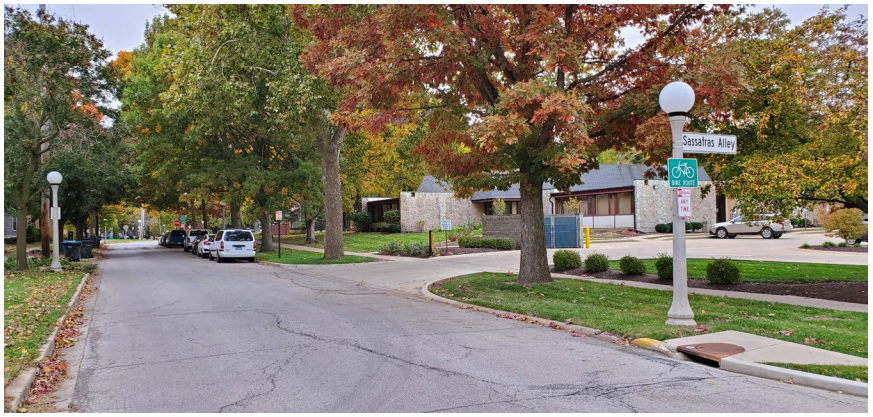
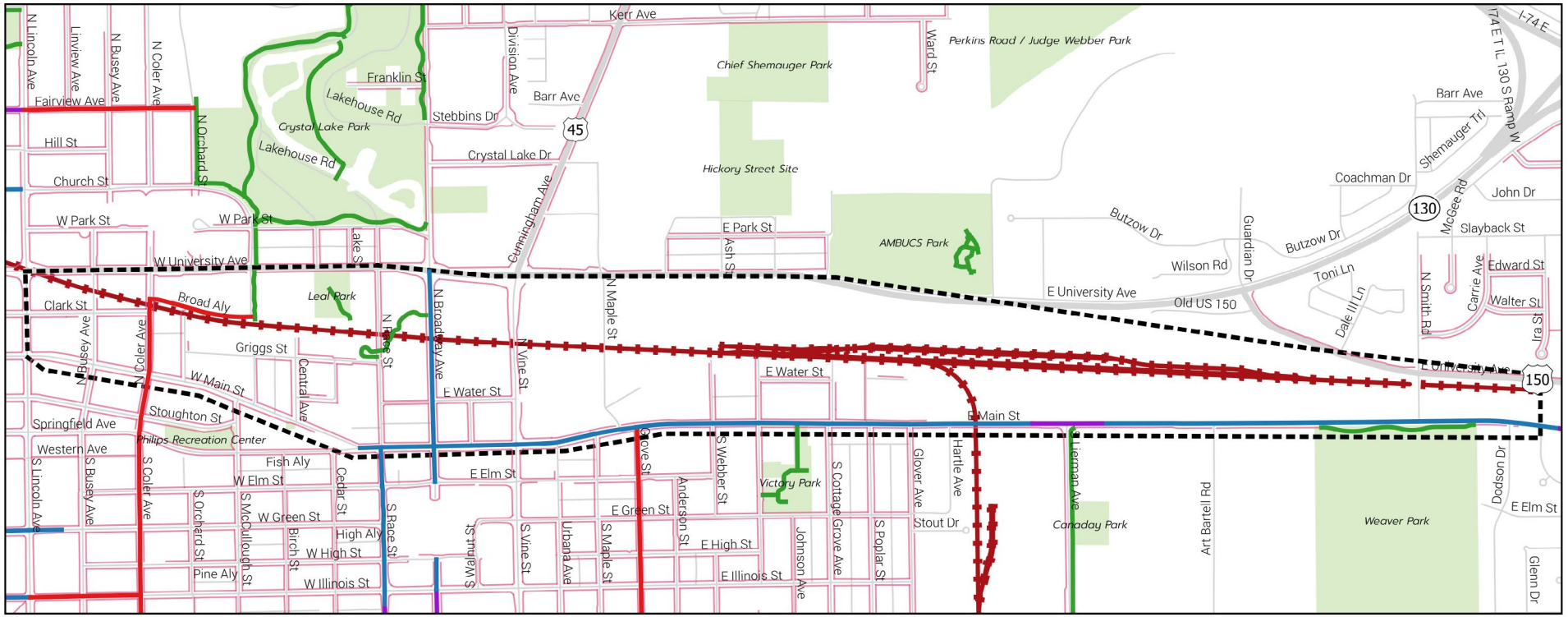


Figure 3.24: Existing Bicycle and Pedestrian Facilities



Existing Bicycle and Pedestrian Facilities

- Bike Lanes
- Bike Route
- Shared-Use Path
- Sharrows
- Sidewalks
- Roadway
- Railroads
- Open Space
- Study Area

Source: CCRPC, CCGIS

0 0.25 mi

CHAMPAIGN COUNTY REGIONAL PLANNING COMMISSION

Several eight to ten-foot wide shared-use paths exist within the study area. Both pedestrian and non-motorized vehicle travel is allowed on these paths, as there is room for two-way traffic. These paths mostly originate in greenspaces and parks, apart from a shared-use path following the Boneyard Creek from Broadway Avenue west, across the railroad corridor, to Griggs Street. Victory Park, just southeast of the study area, has a shared-use path that meets up with the Main Street bike lanes. Crystal Lake Park, just northwest of the study area, has a shared-use path that connects the Fairview Avenue bike route to the proposed KRT extension, and then south to the Coler Avenue bike route. These shared-use paths connect popular parks and greenspace that future users of the proposed KRT extension could also connect to. Having a more connected trail/path/bikeway system increases the functionality of the proposed KRT extension and increases recreational opportunities for the community.

3.3 Traffic Volumes

Average daily traffic (ADT) counts for 2018 were obtained from Illinois Department of Transportation (IDOT) for the purpose of this analysis (Section 3.3.1). In addition, CCRPC, with the assistance of the City of Urbana, Urbana Park District, and CCFPD, collected 12-hour pedestrian, cyclist (on-road and on-crosswalk), and vehicle counts during the day at several intersections in the study area in the summer and fall of 2019 to account for seasonal traffic volume fluctuations. This includes the difference in counts when schools and the University of Illinois are out of session (summer) and in session (fall). These counts took place from 7:00 a.m. to 7:00 p.m (see Section 3.3.2).

Peak hour bicycle and pedestrian counts were conducted at three more locations along the railroad corridor in the fall of 2019 (Section 3.3.3):

- Orchard Street & NSSR
- Central Avenue & NSSR
- Between Race Street & Broadway Avenue

The highest pedestrian counts were collected at the intersection of Coler Avenue and the NSRR. Bicyclist counts were highest at the intersection of Broadway Avenue and the NSRR in the summer and the intersection of Race Street and the NSRR in the fall. Vehicle counts were highest at the intersection of Smith Road and University Avenue.

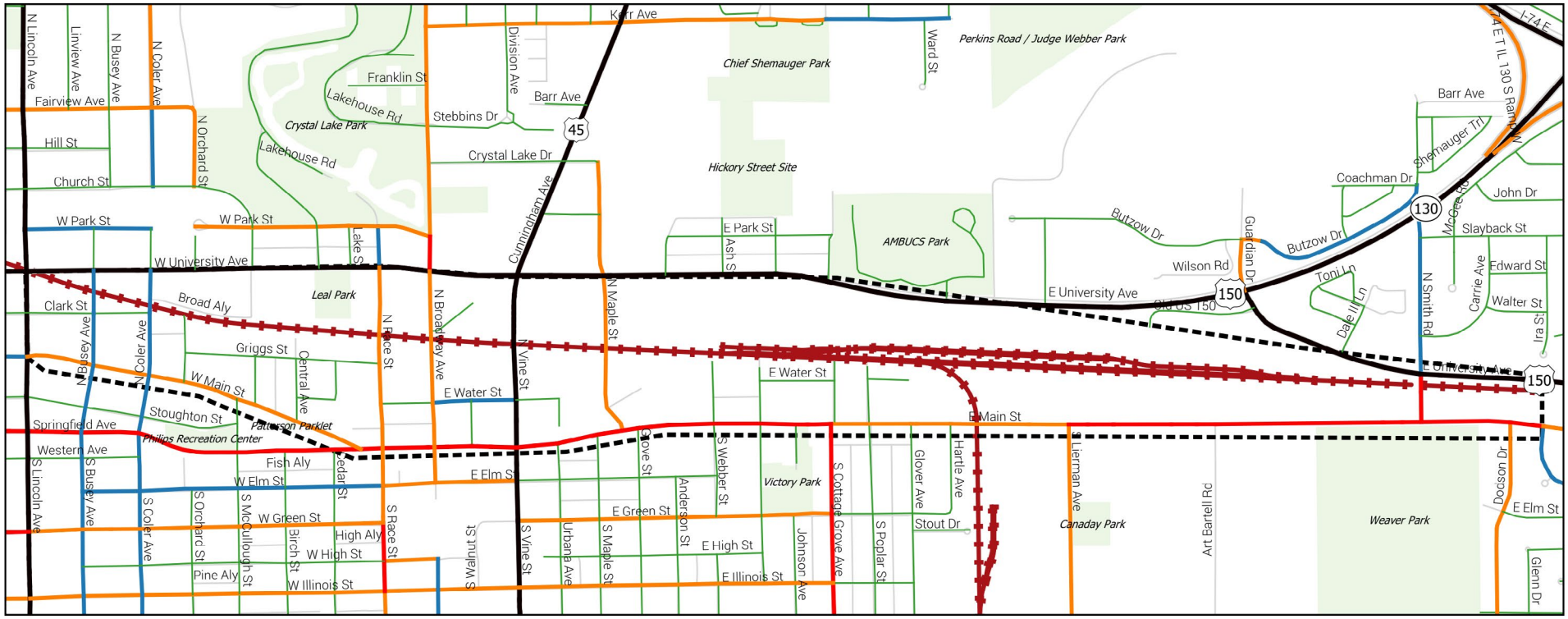
3.3.1 Average Daily Traffic (ADT)

Average Daily Traffic (ADT) counts are defined as bi-directional 24-hour traffic volumes for a given roadway segment. These counts help determine safety concerns for trail users along with potential traffic concerns regarding congestion near the proposed KRT extension. University Avenue, Cunningham Avenue and Vine Street recorded the highest ADT volumes (above 10,000 vehicles per day) in 2018. These roadways have higher speed limits and provide connections to highways. However, these higher volume roadways create barriers in the pedestrian network, decreasing pedestrian accessibility.

Most roads in the study area average between 1,000-5,000 vehicles per day, including Race Street, Broadway Avenue, and Maple Street, which intersect the NSRR corridor in the middle of the study area (Figure 3.26). While the proposed KRT extension is likely to have several access points, these streets will most likely be used the most by future trail users. Other crossings occur on Busey Avenue and Coler Avenue, both of which had ADT counts less than 1,000 in 2018.

Figure 3.25: A cyclist on Race Street

Figure 3.26: Average Daily Traffic (ADT)



Average Daily Traffic (2018)

- 0 - 500
- 500 - 1,000
- 1,000 - 5,000
- 5,000 - 10,000
- >10,000

- Roadway
- Railroads
- Open Space
- Study Area

Source: IDOT, CCGIS

0 0.25 mi

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3.3.2 12-Hour Traffic Volumes

i. Vehicle Counts

Vehicle counts refer to the number of vehicles at designated intersections during the day in the study area. Twelve-hour vehicle counts were taken at five intersections along the NSRR during the summer and fall of 2019. Based on the hourly traffic counts collected, the morning peak hour is from 7:00 a.m. to 8:00 a.m. and the evening peak hour is from 4:00 p.m. to 5:00 p.m. at most of the intersections in both the summer and the fall (Figure 3.28).

Twelve-hour total vehicle count summaries are presented in Figure 3.27. The highest traffic volume occurred at the Smith Road and University Avenue intersection (13,859 in the summer), followed closely by the Main Street and University Avenue intersection (11,227 in the summer). The next highest was at the Broadway Avenue and NSRR intersection (3,963 in the fall). The vehicle counts show a general decrease from east to west in the study area. This is due to a variety of factors including a better grid in downtown Urbana to distribute traffic as opposed to east Urbana, more pedestrian and bike facilities and destinations around downtown Urbana, and the proximity to interstates. More detailed turning movement counts at these intersections are provided in Figure 3.29.

Figure 3.27: 12-Hour Vehicle Counts Summary

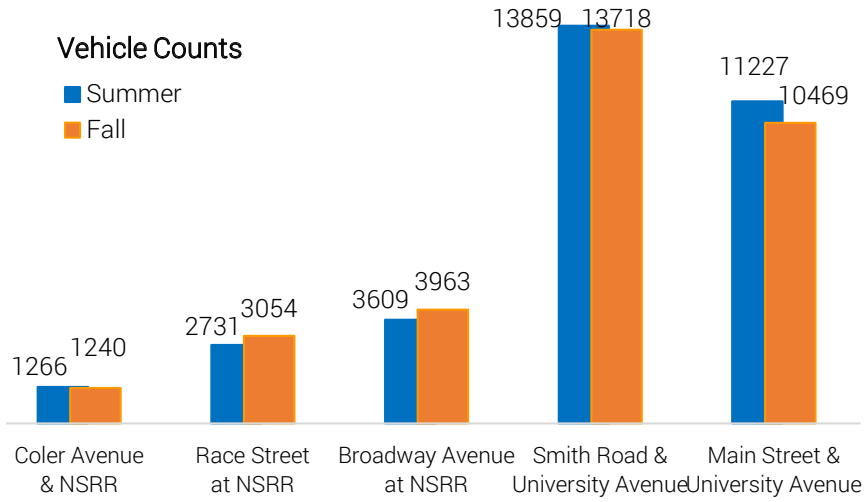
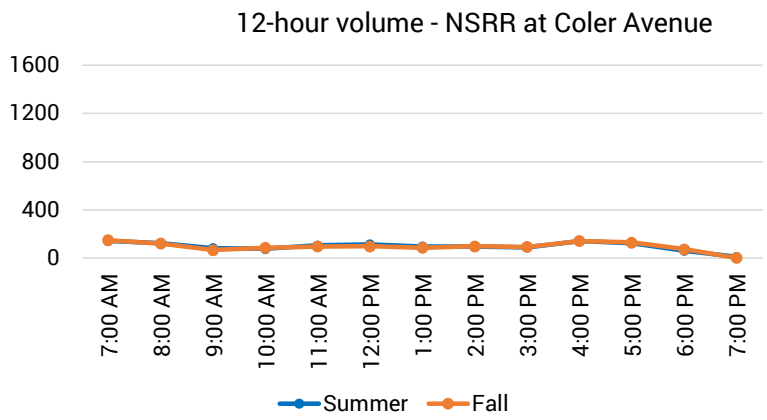
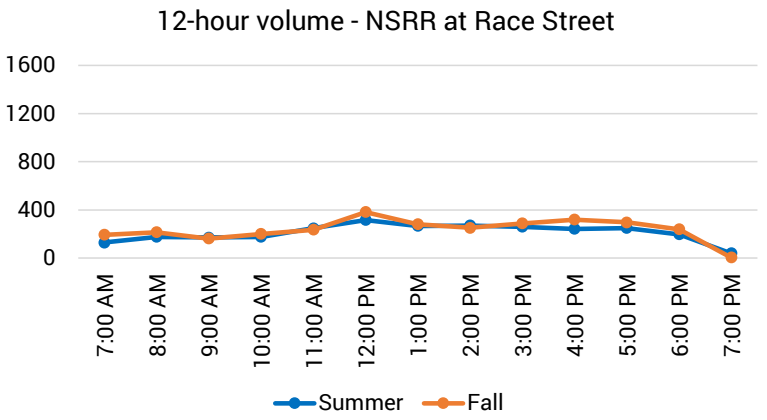
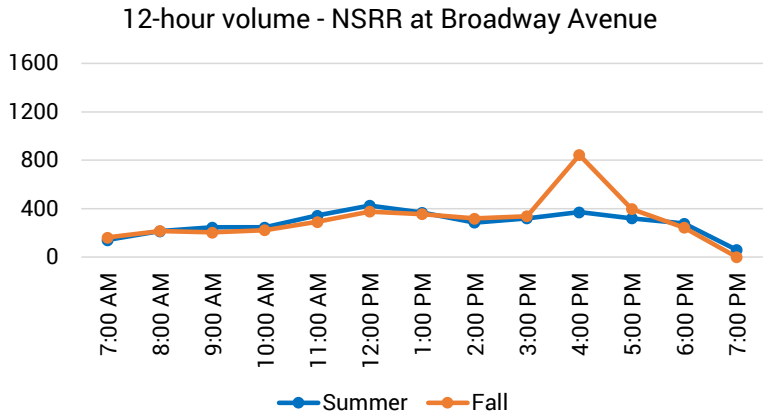
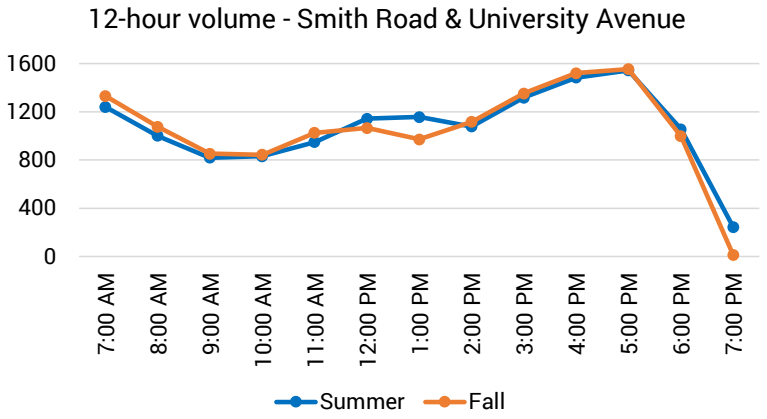


Figure 3.28: 12-Hour Vehicle Counts by Hour









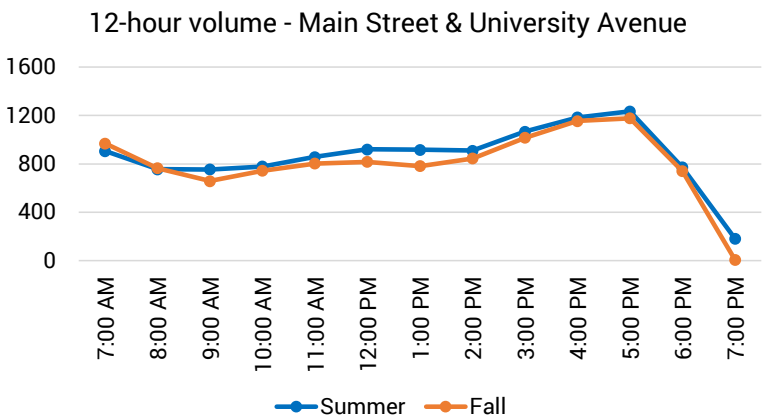
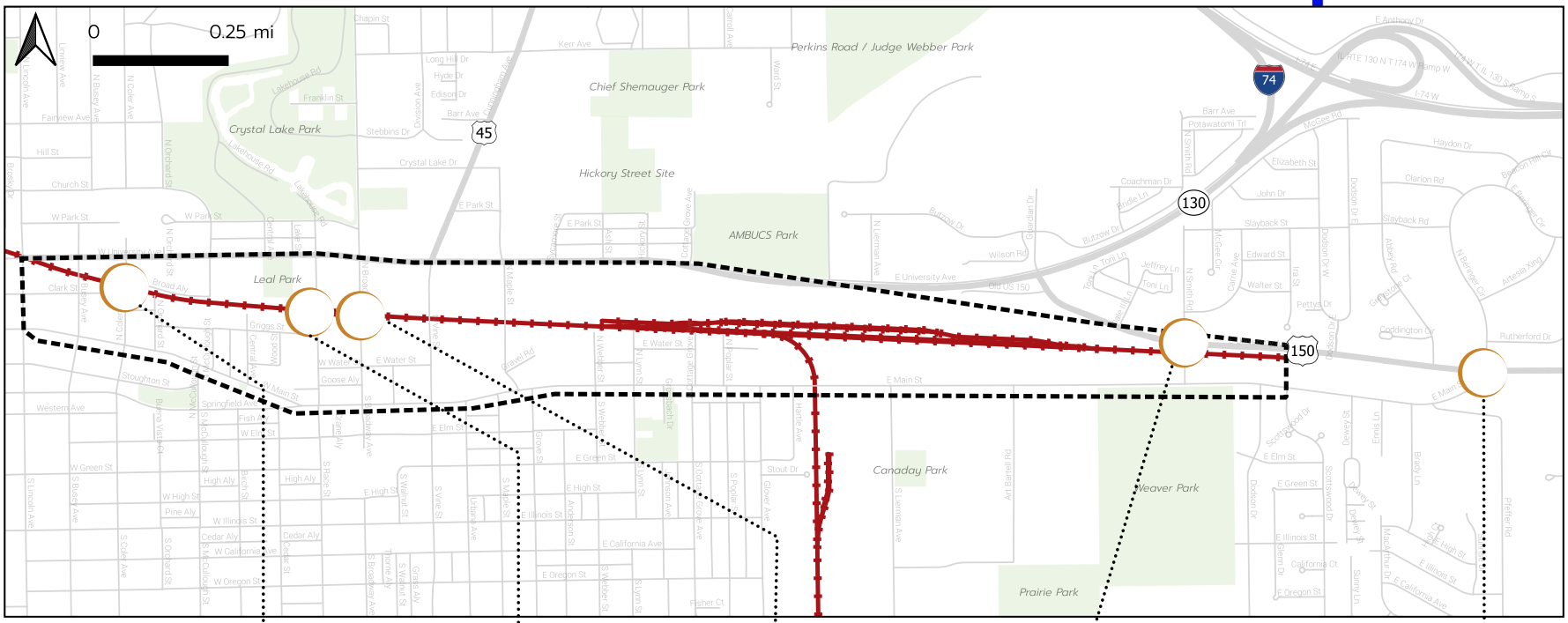
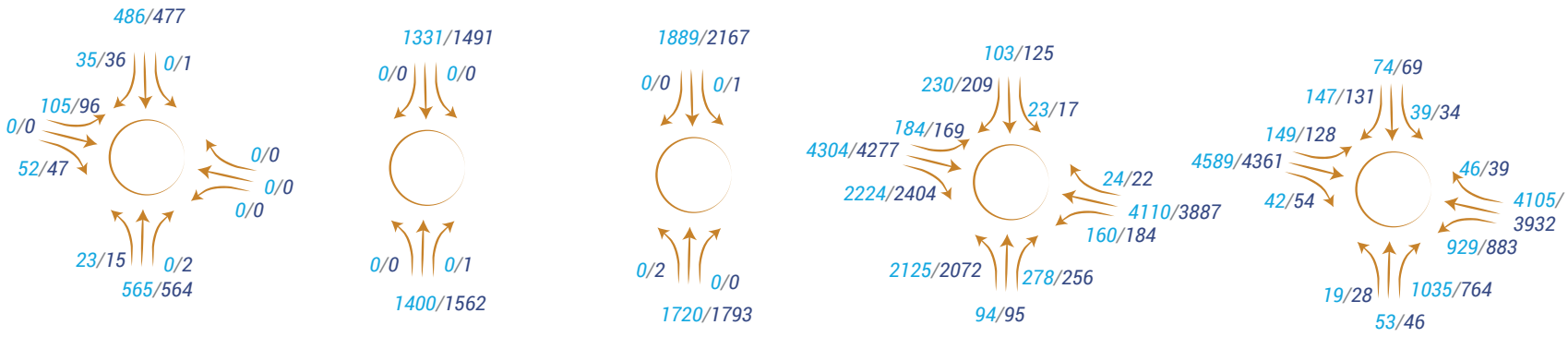


Figure 3.29: 12-Hour Vehicle Turning Movement Counts



Vehicle Counts	Coler Avenue & NSRR	Race Street at NSRR	Broadway Avenue at NSRR	Smith Road & University Avenue	Main Street & University Avenue
Summer / Fall	1,266/1,240	2,731/3,054	3,609/3,963	13,859/13,718	11,227/10,469



ii. Pedestrian Counts

Pedestrian counts refer to the number of pedestrians in a crosswalk at designated intersections during the day along the proposed KRT extension. Twelve-hour pedestrian counts were taken at the seven intersections with the NSRR in the study area during the summer and fall of 2019 (Figure 3.30). Based on the hourly traffic counts collected, the morning peak hour is from 7:00 a.m. to 8:00 a.m. and the evening peak hour is from 4:00 p.m. to 5:00 p.m. at most of the intersections.

Figure 3.31 shows that the highest pedestrian count was at the Coler Avenue and NSRR intersection (1,028 in the summer) and second highest was at the Broadway Avenue and NSRR intersection (304 in the fall). More detailed turning movement counts at these intersections are provided in Figure 3.32.

Figure 3.30: 12-Hour Pedestrian Count Summary

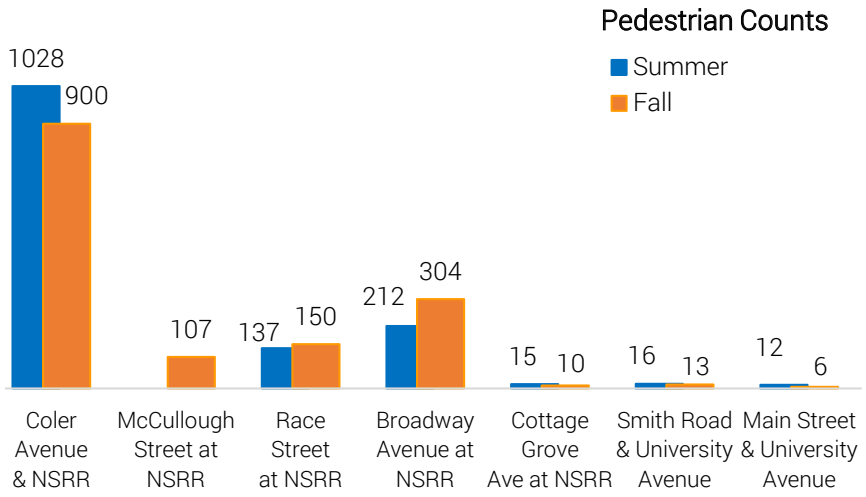
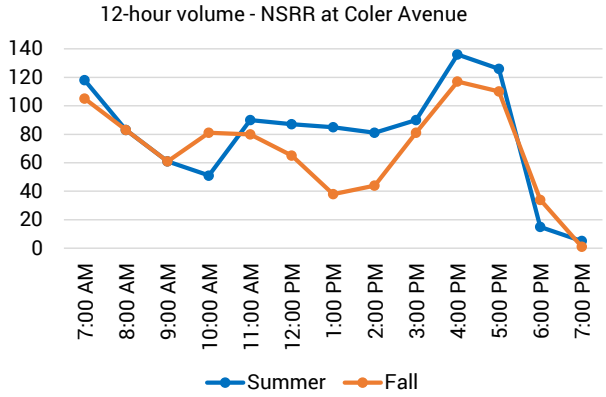
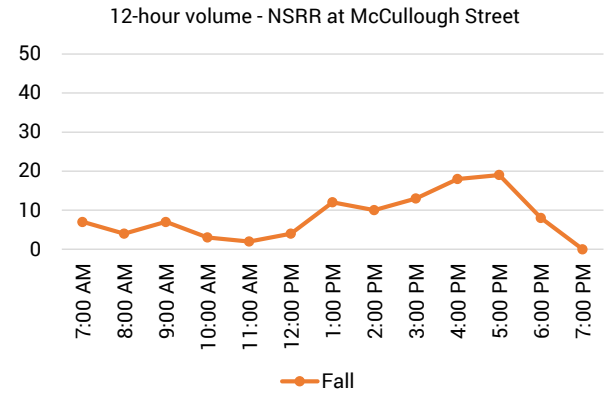
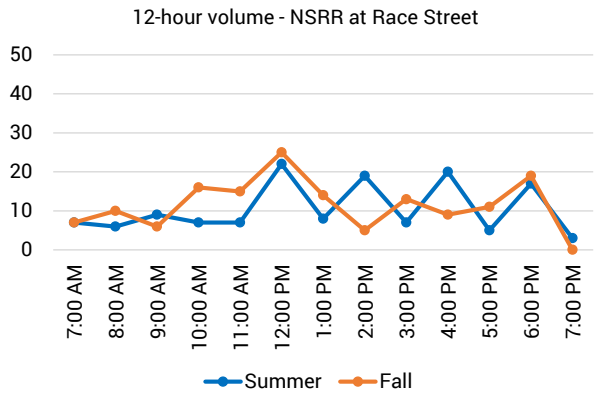
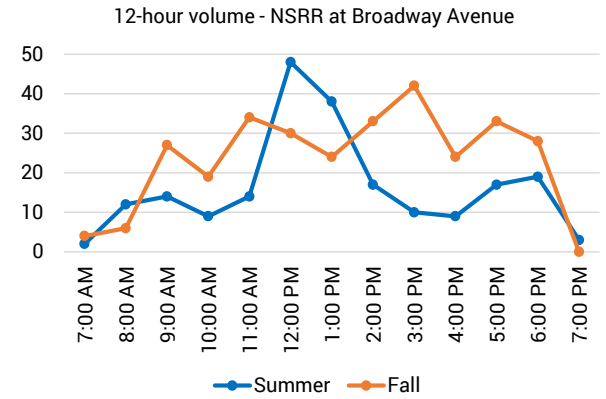


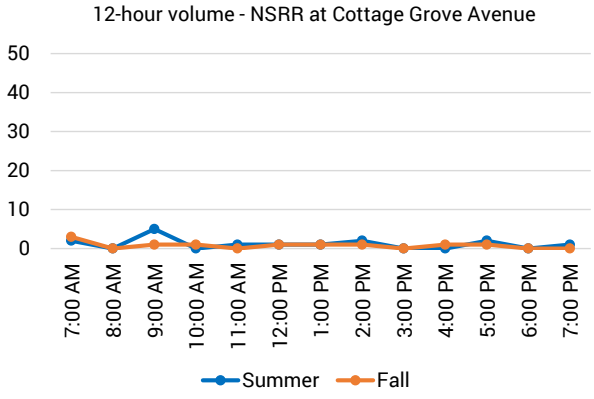
Figure 3.31: 12-Hour Pedestrian Counts by Hour

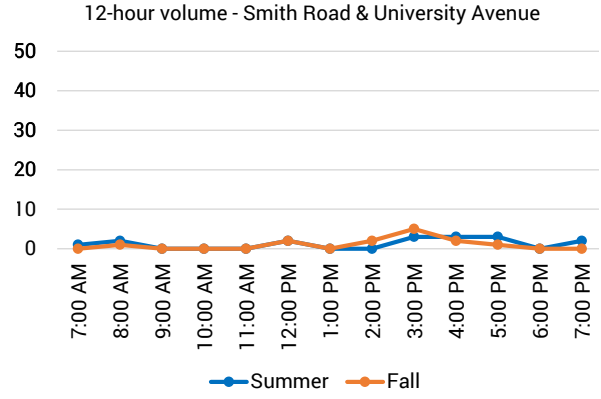












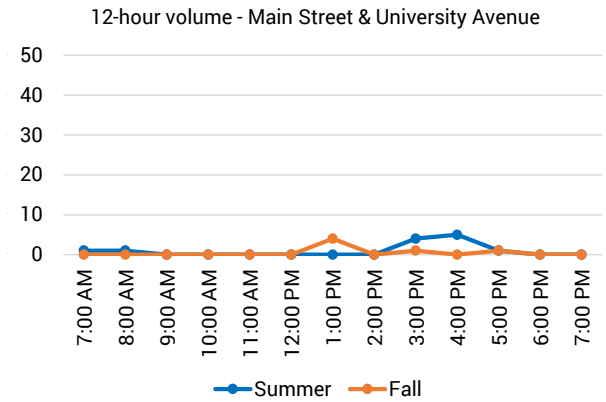
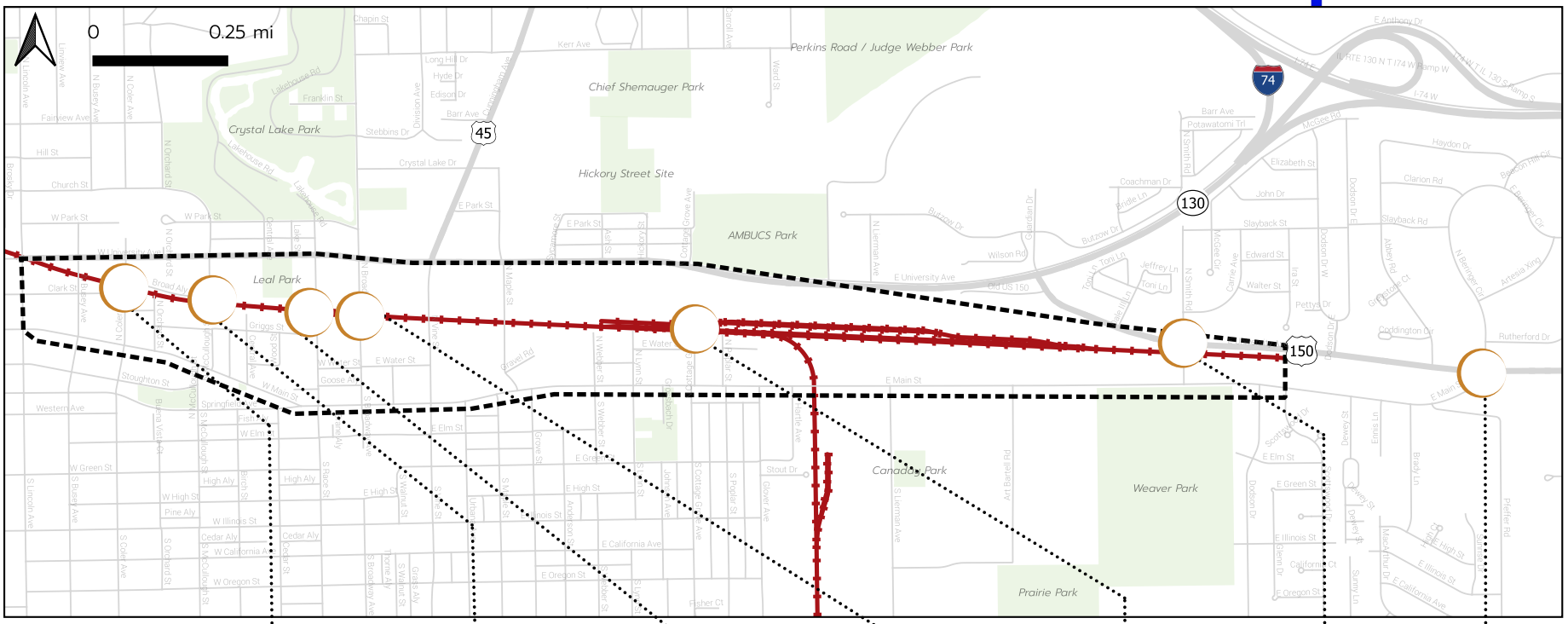
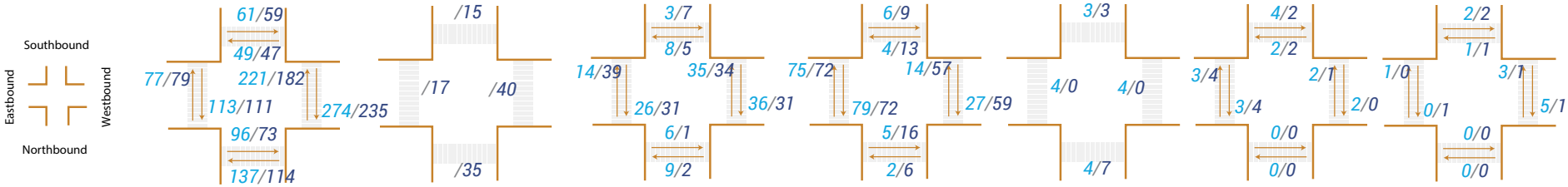


Figure 3.32: 12-Hour Pedestrian Counts on Crosswalk



Pedestrian Counts	Coler Avenue & NSRR	McCullough Street & NSRR	Race Street at NSRR	Broadway Avenue at NSRR	Cottage Grove Avenue at NSRR	Smith Road & University Avenue	Main Street & University Avenue
Summer / Fall	1028/900	/107	137/150	212/304	15/10	16/13	12/6



iii. Bicycle Counts

Bicycle counts refer to the number of bicyclists at designated intersections during the day along the proposed KRT extension. These counts are broken up into:

a. On-Road Bicycle Counts
b. Crosswalk Bicycle Counts

a. On-Road Bicycle Counts

Twelve-hour on-road bicycle counts displayed in Figure 3.34 show that the morning peak hour is from 7:00 a.m. to 8:00 a.m. and the evening peak hour is from 4:00 p.m. to 5:00 p.m. at most of the intersections.

Figure 3.33 shows the on-road bicycle counts summary. Much of the bicycle traffic occurred at the Broadway Avenue intersection (73 in the summer) and the Coler Avenue intersection (61 in the fall) followed by the Race Street intersection (52 in the fall). The lowest on-road bicycle volume in the fall occurred at the McCullough Street intersection (5), and in the summer the lowest was at the Cottage Grove intersection (6). More detailed turning movement counts at these intersections are provided in Figure 3.35.

Figure 3.33: 12-hour On-Road Bicycle Count Summary

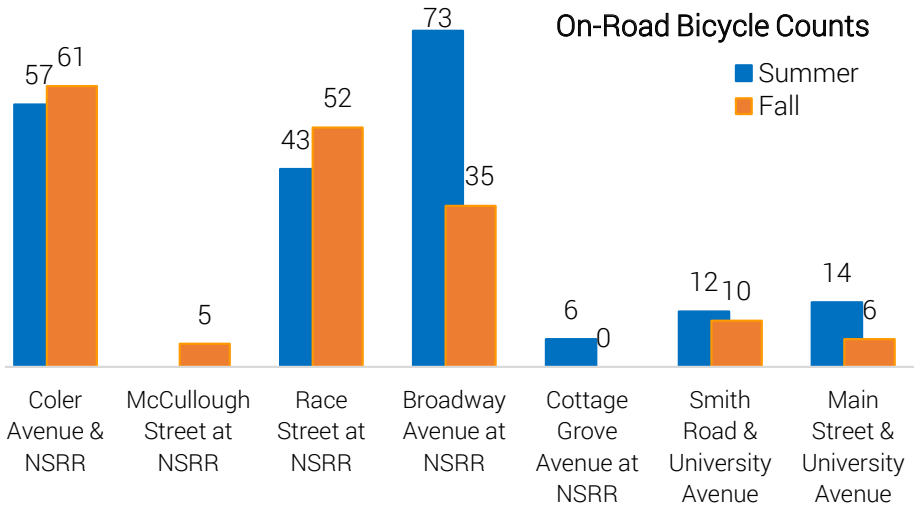
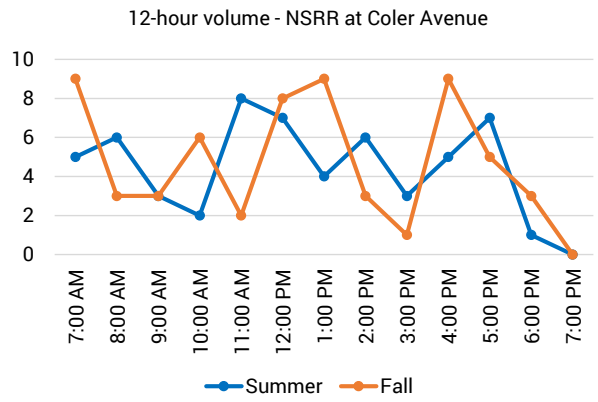
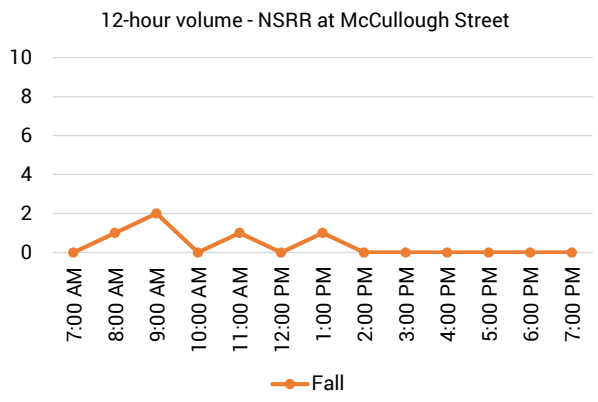
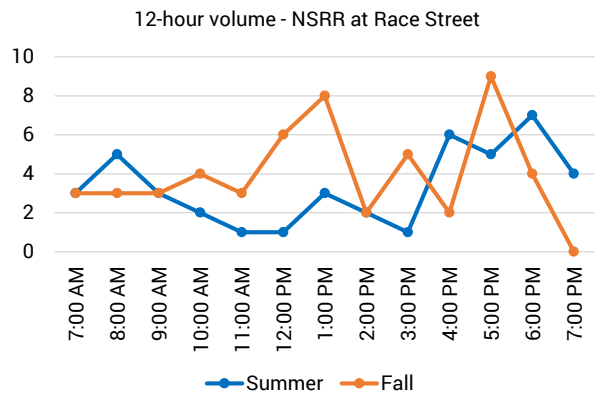
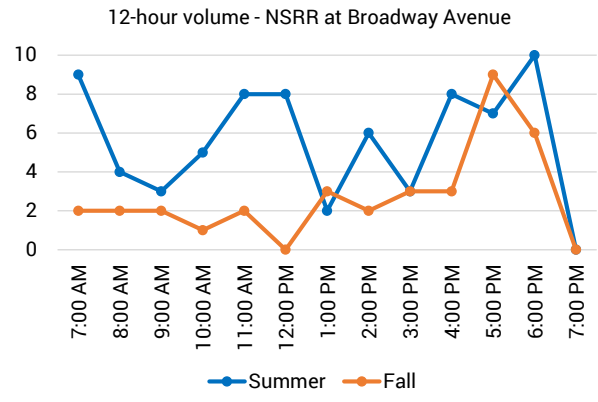


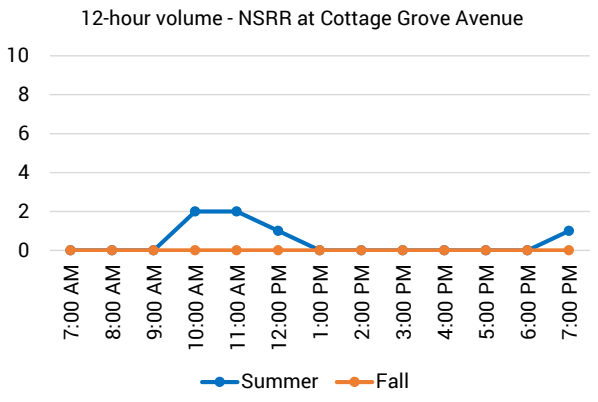
Figure 3.34: 12-Hour On-Road Bicycle Counts by Hour

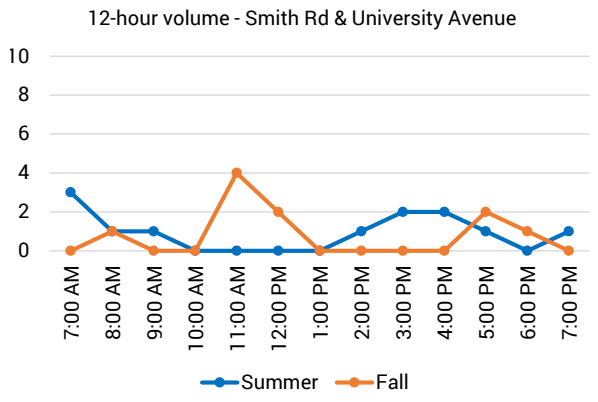












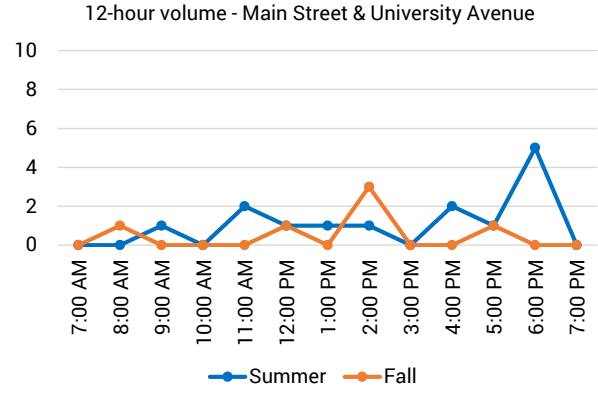
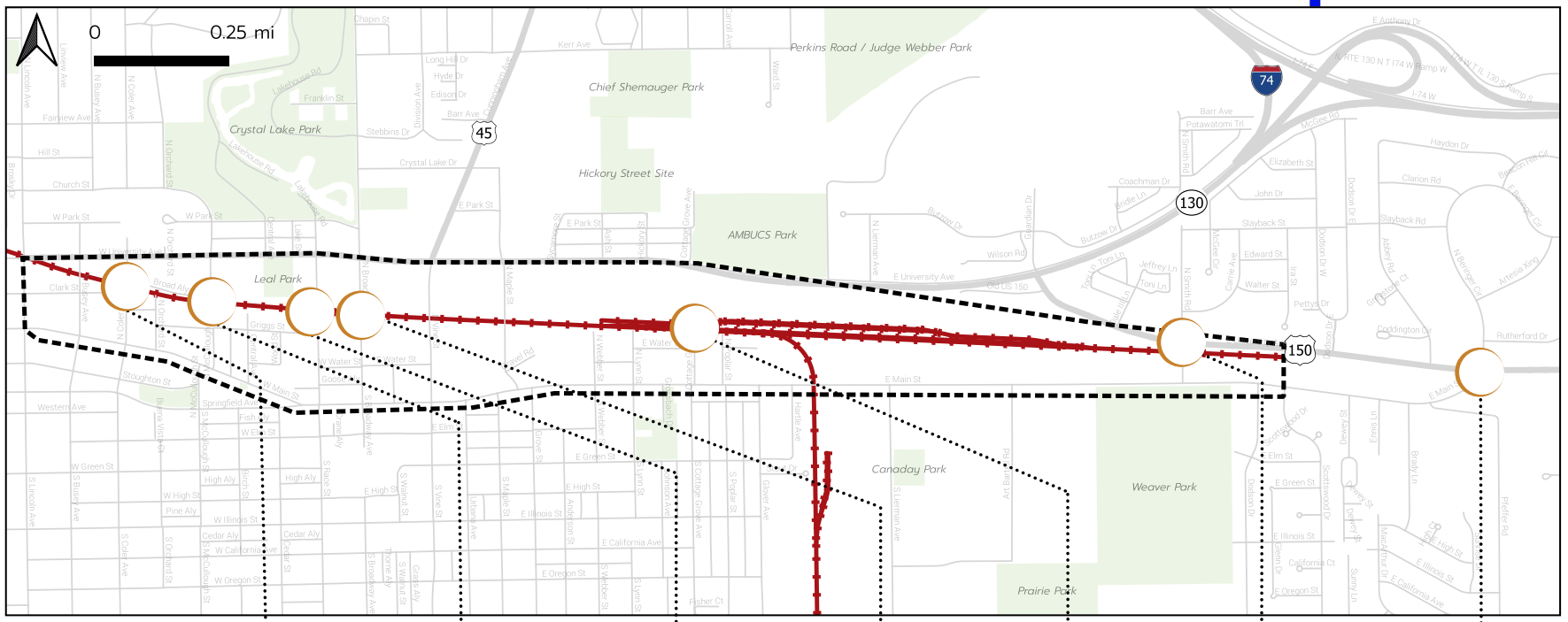


Figure 3.35: 12-Hour On-Road Bicycle Turning Movement Counts



On-Road Bicycle Counts

Summer / Fall

Southbound / Eastbound / Westbound / Northbound

Coler Avenue & NSRR

57/61

25/27 · 2/1 · 0/0 · 7/3 · 0/0 · 3/2 · 0/0 · 0/0 · 0/0 · 2/1 · 0/0 · 18/27

McCullough Street & NSRR

/5

/3 · /0 · /0 · /2

Race Street at NSRR

43/52

19/21 · 0/0 · 1/2 · 0/0 · 0/1 · 0/1 · 0/0 · 2/3 · 0/1 · 0/1 · 21/22

Broadway Avenue at NSRR

73/35

34/17 · 0/0 · 0/0 · 0/0 · 0/0 · 39/17

Cottage Grove Avenue at NSRR

6/0

4/0 · 0/0 · 0/0 · 2/0

Smith Road & University Avenue

12/10

2/3 · 0/0 · 0/0 · 2/0 · 0/0 · 3/2 · 0/1 · 0/1 · 0/0 · 2/1 · 1/0 · 2/2

Main Street & University Avenue

14/6

2/2 · 1/1 · 0/0 · 3/0 · 0/0 · 0/1 · 0/0 · 0/0 · 4/0 · 0/1 · 4/1

b. Crosswalk Bicycle Counts

Crosswalk bicycle counts were taken at the same locations as the on-road counts with the omission of the McCullough Street and Cottage Grove Avenue intersections, since those roads do not actually cross the railroad tracks. The 12-hour crosswalk bicycle counts displayed in Figure 3.37 show that the morning peak hour is from 7:00 a.m. to 8:00 a.m. and the evening peak hour is from 4:00 p.m. to 5:00 p.m. at most of the intersections.

Figure 3.36 shows the crosswalk bicycle counts summary. The highest counts occurred at the Race Street intersection (28 in the fall) and the Broadway Avenue intersection (23 in the summer). More detailed bicycle turning movement counts at these intersections are provided in Figure 3.38.

Figure 3.36: 12-Hour Crosswalk Bicycle Count Summary

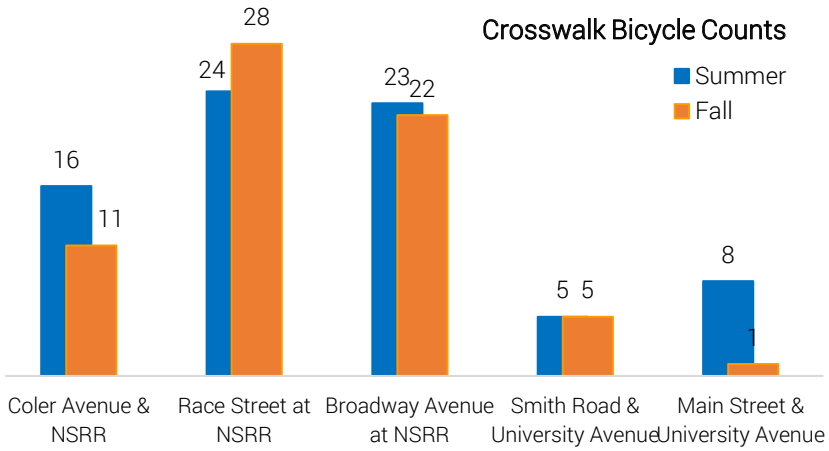
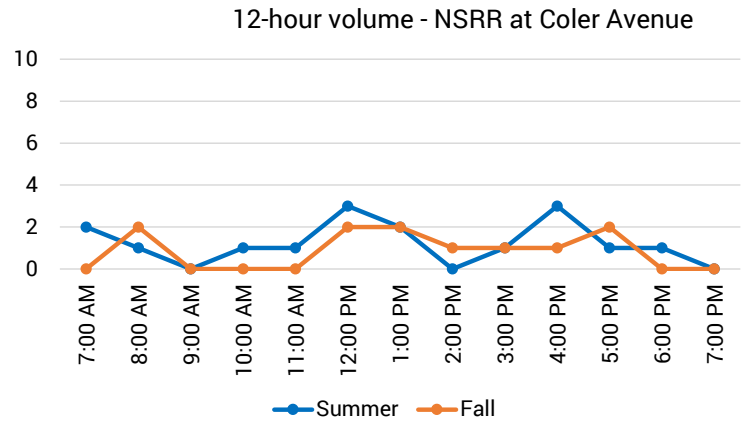
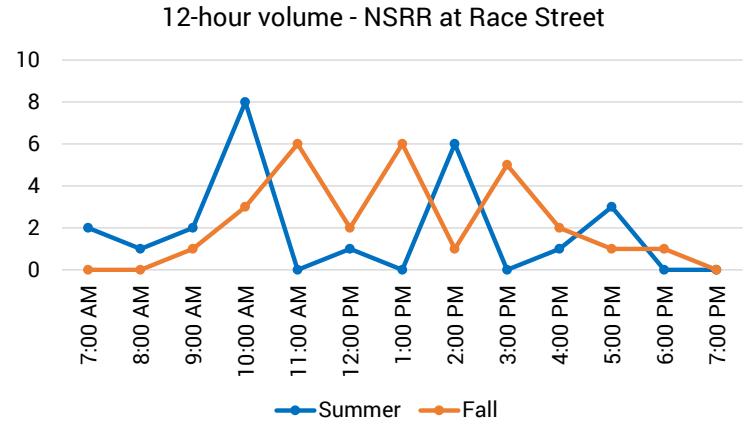
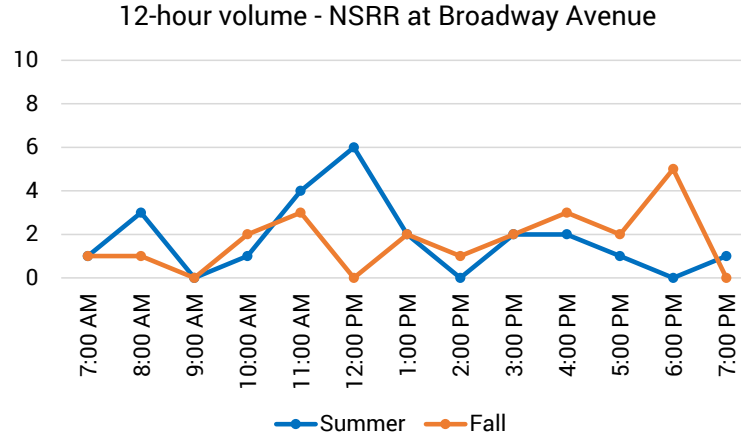
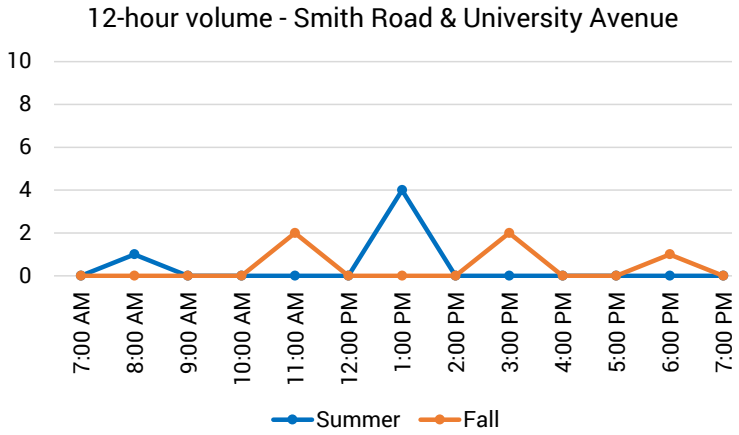


Figure 3.37: 12-Hour Crosswalk Bicycle Counts by Hour









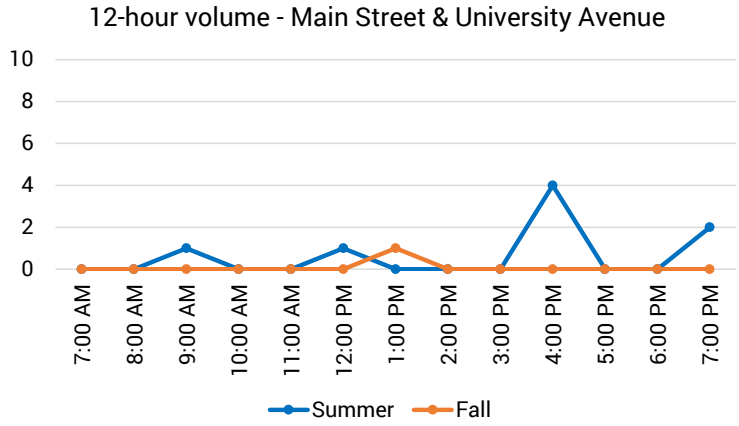
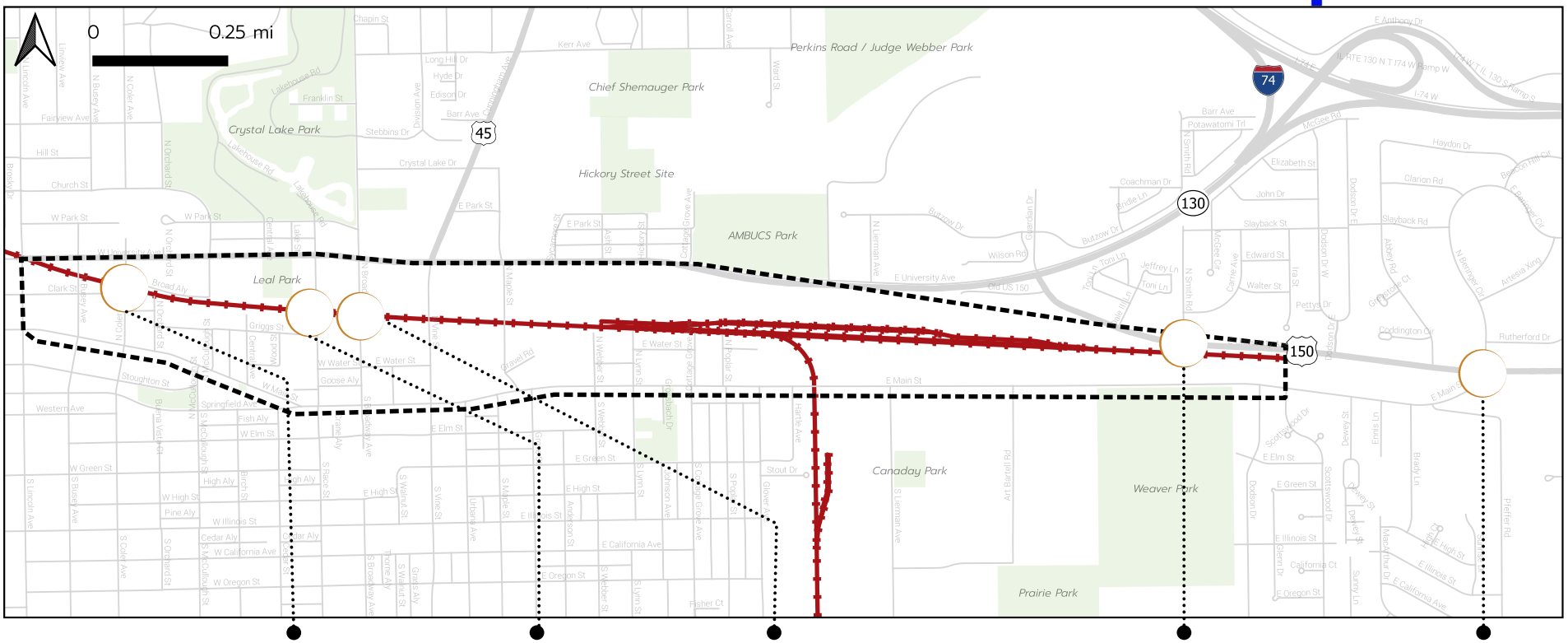
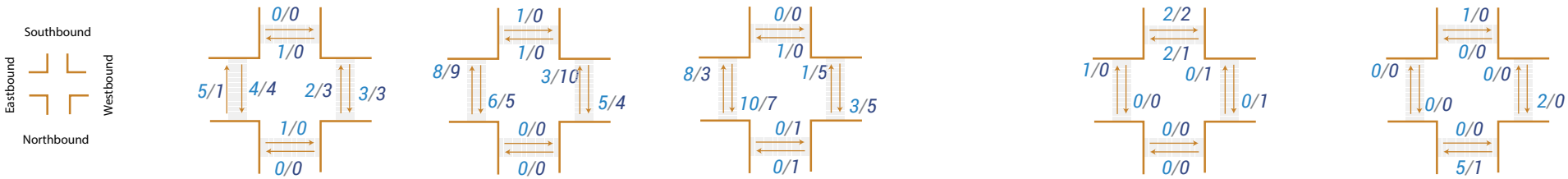


Figure 3.38: 12-Hour Bicycle Counts on Crosswalk



Crosswalk Bicycle Counts	Coler Avenue & NSRR	Race Street at NSRR	Broadway Avenue at NSRR	Smith Road & University Avenue	Main Street & University Avenue
Summer / Fall	16/11	24/28	23/22	5/5	8/1



3.3.3 Peak Hour Counts

During the fall of 2019, peak hour counts were taken at three locations along the proposed KRT extension: East of Orchard Street, Central Avenue, and East of Race Street. Of the three locations observed, the Orchard Street location had the highest pedestrian volumes, mostly in the mornings from 7:00 a.m. to 9:00 a.m. and in the evenings from 4:00 p.m. to 6:00 p.m. The other two locations recorded the most pedestrian volumes midday from 11:00 a.m. to 1:00 p.m. (Figure 3.39).

The underlying trend is that the pedestrian volume increases from east to west along the proposed KRT extension. This is likely due to a variety of factors including the proximity to downtown Urbana, existing pedestrian facilities, and overall more development density. For instance, the number of sidewalks and shared-use paths drastically increases west of Broadway Avenue.
Peak hour bike counts were taken at the same locations as pedestrian counts during the fall of 2019 (Figure 3.40). Of the three locations, the location east of Race Street and the Central Avenue and NSRR intersection had the highest peak hour bicycle volumes with the majority of the volume between 11:00 a.m. and 1:00 p.m. and between 4:00 p.m. and 6:00 p.m. The Orchard Street location had the majority of its bike volume in the morning between 7:00 a.m. and 9:00 a.m.

As with pedestrian volume, the amount of bicyclists tends to increase from east to west across the study area for the same reasons: proximity to downtown Urbana, more residences, and more bicycle facilities (including bike lanes, sidewalks, and shared-use paths) west of Broadway Avenue.

