

CITY OF CHARLESTON BICYCLE PLAN

*Adopted by City Council
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City of Charleston
520 Jackson Ave
Charleston, IL 61920

Funded by: The Lumpkin Family Foundation
Prepared By: Ride Illinois



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1 Introduction/Executive Summary

Biking is a popular activity, a moderate form of exercise within the physical capabilities of most people. However, it need not be limited to weekend outings on designated trails or quiet rural roads. Although cycling is often thought of as just for recreation and exercise, nearly half (43%) of all bike trips are destination-based¹—and many more would be if better facilities existed.

Biking can be a great form of transportation, especially for short, local trips. National data indicate that 27% of all car trips are one mile or shorter; 40% are less than two miles. When cycling conditions are improved, people are more willing to use bikes instead of cars for these short trips—which benefits their health, pocketbooks and surrounding air quality.

Besides those who bicycle by choice, there are many Charleston residents – including children, many teenagers, Eastern Illinois University students, and some low-income workers – who depend on cycling as a transportation necessity. Whether for choice or necessity, transportation by bicycle is made safer and more inviting when a city designates a network of connected on-road and off-road bikeway segments throughout town.

The City of Charleston has adopted local comprehensive plans (1996 Charleston Tomorrow Plan, 1999 Comp Plan & 2009 Comp Plan Update) for the purpose of creating a general framework for the future growth development of the Cities. This includes considerations for alternate modes of surface transportation which have been part of local planning efforts for years. A major part of those plans is to encourage alternative modes of travel throughout the region & improving surface transportation alternatives. Following the County’s Recreation Plan, Charleston’s planning efforts continued in 1996 with the development of the “Charleston Tomorrow Strategic Plan” which was a product of local input and investment. In 1996, the Charleston Tomorrow Plan stated as its goals to “encourage use of bike trails” and “develop walk / run/ bike tours” throughout the City. In 1999 (and in its update of 2009), the Charleston Comprehensive Plan was developed which specifically included the development of pedestrian and bicycle paths which were incorporated as part of the plan’s Capital Improvement Plan. The Charleston Comprehensive Plan also stated as its goals to develop pedestrian linkages between parks and other major land uses to encourage physical activity and alternative mode of travel throughout Charleston. This comprehensive bike plan addresses those transportation goals and will be incorporated into the City’s Comprehensive Plan documents.

The City of Charleston has developed and will be creating a paved multi-modal transportation corridor called the Lincoln Prairie Trail (which IDOT has included in its Long Range State Transportation Plan (2012) as it "may be an option for transportation purposes") on the north side of town and to Mattoon, 6th and 7th Street bike lanes between downtown and EIU, campus area bike lanes on 4th Street and Grant Avenue, and off-road trails by Lake Charleston. The City, The Lumpkin Family Foundation, and Grand Prairie Friends are also working toward a trail connecting the city with Fox Ridge State Park. This proposed bike network will serve as critical connection points and multi-modal transportation links from Mattoon’s Amtrak train

¹ 2001 National Household Travel Survey

station; and throughout Charleston to the campus of EIU to Lake Charleston, Grand Prairie Friends and Fox Ridge State Park. The trail will connect regional facilities and will provide commuter connections and enhance travel and recreational opportunities which will create a key transportation facility.

To build off these efforts, The Lumpkin Family Foundation funded Ride Illinois' work with the City to plan for bikeway networks and programs facilitating travel on two wheels throughout Charleston.

Bicycle Plan outline

Chapter 2 of this plan explains the types of on-road and off-road bicycle facilities needed for a bikeway network in Charleston. The primary target audience for the additions is the “casual adult” bicyclist, although the needs of advanced cyclists and children are both addressed. A thorough analysis is used to determine which option – if any – is appropriate for each of the “routes to study” suggested by the public at an August 3, 2017 public brainstorming workshop and otherwise. As described in Chapter 3, criteria include need, cost, technical factors, and strategies to gain public support while avoiding common bike plan pitfalls.