Figure 3.39: Peak Hour Pedestrian Count Summary

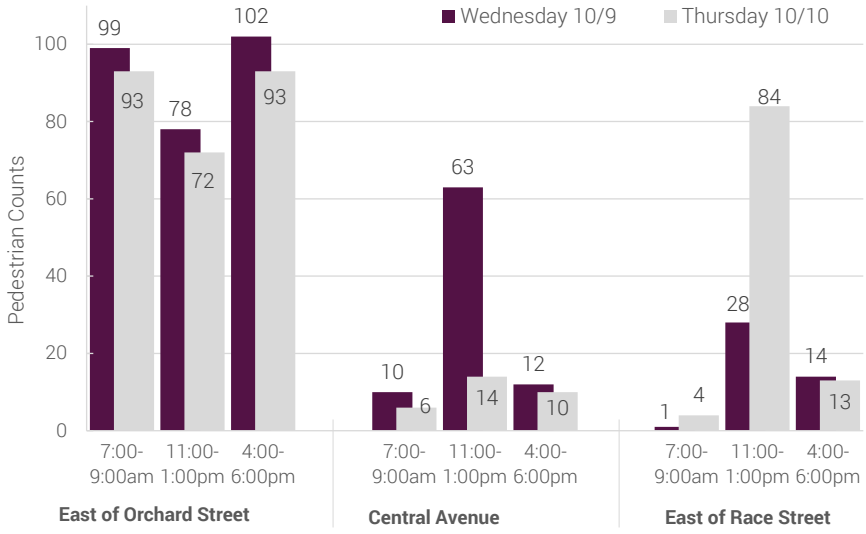
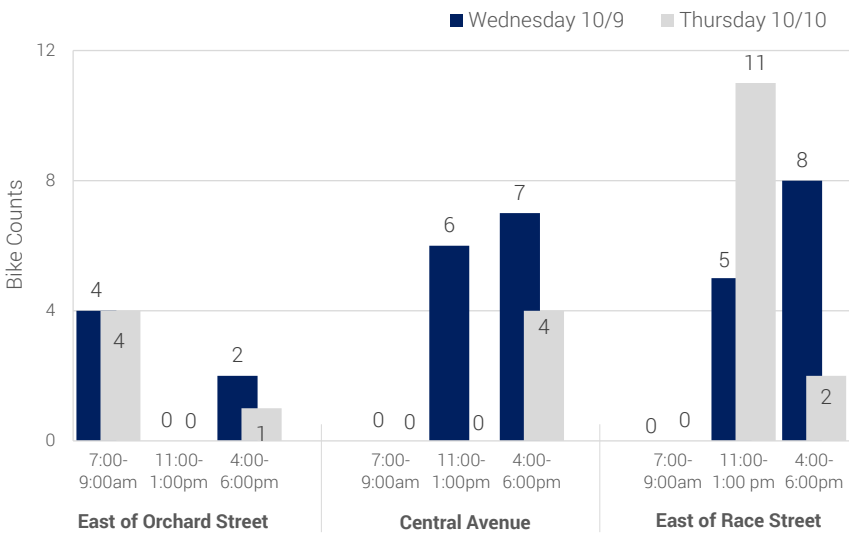


Figure 3.40: Peak Hour Bike Count Summary



3.4 Crash Analysis

The following sections evaluate traffic crashes and crashes that involved pedestrians and bicyclists over a five-year period from 2013-2017 in the study area. Crash data from 2013-2017 was obtained from IDOT for the purpose of this analysis.

3.4.1 Traffic Crashes

The National Safety Council (NSC) and the American National Standards Institute (ANSI) provide the following standard definitions of severity of crashes and injuries:

- Fatal: One or more deaths
- A-level injury: Incapacitating injury preventing victim from functioning normally (e.g. paralysis, broken/distorted limbs, etc.)
- B-level injury: Non-incapacitating but visible injury (e.g. abrasions, bruising, swelling, limping, etc.)
- C-level injury: Probable but not visible injury (e.g. stiff neck, muscle pain)
- PDO: No injury reported, or property damage only (e.g. scratched paint, dented wall, cracked bumper, etc.)

Table 3.2: Number of crashes by severity type in the five-year study period (2013-2017) in the KRT extension study area

Crash Severity	2013	2014	2015	2016	2017	Total	%
Fatal Crash	0	2	0	1	1	**4**	**1%**
A Injury Crash	3	7	5	5	5	**25**	**4%**
B Injury Crash	5	9	9	10	14	**47**	**8%**
C Injury Crash	16	12	13	19	19	**79**	**14%**
No Injuries/ Property Damage Only	76	93	91	85	71	**416**	**73%**
Total	**100**	**123**	**118**	**120**	**110**	**571**	**100%**

Between 2013 and 2017, the number of crashes per year within the study area fluctuated, with an average of 115 crashes per year (Table 3.2). The total crashes reported include both intersection crashes and mid-block crashes. The highest number of crashes occurred in 2014, while the lowest number of crashes occurred in 2017.

Figure 3.42 depicts the 2013-2017 crash locations. Between 2013 and 2017 there were 571 crashes within the study area, mainly occurring along University Avenue and Main Street. There were four fatal crashes over the five-year period, all occurring on University Avenue. There were 25 crashes that led to severe injuries (A-Injury) and accounted for 4 percent of the total crashes.

The three most frequent collision types in the KRT extension study area were turning crashes (33 percent), rear end crashes (32 percent), and angle crashes (14 percent) (Figure 3.41).

Figure 3.41: Type of crashes in the KRT extension study area (2013-2017)

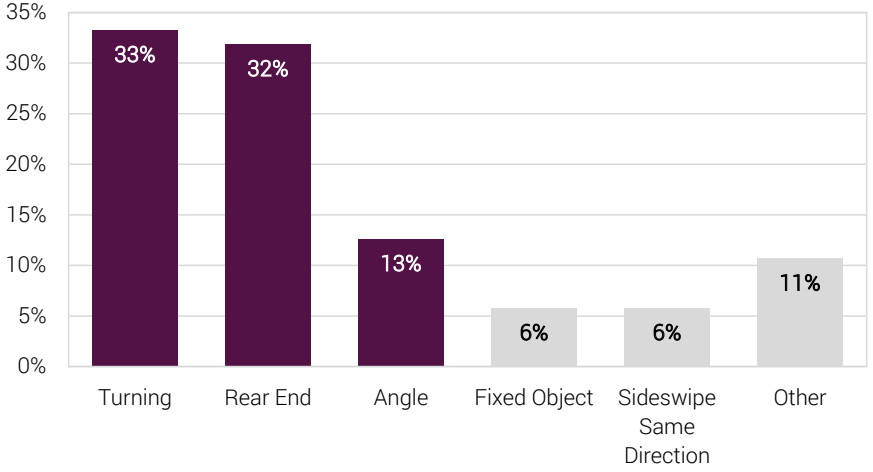
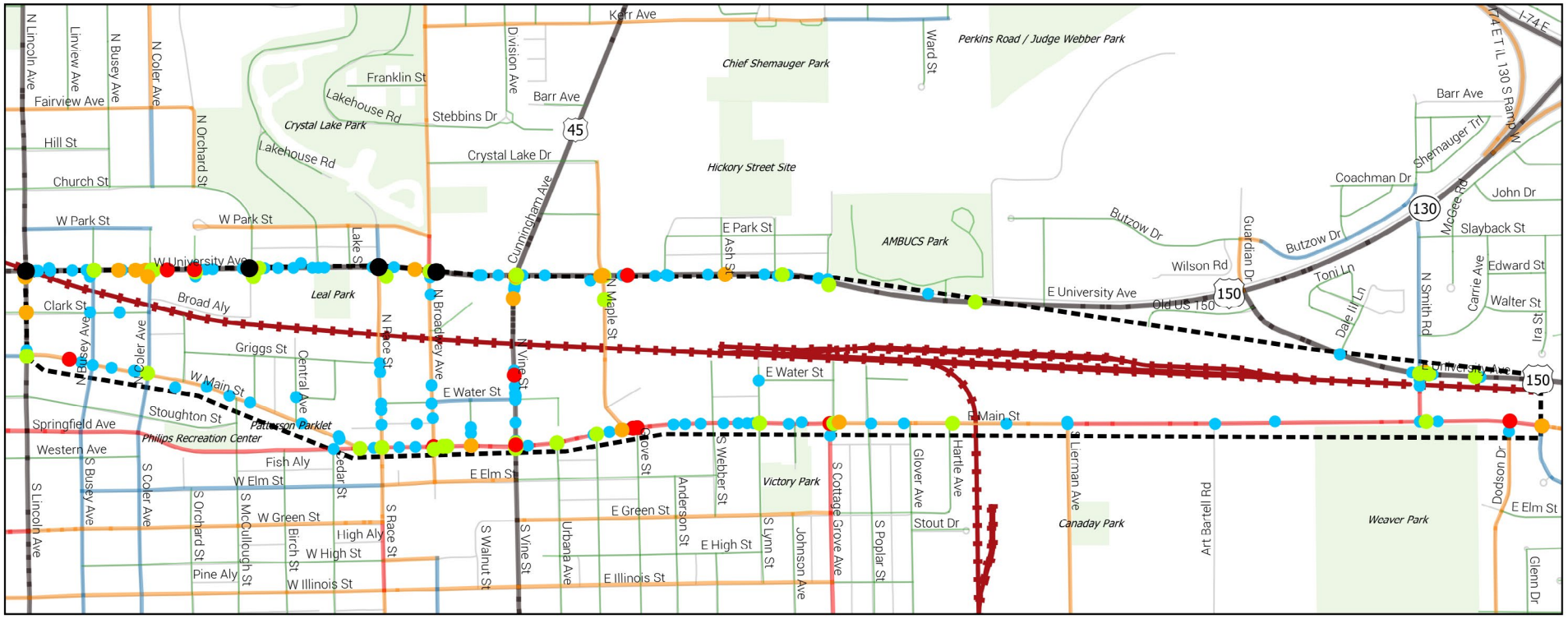


Figure 3.42: Number of Crashes by Severity Type (2013-2017)



Traffic crashes (2013 - 2017)
- Fatal
- A-Injury
- B-Injury
- C-Injury
- No Injuries

Average Daily Traffic (2018)
- 0 - 500
- 500 - 1,000
- 1,000 - 5,000
- 5,000 - 10,000
- >10,000

- Roadway
- Railroads
- Open Space
- Study Area

Source: IDOT, CCGIS

0 0.25 mi

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The most likely cause of traffic crashes in the study area can be attributed to a failure to yield the right-of-way and a failure to reduce speed to avoid a crash, accounting for 51 percent of total crashes in the study area (Table 3.3). Drivers following too closely, and disregarding traffic signals caused an additional 16 percent of crashes.

Table 3.3: Top 10 Traffic Crash Causes in the KRT extension study area

Causes	%
Failing to Yield Right of Way	27%
Failing to Reduce Speed to Avoid Crash	25%
Following Too Closely	8%
Disregarding Traffic Signals	8%
Improper Lane Usage	6%
Unable to Determine	6%
Improper Turning/No Signal	5%
Under Influence of Alcohol/Drugs	2%
Exceeding Safe Speed for Conditions	2%
Improper Backing	1%
Other causes	11%
Total	**100%**

Figure 3.43 shows the crash distribution by the day of the week and time of day between 2013 and 2017. During the study period, there were 62 crashes in the study area that occurred between 5:00 p.m. and 6:00 p.m., the most in any one-hour period. Other than the identified peak period, late afternoon/evening was the most prevalent time for traffic crashes, with the majority occurring between 1:00 p.m. and 5:00 p.m., the typical return commute hours of the day, while there were low numbers of crashes in the morning.

Figure 3.43: Number of crashes distribution by day of the week and time of day (2013-2017)

Month	Time of the Day																							Total
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Jan	1	2				2	1	3		2	2		2	5	1	2	4	7	2	3	4	1		2	46
Feb		2	5		1		2	1	4	2	4	1	4	3	2	3	6	4	3	2	1	1	1	1	53
Mar		1				3	1		4	1	3	1	4	4	5	1	1	2	1		3	1	2		38
Apr	1		1				1	1	3	4	2	4	2	3	4	3	4	5	4	3	3	1			49
May				1	1			2	5	5	4	4	5	4	2	5	7	7	1	1	3				57
Jun	1						1	2	1	2	5	5	4	6	3	2		5	1	1	1		1		41
Jul	1		1	1		1		4			1	3	2	5	1	6	3	5	3	2	1	1		1	42
Aug	1	1	1	2				2	3	5	2	3	4	4	1	4	4	8	5		1	1	2		54
Sep	1	1	2			1	1	2	2		3	2	3	4	6	3	3	7	1	2			2		46
Oct	1		2	1			3	1	5		2	8	3	1	2	1	4	5	4	2	5	3	2		55
Nov		2	2			1	2	1	2	2	1	5	7	3	1	4	3	3	8	1	1	1			50
Dec	1	1					1	2	2	2	4	2	2	4	1	2	2	4	2	3	1		2	2	40
Total	8	10	14	5	2	8	13	21	31	25	33	38	42	46	29	36	41	62	35	20	24	10	12	6	571

Figure 3.44 shows that eleven percent of the traffic crashes between 2013 and 2017 occurred in rainy conditions, while three percent occurred in snowy conditions. Four percent of the crashes occurred in dark conditions, while another 19 percent occurred in dark conditions with roadway lighting. Nineteen percent of crashes took place on a wet road surface, and another four percent took place on a snowy or slushy road.

Figure 3.44: Weather, light and road surface condition

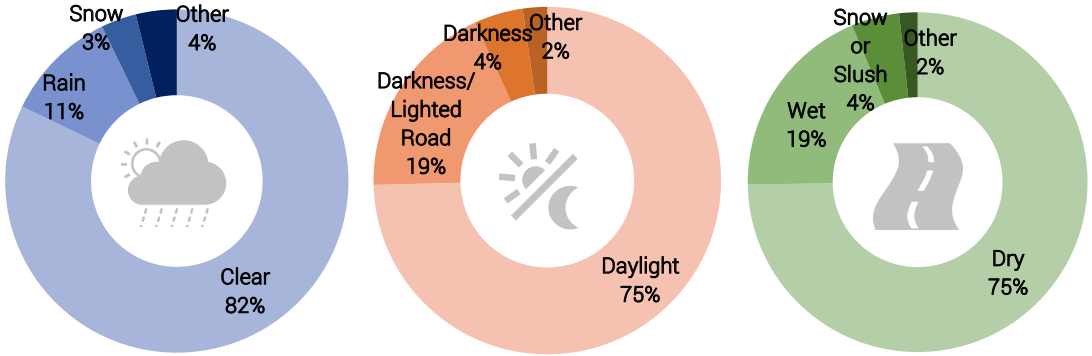
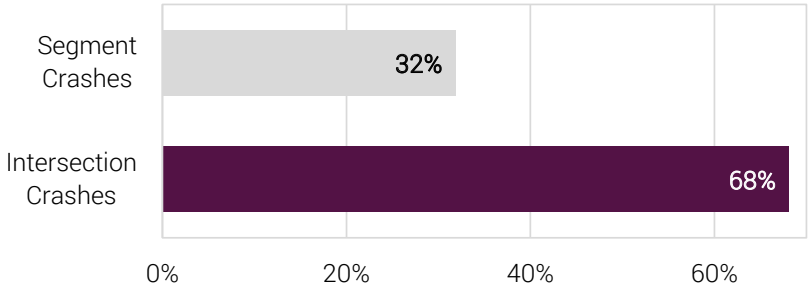


Figure 3.45: Intersection and segment crashes



Intersections are major points of conflicts and angle, rear end, and turning collisions are more prone to occur at intersections. In this study, crashes that occurred within 100 feet of an intersection were defined as intersection crashes and accounted for 68 percent of crashes reported during the five year period (Figure 3.45).

Ten intersections with the highest number of crashes from 2013 to 2017 in the KRT extension study area are listed in Table 3.4. In this analysis, intersection crashes are defined as crashes that took place within 100 feet of an intersection that lies within the KRT extension study area.

Figure 3.46: A pedestrian crossing Lincoln Avenue

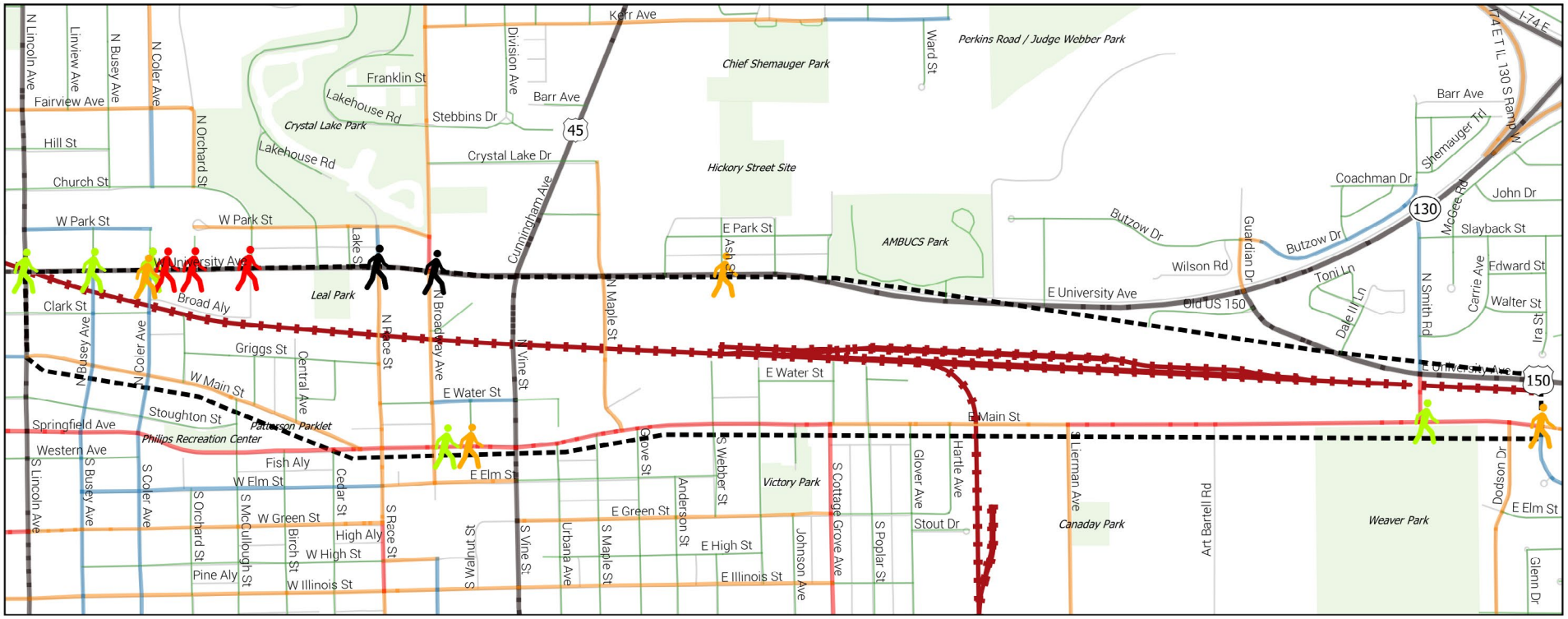
Table 3.4: Ten Intersections with the Highest Number of Crashes (2013-2017)

Intersection	Number of crashes
Lincoln Avenue & University Avenue	95
Cunningham Avenue & University Avenue	94
Vine Street & Main Street	37
Broadway Avenue & University Avenue	30
Maple Street & University Avenue	25
McCullough Street & University Avenue	19
Coler Avenue & University Avenue	18
Race Street & University Avenue	18
Smith Road & University Avenue	18
Vine Street & Water Street	16

3.4.2 Pedestrian Crashes

Pedestrian crashes refer to an incident involving a pedestrian and a vehicle (non-bicycle). Between 2013 and 2017, there were 17 pedestrian crashes recorded within the study area (Figure 3.47). Nine of the 17 crashes took place along University Avenue, between Lincoln Avenue and Broadway Avenue, including one fatal crash just east of Broadway Avenue in 2016 and another fatal crash at Race Street in 2017. Of all 16 crashes in the study area, four were A-level injuries, five were B-level injuries, and six were C-level injuries. The crashes occurred most often during the day under clear weather conditions, dry road surfaces, and in areas with sidewalks. The majority of the crashes were due to a failure to yield the right-of-way by either the driver or the pedestrian.

Figure 3.47: Number of Pedestrian Crashes by Severity Type



Pedestrian crashes (2013 - 2017)

- Fatal
- A-Injury
- B-Injury
- C-Injury

Average Daily Traffic (2018)

- 0 - 500
- 500 - 1,000
- 1,000 - 5,000
- 5,000 - 10,000
- >10,000

- Roadway
- Railroads
- Open Space
- Study Area

Source: IDOT, CCGIS

0 0.25 mi

CHAMPAIGN COUNTY REGIONAL PLANNING COMMISSION

Table 3.5: KRT extension study area Pedestrian/Vehicle Crash Details (2013-2017)

Location	Intersection Crash	Injury Type	Year	Weather Condition	Light Condition	Pavement Condition	Details
Main Street & Smith Road	No	C	2013	Clear	Darkness	Dry	Unable to Determine
University Avenue & McCullough Street	Yes	A	2014	Clear	Daylight	Dry	Failing to Yield Right of Way
University Avenue & Coler Avenue	Yes	A	2014	Clear	Daylight	Dry	Disregarding Other Traffic Signs
University Avenue & Coler Avenue	Yes	C	2014	Rain	Daylight	Wet	Failing to Yield Right of Way
University Avenue & Race Street	Yes	B	2014	Clear	Darkness / Lighted Road	Snow or Slush	Failing to Yield Right of Way
University Avenue & Coler Avenue	Yes	C	2016	Cloudy/ Overcast	Daylight	Dry	Failing to Yield Right of Way
University Avenue (E of Busey Avenue)	No	C	2016	Clear	Daylight	Dry	Failing to Yield Right of Way
Main Street & Walnut Street	No	B	2016	Clear	Daylight	Dry	Failing to Yield Right of Way
University Avenue & Lincoln Avenue	Yes	C	2016	Clear	Daylight	Dry	Unable to Determine
University Avenue (E of Broadway Avenue)	No	Fatal	2016	Cloudy/ Overcast	Darkness / Lighted Road	Dry	Unable to Determine
Main Street & Scottswood Drive	No	B	2016	Clear	Daylight	Dry	Operating Vehicle in Reckless Manner
University Avenue (E of Ash Street)	No	B	2016	Clear	Darkness	Dry	N/A
Main Street (between Walnut Street & Broadway Avenue)	No	C	2016	Clear	Daylight	Dry	Failing to Reduce Speed to Avoid Crash
University Avenue (between Orchard Street & Coler Avenue)	No	A	2016	Clear	Daylight	Dry	Unable to Determine
University Avenue & Orchard Street	Yes	A	2017	Clear	Daylight	Dry	Failing to Yield Right of Way
University Avenue & Coler Avenue	Yes	B	2017	Cloudy/ Overcast	Daylight	Dry	Failing to Yield Right of Way
University Avenue & Race Street	Yes	Fatal	2017	Clear	Darkness / Lighted Road	Dry	Failing to Yield Right of Way

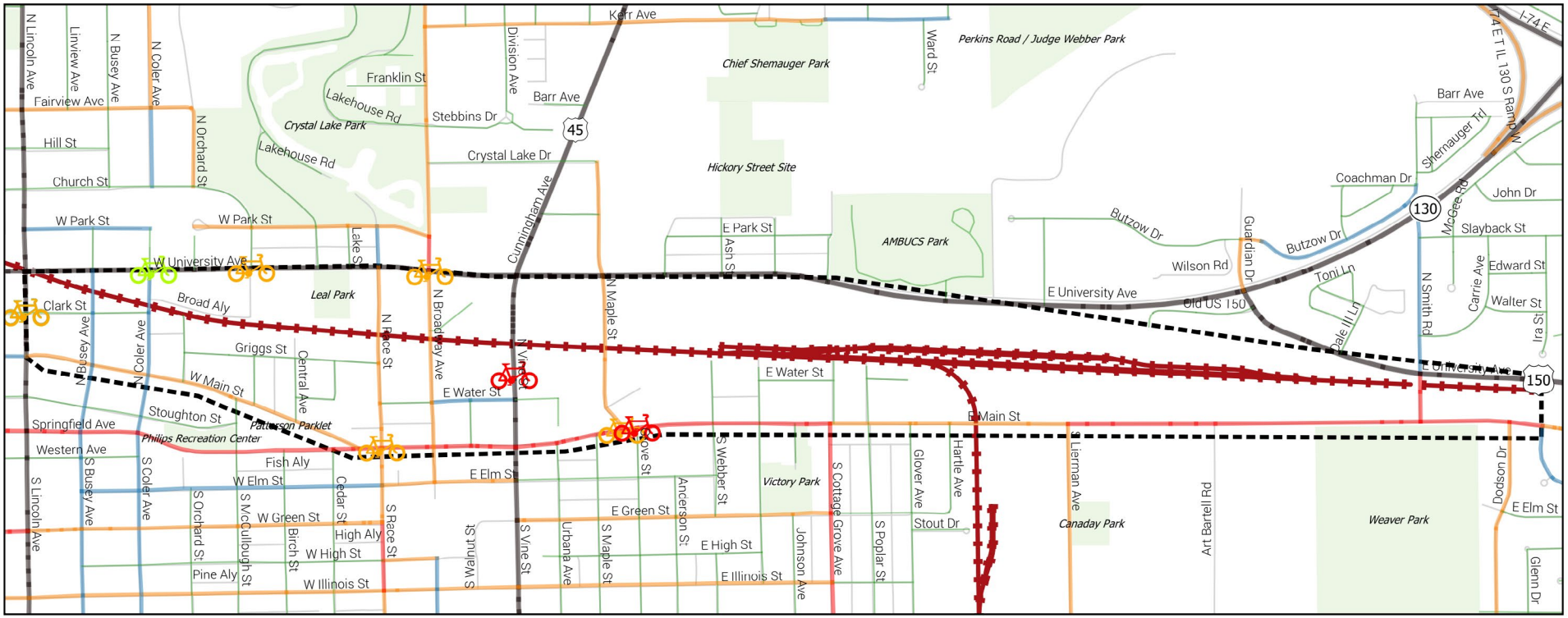
3.4.3 Bicycle Crashes

Bicycle crashes refer to an incident involving a bicycle and a vehicle (non-bicycle). Between 2013 and 2017, there were 10 bicycle crashes recorded within the study area (Figure 3.48). No cyclist fatalities occurred during the five-year span, but there were two A-level injuries, five B-level injuries, two C-level injuries, and one instance where neither party suffered injury (Table 3.6). As with pedestrian crashes, the majority of the bicycle crashes occurred during the day, under clear weather conditions, and dry road surfaces. The crash at the intersection of Main Street and Grove Street occurred in the dark and the driver disregarded the stop sign emphasizing the importance of visibility, especially in areas close to bicycle and pedestrian facilities.

Table 3.6: KRT extension study area Bicycle/Vehicle Crash Details (2013-2017)

Location	Intersection Crash	Injury Type	Year	Weather Condition	Light Condition	Pavement Condition	Details
Main Street & Race Street	Yes	B	2013	Clear	Daylight	Dry	Disregarding Traffic Signals
Vine Street (between University Avenue & Water Street)	No	A	2013	Clear	Daylight	Dry	Failing to Yield Right of Way
University Avenue & Coler Avenue	Yes	C	2013	Clear	Daylight	Dry	Turning Right on Red
Lincoln Avenue & Clark Street	Yes	No Injuries	2013	Clear	Daylight	Dry	Failing to Yield Right of Way
Lincoln Avenue & Clark Street	Yes	C	2014	Clear	Daylight	Dry	Failing to Yield Right of Way
Main Street & Maple Street	Yes	B	2014	Clear	Daylight	Dry	Unable to Determine
Lincoln Avenue & Clark Street	Yes	B	2015	Clear	Daylight	Dry	Failing to Yield Right of Way
Main Street & Grove Street	Yes	A	2016	Clear	Darkness	Dry	Disregarding Stop Sign
University Avenue & McCullough Street	Yes	B	2016	Clear	Daylight	Dry	Failing to Yield Right of Way
University Avenue & Broadway Avenue	Yes	B	2016	Clear	Dusk	Dry	Disregarding Traffic Signals

Figure 3.48: Number of Bicycle Crashes by Severity Type



Bicycle crashes (2013 - 2017)

- A-Injury
- B-Injury
- C-Injury
- No Injuries

Average Daily Traffic (2018)

- 0 - 500
- 500 - 1,000
- 1,000 - 5,000
- 5,000 - 10,000
- >10,000

- Roadway
- Railroads
- Open Space
- Study Area

Source: IDOT, CCGIS

0 0.25 mi

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Figure: E Main Street Bike Lane

4

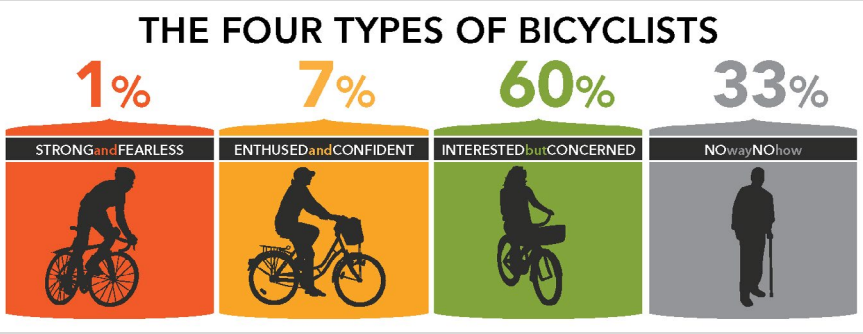
Bicycle and Pedestrian Network Analysis

4. Bicycle and Pedestrian Network Analysis

The network analysis seeks to determine how well different types of bicyclists and pedestrians are accommodated by the study area's existing transportation network. According to the researchers at Portland State University, bicyclists can be grouped into four general categories (Figure 4.1).[1] While the categories reflect the Portland, Oregon population, they still represent one of the best estimates for user types and proportions in the country:

1. **Strong & Fearless:** (<1%) Comfortable operating in the roadway as a vehicle, regardless of facilities.
2. **Enthusiastic & Confident:** (7%) Comfortable riding on some roadways but prefer bicycle facilities separate from vehicle traffic (e.g. bike lanes, shared-use path).
3. **Interested but Concerned:** (60%) Would like to ride more but have safety concerns that are dissuading them. Not comfortable in traffic. Will ride in low volume, low speed conditions (e.g. bike boulevards, off-street bikeways).
4. **No Way No How:** (33%) No interest in riding a bike for transportation.

Figure 4.1: Four Types of Bicyclists



Source: www.rwcmoves.com[2]

This framework suggests that the majority of bicyclists want to ride more, but generally have safety concerns. The network analysis caters to this group by showing where the most bike friendly portions of the study area are, and the degree to which they accommodate riders.

Three different tools are used to measure pedestrian and bicycle accommodation in the study area:

- Bicycle Level of Service (BLOS) (Section 4.1);
- Bicycle Level of Traffic Stress (BLTS) (Section 4.2); and
- Pedestrian Level of Traffic Stress (PLTS) (Section 4.3).

Bicycle Level of Service (BLOS) is an established tool that has been used in the 2008 and 2016 City of Urbana Bicycle Master Plans. In addition, CCRPC has recently developed local analyses for Bicycle Level of Traffic Stress (BLTS) and Pedestrian Level of Traffic Stress (PLTS) which is beneficial for analyzing conditions for both modes.

4.1 Bicycle Level of Service (BLOS)

Bicycle Level of Service (BLOS) is a nationally used tool for determining on-road comfort level of bicyclists.[3] It essentially quantifies the "bike-friendliness" of a roadway. BLOS uses a combination of roadway geometry and traffic conditions to calculate a numerical score between 0 and 5, that are then translated into a grade, A through F (Figure 4.2). The lower the numerical score, the better the grade of that street. Roadways with a better (lower) score are more attractive – and usually safer – for cyclists. An online BLOS calculator can be found at https://rideillinois.org/blos/blosform.htm.

4.1.1 BLOS Correspondence to Bicycle User Types[4]

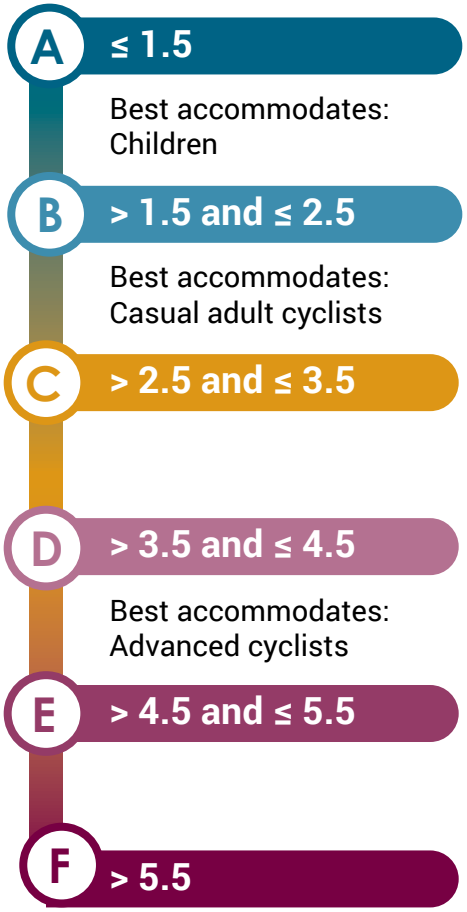
BLOS grades relate to the type of bicycle user in the following manner:

- Children and novice riders (Type C) typically feel comfortable riding on facilities with a BLOS grade of A.
- Casual adult cyclists (Type B), including many teenage and

college-age cyclists, typically feel comfortable riding on facilities with a BLOS grade of a high C, B, or better. This is the target audience of this plan.

- Advanced cyclists (Type A) are able to use roads that achieve BLOS grades of Low C or High D. Bikes May Use Full Lane signage on highly requested routes with these grades will improve conditions for these riders by increasing motorist awareness of bicycle presence.

Figure 4.2: BLOS Grade and Score Spectrum



BLOS Grade & Score Spectrum

4.1.2 BLOS Estimation

The following characteristics are used to determine BLOS:

- Number of Thru Lanes
- Rightmost Lane Width
- Gutter Pan Width
- Marked Extra Width (e.g. shoulder, parking, bike lanes)
- Average Daily Traffic (ADT) Counts
- Posted Speed Limit
- Percentage of Heavy Vehicles (e.g. trucks)
- Pavement Condition Rating (1=worst, 5=best)
  - » Newly constructed or repaved streets received a rating of 5.0
  - » Most streets have a rating of 4.0
  - » Brick roads = 3.0
  - » Gravel roads = 2.0
- On-Street Parking Percentage Estimate

A table containing all the different values collected for each of the different characteristics was created in a similar way to the online calculator. This table was used to obtain the BLOS for all the roadway segments selected to be part of the study area. A regional BLOS database has been used to help determine which streets to include in the local bicycle network since 2007. Additional field data was collected to perform a BLOS analysis for the study area including street width (for rightmost lane width and gutter pan width), number of thru lanes, posted speed limit, and road edge marking type (for extra width). Recent average daily traffic (ADT) counts were collected from IDOT. A full explanation of the methodology to estimate BLOS can be found in Appendix A.

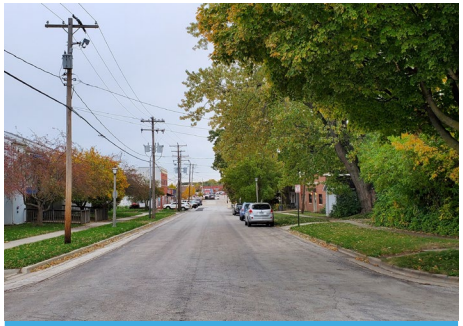
4.1.3 Existing BLOS

Figure 4.4 shows the BLOS grades for the study area. Segments achieving a BLOS grade of A or B indicate that the casual adult bicyclist would feel comfortable riding on the segment in its present state. Based on the available data, the only sections receiving A's within the study area are the eastern section of Main Street (between Dodson Drive and Art Bartell Road), a central section of Main Street covering two blocks (between Maple Street and Vine Street), a quarter-mile section of Broadway Avenue (between University Avenue and Main Street), and Water Street (between Broadway Avenue and Vine Street). Water Street has low vehicle traffic volumes, and the remaining segments have bike lanes. Consistently, streets with existing bike facilities score the best in BLOS.

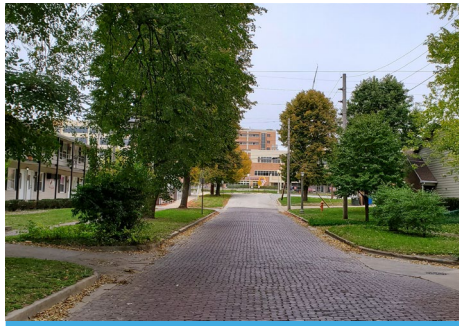
Figure 4.3 shows examples of streets within the study area for each BLOS rating. Appendix B lists the existing BLOS data and scores for the segments measured within the study area.

Figure 4.3: Existing Streets BLOS examples

BLOS A
Broadway Avenue

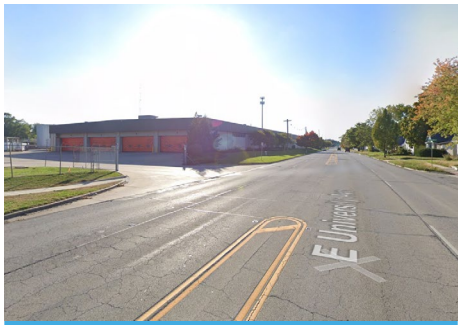


BLOS B
Griggs Street



BLOS C
Orchard Street

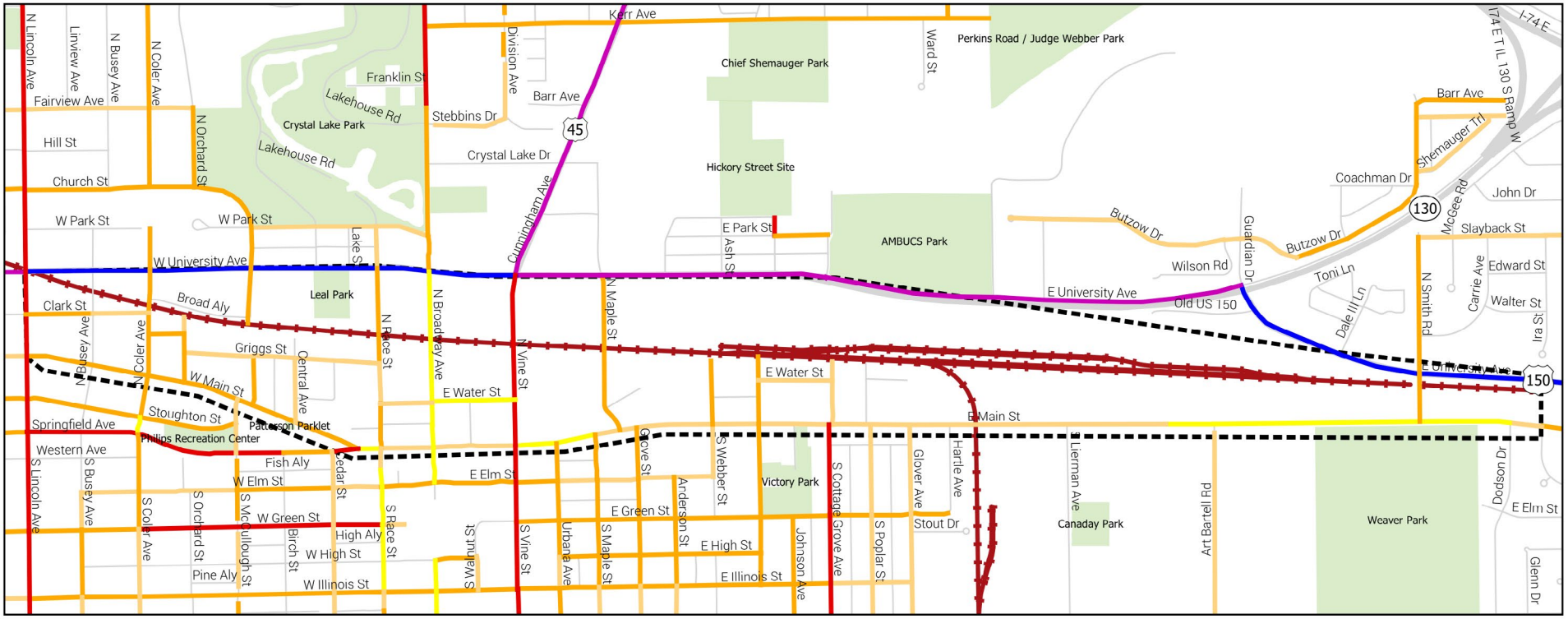
BLOS D
Vine Street



BLOS E
E. University Avenue

BLOS F
W. University Avenue

Figure 4.4: Existing Bicycle Level of Service (BLOS)



Existing BLOS Grade

- A
- B
- C
- D
- E
- F

- Roadway
- Railroads
- Open Space
- Study Area

Source: CCRPC, CCGIS

0 0.25 mi

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A majority of the residential streets achieved a B or C grade for BLOS, with most streets exhibiting moderate bike-friendliness. Certain segments achieved BLOS grades of D, E, or F (scores 3.5 or higher), mainly due to high traffic counts and/or high heavy vehicle usage. Examples of segments in this range include Vine Street, University Avenue, and Cunningham Avenue. University Avenue between Lincoln Avenue and Cunningham Avenue and south of Guardian Drive receives an F grade. This is a high traffic area, as traffic coming from Interstate 74 mixes with traffic coming east and west along University Avenue.

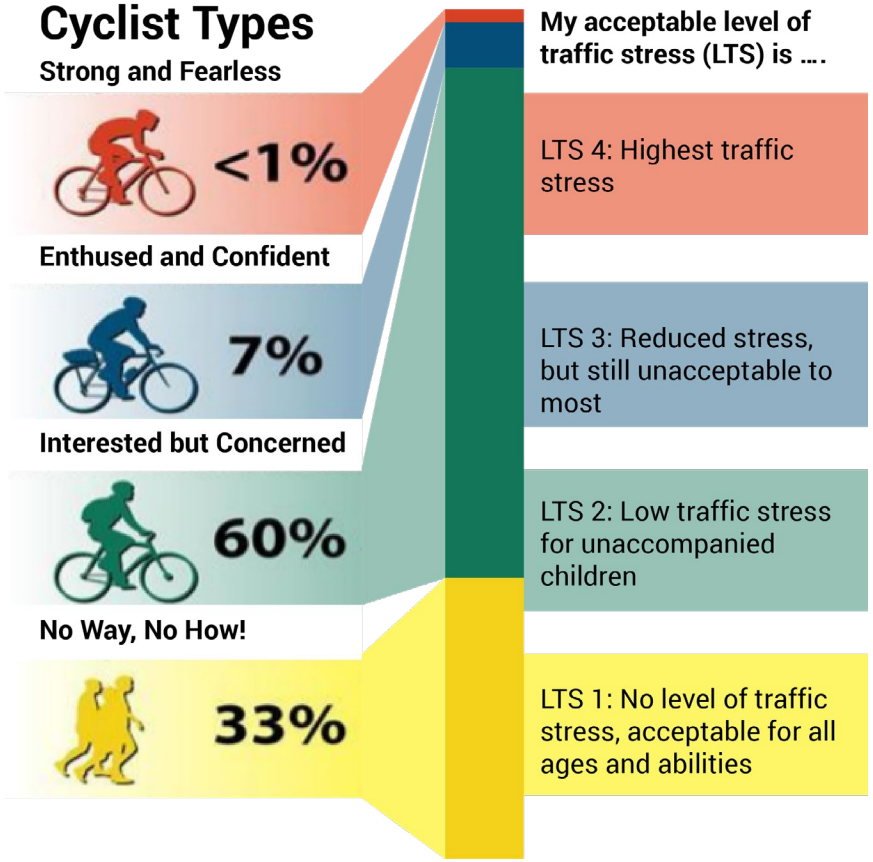
4.2 Bicycle Level of Traffic Stress

Developed by engineers at the Northeastern University College of Engineering, Level of Traffic Stress (LTS) rates how stressful a route segment or crossing is for bicyclists. BLTS is measured on a numeric scale from 1 to 4, with a score of '1' indicating the lowest level of stress. BLTS scores mirror the four bicyclist types mentioned in the previous section on BLOS (Figure 4.5).

The following describes the potential Bicycle Level of Traffic Stress (BLTS) scores and user-suitability (Figure 4.6):[6]

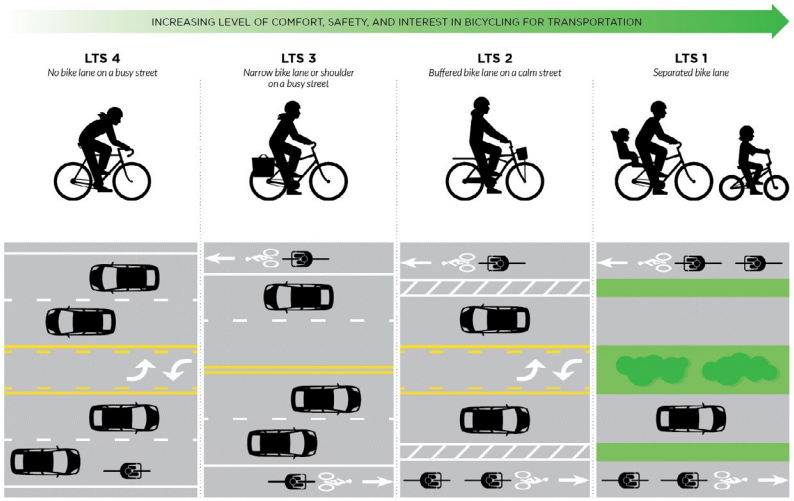
- LTS 1 (low stress): This score denotes simple crossings and sections with strong separation from vehicles except in low speed and low traffic volume situations. It is most suitable for children.
- LTS 2 (medium stress): This score denotes crossings that can easily be navigated by adults and sections giving cyclists their own space to ride except in low speed and low traffic volume situations. Interactions with vehicle traffic is minimal, except at formal crossings, and a physical separation from higher speed and multi-lane traffic exists. Users suited for this score are those in the "interested but concerned" type.
- LTS 3 (medium-high stress): This score denotes sections and crossings where interaction with moderate speed or multilane traffic is common and is often in close proximity with higher speed traffic. Users suited for this score are those in the "enthused and confident" type.
- LTS 4 (high stress): This score denotes sections and crossings where interaction with and proximity to higher speed traffic is common. Users suited for this score are those in the "strong and fearless" type.

Figure 4.5: Cyclist Types corresponding to Bicycle Level of Traffic Stress



Source: www.westernite.org[5]

Figure 4.6: Bicycle Level of Traffic Stress



Source: Alta Planning and Design (https://medium.com/strava-metro/how-representative-are-strava-bike-commuters-lessons-from-santa-clara-b84f74d66af0)

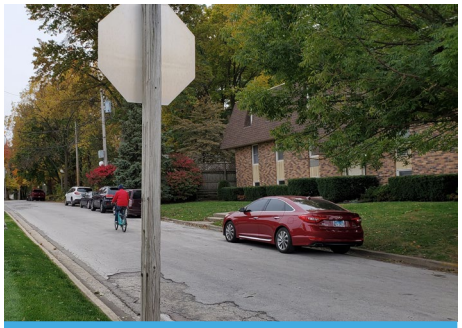
There are criteria for determining BLTS for route segments, intersection approaches, and crossings. The criteria for generating a BLTS score consider several factors including:

- Street width (thru lanes per direction)
- Bike lane width
- Speed limit or prevailing speed
- Bike lane blockage
- Presence of crossing signals
- Turn lane configuration

BLTS scores for a route combine over segments using weakest link logic. That means that if most of the segments on a route have LTS 1 or 2, but one or a few segments on a route have LTS 3, the route as a whole has LTS 3.

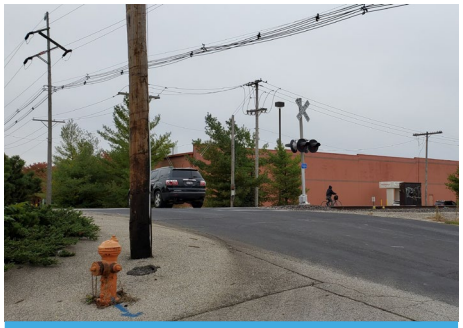
Figure 4.8 shows BLTS scores for the study area. Most of the local streets along the railroad corridor are low stress for cyclists, with a BLTS Score of 1, including Water Street, Griggs Street and Clark Street due to low traffic volumes. However, Main Street between Dodson Drive and Art Bartell Road also has a BLTS score of 1 despite an ADT of 5,000-10,000. This is most likely due to existing bike lanes and no intersections along the segment, both of which tend to reduce stress for cyclists.

Figure 4.7: Existing street BLTS examples

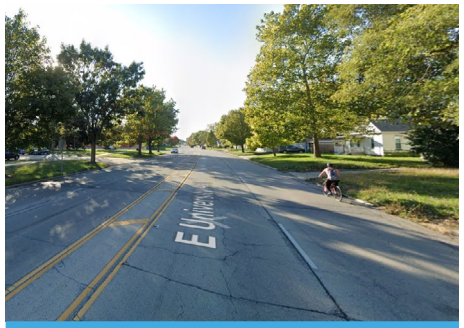


BLTS 1
Busey Avenue

BLTS 2
Race Street

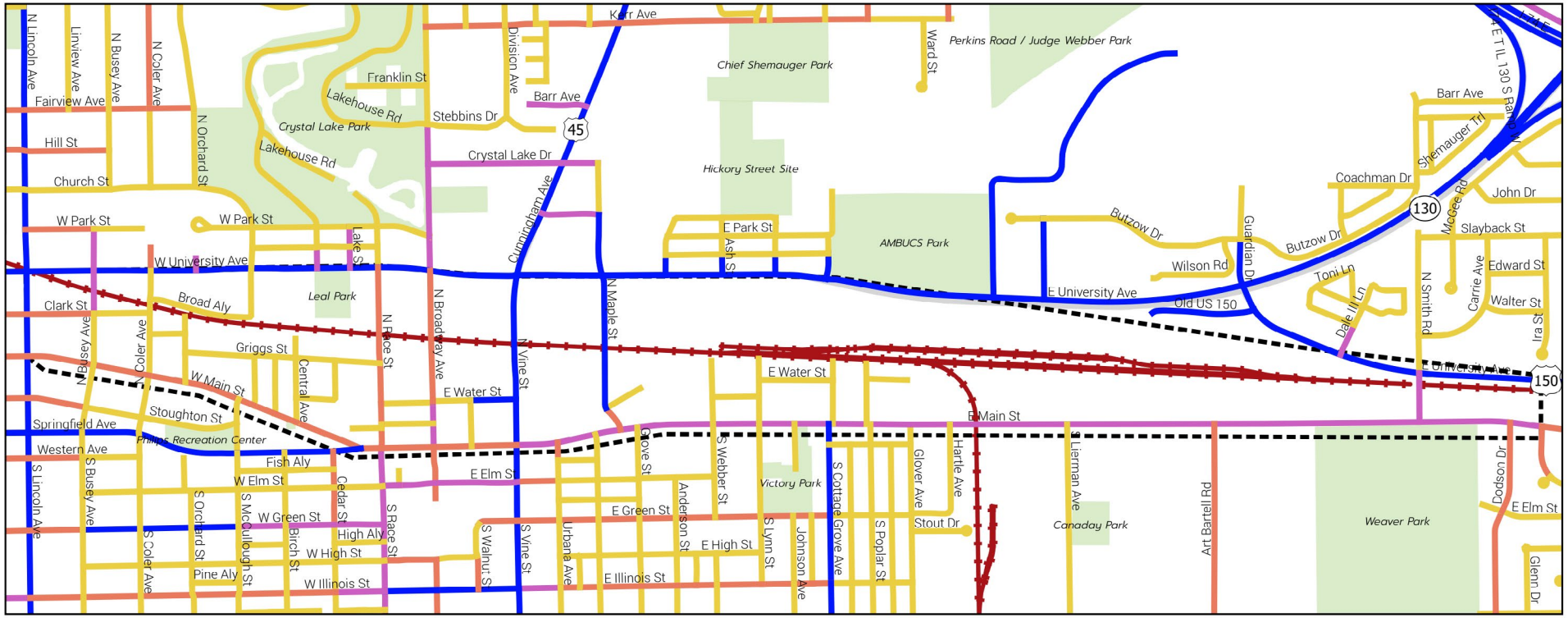


BLTS 3
Maple Street



BLTS 4
E. University Avenue

Figure 4.8: Existing Bicycle Level of Traffic Stress (BLTS)



BLTS Score

- 1 = Low Stress
- 2 = Medium Stress
- 3 = Medium-High Stress
- 4 = High Stress

- Roadway
- Railroads
- Open Space
- Study Area

Source: CCRPC, CCGIS

0 0.25 mi

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Locations with a BLTS score of 2 include Race Street and Broadway Avenue both between University Avenue and Main Street. The ADT is between 1,000 and 5,000 and Broadway Avenue has bike lanes and a shared-use path along the Boneyard Creek that connects to Race Street. These two segments serve as popular north-south options for cyclists. The western section of Main Street, between Vine Street and Lincoln Avenue, receives a BLTS score of 2 as well. Only a short portion of this section has bike lanes, but the fork separating Main Street from Springfield Avenue going west removes the majority of the vehicle traffic from Main Street. Locations with a BLTS score of 3 are in the central and eastern portions of the study area. Maple Street and Smith Road are 1.27 miles apart along the proposed KRT extension, and no streets in between them connect University Avenue to Main Street, so they receive more north-south vehicle traffic which increases stress for bicyclists. Main Street, from Art Bartell Road to Vine Street, has a BLTS score of 3. This section has bike lanes, but also has more vehicle traffic and several intersecting streets, increasing the stress level for cyclists.

The majority of locations with a BLTS score of 4 have high amounts of vehicle traffic and no existing bicycle facilities. University Avenue, Cunningham Avenue, and Vine Street are in this category. Other notable segments with high scores are Cottage Grove Avenue as it connects to Main Street from the south, and Springfield Avenue as it connects to Main Street from the west. Figures 4.8 shows examples of streets within the study area for each BLTS.

4.3 Pedestrian Level of Traffic Stress (PLTS)

Adapted from the methodology used for BLTS, PLTS "classifies roadway segments according to the level of pressure or strain experienced by pedestrians and other sidewalk users." A PLTS analysis was performed to take inventory of existing pedestrian facilities for the study area.

PLTS is a rating given to a route segment or crossing indicating the traffic stress it imposes on pedestrians. Levels of traffic stress range from 1 to 4 as follows from the Oregon Department of Transportation:

- PLTS 1 (low stress): Represents little to no traffic stress and requires little attention to the traffic situation. This is suitable for all users including children 10 years or younger, groups of people, and people using a wheeled mobility device. The infrastructure is a sidewalk or shared-use path with a buffer between the pedestrian and motor vehicle infrastructure. Pedestrians feel safe and comfortable on the pedestrian infrastructure. Motor vehicles are either far from the pedestrian infrastructure and/or traveling at a low speed and volume. All users are willing to use this infrastructure.
- PLTS 2 (medium stress): Represents little traffic stress but requires more attention to the traffic situation than young children may be capable. This would be suitable for children over 10, teens, and adults. All users should be able to use the infrastructure, but some factors may limit people using wheeled mobility devices. Sidewalk condition should be good with limited areas of fair condition. Roadways may have higher speeds and/or higher volumes. Most users are willing to use this infrastructure.
- PLTS 3 (medium-high stress): Represents moderate stress and is suitable for adults. An able-bodied adult would feel uncomfortable but safe using this infrastructure. This includes higher speed roadways with smaller buffers. Small areas in the infrastructure may be impassable for a person using a wheeled mobility device and/or requires the user to travel on the shoulder/bike lane/street. Some users are willing to use this infrastructure.
- PLTS 4 (high stress): Represents high traffic stress. Only able-bodied adults with limited route choices would use this infrastructure. Traffic speeds are moderate to high with narrow or no pedestrian infrastructure provided. Typical locations include high speed, multi-lane roadways with narrow sidewalks and buffers. This also includes infrastructure with no sidewalk. Only the most confident or trip-purpose driven users will use this infrastructure.

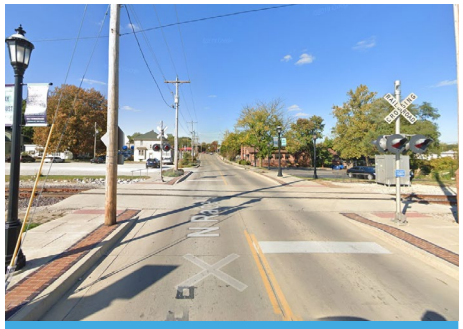
There are criteria for determining PLTS for route segments, intersection approaches, and crossings. The PLTS method uses the same weakest link logic as BLTS. That means that if most of the links on a route have a PLTS score of 1 or 2, but one or a few links on a route have a PLTS score of 3, the route as a whole would receive a PLTS score of 3.

Figure 4.10 shows the PLTS scores for the study area. Only a few locations with a PLTS score of 1 exist in the study area including Race Street (between University Avenue and Griggs Street), Main Street (between Broadway Avenue and Springfield Avenue), and Broadway Avenue just north of Main Street. Most of these areas have bike lanes and sidewalks, which offer extra space in between vehicles and pedestrians. Similarly, there are few locations with a PLTS score of 2 scattered across the study area on Water Street, Griggs Street, Busey Avenue, and Main Street.

Locations with a PLTS score of 3 occur more frequently than scores of 1 or 2, especially on Main Street, University Avenue, and Vine Street. These areas tend to have higher ADTs along with a sidewalk, but some residential streets also received PLTS scores of 3. Every location that received a score of 3, however, connects with a section that received a PLTS score of 4. This means that even though the sections are on narrow streets, the high stress situations from adjacent streets impact them.

The majority of the streets within the study area received a PLTS score of 4. Many of these streets do not have sidewalks along them, such as East University Avenue, Smith Road, Maple Street, and West Griggs Street, or have very narrow sidewalks with no barrier, such as Poplar Street. Pedestrians on University Avenue and Smith Road are exposed to high traffic volumes, as well as high-speed vehicle traffic on University Avenue with no dedicated facility besides the road. For this reason, the proposed KRT extension fulfills its goal of providing safe travel for users, as it eliminates most vehicle interaction and allows for free movement between east and west Urbana.

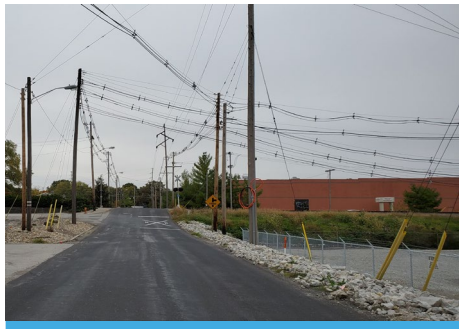
Figure 4.9: Existing street PLTS examples



PLTS 1
Race Street

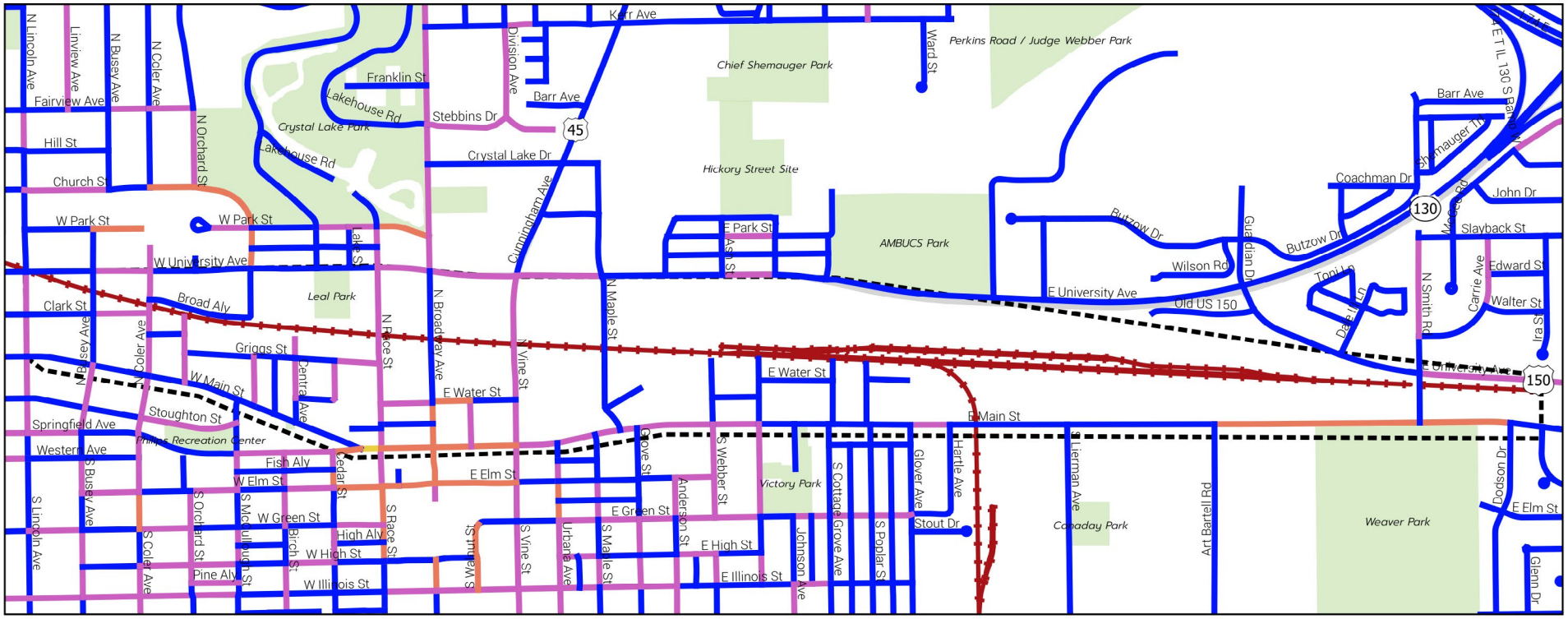
PLTS 2
Water Street

PLTS 3
Vine Street



PLTS 4
Maple Street

Figure 4.10: Existing Pedestrian Level of Traffic Stress (PLTS)



PLTS Score

- 1 = Low Stress
- 2 = Medium Stress
- 3 = Medium-High Stress
- 4 = High Stress

- Roadway
- Railroads
- Open Space
- Study Area

Source: CCRPC, CCGIS

0 0.25 mi

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Endnotes

1. Dill, Jennifer, and Nathan McNeil. "Four Types of Cyclists?." Transportation Research Record: Journal of the Transportation Research Board 2387.1 (2013): 129-138.

2. RWCmoves. A comprehensive assessment of transportation within Redwood City. Retrieved from http://rwcmoves.com/wp-content/uploads/2018/07/RWCmoves-Transportation-Plan_July16.pdf

3. Landis, Bruce. Real-Time Human Perceptions: Toward a Bicycle Level of Service. Transportation Research Record 1578, Transportation Research Board, Washington DC, 1997.

4. Dill, Jennifer, and Nathan McNeil. "Four Types of Cyclists?." Transportation Research Record: Journal of the Transportation Research Board 2387.1 (2013): 129-138.

5. Zhou, M. Lessons Learned from Cycle Tracks (Class IV Bikeways) Design Practice. Retrieved from https://www.westernite.org/annualmeetings/15_Las_Vegas/Presentations/3A-Zhou.pdf

6. Furth, P. G. (n.d.). Commentary on the Original Criteria (version 1.0, 2012). Retrieved January 27, 2020, from http://www.northeastern.edu/peter.furth/research/level-of-traffic-stress/

Figure: Boneyard Creek between Race Street and Broadway Avenue

5

Existing Environmental Conditions

5. Existing Environmental Conditions

Inseparable from the considerations of the built environment are those of the natural environment. It is critical to consider the natural environment when accounting for the short- and long-term impacts of transportation decisions. In connection with new approaches to maintaining and enhancing the natural environment, current Federal and State transportation legislation reconfirms the need to enhance the performance of transportation systems while protecting and enhancing the natural environment as one of its primary goals. Key environmental assets include but are not limited to[1]:

- Air: essential to both human and ecosystem health.
- Water bodies: provide drinking water, recreation, and act as natural pollution filters.
- Biodiversity: essential for food, materials, improved quality of life, and increases the region's resilience to environmental change.
- Forests: serve as watersheds, habitats, carbon sinks, leisure amenities, and tourist destinations. If managed sustainably, forests are also a source of energy and building materials.
- Wetlands: filter and process stormwater and waste as well as acting as a nursery for aquatic life.

This chapter focuses on the current environmental conditions of the study area and how the proposed KRT extension can maintain and enhance environmental resources that prove crucial to local and regional livability. While an official environmental review is outside of the scope of this study, taking preliminary steps to gather relevant information can assist member agencies with initial data preparation to streamline what can be a lengthy and complicated process. Certain factors, such as waterways, do not obey property boundaries, and thus have relevance to the surrounding locality and region. The existing environmental conditions considered are as follows:

- Topography & Soils
- Hydrology
- Waterways
- Flood plain
- Water Quality
- Wetlands
- Cultural Resources
- Natural Areas & Biodiversity
- Air Quality
- Noise
- Light Pollution
- Special Waste

It should be noted that despite this data collection and analysis, IDOT environmental surveys and special waste screening in compliance with National Environmental Policy Act (NEPA) environmental regulations would still be required before any project could be started. This process will help prepare for those processes, so they may be applied for and carried out more efficiently in the future, not as a substitute for them.

Figure 5.1: NSRR Line South of Emulsicoat Inc.

5.1 Topography

Over its 998 square mile area, Champaign County is one of the flattest areas in Illinois with elevations ranging from approximately 261 meters (855 feet) above mean sea level near the north of Rising Township to 191 meters (625 feet) above mean sea level near the Salt Fork River in Homer Township.[2] The county's average percent slope is 0.5.

Consistent with the rest of the county, the topography of the proposed KRT extension study area fluctuates between 208 meters (682 feet) and 232 meters (762 feet) above mean sea level (Figure 5.4). The highest elevations occur on the eastern and western edges and the lowest elevation exists surrounding the Boneyard Creek. Hydrologic features exist in the lowest elevation in an area (i.e. water flows downhill), and the Saline Branch meets the Boneyard Creek just north of the study area. This means that water in the study area drains north to the Saline Branch-Boneyard Creek junction.

With only a change of 24 meters (80 feet) throughout the entire study area, users of the proposed KRT trail will most likely not even notice a change in the topography. Offering a consistently flat ride, the proposed KRT extension will draw a larger number of bicyclists and pedestrians who may not feel comfortable or are unable to navigate a trail with more hills and valleys. However, the flatness does increase the impact of flash flooding events, as there will be few spots for the water to drain.

Figure 5.2: NSRR spur turning south towards DART

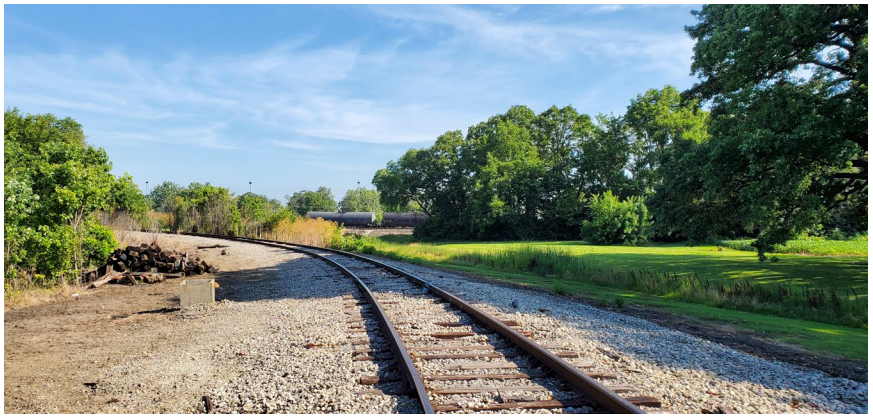
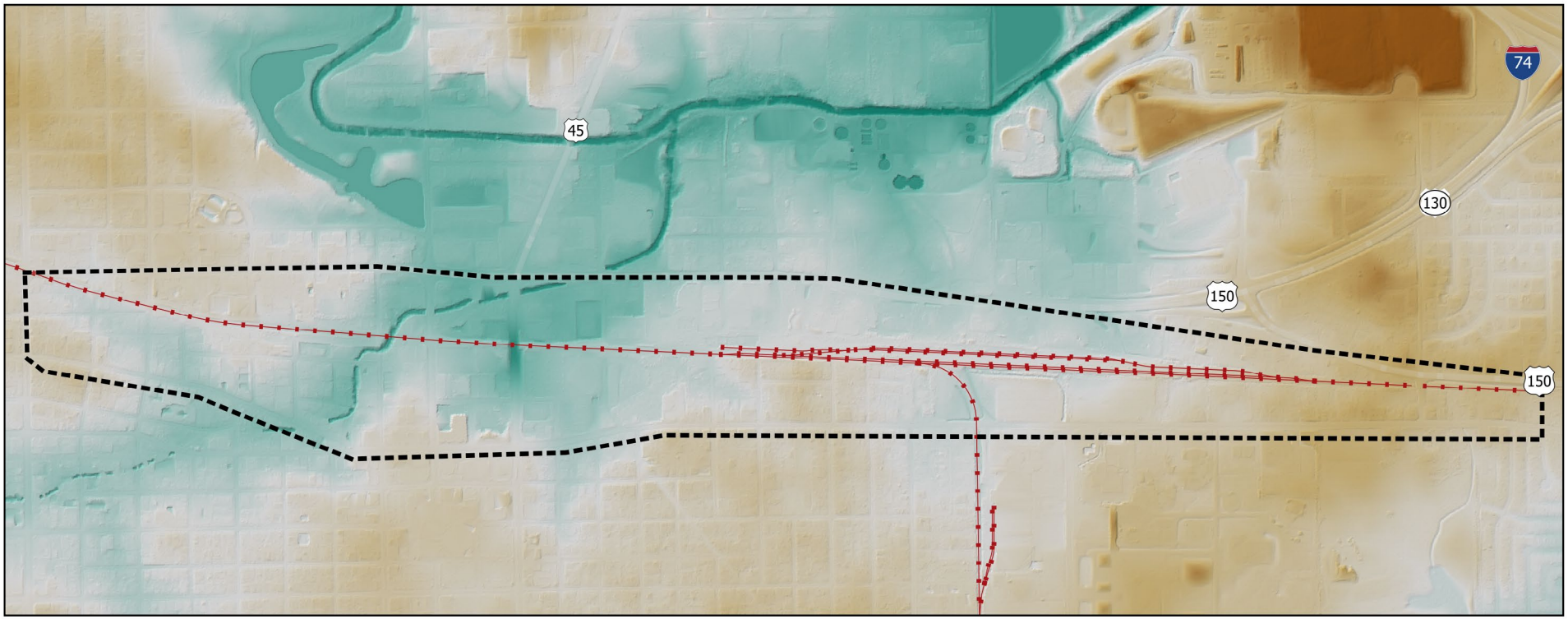


Figure 5.3: NSRR Line north of Save A Lot supermarket

Figure 5.4: Topography of the KRT Extension Study Area



Surface Elevation (1m DEM)

Low: 208m High: 232m

Railroads

Study Area

Source: USGS TNM Download, CCGIS

0 0.25 mi

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5.2 Soils

Originally, much of the Champaign County area was wet, marshy land, but after an extensive field-drainage and plowing effort in the late 1800's, the landscape seen today began to form.[3] With approximately 94.6 percent of the farmland in the county designated as Prime Farmland, this natural resource consists of a mixture of minerals, organic compounds, and living organisms constantly responding to natural and human induced stresses. However, despite their quality, the soils are incredibly fragile, and over-farming/degradation can leave them permanently destroyed. As the 2010 Land Resource Management Plan notes, once soils are depleted, they cannot be restored.[4]

Within the study area there are eight different soil types, each with unique properties and development potential. The following describes each type:

Shrink-swell: The extent to which soil will expand when wet and retract when dry.

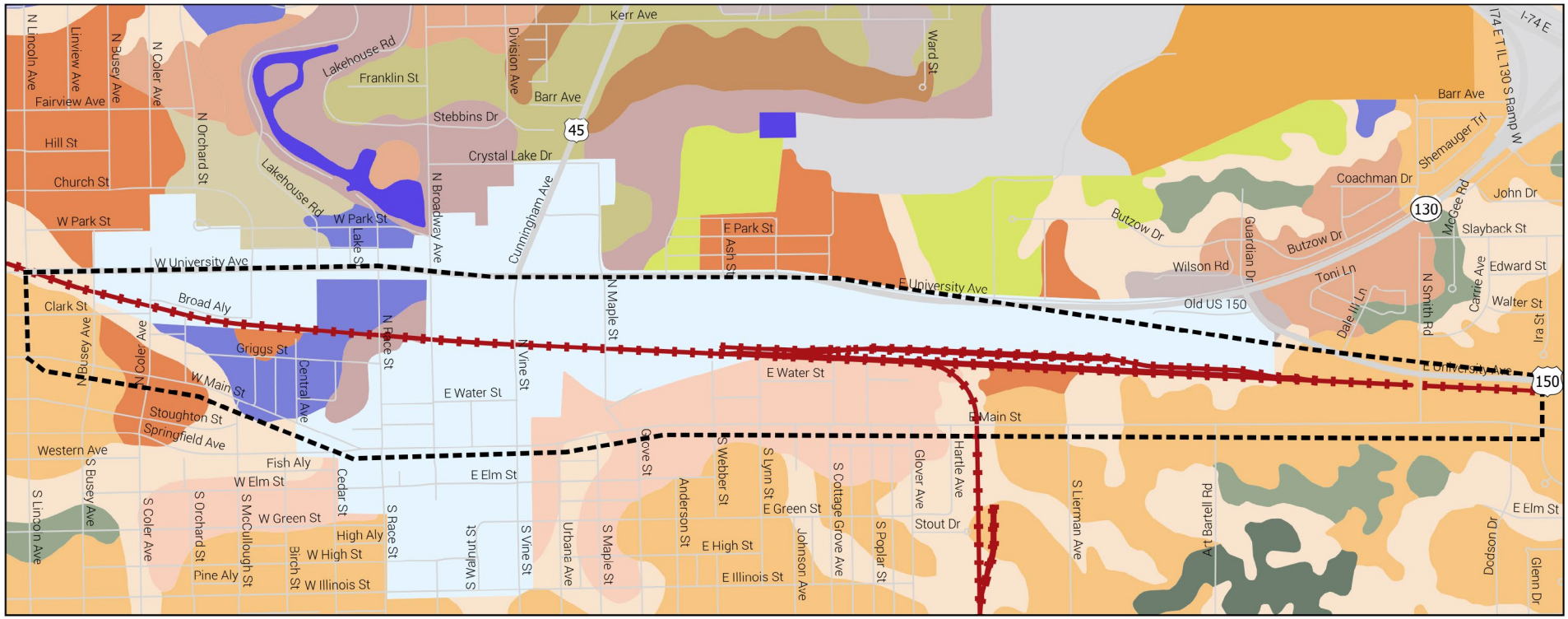
Ponding: The buildup of surface water through improper drainage.

Depth to Saturated Zone: Depth from surface to where all soil pores are filled with water. Avoided through additional fill to allow proper compaction and shaping of soil.

Table 5.1: Soil Types within KRT Extension Study Area

Map Unit Name	Area (Acres)	Area (%)	Hydric	Development Potential			Reason
				Dwellings without basements	Dwellings with basements	Small commercial buildings	
Drummer silty clay loam, 0 to 2 percent slopes	23.92	7.66%	Yes	Very limited	Very limited	Very limited	Ponding, Depth to saturated zone, Shrink-swell
Flanagan silt loam, 0 to 2 percent slopes	57.89	18.53%	No	Somewhat limited	Very limited	Somewhat limited	Ponding, Depth to saturated zone, Shrink-swell
Elburn silt loam, 0 to 2 percent slopes	40.47	12.95%	No	Somewhat limited	Very limited	Somewhat limited	Depth to saturated zone, Shrink-swell
Sunbury silt loam, 0 to 2 percent slopes	11.41	3.65%	No	Very limited	Very limited	Very limited	Depth to saturated zone, Shrink-swell
Xenia silt loam, 2 to 5 percent slopes	22.13	7.08%	No	Somewhat limited	Very limited	Somewhat limited	Depth to saturated zone, Shrink-swell, slope
Sawmill silty clay loam, 0 to 2 percent slopes	6.82	2.18%	Yes	Very limited	Very limited	Very limited	Ponding, Depth to saturated zone, Shrink-swell, Flooding
Urban land	149.76	47.94%	No	Not rated	Not rated	Not rated	
Total	312.40	100%					

Figure 5.5: Soil Types of the KRT Extension Study Area



Soil Types

- Birkbeck silt loam
- Camden silt loam
- Campton silt loam
- Catlin silt loam
- Dana silt loam
- Drummer silty clay loam
- Elburn silt loam
- Flanagan silt loam
- Landfills
- Martinsville loam
- Orthents
- Sabina silt loam
- Sawmill silty clay loam
- Senachwine silt loam
- Sunbury silt loam
- Urban land
- Wyanet silt loam
- Xenia silt loam
- Water

- Roadway
- Railroads
- Study Area

Source: USDA Web Soil Survey, CCGIS

0 0.25 mi

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Despite limited development potential for many of these soils, the area has been highly developed. This limited potential has been overcome through (1) controlled surface runoff through sloping or diversion, (2) proper foundation structure, and (3) a drainage system (natural drainage through vegetation and minimal landscaping reduces impact on soil).[5] Urban land constitutes around 48% of the KRT extension study area, representing areas of developed land where soil information is incomplete due to the poor quality or lack of access (paved over, filled in, etc.). The development potential depends on the area for this type, but in the study area most of the urban land type soil is already paved over or compacted, so should not pose an issue for development.[6]

Most of the study area consists of different subsets of silt-loam. As a foundation soil for a trail, silty loam offers reasonable stability with only minor water issues. The main soil-related issues in the study area will come from compaction and controlling surface runoff, which can be done through sloping of the trail or diversion. These types of soils do not significantly limit potential trail development because of their workability (quality moisture retention) and ease of compaction, but permeable pavement options could be used to further reduce ponding.

Hydric soils present the biggest challenges to development, as they characteristically exhibit limited water infiltration and oversaturated pores. Nearly 10% of the study area has hydric soils; particularly, along the Boneyard Creek and southeast of Vine Street.

Figure 5.6: Urban Land Soil along North Side of NSRR Line

Figure 5.7: Drainage Ditch in Hydric Soil Downslope of NSRR Line

5.3 Hydrology

The study area is located within the Vermilion-Wabash Basin (watershed), and most of the runoff, drainage, or precipitation empties into the Boneyard Creek. From there, the water drains east into the Vermilion River and then the Wabash River, eventually ending up in the Mississippi River traveling south into the Gulf of Mexico. This means pollution (trash or chemicals) discarded within the study area can reach many other communities and eventually the ocean. For this reason, it is important for policymakers and the public to understand the far-reaching effects that development and use in and around our wetlands, groundwater, and waterways has on downstream areas.

5.3.1 Waterways

The only hydrologic feature within the study area is the Boneyard Creek. Running through the Champaign-Urbana area, the Boneyard Creek feeds into the Saline Branch drainage ditch just north of downtown Urbana.[7] Channelized in the early 20th century for flood control and running through many acres of private property, the Boneyard has been heavily polluted over the years from runoff and dumping, with little jurisdiction to undergo large-scale restoration or maintenance. Currently the Boneyard tests positive for excessive amounts of copper, dissolved oxygen, and phosphorous and is considered an "impaired water" by the Illinois EPA.[8]

In 2008, the City of Urbana developed a Boneyard Creek redevelopment plan, known as the Boneyard Creek Master Plan. Only encompassing a portion of the Creek, the Master Plan consists of five sections (all within the study area) from Main Street to University Avenue. The five broad goals shaping the plan are summarized on the right side of this page.[7]

Trail users would benefit from the aesthetic beauty and the recovering ecological integrity of the Boneyard Creek. The proposed KRT extension would cross the Boneyard Creek and offer excellent views of the water, while showing off the improvements made by the Master Plan. As one of the few perennial open-water

2008 City of Urbana Boneyard Creek Master Plan Goals:

1. Enhance the Local Community

- Make creek improvements that encourage appropriate development.
- Create spaces along the creek that will increase the vitality of Downtown.
- Protect privacy of residential neighborhoods.
- Combine infrastructure and beautification projects to minimize capital costs.

2. Create a Network of Pedestrian and Bicycle Connections

- Improve pedestrian and bicycle access to Downtown and the surrounding community.
- Link the Boneyard Creek trail to existing parks and open spaces.
- Provide physical and visual access to increase safety of the creek.

3. Protect and Enhance Wildlife and Habitat

- Enhance habitat at the river bend near Silvercreek Restaurant.
- Provide vegetation that could provide shade and habitat for fish.

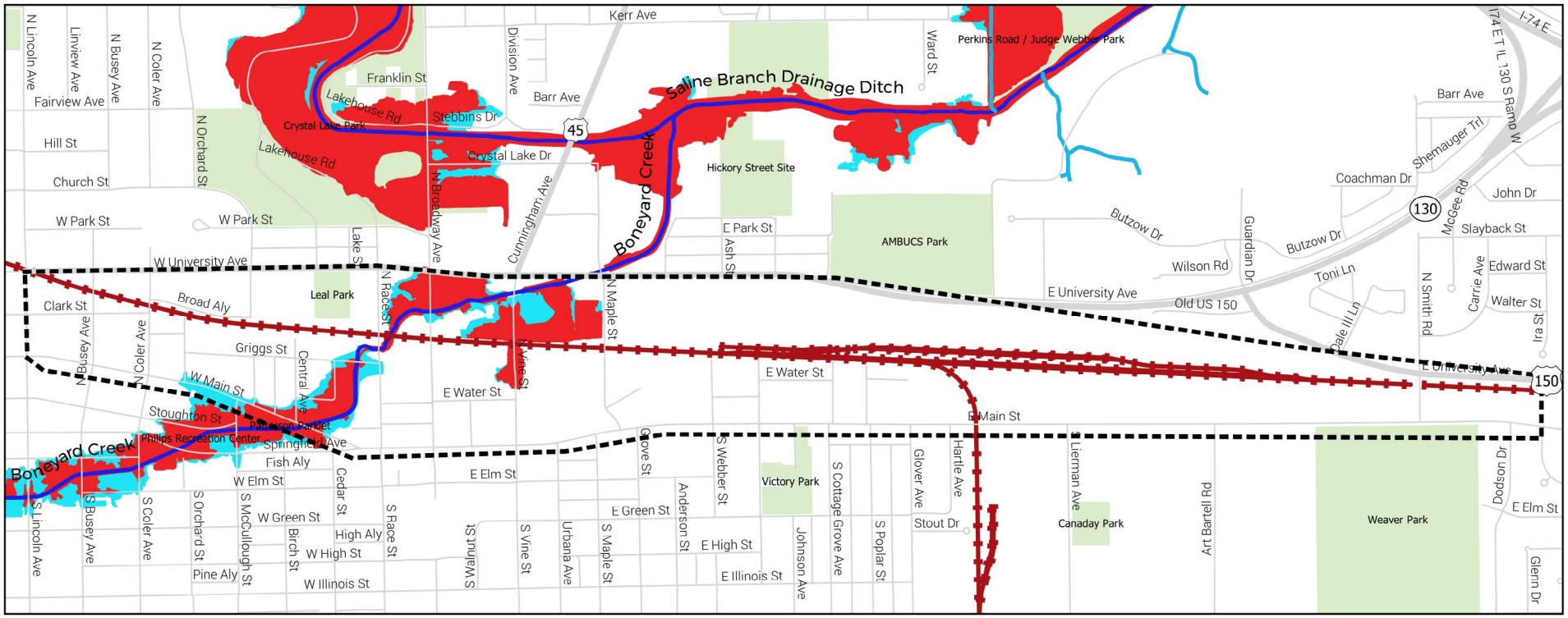
4. Improve Flood Control and Water Quality

- Improve creek banks susceptible to erosion.
- Remove the Courtesy Road Bridge which is a channel restriction during flood events.
- Mitigate sediment and contamination within the creek.

5. Provide spaces for Active and Passive Recreation

- Create public gathering spaces adjacent to the creek.
- Create an outdoor gathering space at the Station Theatre.

Figure 5.8: Waterways and Floodplains in KRT Extension Study Area



Waterways
- Intermittent
- Non-Intermittent
- 100 Year Floodplain
- 500 Year Floodplain

- Roadway
- Railroads
- Open Space
- Study Area

Source: USGS NHD View, FEMA's National Flood Hazard Layer (NFHL) Viewer, CCGIS

0 0.25 mi

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hydrologic features in the entirety of Champaign-Urbana, the Boneyard is a symbol of community pride and a gem along the proposed KRT extension.

5.3.2 Floodplain

With an abundance of hydric soils and presence of the Boneyard Creek, flooding is not uncommon within the study area. Much of the property near the Boneyard, especially along its western bank sits within the 100-year and 500-year floodplain.

Floodplain designation is based on probability, rather than historic data. This means that an area within the 100-year floodplain has a 1 percent (1-in-100) chance of flooding each year. The same holds for a 500-year floodplain; a 0.2 percent (1-in-500) chance of flooding each year. Any areas that have buildable properties touched by the 100-year floodplain around the Boneyard are considered part of the Boneyard Creek District.[9] Special development rules exist within the Boneyard Creek District that will need to be addressed before construction of the proposed KRT extension, but six development bonuses exist to encourage smart development within the District: development rights transfer, extra lot size, decreased or waived yard requirements, increased allowable building height, off-site parking, and mixed-uses on a single zoning lot are allowed.[9]

Flooding within the District has changed over the years, and a remapping of the area in 2014 found a reduction of the flood-prone area around the Boneyard Creek but an expansion of flooding in areas not previously included.[9] Urban flooding across the state has seen a steady upward trend over the last decade with over 90% of damage claims occurring outside of mapped floodplains between 2007-2014.[10]

This means that while certain sections of the proposed KRT extension would exist outside of the mapped floodplains, the risk of flooding is not necessarily reduced. Thus, the surface of a new section of the KRT should allow infiltration of water and runoff to reduce flood risk along the proposed trail, but trail users should still be aware that flash flooding would continue to be possible throughout the entire study area. Flooding events are expected to increase with climate change, as Illinois has experienced a 40% increase in heavy storms between 1979-2009.[10] Illinois has also seen a 20% increase in water volume flowing in streams during the most severe flood events.[11]

Figure 5.9: Boneyard Creek west of Race Street

Figure 5.10: Flooded Drainage Ditch Downslope of NSRR Line

5.3.3 Water Quality

Every two years, the Illinois EPA publishes its Integrated Water Quality Report and Section 303(d) List. This report draws from monitoring stations around the state, including 40 located in Champaign County. Water quality is determined based on the "designated uses" of that body, and biological, water, physical habitat, and fish-tissue data. Designated uses include:

- Aesthetic Quality
- Aquatic Life
- Fish Consumption
- Indigenous Aquatic Life
- Primary Contact
- Public and Food Processing Water Supply[8]

If a body of water cannot support any one of its designated uses, then it is deemed "impaired" and listed on the 303(d) List. Unfortunately, due to resource limitations, the Illinois Environmental Protection Agency (IEPA) "can only assess approximately 15 percent of Illinois stream miles for at least one designated use during every reporting cycle." If a body of water is added on the 303(d) list, it requires additional analysis and a priority ranking to establish a total maximum daily load (TMDL) for pollutants.[12]

The only hydrologic feature within the study area is the Boneyard Creek. In 2018, the Boneyard Creek was tested for the designated use of Aquatic Life, and found to be impaired because of copper, dissolved oxygen, and phosphorous.[8] Just north of the study area, the Boneyard meets with the Saline Branch. The western portion of the Saline Branch has a current TMDL to improve aquatic life, but the eastern portion was found to be fully supporting its designated uses.[12] Contamination sources are also listed in the 303(d) list, and are as follows:

- Loss of riparian habitat – vegetation along stream banks stabilizes soils and provides habitat for organisms.
- Channelization – straightening of streams and rivers reduces the natural filtration of moving water.
- Agriculture – runoff from agriculture fields (pesticides, fertilizer, animal waste).

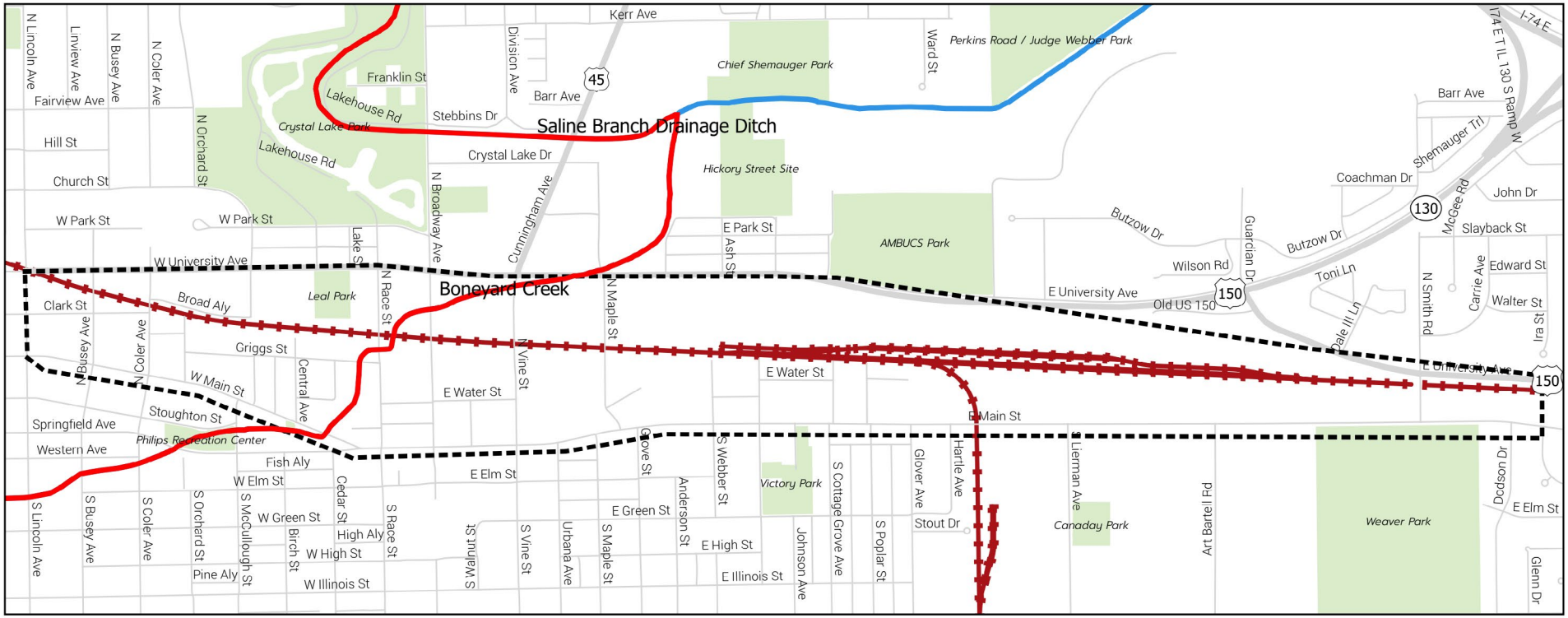
The groundwater within the study area connects to the Mahomet Aquifer, the drinking source for much of the County. While there is currently no concern from groundwater contamination to the aquifer, it is important to stay proactive to prevent such issues from arising in the future. The Regional Water Supply Framework for Champaign County and East-Central Illinois describes the possible pollutants that KRT users should consider[13] :

- Street Litter
- Road Salts
- Fertilizers and Pesticides
- Automotive fluids leaking from cars onto the ground

Users of the proposed KRT extension trail should keep these potential sources in mind to keep our trails and water as clean as possible. The proposed trail would help reduce both ground and surface water pollution by offering a non-motor vehicle transportation option to the community. Furthermore, efforts to re-vegetate the area would reduce runoff, stabilize soil, and aid in filtration of contaminants.

Figure 5.11: Boneyard Creek Water Quality

Figure 5.12: Water Quality in the KRT Extension Study Area



5.3.4 Wetlands

Characterized by fully or partially saturated land dominated by hydrophytes (water plants), wetlands provide a diverse array of services including plant and animal habitat, stormwater runoff control, filtration of nutrients, chemicals, and particulates, water level regulation in aquifers, and recreational opportunities. Despite their productivity, approximately 40-60% of all wetlands in Champaign County have been lost due to agricultural and urban drainage.[14]

Along the entire length of Boneyard Creek, the National Wetlands Inventory notes a 10.2-acre riverine wetland, designated by the light blue in Figure 5.13.[15] This wetland consists of a perennial riverine system with an unconsolidated bottom cover.

Several other wetlands lay just north of the study area. As the Classification of Wetlands and Deepwater Habitats of the United States (2013) notes, these wetlands are all part of the Riverine System (related to a stream/river) of the junction of the Saline Branch and Boneyard Creek because they are considered to be the result of river flooding.[14] The wetlands north of the study area are located in Crystal Lake Park just west of Broadway Avenue and north of Park Street, and just east of Cunningham Avenue (U.S. 45). Also flanking the northeastern portion of Saline Branch, north of Butzow Drive, are two freshwater forested/shrub wetlands.

- **Freshwater Emergent Wetland:** Vegetation of erect, rooted, herbaceous hydrophytes are dominant and present for most of the growing season. The shifting climate will cause them to revert to an open water phase in some years. Common names are marsh, wet meadow, fen, prairie pothole, and slough.[16]
- **Freshwater Forested/Shrub Wetland:** Trees are the dominant form of life (woody plants at least 20 feet in height), with an understory of shrubs and an herbaceous layer. Common names are swamps, hammocks, heads, and bottoms.[16]

Understanding the presence of these wetland ecosystems enhances the ecological view of the area surrounding the trail. These ecosystems perform valuable services for the community and should be treated with respect. As mentioned in the Water Quality section, water pollution is possible through a variety of common occurrences, and users should be mindful of how their actions might impact these wetlands.

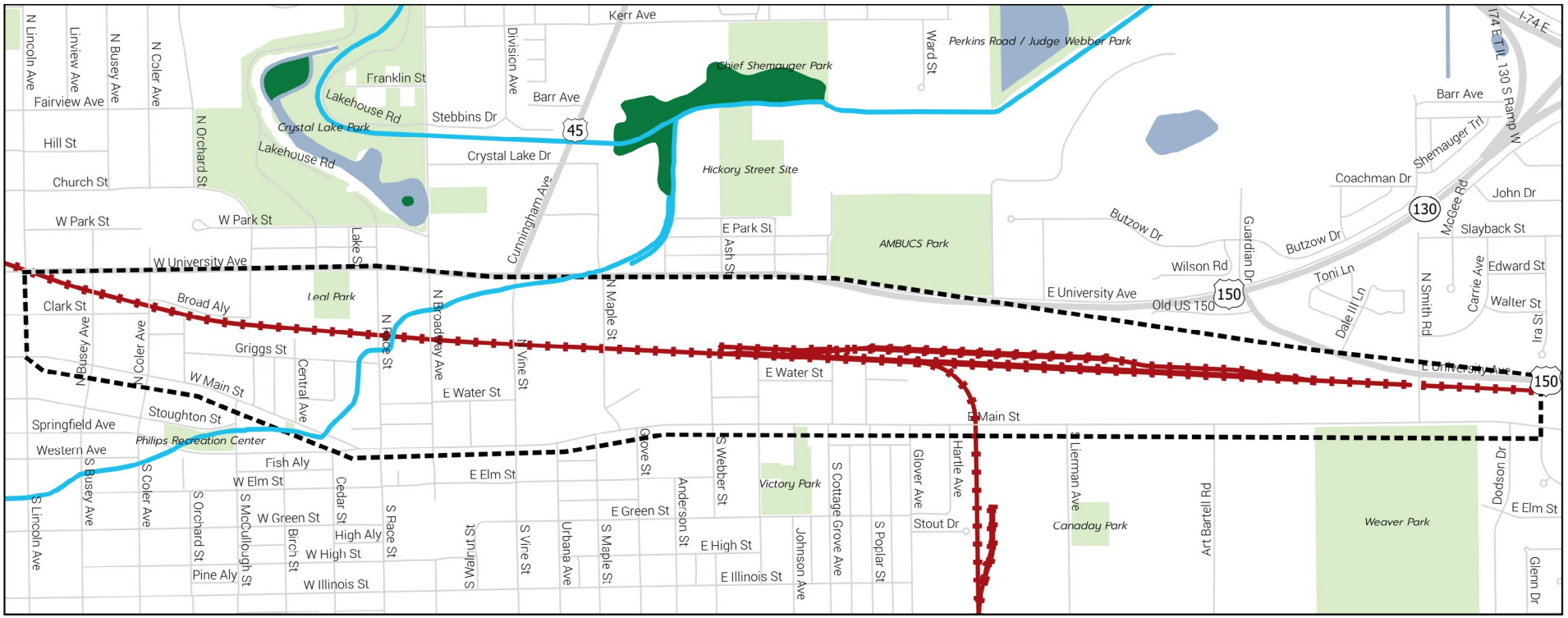
5.4 Cultural Resources

While considerations of the natural resources of the study area are important, equal weight must be given to the cultural resources. Defined by the USDA Natural Resources Conservation Service, cultural resources are evidence of past human activity.[17] Cultural resources contain links to our past and provide an understanding of the prehistory and early history of the area. These resources include sites, buildings, or areas. Cultural resources are classified as archaeological areas, designated by the Illinois Historic Preservation Agency (IHPA), and historic places listed under the National Register of Historic Places (NRHP), kept by the National Park Service (NPS). Site investigations are often necessary to determine these locations, and certain regulations protecting these sites means development projects must consider impacts to such locations, preserving the past to inform the future.

5.4.1 Archaeological Areas

The IHPA lists areas with a high probability of containing archaeological sites, sites that contain artifacts, or structures linking to early human settlement or prehistory. This designation uses soil characteristics, and geological member and formation data to determine potential locations across the state. In the KRT extension study area, the banks of the Boneyard Creek fall under this category, as 300 yards from the bluff line crest (valley wall) of all streams and rivers in the County meet the criteria.[18] This means the area has the potential to be archaeologically significant, but a site investigation would be necessary to determine whether regulatory protections apply. Public data on confirmed sites often remains classified to protect archaeological integrity.

Figure 5.13: Wetlands in the KRT Extension Study Area



Wetland Type

- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

- Study Area
- Roadway
- Railroads
- Open Space

Source: National Wetlands Inventory, CCGIS

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5.4.2 Historic Places

The NRHP tracks buildings and sites of historical significance across the county. The designation takes into account the age, significance, and integrity of the site, as described by the U.S. National Park Service.[19] According to the NRHP, two sites exist in the study area, with several just north and south of the boundary.

1. Clark R. Griggs House: 505 W. Main Street
2. Greek Revival Cottage: 303 W. University Avenue

Impacts and mitigation should be considered during trail construction under Section 106 of the National Historic Preservation Act that accounts for the significance and public benefit of the sites, as well as the cost of mitigation.[20] One cemetery exists in Leal Park, near the Greek Revival Cottage. The Illinois Human Skeletal Remains Protection Act dictates that grave sites cannot be disturbed without an Illinois Historic Preservation Division (IHPD) permit.[21]

Figure 5.14: Historic Clark R. Griggs House in Urbana

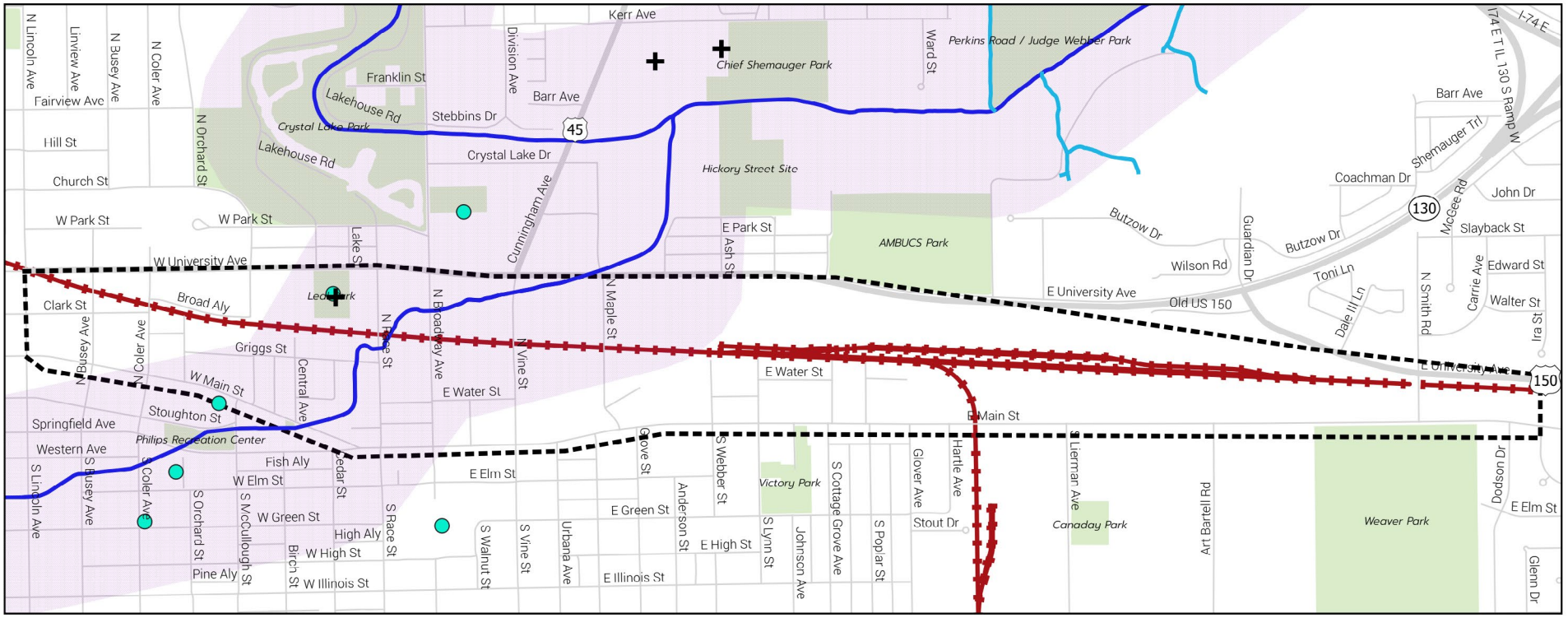
5.5 Natural Areas

Natural areas and open space provide habitat for a diverse array of plant and animal species within the study area. These areas offer a range of opportunities to see some incredible Midwest species in their natural environment, as well as providing a host of ecosystem services such as the provision of clean air, clean water, flood control, nature-based recreation opportunities, and the production of food, fuel and fiber.[22]

However, Champaign County has been transformed over the years, drastically reducing the amount of natural areas and open space, predominantly floodplain forests, upland forests, wetlands, and tallgrass prairie. Pre-settlement, the County was approximately 92.5 percent prairie, seven percent forest, with the remaining areas wetland and open water. Now, the ratios are 91.5 percent agricultural land, six percent urban land, one percent wetland, and one percent forestland.[23] Almost the entire prairie has been replaced with agricultural land, and this loss of habitat has significantly limited native species populations and areas to experience them.[23]

Figure 5.15: Weaver Park Trail

Figure 5.16: Historic Places & Archaeological Areas in KRT Extension Study Area



- Cemeteries
- Historical Places
- Intermittent Waterways
- Non-Intermittent Waterways
- Potential Archeological Area
- Roadway
- Railroads
- Open Space
- Study Area

Source: National Register of Historic Places, graveyards.com, CCGIS

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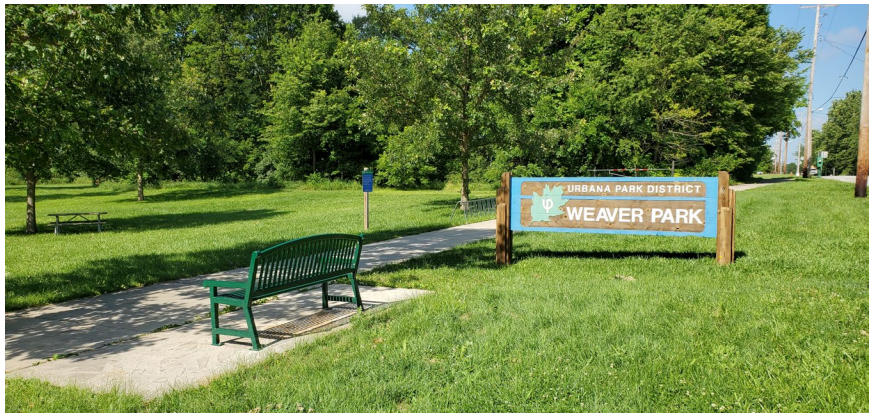
Despite this loss, the Champaign-Urbana area has seen an increase in the amount of natural areas over the years. From 1970-2005, the Urbana Park District has increased its total acreage by 152%, going from 216 to 544 acres.[18] The KRT extension study area hosts several parks and wooded areas and is adjacent to several more. The following descriptions come from the Urbana Park District Trails Master Plan.[24]

- **Weaver Park (60 acres):** Weaver Park is located within cycling distance of Victory Park and has an existing bicycle connection to Lohmann Park via Kinch Street and Florida Avenue. The existing Kickapoo Rail Trail begins just northeast of Weaver Park, offering regional connection and recreation opportunities. Proposed features include a loop path through many existing prairie and woodland habitats and a wetland and retention basin for collecting stormwater. This provides a drainage outlet for the surrounding 300+ acre watershed, protection from flooding for neighborhoods to the east, and essential habitat for marsh and wetland species.

Figure 5.17: Weaver Park entrance

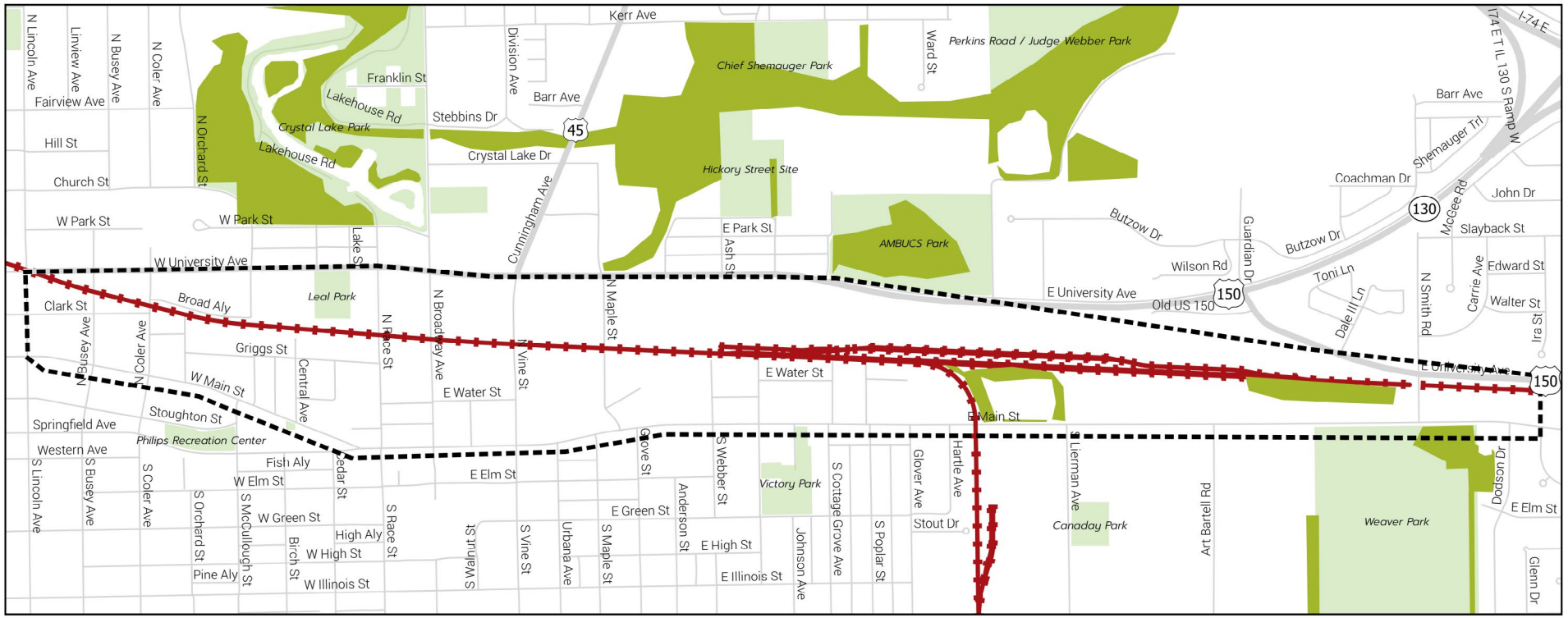


- **Victory Park (5 acres):** Only one block from the proposed extension, Victory Park lies within walking distance (0.25 miles) of AMBUCS Park, within cycling distance of Weaver Park, and is immediately accessible from nearby residential neighborhoods. Bicycle and pedestrian connections exist to the north, east, and west via Main Street and to the southeast via the Lierman Avenue shared-use path. Community gardens are available from April-November.

Figure 5.18: Victory Park pavilion

Figure 5.19: Lighted trail leading to a gazebo in Leal Park

Figure 5.20: Natural Areas in the KRT Extension Study Area



Roadway
Railroads
Wooded Areas
Open Space
Study Area

Source: Illinois Natural Areas Inventory, CCGIS

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- **Leal Park (3 acres):** Only a quarter mile from many nearby residential neighborhoods, downtown Urbana, and UPD facilities including Crystal Lake Park, Philips Recreation Center, and Patterson Parklet, Leal Park sits in a connectivity hub. The park boasts stands of mature oaks, including the National Association of Arborists-certified bicentennial tree (growing since 1787). These stands are remnants of the Big Grove, a native forest covering much of Champaign County prior to the settlement of Urbana.
- **Patterson Parklet (<0.5 acres):** Owned by the Urbana-Champaign Sanitary District but managed by the Urbana Park District, this parklet features an outdoor seating plaza just west of the downtown Urbana historic district.

Figure 5.21: Native Prairie Plants in Weaver Park

Two wooded areas also exist in the eastern portion of the study area, on the southern border of the rail line. Additionally, as previously mentioned, the National Wetlands Inventory notes a 10.2-acre riverine wetland along the Boneyard Creek (Figure 5.20).[25]

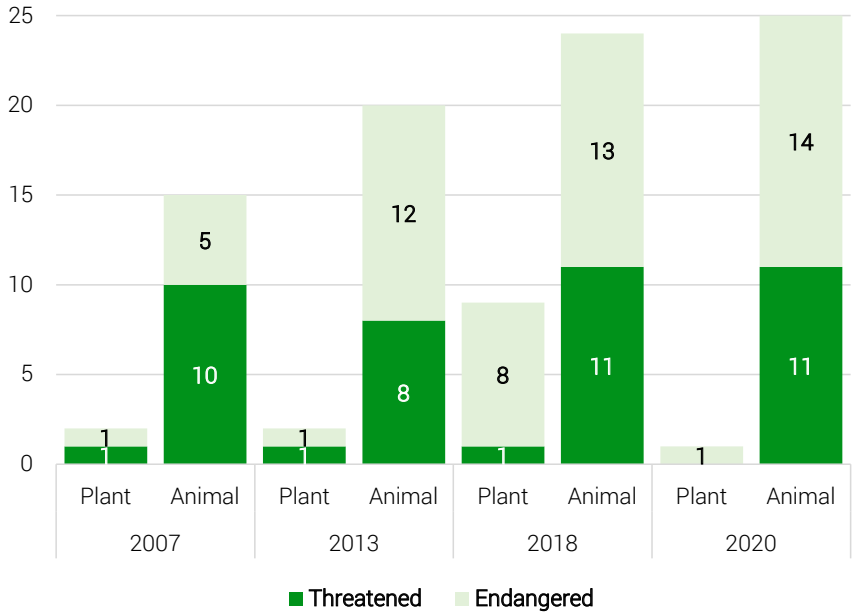
5.6 Biodiversity

The current Illinois Department of Natural Resources (IDNR) count of threatened and endangered species in the county lists 26 plants and animals.[26] This is a decrease of seven species since 2018. All of the species taken off the list were plants, while the only remaining plant on the list, Sangamon Phlox (Phlox pilosa var. sangamonensis), went from threatened to endangered in that same time.

- Threatened: Species likely to become endangered throughout its range.
- Endangered: Species on the brink of extinction throughout its range.

Some species classified as threatened or endangered in Champaign County may be more prevalent in other regions of the country or world. Global classifications from the International Union for Conservation of Nature Red List of Threatened Species (IUCN Red List) assist in differentiating which species are of most concern both globally and locally. Established in 1964, the IUCN Red List is one of the most comprehensive information sources on global conservation. In Champaign County, two animal species were both globally and locally endangered: the Rusty Patched Bumble Bee and Blanding's Turtle.

Figure 5.22: Threatened & Endangered Species in Champaign County



Source: Illinois Department of Natural Resources

Table 5.2: List of Endangered and Threatened Species in Champaign County

Common Name	Type	IUCN Red List Global Ranking	2020 State Status	Year Last Observed
Loggerhead Shrike	Bird	Near Threatened	Endangered	1991
Northern Harrier	Bird	Least Concern	Endangered	1994
Upland Sandpiper	Bird	Least Concern	Endangered	2013
Yellow-crowned Night-Heron	Bird	Least Concern	Endangered	2014
Bigclaw Crayfish	Fish	Least Concern	Endangered	2018
Bigeye Chub	Fish	Least Concern	Endangered	2016
Bluebreast Darter	Fish	Least Concern	Endangered	2014
Pallid Shiner	Fish	Least Concern	Endangered	1928
Rusty Patched Bumble Bee	Insect	Critically Endangered	Endangered	2007
Indiana Bat	Mammal	Near Threatened	Endangered	2015
Sangamon Phlox	Plant	Information Not Available	Endangered	2017
Blanding's Turtle	Reptile	Endangered	Endangered	1953
Northern Riffleshell	Shellfish	Information Not Available	Endangered	2013
Salamander Mussel	Shellfish	Vulnerable	Endangered	2000
Wavy-rayed Lampmussel	Shellfish	Least Concern	Endangered	2014
Mudpuppy	Amphibian	Least Concern	Threatened	2019
Barn Owl	Bird	Least Concern	Threatened	2005
Least Bittern	Bird	Least Concern	Threatened	1993
American Eel	Fish	Endangered	Threatened	1961
Eastern Sand Darter	Fish	Least Concern	Threatened	2019
Franklin's Ground Squirrel	Mammal	Least Concern	Threatened	2010
Northern Long-eared Myotis	Mammal	Near Threatened	Threatened	2014
Little Spectaclecase	Shellfish	Information Not Available	Threatened	2016
Purple Wartyback	Shellfish	Near Threatened	Threatened	2012
Slippershell	Shellfish	Least Concern	Threatened	2015
Spike	Shellfish	Least Concern	Threatened	1988

Habitat loss through land conversion and fragmentation is the main driver in reducing local biodiversity. None of the 26 state-listed species observed in Champaign County have been observed within the study area. The U.S. Fish & Wildlife Service identified 18 migratory birds with a potential presence within the study area at given times throughout the year. However, none of the 18 have ever been observed in the KRT extension study area. Citizens observed at least two such species at Weaver Park to the south and Crystal Lake Park to the north, but neither park crosses the proposed path.[27] The proposed KRT extension will encourage the regrowth of native wildlife habitat and further protect habitat along the trail, strengthening nesting and breeding grounds for these species and providing for opportunities to observe them.

5.7 Air Quality

Under the Clean Air Act, the U.S. EPA set National Ambient Air Quality Standards (NAAQS) for the six "criteria pollutants" deemed most harmful to public health and the environment[28]:

- Particulate Matter ($PM_{2.5}$, PM_{10})
- Nitrogen dioxide (NO_2)
- Ozone (O_3)
- Carbon Monoxide (CO)
- Sulfur dioxide (SO_2)
- Lead (Pb)

In Champaign County, these pollutants are measured across three different monitoring sites located in 1) Bondville, 2) Thomasboro, and 3) Champaign. Not all the sites monitor all the criteria pollutants, so data specific to the KRT study area must be inferred from that of the County.

NAAQS are broken down into primary and secondary Standards. Primary Standards provide public health protection, especially those more sensitive to pollution such as asthmatics, children, and the elderly. Secondary Standards provide public welfare protections, such as visibility, and damage to animals, crops, vegetation, and buildings.[29] Illinois' current air quality standards are listed in Table 5.3.

Figure 5.23: Lincoln Avenue and University Avenue Intersection

Figure 5.24: Smith Road and University Avenue Intersection

Table 5.3: Summary of National and Illinois Ambient Air Quality Standards

Summary of National and Illinois Ambient Air Quality Standards					
Pollutant		**Primary/ Secondary**	**Averaging Time**	**Level**	**Form**
Carbon Monoxide		Primary	8-hour	9 ppm	Not to be exceeded more than once per year
			1-hour	35 ppm	
Lead		Primary and Secondary	Rolling 3-month average	0.15 µg/m3	Not to be exceeded
Nitrogen Dioxide		Primary	1-hour	100 ppb	98th percentile, averaged over 3 years
		Primary and Secondary	Annual	53 ppb	Annual Mean
Ozone		Primary and Secondary	8-hour	0.070 ppm	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years
Particle Pollution	$PM_{2.5}$	Primary	Annual	12.0 µg/m3	Annual mean, averaged over 3 years
		Secondary	Annual	15.0 µg/m3	Annual mean, averaged over 3 years
		Primary and Secondary	24-hour	35 µg/m3	98th percentile, averaged over 3 years
	PM_{10}	Primary and Secondary	24-hour	150 µg/m3	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide		Primary	1-hour	75 ppb	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		Secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year
$PM_{2.5}$ Standards are referenced to local conditions of temperature and pressure rather than standard road conditions (760 mmHg and 25 degrees Celsius).					

Source: IEPA, Illinois 2018 Annual Air Quality Report Final (2018)

5.7.1 Air Quality Index

The EPA-devised Air Quality Index (AQI) rates air quality on a scale from "Good" to "Hazardous." AQI considers concentrations of criteria pollutants and a handful of other heavy metals, volatile organic compounds, and toxic compounds, along with atmospheric and weather conditions. The following, from the 2018 IEPA Air Quality Report, describes this scale:[28]

Champaign County's air quality has shown a significant improvement in the last two decades. Since 2000, no years have surpassed 10 days with less than "Moderate" air quality and none of them were "Unhealthy." Within the last decade, only three years had any days rated less than "Moderate."[30]

Air quality for the proposed KRT trail users will most likely not be an issue, considering the history of clean air in Champaign County. In fact, the KRT extension will help improve air quality, as more people will have a non-motorized vehicle transportation option, which is one of the leading causes of air pollution in the country.[31] However, the worst days for air pollution tend to be in the heat of the summer, when intense sunlight causes a series of complex photochemical reactions resulting in excessive amounts of atmospheric ozone (O_3). This means that peak trail-use months (spring and summer) also have the lowest air quality, which will likely get worse or occur more frequently with rising temperatures due to climate change. Users should check the local AQI to see if there is a safety concern during these seasons, but based on the trends noted in the annual Illinois Air Quality Report, there should be little cause for concern even during these times.

Table 5.4: Air Quality Index Health Concerns

Air Quality Index Health Concerns		
Air Quality Index Levels of Health Concern	Numerical Value	Meaning
Good	0 to 50	Air quality is considered satisfactory, and air pollution poses little or no risk.
Moderate	51 to 100	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
Unhealthy	151 to 200	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.
Very Unhealthy	201 to 300	Health warnings of emergency conditions. The entire population is more likely to be affected.
Hazardous	301 to 500	Health alert: everyone may experience more serious health effects.

5.8 Light Pollution

Perhaps the most noticeable, yet least considered form of pollution comes from the use of artificial lighting. Artificial lighting has been linked to human health problems, such as depression and insomnia, and produces just as salient of hazards to the natural environment.[32] Natural light regulates fundamental biological activities across almost all species, which, when disrupted, impedes and prevents biological timing for organisms to feed, find shelter, migrate, and reproduce.[33] Both light and noise pollution can affect humans and wildlife in a particular area through sustained exposure. No national standards exist for light pollution regarding environmental health, so local ordinances must be followed. The City of Urbana currently has no specific light pollution ordinance. As a general best practice, however, lighting should not cause a public nuisance. Consult the City of Urbana Municipal Code Article IV for precise definitions.[34]

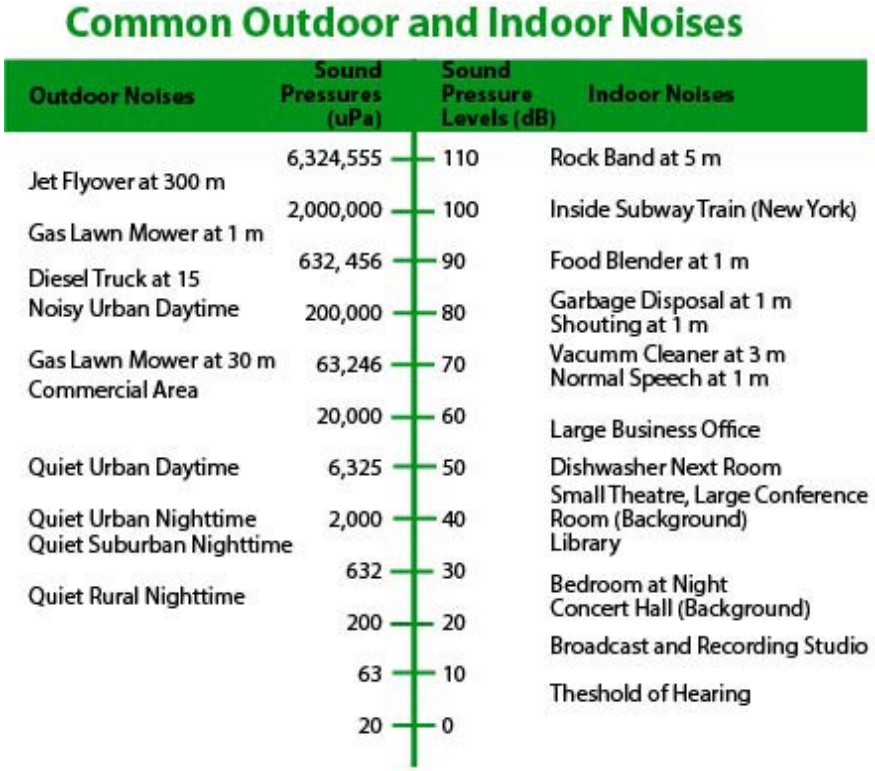
Light pollution is relatively higher in the western portion of the study area, where larger businesses and organizations like Carle Hospital and those of downtown Urbana stand. Users of the proposed KRT extension need not worry about light pollution as low-level lighting for nighttime accessibility is relatively innocuous, but the Illuminating Engineering Society-American National Standards Institute recommends using adaptive lighting strategies to mitigate ecological harm and reduce costs. Adaptive lighting strategies include:[35]

- Orienting lights only downward or towards the target (to minimize wasted light).
- Use light-timing and smart technology to keep lights on when needed, and off when not. Use light-guards to focus light and reduce external pollution (i.e. block the back of streetlamps to avoid polluting behind the streetlamp).
- Avoid high intensity blue emission sources, like white LEDs. These sources produce the most disruptive spectra of light to organisms.

5.9 Noise Pollution

Another infrequently considered form of pollution comes from noise. Much like light pollution, sustained high noise levels result in health problems like sleep loss, high blood pressure, and even heart disease. Wildlife impacts include disruptions in the ability to navigate, find food, attract mates, and avoid predators.[36] Damage to human ears from noise begins roughly at 85 decibels, and for wildlife the level varies by species. Typical highways range from 70-80 decibels, which is below the harmful threshold for humans but still able to cause issues for wildlife. Figure 5.25 illustrates noise pollution levels from common sources.

Figure 5.25: Common outdoor and indoor noises



The Federal Highway Administration (FHWA) deals with noise pollution using three different methods:[37]

- Source Control – Decibel limitations on newly manufactured trucks with a weight limit.
- Design or Operation Mitigation
  - » Restricting truck access.
  - » Traffic signal timing adjustments.
  - » Depressing the highway below grade.
  - » Installing noise barriers (this is the most common method).
- Noise-Compatible Land Use Planning – Locating roads and highways away from sensitive areas.

The proximity of Interstate 74 and U.S. 150 (University Avenue) to the study area could cause potential noise pollution concerns for KRT users and wildlife. However, with the average decibel level of U.S. highways below the harmful threshold for humans, this is unlikely. Wildlife may be impacted, but with the installation of the proposed KRT extension, vegetation plantings along the path act as an extra noise barrier to further reduce noise pollution levels. Construction of the proposed trail would comply with all Urbana noise ordinances.

5.10 Special Waste

Potential presence of hazardous or regulated substances affects both human and ecological health, and work in or around any identified special waste sites can cause a release of contaminants into the air, soil, and/or water. Federal and state regulations require that all currently known and potential special waste sites be identified as part of the environmental review process, so special preparations can be made to handle contaminants appropriately if necessary. EPA-regulated facilities list all sites or places subject to environmental regulations or of environmental interest including, but is not limited to, special waste sites and programs.[38] Special waste refers to any potentially infectious medical waste (PIMW), hazardous waste, pollution control waste, or industrial process waste.[39] These types of EPA facilities are most important to address, as there can be serious health and development issues if mismanaged.

IDOT is responsible for conducting reviews of property owned by IDOT, or property IDOT may acquire for highway project purposes to:

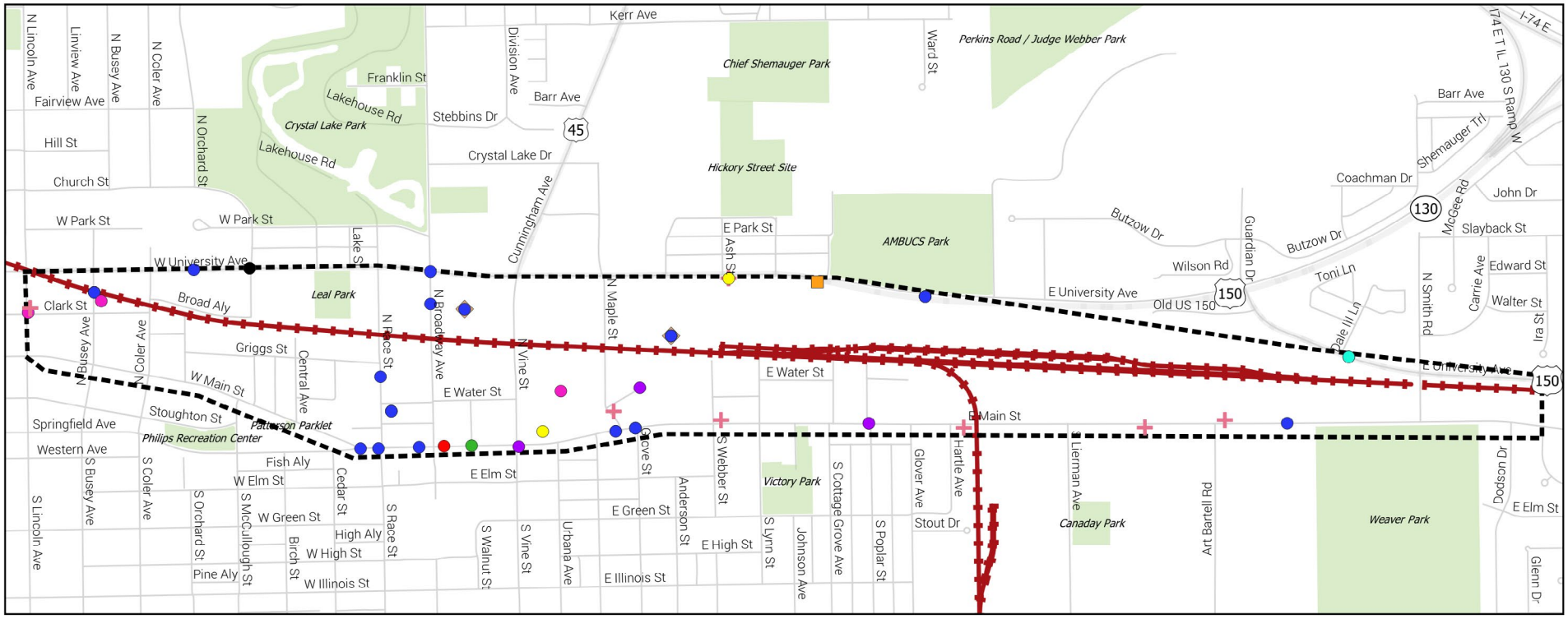
- Identify Hazardous conditions which workers and/or the public could encounter during construction;
- Avoid acquiring land from a potentially contaminated property; and
- Ensure material generated during construction is managed in accordance with state and federal laws.

Reviews are conducted in accordance with the IDOT Bureau of Design & Environment (BDE) Manual. In cases of Local Public Agency (LPA) owned property or property that an LPA may acquire, the LPA is responsible for the regulated substance review in accordance with the Bureau of Local Roads and Streets Manual.

IDOT Special Waste Screening considers 1) right-of-way acquisitions and 2) sites within a minimum search distance of a project property.[39] If a project requires a right-of-way acquisition and there is a site within the minimum search distance of that property, then a Preliminary Environmental Site Assessment (PESA) is performed according to Illinois State Geological Survey Standards.[40] Should a Recognized Environmental Condition be identified during the PESA, then further consultations would be made to determine the appropriate course of action.[17]

Figure 5.26 shows the location of all the special waste sites and other EPA facilities in the study area and the acronym of the program which they are regulated under. Table 5.5 provides a description of each program.

Figure 5.26: Special Waste Sites and other EPA Facilities in the KRT Extension Study Area



Source: EPA Geospatial Data Download Service, CCGIS

CHAMPAIGN COUNTY REGIONAL PLANNING COMMISSION

Table 5.5: List of EPA regulated sites in the KRT Extension Study Area

Acronym	Full Name	Description	Sites in KRT Study Area
UST	Underground Storage Tank	Inventory of all tanks and any connected underground piping that has at least 10% of its combined volume underground.	2
LUST	Leaking Underground Storage Tank	Inventory of all known leaking underground storage tanks.	8
Landfill	Landfill	Site for the acceptance and disposal of waste materials.	1
SRP	Site Remediation Program	Voluntary program involving IEPA assistance with site investigation, cleanups, and risk management. It applies to sites where Hazardous substances, pesticides, or petroleum may be present.	3
RCRA	Resource Conservation and Recovery Act	Facilities determined to be generating, transporting, storing, treating, or disposing of Hazardous and non-Hazardous solid waste. Facilities listed in the RCRAInfo Database.	14
EIS	Emission Inventory System	An inventory of large stationary sources and voluntarily-reported smaller sources of air point pollution emitters containing facility location, process, and control information.	4
AIR	ICIS-AIR (Integrated Compliance Information System-AIR)	Database containing enforcement, compliance, and permit data for stationary sources of air pollution regulated by the EPA, State, and Local air pollution agencies.	8
ICIS	Integrated Compliance Information System	Database compiling compliance and permitting data for stationary pollution sources into the air or water. Often paired with NPDES permits (ICIS-NPDES), and AIR permits (ICIS-AIR).	2
NCDB	National Compliance Data Base	Supports implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA). The system tracks inspections in regions and states with cooperative agreements, enforcement actions, and settlements as they relate to pesticides, and chemical substances and/or mixtures.	5
NPDES	National Pollution Discharge Elimination System	Database containing all facilities that have applied or have already been granted a permit to discharge pollutants from a point source into U.S. waters.	8
TRI	Toxic Release Inventory	Inventory that tracks certain harmful toxic chemicals and how much is released to the environment and/or managed through recycling, energy recovery and treatment.	2

Out of this group of facilities those designated as special waste and listed in the IDOT Special Waste Screening program are:

- Underground Storage Tank (UST)
- Leaking Underground Storage Tank (LUST)
- Landfills
- Site Remediation Program (Cleanup Sites)
- Resource Conservation and Recovery Act (RCRA)

5.10.1 Underground Storage Tank (UST) and Leaking Underground Storage Tank (LUST)

State regulations apply to USTs when either petroleum or certain Hazardous substances are stored. Several agencies are involved in the UST/LUST program. The Illinois EPA oversees developing and evaluating remediation objectives and reports. The Office of the State Fire Marshal regulates daily operation and maintenance of UST systems. The Illinois Emergency Management Agency notifies IEPA to initiate the review process when a leaking UST incident is reported.[41]

Most USTs themselves are not dangerous, but the potential for leaks is where the risk to health and the environment come in. Petroleum or other Hazardous substances can seep into the soil and contaminate groundwater, or potentially catch fire and explode.[16] Two USTs and eight LUSTs exist in the study area (Table 5.6). Most of them are spread out across the southern border of the study area, along Main Street. A PESA would be required if a UST is located on or adjacent to the proposed trail property. A PESA would also be required if a LUST is within half a mile of the proposed trail property.

Table 5.6: UST/LUST Sites

Program	Name	Address	Status	Product
UST	Schnucks Urbana Fuel Center	306 East Main Street, Urbana, IL 61802	Active	Gasoline - Regular
	Champaign Urbana Mass Transit District (CUMTD)	801 East University Avenue, Urbana, IL 61801	Active	Diesel Fuel
LUST	Champaign Urbana Transit (CUMTD)	801 East University Avenue, Urbana, IL 61801	Active	Diesel, Used Oil
	Champaign County Highway Department	1905 East Main Street, Urbana, IL 61801	Active	Gasoline
	Tekton Group, LLC	406 North Lincoln Avenue, Urbana, IL 61801	Active	Gasoline, Diesel
	Solo Cup Co.	1505 East Main Street, Urbana, IL 61801	Active	Fuel Oil
	Wakeland, HowaRoad	406 North Lincoln Avenue, Urbana, IL 61801	Active	Unknown
	Champaign County Highway Department	1705 East Main Street, Urbana, IL 61802	Active	Diesel
	Um, Inc.	808 East Main Street, Urbana, IL 61802	Active	Unleaded fuel, Diesel
	Schnucks Markets Inc.	294 North Maple Street, Urbana, IL 61801	Active	Other Petroleum Product

5.10.2 Landfills

Landfills are facilities that have permits to treat, store, and dispose of certain hazardous and non-hazardous wastes. No active landfills exist within the study area but one landfill in Post Closure Care is located in the northern portion at 1210 E. University Avenue (Table 5.7). Post Closure Care means that this site has reached its permitted disposal capacity, is closed and covered, and monitoring and maintenance activities continue to ensure no leaks occur. The Illinois EPA is responsible for monitoring landfills in Post Closure Care and use of the property must not disturb containment or monitoring systems.[42]

Table 5.7: Landfill Sites

Name	Address	Status
Urbana Landfill #3	1210 East University Avenue Urbana, IL 61801	Landfills in Post Closure 2016

If the proposed KRT extension requires property within a half mile of this landfill site, a PESA will be required.

Figure 5.27: Urbana Landfill #3 in Urbana

5.10.3 Site Remediation Program (Cleanup Sites)

The Site Remediation Program (SRP) is a voluntary program that provides State assistance with site investigation, cleanups, and risk management. This program applies to facilities where hazardous substances, pesticides, or petroleum may be present, and action is needed to address the risk to human and environmental health.[43]

Three of these sites lie within the study area between Maple Street and Lincoln Avenue(Table 5.8). If the proposed KRT extension requires property within a half mile of any of these Cleanup Sites, a PESA will be required.

Table 5.8: SRP Sites

Name	Address	Status
APL Engineered Products	406 North Busey Avenue Urbana, IL 61801	Inactive
Schnucks Markets, Inc.	204 North Maple Street Urbana, IL 61802	Inactive
Tekton Group LLC Series Corner North	406 and 406 1/2 North Lincoln Avenue Urbana, IL 61801	Inactive

5.10.4 Resource Conservation and Recovery Act (RCRA)

The Resource Conservation and Recovery Act (RCRA) provides the framework for managing hazardous and other solid wastes from "cradle to grave." This means that under RCRA, the EPA regulates the generation, transportation, treatment, storage, and disposal of hazardous and other solid wastes. Sites listed under RCRA are involved with hazardous and/or solid waste at any point in this "cradle to grave" process.[44]

Within the study area 14 RCRA sites exist, but only eight of them are active, meaning they are currently involved with hazardous or solid waste (Table 5.9). All eight active sites are Conditionally Exempt Small Quantity Generators, meaning they are the smallest

type of waste generator in the RCRA system. Most of them are south of the rail line and in the western portion of the study area. When the proposed KRT extension trail location is finalized, if one of these sites is located on or adjacent to the property, a PESA will be required.

Table 5.9: RCRA Sites

Name	Address	Status	Facility Type
APL Engineered Materials	406 North Busey Avenue	Null	Unspecified Universe
Denny's Professional Cleaners	119 North Race Street	Null	Unspecified Universe
Sherwin-Williams Co.	108 West Main Street	Null	Unspecified Universe
Walgreens15283	101 West University Avenue	Active	CESQG
Urbana & Champaign Sanitary District	1100 East University Avenue	Null	Unspecified Universe
Emulsicoat Inc.	705 East University Avenue	Active	CESQG
Busey Bank	201 West Main Street	Active	CESQG
Walgreens 15168	602 West University Avenue	Active	CESQG
Harry Gill Co.	201 Courtesy Road	Null	Unspecified Universe
Stephens USARC	2001 East Main Street	Active	CESQG
Long's Garage	503 East Main Street	Active	CESQG
Urbana School District #116	205 North Race Street	Active	CESQG
DO DUDS	402 North Broadway Avenue	Null	Unspecified Universe
Kurland Steel Co.	510 East Main Street	Active	CESQG

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Figure: Weaver Park Trail in Urbana

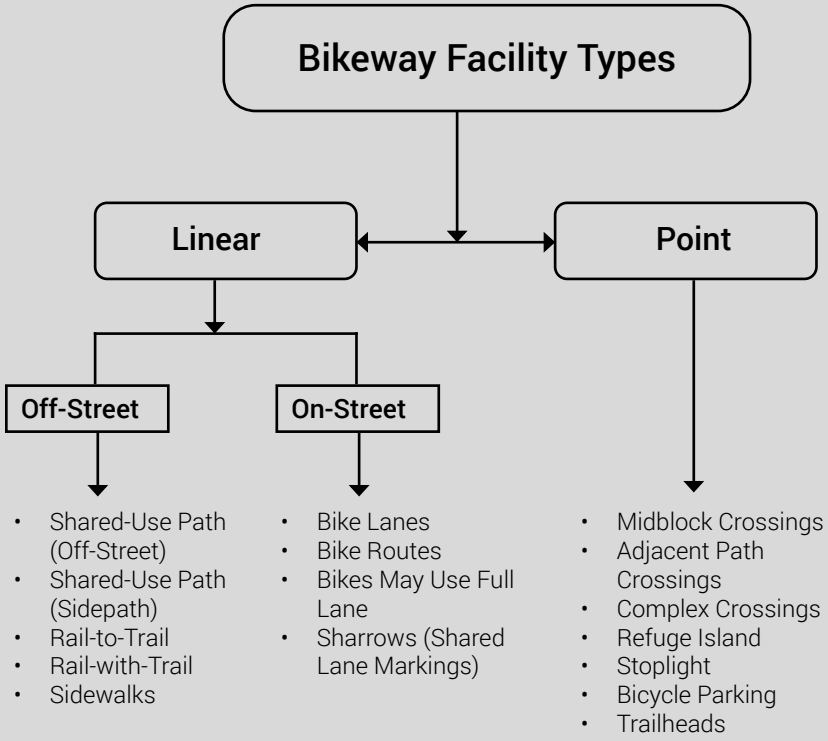
6

Facility Types

6. Facility Types

This discussion of facility types considers a variety of off-street and on-street trails and bikeways, cultivating a cohesive bicycle network that links parks, major destinations, and areas within the KRT Extension study area. Information presented in this chapter can also be found in the 2018 Weaver Park & East Urbana Kickapoo Rail Trail Connectivity Study, the 2016 City of Urbana Bicycle Master Plan (UBMP), and the 2016 Urbana Park District Trails Master Plan (UTMP). To help provide a safe, convenient, and functional transportation facility through the heart of Urbana, the following facility types will be covered:

Figure 6.1: Facility Types Chart



Facility types can be broken down into linear and point facilities (Figure 6.1). Linear facilities, such as off-street and on-street options, are the backbone of the bicycle and trail network, providing the actual transportation element of the network. Point facilities, such as those listed above, support linear facilities with safety, convenience, and accessibility.

At a minimum, all bikeways installed in the City of Urbana shall follow the Manual on Uniform Traffic Control Devices (MUTCD), with additional guidance on bikeway design and installation provided by the following documents:

- American Association of State Highway and Transportation Officials Guide for the Development of Bicycle Facilities (AASHTO Bike Guide 2012)
- National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide
- Federal Highway Administration (FHWA) Separated Bike Lane Planning and Design Guide

Additionally, all pedestrian facilities installed in the City of Urbana shall follow the Americans with Disabilities Act (ADA) with additional guidance on pedestrian design and installation provided by the proposed Public Rights-of-Way Accessibility Guidelines (PROWAG).

6.1 Off-Street Facilities

Off-street trails and paths offer significant separation from other vehicle traffic. These facility types are available for both pedestrian and bicycle traffic.

Recommended pavement types for off-street facilities, with the exception of sidewalks, include:[1]

- Asphalt
- Concrete
- Compacted Crushed Rock

Sidewalks should only use a concrete pavement type, as prescribed by the Champaign County Greenways and Trails Plan.

6.1.1 Shared-Use Paths

The UBMP provides recommendations for shared-use path dimensions that should be followed for the proposed KRT Extension in Urbana. To facilitate bi-directional and multi-modal traffic, shared-use paths should ideally be 10' feet wide, with a minimum recommendation of 8'.[1] Striping is not necessary on shared-use paths.

A clear zone should be maintained adjacent to both sides of all shared-use paths for joggers to use and to keep vegetation back from cracking through the trail surface. Ideally, the clear zone width would be 3' wide, but the minimum clear zone width should not be less than 2'. Therefore, a 16' right-of-way (ROW) is recommended for shared-use paths, with a minimum recommended ROW of 12'.[1]

Where a roadway or railroad runs adjacent to or near a shared-use path, the roadway or railroad should be separated from the shared-use path with a 5' wide clear zone. Therefore, 15' is recommended between the far side of the shared-use path and the road or rail edge, and a minimum of 13' between the two locations. If this separation is not possible, a 4.5' high physical barrier between the trail and roadway or railroad is recommended.[1]

Figure 6.2: Meadowbrook Park Shared-Use Path

Between the trail edge and any water body, there should be a vegetative distance of 10' to minimize potential for water pollution from runoff and chemicals associated with paved surfaces.[1]

a. Shared-Use Path (Off-Street)

A shared-use trail is a recreational pathway that pedestrians, bicyclists, rollerbladers, people with baby strollers, and skateboarders may use. They may connect parks, employment centers, shopping centers, and public places.[2]

b. Shared-Use Path (Sidepath)

Sidepaths are shared-use paths running immediately parallel to a roadway, similar to, but wider than a sidewalk. In general, sidepaths may be better choices than on-road bikeways for faster, busier roads with fewer access points and with well-designed intersections.[2]

Figure 6.3: Main Street Sidepath

6.1.2 Rail-to-Trail

A “rail-to-trail” is a shared use path, either paved or unpaved, built within the right-of-way of a former railroad, perhaps under federal railbanking law.[2]

6.1.3 Rail-with-Trail

A “rail-with-trail” is a shared-use path that parallels active railtrack, sometimes as an easement on railroad right-of-way. FHWA’s “Rails with Trails: Lessons Learned” provides best practices information on rails-with-trails.[2]

6.1.4 Sidewalks

Sidewalks are appropriate for mainly pedestrians and should be accessible to all users. Sidewalks offer pedestrians a safe place to travel, and should therefore be provided extensively throughout the transportation network. Typically, sidewalks are 4-6’ wide; not appropriate for shared-use with bicyclists. However, it should be noted that all bicyclists who choose to travel on sidewalks have the same rights as pedestrians and must yield to pedestrians. Accessible sidewalk facilities should be provided in all sidewalk reconstruction and new construction.[2]

Figure 6.4: Monon Greenway Rail-to-Trail in Carmel, IN

Figure 6.5: Constitution Trail Rail-with-Trail in Bloomington, IL

Figure 6.6: Broad Alley Sidewalk

6.2 On-Street Facilities

On-street facilities cater to bicyclists, and do not separate path users from vehicle traffic. As bicyclists on sidewalks have the same rights as pedestrians, traffic laws apply to bicyclists, as they have the right to ride on roads. On-street facilities can improve safety by increasing cyclist visibility, particularly at intersections, where most crashes occur.

These facilities are best suited for moderate to lower speed roads with many intersections, driveways, and entrances. Conflicts with pedestrians are reduced through physical separation of bikes and pedestrian facilities, which are not wide enough to handle both modes. When on-street facilities are present, it is important to include sidewalks on at least one side of the street to serve non-bicyclists.

Pavement types for on-street facilities should follow the most recent adopted edition of the Illinois Department of Transportation (IDOT)'s Bureau of Local Streets & Roads Manual (Chapter 42 - Bicycle Facilities) for road engineering standards.

6.2.1 Bike Lanes

An on-road bike lane is a one-way path that carries bicyclists in the same direction as the adjacent motorized travel lane. Bike lanes should be located on the right side of the roadway, between the parking lane (if one exists) and the travel lane. Bicycles traveling in bike lanes have the same rights and responsibilities as motorized vehicles.[2]

Figure 6.7: Broadway Avenue Bike Lanes

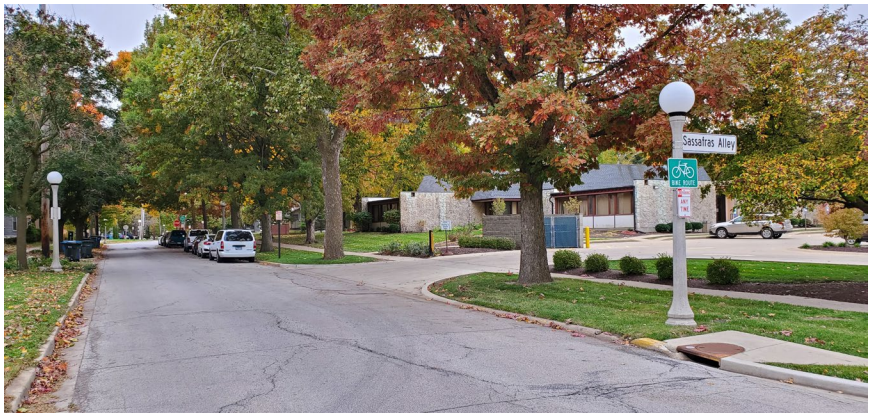
Bike lanes are at least 5' wide, with minimum widths varying based on roadway cross-sections. They promote predictable motorist and bicyclist movements, reduce bad cycling habits, add visual definition and clarify to the roadway, and have passive traffic calming effects from narrower lanes.[1]

6.2.2 Bike Routes

Bike routes are specially designated shared roadways that are preferred for bicycle travel for certain recreation or transportation purposes. Specific dimensions are not given for bike routes. Rather, proper signage, adhering to the 2012 AASHTO Guide for the Development of Bicycle Facilities and 2020 Urbana Bicycle Wayfinding Plan should be used to designate bike routes.

Where room or need does not exist for a dedicated bike lane, bike routes are appropriate. If the road is a common route for bicyclists through a high-demand corridor, or the route extends along local neighborhood streets leading to internal neighborhood destinations, then a bike route designation may be appropriate.[1]

Figure 6.8: Coler Avenue Bike Route



6.2.3 Bikes May Use Full Lane

A Bicycles May Use Full Lane sign may be used to inform road users that bicyclists may occupy the full travel lane. This sign may be used on roadways where no bike lanes or adjacent shoulders usable by bicyclists are present, and where travel lanes are too narrow for bicyclists and motor vehicles to operate side by side.[2]

This signage is recommended when traffic volumes and speeds are low, at intersections where bike lanes do not continue on the other side of the intersection, and on roads with insufficient width for bike lanes or shoulders (BLOS grades of Low C or High D).[1]

6.2.4 Sharrows (Shared Lane Markings)

Bicycle positioning on the roadway is key to avoiding crashes with cars turning at intersections. Shared lane markings, also known as "sharrows," are included in the 2009 version of the FHWA's MUTCD. Shared lane markings are used to indicate correct straight-ahead bicycle position at intersections with turn lanes, and at intersections where bike lanes are temporarily discontinued due to turn lanes or other factors.[2]

Sharrows improve bicyclist positioning reducing the potential of being hit by the opening of a door of a parked vehicle, conflicts caused by lanes too narrow for side-by-side traveling of motor vehicles and bicycles, and safe practices by both motorists and bicyclists.[1]

Figure 6.9: Bikes May Use Full Lane Sign on East Main Street

Figure 6.10: Sharrows on East Main Street

6.3 Point Facilities

Bikeway and trail crossings and end-of-trip facilities create a safe and attractive active transportation network, and should be designed to maximize safety, convenience, and accessibility. The proposed KRT Extension will require six at-grade trail crossings along its length.

Guidance on trail crossing signage can be found in the UBMP Section 5.3.1.

Further guidance on shared-use path crossings can be found in MUTCD Figure 9B-7 and AASHTO Bike Guide Figures 5-17 through 5-20.

Several types of trail crossings and end-of-trip facilities can be considered.[3]

6.3.1 Midblock Crossings

A trail crossing at a roadway or railroad with no other adjacent intersections or crossings. These crossings most commonly occur when the trail and the roadway intersect at right angles.

Figure 6.11: Midblock Crossing in Savoy

6.3.2 Adjacent Path Crossings

A trail crossing where the trail runs parallel to a roadway and crosses an existing roadway intersection. More challenging than a midblock crossing, due to the presence of turning vehicles, this crossing requires a stronger consideration of signage, traffic signals, and distance between the roadway intersection and the trail crossing.

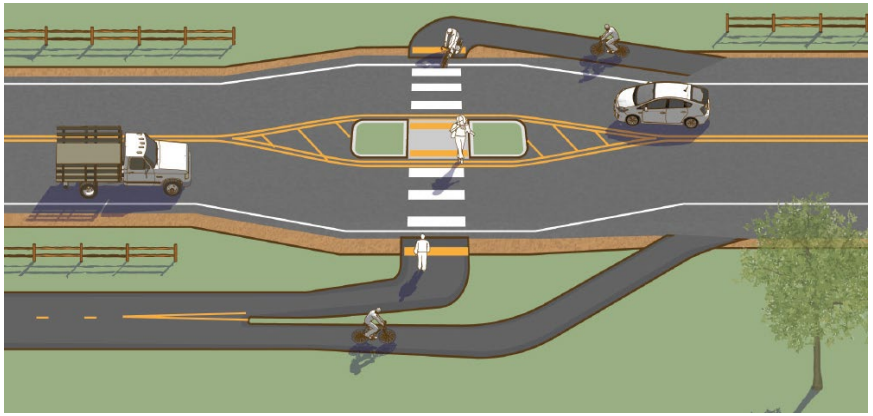
6.3.3 Complex Crossings

Complex crossings are any nonstandard trail crossings not covered by midblock or adjacent path crossings. The 2012 AASHTO Bike Guide recommends these crossings be treated on a case-by-case basis.

Other point facility types in Urbana include the following:

a. Refuge Island
b. Stoplight
c. Bicycle Parking
d. Trailheads

Figure 6.12: Adjacent Path Crossing



Source: Small Town and Rural Design Guide, https://ruraldesignguide.com/physically-separated/sidepath

6.3.4 Refuge Island [1]

A refuge island is a concrete island in the middle of a roadway that allows bicyclists and pedestrians to cross one direction of traffic at a time. These facilities allow safe crossings on roads where cross-traffic does not stop. The minimum width of a refuge island should not be less than 6' but the desired width is 10' to accommodate bicycles with a trailer, according to the Federal Highway Administration Report No. FHWA-SA-05-12.

Figure 6.13: Refuge island across Windsor Road to Vine Street

6.3.5 Stoplight [1]

Marked crossings at stoplights can offer an accessible and safe method to crossing roadways. Two types of stoplights exist in the City of Urbana: fixed-time and demand-actuated.

Fixed-time signals change at pre-set intervals, and pedestrians and bicyclists must wait for the signal to change at the pre-set interval.

Demand-actuated signals have a range of detection methods including embedded detector loops, video, thermal imaging, and radar. These signals give a green light to the busier street until a pedestrian, bicycle, or other vehicle on the minor street wants to cross.

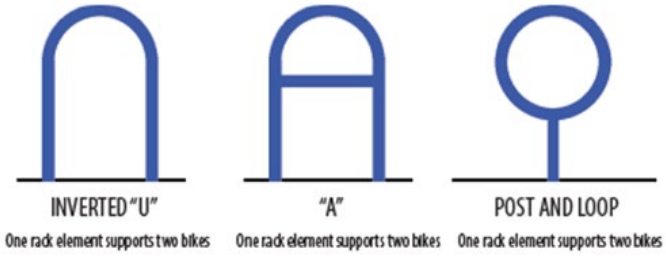
Figure 6.14: Goodwin Avenue at Green Street stoplight

6.3.6 Bicycle Parking

Bicycle parking is an end-of-trip facility to secure a bicycle, falling into one of two categories: short-term (two hours or less), or long-term (more than two hours). Short-term bicycle parking accommodates convenience and ease of use, while long-term parking provides security and weather protection.

Bicycle parking should be located at trailheads and destinations along trails and bikeways. A good bicycle rack provides support for the bike frame and allows both the frame and wheels to be secured with one lock. The Association of Pedestrian and Bicycle Professionals (APBP) recommends the "inverted-U" and "post and loop" bike parking types.[4]

Figure 6.15: Recommended Bike Racks



6.3.7 Trailheads

Trailheads act as the gateway between trails and adjacent communities and neighborhoods. Trailheads are designated public access points to trails, and can be located at both termini and mid-points along a trail.[5]

As opportunities to orient users to the trail or trail network, gathering places for organized community events, or celebrating the culture or history of a place, these facilities serve many functions and should be considered early in the planning process. Plans should include purposefully designed trailheads to provide amenities to trail users as either primary trailheads or secondary trailheads.

The following is a list of features that could be installed at a trailhead:

1. Bicycle and pedestrian counters to track trail usage
2. Bike parking
3. Bike repair station
4. Bus shelters, for transit connections
5. Charging stations for electric wheelchairs and/or mobile devices
6. Drinking fountain
7. Food/drink vending machines or space for food carts
8. Landscaping for aesthetics and/or shade
9. Lighting
10. Motorized vehicle parking
11. Pavilion
12. Pet amenities such as drinking fountain and/or waste station
13. Public art
14. Restrooms
15. Seating, such as benches, picnic tables, etc.
16. Signage/information such as donor recognition signs, historical markers, information kiosks, interpretive signage, and/or wayfinding signage or maps
17. Trash and recycling receptacles

Primary trailheads are major destinations along the trail, while secondary trailheads provide access and services between major destinations.

Essential features that should be considered for installation at primary trailheads are information kiosks, motorized vehicle parking, a pavilion, and restrooms.

Essential features that should be considered for installation at both primary and secondary trailheads are bike parking, drinking fountains, pet amenities, seating, trash and recycling receptacles, and wayfinding signage and maps.

Users should be able to access the trail without traveling too far of a distance, and ideally by using any mode of transportation. Trailheads should also be compatible with surrounding land uses and property owners. A full list of potential future trailhead sites within the KRT extension study area can be found in Table 9.3.

Figure 6.15: Partially developed Primary Trailhead at Weaver Park

Endnotes

1. CCRPC. Urbana Bicycle Master Plan, Chapter 5: Facility Types (2016).

2. CCRPC. Weaver Park & East Urbana Kickapoo Rail Trail Connectivity Study, Chapter 5: Facility Types (2018).

3. Rails-to-Trails Conservancy. Trail-Building Toolbox: Crossings (n.d.) Retrieved from https://www.railstotrails.org/build-trails/trail-building-toolbox/design/crossings/

4. Urbana Park District. UPD Trails Master Plan, Chapter 6: Facility Types (2016).

5. Rails-to-Trails Conservancy. Trail-Building Toolbox. Trailheads (n.d.) Retrieved from https://www.railstotrails.org/build-trails/trail-building-toolbox/design/trailheads/

Figure: Constitution Trail in Bloomington, IL

7

Alternative Analysis

7. Alternative Analysis

The alternative analysis chapter consists of general descriptions of the study area and its relevant features, as well as an analysis of potential opportunities and constraints of extending the KRT within study area boundaries. Based on existing transportation, environment, and land use data, the study team developed five alternatives to analyze (see Section 7.2).

7.1 Study Area Opportunities and Constraints

Based on existing conditions analysis, the study area was divided into four sections to consider:

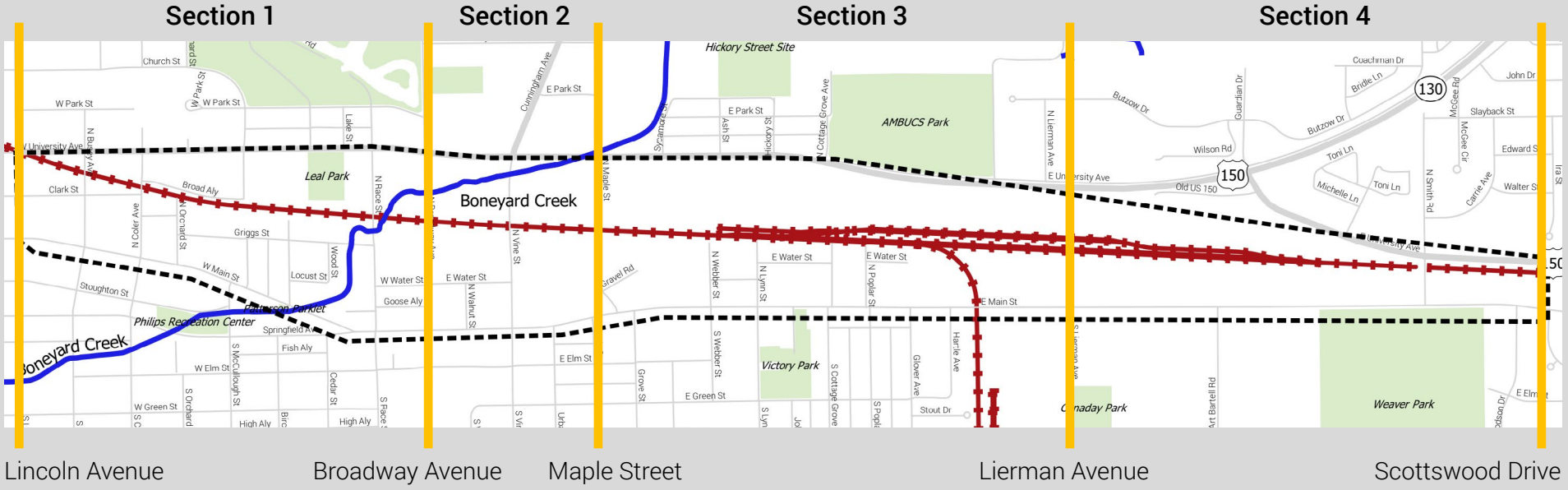
- Section 1: Lincoln Avenue to Broadway Avenue.
- Section 2: Broadway Avenue to Maple Street.
- Section 3: Maple Street to Lierman Avenue.
- Section 4: Lierman Avenue to Scottswood Drive.

A section-specific description of relevant features along the north and south sides of the NSRR corridor is described below.

Section 1: Lincoln Avenue to Broadway Avenue

Section 1 stretches roughly 0.64 miles from Lincoln Avenue to Broadway Avenue. Interspersed within this section are commercial land uses mixed with residential areas, and a crossing of the Boneyard Creek just east of Race Street. Broadway Avenue has bike lanes and connects to a shared-use path along a short segment of the Boneyard Creek. All of the streets in this section have posted speed limits of 30 mph. This now includes University Avenue, where the posted speed limit was reduced from 35 mph to 30 mph in March 2020. Heavy traffic coming from University Avenue to the south around downtown Urbana is the major source of stress for pedestrians and bicyclists. Bicycle Level of Service (BLOS) grades are B and C for this section, and the Bicycle Level of Traffic Stress (BLTS) is ranked as "Low Stress" on streets in this section (with the exception of University Avenue, Lincoln Avenue, and Main Street). The Pedestrian Level of Traffic Stress (PLTS)

Figure 7.1: KRT Extension Study Area Sections



ranges from "Medium" to "High Stress." Figure 7.2 shows some selected transportation and environmental conditions present in this section.

Section 1 North Side: The north side of Section 1 borders both the Carle Hospital main campus and Leal Park. A National Register of Historic Places (NRHP) site exists in Leal Park: the Greek Revival Cottage. A green strip along Broad Alley separates the rail line from the hospital traffic in the west half of the section, but transitions into a dirt/gravel border from the hospital parking lot to Broadway Avenue. Between Race Street and Broadway Avenue, the north side of the rail line borders the Silvercreek restaurant parking lot and the Broadway Food Hall lot. Broadway Food Hall is 26 feet from the closest edge of the building to the edge of the railroad.

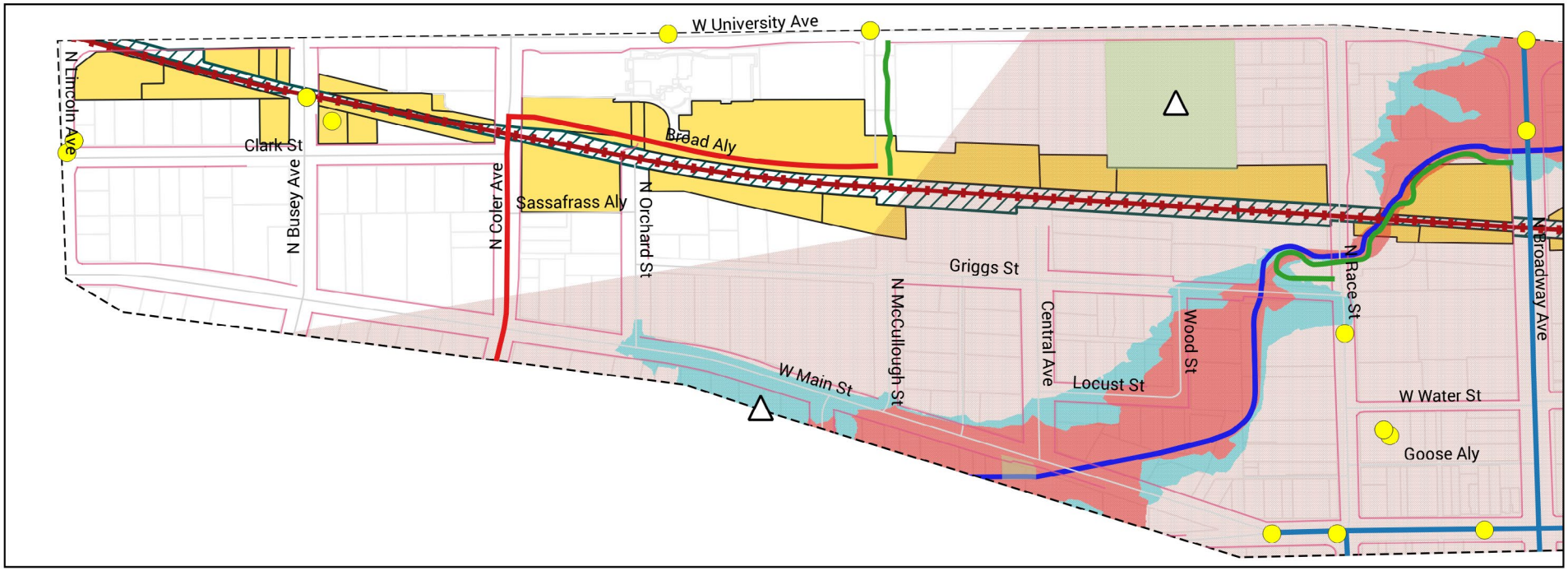
Opportunities

1. Support from Carle Hospital
    - Including increased walking and biking access for hospital staff, patients, and visitors.
2. The small green space bounded by the railroad and University and Busey Avenues offers public space to rest or relax.
3. Connectivity to destinations and facilities:
    - Boneyard Creek and its shared-use path.
    - Proximity to Leal Park.
    - Proximity to Crystal Lake Park.
    - Greek Revival Cottage (NRHP site in Leal Park).
    - Existing bike route along Coler Avenue and Broad Alley.
    - Existing shared-use path begins at the end of Broad Alley at McCullough Street and connects to Crystal Lake Park.
    - Existing bike lanes on Broadway Avenue.
4. Soil types on the north side of the railroad are non-hydric soils with only "Somewhat limited" development potential.
5. Community benefits:
    - Promotes a healthy lifestyle.
    - Connects residents to surrounding landscape.
6. Economic benefits:
    - Increased property values.
    - Businesses along section will experience more foot traffic.
7. Environmental benefits:
    - Enhanced vegetation and green space along the proposed trail prevent soil erosion, filters pollution caused by road runoff, and reduces flooding potential.
    - Enhanced vegetation provides wildlife habitats and a safer migration corridor.
    - A trail promotes non-motorized transportation that could replace some automobile travel and reduce greenhouse gas and other polluting emissions.
    - A trail would protect this section of the Boneyard Creek from further development that could increase degradation.

Constraints

1. Based on best practices, the proposed KRT extension construction will require access (easements or acquisition) on the following number of properties within 30 feet of the railroad centerline:
    - Railroad parcels – 3
    - Private parcels – 13
2. Building a trail crossing over the Boneyard Creek requires special permitting or a potential impact study.
3. Safety concerns for people walking and bicycling across University Avenue to the proposed KRT extension based on recent traffic crashes on University Avenue.
4. Addressing the effect of trail construction on one Historic Place:
    - Greek Revival Cottage in Leal Park.
    - IDOT review needed only if project potentially impacts the Greek Revival Cottage.
5. Hydric soils in this section increases flood risk.
6. Potential archeological area around Boneyard Creek.
    - Creekway Permit required for any project within Boneyard Creek District.

Figure 7.2: KRT Extension Study Area between Lincoln Avenue and Broadway Avenue



7. Addressing the effect of three EPA Monitored Facilities sites on trail construction:
    - APL Engineered Materials.
    - Walgreens 15168.
    - University & McCullough PKG LT. (parking lot).

Section 1 South Side: The south side of Section 1 borders mainly parking lots and commercial lots for the entire length. Interspersed within this section are some institutional land use parcels, including the Station Theatre which backs up directly to the rail line. The Station Theatre is 18 feet from the closest edge of the building to the edge of the railroad. Some single and multi-family residential parcels also exist in the west half of this section. The west half of the south side of Section 1 is a mixture of gravel and pavement, running up to several parking lots and businesses. The mixed-use Gather development began construction on the south side of the railroad between Lincoln and Busey Avenues in 2020. A small electrical utility station exists about 10 feet south of the railroad centerline on the east side of Coler Avenue. As the rail line passes Broad Alley, the bordering terrain turns to grass for the remainder of the length, until crossing Race Street where a gravel/pavement mix separates the rail from the Boneyard Creek and Station Theatre facilities to Broadway Avenue.

Opportunities

1. Traffic controls at the nearest intersections will improve the chance of fewer crashes.
2. Connectivity to destinations and facilities:
    - Boneyard Creek and its shared-use path.
    - Existing bike route on Coler Avenue.
    - Existing bike lanes on Broadway Avenue.
    - Clark R. Griggs House (NHRP site).
    - Downtown Urbana Historic District (NHRP district).
3. Less vehicle traffic on streets south of the railroad as opposed to north of the railroad.
4. Small wooded area bounded by the railroad, McCullough Street extended, Griggs Street, and Central Avenue is aesthetically pleasing.
5. Community benefits:
    - Promotes a healthy lifestyle.
    - Connects residents to surrounding landscape.
6. Economic benefits:
    - Increased property values.
    - Businesses along section will experience more foot traffic.
7. Environmental benefits:
    - Enhanced vegetation and green space along the proposed trail prevent soil erosion, filters pollution caused by road runoff, and reduces flooding potential.
    - Enhanced vegetation provides wildlife habitat and a safer migration corridor.
    - A trail promotes non-motorized transportation reducing greenhouse gas and other polluting emissions from deposition in the Boneyard Creek or release into the air.
    - The trail protects the Boneyard Creek in this section from further development along its bank that could cause increased degradation.

Constraints

1. Based on best practices, the proposed KRT extension construction will require access (easements or acquisition) on the following number of properties within 30 feet of the railroad centerline:
    - Railroad parcels – 3
    - Private parcels – 11
2. Negotiations for rail corridor access with owners of multiple commercial parcels could prove difficult.
3. Negotiations for rail corridor access with owners of multiple residential parcels could prove difficult.
4. No existing bicycle or pedestrian facilities along the south side of the rail corridor.
5. Station Theatre directly on rail line, which creates a space constraint for building a trail.
6. Hydric soils in parts of section increase flood risk.

7. "Very Limited" development potential of soil.
8. Building a trail crossing over the Boneyard Creek requires special permitting or a potential impact study.
9. Addressing the effect of eight EPA Monitored Facilities sites on trail construction:
    - Urbana School District #116.
    - Denny's Professional Cleaners.
    - APL Engineered Materials.
    - Tekton Group LLC Series Corner North.
    - Tekton Group LLC.
    - LPJ Research.
    - Busey Bank.
    - Sherwin-Williams Co.
10. Addressing the effect of trail construction near two Historic Places:
    - Clark R. Griggs House.
    - Downtown Urbana Historic District.

Section 2: Broadway Avenue to Maple Street

Section 2 stretches approximately 0.27 miles from Broadway Avenue to Maple Street. This section passes through a mixture of commercial and industrially zoned land-use parcels, and crosses Vine Street, one of the busiest streets within the study area. However, there is a railroad bridge over Vine Street, so vehicles do not currently interfere with crossings. The posted speed limit on all streets in this area is 30 mph, and the Bicycle Level of Service (BLOS) grades vary between an A for Broadway Avenue, and a D for Vine Street. Broadway Avenue has designated bike lanes between Main Street and University Avenue. The Bicycle and Pedestrian Levels of Traffic Stress in the area varies between Medium Stress and High Stress. The highest stress for bicycles is along Vine Street, but pedestrians experience the highest levels of stress on Broadway Avenue and Maple Street. Broadway Avenue has sidewalks and bike lanes, but Maple Street has no on- or off-street pedestrian or bicycle facilities. Figure 7.3 shows selected transportation and environmental conditions present in this section.

Section 2 North Side: The north side passes through a mixture of commercial and industrial land-use parcels. Included within these parcels are the Champaign County Coroner, the Courtesy Motel, and Carter's Furniture. A small electrical utility station exists about 60 feet north of the railroad centerline on the west side of Maple Street.

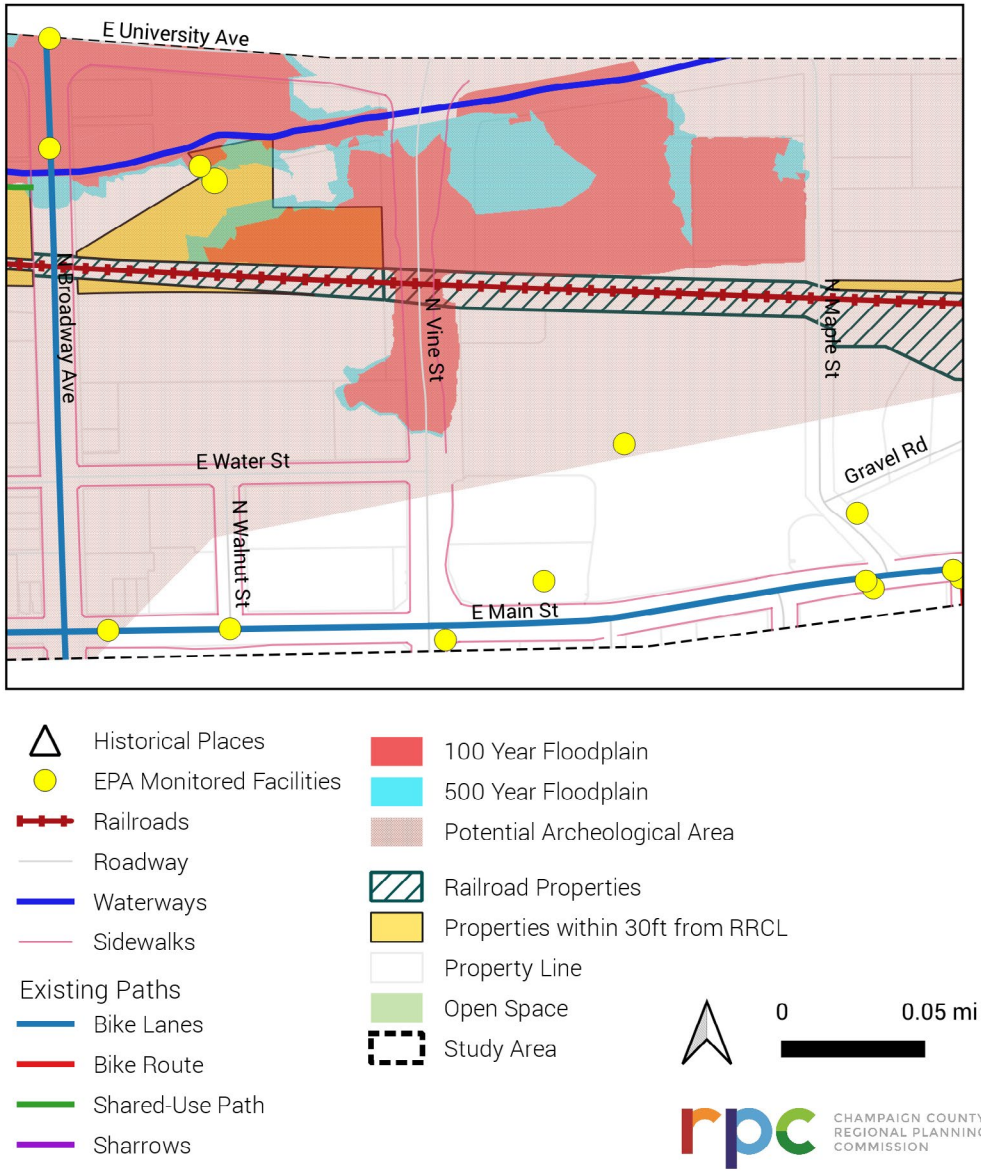
Opportunities

1. Gravel/soil shoulder exists (i.e. no need to remove existing pavement).
2. Municipal drainage limits flooding.
3. Aesthetically pleasing tree line between Vine Street and Maple Street.
4. Community benefits:
    - Promotes a healthy lifestyle.
    - Connects residents to surrounding landscape.
5. Connectivity to destinations and facilities:
    - Bikeway access exists from Broadway Avenue bike lanes.
    - Pedestrian access exists from Broadway Avenue and Vine Street sidewalks.
6. Economic benefits:
    - Increased property values.
    - Businesses along section will experience more foot traffic.
7. Environmental benefits:
    - Enhanced vegetation and green space along the proposed trail prevent soil erosion, filters pollution caused by road runoff, and reduces flooding potential.
    - Enhanced vegetation promotes wildlife habitat and a safer migration corridor.
    - A trail promotes non-motorized transportation reducing greenhouse gas and other polluting emissions from release into the air.

Constraints

1. Based on best practices, the proposed KRT extension construction will require access (easements or acquisition)

Figure 7.3: KRT Extension Study Area between Broadway Avenue and Maple Street



on the following number of properties within 30 feet of the railroad centerline:
   - Railroad parcels – 1
   - Private parcels – 1
2. Most of the north side of the railroad is within the flood hazard area.
3. Addressing Vine Street bridge structural issues will raise trail construction costs.
4. Potential safety concern from the Maple Street electrical station (60 feet from rail centerline).
5. Addressing the effect of three EPA Monitored Facilities sites on trail construction:
   - Walgreens 15283.
   - Harry Gil Co. (southwest of Five Points).
   - DO DUDS.

Section 2 South Side: The south side passes through a stretch of all commercial properties. These businesses include Save-A-Lot, Express Car Care, and CVS Pharmacy at Schnucks. This section crosses Vine Street, one of the busiest streets within the study area. However, the crossing is above the street, so vehicles will not interfere with use of the proposed trail.

Opportunities

1. No interference with existing buildings (none directly adjacent to the rail line).
2. Broadway Avenue bus stop at Save-A-Lot grocery store increases multimodal access and connectivity.
3. "Urban Land" soil limits flooding (except in area along Vine Street).
4. Community benefits:
   - Promotes a healthy lifestyle.
   - Connects residents to surrounding landscape.
5. Connectivity to destinations and facilities:
   - Bikeway access from Broadway Avenue bike lanes.
   - Direct connection from the proposed KRT extension to

Main Street bike lanes via Broadway Avenue.
- Pedestrian access from Broadway Avenue and Vine Street sidewalks.

6. Economic benefits:
   - Increased property values.
   - Businesses along section will experience more foot traffic.
7. Environmental benefits:
   - Enhanced vegetation and green space along the proposed trail prevent soil erosion, filters pollution caused by road runoff, and reduces flooding potential.
   - Enhanced vegetation promotes wildlife habitat and a safer migration corridor.
   - A trail promotes non-motorized transportation reducing greenhouse gas and other polluting emissions from release into the air.

Constraints

1. Based on best practices, the proposed KRT extension construction will require access (easements or acquisition) on the following number of properties within 30 feet of the railroad centerline:
   - Railroad parcels – 1
   - Private parcels – 0
2. Addressing Vine Street bridge structural issues will raise trail construction costs.
3. Commercial businesses make up all parcels outside the 30-foot buffer. Requires negotiations with multiple parties if trail will be developed outside 30-foot buffer.
4. Billboard on Broadway Avenue may require different parcel acquisition negotiations.
5. Flood hazard area along Vine Street.
6. Addressing the effect of six EPA Monitored Facilities sites on trail construction:
   - Schnucks Express 620.
   - Univ. of Illinois.
   - DT Urbana.
   - Schnucks Urbana Fuel Center.
   - Schnucks Markets, Inc.
   - Longs Garage.

Section 3: Maple Street to Lierman Avenue

Section 3 stretches approximately 0.73 miles from Maple Street to Lierman Avenue, ending just north of Lierman Avenue directly north of a tree-lined property boundary and east of the railroad spur. This section has stark contrasts between the heavily commercial/industrial land uses to the north and the heavily residential south side. Figure 7.4 shows selected transportation and environmental conditions present in this section.

Section 3 North Side: The north side passes through mainly commercial land-uses with some institutional just north of the commercial parcels. Much of this land is owned by the Champaign-Urbana Mass Transit District (CUMTD), and houses many of their facilities including their maintenance depot and main offices. Other businesses along the north side of the railroad include Emulsicoat Asphalt Contractors, Pard's Western Shop, and Attention to Detail-Car Care Specialists. Much of the ground directly bordering the rail line is a combination of gravel and pavement as many of the commercial facilities back right up to the rail line. A siding loop exists from Webber Street to west of Smith Road, where the rail line splits into a siding for roughly one mile. The center of this siding has four tracks, between Cottage Grove Avenue and Art Bartell Road.

There are no roads on the north side that intersect or reach the rail line for the entire length of this section. The closest road to the north side of the railroad is University Avenue, the busiest street in the entire study area with posted speed limits of 40 and 45 mph, almost no existing bicycle or pedestrian facilities, and "High Stress" scores for both Pedestrian Level of Traffic Stress (PLTS) and Bicycle Level of Traffic Stress (BLTS).

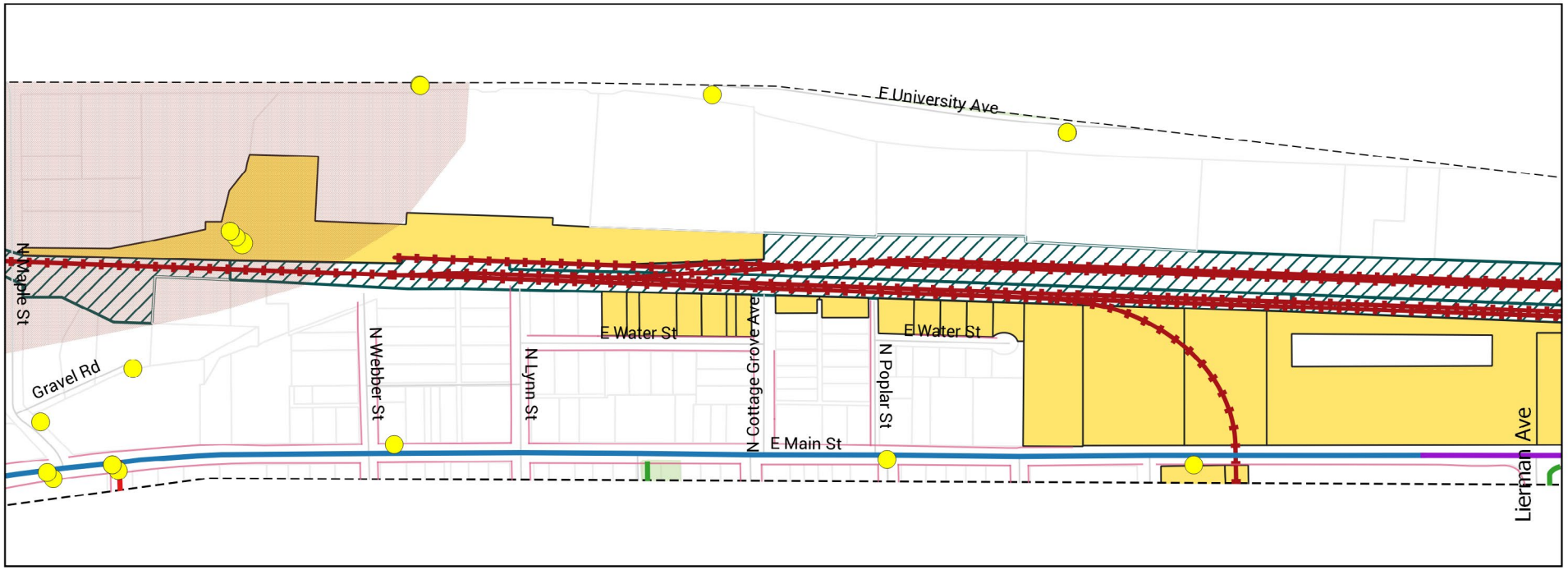
Opportunities

1. Fewer individual landowners means fewer negotiations for access to building the proposed KRT extension.
2. CUMTD owns much of the land and may be a supportive partner in building the trail based on its mission statement of "leading the way to greater mobility," and its status as a Bicycle Friendly Business.
3. No intersecting roads means no interaction between pedestrians, bicyclists, and vehicles.
4. Creates a safe pedestrian and bicycle facility for CUMTD employees and visitors, as one does not currently exist.
5. The railroad siding creates a wider railroad parcel, which is also more space to build the trail.
6. "Urban Land" soil limits flooding.
7. Proximity to AMBUCS Park.
8. Community benefits:
    - Promotes a healthy lifestyle.
9. Economic benefits:
    - Increased property values.
    - Businesses along section will experience more foot traffic.
10. Environmental benefits:
    - Enhanced vegetation and green space along the proposed trail prevent soil erosion, filters pollution caused by road runoff, and reduces flooding potential.
    - Enhanced vegetation promotes wildlife habitat and a safer migration corridor.
    - A trail promotes non-motorized transportation reducing greenhouse gas and other polluting emissions from release into the air.

Constraints

1. Based on best practices, the proposed KRT extension construction will require access (easements or acquisition) on the following number of properties within 30 feet of the railroad centerline:
    - Railroad parcels – 3
    - Private parcels – 1
2. Not aesthetically pleasing.
3. Emulsicoat facility located directly off the rail line will make trail construction difficult, since the company is an active user of the rail line, and the spur requires another railroad crossing.
4. No bicycle or pedestrian facilities in the area.

Figure 7.4: KRT Extension Study Area between Maple Street and Lierman Avenue



EPA Monitored Facilities
Railroads
Roadway
Waterways
Sidewalks

Existing Paths
Bike Lanes
Bike Route
Shared-Use Path
Sharrows

Potential Archeological Area
Railroad Properties
Properties within 30ft from RRCL
Property Line
Open Space
Study Area

0 0.05 0.1 mi

CHAMPAIGN COUNTY REGIONAL PLANNING COMMISSION

5. Maple Street provides the only public access in this section, which does not have any intersecting streets nor dedicated bicycle or pedestrian facilities.
6. Addressing the effect of four EPA Monitored Facilities sites on trail construction:
    - Emulsicoat.
    - Urbana & Champaign Sanitary District.
    - Champaign-Urbana Mass Transit District.
    - Urbana Landfill #3.

Section 3 South Side: The south side passes through a mix of commercial, residential, industrial, and agricultural land use parcels. For almost the entire length of the section, the south side is bordered with a thick tree line separating the neighboring properties from the rail line. A small wooded area exists just east of the spur surrounding agricultural land. Victory Park lies south of Main Street and a shared-use path connects the park to the Main Street bike lanes.

Main Street has bike lanes rated as "Medium-High Stress" in Bicycle Level of Traffic Stress. Unlike the north side of the railroad, several roads meet the rail line and dead end just before crossing into railroad property. While these streets do not have dedicated bike facilities, they are low traffic streets and therefore have low Bicycle Level of Traffic Stress ratings. These streets also have sidewalks on at least one side but have higher scores for Pedestrian Level of Traffic Stress (PLTS) scores due to their proximity to crossing Main Street and/or narrow widths.

Opportunities

1. Aesthetically pleasing tree line.
2. Soils west of the spur offers decent development potential, since they are low flooding risk.
3. Community benefits:
    - Promotes a healthy lifestyle.
    - Connects residents to surrounding landscape.
4. Connectivity to destinations and facilities:
    - Proximity to Main Street bike lanes.
    - Proximity to Victory Park.
5. Streets that terminate at the rail line have sidewalks, which provides accessibility for pedestrians.
6. Economic benefits:
    - Increased property values.
7. Environmental benefits:
    - Enhanced vegetation and green space along the proposed trail prevent soil erosion, filters pollution caused by road runoff, and reduces flooding potential.
    - Enhanced vegetation promotes wildlife habitat and a safer migration corridor.
    - A trail promotes non-motorized transportation reducing greenhouse gas and other polluting emissions from release into the air.

Constraints

1. Based on best practices, the proposed KRT extension construction will require access (easements or acquisition) on the following number of properties within 30 feet of the railroad centerline:
    - Railroad parcels – 3
    - Private parcels – 20
2. Negotiations for rail corridor access with owners of multiple residential parcels could prove difficult.
3. Negotiations for rail corridor access with owners of agricultural parcels present different challenges than other land uses.
4. There is less space between the railroad centerline and residential property lines than on the north side of the railroad.
5. A new trail will have to cross the DART Solo Cup railroad spur, which requires railroad company permission.
6. Higher pedestrian stress (i.e. high PLTS values).
7. Soil from the spur going east is either hydric (flooding) or has limited development potential.

8. Addressing the effect of six EPA Monitored Facilities sites on trail construction:
    - Kurland Steel Co.
    - Behnke Oil.
    - University of Illinois Television Studio.
    - Schnucks Markets, Inc.
    - Um, Inc.
    - Solo Cup Co.

Section 4: Lierman Avenue to Scottswood Drive

Section 4 stretches approximately 0.75 miles from just north of Lierman Avenue to just north of Scottswood Drive. The existing railtrack ends at Smith Road, with some railtrack fragments remaining east of Smith Road. Kickapoo Rail Trail property ownership by the Champaign County Forest Preserve District (CCFPD) begins at Scottswood Drive extended, and continues east to Vermilion County. A thick tree line separates the rail line from the neighboring properties along the entire section. The parallel rail line split that starts in Section 3 continues into Section 4 for almost half of the section. This siding loop begins at Webber Street in Section 3, and ends west of Smith Road in Section 4, where the rail line splits into multiple parallel tracks for roughly one mile. The center of this siding has four tracks, between Cottage Grove Avenue in Section 3 and Art Bartell Road extended in Section 4. Figure 7.5 shows selected transportation and environmental conditions present in this section.

Section 4 North Side: The north side includes only commercial land uses. These businesses include Illini FS Inc., Armstrong Cash & Carry Lumber, Frosty's Frigeration Inc., Hicksgas Propane Sales and Service, and Project Te. There are no roads on the north side of the railroad that intersect or reach the rail line for the entire length of this section. The closest road north of the rail line is University Avenue (U.S. 150) which is the busiest street in the entire study area with a posted speed limit of 45 mph, almost no existing bicycle or pedestrian facilities, and "High Stress" scores for both Pedestrian Level of Traffic Stress (PLTS) and Bicycle Level of Traffic Stress (BLTS). This section is in the closest proximity to University Avenue as it turns south and intersects with Smith Road just north of the rail line corridor. There is a sidewalk on the north side of University Avenue between Guardian Drive and Smith Road.

Opportunities

1. The railroad siding creates a wider railroad parcel, which is also more space to build the proposed KRT extension.
2. Aesthetically pleasing tree line.
3. Municipal drainage limits flooding.
4. Community benefits:
    - Promotes a healthy lifestyle
5. Economic benefits:
    - Increased property values.
    - Businesses along section will experience more foot traffic.
6. Environmental benefits:
    - Enhanced vegetation and green space along the proposed trail prevent soil erosion, filters pollution caused by road runoff, and reduces flooding potential.
    - Enhanced vegetation promotes wildlife habitat and a safer migration corridor.
    - A trail promotes non-motorized transportation reducing greenhouse gas and other polluting emissions from release into the air.

Constraints

1. Based on best practices, the proposed KRT extension construction will require access (easements or acquisition) on the following number of properties within 30 feet of the railroad centerline:
    - Railroad parcels – 4
    - Private parcels – 4
2. Negotiations for rail corridor access with owners of multiple commercial parcels could prove difficult.
3. Addressing the effect of one EPA Monitored Facilities site on trail construction:
    - Jackson Auto Makeover.

Section 4 South Side: The south side includes mainly single-family residential properties with some multi-family residences mixed in and a short section of agricultural land. Weaver Park lies just south of Main Street. The Urbana-Champaign Friends Quaker Meetinghouse sits just south of the rail line and tree line. Other than Smith Road, there are no other roads on the south side that intersect with or reach the rail line for the entire length of this section. The closest road south of the rail line is Main Street which, because of its bike lanes, gets a mix of A and B scores for Bicycle Level of Service (BLOS), but only a Bicycle Level of Traffic Stress (BLTS) rating of "Medium" to "Medium-High Stress." In addition to the Main Street bike lanes, there is an off-street shared-use path in Weaver Park.

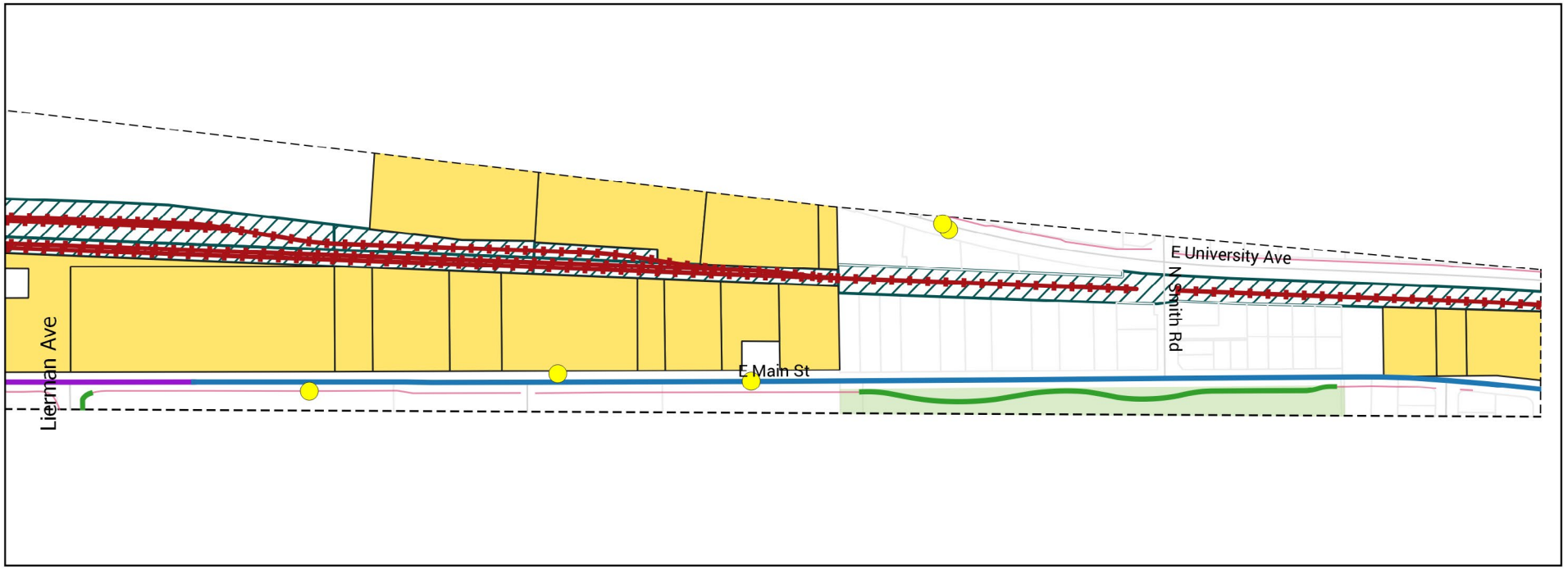
Opportunities

1. Aesthetically pleasing tree line.
2. Keeps potential trail users further from University Avenue, the busiest and least safe road in the study area for both pedestrians and bicyclists.
3. Decent development potential for soil east of Art Bartell Road extended.
4. Community benefits:
    - Promotes a healthy lifestyle.
    - Connects residents to surrounding landscape.
5. Connectivity to destinations and facilities:
    - Proximity to Weaver Park.
    - Proximity to Main Street bike lanes.
    - Proximity of Main Street and Smith Road bus stop increases multimodal trail access.
6. Economic benefits:
    - Increased property values.
7. Environmental benefits:
    - Enhanced vegetation and green space along the proposed trail prevent soil erosion, filters pollution caused by road runoff, and reduces flooding potential.
    - Enhanced vegetation promotes wildlife habitat and a safer migration corridor.
    - A trail promotes non-motorized transportation reducing greenhouse gas and other polluting emissions from release into the air.

Constraints

1. Based on best practices, the proposed KRT extension construction will require access (easements or acquisition) on the following number of properties within 30 feet of the railroad centerline:
    - Railroad parcels – 4
    - Private parcels – 12
2. Negotiations for rail corridor access with owners of multiple residences could prove difficult.
3. Negotiations for rail corridor access with owners of the agricultural parcel presents different challenges than other land uses.
4. Must negotiate rail corridor access with Urbana-Champaign Friends Quaker Meetinghouse.
5. Addressing the effect of two EPA Monitored Facilities sites on trail construction:
    - Stephens USARC.
    - Champaign County Highway Department.
6. Lack of sidewalks along Smith Road to access the proposed KRT extension.
7. Lack of sidewalks along the north side of Main Street to walk between the KRT and nearby residences.
8. Soil west of Art Bartell Road extended is hydric (flooding).

Figure 7.5: KRT Extension Study Area between Lierman Avenue and Scottswood Drive



EPA Monitored Facilities
Railroads
Roadway
Waterways
Sidewalks

Existing Paths
Bike Lanes
Bike Route
Shared-Use Path
Sharrows

Railroad Properties
Properties within 30ft from RRCL
Property Line
Open Space
Study Area

0 0.05 0.1 mi

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7.2 Suitability Analysis

Using the identified opportunities and constraints for each section, staff developed a quantitative analysis culminating in a final score for the north and south side of the rail line in each section. Scores from this process were applied to the eight sections of this study: the north and south sides of Sections 1-4. From these scores, alternatives have been ranked on their suitability.

All of the opportunities and constraints are encompassed within 10 categories. Within each category, staff identified 26 criteria based on the opportunities and constraints to refine the proposed alternatives. Categories, such as safety, environmental impact, and development potential, have at least one variable describing what specifically was considered. These variables in some cases have been subdivided by a subclass. These subclasses break down variables into more specific factors. For example, the variable "On-Street Bikeway" describes the presence of such facilities on the north and south sides of Sections 1-4. This variable has two subclasses, length and connections, adding both the length of on-street bikeways into the analysis, as well as the connectivity to the rail corridor. The subclasses allow more considerations to be factored into the analysis, strengthening its comprehensive nature. Each variable, or subclass if applicable, has a rationale as to why it was included in the analysis.

Points were awarded on a scale from zero to five, with five being the maximum points a single variable or subclass could achieve. The more points awarded, the more suitable a section is for a trail. Following is the list of the criteria scored. Details on how each variable and subclass were scored are provided in Appendix C.

Suitability Analysis Scoring Criteria:

1. Safety
    a. Number of Road Intersections
    b. Number of crashes within 5-year period
    c. Bridges
2. Development Potential
    a. Number of Buildings within 30 ft buffer
    b. Closest Building Distance to Railroad Centerline
    c. Floodplain Area Percentage
    d. Hydric Soil Percentage
    e. Urban Soil Percentage
3. Parcel Access
    a. Parcels within 30 ft buffer
        i. Railroad Parcels
        ii. Private Parcels
4. EPA Facilities
    a. EPA Facility sites
5. Community Support
    a. Institutional Support
6. Connectivity
    a. Sidewalks
        i. Length
        ii. Connections
    b. On-Street Bikeway
        i. Length
        ii. Connections
    c. Off-Street Trail
        i. Length
        ii. Connections
    d. Bus Stops
    e. Parks
    f. NRHP Site
7. Economic Benefit
    a. Number of commercial businesses
    b. Number of residential parcels
8. Environmental Impact

a. Environmental benefits

9. Cultural Resource Impact
    a. Potentially affected cultural resource
10. Aesthetics
    a. Character adjacent to proposed KRT extension

7.3 Alternative Analysis

Based on the results of the suitability analysis, five alternatives have been developed. Staff looked at all 16 potential north/south side combinations for each section, and selected the top three scoring combinations, as well as an all north side alternative and all south side alternative. The all south side alternative ended up being the highest scoring, while the all north side alternative was the lowest. Both were included, along with the other top three scores. Using the scoring criteria, the maximum score possible for each section is 130 and the maximum score possible for each alternative is 520.

Alternatives consider a proposed trail extension on either the north or south side of the NSRR line in each section, respectively. All alternatives (Figure 7.7 – Figure 7.11) consider a 30 foot buffer from the railroad centerline. The 15 feet closest to the railroad is a buffer recommended in the IDOT BDE Manual (see Section 2.2.2). The next 15 feet includes a trail with the 10 foot ideal width, and 2.5 foot clear zones on both sides of the trail as recommended in the Champaign County Greenways & Trails Plan. Trail crossings will occur at existing street intersections along the rail line, with the exception of crossing from Section 3 to Section 4 around Lierman Avenue. Because there are no existing street intersections at this junction, new crossing(s) will have to installed here over the railroad(s). Crossings between these sections will either go over the railroad spur to continue on the south side of Section 4, or north across the railroad siding to continue on the north side of Section 4. Approval from Norfolk Southern Railroad or railroad abandonment is required to install these crossings, especially to switch sides of the railroad. Currently, there has been no such approval or abandonment plan from Norfolk Southern.

Table 7.1: Selected Alternatives for Public Input

Alternatives	Section 1	Section 2	Section 3	Section 4	Total Score	Rank
Alternative 1	S	S	S	S	300	1
Alternative 2	S	S	S	N	299	2
Alternative 3	N	S	S	S	298	3
Alternative 4	N	S	S	N	297	4
Alternative 5	N	N	N	N	283	16

N=North side of the rail line
S=South side of the rail line

Alternative 1: The all south side alternative begins at Lincoln Avenue with parking and commercial lots running the entire length of Section 1. The Station Theatre sits almost directly on the rail line at the intersection with Broadway Avenue, limiting space for the proposed trail. Connections to the Boneyard Creek, Coler Avenue bike route, Broadway Avenue bike lanes, Leal Park, Victory Park, and Weaver Park are all available along the south side of the rail line. Large percentages of hydric soil can be found along the south side of the rail line, complicating development potential. However, the south side offers the most sidewalk connectivity as well as the highest on-street bikeway and off-street trail lengths. Coupled with the 33 bus stops available south of the railroad, this alternative is highly accessible for potential trail users. 54 railroad and private parcels, and nine buildings are within 30 feet of the rail line, potentially limiting trail development and access. This alternative does offer the lowest percentage of land within the floodplain needed for the proposed trail, reducing the risk of trail flooding. Crossing the Boneyard Creek and Vine Street bridge are challenges, but these are not exclusive to the south side. This alternative involves one railroad crossing at the spur north of Hartle Avenue.

Figure 7.6: Urbana KRT Extension Study Alternatives Analysis

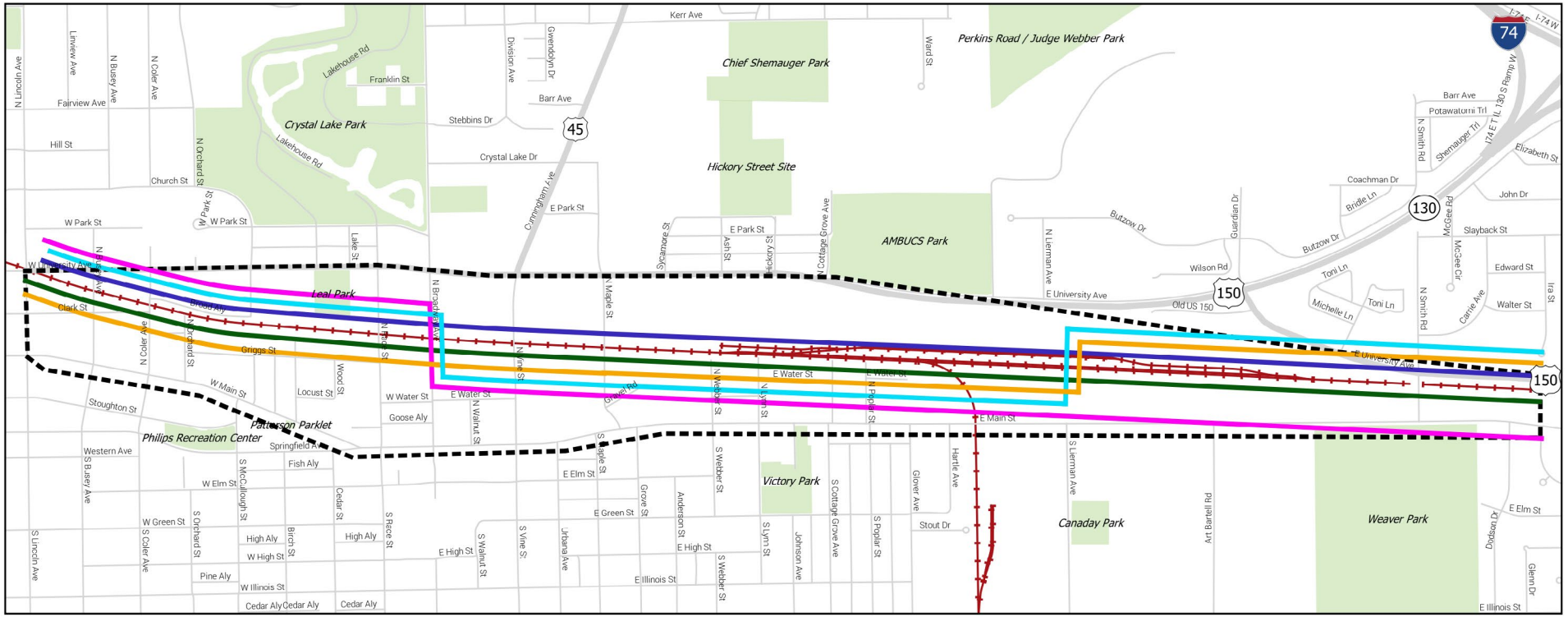
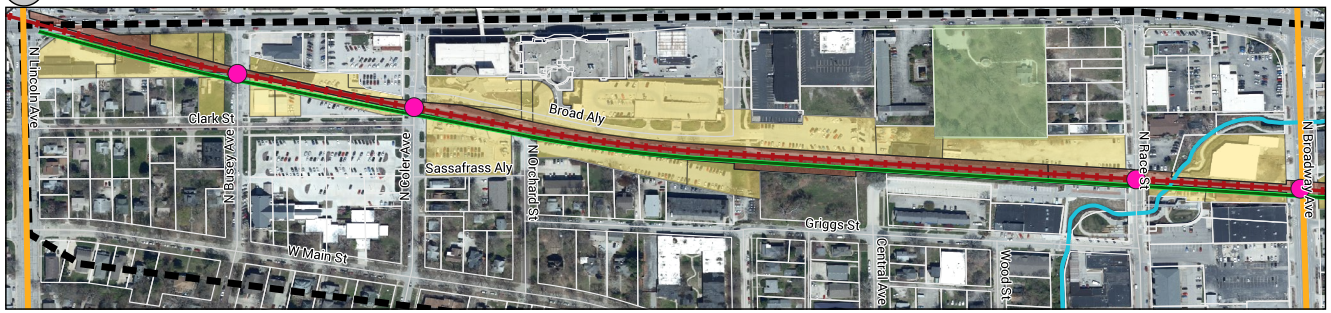


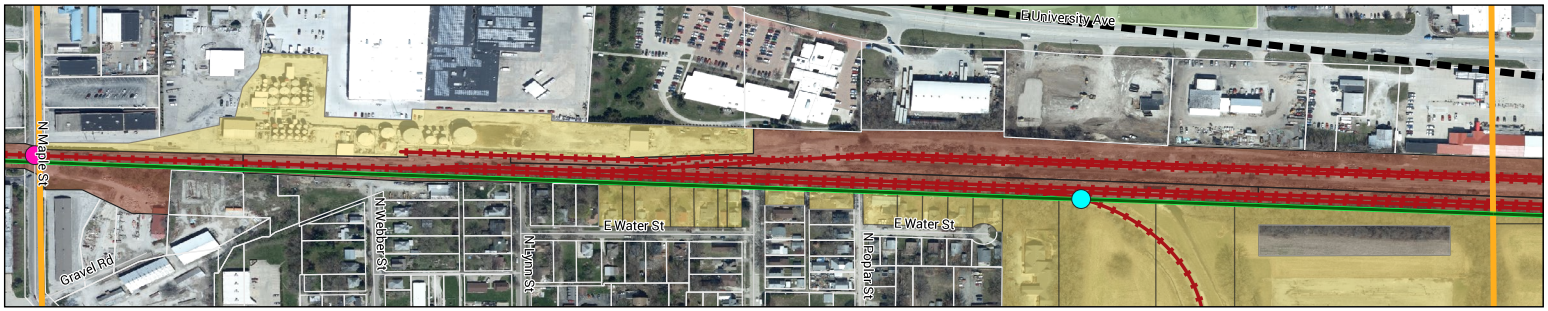
Figure 7.7: Urbana KRT Extension Study Alternatives Analysis – Alternative 1

1 Section 1: Lincoln Avenue to Broadway Avenue

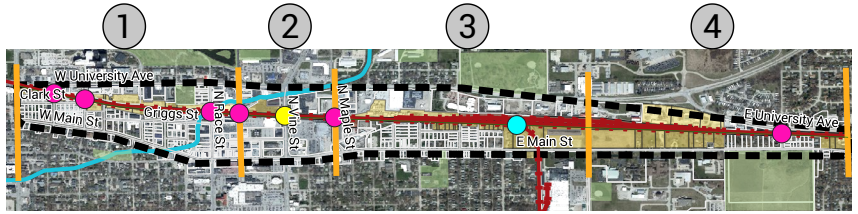


2 Section 2: Broadway Avenue to Maple Street

3 Section 3: Maple Street to Lierman Avenue



4 Section 4: Lierman Avenue to Scottswood Drive extended



- Road Intersections
- Grade Separated Intersection
- New Railroad Crossing Required
- Clear Zone (2.5ft)
- Trail (10ft)
- Railroad Properties
- Properties within 30ft from RRCL
- Property Line
- Waterways
- Roadway
- Study Area

0 0.05 0.1 mi

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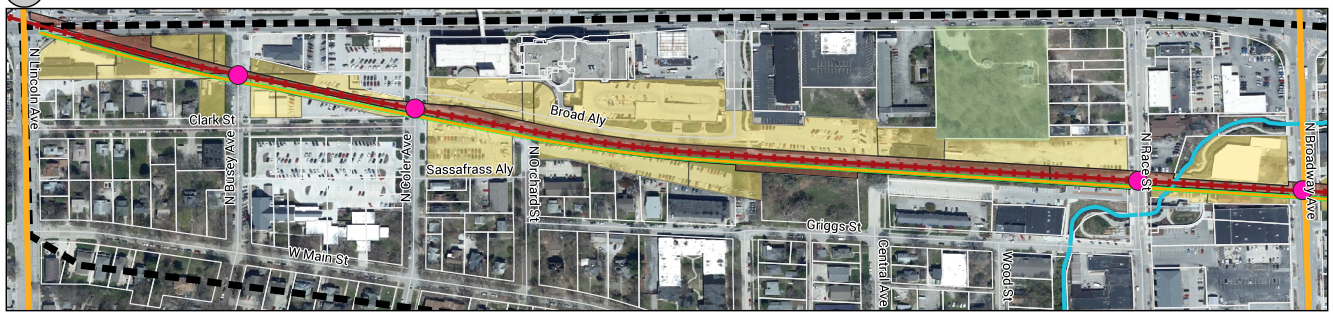
Alternative 2: This alternative runs along the south side of the rail line for Sections 1-3 before crossing over to the north side of Section 4. The Station Theatre will limit space for the proposed trail, and crossing the Boneyard Creek and Vine Street bridge are challenges to trail construction. 46 railroad and private parcels, and four buildings are within 30 feet of the rail line. This alternative has 26 adjacent bus stops. Soils along this alternative consist of more suitable development conditions than Alternative 1, but much less accessibility due to the north side crossing at Section 4. This alternative carries the same connectivity opportunities as Alternative 1, until it crosses to the north side of the rail line in Section 4. The north side of Section 4 has very limited connectivity, with no intersecting streets until the end of the proposed trail at Smith Road, only 0.48 km of sidewalks, and no on-street bike lanes, nor off-street trail access. However, limited connectivity reduces the chances of traffic crashes across the trail, increasing safety but decreasing accessibility. The biggest concerns of this alternative are crossing the railroad spur north of Hartle Avenue, and the two crossings to the north side of the railroad siding north of Lierman Avenue.

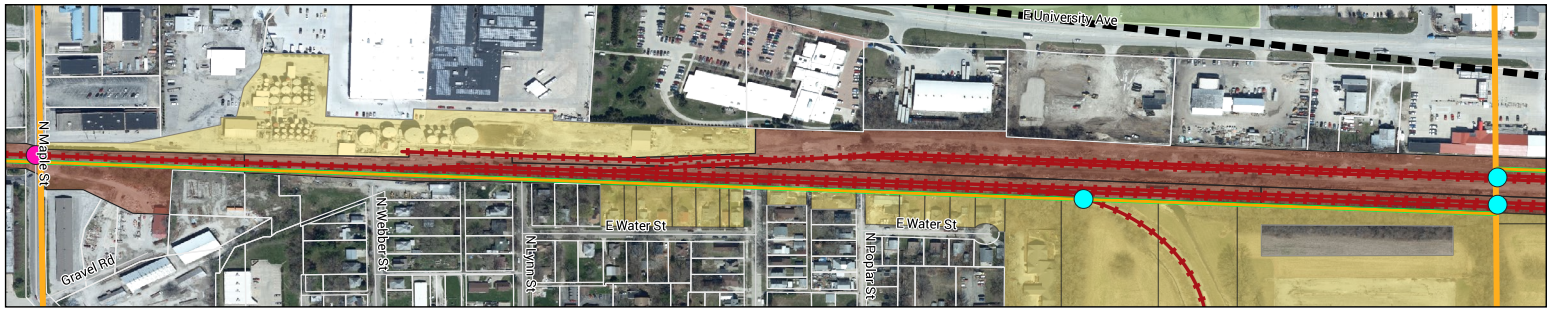
Figure 7.8: Urbana KRT Extension Study Alternatives Analysis – Alternative 2

1 Section 1: Lincoln Avenue to Broadway Avenue

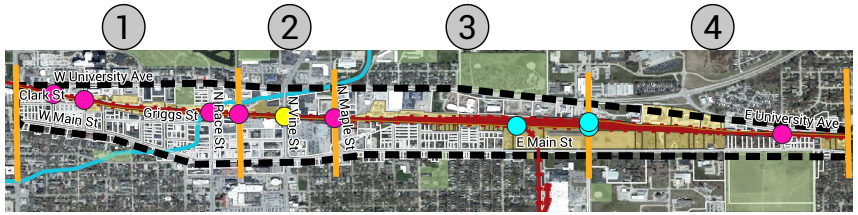


2 Section 2: Broadway Avenue to Maple Street

3 Section 3: Maple Street to Lierman Avenue



4 Section 4: Lierman Avenue to Scottswood Drive extended



- Road Intersections
- Grade Separated Intersection
- New Railroad Crossing Required
- Clear Zone (2.5ft)
- Trail (10ft)
- Railroad Properties
- Properties within 30ft from RRCL
- Property Line
- Waterways
- Roadway
- Study Area

0 0.05 0.1 mi

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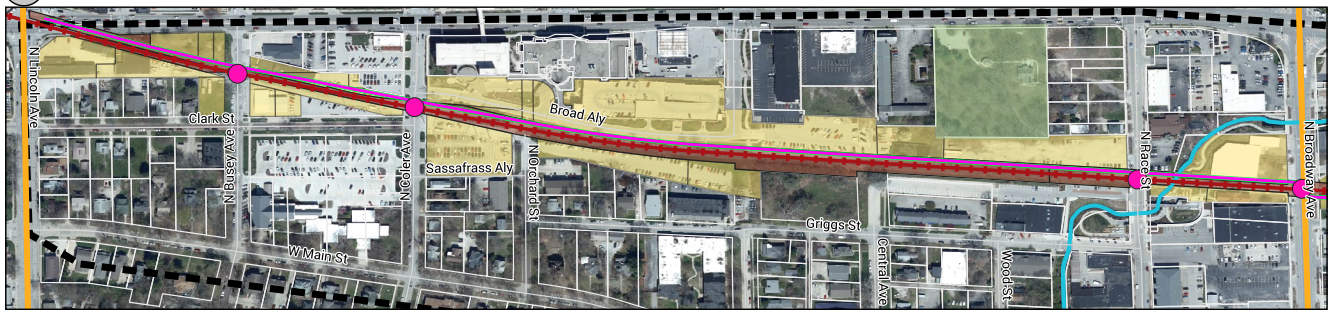
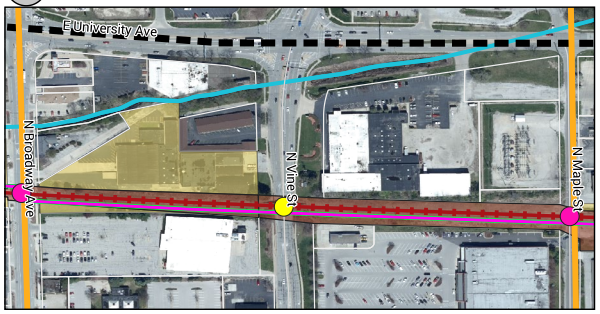
Alternative 3: This alternative starts out on the north side of Section 1 before crossing the rail line at Broadway Avenue and continuing along the south side of the rest of the rail line. The north side of Section 1 offers support from neighboring Carle Hospital, as well as an abundance of suitable soil for construction. Support from Carle for the proposed trail means that access to the rail line from Carle property will not be hindered and helps set a precedent of community support for the proposed trail. Connections to the Boneyard Creek trail and McCullough Street sidepath are available along this alternative, as are connections to the Coler Avenue bike route and Broadway Avenue bike lanes. This alternative contains the highest number of bus stops of any alternative and the greatest length of off-street trails. However, this alternative scores lower than Alternatives 1 and 2 in sidewalk length, sidewalk connections, and length of on-street bikeways. 56 railroad and private parcels are within 30 feet of the rail line, tied for most of any alternative considered, making access to the rail line more difficult. On the positive side, this alternative avoids impacting the Station Theatre and the Emulsicoat facility. The first railroad crossing occurs at Broadway Avenue, which allows users to cross at a marked intersection. However, the railroad spur will need to be crossed in Section 3.

Figure 7.9: Urbana KRT Extension Study Alternatives Analysis – Alternative 3

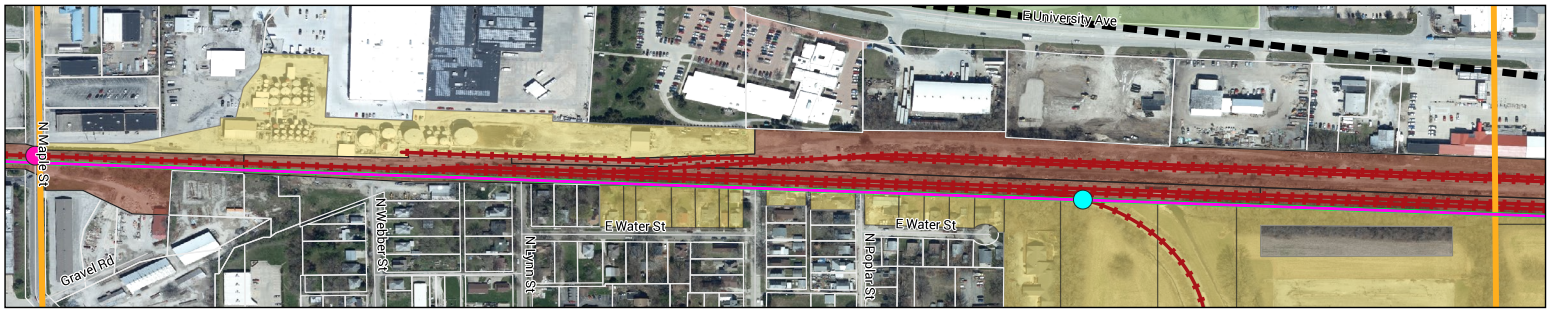
1 Section 1: Lincoln Avenue to Broadway Avenue



2 Section 2: Broadway Avenue to Maple Street

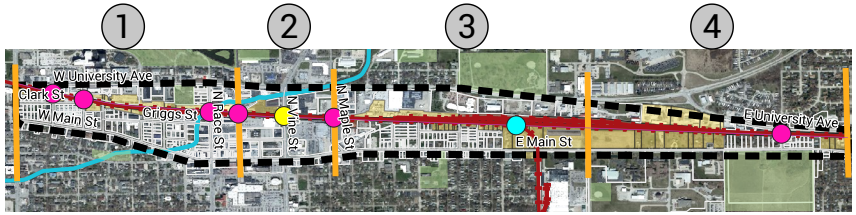


3 Section 3: Maple Street to Lierman Avenue



4 Section 4: Lierman Avenue to Scottswood Drive extended

- Road Intersections
- Grade Separated Intersection
- New Railroad Crossing Required
- Clear Zone (2.5ft)
- Trail (10ft)
- Railroad Properties
- Properties within 30ft from RRCL
- Property Line
- Waterways
- Roadway
- Study Area



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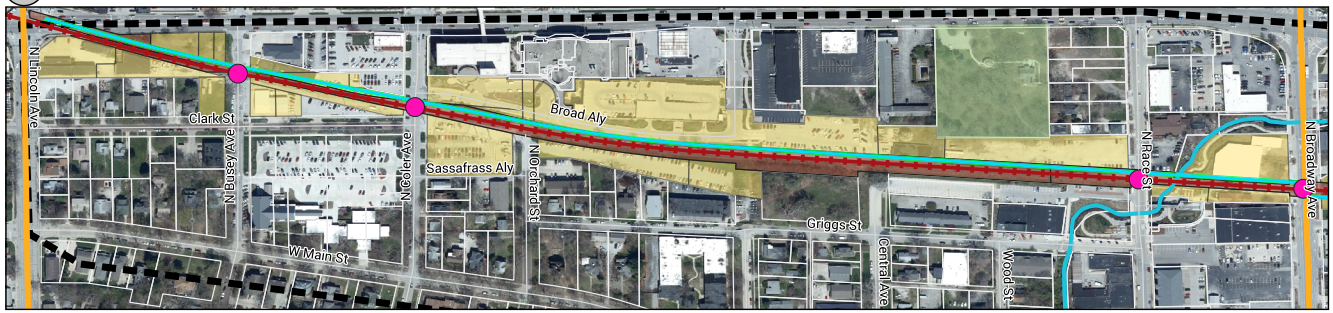
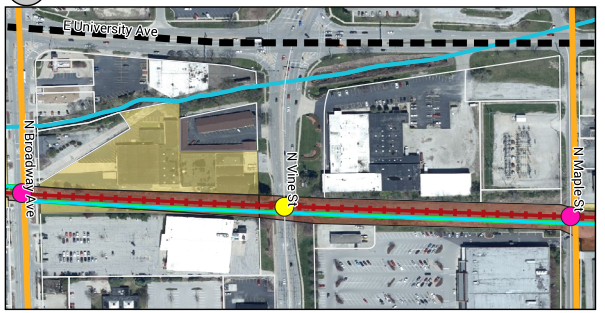
Alternative 4: This alternative starts out on the north side of Section 1 before crossing at Broadway Avenue to the south sides of Sections 2 and 3. At Lierman Avenue, this alternative then crosses back over to the north side of Section 4. Three rail line crossings; one at the spur in Section 3, and two across the siding into Section 4, are the most of any alternative considered, complicating trail construction and safety. However, this alternative does avoid both the Station Theatre and Emulsicoat facility. 56 railroad and private parcels are within 30 feet of the rail line, tied with Alternative 3 for most parcels within the 30-foot buffer, limiting access to the proposed trail. However, only four buildings are within 30 feet of the rail line. This alternative scores lower than the previous three in length of sidewalks and off-street trails along the route, and number of bus stops. It is tied with Alternative 3 in sidewalk connections, and length of on-street bikeways. However, it runs along some of the most aesthetically pleasing parts of the trail on the south side of Section 3 and the north side of Section 4.

Figure 7.10: Urbana KRT Extension Study Alternatives Analysis – Alternative 4

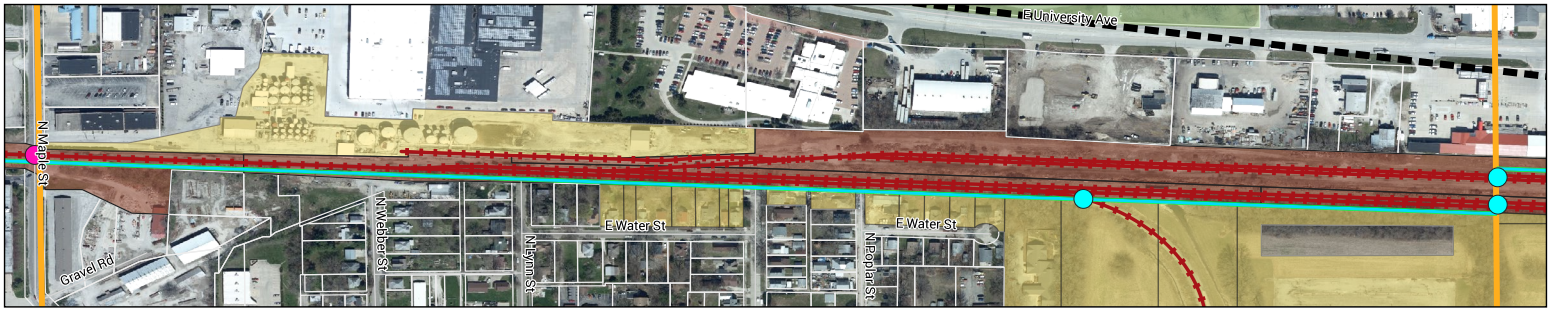
1 Section 1: Lincoln Avenue to Broadway Avenue



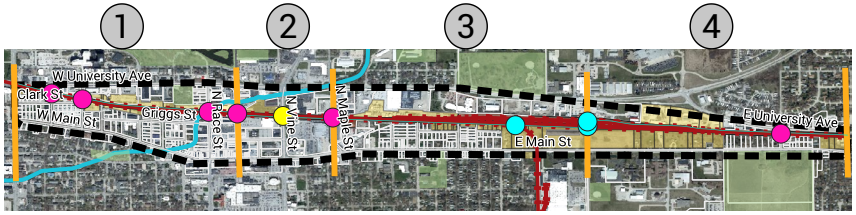
2 Section 2: Broadway Avenue to Maple Street



3 Section 3: Maple Street to Lierman Avenue



4 Section 4: Lierman Avenue to Scottswood Drive extended



- Road Intersections
- Grade Separated Intersection
- New Railroad Crossing Required
- Clear Zone (2.5ft)
- Trail (10ft)
- Railroad Properties
- Properties within 30ft from RRCL
- Property Line
- Waterways
- Roadway
- Study Area

0 0.05 0.1 mi

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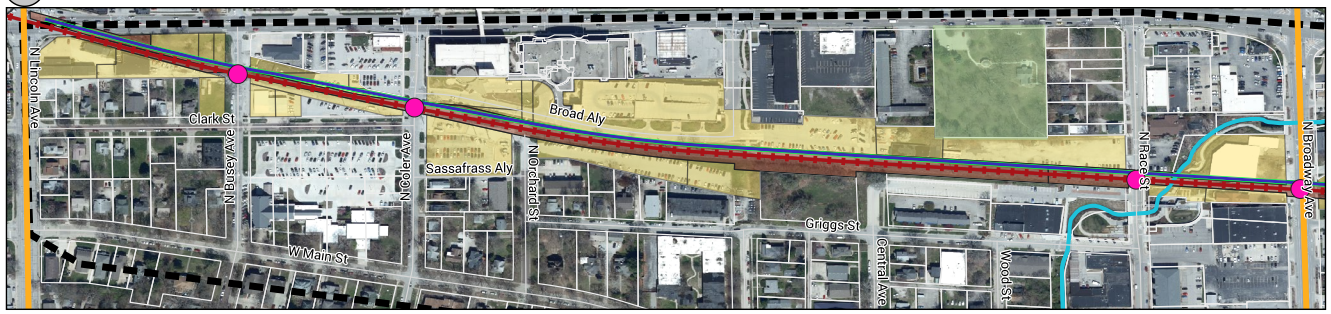
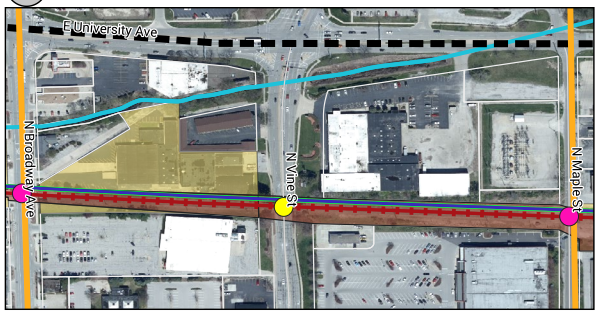
Alternative 5: The all north side alternative begins along the Carle Hospital main campus. Support from Carle for the proposed trail means that access to the rail line from Carle property will not be hindered and helps set a precedent of community support for the proposed trail. 30 railroad and private parcels are within 30 feet of the rail line along the north side, potentially limiting access. Alternative 5 also passes along the Emulsicoat property along Sections 2 and 3, significantly limiting rail line access and space for the proposed trail. Coupled with the 18 EPA facilities along the north side of the rail line (versus 8 along the south side), this alternative will require the most in-depth environmental evaluation. The north side of Section 2 crosses the most floodplain of any section in the study area, with 56% of the section in the marked floodplain. The north side of Section 1 has the highest amount of traffic crashes due to its proximity to University Avenue. This alternative does avoid interfering with the Station Theatre; however, it must also cross the Boneyard Creek and Vine Street bridge. Only one railroad crossing occurs in this alternative: just east of Maple Street along Emulsicoat property, the proposed trail will cross north before the railroad siding.

Figure 7.11: Urbana KRT Extension Study Alternatives Analysis – Alternative 5

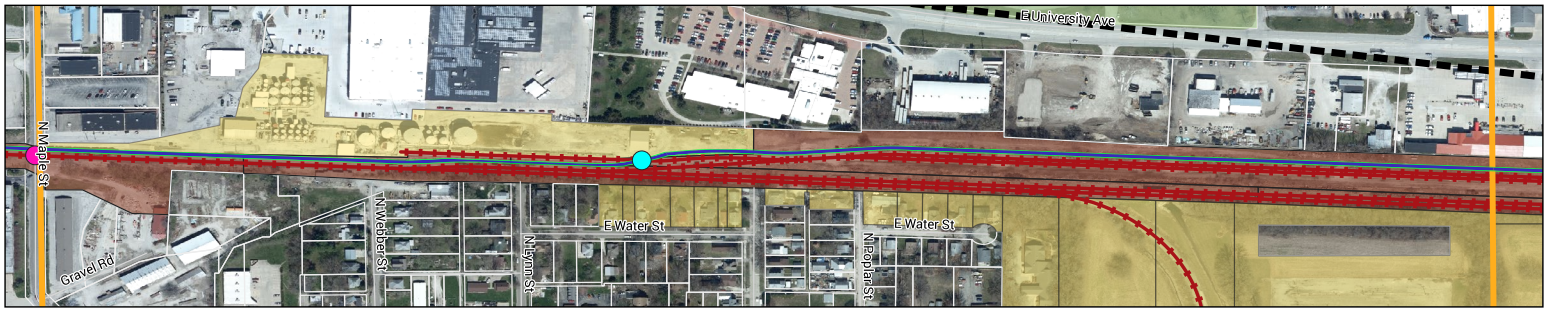
1 Section 1: Lincoln Avenue to Broadway Avenue



2 Section 2: Broadway Avenue to Maple Street

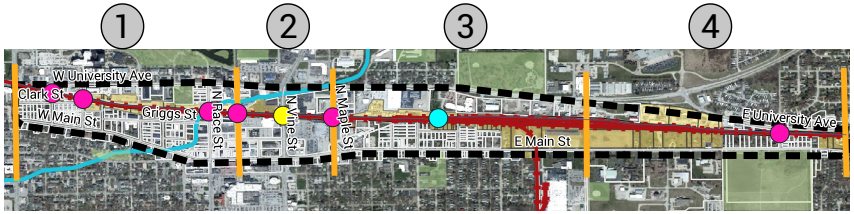


3 Section 3: Maple Street to Lierman Avenue



4 Section 4: Lierman Avenue to Scottswood Drive extended

- Road Intersections
- Grade Separated Intersection
- New Railroad Crossing Required
- Clear Zone (2.5ft)
- Trail (10ft)
- Railroad Properties
- Properties within 30ft from RRCL
- Property Line
- Waterways
- Roadway
- Study Area



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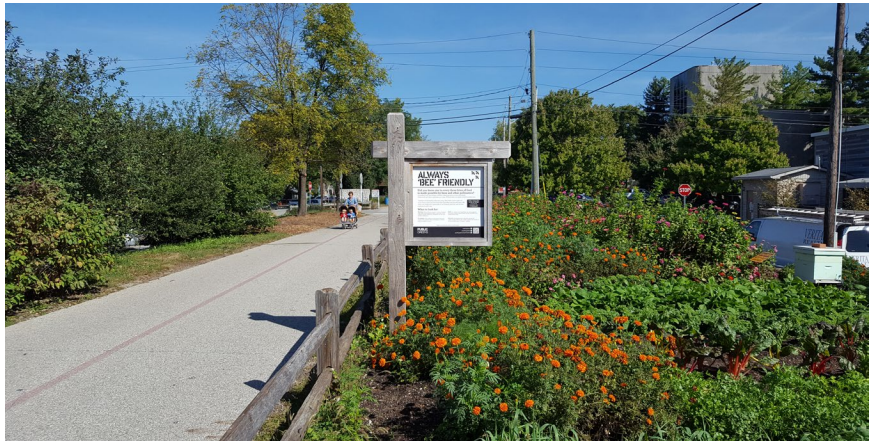
7.4 Proposed Facility Types

The proposed KRT extension trail is being considered as a Rail-with-Trail[1] as opposed to a Rail-to-Trail. Rail-with-Trails are trails adjacent to or within an active railroad corridor, whereas a Rail-to-Trail involves conversion of a railroad track into a trail. Railroad parcel acquisition is the main driver behind this decision. For Sections 1-3 of the proposed KRT extension, Norfolk Southern has not shown interest in allowing the Urbana Park District to acquire the parcels necessary to facilitate a Rail-to-Trail. However, Norfolk Southern has shown some interest in allowing Section 4 to be acquired. Therefore, Sections 1-3 are being proposed as Rail-with-Trail facilities, while both options are on the table for Section 4 (especially from Smith Road to east of the study area).

Rail-with-Trails offer unique ways to enhance local transportation systems and offer safe and attractive community connections without having to disrupt existing use of a railroad corridor. Design and recommendations for the proposed trail should comply with the most recent versions of the Americans with Disabilities Act (ADA), Illinois Department of Transportation (IDOT), and American Association of State Highway and Transportation Officials (AASHTO) standards as applicable.

Figure 7.12: Monon Trail

Rail-to-Trail, Indianapolis, IN



Rail-with-Trails offer solutions to address illegal railroad crossings. By incentivizing the use of an adjacent trail, rather than shortcuts by crossing the tracks, Rail-with-Trails enhance safety when a Rail-to-Trail is not possible. From 1992 to 2012, there have been between 667-1,516 fatalities along railroad corridors each year[1]. Only one of these deaths can be confirmed as occurring on a Rail-with-Trail, and in that case, neither the railroad nor the trail manager was found legally liable. Rail-with-Trails, when designed with proper fencing and setback distances, have a documented track record of providing safe transit for those who may otherwise have crossed the tracks, creating equitable transportation opportunities for the community. People living in low-income neighborhoods often face barriers in accessing employment centers, services, or other destinations and rely on unsafe and illegal track crossings. Rail-with-Trails optimize the use of railroad corridors to accommodate bicycle and pedestrian mobility needs of all residents, regardless of income or class.

Norfolk Southern lines are considered Class I railroads according to the Surface Transportation Board. Class I railroads are often opposed to Rail-with-Trail due to liability and design concerns. However, Rail-with-Trails do not expose landowners to legal liability any more than stand-alone trails. Recreational Use Standards

Figure 7.13: Constitution Trail

Rail-with-Trail, Bloomington, IL

(RUS) limit the liability of trail managers and landowners who allow public access for recreation without a fee. RUS liability protection covers the trail manager unless the trail manager intentionally harmed the trail user or was grossly negligent. To prevent this, Rail-with-Trails must implement risk management strategies that significantly limit liability of all parties. Risk management strategies include:

- Offering prominent signage to warn users of hazardous areas and rules/hours of operation;
- Trail inspections and conditions corrections on a regular schedule (i.e. document inspections and improvements);
- Developing procedures for handling medical emergencies along with emergency contact information.

Among other concerns for railroad companies are setback, separation, and crossings of the rail. With these conditions addressed, railroad companies tend to have a more agreeable attitude to trail development. There are no national standards for these conditions; they must be negotiated with the railroad company (Norfolk Southern). The following definitions and numbers are based on survey findings by the Rails-to-Trails Conservancy.

- **Setbacks** – lateral distance between the centerline of the nearest track.
  - Nearly 60 percent of trails studied were 30 feet or less from the tracks, and more than a quarter of trails reported a minimum distance of between 11 and 20 feet.
- **Separation** – barriers between the trail and the railroad.
  - The most common forms of separation are fencing and vegetation. Applicable fencing standards should be met for use.
- **Crossings** – location to cross from one side of the tracks to the other.
  - 61 percent of trails reported at least one crossing; the average number of crossings was 1.6 for the entire trail.
  - KRT extension alternatives average only one crossing per alternative, and some occur at existing street intersections.

7.5 Surface Type Considerations

The current surface type of the existing KRT length is mostly crushed limestone.[2] This surface type was chosen because of its low up-front cost, structural adequacy, and complements the natural aesthetic of the rest of the trail. However, opportunities for upgrades to a paved surface are still available for jurisdictions along the trail.

The Champaign County Greenways and Trails Plan recommends the following surface types for shared-use trails:

Crushed Stone

Commonly used for more rural trails, crushed stone is often chosen for its natural aesthetic, relative permeability, and low impact on joint health for users.[3] This surface can be made of almost any type of rock, but the most common is limestone and sandstone.[4] Of all three pavement types, this type has the lowest initial installation cost. Crushed stone does have difficulty complying with ADA surface standards and is easily erodible. Crushed stone trails within floodplains often face high costs of maintaining consistent surface quality and can cause environmental damage from washout into surrounding waterbodies and floodplains.[5]

Asphalt

Commonly used in urban areas, the smooth and crack-free quality of fresh asphalt make it an attractive initial surface type. It is more sturdy than crushed stone and usually cheaper in initial cost than concrete.[3] However, minor maintenance, due to long-term cracking, reduces its life expectancy and incurs increased maintenance costs than concrete.[4] Asphalt is not particularly aesthetically pleasing, and its impervious nature results in environmental issues from water runoff, and soil compaction.[3] Asphalt also requires greater initial excavation than crushed stone and concrete, resulting in vegetation and topsoil destruction to account for a gravel base rock.[5] Of all three types, it has the greatest potential for negative environmental impact.

Concrete

Concrete is the least erodible surface type considered, making it the most environmentally friendly of the three. It is impervious, like asphalt, but the installation requires less environmental impact because a gravel base rock is not required, and less area is required due to its long-life expectancy.[3] Low maintenance cost makes it cost-comparable to the other surfaces over the long-term, and it is the best ADA-compliant surface over the long-term.[4] The main drawback with a concrete surface is the high initial installation cost. Concrete also has the least amount of give of the three types, meaning greater impact on user joints.

Table 7.2: Surface Type Comparison

Surface Type	Initial Cost	Long-term Cost	Aesthetic	Environmental Impact	User-Friendliness	Permeable Pavement Available?
Crushed Stone	●	●	●	●	●	N/A
Asphalt	●	●	●	●	●	Yes
Concrete	●	●	●	●	●	Yes

● Best Option
● Second Best Option
● Worst Option

7.5.1 Permeable Pavement

Permeable pavement is a porous urban surface composed of open pore pavers, concrete, or asphalt with an underlying stone reservoir.[6] It catches precipitation as it falls and controls runoff by allowing infiltration into the underlying soil. This reduces the amount of pollutants and runoff volume going into urban stormwater management systems and nearby waterways.[5] Runoff from impervious surfaces degrades water quality, causes dangerous floods, erodes stream banks, inhibits groundwater recharge, and degrades surrounding habitat. Pollutants such as nutrients, sediment, bacteria, pesticides, and chlorides are

Figure 7.14: Permeable Pavement Considerations

Source: USGS

transported in runoff to areas adjacent to the impervious surface and downstream locations. Permeable pavement addresses those dangers and restores a more natural hydrologic balance.

A study by the United States Geological Survey (USGS) compared three different permeable pavement types:

- Permeable Pavers,
- Permeable Concrete, and
- Permeable Asphalt.

The summarized findings show the following:

- All three resulted in statistically significant reductions in the cumulative loads of solids, phosphorous, and certain bacteria (including E. coli).
- Permeable concrete achieved the highest reductions in almost all pollutants, and permeable asphalt had the lowest.
- Permeable asphalt did result in the most infiltration of volume during the study period, despite a lower ability to reduce pollutants.
- All types of permeable pavement resulted in soil pore spaces remaining open longer during cold months, reducing the need to apply deicing agents in winter.[7]

i. Permeable Pavement in the KRT Context

Permeable pavement should be considered as an option, depending on its availability. The Boneyard Creek is already an extremely polluted water body (303d listed; see Chapter 5) and building a trail that will cross it will have potential negative impacts on it and the bodies of water it feeds into. Soil and groundwater in the area will be degraded with a non-permeable surface. As almost the entirety of Champaign County relies on the Mahomet Aquifer for drinking water, new infrastructure should, to the best ability, work to ensure clean drinking water and continued soil productivity for all residents. Coupled with the large amounts of hydric soil in the area, permeable pavement may be the most structurally sound option.

Permeable pavement, as noted above, reduces damaging flooding and pollution runoff onto adjacent properties. This means that a permeable trail surface will have less of an impact on private property along the proposed KRT extension, particularly the residential property in Sections 3 and 4. Support from these residents along the proposed KRT extension is crucial to a successful implementation of the preferred alternative.

Endnotes

1. Rails-to-Trails Conservancy. America's Rails-with-Trails: A Resource for Planners, Agencies and Advocates on Trails Along Active Railroad Corridors (2013). Retrieved from https://www.railstotrails.org/resourcehandler.ashx?name=americas-rails-with-trails-report&id=2982&fileName=RwT%20Report_FINAL_103113_low%20res.pdf

2. OneKRT. Frequently Asked Questions (n.d.). Retrieved from https://www.onekrt.org/faqs

3. PermaTrak. Choosing Multi Use Trail Surface Types: Gravel, Asphalt, Concrete (June 2014). Retrieved from https://www.permatrak.com/news-events/bid/102041/Choosing-Multi-Use-Trail-Surface-Types-Gravel-Asphalt-Concrete

4. Rail-to-Trails Conservancy. Trail-Building Toolbox: Surfaces (n.d.). Retrieved from https://www.railstotrails.org/build-trails/trail-building-toolbox/design/surfaces/

5. Columbia Parks and Recreation. Choosing the Right Trail Surface (n.d.). Retrieved from https://www.americantrails.org/images/documents/Choosing-the-Right-Trail-Surface.pdf

6. USGS. Evaluating the potential benefits of permeable pavement on the quantity and quality of stormwater runoff (2018). Retrieved from https://www.usgs.gov/science/evaluating-potential-benefits-permeable-pavement-quantity-and-quality-stormwater-runoff?qt-science_center_objects=1#qt-science_center_objects

7. Selbig, W.R., and Buer, Nicolas, 2018, Hydraulic, water-quality, and temperature performance of three types of permeable pavement under high sediment loading conditions: U.S. Geological Survey Scientific Investigations Report 2018–5037, 44 p., https://doi.org/10.3133/sir20185037.

Figure: A man walks his bike over the Vine Street bridge on the Norfolk Southern Railroad Line in Urbana

8

Public Involvement

8. Public Involvement

Public participation represents a crucial step in the planning process as improvements to the existing system have the potential to affect every resident, employee, and visitor in the community. Obtaining public input gives a voice to residents and other stakeholders, allowing local planners to identify and address the unique needs and desires of the participating residents without losing sight of the social, environmental, and economic differences within the region.

Gathering public input for the Urbana KRT Extension Study required adjustments from the traditional public participation process as large gatherings were not allowed during the COVID-19 pandemic. Normally, public workshops would be held to seek input directly from community members. In order to stay safe under these unique circumstances, CCRPC hosted a month-long Public Comment Period online in October 2020. Residents and stakeholders were invited to review the draft materials, and respond to short answer and multiple-choice questions via a digital Comment Form. The results of the Public Comment Period are summarized in Section 8.1.

Several local plans also reference previous public input and support for the Urbana KRT extension. The relevant content of these related plans is summarized in Section 8.2.

8.1 October 2020 Public Comment Period

The Urbana KRT Extension Study Public Comment Period was open from Thursday, October 1, 2020 through Friday, October 30, 2020. On the CCRPC website, staff provided a brief project background summary, Chapters 1-7 of the draft report (with Chapters 8 and 9 being completed after the public comment period), maps and descriptions of the top five alternatives, and a schedule of upcoming project presentations. Residents and stakeholders were asked to review the alternative maps and/or the draft report chapters to become familiar with the study, and then were invited to complete the digital Comment Form.
The Comment Form was provided as a Google Form for people to submit their comments directly online, and also as a PDF that people could submit by email or mail. The Comment Form asked five questions, and 32 people responded to the comment form. These results are summarized in Sections 8.1.1 through 8.1.5.
People who own property and/or live immediately next to the NSRR line in the study area were also informed about this study and invited to provide comments. Three people submitted comments, which are summarized in Section 8.1.6.

The full list of responses from all persons are listed in Appendix B.

8.1.1 Preferred Alternative

The first Comment Form question asked people to choose their preferred alternative. Half of the 32 Comment Form respondents chose Alternative 1 as their preferred alternative, which was the highest number for any one alternative. Alternative 3 received the second most votes, followed by Alternative 4, and Alternatives 2 and 5 were tied for last, with just one vote each. Figure 8.1 and 8.2 display the votes by alternative and alignment.

Figure 8.1: Alternative Vote Count & Alignment

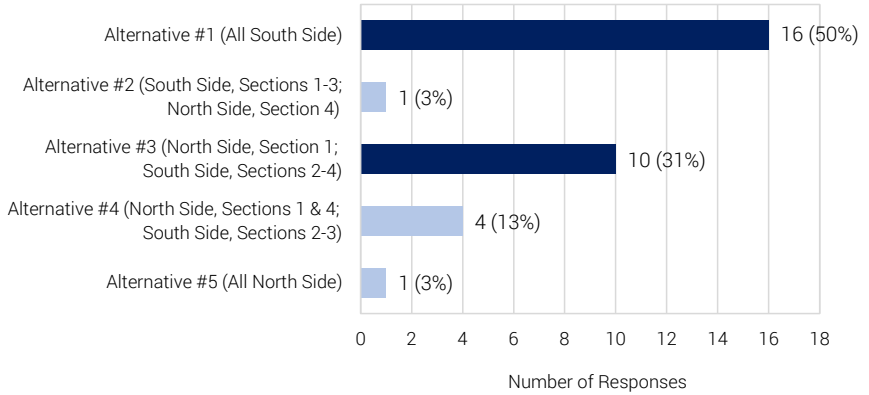
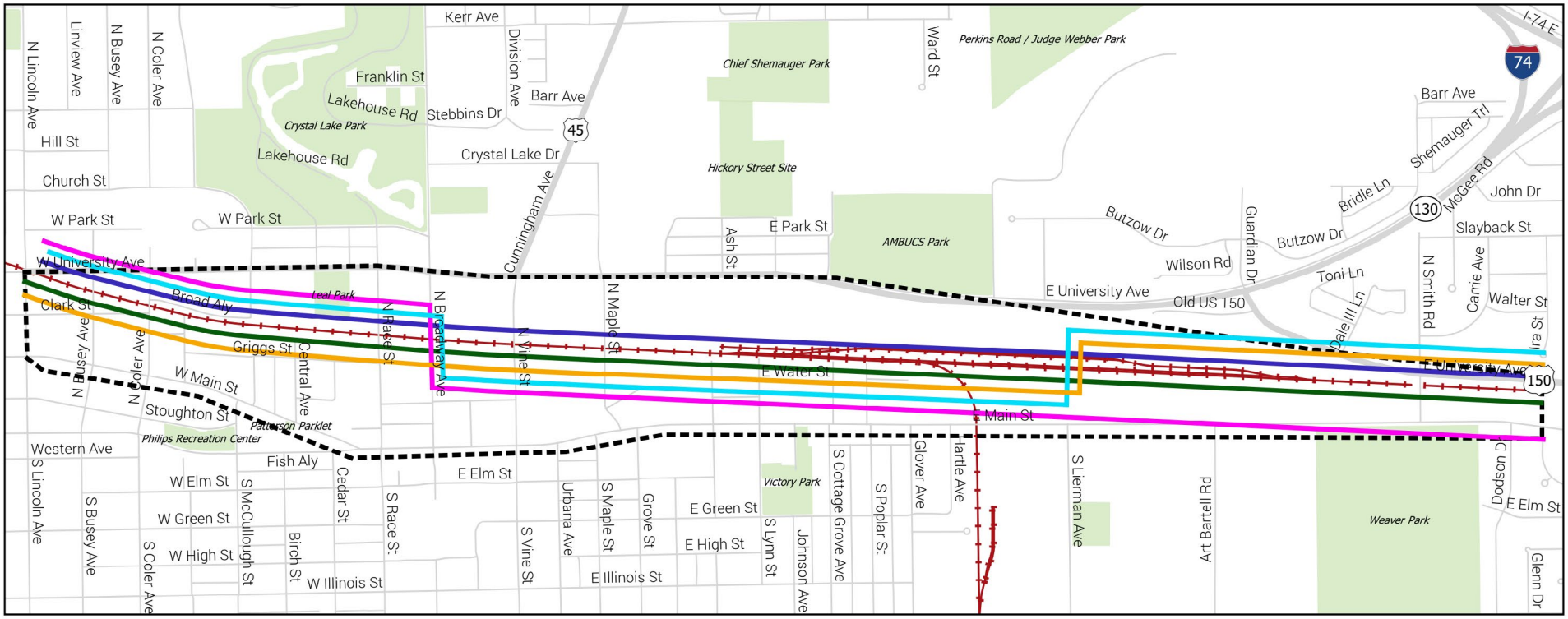


Figure 8.2: Alternative Vote Count Map



Source: CCGIS

Alternative #1 (All South Side)

16 Votes

Alternative #2 (South Side, Sections 1-3; North Side, Section 4)

1 Vote

Alternative #3 (North Side, Section 1; South Side, Sections 2-4)

10 Votes

Alternative #4 (North Side, Sections 1 & 4; South Side, Sections 2-3)

4 Votes

Alternative #5 (All Nouth Side)

1 Vote

Railroads

Roadway

Open Space

Study Area

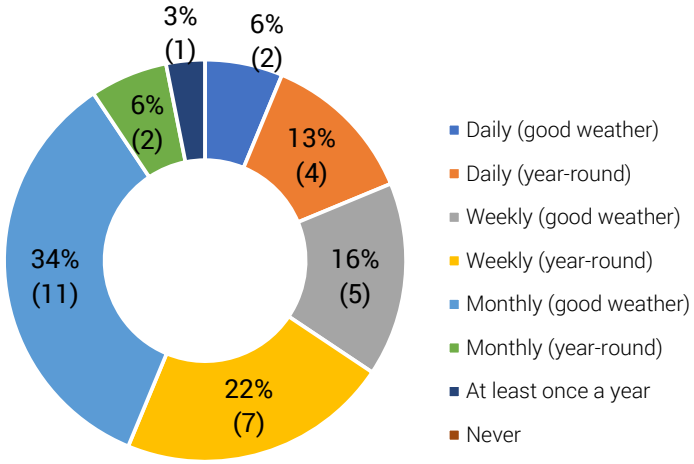
0 0.25 mi

CHAMPAIGN COUNTY REGIONAL PLANNING COMMISSION

8.1.2 Anticipated Trail Use Frequency

The Comment Form asked how often people would use the proposed KRT extension if it was built. The highest percentage of respondents (34%) indicated they would use the KRT extension monthly in good weather if it were built (Figure 8.3). The second highest (22%) answered that they would use the KRT extension weekly year-round, regardless of weather. All respondents indicated that they would use the KRT extension sometime during the year, with both options for weekly use receiving over 15% of responses. These results signal strong interest in frequent use of a KRT extension, often year-round.

Figure 8.3: KRT Extension Anticipated Frequency of Use Responses

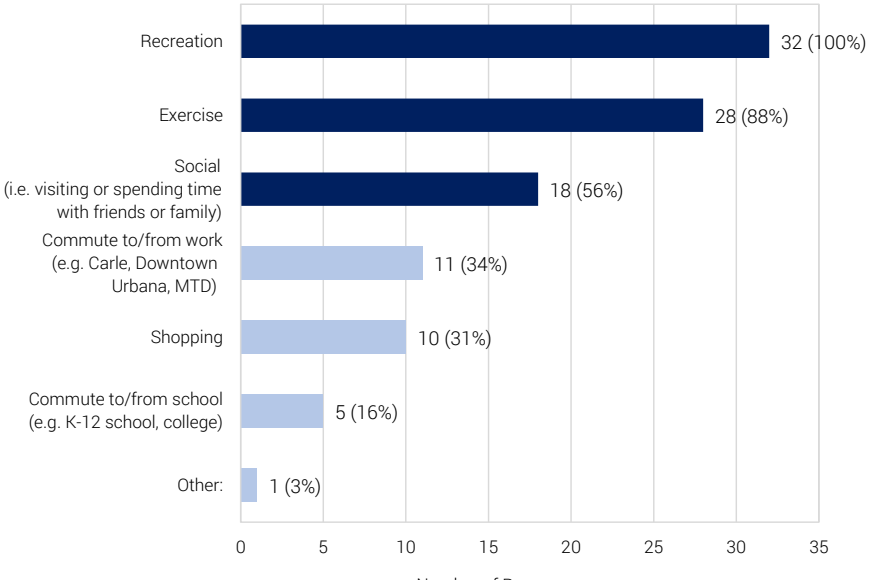


8.1.3 Anticipated Trail Use Purpose

The Comment Form asked what purpose(s) people envision using the proposed KRT extension. All respondents chose recreation (Figure 8.4). The second highest response (88%) indicated that people would use the trail for exercise. The third highest answer (56%) was that people are interested in using the KRT for social reasons, to visit or spend time with friends or family.

These top three responses (recreation, exercise, and socializing) indicate that the trail would have a much more significant effect on physical and mental health and well-being than for transportation to work, school, or retail. As trail use has surged across the country during the COVID-19 pandemic, the importance of trails that can offer safe opportunities for recreation, exercise, and social interaction is more apparent than ever.

Figure 8.4: KRT Extension Anticipated Purpose of Use Responses



8.1.4 Advertising

Respondents were asked how they heard about the Public Comment Period. This was of particular interest to local planners since it was unclear how COVID-19 pandemic would impact traditional forms of advertising and participation in public input opportunities held online rather than in person. Over two-thirds of people heard about the Public Comment Period through email or Facebook (34.4% each).

Table 8.1: Method of learning about the Public Comment Period

Option	Count	Percentage
Email	11	34.4%
Facebook	11	34.4%
Smile Politely	7	21.9%
Word of Mouth	6	18.8%
Twitter	3	9.4%
Champaign County Bikes Google discussion group	1	3.1%
City of Urbana posting	1	3.1%
It's All About U e-newsletter	1	3.1%
News-Gazette	1	3.1%
Total	**42**	**100%**

8.1.5 Additional Comments

Respondents were asked if they had any other comments or concerns regarding any of the alternatives or information in the report. Some common responses focus around increasing safety for trail users (especially around street crossings), increasing the connectivity of a potential trail to local destinations as well as the larger trail network, utilizing areas with the best development potential, minimizing railroad crossings for users, improving or at least not limiting aesthetic value, and maximizing continuous trail length. The following list reflects input received from the public via the Comment Form that illustrate repeated sentiments among respondents:

- Aesthetically pleasing alignments are important, and the south side of the rail line offers the potential for a green space buffer between the railroad and homes.
- Avoiding trail construction immediately next to the Emulsicoat facility and the Station Theatre reduces spatial and safety concerns.
- Connecting the KRT extension to the existing bicycle/pedestrian network and parks offers significant value to the community.
- Preferred alternatives should reduce flooding potential.
- Extending the KRT on the north side of the railroad near Carle Hospital should be a major priority, as it facilitates development (including community support), potential funding, promotion of the trail, and can act as a health and wellness amenity for patients.
- Safe street crossings must remain a significant consideration, both in terms of proper signage, but also alignments that limit vehicle interaction.
- The proposed trail should be as continuous as possible and minimize rail line crossings. Disjointed, short segments are less appealing.
- University Avenue presents the biggest safety risk to entering and existing the proposed KRT extension.
- These responses support Alternative 1 and Alternative 3 as the two best options to extend the KRT through Urbana.

8.1.6 Letters to Adjacent Property Owners and Residents

In the fall of 2020, the City of Urbana worked with CCRPC to inform adjacent property owners and residents about this study. Fifty five letters were sent to the 38 property owners as well as the residents of the 72 properties that fall within the 30-foot buffer from the railroad centerline. The letters informed people that the study partners may be interested in accessing the land within the 30-foot buffer to extend the KRT in the future. However, the letter stated that no land acquisition is occurring at this time, and will not occur without cooperation between the City of Urbana and property owners.

People were invited to review the study and submit comments to the City of Urbana and CCRPC staff. Three property owners responded to this letter. This includes one inquiry from Urbana-Champaign Friends Meeting, which was only a clarification about the 30-foot buffer.

An owner of several commercially zoned properties in Section 1 expressed interest in the development of a block long plaza "when the rest of the railroad tracks come out," but is concerned that a trail would hinder this plan. This property owner is also concerned about providing enough parking in the area for Carle Hospital.

Finally, a homeowner on Cottage Grove Avenue expressed concerns that extending the KRT on the south side of the railroad will affect their property value and security, and eliminate access to their garage. They also stated that the KRT has not been extended into urban areas yet, and wonders what the effect will be when that occurs. Sections 2.3.3 and 2.3.4 of this report provide information about the effect of rail-trails on safety and property values from studies done in other locations.

8.2 Related Plans

Public involvement from several local plans supports the construction of a shared-use path along the NSRR right-of-way in the KRT extension study area.

8.2.1 Champaign County Greenways & Trails Plan

CCRPC completed the update of the Champaign County Greenways & Trails (GT) Plan in 2014. The Kickapoo Rail Trail and its extension through Urbana were the recommendations that received the most votes during this plan's two public comment periods.

Public comments were one of several factors used to develop the GT Plan List of Prioritized Projects. Within this plan, the proposed KRT extension is referred to as the "Railroad Path," and is broken up into several smaller sections. Each of these sections are of medium priority, but implementation timeframes differ for each section. The 0.27 mile stretch between Broadway Avenue and McCullough Street has a high priority timeframe, meaning this section should be completed first. The remaining sections receive a low priority timeframe, meaning they should be constructed after the other sections have been completed.

8.2.2 Long Range Transportation Plan (LRTP) 2045

CCRPC completed the update of the Long Range Transportation Plan (LRTP) 2045 in 2019. During Phase One of Public Outreach between June and October 2018, comments were made expressing the desire to extend the KRT west from its current terminus through Downtown Urbana, and all the way through Champaign and Mahomet.

This led to showcasing the KRT extension as a key recommendation of the LRTP 2045 in the Bicycle and Pedestrian Vision Projects Map, in the Regionally Significant Vision Projects poster, and in the LRTP 2045 Vision video. A trail facility running the length of the NSRR line will enhance the quality of the overall transportation network by increasing regional pedestrian and bicycle connectivity. The proposed KRT extension would begin this work and serve as a building block on which to keep the KRT going through Urbana, Champaign, and Mahomet.

8.2.3 Urbana Park District Trails Master Plan

In conjunction with the Urbana Bicycle Master Plan, CCRPC developed a Trails Master Plan for the Urbana Park District (the UTMP) in 2016. Extending the KRT along the NSRR corridor through Urbana was frequently requested at public meetings, with the KRT being the third most requested project.

KRT recommendations in the UTMP advise the Urbana Park District to work with the City of Urbana to establish a safe, efficient trail connection into Urbana. The proposed alignment follows the NSRR corridor west from Smith Road. Other recommendations include extending the KRT as the "Kickapoo Greenline Trail" into Downtown Urbana and Champaign by connecting it from its current terminus to the Boneyard Creek Trail, and continuing acquisition and construction efforts to build out the KRT. This plan set a goal of implementing two portions of the proposed KRT extension by 2026: between High Cross Road and Cottage Grove Avenue, and between the Boneyard Creek Path and McCullough Street.

Figure 8.5: LRTP 2045 Vision board

LRTP 2045 VISION

In 2018 and 2019 we gathered over 2,000 comments from local residents regarding changes residents would like to see in the local transportation system and transportation priorities for 2045. Based on that and other input, this poster illustrates the collectively defined transportation goals that comprise the LRTP 2045 vision.

SAFETY

- Eliminate fatalities and reduce injuries
- Improve infrastructure conditions
- Implement urban and rural safety plans
- Continue to faciliate regional Safety Committee to support collaboration between planners, engineers, law enforcement, and other community partners

MULTIMODAL CONNECTIVITY

- Implement approved bicycle and pedestrian facilities recommendations
- Reduce vehicle miles travelled
- Increase transit trips between urban and rural areas
- Increase active transportation connections between municipalities
- Increase Amtrak ridership

EQUITY

- Implement off-campus transit hubs to decrease transit travel time
- Increase access to transit, bicycle, and pedestrian facilities from affordable housing locations
- Shorten travel times to employment centers for low income areas

ECONOMY

- Shorten travel times to employment centers for all modes
- Increase airport passenger and cargo trips and destinations
- Improve train access to other regional centers including Chicago
- Protect valuable agricultural land

ENVIRONMENT

- Increase alternative fueling and charging stations
- Increase MTD reliance on alternative (non-fossil) fuels
- Increase solar energy production potential
- Increase walking, biking, and transit trips
- Support infill development over peripheral growth/ sprawl

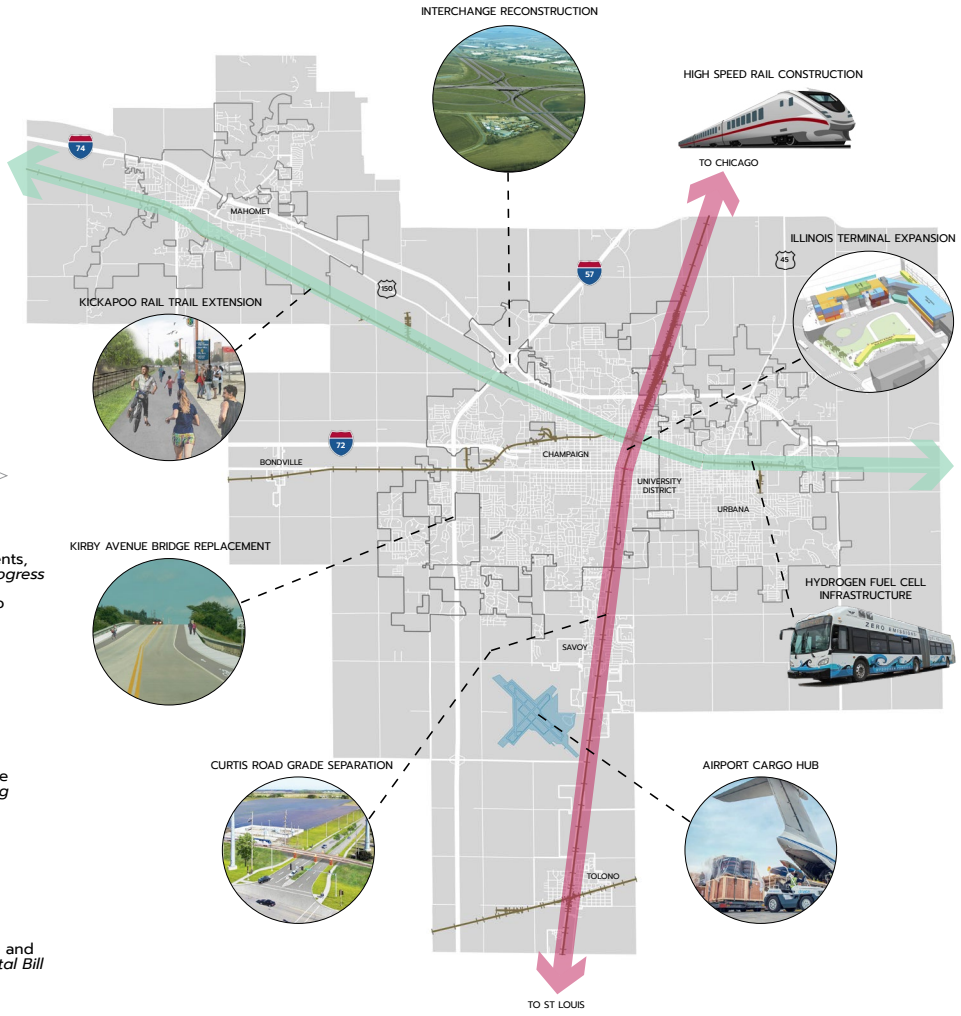
GOALS

The overarching goals of the Long Range Transportation Plan (LRTP) 2045 are **safety, multimodal connectivity, equity, economy,** and **environment.**

The regionally - significant projects included in the list to the right and highlighted on the map are intended to illustrate these goals. Some projects are already funded and in progress while others are part of the illustrative, un-funded vision for 2045.

	SAFETY	MULTIMODAL CONNECTIVITY	EQUITY	ECONOMY	ENVIRONMENT
New I-57/I-74 interchange: Reconstruction starting in 2021	●	●		●	
University Avenue safety & ADA improvements, Wright Street to Cunningham Avenue: *In progress*	●	●	●		
Kickapoo Rail Trail extension from Urbana to Mahomet: *Planning study in progress*		●	●	●	●
Curtis Road grade separation: *Looking for funding*	●	●		●	
Illinois Terminal expansion: *Looking for funding*		●	●	●	●
Increase regional ADA sidewalk and curb ramp compliance: *Ongoing*	●	●	●		●
Increase car and bike share options to make driving and biking more affordable: *Ongoing*		●	●	●	●
Hydrogen fuel cell infrastructure: *Zero-emission MTD buses in 2020*		●			●
Utilization of Willard Airport as a cargo hub: *Future vision*		●		●	
High speed rail construction: *Future vision*		●		●	
Kirby Avenue bridge replacement with bike and pedestrian facilities: *Funded in 2019 IL Capital Bill*	●	●			●
Multimodal transit hub in downtown Urbana: *Looking for funding*		●	●	●	●

SAMPLE PROJECTS



rpc CUUATS

8.2.4 Urbana Bicycle Master Plan (UBMP)

In conjunction with the Urbana Park District Trails Master Plan, CCRPC completed the update of the Urbana Bicycle Master Plan in 2016. Extending the KRT along the NSRR corridor through Urbana was frequently requested at public meetings, with the KRT being the third most requested project.

Five of the thirteen major infrastructure recommendations of the UBMP are to install trails along rail corridors, install trail wayfinding signage, establish bikeway access to employers such as Carle Hospital and CUMTD, improve bikeway access in low-income neighborhoods, and establish the Urbana Green Loop connecting green spaces. Extending the KRT will help accomplish all five of these recommendations, and also help elevate Urbana's current Bicycle Friendly Community status from Gold to Platinum. This plan shares the UTMP goal of implementing two portions of the proposed KRT extension by 2026: between High Cross Road and Cottage Grove Avenue, and between the Boneyard Creek Path and McCullough Street.

Figure 8.6: Urbana Bicycle Master Plan Recommended Route Votes Map

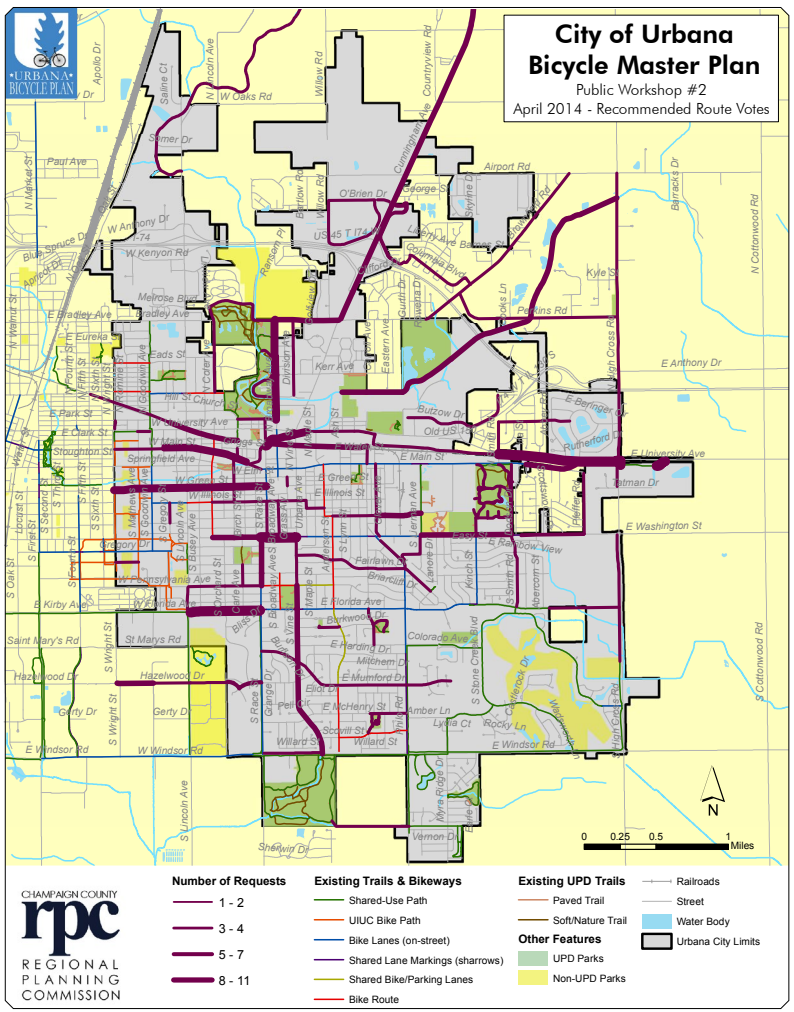
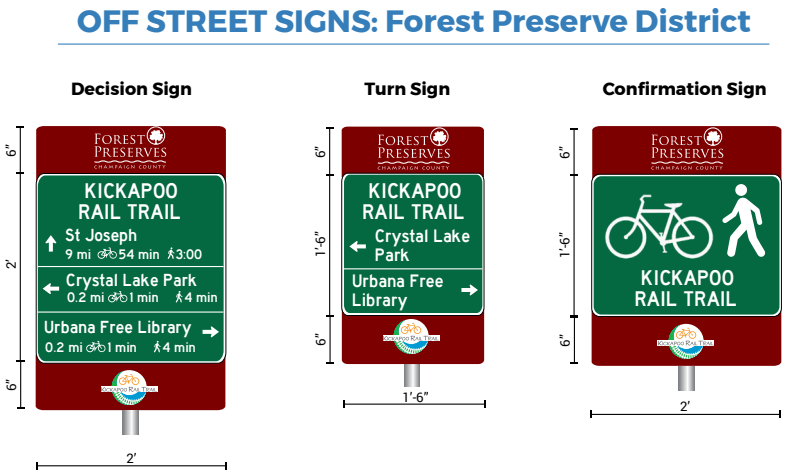


Figure 99 UBMP/UTMP Public Workshop #2 Recommended Route Votes

8.2.5 Urbana Bicycle Wayfinding Plan (UBWP)

Hired by the City of Urbana to carry out a recommendation of the UBMP, CCRPC developed the Urbana Bicycle Wayfinding Plan in 2020. During the public input phase of this plan, the current KRT corridor emerged as a Priority 3 Bikeway for installing wayfinding signs. Public input also reinforced the desire to extend the KRT following the NSRR line. Sign designs were created as another plan recommendation to show what information can be included on wayfinding along the KRT.

Figure 8.7: KRT sign designs in the Urbana Bicycle Wayfinding Plan

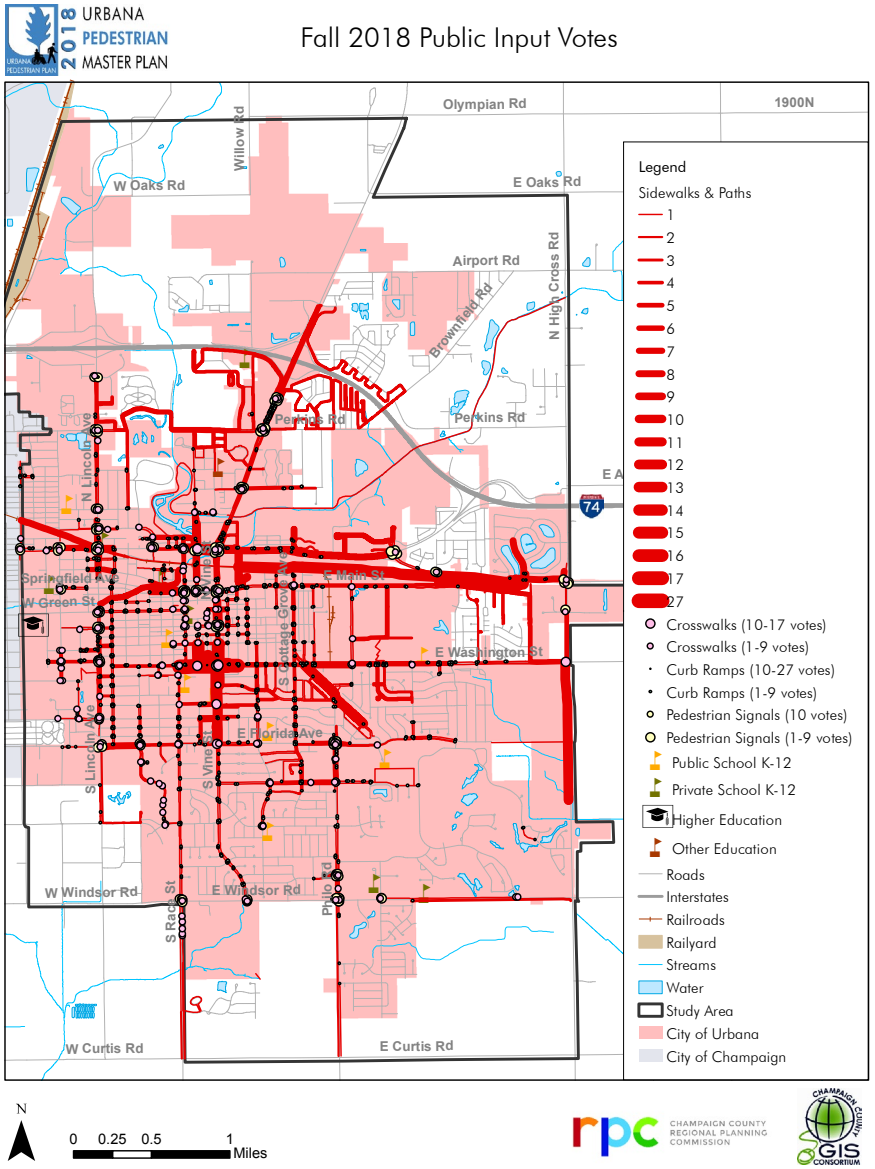


8.2.6 Urbana Pedestrian Master Plan

CCRPC conducted eleven public workshops during the Urbana Pedestrian Master Plan (UPMP), which was approved in 2020. The KRT was one of the top five corridors receiving the most votes indicating where the City of Urbana should target pedestrian infrastructure improvements.

Based on public input and other prioritization criteria, the proposed KRT extension between Cottage Grove Avenue and Maple Street (i.e. most of Section #3) is a Top Priority Recommendation for Trail projects. Extending the KRT to at least one predominately low- or moderate-income Urbana neighborhood is an objective of the UPMP Equity goal, and extending the KRT to more Urbana neighborhoods is a strategy of the UPMP Vibrancy goal.

Figure 8.8: Urbana Pedestrian Master Plan Public Input Votes Map



Norfolk Southern Railroad east of Broadway Avenue

9

Implementation

9. Implementation

Implementation of the Final Alternative is contingent on a number of factors, primarily cooperation with the Norfolk Southern Railroad company and other landowners. A stakeholder partnership consisting of at least the Urbana Park District, City of Urbana, and Champaign County Forest Preserve District should continue to meet and work together beyond the completion of this study to implement the Final Alternative to extend the existing KRT.

9.1 Final Alternative

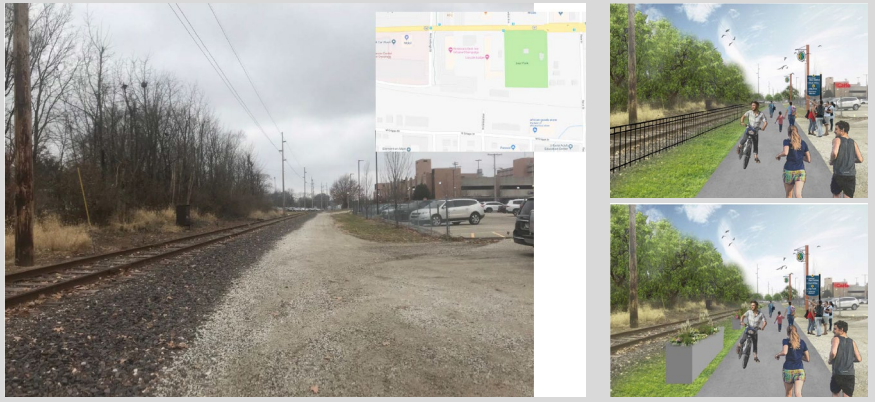
Two major factors determined the Final Alternative for the KRT extension alignment: the cumulative scores of the suitability analysis, and public input. The four alternatives with the highest suitability score as well as another alternative alignment along the north side of the NSRR line were presented for public review, listed in Table 9.1. In total, 32 people voted for their preferred alternative during the Public Comment Period. Half of all respondents chose Alternative 1 (16 votes), and Alternative 3 received the second most votes (10 votes). The suitability analysis and public support indicate that Alternatives 1 and 3 provide the best routes for a KRT extension.

Table 9.1: Recommended KRT Alternatives Suitability Score and Public Votes

Alternatives	Section 1	Section 2	Section 3	Section 4	Suitability Score	Public Votes
Alternative 1	S	S	S	S	300	16
Alternative 2	S	S	S	N	299	1
Alternative 3	N	S	S	S	298	10
Alternative 4	N	S	S	N	297	4
Alternative 5	N	N	N	N	283	1

N=North side of the NSRR line
S=South side of the NSRR line

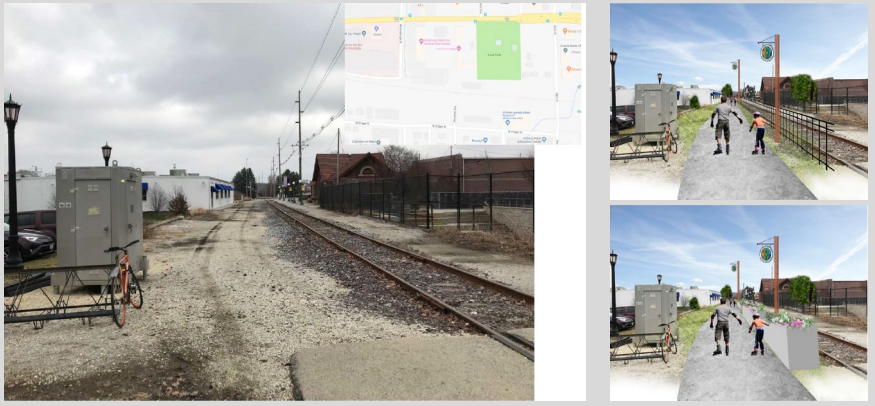
Figure 9.1: Renderings looking west towards McCullough Street & Carle Hospital



Existing Renderings

Rendering Source: University of Illinois Landscape Architecture students

Figure 9.2: Renderings at Race Street looking east towards the Station Theatre



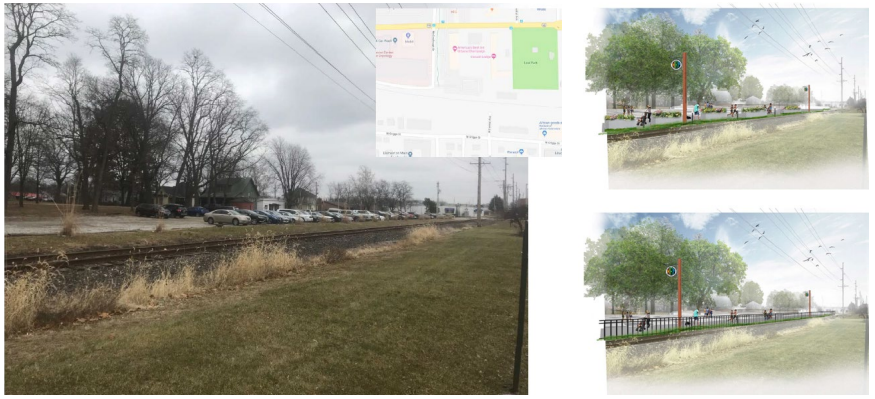
Existing Renderings

Rendering Source: University of Illinois Landscape Architecture students

Alternative 1 runs along the south side of the NSRR line for the entire length of the study area. Only one railroad crossing at the spur north of Hartle Avenue is required for this alternative. Public comments indicated that Alternative 1 provides the strongest connectivity options and "integrates best with bike facilities in Urbana and is the most aesthetically pleasing." Other comments signaled that Alternative 1 offered the best opportunity for trail safety and development as "it appears to have the least street interaction and train line crossing [and]…the least flooding potential [which] is important for the spring months." Furthermore, the accessibility of Alternative 1 was highlighted as "…it provides greater accessibility to the population and is closer to downtown, which gives the trail a more exciting selling point."

Alternative 3 starts out on the north side of the NSRR line along the Carle Hospital Main Campus at Lincoln Avenue. This alternative continues on the north side to the Broadway Avenue intersection, at which point the trail switches to the south side of the NSRR line through the rest of the study area to Scottswood Drive extended. Two railroad crossings are required for this alternative: one at Broadway Avenue, where the alignment switches to the south side of the rail line; and the second at the railroad spur north of Hartle Avenue. Public comments indicated that Alternative 3 had an abundance of benefits including "…accessibility, availability of suitable soil for construction, and avoiding the Station Theatre and Emulsicoat facility." Other comments showed that the connection with the Carle Hospital Main Campus was a major selling point because the hospital could "…use this as an amenity and help with development/funding/promotion of the trail." Moving east of Section 1, comments expressed support for the switch to the south side of the NSRR line for "…improved aesthetics, better access, and staying further away from commercial/industrial areas and busy University Avenue/[US] 150. Also, this avoids the space conflict with The Station Theatre."

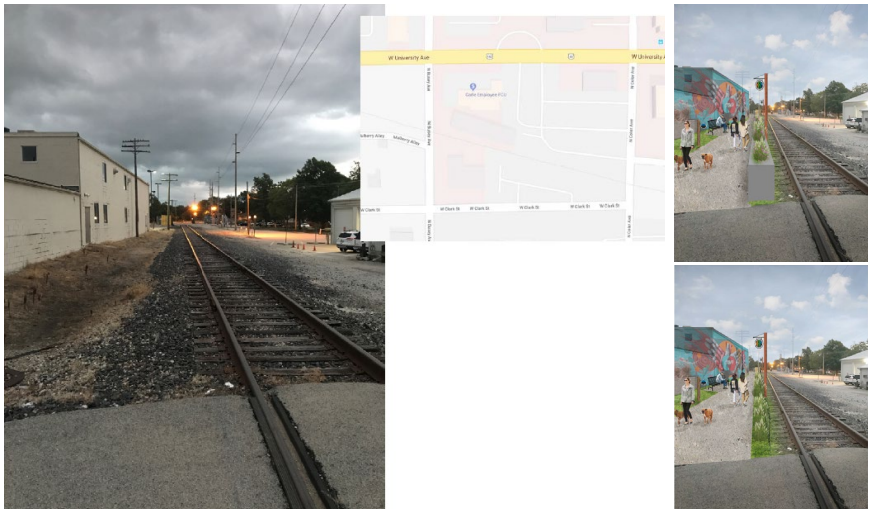
Figure 9.3: Renderings looking east towards Leal Park & Race Street



Existing Renderings

Rendering Source: University of Illinois Landscape Architecture students

Figure 9.4: Renderings at Busey Avenue looking east



Existing Renderings

Rendering Source: University of Illinois Landscape Architecture students

The Final Alternative is that the Kickapoo Rail Trail (KRT) should be extended through Urbana on either the north or south side of the NSRR line in Section 1 (between Lincoln and Broadway Avenues), and on the south side of the NSRR line in Sections 2-4 (from Broadway Avenue to Scottswood Drive extended). Suitability scores and public input support the use of either the north or south side of the NSRR line in Section 1, so the availability of land will help local agencies determine which side will be easier and faster to build.

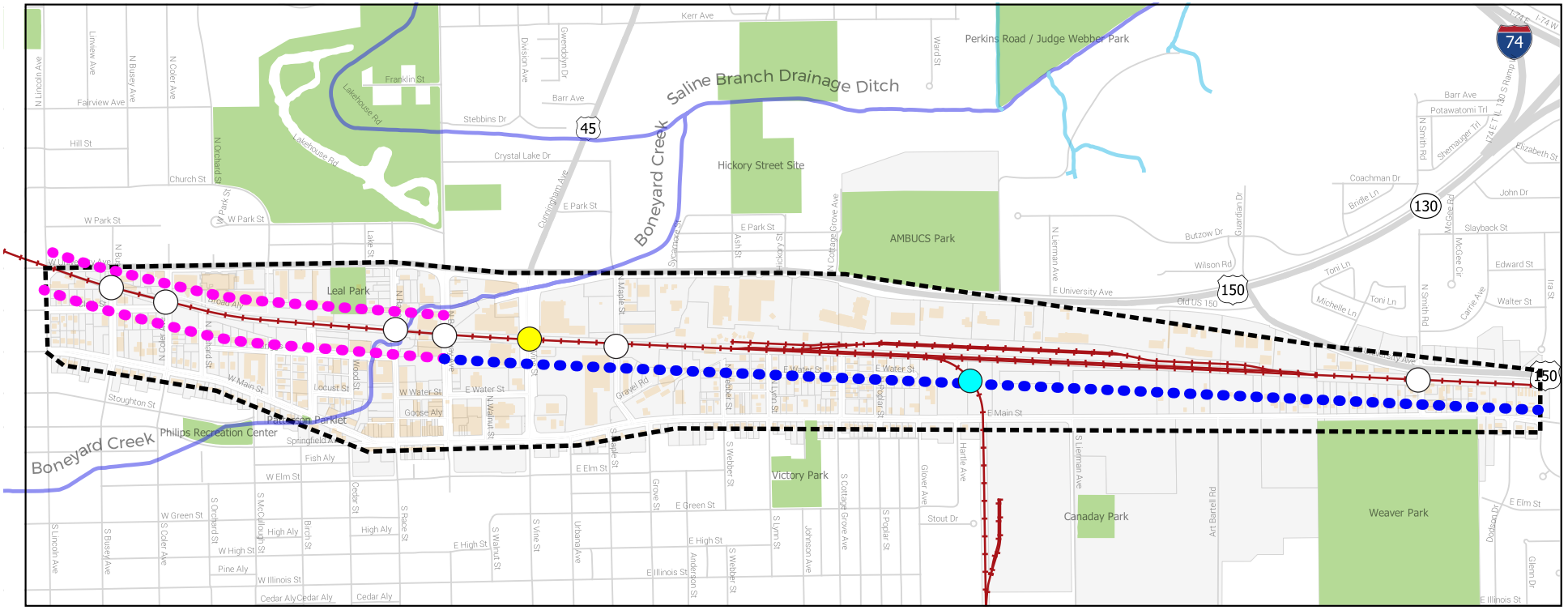
Table 9.2 and Figure 9.5 show the Final Alternative alignment. The Final Alternative has six at-grade road intersections, one grade-separated road intersection, and one new railroad crossing that will have to be addressed. Figures 9.1 through 9.4 show renderings of how the KRT extension could look with a fence or planter boxes separating the railroad from the trail.

Table 9.2: Final KRT Extension Alternative Alignment

Alternative	Section 1	Section 2	Section 3	Section 4	Suitability Score Range	Combined Public Votes
Final Alternative	N or S	S	S	S	298-300	26

N=North side of the NSRR line
S=South side of the NSRR line

Figure 9.5: Final Alternative Map



Source: CCGIS

Final Alternatives

- Section 1 (Lincoln Avenue to Broadway Avenue): North or South Side
- Sections 2-4 (Broadway Avenue to Scottswood Drive extended): South Side
- Road Intersections
- Grade Separrated Intersection
- New Railroad Crossing Required
- Railroads
- Roadway
- Structures
- Property Line
- Open Space
- Study Area

0 0.25 mi

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9.2 Cost Estimate

The cost estimates below are based on the following local sources: 2020 KRT construction estimates from Farnsworth Group via CCFPD for the section between St. Joseph and the Champaign/ Vermilion County line, the 2020 Urbana Bicycle Wayfinding Plan, and the 2020 Urbana Pedestrian Master Plan. The term "estimate" is used since the actual cost of any rail-with-trail project will not be known until design and construction occurs.

- Multi-Use Trail: $800,000 per mile
    - Assumptions: The cost per mile would be approximately $700,000 for construction and $100,000 for engineering (2020 CCFPD estimate). This estimate includes sitework, seeding, erosion control, paving and/or aggregate, detectable warnings, shoulders, safety signage, mobilization, and 15% for construction engineering.

- Continental crosswalk: $2,540
    - Assumptions: One new crosswalk will need to be installed at each of the road intersections.

- Trail crossing sign: $160
    - Assumptions: Four new signs will need to be installed at each of the road intersections, in advance of and at the intersection for two directions of travel.

- Trail wayfinding sign: $300
    - Assumptions: The Urbana Bicycle Wayfinding Plan recommended 42 signs along the KRT corridor in the study area.

The total estimated cost to build the proposed 2.4 mile KRT trail extension is $1,951,680. Other expenses that are not included in this cost estimate are: Vine Street bridge replacement, environmental mitigation, right-of-way acquisition, fencing or landscaping to separate the trail from the railroad, installation of new railroad crossings where the trail would not use an existing crossing, utility adjustments, temporary traffic management cost, and the cost to remove existing structures that are within the right-of-way needed to build the trail. These additional expenses will be significant, and the City of Urbana and Urbana Park District will likely use multiple funding sources described in Section 9.4 to complete trail construction.

Regarding environmental mitigation, Chapter 5 outlines existing environmental conditions in the study area. The City of Urbana and Urbana Park District should refer to the IDOT Bureau of Design and Environment (BDE) Manual Chapter 24 - Environmental Assessments to complete the environmental assessment when they are ready to begin rail-with-trail construction in the study area. Chapter 2 of the Champaign County Regional Environmental Framework also discusses the IDOT Environmental Survey Request needed to begin work on environmental mitigation efforts.

A concrete paved trail is recommended to be installed throughout the KRT extension study area. While the initial cost of an unpaved trail is lower than a paved trail, long-term maintenance of crushed limestone will catch up to the higher upfront cost of concrete. Concrete has a significantly longer life than crushed limestone, with the added benefit of being more aesthetically suitable for the urban environment. A crushed limestone trail also has the negative environmental impact of potential washout into the Boneyard Creek or adjacent properties. Crushed limestone washout can also overload and impede municipal drainage and water treatment infrastructure following heavy rains. A concrete paved trail facilitates use by all types of non-motorized transportation modes for generations to come.

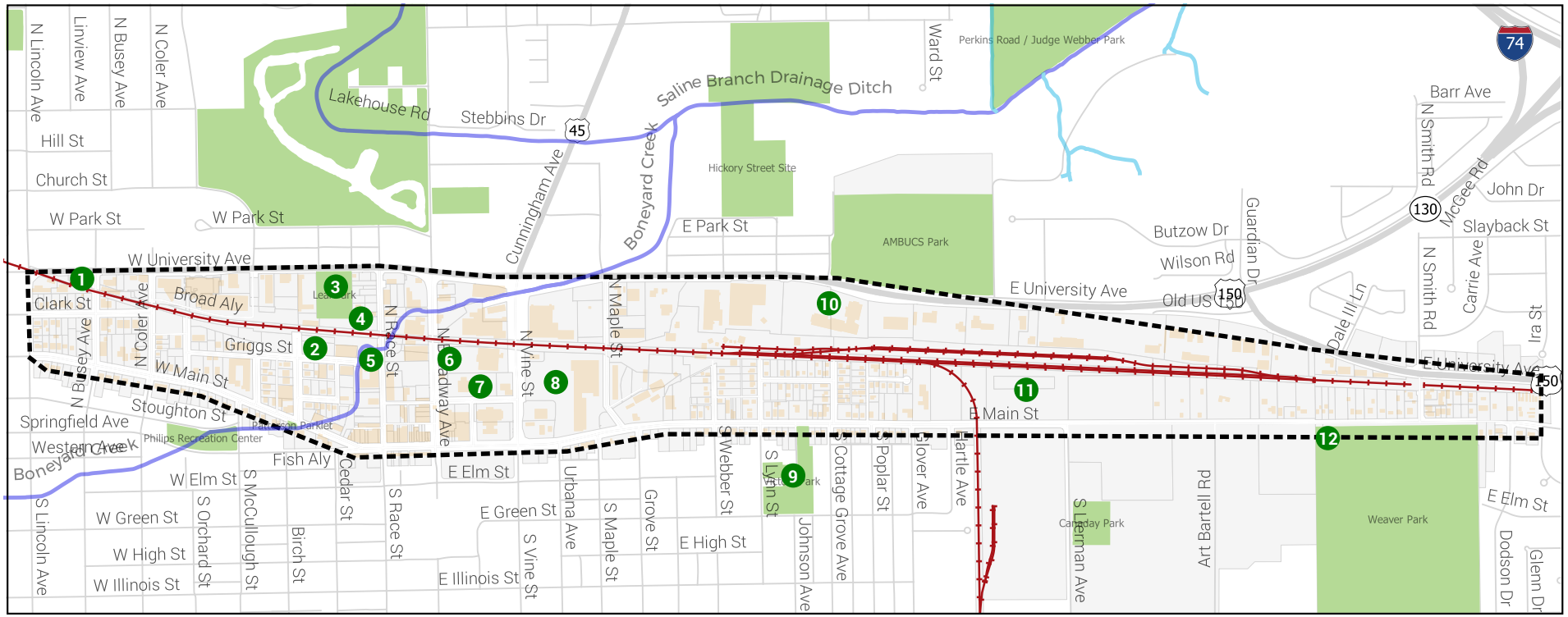
9.3 Potential Trailheads

Based on the existing land uses, location suitability, and existing condition analysis, the study team identified several locations in Table 9.3 where trailheads could be installed along the proposed KRT extension in Urbana. Table 9.3 and Figure 9.6 generally list these locations from west to east, starting in Section #1 and ending in Section #4. Please refer to Section 6.4.7: Trailheads for more information about the features that could be installed at trailheads.

Table 9.3: Potential Trailhead Locations in the KRT Extension Study Area

#	Potential KRT Trailhead Locations	Property Address(es)	Property Owner	Property Owner Type	Existing Land Use(s)
1	Southwest corner of University & Busey Avenues	801-805 W. University Ave.	IDOT	Public	Undeveloped land
2	City of Urbana Lot 25 (south side of NSRR between Race St. and Central Ave.)	305 N. Race St.	City of Urbana	Public	Paved parking lot
3	Leal Park	303 W. University Ave.	Urbana Park District	Public	Park, paved parking lot
4	Silvercreek west parking lot	395 N. Race St.	Allen Strong	Private	Gravel parking lot
5	Boneyard Crossing	301 N. Race St.	City of Urbana	Public	Park, street parking
6	Save-A-Lot	220-224 N. Broadway Ave.	Niemann Foods Inc.	Private	Grocery store, paved parking lot
7	City of Urbana Lots 5 and 9 (near the former Urbana Civic Center)	104, 202 E. Water St.	City of Urbana	Public	Vacant building, paved parking lots
8	Schnucks	200 N. Vine St.	The Desco Group	Private	Grocery store, paved parking lot
9	Victory Park	1000 E. Green St.	Urbana Park District	Public	Park, street parking
10	CUMTD headquarters	1101 E. University Ave.	CUMTD	Public	Offices, paved parking lot
11	DART Container north parking lot	1502 E. Main St.	DART Development	Private	Paved parking lot
12	Weaver Park northwest parking lot	2205 E. Main St.	Urbana Park District	Public	Park, paved parking lot

Figure 9.6: Potential Trailhead Locations in the KRT Extension Study Area



Source: CCGIS

Potential Trailheads

1. Southwest corner of University & Busey Avenues
2. City of Urbana Lot 25
3. Leal Park
4. Silvercreek west parking lot
5. Boneyard Crossing
6. Save-A-Lot
7. City of Urbana Lots 5 and 9
8. Schnucks
9. Victory Park
10. CUMTD headquarters
11. DART Container north parking lot
12. Weaver Park northwest parking lot

- Railroads
- Roadway
- Structures
- Property Line
- Open Space
- Study Area

0 0.25 mi

CHAMPAIGN COUNTY REGIONAL PLANNING COMMISSION

9.4 Funding Sources

The City of Urbana, Urbana Park District, and Champaign County Forest Preserve District develop capital plans each year that identify all the infrastructure work to be implemented in the planning period, including the construction and maintenance of roadways, trails, and bridges. It is recommended to include activities in these plans that support the proposed KRT extension, including land acquisition, engineering, and construction. The following sections list potential funding sources that could supplement existing capital plans to fund the different activities involved in implementing the KRT extension through Urbana.

9.4.1 Peer Ideas

Funding for rail-to/with-trail projects in peer communities have come from a variety of sources such as sales tax, other taxes, bond measures, and public/private partnerships.

Fort Collins voters passed the "Keep Fort Collins Great" 0.85 percent sales tax to fund critical services and programs from 2011-2020. Fort Collins voters also renewed the "Building on Basics" ¼ cent sales tax in 2015 to fund community capital improvements for another 10 years, including bike plan implementation.

The City of Wichita Bicycle Wayfinding Plan recommends using part of its annual Community Development Block Grant (CDBG) funds from the U.S Department of Housing and Urban Development (HUD) to install wayfinding signs. The City of Wichita also collects a transient guest tax that supports convention and tourism promotion, which can be used to install wayfinding signs that improves traveler orientation and navigation.

In addition to public funding sources, local agencies can seek funding from private foundations and civic crowd funding. The Foundation Center is one resource to find private foundation funding, and GoFundMe.com is one method to implement civic crowd funding. The latter approach can be used if a segment of the population is interested in raising funds for a specific wayfinding project, such as the Friends of the KRT.

9.4.2 Public & Private Resources

At the state level, the Illinois Department of Transportation (IDOT) and Illinois Department of Natural Resources (IDNR) provide the most access to funding for bicycle and pedestrian facilities. Those state funding sources, along with federal, private, and non-profit sources are listed below.

Illinois Transportation Enhancement Program (ITEP)

- Department: IDOT
- Deadline: Set by IDOT
- Maximum Amount: $2,000,000
- Description: ITEP provides funding for community based projects that expand travel choices and enhance the transportation experience by improving the cultural, historic, aesthetic and environmental aspects of our transportation infrastructure. Project sponsors may receive up to 50 percent reimbursement for right-of-way and easement acquisition costs, and up to 80 percent reimbursement for Phase II engineering, utility relocations, construction engineering, and construction costs. The remaining 20 or 50 percent is the responsibility of the project sponsor. A project must qualify as one of the 9 eligible categories listed in the ITEP Guidelines Manual and it must relate to surface transportation to be eligible for funding.
- Website: http://www.idot.illinois.gov/transportation-system/local-transportation-partners/county-engineers-and-local-public-agencies/funding-opportunities/ITEP

Illinois Bicycle Path Program

- Department: IDNR
- Deadline: March 2nd
- Maximum Amount: $200,000 for Development Projects, None for Acquisition Projects
- Description: The Illinois Bicycle Path Grant Program was created to financially assist eligible units of government acquire, construct, and rehabilitate public, non-motorized bicycle paths and directly related support facilities. Grants are available to any local government agency having statutory

authority to acquire and develop land for public bicycle path purposes. Financial assistance up to 50% of approved project costs is available through the program.
- Website: https://www.dnr.illinois.gov/AEG/Pages/BikePathProgram.aspx

Open Space Lands Acquisition and Development Program (OSLAD) & Land and Water Conservation Fund (LWCF)

- Department: IDNR
- Deadline: Between May 1st & July 31st
- Maximum Amount: $750,000 for Acquisition Projects, $400,000 for Development/Renovation Projects
- Description: The OSLAD Program is a state-financed grant program that provides funding assistance to local government agencies for acquisition and/or development of land for public parks and open space. The federal LWCF program (also known as LAWCON) is a similar program with similar objectives. Projects vary from small neighborhood parks or tot lots to large community and county parks and nature areas. Both programs provide funding assistance up to 50% of approved project.
- Website: https://www.dnr.illinois.gov/aeg/pages/openspacelandsaquisitiondevelopment-grant.aspx

Recreational Trails Program (RTP)

- Organization: IDNR
- Deadline: March 1st
- Maximum Amount: N/A
- Description: This program provides funding assistance for acquisition, development, rehabilitation and maintenance of both motorized and non-motorized recreation trails. Examples of eligible project activities include: trail construction and rehabilitation; restoration of areas adjacent to trails damaged by unauthorized trail uses; construction of trail-related support facilities and amenities; and acquisition from willing sellers of trail corridors through easements or fee simple title. By law, 30% of each state's RTP funding must be earmarked for motorized trail projects, 30% for non-motorized trail projects and the remaining 40% for multi-use (diversified) motorized and non-motorized trails or a combination of either. The RTP program can provide up to 80% federal funding on approved projects and requires a minimum 20% non-federal funding match.
- Website: https://www.dnr.illinois.gov/AEG/Pages/FederalRecreationalTrailsProgram.aspx

Doppelt Family Trail Development Fund

- Organization: Rails-to-Trails Conservancy (RTC)
- Deadline: Varies
- Maximum Amount: $10,000 for Community Support Grants, $50,000 for Project Transformation Grants
- Description: The Rails-to-Trails Conservancy (RTC) launched a new grant program in 2015 to support organizations and local governments that are implementing projects to build and improve rail-trails. Under the Doppelt Family Trail Development Fund, RTC will award a total of $85,000 per year for the next five years to qualifying projects through a competitive process.
- Website: http://www.railstotrails.org/our-work/doppelt-family-trail-development-fund/

People for Bikes (PFB) Community Grants Program

- Organization: People for Bikes
- Deadline: Varies; Letter of Interest Required
- Maximum Amount: $10,000
- Description: The People for Bikes (PFB) Community Grants Program provides funding for important and influential projects that leverage federal funding and build momentum for bicycling in communities across the U.S. These projects include bike paths, bike lanes, rail trails, bridges, mountain bike trails, bike parks, BMX facilities, end-of-trip facilities, and large-scale bicycle advocacy initiatives.
- Website: https://peopleforbikes.org/our-work/community-grants/

9.5 Recent Work

9.5.1 East Urbana KRT Study Implementation

The 2018 Weaver Park and East Urbana Kickapoo Rail Trail (KRT) Connectivity Study developed by CCRPC was approved by the Champaign County Forest Preserve District (CCFPD) Board, Urbana Park District (UPD) Board, and Urbana City Council. The preferred alternative is to extend the KRT west along the NSRR rail line at least to Smith Road and build a north-south connection along the Bakers Lane corridor to Main Street, Weaver Park, the Prairie Campus, and Washington Street.

The City of Urbana owns a property on Bakers Lane extended between the NSRR line and Main Street. The City of Urbana and CCRPC prepared an Illinois Transportation Enhancement Program (ITEP) grant application in October 2020 to build a shared-use path on Bakers Lane between Main and Washington Streets. The City of Urbana should continue to work with the Urbana Park District, CCFPD, and other community partners to extend the KRT westward from its current terminus and connect it south into East Urbana.

Figure 9.7: Bakers Lane corridor south of Main Street through Weaver Park

9.5.2 Norfolk Southern Railroad and Legislator Coordination

In March 2020, the City of Urbana, Urbana Park District, CCFPD, and CCRPC met with representatives from Norfolk Southern Railroad, U.S. Senator Dick Durbin's office, and U.S. Senator Tammy Duckworth's office. These representatives are now up to date on efforts to extend the KRT west through Urbana. The aforementioned four local agencies should continue to work with the latter three entities to keep the KRT extension effort active. The local agencies should also work with state and federal legislators to secure funding for railroad property access and trail development.

9.5.3 Mayor and Council Priority

The City of Urbana City Council and Mayor Priorities for 2018-2021 include the expansion of the KRT. Priority #4 reads "Expand connectivity of the Kickapoo Rail Trail with a focus between Vine Street and Lincoln Avenue and plan for the Boneyard Creek Multiuse Path." This study provides the information for the City of Urbana to accomplish this goal as soon as funding and coordination allows.

9.5.4 Active Rail Line Users

The existing NSRR rail line in the KRT Extension Study Area is considered an active rail line, and is currently being used by two companies. One is Emulsicoat, Inc. at 705 East University Avenue on the north side of the railroad. The other is DART Container Corporation (formerly Solo Cup) at 1505 East Main Street, south of the rail line. Both companies have railroad spurs to their properties. Trains are present on this railroad at least once a week. Both companies expect to continue using this section of railroad as long as their businesses are located in or adjacent to the study area. The City of Urbana and its partners will have to work with NSRR, Emulsicoat, and DART Container to extend the KRT west through Urbana.

Figure 9.8: Norfolk Southern train cars on the tracks near Emulsicoat, Inc.

Figure 9.9: Norfolk Southern train crosses the intersection of University and Lincoln Avenues

9.5.5 Committees and Construction

Members of the OneKRT Steering Committee continue to work on building more sections of the trail. Member agencies include CCFPD, the Vermilion County Conservation District (VCCD), Urbana Park District, CCRPC, IDNR, and the City of Danville. During the summer of 2020, the Friends of the Kickapoo Rail Trail group was formed, with Champaign County Bikes (CCB) and Vermilion County bicyclists represented.

A new section of the KRT opened in 2020 between Oakwood and Gray's Siding east of Oakwood. The KRT section through Kickapoo State Park is expected to open in mid-2021. CCFPD applied for an ITEP grant to construct a section of the KRT from Ogden to the Champaign/Vermilion County line.

Steering and stakeholder committee agencies for this study, the OneKRT steering committee, and the Friends of the KRT should continue to work together to build more trail sections and extend the KRT east and west from its current property.

Figure 9.10: A bicyclist on the KRT in Oakwood

9.6 Next Steps

In order to implement this study's Final Alternative to extend the KRT westward through Urbana, several steps must be taken. These next steps represent concrete actions to realize the vision of this project. These steps are not listed in a priority order.

9.6.1 Fundraising & Land Acquisition

Fundraising and land acquisition can be done simultaneously as they are mutually beneficial tasks, or can be done as individual tasks as opportunities arise.

1. **Fundraising Strategy:** Develop a written strategy for securing the necessary funds for constructing and maintaining the KRT extension. This will most likely be a multifaceted approach consisting of applying for state and federal grants, setting aside certain local funds, and public and private donations. It is recommended for the Urbana Park District Foundation, Forest Preserve Friends Foundation, and Friends of the KRT to begin fundraising efforts as soon as possible.

2. **Right-of-Way (ROW) Acquisition:** Begin acquiring parcels necessary for the proposed KRT extension and Bakers Lane connection. When land along the KRT corridor becomes available for purchase or lease, the City of Urbana should obtain this access. In many locations, only an easement is needed to acquire the additional space to build the trail as opposed to a full parcel.

    a. Land Acquisition Strategy: Develop a strategy for acquiring the Norfolk Southern Railroad ROW. This will be done through either the direct sale of property to or through a lease agreement with the City of Urbana and/or Urbana Park District.

9.6.2 Engineering & Environmental Surveys

Various phases of engineering and environmental surveys need to be completed in order to start construction on future phases of the KRT.

1. **Preliminary Engineering**

    a. Phase I Preliminary Engineering: Initial preparation of environmental documents, project development or design report, bridge condition reports, preliminary bridge design, and a hydraulic report. Collaboration with adjacent stakeholders such as Carle Hospital is necessary.

    b. Phase II Preliminary Engineering: Preparation of the plans, specifications, and estimates. This work cannot begin until Phase I has been completed and design approval given by IDOT. Collaboration with adjacent stakeholders such as Carle Hospital is necessary.

    c. Construction Engineering: Perform engineering services such as Quality Assurance/Quality Control of all construction work in progress.

    d. KRT Extension Construction: Once properties, funding, materials, and initial surveys have been completed, construction on the proposed KRT extension (either in total or in sections) can begin.

2. **Environmental Review Process**

    a. Environmental Survey Request (ESR): IDOT checklist of conditions to determine potential impacts to cultural, biological, or special waste resources. Upon submission of ESR to IDOT, the BDE will determine if more environmental surveys are necessary. ESR's take roughly six months to complete and results have a two-year lifespan. Submission of the ESR for this study area will likely trigger a PESA.

    b. Preliminary Environmental Site Assessment (PESA): Study to identify and assess environmental risks and

liabilities of a property. Conducted by the Illinois State Geological Survey (ISGS) on behalf of IDOT, a PESA considers presence of Recognized Environmental Conditions within a property to determine if further study is needed. PESA's take roughly six months to complete and costs vary widely. PESA results have a lifespan of three years but require validation after six months to confirm no land use changes or new special waste releases exist. Consult Chapter 2 of the Champaign County Regional Environmental Framework, or BDE 27-3.03 for more information.

9.6.3 Phased Construction

Considering that the KRT is a lengthy regional trail, construction will occur in phases. Adjacent trails are also included here that will enhance connectivity of the KRT to more Urbana residents. The Urbana Park District, City of Urbana, and CCFPD should address alternative trail alignments as temporary routes as trail construction progresses.

1. **Phased Construction:** Section 1 (Lincoln Avenue-Broadway Avenue) and part of Section 2 (Broadway Avenue-Vine Street) should be the priority build when materials, funding, and land have been secured for trail construction, even if the entire 2.4-mile length cannot be completed. Building a trail from Lincoln Avenue to Vine Street is a priority of the Urbana Mayor and City Council. Additionally, starting the construction from Lincoln Avenue to Vine Street signals the commitment to completing the entire trail and solidifies connecting the two ends of the proposed trail as inevitable.

    a. Bakers Lane Development: Developing a shared-use path along the Bakers Lane ROW is necessary to increase access between the proposed KRT extension and Urbana's bicycle and pedestrian network (e.g. Main Street bike lanes, Washington Street bike lanes). The preferred alternative of the 2018 Weaver Park and East Urbana Kickapoo Rail Trail Connectivity Study recommends extending the KRT along the NSRR line to Bakers Lane, and then building a trail south on Bakers Lane to Washington Street. CCFPD, the City of Urbana, and Urbana Park District should continue efforts to acquire the 0.18 miles of the NSRR corridor from Scottswood Drive extended to Smith Road in order to extend the KRT to Bakers Lane and Weaver Park.

    b. Boneyard Creek Path Diversion: Future plans should examine the opportunity to utilize the existing Boneyard Creek Path between Race Street and Broadway Avenue to avoid spatial limitations alongside the Station Theatre. The proposed KRT extension could be connected to the Boneyard Creek Path by either 1) diverting trail users down the west side of Race Street and retrofitting the entrance to the path to accommodate bicyclists; or 2) installing a path connection from the NSRR corridor to the existing ramp, directly west of the Station Theatre. This ramp would need to be widened in order to accommodate bicyclists. Between the Boneyard Creek Path entrance at Broadway Avenue and the NSRR corridor, trail wayfinding signs need to be installed on Broadway Avenue to direct users to travel along the sidewalk or bike lanes to return to the NSRR corridor and the rest of the proposed KRT extension. This corridor diversion eliminates the need to encroach on the Station Theatre property, utilizes existing trails instead of new construction, and highlights the natural aesthetics of the Boneyard Creek.

    c. Cottage Grove Avenue corridor: Several local plans recommend that a north-south trail crossing be built from the Cottage Grove Avenue terminus north of Water Street to the CUMTD parking lot and extended north across University Avenue (US 150) to AMBUCS Park. This includes the GT Plan, LRTP 2045, UTMP, UBMP, and UPMP. While the rail line is still active, NSRR will not consider building a new crossing without closing an existing crossing, making this crossing unlikely to happen unless the City of Urbana identifies another street

crossing to close or the railroad is abandoned. However, pedestrians and bicyclists are already using this area as a crossing (see Section 3.3 Traffic Volumes), as it connects parks, residential areas, and employers. The City of Urbana and Urbana Park District should pursue construction of this north-south trail in conjunction with KRT Section #3 construction if active use of the rail tracks ends, a different crossing can be closed, or another arrangement negotiated.

Figure 9.11: A train sits past the Cottage Grove Avenue terminus north of Water Street

9.6.4 Vine Street Bridge

Norfolk Southern Railroad and/or the City of Urbana must perform an inspection on the Vine Street bridge to determine its structural integrity for future rail and/or trail use. This project is within the area defined as a priority of the Urbana Mayor and City Council to complete KRT construction.

Figure 9.12: A train crosses the Vine Street bridge

9.6.5 Develop Trailheads

Effective implementation of trailheads and other designated public access points will impact how well a trail is accepted and integrated in the surrounding community. Users should be able to access the trail without traveling too far of a distance, and ideally by using any mode of transportation. Trailheads should also be compatible with surrounding land uses and property owners.

1. **Continue trailhead development at Weaver Park:** Continue development of a trailhead at Weaver Park in accordance with the Greenways and Trails Design Guidelines.

2. **Investigate potential future trailhead sites:** Investigate sites listed in Table 9.3 to establish future trailheads along the KRT extension in Urbana.

9.7 Conclusion

The strong public support for this project, along with its inclusion in many local development plans and timetables clarifies the importance of this KRT extension to local and state agencies. Efforts to secure funding, acquire land access, and work with all stakeholders must continue to realize the full vision of the KRT and its many benefits to Urbana.

Figure 9.13: NSRR looking west of Broadway Avenue

Appendix

Appendix A

Bicycle Level of Service (BLOS) Methodology

Urbana Kickapoo Rail Trail Extension Study BLOS Model

BLOS Model Characteristics

Letters relate to the Column in the Urbana KRT Extension Study BLOS Database.

- I (# of Thru Lanes per Direction) – Taken from the CUUATS Travel Model, aerial photography, and local knowledge
- V (Bi-directional ADT) – Used Column V: Real Data, and Averages & Interpolation when real data is not available.
  - U – Real Data
    - 2011 & 2016 counts
  - V – Adjusted Counts:
    - Single value Real Data
    - Averages of Real Data where multiple values are given (i.e. ADT at two endpoint intersections within segment)
    - Averages & Interpolation when real data is not available for a specific segment, but when ADT is available for neighboring segments.
    - Values of Missing Data were assigned a Model value of 1,000
    - This is appropriate for residential streets, but not streets with higher functional classifications.
- L (Rightmost Lane Width, excluding Gutter Seam Width) – Average of K
  - Lane Widths from Column K were averaged if:
    - Directional lane widths differ (i.e. eastbound (EB) & westbound (WB))
    - Inner & Outer Lane widths differ
- G (Directional Gutter Seam Width)
  - Used real numbers, with the following exception:
    - If gutter pan is only on one side of the street, the number is divided by 2 to produce the Model value.
- R (Directional Extra Width)
  - Subtracted gutter pan width (Q)
  - Averaged if widths differed on each side
  - Divided by 2 for extra width only on one side
  - For all values, if the width was over 5', half of the extra distance over 5' was added to 5' to produce the Model value.
    - » If x > 5: x adj = 5+0.5(x-5)
    - » i.e. If x = 7: x adj = 5 + 0.5(7-5) = 6
- W (Posted Speed Limit)
  - Real values were used for speeds above 25 MPH
  - Speeds below 25 MPH were assigned a Model value of 25, because the minimum speed limit for the Model is 25 MPH.
- T (Parking Usage)
  - Used aerial photography to determine parking percentages
    - Champaign County GIS Consortium Interactive Public Map images: http://www.maps.ccgisc.org/public/
- T (Parking Usage) continued
  - Under 20 cars on a segment: 1 car = 1%.
    - 'Parking spaces are not marked on these segments.
  - Over 20 cars on a segment: used the real parking percentage
    - Number of cars / Number of parking spaces
  - Exception to "under 20 cars" rule: used real percentages when there were higher parking percentages on smaller segments, in such districts as Campus & Downtown. For example:
    - Main Street (Vine-Race)
- Z (% Truck Traffic) – based on Average Percentages for Functional Classification, unless real data exists for % of Truck Traffic (X)
  - Maximum percentage used in model is 7%. For real percentages over 7%, use 7%.
- AB (Pavement Condition) – Taken from field survey judgments, recent resurfacing and reconstruction projects, and aerial photography
  - 5- Recently repaved
  - 4.5 – Parts recently repaved
  - 4 – Average
  - 3.5 – Less than average
  - 3 – Poor pavement
  - 3 – Brick road
  - 2 – Gravel road

Model Calculations

Volume Term

Urbana BLOS model:
= 0.507 * ln (G2 * 0.091 * 0.565/4/F2)

- G2 = bi-directional volume (ADT)
- F2 = number of lanes in 1 direction
  - Did not have to divide Number of Lanes in half like done in the Batavia model, because our Number of Lanes is already expressed in each direction.

Batavia model:
= 0.507 * ln (F2 * 0.091 * 0.565/4/(E2/2))

- E2 = number of lanes for the entire street width
- E2/2 = number of lanes in 1 direction

All

- Volume Term – the only formula that is slightly different between Batavia & Urbana
- Speed Term – same formula
- Width Term – same formula
- Pavement Term – same formula

- Volume Term – involves ADT & Number of Lanes
- Speed Term – involves Posted Speed Limit & % of Truck Traffic
- Width Term – involves Lane Width, Extra Width & Parking %
- Pavement Term – involves Pavement Condition

Results

- BLOS Score = (Volume Term + Speed Term + Width Term + Pavement Term) + 0.76
- BLOS Grade: formula was copied & pasted from Batavia Model
  - A ≤ 1.5
  - B > 1.5 and ≤ 2.5
  - C > 2.5 and ≤ 3.5
  - D > 3.5 and ≤ 4.5
  - E > 4.5 and ≤ 5.5
  - F > 5.5
- BLOS Scores & Grades are linked from the Model to the Database.
  - Changes to the scores in the Model will result in changes to scores in the Database.

Appendix B

Urbana Bicycle Level of Service (BLOS) Database

Urbana Bicycle Master Plan Database with Recommendations					Total Road-way Widths			Lanes	Included in Total Street Width:								Additional Roadway Character-istics										Model Results		Addi-tional Data:											
Date	ID	Street Name	From (E/N)	To (W/S)	Total Street Width (feet)	Gutter Seam Width (feet)	Street Width - EXCLUDING Gutter Seam (feet)	# of Thru Lanes per Direction	Lane Width - Including Gutter Seam (feet)	Lane Width - EXCLUDING Gutter Seam (feet)	Right Lane Width ADJ (feet)	Median Type	Median Width (feet)	Road Edge Marking Type	Extra Width (feet)	Extra Width EXCLUDING Gutter Seam (feet)	Extra Width ADJ (feet)	Parking Type	On-Street Parking % (estimate)	Traffic ADT (2011)	Traffic ADT Adjusted (2006, 2011, 2016)	Posted Speed Limit	% of Heavy Vehicles: Trucks	Functional Classification	% of Heavy Vehicles: Trucks ADJ	Pavement Type	Pavement Condition (1-Worst, 5-Best)	Bicycle/ Vehicle Crash Counts	BLOS Score	BLOS Grade	Drain Type	Sidewalk Status (SW = Sidewalk, SP = Sidepath)	Sidewalk Width (feet)	Parkway Width (feet)	Sidepath Width (feet)	RR Crossing: Perpendicular or Diagonal?	Curbs? Y/N/ Parts	Street Lights? Y/N/ Parts	Street Light Type (HI or LO Poles)	CUMTD Bus Route? Y/N/ Parts	What part(s)?	Comments	Recommendations
Key:	Not a street	Model Data																			Default ADT = 1,000																			
3/9/15	19	Kerr Avenue	Eastern Ave	east city limits	27	1.5	24	1	13.5	12	12	none	-	none	-	-	0	No Parking Restrictions	1	3,400	3,400	30		collector	1.5	concrete	4	0	3.31	C		both-SW			-	-	N	N		Y	all	Township juris-diction. Trans-verse drains at Ward St.	Bike Route with wayfinding signage. Urbana Green Loop. Township will be responsible for in-stallation of signage; signage should be consistent with Urbana's.
3/2/15	20	Kerr Avenue	east city limits	Cunningham Ave	29	1	27	1	14.5	13.5	13.5	none	-	none	-	-	0	No Parking Allowed	0	3,050	3,050	30		collector	1.5	concrete	5	1	2.89	C	trans-verse	both-SW			-	-	Y	Y	HI	Y	all	At Cunning-ham: asphalt pavement, LTL, marked parallel crosswalks	Bike Route with wayfinding signage. Urbana Green Loop.
3/2/15	21	Kerr Avenue	Cunningham Ave	Broadway Ave	27	1.5	24	1	13.5	12	12	none	-	none	-	-	0	No Parking Allowed	0	1,500	1,500	30		collector	1.5	concrete	5	0	2.72	C	trans-verse	both-SW			-	-	Y	Y	LO	Y		At Cunning-ham: asphalt pavement, LTL, marked parallel crosswalks	Bike Route with wayfinding signage. Urbana Green Loop.
3/2/15	24	Slayback Street	Dodson Dr E	E of Ira St	26	0	26	1	13	13	13	none	-	none	-	-	0	No Parking Restrictions	0		700	30		collector	1.5	asphalt	4	0	2.37	B	longitu-dinal	none			-	-	N	N		Y	all	Edgewood - unincorporated Urbana. Town-ship jurisdiction. Offset at Dodson Dr E: EB travel moves N.	Bike Route with wayfinding signage. Township will be responsible for in-stallation of signage; signage should be consistent with Urbana's.
3/2/15	25	Slayback Street	E of Ira St	Smith Rd	30	0	30	1	15	15	15	none	-	none	-	-	0	No Parking Restrictions	0		700	30		collector	1.5	asphalt	4	0	2.09	B	longitu-dinal	none			-	-	N	N		Y	all	Edgewood - un-incorporated Ur-bana. Township jurisdiction.	Bike Route with wayfinding signage. Township will be responsible for in-stallation of signage; signage should be consistent with Urbana's.
3/9/15	26	Fairview Avenue	Orchard St	Lincoln Ave	30	0	30	1	15	15	15	none	-	none	-	-	0	S-Un-marked On-Street	5		1,000	30		collector	1.5	concrete	4	1	2.35	B	diagonal	both-SW			-	-	Y	Y	LO	Y, part	Coler to Lincoln	LTL at Lincoln.	Existing Bike Route; add wayfinding sig-nage. Urbana Green Loop. North Sidepath from Orchard-Coler.
3/2/15	27	Fairview Avenue	Lincoln Ave	Goodwin Ave	30	0	30	1	10	10	10	none	-	Bike Lanes	5	5	5	No Parking Allowed; N-Angled at King School	0	1,900	1,900	30		collector	1.5	concrete	4	0	1.72	B		both-SW			-	-	Y	Y	LO	Y	all	LTL at Lincoln.	Existing Bike Lanes. Add wayfinding signage. Urbana Green Loop.
3/2/15	29	Church Street	Park St	Orchard St	27	1	25	1	13.5	12.5	12.5	none	-	none	-	-	0	No Parking Allowed	0		1,000	30		collector	1.5	concrete	4	0	2.62	C		N-SP, S-SW			10	-	Y	Y	LO	Y	all		Existing North Sidepath; add wayfin-ding signage. Urbana Green Loop.
3/9/15	30	Church Street	Orchard St	Lincoln Ave	26	1	24	1	13	12	12	none	-	none	-	-	0	No Parking Allowed	0		1,000	30		collector	1.5	concrete	4	1	2.68	C		both-SW			-	-	Y	Y	LO	Y	all	Stoplight at Church & Lin-coln, widens at intersection.	Bike Route with wayfinding signage upon construction of Lincoln Ave SP &/or IAWC easement trail.
3/9/15	31	Church Street	Lincoln Ave	terminus W of Lincoln Ave	11	0	11	1	5.5	5.5	5.5	none	-	none	-	-	0	No Parking Restrictions	0		1,000	30		local	0	oil & chip	3	0	3.36	C	none	none			-	-	N	Y	LO	N		Stoplight at Church & Lincoln.	Bike Route with wayfinding signage. Shared-use path west through public ROW.
3/2/15	35	Park Street	Broadway Ave	McCullough St	24	0	24	1	12	12	12	none	-	none	-	-	0	No Parking Allowed	0		1,000	30		local	0	asphalt	4	0	2.45	B		S-SW			-	-	Y	Y	LO	Y	all		North Sidepath with wayfinding signage. Urbana Green Loop. Fitness Trail.
3/2/15	38	University Avenue	High Cross Rd	Guardian Dr	42	1.5	39	1	14.5	13	13	CTL	13	none	-	-	0	No Parking Allowed	0	11,400-13,900	13,900	45	8.7 - 19.5	Major Arterial	7	asphalt	4	0	5.60	F	trans-verse	N-SW	N-4	N-34	-	-	Beringer/ Main-Guard-ian	At Guard-ian	HI at Guard-ian only	Y, parts	High Cross to Main, Dodson to Guard-ian	45 mph E of Smith, 40 mph W of Smith. RTLs at Guard-ian, Smith, High Cross. Measured at Abbey; at Smith: 2' GPs, 12' CTL.	Kickapoo Rail-Trail Study Area; work with Urbana Park District and Cham-paign County Forest Preserve District to determine best route into Urbana. Safe crossing from Main to Beringer.

Date	ID	Street Name	From (E/N)	To (W/S)	Total Street Width (feet)	Gutter Seam Width (feet)	Street Width - EXCLUDING Gutter Seam (feet)	# of Thru Lanes per Direction	Lane Width - Including Gutter Seam (feet)	Lane Width - EXCLUDING Gutter Seam (feet)	Right Lane Width ADJ (feet)	Median Type	Median Width (feet)	Road Edge Marking Type	Extra Width (feet)	Extra Width EXCLUDING Gutter Seam (feet)	Extra Width ADJ (feet)	Parking Type	On-Street Parking % (estimate)	Traffic ADT (2011)	Traffic ADT Adjusted (2006, 2011, 2016)	Posted Speed Limit	% of Heavy Vehicles: Trucks	Functional Classification	% of Heavy Vehicles: Trucks ADJ	Pavement Type	Pavement Condition (1-Worst, 5-Best)	Bicycle/ Vehicle Crash Counts	BLOS Score	BLOS Grade	Drain Type	Sidewalk Status (SW = Sidewalk, SP = Sidepath)	Sidewalk Width (feet)	Parkway Width (feet)	Sidepath Width (feet)	RR Crossing: Perpendicular or Diagonal?	Curbs? Y/N/ Parts	Street Lights? Y/N/ Parts	Street Light Type (HI or LO Poles)	CUMTD Bus Route? Y/N/ Parts	What part(s)?	Comments	Recommendations
3/9/15	39	University Avenue	Guardian Dr	Cottage Grove Ave	70	0	70	2	12	12	12	raised grass, raised	15	both-paved shoulders	1	1	1	No Parking Allowed	0	11,300-14,200	14,200	45	6.6 - 7.5	Major Arterial	7	asphalt	4	0	5.13	E	trans-verse	none			-	-	N	At Guard-ian	HI at Guard-ian only	Y	all	N-S measure-ments W of Guardian: 1' white stripe, two 12' lanes, 1' yellow stripe, 15' raised grass median, two 12' lanes, 5' white stripe. Need a safe crossing from AMBUCS Park to future CUMTD path to connect to Rail-Trail & Main St: work with IDOT to explore use of median for refuge island.	Marked crossing from AMBUCS Park to future CUMTD Path. Urbana Green Loop. Work with IDOT.
3/9/15	40	University Avenue	Cottage Grove Ave	Cunningham Ave	56	0	56	2	13	13	13	painted E of Maple, raised W of Maple	4	none	-	-	0	No Parking Allowed	0	14,200	14,200	40	7.5	Major Arterial	7	asphalt	4	1	5.12	E		N-SW			-	-	Y	Part	HI from Ma-ple-Cun-ning-ham	Y	all	CUMTD offices & garages are here - they are a Bike Friendly Business, but have no bikeway to their offices.	South Sidepath with wayfinding signage
3/2/15	41	University Avenue	Cunningham Ave	Lincoln Ave	50	0	50	2	10	10	10	E of Race: raised, W of Race: CTL	10	none	-	-	0	No Parking Allowed	0	20,300-21,700	21,700	35	4.3 - 4.5 - 8.5	Major Arterial	7	asphalt	3.5	6	5.62	F	longitu-dinal	both-SW			-	diagonal at Lincoln	Y	Y	HI	Y, part	Broad-way to Mc-Cullough	EB RTLs at Broadway & Cunningham, widens at those intersections. Bicyclists present upon survey in 2007, but were riding on sidewalks.	
3/2/15	42	University Avenue	Lincoln Ave	Wright St	50	0	50	2	10	10	10	CTL	10	none	-	-	0	No Parking Allowed	0	20,100-20,900	20,900	35	5.5 - 5.4	Major Arterial	5.5	asphalt	3.5	4	5.21	E	longitu-dinal	both-SW			-	diagonal at Lincoln	Y	Y	HI	Y	all	Good-win-Mathews: S-6' SW, Mathews-Wright: S-10' SP. EB RTLs at Goodwin & Mathews.	Widen south sidewalk to sidepath from Mathews-Good-win, add wayfinding signage.
3/9/15	48	Main Street	University Ave	E of Scotts-wood Dr	26.5	N-1.5	25	1	WB-14, EB-12.5	12.5	12.5	none	-	none	-	-	0	No Parking Allowed	0	2,600	2,600	35		collector	1.5	asphalt	4	1	3.22	C		none			-	-	N-all, S-at University only	N		Y	all	Intersection widens at University. University-En-nis: Township jurisdiction.	Bike Route with wayfinding signage. Kickapoo Rail-Trail Study Area; work with Urbana Park District and Cham-paign County Forest Preserve District to determine best route into Urbana. Safe crossing across Uni-versity to Beringer.
3/9/15	49	Main Street	E of Scotts-wood Dr	Dodson Dr	46	1	44	1	11	11	11	CTL	12	Bike Lanes	6	5	5	No Parking Allowed	0	5,600	5,600	35		collector	1.5	asphalt	4	1	2.19	B		none			-	-	Y	Y	HI	Y	all	Road Diet & Bike Lanes installed in 2013. Road narrows E of Scottswood, sharrows.	Kickapoo Rail-Trail Study Area; work with Urbana Park District and Cham-paign County Forest Preserve District to determine best route into Urbana.
3/9/15	50	Main Street	Dodson Dr	Art Bartell Rd	54	1	52	1	11	11	11	CTL	12	Bike Lanes, Buffers	10	9	7	No Parking Allowed	0	5,600-4,850	5,225	35		collector	1.5	asphalt	4	0	1.23	A	trans-verse	S-SP from Dod-son-Weaver Park, S-SW from Weav-er Park-Art Bartell	4		8	-	Y	Y	HI	Y	all	Road Diet, Bike Lanes & Weaver Park Sidepath installed in 2013.	Extend sidepath west, as part of East Urbana Parks Loop Trail. Kickapoo Rail-Trail Study Area; work with Urbana Park District and Champaign County Forest Preserve District to determine best route into Urbana.
3/9/15	51	Main Street	Art Bartell Rd	ILEAS En-trance	53	1	51	1	11	11	11	CTL	11	Bike Lanes, Buffers	10	9	7	No Parking Allowed	0	4,850	4,850	35		collector	1.5	asphalt	4	0	1.19	A		S-SW	5		-	-	Y	Y	HI	Y	all	Road Diet & Bike Lanes installed in 2013. Road narrows W of Art Bartell.	South Sidepath, as part of East Urbana Parks Loop Trail. Kickapoo Rail-Trail Study Area; work with Urbana Park District and Cham-paign County Forest Preserve District to determine best route into Urbana.

Date	ID	Street Name	From (E/N)	To (W/S)	Total Street Width (feet)	Gutter Seam Width (feet)	Street Width - EXCLUDING Gutter Seam (feet)	# of Thru Lanes per Direction	Lane Width - Including Gutter Seam (feet)	Lane Width - EXCLUDING Gutter Seam (feet)	Right Lane Width ADJ (feet)	Median Type	Median Width (feet)	Road Edge Marking Type	Extra Width (feet)	Extra Width EXCLUDING Gutter Seam (feet)	Extra Width ADJ (feet)	Parking Type	On-Street Parking % (estimate)	Traffic ADT (2011)	Traffic ADT Adjusted (2006, 2011, 2016)	Posted Speed Limit	% of Heavy Vehicles: Trucks	Functional Classification	% of Heavy Vehicles: Trucks ADJ	Pavement Type	Pavement Condition (1-Worst, 5-Best)	Bicycle/ Vehicle Crash Counts	BLOS Score	BLOS Grade	Drain Type	Sidewalk Status (SW = Sidewalk, SP = Sidepath)	Sidewalk Width (feet)	Parkway Width (feet)	Sidepath Width (feet)	RR Crossing: Perpendicular or Diagonal?	Curbs? Y/N/ Parts	Street Lights? Y/N/ Parts	Street Light Type (HI or LO Poles)	CUMTD Bus Route? Y/N/ Parts	What part(s)?	Comments	Recommendations
3/9/15	52	Main Street	ILEAS Entrance	Lierman Ave	39	1	37	1	11	11	11	painted	5	Bike Lanes	6	5	5	No Parking Allowed	0	4,850	4,850	30		collector	1.5	asphalt	4	0	1.99	B		S-SW	5		-	-	Y	Y	HI	Y	all	Bike Lanes, and Sharrows at Lierman installed in 2013.	South Sidepath, as part of East Urbana Parks Loop Trail. Kickapoo Rail-Trail Study Area; work with Urbana Park District and Champaign County Forest Preserve District to determine best route into Urbana.
3/9/15	53	Main Street	Lierman Ave	Glover Ave	39	1.25	36.5	1	11	11	11	painted	5	Bike Lanes	6	4.75	4.75	No Parking Allowed	0	5,100	5,100	30		collector	1.5	asphalt	4	0	2.12	B		N-SW 1/2 block E of Glover; S-SW all			-	perpendicular	Y	Y	HI	Y	all	Bike Lanes, and Sharrows at Lierman installed in 2013.	Kickapoo Rail-Trail Study Area from Lierman-Hartle; work with Urbana Park District and Champaign County Forest Preserve District to determine best route into Urbana. Urbana Green Loop.
3/9/15	54	Main Street	Glover Ave	Cottage Grove Ave	39	1.25	36.5	1	10	10	10	center line	-	Bike Lanes, S-marked parking	N-6, S-13	N-4.75, S-11.75	6.625	S-Parallel	3	5,100	5,100	30		collector	1.5	asphalt	4	0	1.61	B		both-SW			-	-	Y	Y	HI	Y	all	Bike Lanes installed in 2013.	Urbana Green Loop.
3/9/15	55	Main Street	Cottage Grove Ave	Maple St north	39	0	39	1	10	10	10	center line	-	Bike Lanes, S-marked parking	N-6, S-13	N-6, S-13	7.25	S-Parallel from W of Grossbach-Grove	2	6,700	6,700	30		minor arterial	2	asphalt	4	0	1.51	B		both-SW, parts brick			-	-	Y	Y	HI	Y	all	Bike Lanes, WB Sharrows at Cottage Grove, and concrete sidewalks installed in 2013. Gutter seams from Grove-Maple.	Urbana Green Loop.
3/9/15	56	Main Street	Maple St north	Maple St south	50-54	1	48-52	1	11	10	10	CTL	12	Bike Lanes, N-buffer	N-10-14; S-6	N-9-13; S-5	6.5	No Parking Allowed	0	6,700	6,700	30		minor arterial	2	asphalt	4	0	1.80	B	diagonal	both-SW			-	-	Y	Y	HI	Y	all	Road Diet & Bike Lanes installed in 2010. 50' at Maple (N), 54' at Maple (S).	Urbana Green Loop.
3/9/15	57	Main Street	Maple St south	Vine St	59	N-1	58	1	11	11	11	CTL	12	Bike Lanes, N-RTLs/ buffer	N-19; S-6	N-18; S-6	8.5	No Parking Allowed	0	6,700	6,700	30	1.5	minor arterial	1.5	asphalt	4	1	0.44	A		both-SW			-	-	Y	Y	HI	Y	all	Road Diet & Bike Lanes installed in 2010. WB RTLs at Vine & Urbana, road widens W of Urbana Ave.	Urbana Green Loop.
3/9/15	58	Main Street	Vine St	Race St	62	1	60	1	11	11	11	CTL	11	both-Bike Lanes, marked parking	14.5	13.5	9.25	Vine-Walnut: N-Parallel; Walnut-Race: Both-Parallel	48	6,300	6,300	30	0.5	minor arterial	0.5	asphalt	4	2	2.05	B		both-SW			-	-	Y	Y	LO; HI at Broadway & Race	Y	all	Road Diet & Bike Lanes installed in 2013. Bulb outs at Broadway and intermediate points.	Urbana Green Loop.
3/11/15	59	Main Street	Race St	Springfield Ave	52	1	50	1	11	11	11	LTL	11	N-marked parking at Race, S-marked parking at Springfield	N-13; S-6	N-12; S-5	6.75	Race-mid-block: N-Parallel; Mid-block-Springfield: S-Parallel	8	6,600	6,600	30	0.7	minor arterial	0.7	asphalt	4	0	1.49	A		both-SW		0	-	-	Y	Y	LO	Y	all	Road Diet & Bike Lanes installed in 2013.	Urbana Green Loop.
3/9/15	60	Main Street	Springfield Ave	Central Ave	29	N-1	28	1	EB-14, WB-15	14	14	none	-	N-marked parking at Springfield	-	-	0	N-Parallel at Springfield	4	2,250	2,250	30		local	0	asphalt	4	0	2.66	C		N-SW			-	-	Y	Y	LO	N		28' at Springfield, 30' at Kirby Firestone, 33' E of Central.	Bike Route, Sharrows, wayfinding signage. Urbana Green Loop.
3/9/15	61	Main Street	Central Ave	Lincoln Ave	35	1.5	32	1	17.5	16	16	none	-	none	-	-	0	N-Parking only on Sunday, S-Unmarked On-Street	67	2,250	2,250	30		local	0	concrete	4	1	3.15	C		both-SW, parts brick			-	-	Y	Y	LO	N		No parking on N side, Mon-Sat. 4-way stop at Coler. No ramps on E side of Lincoln.	Bike Route with wayfinding signage. Urbana Green Loop.
3/9/15	62	Main Street	Lincoln Ave	Goodwin Ave	34.5	0	34.5	1	13.5	13.5	13.5	none	-	S-marked parking from Harvey-Goodwin	S-7.5	S-7.5	3.75	Lincoln-Harvey: S-Unmarked On-Street; Harvey-Goodwin: S-Parallel	81	1,400	1,400	25		local	0	asphalt	4	0	2.07	B		both-SW			-	-	Y	Y	LO	N		Diagonal ramps on W side of Lincoln. Bike ramps on W side of Goodwin.	Bike Route from Lincoln-Harvey, Bike Boulevard from Harvey-Goodwin. Urbana Green Loop. Work with University to continue bikeway west along this corridor to Wright St.
3/9/15	63	Stoughton Street	McCullough St	Coler Ave	26	1.5	23	1	13	11.5	11.5	none	-	none	-	-	0	S-Unmarked On-Street	67		1,000	30		local	0	concrete	4.5	0	2.96	C	none	both-SW, parts brick			-	-	Y	Y	LO	N		Phillips Recreation Center. 2-way stops at McCullough & Coler.	

Date	ID	Street Name	From (E/N)	To (W/S)	Total Street Width (feet)	Gutter Seam Width (feet)	Street Width - EXCLUDING Gutter Seam (feet)	# of Thru Lanes per Direction	Lane Width - Including Gutter Seam (feet)	Lane Width - EXCLUDING Gutter Seam (feet)	Right Lane Width ADJ (feet)	Median Type	Median Width (feet)	Road Edge Marking Type	Extra Width (feet)	Extra Width EXCLUDING Gutter Seam (feet)	Extra Width ADJ (feet)	Parking Type	On-Street Parking % (estimate)	Traffic ADT (2011)	Traffic ADT Adjusted (2006, 2011, 2016)	Posted Speed Limit	% of Heavy Vehicles: Trucks	Functional Classification	% of Heavy Vehicles: Trucks ADJ	Pavement Type	Pavement Condition (1-Worst, 5-Best)	Bicycle/ Vehicle Crash Counts	BLOS Score	BLOS Grade	Drain Type	Sidewalk Status (SW = Sidewalk, SP = Sidepath)	Sidewalk Width (feet)	Parkway Width (feet)	Sidepath Width (feet)	RR Crossing: Perpendicular or Diagonal?	Curbs? Y/N/ Parts	Street Lights? Y/N/ Parts	Street Light Type (HI or LO Poles)	CUMTD Bus Route? Y/N/ Parts	What part(s)?	Comments	Recommendations
3/9/15	64	Stoughton Street	Coler Ave	Lincoln Ave	25	0	25	1	12.5	12.5	12.5	none	-	none	-	-	0	S-Un-marked On-Street	69		1,000	30		local	0	asphalt	3.5	0	3.15	C		both-SW, parts brick			-	-	Y	Y	LO	N		2-way stops at Coler & Lincoln. Brick over Busey. Different pavement types (brick, concrete & asphalt), and poor pavement condition: potholes & cracks. Crossing at Lincoln is too close to Springfield, with no raised median on S side of intersection.	
3/9/15	65	Stoughton Street	Lincoln Ave	Harvey St	25	1.5	22	1	12.5	11	11	none	-	none	-	-	0	S-Un-marked On-Street	83		1,000	25		local	0	asphalt	4	0	2.98	C		both-SW, parts brick			-	-	Y	Y	HI	N			
3/9/15	69	Springfield Avenue	Main St	Cedar St	30	1	28	1	EB-11, WB-19	EB-10, WB-18	14	none	-	none	-	-	0	No Parking Allowed	0	8,600	8,600	30		minor arterial	2	asphalt	4	0	3.59	D		S-SW			-	-	Y	Y	LO	Y	all		
3/3/15	70	Springfield Avenue	Cedar St	Birch St	30	0	30	1	EB-11, WB-19	EB-11, WB-19	15	none	-	none	-	-	0	No Parking Allowed	0	8,600	8,600	30		minor arterial	2	concrete	4	0	3.45	C		both-SW			-	-	Y	Y	LO	Y	all		
3/9/15	71	Springfield Avenue	Birch St	Lincoln Ave	30	0	30	1	EB-11, WB-19	EB-11, WB-19	15	none	-	none	-	-	0	Birch-Busey: N-Un-marked On-Street	54	8,600	8,600	30		minor arterial	2	concrete E of Mc-Cullough, asphalt W of Mc-Cullough	4	1	4.11	D		N-SW from Birch-Coler, Busey-Lincoln; S-SW all			-	-	Y	Y	HI	Y	all	8' unmarked parking on N side, high parking occupancy.	
3/2/15	72	Springfield Avenue	Lincoln Ave	Goodwin Ave	35	3.5	28	1	10.5	10.5	10.5	none	-	Gregory-Goodwin: both-marked parking	7	3.5	3.5	Gregory-Goodwin: Both-Parallel	11	9,000-10,800	9,900	30		minor arterial	2	asphalt	4	4	3.24	C		both-SW			-	-	Y	Y	HI	Y	all		
3/9/15	74	Elm Street	Webber St	Grove St	24	0	24	1	12	12	12	none	-	none	-	-	0	S-Un-marked On-Street	1		1,000	30		local	0	asphalt	4	0	2.46	B		both-SW			-	-	Y	Y	LO	N		Road shifts north E of Grove.	
3/9/15	75	Elm Street	Grove St	Urbana Ave	25	0	25	1	12.5	12.5	12.5	none	-	none	-	-	0	S-Un-marked On-Street	2		1,000	30		local	0	asphalt	4	0	2.41	B		both-brick SW			-	-	Y	Y	LO	N		2 hour parking M-F 9a-5p, unrestricted after.	
3/9/15	76	Elm Street	Urbana Ave	Vine St	20	0	20	1	10	10	10	none	-	none	-	-	0	No Parking Allowed	0		1,000	30		local	0	asphalt	4	0	2.67	C		N-SW all; S-SW from alley-Vine		0	-	-	Y	Y	LO	N		Narrow	
3/9/15	77	Elm Street	Vine St	Race St	35	1	33	1	12	11	11	CTL	11	N-bus pullout at Broadway in lieu of CTL	-	-	0	No Parking Allowed	0		1,000	30		collector	1.5	asphalt	4	1	2.79	C	diagonal	both-SW		0	-	-	Y	Y	LO	Y	all	11' lane + 1' GP = 12' lanes. 11' CTL. Brick buffer b/w SW & road. Bus pullout on N side of street W of Broadway in lieu of CTL. Downtown - post office, Lincoln Square.	Bike Route from Walnut (USPS mailbox driveway) to Race, wayfinding signage to direct bicyclists to/from Broadway around Lincoln Square.
3/9/15	78	Elm Street	Race St	Cedar St	32	N-2	30	1	EB-11, WB-13	11	11	none	-	S-marked parking	S-8	S-8	4	S-Parallel	11		1,000	30		local	0	asphalt	4	0	1.53	B		both-SW			-	-	Y	Y	LO	N		2' GP on N side, two 11' lanes, 8' parking lane on S side = 32'. Wide driveway opening to Busey Bank on N side takes up 1/2 the block.	
3/9/15	79	Elm Street	Cedar St	McCullough St	33	N-1	32	1	16.5	16	16	none	-	none	-	-	0	S-Un-marked On-Street	68		1,000	30		local	0	asphalt	4	0	2.75	C		both-SW			-	-	Y	Y	LO	N		Unmarked lanes. High parking occupancy.	
3/9/15	80	Elm Street	McCullough St	Coler Ave	33	N-2.5, S-1	29.5	1	13	11.75	11.75	none	-	S-marked parking	S-7	S-6	3	S-Parallel	85		1,000	30		local	0	asphalt	4	0	2.37	B		both-SW			-	-	Y	Y	LO	N		Unmarked lanes. High parking occupancy.	
3/9/15	81	Elm Street	Coler Ave	Busey Ave	33	0	33	1	13	13	13	none	-	S-marked parking	S-7	S-7	3.5	S-Parallel	75		1,000	30		local	0	asphalt	4	0	2.08	B	trans-verse	both-SW		N-0, S-7	-	-	Y	Y	LO	N		Unmarked lanes. High parking occupancy.	

Date	ID	Street Name	From (E/N)	To (W/S)	Total Street Width (feet)	Gutter Seam Width (feet)	Street Width - EXCLUDING Gutter Seam (feet)	# of Thru Lanes per Direction	Lane Width - Including Gutter Seam (feet)	Lane Width - EXCLUDING Gutter Seam (feet)	Right Lane Width ADJ (feet)	Median Type	Median Width (feet)	Road Edge Marking Type	Extra Width (feet)	Extra Width EXCLUDING Gutter Seam (feet)	Extra Width ADJ (feet)	Parking Type	On-Street Parking % (estimate)	Traffic ADT (2011)	Traffic ADT Adjusted (2006, 2011, 2016)	Posted Speed Limit	% of Heavy Vehicles: Trucks	Functional Classification	% of Heavy Vehicles: Trucks ADJ	Pavement Type	Pavement Condition (1-Worst, 5-Best)	Bicycle/ Vehicle Crash Counts	BLOS Score	BLOS Grade	Drain Type	Sidewalk Status (SW = Sidewalk, SP = Sidepath)	Sidewalk Width (feet)	Parkway Width (feet)	Sidepath Width (feet)	RR Crossing: Perpendicular or Diagonal?	Curbs? Y/N/ Parts	Street Lights? Y/N/ Parts	Street Light Type (HI or LO Poles)	CUMTD Bus Route? Y/N/ Parts	What part(s)?	Comments	Recommendations
3/3/15	82	Green Street	Hartle Ave	Cottage Grove Ave	25	1.33	22.33	1	12.5	11.17	11.17	none	-	none	-	-	0	Hartle-Poplar: Both-Unmarked On-Street; Poplar-Cottage Grove: S-Unmarked On-Street	2		1,000	30		local	0	oil & chip E of Poplar, concrete W of Poplar	4	1	2.57	C		both-SW from Glover-Cottage Grove			-	-	Poplar-Cottage Grove	Y	LO	N			
3/9/15	83	Green Street	Cottage Grove Ave	Vine St	26	0	26	1	EB-16, WB-10	EB-16, WB-10	13	none	-	none	-	-	0	S-Unmarked On-Street	9		1,000	30		collector	1.5	asphalt	4	0	2.67	C		both-SW			-	-	Y	Y	LO	Y	all	10' WB + 16' EB marked lanes = 26' total (no gutter pans).	
3/2/15	84	Green Street	Lincoln Square	Race St	31	1	29	1	15.5	14.5	14.5	none	-	none	-	-	0	No Parking Allowed	0		1,000	30		local	0	asphalt	4	0	2.12	B		S-SW			-	-	Y	Y	LO	N		West entrance to Lincoln Square. Median at Race.	
3/9/15	85	Green Street	Race St	Coler Ave	31	0	31	1	EB-11.5, WB-19.5	EB-11.5, WB-19.5	15.5	none	-	none	-	-	0	Cedar-Coler: N-Unmarked On-Street	63	3,600-4,100	3,850	30		collector	1.5	asphalt	3.5	0	3.79	D		both-SW			-	-	Y	Y	LO	Y	all	19.5' WB (incl. 8' unmarked parking on N side) + 11.5' EB = 31'. At Race: 23' WB lane + 5' raised landscaped median + 11' EB LTL + 11' EB RTL = 50' total.	Bike Lanes. Requires removal of on-street parking.
3/9/15	86	Green Street	Coler Ave	Busey Ave	31	0	31	1	11.5	11.5	11.5	none	-	N-marked parking	N-8	N-8	4	N-Parallel	90	4,100	4,100	30		collector	1.5	asphalt	3.5	2	3.49	C		both-SW			-	-	Y	Y	LO	Y	all	Two 11.5' marked lanes, 8' marked parking lane on N side.	Bike Lanes. Requires removal of on-street parking.
3/3/15	87	Green Street	Busey Ave	Lincoln Ave	55	0	55	2	11	11	11	LTL	11	none	-	-	0	No Parking Allowed	0	4,100	4,100	30		collector	1.5	asphalt	4	2	3.16	C		both-SW			-	-	Y	Y	LO	Y	all	31' at Busey with double yellow stripe (15.5' lanes, no parking). Road widens from 2 lanes at Busey (old pavement) to 5 lanes at Lincoln (new pavement). At Lincoln: five 11' lanes = 55', incl. LTL.	Bike Lanes
3/9/15	88	Green Street	Lincoln Ave	Gregory St	66	0	66	2	11	11	11	raised grass	11	none	-	-	0	No Parking Allowed	0	5,400	5,400	30		minor arterial	2	asphalt	4	0	3.38	C	longitudinal, transverse	both-SW		N-0, S-3 to 8	-	-	Y	Y	HI	Y	all	EB LTL & RTL at Lincoln. 4 EB lanes + 2 WB lanes x 11' = 66' total.	Bike Lanes
3/9/15	92	High Street	Lynn St	Urbana Ave	18	0	18	1	9	9	9	none	-	none	-	-	0	No Parking Restrictions	9		1,000	30		local	0	oil & chip	4	0	2.84	C	none	both-SW, parts brick			-	-	N	Y	LO	N		No stops. Undefined road edge.	
3/9/15	93	High Street	Walnut St	Broadway Ave	25	1	23	1	12.5	11.5	11.5	none	-	N-7' dashed parking pullout at Tang Dynasty	-	-	0	No Parking Allowed	0		1,000	30		local	0	asphalt	4	0	2.51	C		N-SW			-	-	Y	Y	HI	N		Two 12.5' marked lanes, + additional 7' dashed line pullout on N side at Tang Dynasty only. Bike Parking. Gutter pans on both sides.	Bike Route with wayfinding signage to direct bicyclists to/from Broadway around Lincoln Square.
3/2/15	94	Illinois Street	Glover Ave	Cottage Grove Ave	18	0	18	1	9	9	9	none	-	none	-	-	0	Gravel Shoulders	0	325	325	30		local	0	oil & chip	4	0	2.20	B	diagonal at corners	both-SW			-	-	N	Y	LO	N		No curbs, no gutters, gravel shoulders. Diagonal drains at corners. E of Glover: Central IL Produce, w/ very large, bumpy gravel parking lot used by many trucks, and lots of vegetation between gravel lot & Solo Cup RR.	
3/9/15	95	Illinois Street	Cottage Grove Ave	Urbana Ave	25	1.5	22	1	12.5	11	11	none	-	none	-	-	0	S-Unmarked On-Street	5	1,550	1,550	30		collector	1.5	brick	3	0	3.41	C		both-SW			-	-	Y	Y	LO	N		Brick road with concrete gutter seams.	No treatment - brick road.

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3/9/15	96	Illinois Street	Urbana Ave	Vine St	26-42	1.33	23.33-39.33	1	13 at Urbana, 13-11-14 at Vine (N-S)	11.67 at Urbana, 12.17 at Vine	11.92	painted at Vine	4	none	-	-	0	No Parking Allowed	0	1,550	1,550	30		collector	1.5	asphalt	4	1	2.91	C		both-SW			-	-	Y	Y	LO	N		1 unmarked EB lane, 2 marked WB lanes at Vine. 26' at Urbana Ave, 42' at Vine St (N-S: 13' WB lane [incl. 16"GP], 11' WB lane, 4' painted median, 14' EB lane [incl. 16" GP] = 42').	Bike Route. Wayfinding signage should direct EB bicyclists to SB Urbana Ave.
3/2/15	97	Illinois Street	Vine St	Race St	55	N-1	48	2	N outer-13; others-12	12	12	landscaped	6	none	-	-	0	No Parking Allowed	0	4,850	4,850	30		collector	1.5	asphalt	4	2	3.13	C		both-SW		0	-	-	Y	Y	HI	Y	all	4 x 12' lanes + 1' gutter pan on N side + 6' landscaped median = 55'	Road Diet + Bike Lanes: 6' bike lanes, 11' travel lanes, paint a wider median (N-8', S-7')
3/9/15	98	Illinois Street	Race St	Lincoln Ave	28	1	26	1	14	13	13	none	-	none	-	-	0	Race-Coler: S-Unmarked On-Street; Coler-Busey: S-Parallel	8	1,850-1,750	1,800	30		collector	1.5	asphalt	4.5	3	2.86	C		both-SW			-	-	Y	Y	LO	N			Bike Route with wayfinding signage from Race-Coler. Existing Bike Route from Lincoln-Coler, add wayfinding signage. Bike activated stoplight at Lincoln. Urbana Green Loop from McCullough-Lincoln.
3/9/15	99	Illinois Street	Lincoln Ave	Goodwin Ave	44	1	42	1	10	10	10	none	-	both-7' marked parking + 5' bike lanes	12	11	8	Both-Parallel	41	2,050	2,050	25		collector	1.5	asphalt	5	1	1.51	B		both-SW			-	-	Y	Y	HI	Y	all	Street reconstructed to include 10' travel lanes, 5' bike lanes, and 7' parking lanes in August 2007.	Existing Bike Lanes. Bike activated stoplight at Lincoln. Urbana Green Loop.
3/10/15	177	Lincoln Avenue	Bradley Ave	University Ave	45	0	45	2	11	11	11	center line from Bradley-King Park, CTL from King Park-University	1	none	-	-	0	No Parking Allowed	0	15,700-16900	16,300	35		major arterial	3.5	asphalt	4	2	4.38	D		both-SW			-	diagonal at University	Y	Y	HI	Y	all	Busy street. Measured at Eads St.	Short-term: Widen West Sidewalk along King Park to Sidepath; Urbana Green Loop. Long-term: Widen all of West Sidewalk to Sidepath.
3/2/15	178	Lincoln Avenue	University Ave	Green St	52	0	52	2	12	12	12	raised	4	none	-	-	0	No Parking Allowed	0	14,200-19,900	17,050	30		minor arterial	2	asphalt	4	5	3.85	D		both-SW			-	diagonal at University	Y	Y	HI	N		Measured at Main St.	Widen medians at Main Street to 6' to create a safe crossing for bicyclists (& peds) by making the inside travel lanes 11', leaving the outside travel lanes at 12'.
3/2/15	179	Lincoln Avenue	Green St	Nevada St	55	0	55	2	11	11	11	Green-CA: 11' CTL; CA-NV: 4' raised	11	none	-	-	0	No Parking Allowed	0	12,200	12,200	30		minor arterial	2	asphalt	4	6	3.79	D		both-SW		0	-	-	Y	Y	HI	Y, part	Illinois to Nevada	Measured at Green St. No gutter pans; sidewalks with no buffers, 11' lanes including center turn lane.	No treatment. Use Goodwin or Coler.
3/2/15	184	Busey Avenue	Elm St	Green St	24	0	24	1	12	12	12	none	-	none	-	-	0	No Parking Allowed	0		1,000	30		local	0	asphalt	4	2	2.45	B		both-SW, parts brick	4	E-15	-	-	Y	Y	LO	N		Brick N of Boneyard Creek.	
3/10/15	185	Busey Avenue	Green St	Illinois St	25	1.5	22	1	8.5	7.75	7.75	none	-	E-marked parking	E-8	E-6.5	3.25	E-Parallel	11		1,000	30		local	0	brick	3	0	2.60	C		both-SW, parts brick			-	-	Y	Y	LO	N		Brick road, unmarked lanes, marked parking on E side of street.	
3/10/15	186	Busey Avenue	Illinois St	Washington St	27	1	25	1	9.5	9	9	none	-	E-marked parking	E-8	E-7	3.5	E-Parallel	11		1,000	30		local	0	asphalt	4	0	2.01	B		both-SW, parts brick			-	-	Y	Y	LO	N		Unmarked lanes, marked parking on E side of street.	
3/10/15	190	Coler Avenue	Sunset Dr	Fairview Ave	25	0	25	1	12.5	12.5	12.5	none	-	none	-	-	0	No Parking Restrictions	0	2,150	2,150	30		collector	1.5	oil & chip	4	0	3.00	C		W-SW		E-12, W-10	-	-	N	Y	LO	N		Carle has installed "Alternate Bike Route" sign to lead bicyclists around Carle campus. No curbs & gutters. W SW is about 10' away from road. E grass area is 12' wide, including utility poles.	East Sidepath with wayfinding signage

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3/10/15	191	Coler Avenue	Fairview Ave	Church St	33	0	33	1	16.5	16.5	16.5	none	-	none	-	-	0	E-Un-marked On-Street	13	2,750	2,750	30		collector	1.5	asphalt	4	0	2.75	C		both-SW			-	-	Y	Y	LO	Y	all		Use sidepaths & Bike Routes around east side of Carle campus.
3/10/15	193	Coler Avenue	Park St	University Ave	36	E-1.5	34.5	1	12	NB-10.5, SB-12	11.25	LTL at University	12	none	-	-	0	No Parking Allowed	0	2,750	2,750	30		collector	1.5	asphalt	4	1	3.28	C		W-SW			-	-	Y	Y	LO	Y	all	At University: 12' SB, 12' SB LTL, 12' NB = 36' total. At Park: 16' lanes x 2 = 36' total.	Use sidepaths & Bike Routes around east side of Carle campus.
3/10/15	194	Coler Avenue	University Ave	Clark St	36	1.33	33.33	1	12	10.67	10.67	LTL at University	12	none	-	-	0	No Parking Allowed	0	2,800	2,800	30		collector	1.5	asphalt	4	0	3.35	C		both-SW	E-6, W-5	E-5, W-15	-	diagonal	Y	Y	LO	N		Bike Route installed in 2013. At University: 12' SB, 12' NB LTL, 12' NB lanes = 36' total. Paved crossings over RR on sidewalks.	Existing Bike Route from Broad Alley-Clark. Add wayfinding signage. Use sidepaths & Bike Routes around east side of Carle campus.
3/10/15	195	Coler Avenue	Clark St	Stoughton St	24	0	24	1	12	12	12	none	-	none	-	-	0	W-Un-marked On-Street	16	2,800	2,800	30		collector	1.5	asphalt	4	0	3.38	C		both-SW, parts brick			-	-	Y	Y	LO	N		Bike Route installed in 2013. S of Clark: 25' (incl. 8' parking on W side). One marked metered parking space N of Sassafras Alley.	Existing Bike Route. Add wayfinding signage.
3/10/15	196	Coler Avenue	Stoughton St	Springfield Ave	46	0	46	1	23	23	23	none	-	none	-	-	0	No Parking Allowed	0	2,800	2,800	30		collector	1.5	asphalt	4	0	1.27	A		both-SW			-	-	Y	Y	LO	N		Bike Route installed in 2013. At Springfield: skewed intersec-tion, 2-way stop on Coler, widens to 46'. This is a short segment.	Existing Bike Route. Add wayfinding signage.
3/10/15	197	Coler Avenue	Springfield Ave	Green St	24	0	24	1	12	12	12	none	-	none	-	-	0	W-Un-marked On-Street	16	550	550	30		collector	1.5	asphalt	4	0	2.55	C		E-SW from Spring-field-Elm; W-SW from Spring-field-Green			-	-	Y	Y	LO	N		Bike Route installed in 2013. Unmarked park-ing on W side of street (not on bridge). E & W sidewalk bridges over Boneyard Creek.	Existing Bike Route. Add wayfinding signage.
3/10/15	198	Coler Avenue	Green St	Washington St	24	0	24	1	8.5	8.5	8.5	none	-	E-marked parking	E-7	E-7	3.5	E-Parallel	11	550	550	30		collector	1.5	asphalt	4	2	2.01	B		both-SW, parts brick			-	-	Y	Y	LO	N		Bike Route installed in 2013. Brick across High St.	Existing Bike Route. Add wayfinding signage.
3/10/15	199	Orchard Street	Fairview Ave	Church St	24	1	22	1	12	11	11	none	-	none	-	-	0	No Parking Allowed	0		1,000	30		local	0	concrete	4	0	2.57	C		E-SP, W-SW			8	-	Y	Y	LO	N			Existing East Side-path. Replace Bike Route signage with Trail signage. Urbana Green Loop.
3/10/15	203	McCullough Street	Park St	Penn Central RR	33	1	31	1	11.5	10.5	10.5	CTL	10	none	-	-	0	No Parking	0		1,000	30		collector	1.5	concrete	4	4	2.85	C		E-SP all, W-SP from Park-Univer-sity			8	-	Y	Y	LO	Y, part	Park to Univer-sity	Sidepath is com-plete from the fairgrounds to the RR tracks.	Existing East Side-path. Replace Bike Route signage with Trail signage. Urbana Green Loop.
3/10/15	204	McCullough Street	Griggs St	Main St	24	1.5	21	1	12	10.5	10.5	none	-	none	-	-	0	E-Un-marked On-Street	93		1,000	30		local	0	concrete	5	0	3.00	C	none	E-SW			-	-	Y	Y	LO	N		N-S from RR to Griggs: Gravel path, Carle park-ing lot, private apt. gravel park-ing lot on public ROW, & asphalt driveway. E of Apt Lot: vacant lot w/ trees. Griggs-Main: large W parkway - room for a SP. Offset at Main. Orchard (Griggs-Main) is brick.	Shared-use path from Broad Alley-Griggs over RR tracks thru public ROW. Bike Route with wayfinding signage from Griggs-Main. Urbana Green Loop.
3/10/15	205	McCullough Street	Main St	Springfield Ave	26	1.5	23	1	13	11.5	11.5	none	-	none	-	-	0	W-Un-marked On-Street	2		1,000	30		local	0	concrete	4.5	0	2.44	B	trans-verse	both-SW			-	-	Y	Y	LO	N		Phillips Recre-ation Center, Boneyard Creek crossing.	Bike Route with wayfinding signage. Urbana Green Loop.
3/10/15	210	Central Avenue	Griggs St	Main St	31	1.33	28.33	1	15.5	14.17	14.17	none	-	none	-	-	0	No Parking Restrictions	12		1,000	30		local	0	concrete	4	0	2.33	B	none	both-SW, parts brick			-	-	Y	Y	LO	N			

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3/2/15	211	Cedar Street	Springfield Ave	Elm St	36	1	34	1	12	11	11	LTLs	12	none	-	-	0	No Parking Allowed	0		700	30		local	0	asphalt	4	0	2.38	B	E-diag-onal, W-trans-verse	both-SW			-	-	Y	Y	HI	N		3-lane cross section (12' lanes) w/ LTLs, incl. 1' GPs. Stop bars. 2-way stop at Springfield, 4-way stop at Elm.	
3/2/15	212	Cedar Street	Elm St	Green St	26	0	26	1	13	13	13	none	-	none	-	-	0	No Parking Allowed	0		700	30		local	0	asphalt	4	0	2.14	B	none	both-SW			-	-	Y	Y	N-HI, S-LO	N		2-way stop at Green.	
3/10/15	213	Cedar Street	Green St	High St	24	0	24	1	12	12	12	none	-	none	-	-	0	E-Un-marked On-Street	4		250	30		local	0	asphalt	4	0	1.80	B	none	both-SW			-	-	Y	N		N		2-way stop at High. Pavement across High.	
3/10/15	214	Cedar Street	High St	California Ave	23	0	23	1	11.5	11.5	11.5	none	-	none	-	-	0	E-Un-marked On-Street	2		250	30		local	0	asphalt	4	0	1.83	B	trans-verse	both-SW, parts brick			-	-	Y	N		N		2-way stops at every block.	
3/10/15	217	Race Street	Park St	University Ave	20-32	1.5	17-29	1	10-11	8.5-9.5	9	LTL at University	10	none	-	-	0	No Parking Allowed	0	700	700	30		local	0	concrete	5	0	2.43	B		both-SW, parts brick	5		-	-	Y	Y	LO	N		Brick pavement replaced with concrete.	Bike Route with wayfinding signage. Urbana Green Loop.
3/10/15	218	Race Street	University Ave	Griggs St	22-33	1.5	20.5-31.5	1	11	9.5	9.5	LTL at University	11	none	-	-	0	No Parking Allowed	0	2,850	2,850	30		collector	1.5	concrete	5	0	3.32	C		both-SW	6	0-11	-	diagonal	Y	Y	HI	N		Part of Bone-yard Creek reconstruction in 2013-14. Sidewalks are 6' - not wide enough to be a sidepath, but wider road with concrete pave-ment should make this an acceptable bike route to connect Crystal Lake Park, Leal Park, and Downtown. Stoplight at University w/ marked cross-walks.	Bike Route with wayfinding signage. Urbana Green Loop. Off-street trail con-nection to Leal Park.
3/10/15	219	Race Street	Griggs St	Water St	32	1	30	1	12	11.5	11.5	none	-	E-marked parking	E-8	E-7	3.5	E-Parallel	4	3,200	3,200	30		collector	1.5	asphalt	5	0	2.17	B		both-SW		0	-	-	Y	Y	HI	N			Bike Route with way-finding signage.
3/10/15	220	Race Street	Water St	Main St	32	1	30	1	NB-12, SB-10	NB-11, SB-9	10	painted, LTL at Main	10	none	-	-	0	No Parking Allowed	0	3,200	3,200	30		collector	1.5	asphalt	5	1	3.33	C		both-SW		0	-	-	Y	Y	LO	N		No parking. LTL & Stoplight at Main.	Bike Route with way-finding signage.
3/10/15	221	Race Street	Main St	Busey Bank entrance	42	1	40	1	10	10	10	LTL	12	Bike Lanes	5	4	4	No Parking Allowed	0	3,800	3,800	30		collector	1.5	asphalt	5	0	2.29	B		both-SW		0	-	-	Y	Y	HI	Y	all	Bike Lanes installed in 2013. Stoplight at Main.	Existing Bike Lanes
3/10/15	222	Race Street	Busey Bank entrance	Elm St	48	1	46	1	10	10	10	painted	12	Bike Lanes, E-buffer	W-5, E-11	W-4, E-10	6	No Parking Allowed	0	3,800	3,800	30		collector	1.5	asphalt	5	1	1.49	A	trans-verse	both-SW		0	-	-	Y	Y	LO	Y	all	Road Diet & Bike Lanes installed in 2013. No LTL at Elm. 4-way stop at Elm.	Existing Bike Lanes
3/11/15	223	Race Street	Elm St	Green St	51	1	49	1	10	10	10	land-scaped	7	Bike Lanes, buffers	12	11	8	No Parking Allowed	0	3,800	3,800	30		collector	1.5	asphalt	5	0	0.53	A		both-SW		0	-	-	Y	Y	HI	Y	all	Bike Lanes installed in 2014. At midpoint: 22' on each side of median (6' buffers, 6' bike lanes, 10' lanes, incl. 1' GPs) + 7' raised landscaped median = 51'. No LTL at Elm; LTL at Green. 4-way stops at Elm & Green.	Existing Bike Lanes & Sharrows at inter-sections
3/11/15	224	Race Street	Green St	High St	59	0	59	1	11	11	11	4' land-scaped + 11' LTLs	15	Bike Lanes, buffers	11	11	8	No Parking Allowed	0	5,400	5,400	30		collector	1.5	asphalt	5	0	0.45	A		both-SW		0	-	-	Y	Y	HI	Y	all	Bike Lanes installed in 2014. 5' buffers + 11' travel lanes + 4' median + 11' LTL + 6' bike lanes = 59'. LTLs at Green & High. Street lights in median. 4-way stop at Green.	Existing Bike Lanes

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3/11/15	225	Race Street	High St	Illinois St	59	0	59	1	11	11	11	raised grass	15	Bike Lanes, buffers	11	11	8	No Parking Allowed	0	5,400	5,400	30		collector	1.5	asphalt	5	1	0.45	A		both-SW		0	-	-	Y	Y	HI	Y	all	Bike lanes installed in 2014. At midpoint: 5' buffers, 6' bike lanes, 11' lanes, 15' median at widest point = 59'. LTL at Illinois only. 4-way stop at Illinois.	Existing Bike Lanes
3/11/15	226	Race Street	Illinois St	alley between IL & CA	51	0	51	1	NB-11, SB-10	NB-11, SB-10	10.5	raised grass	9	Bike Lanes, buffers	W-10	W-10	5	No Parking Allowed	0	4,750	4,750	30		collector	1.5	asphalt	5	0	1.93	B		both-SW		0	-	-	Y	Y	HI	Y	all	Bike lanes & sharrows installed in 2014. 4' SB buffer, 6' SB bike lane, 10' SB lane, 11' NB lane, 11' NB RTL w/ sharrows, 9' median = 51'. 4-way stop at Illinois.	Existing Bike Lanes & Sharrows
3/10/15	240	Broadway Avenue	Oakland Ave	Stebbins Dr	24	1	22	1	12	11	11	none	-	none	-	-	0	No Parking Allowed	0	1,850-3,650	2,750	30		collector	1.5	brick	3	0	3.65	D		both-SW			-	-	Y	Y	HI	Y	all	Brick road. May have to move electrical boxes for construction of SP, but otherwise, there are no barriers to construction.	Widen West Sidewalk to Sidepath. Urbana Green Loop.
3/10/15	241	Broadway Avenue	Stebbins Dr	Park St	27	0	27	1	13.5	13.5	13.5	none	-	none	-	-	0	No Parking Allowed	0	3,650	3,650	30		collector	1.5	asphalt	4	0	3.14	C		both-SW			-	-	Y	Y	HI	Y	all		Widen West Sidewalk to Sidepath. Urbana Green Loop.
3/10/15	242	Broadway Avenue	Park St	University Ave	36	1.5	33	1	18	16.5	16.5	painted at University Ave	-	none	-	-	0	No Parking Allowed	0	3,650	3,650	30		collector	1.5	asphalt	4	0	2.69	C		both-SW			-	-	Y	Y	HI	Y	all	Problem: Transitioning bike lanes to W SP at Park. Barriers: Utility poles very close to the E side of the road. Solution: Mark bike crossing N of fire hydrant. At Park: 33' + 1.5' gutter pans = 36'. Widens at University (E-W): 11.5' NB Lane, painted median, LTL, 21' SB thru lane, refuge island, RTL. Intersection should be designed to allow bicyclists to safely cross University Ave & Park St.	Bike Lanes & Sharrows. Two-stage two-queue box at NE corner. Trail Crossing signs at N leg of Broadway/Park for NB & SB traffic. Mark bike crossing at Park on N leg to proposed Park & Broadway sidepaths along Crystal Lake Park.
3/10/15	243	Broadway Avenue	University Ave	Penn Central RR	48	1.5	45	1	10.5	10.5	10.5	painted, raised at University Ave	0-12	Bike Lanes	7.5	6	5.5	No Parking Allowed	0	2,700	2,700	30		collector	1.5	asphalt	5	0	1.43	A		both-SW			-	diagonal	Y	Y	HI	Y	all	Bike lanes & sharrows installed in 2013 upon street reconstruction. Widens at University, narrows towards Penn Central RR.	Existing Bike Lanes & Sharrows
3/10/15	244	Broadway Avenue	Penn Central RR	Goose Alley	49	1.5	46	1	10.5	10.5	10.50	painted from Water-Goose Alley	0-8.5	both-Bike Lanes, marked parking, E-bus pullout	14	12.5	8.75	Both-Parallel	12	2,700	2,700	30		collector	1.5	asphalt	5	0	0.39	A		both-SW			-	diagonal	Y	Y	LO	Y	all	Bike lanes installed in 2013 upon road reconstruction. Bumpouts for parking lanes and bus pullout at Save A Lot grocery store.	Existing Bike Lanes
3/10/15	245	Broadway Avenue	Goose Alley	Main St	58	1	56	1	10	10	10.0	LTL	10	both-Bike Lanes, marked parking	14	13	9	Both-Parallel	18	2,700	2,700	30		collector	1.5	asphalt	5	0	0.68	A		both-SW			-	-	Y	Y	LO	Y	all	Bike lanes installed in 2013 upon road reconstruction.	Existing Bike Lanes

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3/10/15	246	Broadway Avenue	Main St	Elm St	60-52	1	58	1	10	10	10	LTL	10	both-Bike Lanes, E-RTL, W-bus pullout	E-16.5, W-13.5	E-15.5, W-12.5	9.5	No Parking Allowed	0	1,250	1,250	30		collector	1.5	asphalt	5	0	0.01	A		both-SW			-	-	Y	Y	LO; HI at Main & Elm	Y	all	Bike lanes installed in 2013. Bus pullouts on both sides N of Elm. Stoplight at Main, 4-way stop at Elm.	Existing Bike Lanes
3/10/15	248	Walnut Street	Green St	High St	30	0	30	1	15	15	15	none	-	none	-	-	0	No Parking Allowed	0		1,000	30		local	0	asphalt	4	0	2.05	B		W-SW			-	-	Y	Y	HI in parking lot	N		Two 15' marked lanes. Road is adjacent to Lincoln Square & its parking lots. No gutter pans. Room for bike lanes (5', 10', 10', 5'), but ADT is so low that only Bike Route signs are necessary.	Bike Route with wayfinding signage to direct bicyclists to/from Broadway around Lincoln Square.
3/10/15	249	Broadway Avenue	High St	Illinois St	35	0.5	34	1	17.5	17	17	none	-	none	-	-	0	No Parking Allowed	0	600	600	30		local	0	asphalt	4	1	1.47	A		both-SW			-	-	Y	Y	LO	N		Landscaped median at Illinois. Double yellow stripe N of median. Road leads to Lincoln Square.	Bike Lanes: 5', 12.5', 12.5', 5'
3/10/15	250	Broadway Avenue	Illinois St	California Ave	40	0	40	1	NB-11, SB-20	NB-11, SB-20	15.5	semi-raised at Illinois	4	E-striped parking lane	E-9	E-9	4.5	E-Parking Lane	1	1,300	1,300	30		local	0	asphalt	5	0	0.17	A	diagonal	both-SW			-	-	Y	Y	LO	N		Sharrows installed in 2014 upon street resurfacing. Median at Illinois. No parking permitted on W side of street.	Existing Sharrows. Add Bike Route and wayfinding signage.
3/10/15	261	Cunningham Avenue	Perkins Rd	University Ave	58	0	58	2	12	12	12	CTL, raised at University	10	none	-	-	0	No Parking Allowed	0	19,300-22,800	22,800	35	4.4 - 4 - 4.5	Major Arterial	4.3	asphalt	4	6	4.61	E	diagonal	both-SW	E-5, W-4	3	-	-	Y	Y	HI	Y	all	W side: S of Info Plaza: 5' SW, 11' parkway. Thru CCH: SW goes between trees & utility boxes. S of CCH: very narrow parkway. Lots of driveways.	Use Broadway.
3/10/15	262	Vine Street	University Ave	Main St	47	1	45	2	11.5	11	11	center line; raised at University	1	none	-	-	0	No Parking Allowed	0	19,700	19,700	30		minor arterial	2	asphalt	4	3	4.03	D		both-SW			-	bridge	Y	Y	HI	Y	all	Narrowest point: 47' on N side of RR underpass; 4 lanes, fast traffic. Intersection widens at University, Water, & Main. At Water: five 11' lanes (incl. LTL) + 1' GP on E side of road + 1' double yellow centerline = 57'.	Use Broadway.
3/10/15	263	Vine Street	Main St	Illinois St	62	W-1	61	2	Outer-12, Inner-11	NB Outer-12; Others-11	11.25	5' raised landscaped + 11' LTLs	16	none	-	-	0	No Parking Allowed	0	14,000-15,200	14,600	30		minor arterial	2	asphalt	4	1	3.85	D		both-SW		0	-	-	Y	Y	HI	Y	all	At Green (E-W): 12' outer NB lane + 11' inner NB lane + 11' LTL + 5' raised median + 11' SB lane + 11' SB lane + 1' gutter pan on west side of road = 62'. Stoplights at Main & Illinois.	
3/10/15	264	Vine Street	Illinois St	California Ave	59-39	0	59-39	2	11	11	11	4' raised landscaped + 11' CTL	15	none	-	-	0	No Parking Allowed	0	12,900	12,900	30		minor arterial	2	N-asphalt, S-concrete	4	0	3.82	D		both-SW			-	-	Y	Y	HI	Y	all	59' at IL = five 11' lanes + 4' raised median. 39' at CA = three 13' lanes. Concrete begins just N of California.	

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3/11/15	273	Urbana Avenue	Main St	Elm St	20	0	20	1	10	10	10	none	-	none	-	-	0	No Parking Restrictions	0		1,000	30		local	0	oil & chip	4	0	2.67	C		W-SW at Elm			-	-	N	Y	LO	N		Manhole in the middle of the road, gravel shoulders, hardly any visible sidewalks. At Main: E crossing would be best to get to Schnucks. 2-way stops at Main & Elm.	
3/11/15	274	Urbana Avenue	Elm St	Green St	22	0	22	1	11	11	11	none	-	none	-	-	0	No Parking Restrictions	0		1,000	30		local	0	oil & chip	4	0	2.57	C		both-SW, W-brick			-	-	N	Y	LO	N		Gravel shoulders. W-SW is brick & overgrown w/ vegetation. 2-way stops at Elm & Green.	
3/11/15	275	Urbana Avenue	Green St	High St	22	0	22	1	11	11	11	none	-	none	-	-	0	E-Unmarked On-Street	1		1,000	30		local	0	oil & chip	4	0	2.58	C		both-SW			-	-	Y-W side only	Y	LO	N		E-gravel shoulder, No Parking on W side. W-SW in good condition (City Bldg property). 2-way stop at Green, no stop at High.	
3/11/15	276	Urbana Avenue	High St	Illinois St	24	0	24	1	12	12	12	none	-	none	-	-	0	No Parking Restrictions	2		1,000	30		local	0	oil & chip	4	0	2.47	B		both-SW, parts brick			-	-	Y-W side only	Y	LO	N		E-gravel shoulder. No Parking on W side. W-SW in good condition (City Bldg property). No stop at High, 2-way stop at IL.	
3/11/15	277	Urbana Avenue	Illinois St	California Ave	21	0	21	1	10.5	10.5	10.5	none	-	none	-	-	0	No Parking Restrictions	4		1,000	30		local	0	oil & chip	4	0	2.66	C		both-brick SW			-	-	N	Y	LO	N		Gravel shoulders on both sides. 2-way stops at IL & CA.	Bike Route with way-finding signage
3/11/15	280	Maple Street	Main St	Elm St	17	0	17	1	8.5	8.5	8.5	none	-	none	-	-	0	No Parking Restrictions	5		1,000	30		local	0	oil & chip	3.5	0	2.99	C		both-SW, parts brick			-	-	N	Y	LO	N		Maple at Main: Hard to see EB traffic because of trees in the parkway to the W & power pole at SW corner. 16' at Main. High parking occupancy on both sides of road - gravel shoulders. Between Long's Garage (E) & BCA (W). Parts of SW are brick & overgrown w/ vegetation. 2-way stops at Main & Elm.	
3/11/15	281	Maple Street	Elm St	Green St	20	0	20	1	10	10	10	none	-	none	-	-	0	No Parking Restrictions	3		1,000	30		local	0	oil & chip	4	0	2.70	C		both-SW, parts brick			-	-	N	Y	LO	N		Gravel shoulders, road edge not consistent. E SW is brick & very overgrown w/ vegetation. 2-way stops at Elm & Green.	
3/11/15	282	Maple Street	Green St	High St	18	0	18	1	9	9	9	none	-	none	-	-	0	No Parking Restrictions	0		1,000	30		local	0	oil & chip	4	0	2.77	C		both-SW, parts brick			-	-	N	Y	LO	N		Not as consistent of a road edge as S of High; not as much of a gravel shoulder. 2-way stops at Green & High.	
3/11/15	283	Maple Street	High St	Illinois St	20	0	20	1	10	10	10	none	-	none	-	-	0	No Parking Restrictions	2		1,000	30		local	0	oil & chip	4	0	2.69	C		both-SW, parts brick			-	-	N	Y	LO	N		Good asphalt, more consistent road edge; gravel shoulders. 2-way stops at IL & High.	

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3/11/15	284	Maple Street	Illinois St	Oregon St	27	1.33	24.33	1	13.5	12.17	12.17	none	-	none	-	-	0	No Parking Restrictions	1		1,000	30		local	0	asphalt	4	0	2.44	B		both-SW, parts brick			-	-	Y	Y	LO	N		Narrows at Illinois, brick across Illinois. 2-way stops at IL, CA & OR.	
3/11/15	286	Grove Street	Main St	Elm St	20	0	20	1	10	10	10	none	-	none	-	-	0	No Parking Restrictions	1		1,000	30		local	0	oil & chip	4	0	2.68	C		parts-SW			-	-	N	Y	LO	N		Bike Route installed in 2013. Main St Auto (garage) on W side of street - lots of cars parked on W shoulder, lots of cars being moved. Gravel shoulders. 2-way stops at Main & Elm.	Existing Bike Route. Add wayfinding signage.
3/11/15	287	Grove Street	Elm St	High St	17	0	17	1	8.5	8.5	8.5	none	-	none	-	-	0	No Parking Restrictions	3		1,000	30		local	0	oil & chip	4	0	2.83	C		both-SW, parts brick			-	-	N	Y	LO	N		Bike Route installed in 2013. NB at Elm; difficult to see WB oncoming traffic on Elm, because Elm is offset. Gravel shoulders w/ parking - undefined road edge. 2-way stops at Elm & Green, Yield at High.	Existing Bike Route. Add wayfinding signage.
3/11/15	288	Grove Street	High St	Illinois St	18	0	18	1	9	9	9	none	-	none	-	-	0	No Parking Restrictions	0		1,000	30		local	0	oil & chip	4	0	2.77	C		both-SW, parts brick			-	-	N	Y	LO	N		Bike Route installed in 2013. No curb & gutter; narrows; undefined road edge; brick across Illinois. Yield at High, 2-way stop at IL.	Existing Bike Route. Add wayfinding signage.
3/2/15	289	Grove Street	Illinois St	Oregon St	27	1.5	24	1	13.5	12	12	none	-	none	-	-	0	No Parking Restrictions	3		1,000	30		local	0	asphalt	4	0	2.49	B	trans-verse	both-SW, parts brick			-	-	Y	Y	LO	N		Bike Route installed in 2013. Narrows at Illinois. Pavement is in really good shape. 2-way stops at IL, CA & OR.	Existing Bike Route. Add wayfinding signage.
3/11/15	291	Anderson Street	Elm St	Green St	17	0	17	1	8.5	8.5	8.5	none	-	none	-	-	0	Gravel Shoulders	0	450	450	30		local	0	oil & chip	3	0	2.75	C		both-SW			-	-	N	Y	LO	N		Even narrower N of Green. 2-way stops at Elm & Green.	
3/11/15	292	Anderson Street	Green St	Illinois St	18	0	18	1	9	9	9	none	-	none	-	-	0	Gravel Shoulders	2	450	450	30		collector	1.5	oil & chip	3	0	2.95	C		both-brick SW			-	-	N	Y	LO	N		Brick SWs, no curbs & gutters. 2-way stops at Green & IL, Yield at High.	
3/11/15	293	Anderson Street	Illinois St	Oregon St	23	1	21	1	11.5	10.5	10.5	none	-	none	-	-	0	W-Unmarked On-Street	3	450	450	30		collector	1.5	asphalt	4	0	2.47	B		both-SW			-	-	Y	Y	LO	N		2-way stops at every block (IL, CA, OR). Road shifts east N of Oregon, shifts back west N of California.	
3/11/15	301	Webber Street	Main St	Elm St	20	0	20	1	10	10	10	none	-	none	-	-	0	No Parking Restrictions	1		250	30		local	0	oil & chip	4	0	1.98	B		both-SW	0-5	10	-	-	N	Y	LO	N		Concrete parking pads N of Elm, on both sides - at Head Start (E) & church (W): 9' on each side; 10' parkways. 5' SW at Head Start, narrower or nonexistent SWs elsewhere. 2-way stops at Main & Green.	

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3/11/15	302	Lynn Street	Penn Central RR	Main St	26	1.5	23	1	13	11.5	11.5	none	-	none	-	-	0	RR-Water: No Parking Restric-tions; Water-Main: W-Un-marked On-Street	2		1,000	30		local	0	oil & chip	4	0	2.53	C	trans-verse	both-SW, parts brick			-	-	Y	Y	LO	N		Potential trail-head for future Rail-Trail. There is already a goat trail on W side of N terminus where a bicyclist passed through, carried bike across RR, and rode west on N side of RR upon site visit. N of RR: Emulsicoat, MTD Bus Garage.	
3/11/15	303	Lynn Street	Main St	Green St	26	1.33	23.33	1	13	11.67	11.67	none	-	none	-	-	0	E-Un-marked On-Street	2		1,000	30		local	0	concrete	4	0	2.51	C	diagonal	both-SW	E-5		-	-	Y	Y	LO	N		5' SW N of Green is newer (along Victory Park). 2 marked parking stalls by Secondhand Rose at Main on E side of street (not included as marked parking). 2-way stops at Main & Green.	
3/11/15	304	Lynn Street	Green St	Illinois St	25	1.33	22.33	1	12.5	11.17	11.17	none	-	none	-	-	0	E-Un-marked On-Street	1		1,000	30		local	0	concrete	4	0	2.56	C		both-SW			-	-	Y	Y	LO	N		Lynn ends at Illinois, but cannot make a connection, because Illinois is brick. 2-way stops at Green & IL.	
3/2/15	305	Johnson Avenue	Green St	Oregon St	24	1.5	21	1	12	10.5	10.5	none	-	none	-	-	0	No Parking Restrictions	8		1,000	30		local	0	concrete	3.5	0	2.84	C	trans-verse	both-SW		0	-	-	Y	Y	LO	N		Offset w/ Wabash. Concrete across Illinois. 2-way stops at every intersection. Needs a marked crossing, ramp, and SP entrance at Green to Victory Park if this were to become a Bike Route. SW at Victory Park is 5' wide from Main to Green.	
3/11/15	307	Cottage Grove Avenue	Penn Central RR	Main St	26	1.5	23	1	13	11.5	11.5	none	-	none	-	-	0	E-Un-marked On-Street	1		250	30		local	0	concrete	3.5	0	1.95	B	diagonal (W) & longitu-dinal	both-SW from Wa-ter-Main			-	-	Y	Y	LO	N		Potential trail-head for future Rail-Trail &/or connection to future CUMTD path.	Bike Route upon construction of shared-use path across Penn Central Railroad and/or Rail-with-Trail
3/11/15	308	Cottage Grove Avenue	Main St	Oregon St	26	0	26	1	13	13	13	none	-	none	-	-	0	No Parking Allowed	0	6,600	6,600	30		minor arterial	2	asphalt	4	1	3.59	D		both-SW			-	-	Y	Y	LO	Y, part	Green to Oregon	Bikes May Use Full Lane is only possible treatment.	Use Poplar.
3/11/15	325	Poplar Street	Main St	Green St	26	1.5	23	1	13	11.5	11.5	none	-	none	-	-	0	W-Un-marked On-Street	3		250	30		local	0	concrete	4	0	1.84	B	none	both-SW			-	-	Y	Y	LO	N		2-way stops at Main & Green.	Bike Route with way-finding signage
3/11/15	326	Poplar Street	Green St	Oregon St	26	0	26	1	13	13	13	none	-	none	-	-	0	W-Un-marked On-Street	6		250	30		local	0	asphalt	4	0	1.70	B	none	both-SW			-	-	Y	Y	LO	N		No stop at IL, 2-way stops at Green & Oregon.	Bike Route with way-finding signage
3/11/15	328	Glover Avenue	Main St	Oregon St	30	0	30	1	15	15	15	none	-	none	-	-	0	W-Un-marked On-Street	5		1,000	30		local	0	concrete	4	0	2.12	B	trans-verse	both-SW			-	-	Y	Y	LO	N		Wide enough for treatment, low traffic, low park-ing occupancy.	
3/11/15	330	Eastern Avenue	Perkins Rd	Kerr Ave	27	1.5	24	1	13.5	12	12	none	-	none	-	-	0	No Parking Allowed	0	650	650	30		collector	1.5	concrete	3.5	0	2.59	C		W-SW			-	-	N	N		Y	all	Transverse drains at Perkins.	Bike Route. Town-ship will be respon-sible for installation of signage; signage should be consistent with Urbana's. Urba-na Green Loop.

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3/11/15	340	Smith Road	Slayback Rd	University Ave	23	0	23	1	11.5	11.5	11.5	none	-	none	-	-	0	No Parking Allowed	0	700	700	30		collector	1.5	asphalt	4	0	2.55	C	none	E-SW from S of Slayback to Carrie			-	-	N	N		Y	all	Edgewood - unincorpo-rated Urbana. Slayback to 200 ft S of Slayback: widens to 27'. No room on W side for SP: mobile home park parkway. Stop bar, double yellow line, and stoplight at University.	Bike Route. Town-ship will be respon-sible for installation of signage; signage should be consistent with Urbana's.
3/11/15	341	Smith Road	University Ave	Main St	38-58	2	34-54	1	NB RTL-11, NB LTL/ Thru-13, SB-20	NB RTL-9, NB LTL/ Thru-13, SB-18	17	double yellow line	-	none	-	-	0	No Parking Allowed	0	4,650	4,650	30		collector	1.5	asphalt	4	0	2.73	C	trans-verse	none	-	-	-	-	E-all; W-parts	N		N		38' at midpoint, 39' at Main, 58'+ at University. 2-way stop at Main, Stoplight at University. Stop Bars at Main & University. ROW is too limited to install sidepath connecting Kick-apoo Rail Trail to Weaver Park, and segment is to short to promote such an on-street con-nection here.	Bike Route with wayfinding signage. Sharrows, especially in NB Thru/LTL lane at University.
3/11/15	358	Art Bartell Road	Main St	Prairie Park	24	0	24	1	12	12	12	none	-	none	-	-	0	No Parking Restrictions	0		1,000	30		local	0	asphalt	4.5	0	2.36	B		none				-		Y	HI	N		Champaign County East Campus.	Sidepath from Salt Barn-Prairie Park.
3/11/15	360	Barr Avenue	E Terminus	Smith Rd	14	0	14	1	7	7	7	none	-	none	-	-	0	No Parking Allowed	0		1,000	30		local	0	asphalt/ gravel	3.5	0	3.06	C		none				-		N		N		Township road.	
3/11/15	364	Butzow Drive	Smith Rd	E of Guardian Dr	20	0	20	1	10	10	10	none	-	none	-	-	0	No Parking Restrictions	0		1,000	30		local	0	asphalt	4	0	2.67	C		none				-		N		N		Township road.	Bike Route with way-finding signage.
3/11/15	365	Butzow Drive	E of Guard-ian Dr	Guardian Dr	26.5	1	24.5	1	13.25	12.25	12.25	none	-	none	-	-	0	No Parking Restrictions	0		1,000	30		local	0	concrete	4.5	0	2.33	B		none				-		N		N		2-way stop & stop bar at Guardian.	Bike Route with way-finding signage.
3/11/15	366	Butzow Drive	Guardian Dr	Wilson Rd	26.5	1.5	23.5	1	13.25	11.75	11.75	none	-	none	-	-	0	No Parking Allowed	0		1,000	30		local	0	concrete	4.5	0	2.39	B		none				-		N		Y	all	2-way stop & stop bar at Guardian.	Bike Route with way-finding signage.
3/11/15	367	Butzow Drive	Wilson Rd	Lierman Ave	32	1	30	1	16	15	15	none	-	none	-	-	0	No Parking Restrictions	0		1,000	30		local	0	concrete	4.5	0	1.95	B		none				-		N		Y	all	Flex-N-Gate.	Bike Route with way-finding signage.
3/11/15	368	Butzow Drive	Lierman Ave	W terminus	30	0	30	1	15	15	15	none	-	none	-	-	0	No Parking on S side	0		1,000	30		local	0	concrete	4	0	2.05	B		none				-		N		N			Bike Route with wayfinding signage. Shared-use path west to AMBUCS Park.
3/11/15	373	Division Avenue	Oakland Ave	Kerr Ave	24	E-1	23	1	12.5	11.5	11.5	none	-	none	-	-	0	No Parking on E side	5		1,000	30		local	0	concrete	4	0	2.57	C		E-SW S of Oakland, W-SW all		2		-		Y	LO	N			Bike Route with way-finding signage.
3/11/15	374	Division Avenue	Kerr Ave	S of Kerr Ave	14	0	14	1	7	7	7	none	-	none	-	-	0	No Parking Restrictions	0		1,000	30		local	0	asphalt/ gravel	3	0	3.27	C		none				-		N		N			Bike Route with way-finding signage.
3/11/15	375	Division Avenue	S of Kerr Ave	Stebbins Dr	26	1	24	1	13	12	12	none	-	none	-	-	0	E-Un-marked On-Street	3		1,000	30		local	0	concrete	5	0	2.33	B		both-SW				-		Y	HI	N			Bike Route with way-finding signage.
3/11/15	382	Hickory Street	Park St	N terminus	17	0	17	1	8.5	8.5	8.5	none	-	none	-	-	0	No Parking Restrictions	1		1,000	30		local	0	gravel	2	0	4.14	D		E-SW from Park-N of Park				-		Y	HI	N		Hickory Street Park Site.	
3/11/15	385	McCullough Street	Springfield Ave	Green St	26	1	24	1	13	12	12	none	-	none	-	-	0	W-Un-marked On-Street	9		1,000	30		local	0	concrete	4	0	2.55	C		both-SW				-	Y	N		N			Bike Route with wayfinding signage. Urbana Green Loop.
3/11/15	386	McCullough Street	Green St	Illinois St	27	1	25	1	13.5	12.5	12.5	none	-	none	-	-	0	E-Un-marked On-Street	1		1,000	30		local	0	concrete	4	0	2.40	B		both-SW, parts brick				-	Y	N		N			Bike Route with wayfinding signage. Urbana Green Loop.
3/11/15	394	Park Street	Cottage Grove Ave	Hickory St	24	1	22	1	12	11	11	none	-	none	-	-	0	S-Un-marked On-Street	1		1,000	30		local	0	oil & chip	4	0	2.58	C		both-SW				-	Y	Y	LO	N		AMBUCS Park.	
3/11/15	395	Potawatomi Trail	Shemauger Trl	Smith Rd	24	0	24	1	12	12	12	none	-	none	-	-	0	No Parking Restrictions	2		1,000	30		local	0	concrete	4	0	2.47	B		none				-		Y	LO	N		Outside city limits.	Bike Route with wayfinding signage. Outside city limits.

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3/11/15	396	Shemauger Trail	Potawatomi Trl	Smith Rd	24	0	24	1	12	12	12	none	-	none	-	-	0	No Parking Restrictions	1		1,000	30		local	0	concrete	4	0	2.46	B		none			-		Y	LO	N			Outside city limits.	Bike Route with wayfinding signage. Outside city limits.
3/11/15	397	Smith Road	Barr Ave	Butzow Dr	22	0	22	1	11	11	11	none	-	none	-	-	0	No Parking Restrictions	0		1,000	30		local	0	oil & chip	4	0	2.57	C		none			-		N		N			Township road.	Bike Route with wayfinding signage. Urbana Township owned.
3/11/15	398	Stebbins Drive	Division Ave	Broadway Ave	26	1	24	1	13	12	12	none	-	none	-	-	0	S-Un-marked On-Street	0		1,000	30		local	0	concrete	5	0	2.29	B		both-SW	S-5		-		Y	HI	N			Crystal View Townhomes. Crystal Lake Park. Round-about at Division Ave.	Bike Route with wayfinding signage. Long-term: Shared-Use Path along Saline Branch connecting Crystal Lake Park, Chief Shemauger Park, and Perkins Road Park Site.
10/24/19	405	Water Street	N Cottage Grove Ave	Lynn St	27	2	23	1	13.5	11.5	11.5	none	-	none	-	-	0	Both - Parallel	4		1,000	30		local	0	asphalt	4.5	0	2.46	B		both, N-brick and S-concrete	4	8	-	Y	Y	LO	N				
10/24/19	406	Webber Street	Main St	N terminus	18	0	18	1	9	9	9	none	-	none	-	-	0	Both - Parallel	1		1,000	30		local	0	asphalt	4	0	2.77	C		both, E-brick and W-con-crete	E-4, W-5	10	-	N	Y	LO	N				
10/24/19	407	Maple Street	Main St	RR Crossing	24	0	24	1	12	12	12	none	-	none	-	-	0	None	0		2,350	30		local	0	asphalt	4.5	1	2.79	C		none		-	perpendicular	N	Y	Power pole	N				
10/24/19	408	Maple Street	RR Crossing	University Ave	24	0	24	1	12	12	12	none	-	none	-	-	0	None	0		2,350	30		local	0	asphalt	4.5	1	2.79	C		none		-	perpendicular	N	Y	Power pole	N				
10/24/19	409	Water Street	Vine St	Walnut St	40	1	38	1	13	13	13	none	-	both - marked paring	7	6	5.5	Both - Parallel	0		700	30		local	0	concrete	4	2	0.11	A		both - con-crete	6	-	-	N	Y	LO	N			6ft sidewalk but 3ft usable because of the tree on the sidewalk	
10/24/19	410	Water Street	Walnut St	Broadway Ave	40	1	38	1	13	13	13	none	-	both - marked paring	7	6	5.5	Both - Parallel	0		700	30		local	0	concrete	4	0	0.11	A		both - con-crete	6	-	-	N	Y	LO	N			6ft sidewalk but 3ft usable because of the tree on the sidewalk	
10/24/19	411	Water Street	Broadway Ave	Race St	20	1	18	1	10	9	10	none	-	none	-	-	0	None	0		700	30		local	0	asphalt	4	0	2.49	B	trans-verse	both - con-crete	4	2	-	Y	Y	LO	N				
10/24/19	412	Griggs St	Race St	West of Race St	23	S-1	22	1	E-11, W-12	E-10, W-12	11	Double Yellow Line	-	N-marked parking	-	-	0	N-Angled	55		400	30		local	0	concrete	4.5	0	2.46	B	trans-verse	S-concrete	S-6	-	-	Y	Y	LO	N			7ft drop off sidewalk west of parking spaces. Curb extension on north side is deeper on the east side than the west side of the parking spaces.	
10/24/19	413	Griggs St	West of Race St	Wood St	32	1	30	1	16	15	15	none	-	none	-	-	0	None	0		400	30		local	0	asphalt	4	0	1.58	B	none	S-concrete	S-4	-	-	N-none, S-Y	Y	LO	N			N side private business parking overflow to street	
10/24/19	414	Griggs St	Wood St	Central Ave	32	1	30	1	16	15	15	none	-	none	-	-	0	S-Parallel	2		400	30		local	0	asphalt	4	0	1.61	B	none	both-con-crete	S-4, N-5	S-11, N-11	-	Y	Y	LO	N				
10/24/19	415	Griggs St	Central Ave	McCullough St	32	1	30	1	16	15	15	none	-	none	-	-	0	S-Parallel, N-none	3		400	30		local	0	asphalt	4	0	1.63	B	trans-verse	S-concrete, N-none	S-4	S-11	-	Y	Y	LO	N				
10/24/19	416	Griggs St	McCullough St	Orchard St	32	1	30	1	16	15	15	none	-	none	-	-	0	N-Parallel, S-none	73		400	30		local	0	asphalt	4	0	2.41	B	trans-verse	none		-	-	Y	Y	LO	N				
10/24/19	417	Orchard Street	Main St	Sassafrass Alley	24	2	20	1	12	10	10	none	-	none	-	-	0	None	0		1,000	30		local	0	brick	3	0	3.01	C	none	E-none, W-brick	W-4	W-16	-	Y	Y	LO	N				
10/24/19	418	Orchard Street	Sassafrass Alley	RR Crossing	24	0	24	1	12	12	12	none	-	none	-	-	0	None	0		1,000	30		local	0	asphalt	4	0	2.45	B	none	E-none, W-concrete	W-5	W-15	perpendicular	N	N	N	N				
10/24/19	419	Sassafrass Alley	Orchard Street	Coler Ave	11	0	11	1	11	11	11	none	-	none	-	-	0	None	0		1,000	30		local	0	asphalt	4	0	2.57	C	none	none		-	-	N	N	N	N			One way alley west	
10/24/19	420	Clark Street	Coler Ave	Busey Ave	26	2	22	1	9.5	8.5	8.5	none	-	S-marked parking	7	5	5	N-none, S-Parallel	36		1,000	30		local	0	brick	3	0	2.40	B	trans-verse	Both-con-crete	5	13	-	Y	Y	LO	N			Trees on parkway	
10/24/19	421	Clark Street	Busey Ave	Lincoln Ave	26	2	22	1	11	11	11	none	-	none	-	-	0	N-none, S-Parallel	10		1,000	30		local	0	brick	3	2	3.01	C	diagonal	N-concrete, S-concrete & parts brick	N-5, S-4	N-13, S-14	-	Y	Y	LO	N			N side has no sidewalk to brick to concrete	

Appendix C

Suitability Analysis

Suitability Analysis Criteria for Alternatives

Opportunities, constraints, and proposed alternatives were presented by CCRPC staff to the Stakeholder Committee in July 2020. As requested by the Stakeholder Committee, CCRPC developed 26 weighted criteria based on the opportunities and constraints to refine the proposed alternatives. Scores from this process were applied to the eight sections of this study: the north and south sides of Sections 1-4.

Following is information on how each criterion was scored, with no single criterion receiving more than 5 points.

Table A1: Suitablity Analysis Criteria for Alternatives

Category Ranking	Category	Variable	Sub class	Points	Rationale
1	Safety	Number of Road Intersections	None	No intersections = 5 points 1 intersection = 4 points 2 intersections = 3 points 4 intersections = 2 points	The fewer roads that cross the proposed KRT extension in each section, the more points are awarded, since there is less of a chance for a vehicle crash.
		Number of crashes within 5-year period	None	No crashes = 5 points 1-2 crashes = 4 points 3-5 crashes = 3 points 6-8 crashes = 2 points 9-10 crashes = 1 point	The fewer crashes that occurred in a section in recent history, the more points are awarded, since the section is considered safer.
		Bridges	None	No bridge = 5 points Boneyard Creek bridge = 2 Vine Street bridge = 1	The structural feasibility of existing bridges will need to be addressed during trail construction.

Category Ranking	Category	Variable	Sub class	Points	Rationale
2	Development Potential	Number of Buildings within 30 ft buffer	None	No building = 5 points 1 building = 4 points 2 buildings = 3 points 3 buildings = 2 points 4 buildings = 1 point 5 buildings = 0 points	The more buildings within the 30-foot buffer needed for trail access and development, the fewer points are awarded, since the buildings may have to be relocated.
		Closest Building Distance to Railroad Centerline	None	No building = 5 points Over 20-30 feet = 4 points 10-20 feet = 3 points Less than 10 feet = 2 points	The closer a building is to the railroad centerline; it will be less likely that a trail can be built around it and more likely that the building will need to be relocated.
		Floodplain Area Percentage	None	0% = 5 points Over 0%-25% = 4 points Over 25-50% = 3 points Over 50-75% = 2 points Over 75% = 1 point	The greater proportion of a section that is in the floodplain, the more difficult it will be to address environmental concerns during trail construction.
		Hydric Soil Percentage	None	0% = 5 points Over 0%-25% = 4 points Over 25-50% = 3 points Over 50-75% = 2 points Over 75% = 1 point	The greater proportion of a section that has hydric soil, the more difficult it will be to address environmental concerns during trail construction.
		Urban Soil Percentage	None	Over 75% = 5 points Over 50-75% = 4 points Over 25-50% = 3 points Over 0%-25% = 2 points 0% = 1 point	The greater proportion of a section that has urban soil, the better it will be to construct a trail.
3	Parcel Access	Parcels within 30 ft buffer	Railroad Parcels	No parcels = 5 points 1 parcel = 4 points 2 parcels = 3 points 3 parcels = 2 points 4 parcels = 1 point	The more railroad parcels within the 30-foot buffer needed for trail access and development, the fewer points are awarded.
			Private Parcels	No parcels = 5 points 1-5 parcels = 4 points 6-10 parcels = 3 points 11-15 parcels = 2 points 16 or more parcels = 1 point	The more private parcels within the 30-foot buffer needed for trail access and development, the fewer points are awarded.
4	EPA Facilities	EPA Facility sites	None	No sites = 5 points 1-3 sites = 4 points 4-5 sites = 3 points 6-8 sites = 2 points More than 8 sites = 1 point	The more EPA facilities within a section, the more difficult it will be to address environmental concerns during trail construction.
5	Community Support	Institutional Support	None	Larger area of a section = 5 points Some area of a section = 4 points No area of a section = 0 points	Supportive Stakeholder Committee agencies include Carle, the City of Urbana, and CUMTD. Points were awarded if any of these agencies' own property adjacent to the railroad in any of the sections, as it is assumed that these agencies will be cooperative in providing access for trail construction.

Category Ranking	Category	Variable	Sub class	Points	Rationale
6	Connectivity	Sidewalks	Length	More than 4 kilometers = 5 points >3-4 kilometers = 4 points >2-3 kilometers = 3 points >1-2 kilometers = 2 points 1 kilometer or less = 1 point	The more kilometers of sidewalk in a section, the better that pedestrians can use a dedicated facility to access the proposed KRT extension.
			Connections	8 connections = 5 points 6-7 connections = 4 points 4-5 connections = 3 points 2-3 connections = 2 points 1 connection = 1 point 0 connections = 0 points	The more sidewalks that directly connect to the rail corridor, the more points are awarded.
		On-Street Bikeway	Length	More than 0.8 kilometers = 5 points >0.6-0.8 kilometers = 4 points >0.4-0.6 kilometers = 3 points >0.2-0.4 kilometers = 2 points 0.2 kilometers or less = 1 point	The more kilometers of bikeways in a section, the better that bicyclists can use a dedicated facility to access the proposed KRT extension.
			Connections	2 connections = 5 points 1 connection = 3 points 0 connections = 0 points	The more on-street bikeways that directly connect to the rail corridor, the more points are awarded.
		Off-Street Trail	Length	More than 0.4 kilometers = 5 points >0.3-0.4 kilometers = 4 points >0.2-0.3 kilometers = 3 points >0.1-0.2 kilometers = 2 points 0.1 kilometers or less = 1 point	The more kilometers of trails in a section, the better that bicyclists and pedestrians can use a dedicated facility to access the proposed KRT extension.
			Connections	2 connections = 5 points 1 connection = 3 points 0 connections = 0 points	The more off-street trails that directly connect to the rail corridor, the more points are awarded.
		Bus Stop	None	10 or more stops = 5 points 7-9 stops = 4 points 4-6 stops = 3 points 1-3 stops = 2 points No stops = 0 points	The more bus stops in a section, the better that people can access the proposed KRT extension without a car.
		Parks	None	2 or more parks = 5 points 1 park = 4 points No parks = 0 points	The more parks in a section, the more attractions there will be for users of the proposed KRT extension.
		NRHP Site	None	2 or more historic places = 5 points 1 historic places = 4 points No historic places = 0 points	The more historic places in a section, the more attractions there will be for users of the proposed KRT extension.

Category Ranking	Category	Variable	Sub class	Points	Rationale
7	Economic Benefit	Number of commercial businesses	None	40 or more businesses = 5 points 31-40 businesses = 4 points 21-30 businesses = 3 points 11-20 businesses = 2 points 0-10 businesses = 0 points	The more businesses in a section, the better economic benefits the proposed KRT extension will bring to businesses in terms of visitors, sales, and land value.
		Number of residential parcels	None	40 or more homes = 5 points 31-40 homes = 4 points 21-30 homes = 3 points 11-20 homes = 2 points 0-10 homes = 0 points	The more residences in a section, the better economic benefits the proposed KRT extension will bring to residents in terms of trail access and land value.
8	Environmental Impact	Environmental benefits	None	5 environmental benefits = 5 points 4 environmental benefits = 4 points 3 environmental benefits = 3 points 2 environmental benefits = 2 points 1 environmental benefit = 1 point	The more environmental benefits that trail construction will have on a section, the more points are awarded.
9	Cultural Resource Impact	Potentially affected cultural resource	None	No cultural resources impacted = 5 points 1 cultural resource impacted = 4 points 2 cultural resources impacted = 3 points	The more cultural resources will be impacted by trail construction, the fewer points are awarded.
10	Aesthetics	Character adjacent to proposed KRT extension	Tree line	3 points for sections surrounded by trees	The more natural environment surrounding a section, the more points are awarded.
			Grass	2 points for sections surrounded by grass	
			Urban	1 point for sections surrounded by urban development without vegetation	

Table A2: Existing Transportation and Environmental Features within the KRT Extension Study Area

Section	Side	Number of Road Intersections	Number of Crashes	Bridge	Number of Buildings within 30ft Buffer	Closest Building Distance to RRCL	Floodplain Area %	Hydric Soil %	Urban Soil %	RR Parcels within 30ft buffer	Private Parcels within 30ft buffer	EPA Facilities	Institutional Support	Sidewalk Length (km)	Sidewalk Connections	On-Street Bikeway (km)	Bikeway Connections	Off-Street Trail (km)	Trail Connections	Number of Bus Stops	Parks	Historic Places	Commercial Land Use	Residential Land Use	Environmental Benefits	Other Cultural Resources (constraint)	Aesthetics
Section 1	**North Side**	1. Busey Avenue 2. Coler Avenue 3. Race Street 4. Broadway Avenue	10	1. Boneyard Creek	3	Buildings 18', 22', 27' from RRCL	9%	10%	64%	3	13	3	1. Carle	1.56	1. Busey Avenue east side 2. Coler Avenue west side 3. Coler Avenue east side 4. Orchard Street west side 5. Race Street west side 6. Race Street east side 7. Broadway Avenue west side	0.44	1. Coler Avenue bike route 2. Broadway Avenue bike lanes	0.33	1. McCullough Street sidepath 2. Boneyard Creek trail	6	1. Leal Park 2. Boneyard Creek	1. Cemetery (Leal Park) 2. Greek Revival Cottage	25	8	1. Soil benefit 2. Wildlife habitat 3. Air Quality 4. Protect Boneyard	1. Boneyard Creek	Grass border with a few sparse trees. Small greenspace on corner of Lincoln and University. Leal Park trees visible from rail line, but separated by a large parking lot. (+2)
	South Side	1. Busey Avenue 2. Coler Avenue 3. Race Street 4. Broadway Avenue	5	1. Boneyard Creek	3	Buildings 9', 14', 24' from RRCL	9%	19%	29%	3	11	2	1. City	5.42	1. Lincoln Avenue east side 2. Busey Avenue east side 3. Coler Avenue west side 4. Coler Avenue east side 5. Orchard Street west side 6. Race Street west side 7. Race Street east side 8. Broadway Avenue west side	0.70	1. Coler Avenue bike route 2. Broadway Avenue bike lanes	0.16	1. Boneyard Creek trail	2	1. Leal Park 2. Boneyard Creek	1. Station Theater 2. Clark R. Griggs House	60	71	1. Soil benefit 2. Wildlife habitat 3. Air Quality 4. Protect Boneyard	1. Boneyard Creek 2. Station Theater	First quarter of section is pavement/gravel until just after Coler Ave. Then grass border with a stand of trees just after Carle Hospital (+2)
Section 2	**North Side**	1. Vine Street 2. Maple Street	1	1. Vine Street	0	No buildings in 30ft buffer	56%	0%	100%	1	1	4	None	0.62	1. Broadway Avenue east side 2. Vine Street west side 3. Vine Street east side	0.17	1. Broadway Avenue bike lanes	0.00	None	5	None	None	8	0	1. Soil benefit 2. Wildlife habitat 3. Air Quality	None	Tree line from Vine-Maple St. Grass border the rest of the section. (+3)
	South Side	1. Vine Street 2. Maple Street	3	1. Vine Street	0	No buildings in 30ft buffer	4%	3%	78%	1	0	1	None	2.10	1. Broadway Avenue east side 2. Vine Street west side 3. Vine Street east side	0.76	1. Broadway Avenue bike lanes	0.00	None	8	None	None	18	0	1. Soil benefit 2. Wildlife habitat 3. Air Quality	None	Grass border with a few shrubs. There is a relatively large shoulder between Schnucks and the rail line, which may be suitable for plantings (+2)
Section 3	**North Side**	None	1	None	4	Buildings 25', 27', 27', 28' from RRCL	0%	0%	100%	3	1	9	1. CUMTD	0.00	None	0.00	None	0.00	None	12	None	None	12	0	1. Soil benefit 2. Wildlife habitat 3. Air Quality	None	Urban border. Emulsicoat followed by the CUMTD offices. (+1)
	South Side	None	2	None	1	Building 17' from RRCL	0%	9%	13%	3	20	4	None	3.18	1. Lynn Street west side 2. Poplar Street west side	1.15	None	0.02	None	12	1. Victory Park	None	19	74	1. Soil benefit 2. Wildlife habitat 3. Air Quality	None	Tree line along residential property for whole section (+3)
Section 4	**North Side**	1. Smith Road	0	None	0	No buildings in 30ft buffer	0%	4%	57%	4	4	2	None	0.48	None	0.00	None	0.00	None	4	None	None	11	0	1. Soil benefit 2. Wildlife habitat 3. Air Quality	None	Tree line after siding for the entire section (+3)
	South Side	1. Smith Road	2	None	5	Buildings 20', 21', 26', 29', 30' from RRCL	0%	21%	0%	4	12	1	None	1.11	None	1.19	None	0.41	None	11	1. Weaver Park	None	0	41	1. Soil benefit 2. Wildlife habitat 3. Air Quality	None	Tree line along entire section (+3)

Table A3: KRT Extension Suitability Analysis Scores

Section	Side	Road Intersections	Number of Crashes	Bridge	Buildings within 30ft Buffer	Closest Building Distance to RRCL	Flood plain	Hydric Soil	Urban Soil	Railroad Parcels within 30ft	Private Parcels within 30ft	EPA Facilities	Institutional Support	Sidewalk Length	Sidewalk Connections	On-Street Bikeway Length	On-Street Bikeway Connections	Off-Street Trail Length	Off-Street Trail Connections	Bus Stop	Parks	NRHP Sites	Commercial Land Use	Residential Land Use	Environmental Benefits	Cultural Resource mpact	Aesthetics	**Final Score**
Section 1	**North Side**	2	1	2	2	3	4	4	4	2	1	4	5	2	4	3	5	4	5	3	5	5	4	1	4	4	2	**85**
	South Side	2	3	2	2	2	4	4	2	2	1	4	4	5	5	4	5	2	3	2	5	5	5	5	4	3	2	**87**
Section 2	**North Side**	3	4	1	5	5	2	5	5	4	4	3	0	1	2	1	3	1	0	3	0	0	1	1	3	5	3	**65**
	South Side	3	3	1	5	5	4	3	5	4	5	4	0	3	2	4	3	1	0	4	0	0	2	1	3	5	2	**72**
Section 3	**North Side**	5	4	5	1	4	5	5	5	2	4	2	4	1	0	1	0	1	0	5	0	0	2	1	3	5	1	**66**
	South Side	5	4	5	4	3	5	4	2	2	1	3	0	4	2	1	0	1	0	5	4	0	2	5	3	5	3	**73**
Section 4	**North Side**	4	5	5	5	5	5	4	5	1	4	4	0	1	0	1	0	1	0	3	0	0	2	1	3	5	3	**67**
	South Side	4	4	5	0	4	5	4	1	1	2	4	0	2	0	1	0	5	0	5	4	0	1	5	3	5	3	**68**

Table A4: Potential KRT Alignment Scores

Alternative	Section 1	Section 2	Section 3	Section 4	Final Score
1	N	S	S	S	298
2	N	N	S	S	291
3	N	N	N	S	284
4	N	N	N	N	283
5	S	N	N	N	285
6	S	S	N	N	292
7	S	S	S	N	299
8	S	S	S	S	300
9	N	N	S	N	290
10	N	S	N	N	290
11	N	S	N	S	291
12	S	N	S	N	292
13	S	S	N	S	293
14	S	N	S	S	293
15	N	S	S	N	297
16	S	N	N	S	286

Table A5: Selected Alternatives for Public Input

Alternative	Section 1	Section 2	Section 3	Section 4	Total Score	Alternative # for Public Comment Period
8	S	S	S	S	300	1
1	N	S	S	S	298	2
15	N	S	S	N	297	3
7	S	S	S	N	299	4
4	N	N	N	N	283	5

N = North Side of the NSRR Line
S = South Side of the NSRR Line

Appendix D

Fall 2020 Public Comment Period Results Report

Comment Form Background

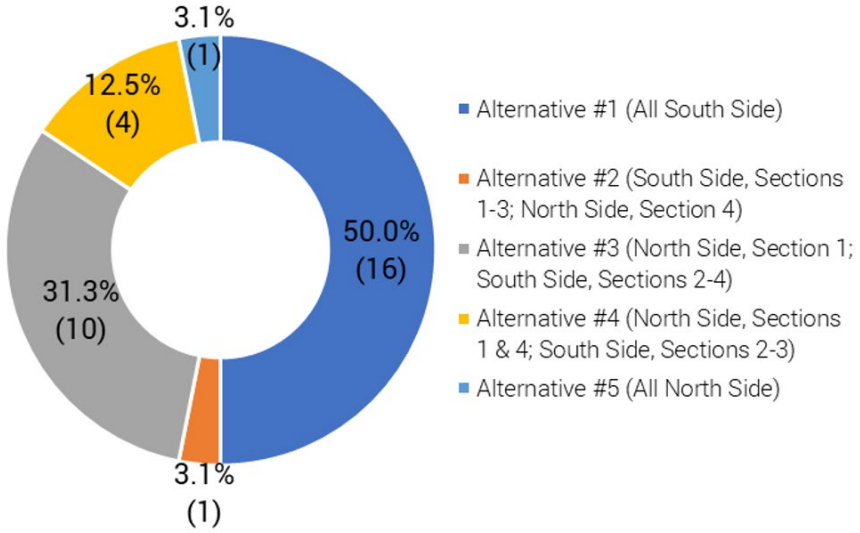
The Urbana Kickapoo Rail Trail (KRT) Extension Study 30 Day Public Comment Period was open from Thursday, October 1, 2020 through Friday, October 30, 2020. On the CCRPC website, staff provided a brief project background summary, Chapters 1-7 of the draft report (with Chapters 8 and 9 being completed after the public comment period), maps and descriptions of the top five alternatives, and a schedule of upcoming project presentations. Residents and stakeholders were asked to review the alternative maps and/or the draft report chapters to become familiar with the study, and then were invited to complete the digital Comment Form.

The Comment Form was provided as a Google Form for people to submit their comments directly online, and also as a PDF that people could submit by email or mail. The Comment Form asked five questions, listed below.

1. What is your preferred alternative? (Select between Alternatives #1-5.)
   - Please explain why.
   - Is there anything you would change about this alternative?
2. Do you have any other comments or concerns regarding any of the other alternatives or information in the report?
3. How often would you use the KRT extension if it was built? (Multiple choices were provided.)
4. If this KRT extension is built, what purpose(s) do you envision using the trail for? Check all that apply. (Multiple choices were provided.)
5. How did you hear about this public comment period? Check all that apply. (Multiple choices were provided.)

32 people responded to the Comment Form during the Public Comment Period. Following are the results.

Comment Form Question 1a. What is your preferred alternative?



Q1a. What is your preferred alternative?	Number of responses	%
Alternative #1 (All South Side)	16	50.0%
Alternative #3 (North Side, Section 1; South Side, Sections 2-4)	10	31.3%
Alternative #4 (North Side, Sections 1 & 4; South Side, Sections 2-3)	4	12.5%
Alternative #2 (South Side, Sections 1-3; North Side, Section 4)	1	3.1%
Alternative #5 (All North Side)	1	3.1%

Comment Form Question 1b. Please explain why.
Comment Form Question 1c. Is there anything you would change about this alternative?

#	Q1a. What is your preferred alternative?	Q1b. Please explain why:	Q1c. Is there anything you would change about this alternative?
1	Alternative #1 (All South Side)	Connecting with Coler Ave. Is important as it is the best bike route to the north end from campus. I believe this route would highlight the Boneyard Creek renovations best.	There needs to be signage. Indicating an alternative route to the Green St. MCORE project at Race St. and Green. It would route people down Race St. through downtown highlighting a possible newly renovated hotel and beautiful new sidewalks down Green St.
2	Alternative #1 (All South Side)	Fewer back and forth crossings, more connectivity means it is easier for people to access and use it. As a recreational bicyclist or a runner, switching back and forth across the tracks would be annoying (like the 90 degree turn/bridges in Meadowbrook, where pedestrians and especially children can be unpredictable)	I alternatively would like the all Northside alternative, as it also doesn't cross back and forth
3	Alternative #1 (All South Side)	I believe that it integrates best with bike facilities in Urbana and is the most aesthetically pleasing.	No
4	Alternative #1 (All South Side)	I think it would make it easier for me to access the trail	No.
5	Alternative #1 (All South Side)	I'd prefer to avoid crossing a major street.	no
6	Alternative #1 (All South Side)	I'm a fan of it because of the length of off-street trail. I'm a chicken about riding in traffic. I only ride the KRT from St. Joe to Mt. Olive Cemetery. That's as far as I can make it! ;-) It also continues straight from where it leaves off at Walmart and ends at the new development on Lincoln Ave.	As a park district person, I DO like the ones on the north side after crossing the boneyard because that gives riders access to Leal Park.
7	Alternative #1 (All South Side)	It appears to have the least street interaction and train line crossing. Also, the least flooding potential is important for the spring months.	No.
8	Alternative #1 (All South Side)	It is the best route, it doesn't require people to cross University which is an awful road, it connects well to the community, and can connect well with the Boneyard pathway.	I would like to see it extended through downtown connecting with the Boneyard and continuing into campus.
9	Alternative #1 (All South Side)	It seems to connect to central Urbana and does not necessitate rail crossings	The acquisition of a lot of private land seems difficult and expensive
10	Alternative #1 (All South Side)	Least bad option according to alternative analysis (Ch 8)	n/a
11	Alternative #1 (All South Side)	Less interactions with motorized vehicles	Unsure

#	Q1a. What is your preferred alternative?	Q1b. Please explain why:	Q1c. Is there anything you would change about this alternative?
12	Alternative #1 (All South Side)	My primary concern is that the KRT be part of a network of easy to use and safe bike facilities in Urbana. It's no use if short segments of wonderful bike routes are broken up by terrible, dangerous segments. Connecting the KRT extension to the existing bike routes in Urbana is best.	No
13	Alternative #1 (All South Side)	No street crossing, better access to parks and features, and better side of the street.	No
14	Alternative #1 (All South Side)	Section 1) Although it is nice to have the support of Carle Hospital as the first precedence of community support BUT most students access point is in the south and I feel south has a greater contact point to the population. 2) Simply due to north has lots of flood points 3) Since sec 1 and 2 are on south, it makes sense to continue on south 4) Changing to north here reduces accessibility and I think accessibility to the trail is very important Overall, although it mentioned that south part of the railroad poses more challenge due to the hydric soil but I think it provides greater accessibility to the population and is closer to downtown, which gives the trail a more exciting selling point.	It is a great opportunity to make the beautiful Station theatre to be seen. I propose to have a bike parking lot on the west side of the station theatre for both accessing the Boneyard Creek park and the theatre and also downtown.
15	Alternative #1 (All South Side)	Seems to be the most accessible and safe for cyclists.	I don't know enough to suggest changes.
16	Alternative #1 (All South Side)	The ability to access the trail easily from Urbana streets/neighborhoods is of highest importance. Also by placing the trail on the south side, it helps to create a green space buffer between the rails & homes.	No
17	Alternative #2 (South Side, Sections 1-3; North Side, Section 4)	I'm on the South side in section 4; there are trees within 30 feet of the Tracks; they screen my yard from the industries and stores behind us. If the trail DOESN'T interfere with the trees, then all south side is fine! Can someone look over the area with me?	Not really...I'm looking forward to having the trail.
18	Alternative #3 (North Side, Section 1; South Side, Sections 2-4)	avoids impacting the Station Theater and the Emulsicoat facility.	none
19	Alternative #3 (North Side, Section 1; South Side, Sections 2-4)	Best connection to Carle	Yes, I would put it north on most of section 3 from Maple through MTD to provide access to Ambucs Park and E University where bikes can't go now. So mine would be more like NSNS

#	Q1a. What is your preferred alternative?	Q1b. Please explain why:	Q1c. Is there anything you would change about this alternative?
20	Alternative #3 (North Side, Section 1; South Side, Sections 2-4)	Biggest reason why-- avoids the narrow area near the Station Theater. Other pros include the visibility at Lincoln and University of the path being on the north side. Also crossing the railroad line at Broadway avoids the complex and difficult notion of creating a new crossing. While the railroad spur crossing will be difficult, I see the spur as a great opportunity to connect the neighborhoods on the south to the trail in the future. Is it easier to get a crossing of the spur than the main rail line?	None.
21	Alternative #3 (North Side, Section 1; South Side, Sections 2-4)	Connectivity to Carle, greatest off-street trails, avoids conflict with Station Theatre and Emulsicoat facility.	No
22	Alternative #3 (North Side, Section 1; South Side, Sections 2-4)	I like the fact that Carle would be involved with Section 1, and the fact that it has the greatest amount of off street trails.	Look at acquiring some of the properties along the trail to add additional areas with which to access it.
23	Alternative #3 (North Side, Section 1; South Side, Sections 2-4)	I would prefer the all south side option but this one avoids the station theater.	No
24	Alternative #3 (North Side, Section 1; South Side, Sections 2-4)	None of these 5 options are what would serve my trail needs	Yes, See #2
25	Alternative #3 (North Side, Section 1; South Side, Sections 2-4)	Staying north on section 1 will allow easier access to the Carle campus and Crystal Lake Park, both of which should be major destinations. Plus Carle could use this as an amenity, and help with development/funding/promotion of the trail. The rest of the trail should go on the south for improved aesthetics, better access, and staying further away from commercial/industrial areas and busy University Avenue/150. Also, this avoids the space conflict with The Station Theater. This is my opinion as a serious cyclist. As for costs, soil types, flooding risks, property acquisition, etc. I will leave those decisions to the experts. Any of the five options that can be undertaken and completed in a reasonable time frame and at a reasonable cost, would be a fantastic improvement to Urbana.	No. My second choice would be option 1. All south.
26	Alternative #3 (North Side, Section 1; South Side, Sections 2-4)	The connectivity with Carle and other assets in Section 1 seems too good to pass up, and the score of this option was nearly identical to options 1 and 2	No.
27	Alternative #3 (North Side, Section 1; South Side, Sections 2-4)	This alternative seems to have the most positives - accessibility, availability of suitable soil for construction and avoiding the Station Theater and Emulsicoat facility.	No

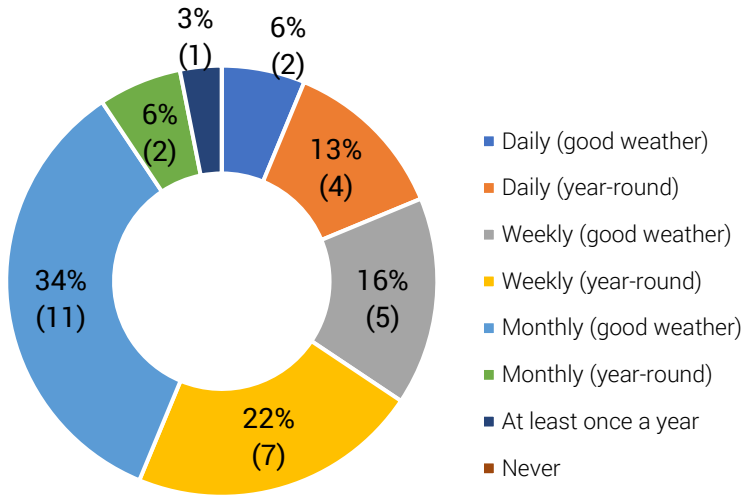
#	Q1a. What is your preferred alternative?	Q1b. Please explain why:	Q1c. Is there anything you would change about this alternative?
28	Alternative #4 (North Side, Sections 1 & 4; South Side, Sections 2-3)	Honestly, I love the KRT and think the park district, City, and Forest preserve district can decide the best route for the extension. I only chose this one because it mentions utilizing the more "aesthetic" features of the trail. But honestly, being 20-100 feet to one side or the other doesn't seem like it will effect the user as much as it may effect the cost of the project, ease of construction, ease of future development, etc. I think those in charge of the nuts and bolts of this operation are likely the ones who should make the final call on the exact route- I will use it regardless of what route they choose, as I expect most other users will as well.	I trust those in charge of the project to change it as necessary to save money, increase accessibility, add aesthetics, etc.
29	Alternative #4 (North Side, Sections 1 & 4; South Side, Sections 2-3)	Most aesthetically pleasing. Avoids Station theater and Emulsicoat	Incorporating a section that travels next to Carle campus. Not sure if this is covered by another one.
30	Alternative #4 (North Side, Sections 1 & 4; South Side, Sections 2-3)	Partnership w Carle, avoids Emusicoat, aesthetics	No
31	Alternative #4 (North Side, Sections 1 & 4; South Side, Sections 2-3)	Section 1 should be on the north side to work with Carle and the Station Theatre	no
32	Alternative #5 (All North Side)	Connection to Carle was the main deciding factor. Partnering the development of KRT with a large employer that is also health- and wellness-related seems like a good idea.	Limited conflict points between road and trail traffic should be paramount. The fewer the better.

Comment Form Question 2. Do you have any other comments or concerns regarding any of the other alternatives or information in the report?

#	Q2. Do you have any other comments or concerns regarding any of the other alternatives or information in the report?
1	A pedestrian walkway over University Ave. is needed. Race St. would be the best location. Biking across University Ave. with children is a serious anxiety inducer. Traffic flow is only going to increase with the new apartment complexes along University Ave. A pedestrian bridge would tie into the Boneyard Creek and rails to trails network perfectly and give easier access to a newly renovated crystal lake park.
2	Alt. #1 is my second choice.
3	Any that have section 1 on the north side would be fine with me
4	Fewer street crossings is better overall for the trail
5	Highly encourage paved surface, especially wherever the trail crosses roads, sidewalks, etc- braking is much improved on pavement compared to gravel to decrease likelihood of accidents- I honestly am disappointed the entire length of the entire KRT is not paved. My bikes can ride the gravel just fine, but you would have better usership and less maintenance on pavement, though greater investment up front... but let's just think about how much money is spent on car use only pavement in this county every year... it would be a drop in the bucket to pave the whole thing.
6	I am a member of Rails to Trails and would like to see the trail extend a short distance from the Urbana Walmart to Riggs Brewery along High [Cross] Rd which would then connect many other trails.
7	I know there is SO much to consider, but I feel like the less time crossing back and forth over the tracks, the better. As a more novice rider, I would appreciate benches often along the way for breaks, too.
8	I wasn't able to read and understand the maps of the alternative routes very well. The size of the maps was small, at least on my computer/set up.
9	I wish we could make Main St a bike blvd and bypass the need for building a lot of new infrastructure.
10	I would like to see the trail continue along the rail line potentially connecting it to downtown Champaign and beyond.
11	I'm unclear what the width/material of path is supposed to be based on the plan
12	Including flashing lights at street crossings and marked crosswalks for bikes would be valuable for safety.
13	It seems a little overly reliant on existing conditions that are likely to change.
14	No
15	No
16	No
17	No
18	No
19	No
20	No
21	No
22	No
23	No concerns, the report is well done. The environmental section was particularly interesting and thorough, and the analysis of the report as a whole sets Urbana up for KRT extension/ implementation sooner rather than later.
24	No, other than concern about finding the funds to build it.
25	None
26	No--report was very informative and appeared to be thorough.

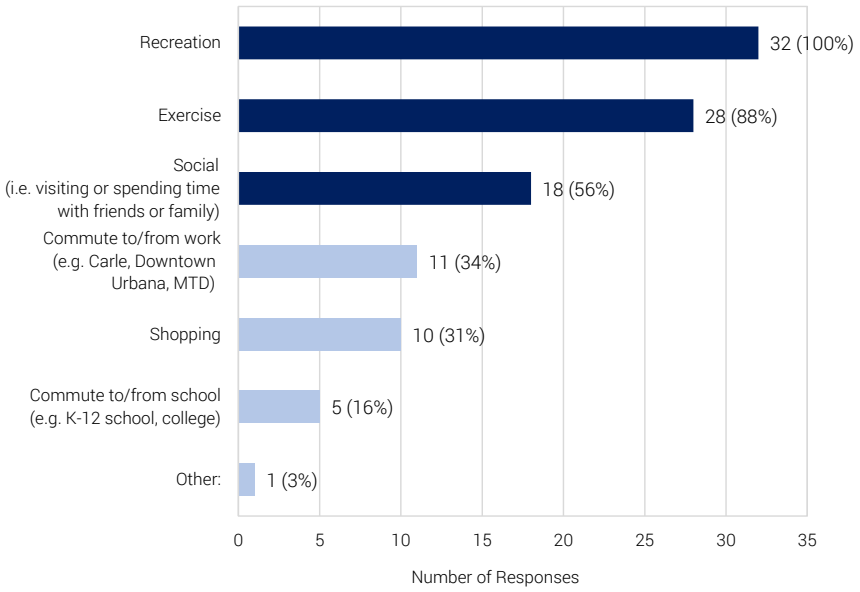
#	Q2. Do you have any other comments or concerns regarding any of the other alternatives or information in the report?
27	Please include well marked/signed crossing notices for drivers where the trail would cross any streets. To me, that is the most dangerous aspect of a trail in town. Drivers who fail to slow down or yield at the crossing will deter use of the trail. Please don't cut down a bunch of trees to construct the trail. This destroys the aesthetics that the trees provide. I would rather have a cheaper trail surface and have the trail get built, then wait many years until money is available for asphalt of concrete. Crushed limestone is better than nothing.
28	Staying away from the Emulsicoat factory is a high concern
29	Thank you for working on a KRT extension!
30	The Broadway bike lane is a joke - the paint is fading, the motor traffic moves too fast and it ends abruptly in a weird slip lane crossing University northbound that makes it unclear who's supposed to yield.
31	The maps are hard to read on my monitor.
32	These choices are not user friendly for the everyday person. You will only get feedback from people who know the plan, can read planning documents or have high interest in the project. Maybe next time link to a video with Gabe explaining the choices while showing the maps.

Comment Form Question 3. How often would you use this KRT extension if it was built?



Q3. How often would you use this KRT extension if it was built?	Number of responses	%
Monthly (good weather)	11	34%
Weekly (year-round)	7	22%
Weekly (good weather)	5	16%
Daily (year-round)	4	13%
Daily (good weather)	2	6%
Monthly (year-round)	2	6%
At least once a year	1	3%
Never	0	0%

Comment Form Question 4. If this KRT extension is built, what purpose(s) do you envision using the trail for? (Check all that apply.)



Other:

- Bragging about it

Comment Form Question 5. How did you hear about this public comment period?

How did you hear about this public comment period?	Number of responses	%
Email	11	34.4%
Facebook	11	34.4%
Smile Politely	7	21.9%
Word of Mouth	6	18.8%
Twitter	3	9.4%
Champaign County Bikes Google discussion group	1	3.1%
City of Urbana posting	1	3.1%
It's All About U e-newsletter	1	3.1%
News-Gazette	1	3.1%

Comment Form Respondents' hometown:

- Urbana = 75% (24)
- Champaign = 18.8% (6)
- Mahomet = 3.1% (1)
- St. Joseph = 3.1% (1)

Comment Form Respondents' residence:

- Outside study area in Urbana = 66% (21)
- Outside Urbana = 33.3% (8)
- Within study area = 12.5% (3)

Background of Letters to Adjacent Property Owners

In the Fall of 2020, the City of Urbana worked with CCRPC to send an informational letter about this study to 55 people. Letters were sent to all property owners and residents of the 72 properties that fall within the 30-foot buffer from the railroad centerline. The letters informed people that the study partners may be interested in accessing the land within the 30-foot buffer to extend the KRT in the future. However, the letter stated that no land acquisition is occurring at this time, and will not occur without cooperation between the City of Urbana and property owners.

People were invited to review the study and submit comments to the City of Urbana and CCRPC staff. Three out of the 38 property owners responded to this letter.

Responding Property Owner #1: Carol Deck

To; Carol Mitten, Gabe Lewis, and the Urbana Town Council,

Subject; Kickapoo Rail Trail (KRT) the acquiring of land from the citizens of Urbana, Il. Ward 5, For the use of a bike path from Smith Road to Lincoln avenue on the north side of the Railroad tracks.

My family and I have lived in Urbana (specifically on Cottage Grove, North of Main street) for the past 70 plus years. In that time the city and neighborhoods have changed and grown, sometimes for the better and some not much.

My late Husband (Robert Eugene Deck) and my older late Son (Rickey Eugene Deck) would be furious to find out the land that we had cleaned up and brought from a weed and tree infested rail siding, and fought for (Including with the City of Urbana), could be just callously swept away with just a letter and an excuse of an impending "Bike Trail".

If this KRT Bike trail goes through on the mentioned 30' south side of the center of the track, I am sure that this will effect more than just my property value and security, Along with every included homeowners properties along the adjoining south side of the tracks, Also the removal of land will effectively eliminate the access to my garage. M**aking the driveway access to my back yard and garage useless**.
I must also mention the criminal element along with the vandalism. Installing the trail on the south side of the Railroad Instead of the north side of the tracks will without a doubt bring to this fear to a reality for this community. This will effectively make an easier target to every residential home and business along the trail to criminals and others that would do harm to our peaceful neighborhood and the good people that reside there. Not to mention the logistics to police protection along the trail, in such remote locations this would be another hurdle that our now overworked police department would have to overcome. What a nightmare!

So far, we have seen the KRT Bike Trail installed from East Main street in Urbana along the deserted tracks to the east side of St Joseph. This path is relatively going through some peaceful rural and small-town neighborhoods. We have yet to see just what will happen if it goes through a larger town i.e. Danville, Champaign or Urbana, nor do I want to see this approximately 8 feet from my own house and back yard.

The City of Urbana has installed a Bike path along Main street from the Trail end on East Main street through the Heart of the downtown area that continues west to the Campus town area. why is this not enough or better than the taking of property of this community and following the Railroad tracks that is much further away from the downtown business that you want to promote or Campus area for the Students,

Carol Deck
116 N. Cottage Grove
Urbana, IL. 61801

From: Rob -N- Jeannie Deck
To: cjmitten@urbanaillinois.us; citycouncil@urbanaillinois.us; Gabriel Lewis
Subject: Re: KRT Carol Deck opposition
Date: Thursday, October 1, 2020 9:11:30 AM
Attachments: image003.jpg
Carol Deck vs the KRT.docx

CAUTION: External email, be careful when opening.

Council Members of the City of Urbana,
Please see the attched for the comments to the opposition of the rail to trials (KRT) proposed path south side of the rail road tracks.
Carol Deck

-------- Original message --------
From: "Mitten, Carol" <cjmitten@urbanaillinois.us>
Date: 9/21/20 3:10 PM (GMT-06:00)
To: "'r.deck@hotmail.com'" <r.deck@hotmail.com>
Subject: KRT Study

Mr. Deck:

Thank you for getting in touch with me to give feedback regarding your mother's concerns about the Kickapoo Rail Trail extension into Urbana. The Regional Plan Commission, which is leading the study of the extension, will present their findings to the Urbana City Council on Monday, October 5, 2020 at 7:00 pm.

Although you are welcome to attend the meeting via Zoom (the meeting notice will be posted here), you may also share your feedback with the Council via email: CityCouncil@UrbanaIllinois.us. Please also copy Gabe Lewis, the lead planner on the project (glewis@ccrpc.org), on your email to the Council.

You may send your comments at any time leading up to the meeting on October 5 and your email will be distributed to all Council members and the Mayor. However, if you want your comments incorporated into the official meeting record of the October 5 Council meeting, please send them between 8:00 am and 4:00 pm on October 5.

In the meantime, if you have any additional questions, please feel free to contact me.

Thanks,

Carol

Carol J. Mitten
City Administrator

Responding Property Owner #2: Lester B. Johnson

From: Cindy Johnson
To: CityCouncil@UrbanaIllinois.us
Cc: Gabriel Lewis
Subject: Property owned by Lester B. Johnson at 303 N. Mccullough St., 401 N. Coler, 710 and 712 W Clark Street, Urbana
Date: Monday, October 5, 2020 8:18:44 AM

CAUTION: External email, be careful when opening.

Council Members: Regarding the proposed bike trail along the above mentioned properties: those properties are zoned for business and when the rest of the railroad tracks come out, which they will, it would be a great place for a block long plaza. But not with a bike trail in the middle of it. It would completely kill that plan. Also, it would take up much needed parking of Carle Clinic and hospital.

Thank you. Lester B. Johnson

Responding Property Owner #3: Urbana-Champaign Friends Meeting

From: Charlotte Green
To: Gabriel Lewis
Subject: Kickapoo Rail Trail
Date: Wednesday, October 14, 2020 10:18:20 AM

CAUTION: External email, be careful when opening.

Hello Gabe,

I am the clerk of the Urbana-Champaign Friends Meeting. We are located at 1904 E. Main St., Urbana. We received a letter recently from the City of Urbana, indicating that our property abuts the railroad, and that the plans for KRT construction will be on the north or south side of the tracks. I want to make sure I understand what impact the KRT would have on our property if it is constructed on the south side of the railroad tracks. From the letter, it sounds like the path would extend 30 feet from the center of the railroad track into our property. Is that correct?

Thanks,
Charlotte Green