Chapter 4 details the specific recommendations for the bikeway network. These include an array of bikeways – mostly on-street:

- Signed bike routes, e.g., Woodlawn, 20th, McKinley, parts of Harrison and Grant
- Bike lanes, e.g., most of 9th and E Street/University, parts of Polk and Garfield, as well as Roosevelt and Woodfall
- Buffered bike lanes, e.g., 6th and 7th between downtown and EIU, south 4th, and westbound Grant
- Shared lane markings, e.g., parts of 6th and 7th, Polk, 4th, 9th, and Harrison
- Combined bike/parking lanes on most of Reynolds
- Striped “urban shoulders” on part of Garfield
- Widening of the sidewalk along 18th
- Remedying demand-actuated stoplights not triggered by on-road bicycles
- Posting wayfinding signage for the network

The chapter includes maps and tables for easier comprehension of the recommendations. It also has text with details on some key route recommendations, including Lincoln Prairie Grass Trail road crossings and other improvements, possible trail routings to Lake Charleston and Fox Ridge State Park, possible improvements on the Eastern Illinois University campus, implementation of specific bike lanes, and the transition from 4th Street to 6th/7th Streets by Lincoln. For the latter, some right-of-way acquisition is needed on the north side of Lincoln, between 6th and 7th.

Chapter 5 suggests specific road design standards on bicycle and pedestrian accommodation, as part of a “complete streets” ordinance recommendation for use when roads are reconstructed or new roads built. References are given for bike-friendly development ordinances.

Chapter 6 identifies easy-to-use (and often free) resources and strategies to leverage infrastructure investment with bicyclist education, motorist education, enforcement, and encouragement efforts. In addition, recommendations are offered on retrofitting bicycle parking where needed and adding bike parking requirements to the City development ordinance.

Chapter 7 recommends implementation strategies, which may include opportunistic and stand-alone projects in the City's Capital Improvement Program. Sample costs of various bikeway types are listed, along with funding and grant suggestions. Establishment of a Bicycle/Pedestrian Advisory Commission and designation of a staff bike/ped coordinator are described as key steps to implementation. The plan calls for an annual implementation report to track progress. Finally, Charleston's path to national Bicycle Friendly Community designation is discussed.

The appendices cover the August 3, 2017 public brainstorming workshop input, the route segment data collection and analysis spreadsheet with details for the City's implementing staff, external grant source strategies and tips, and a graphical summary of national Bicycle Friendly Community designation.

Ride Illinois would like to thank The Lumpkin Family Foundation for its generous support.

2 Bikeway Types in the Charleston Plan

Standards and Guidelines

The 2012 *Guide for the Development of Bicycle Facilities* by the American Association of State Highway and Transportation Officials (AASHTO), the Federal Highway Administration’s (FHWA) Manual of Uniform Traffic Control Devices (MUTCD), and the NACTO Urban Bikeway Design Guide (NACTO) form the technical basis for the plan’s recommendations.

These references are recognized by the industry as the standards for bicycle facility design. The Illinois Department of Transportation encourages communities to consult these guidelines and standards when developing bicycle plans.

After a description of the recommended network wayfinding signage, a general overview of bicycle facility options follows. More engineering details are in the publications.

Bike Network Wayfinding Signage

The recommended bicycle network of Chapter 4 will include a variety of mostly on-road and some off-road bikeway types. For each of these, bicycle network signage can serve both wayfinding and safety purposes including:

- Helping to familiarize users with the bikeway system
- Helping users identify the best routes to significant destinations
- Helping to overcome a “barrier to entry” for people who do not bicycle much but who want to get started
- Alerting motorists to expect bicyclists on the route



Figure 2.1. Recommended network wayfinding signs. Left: D1-3b Middle: D1-2c Right: D11-1c

It is recommended that Charleston adopt wayfinding conventions consistent with the MUTCD and Section 4.11 of the 2012 AASHTO bike guide. Signs should be installed on each designated on-road or off-road segment of the network. Figure 2.2 illustrates signage placement.

In general, signs should be placed where a route turns at an intersection, crosses another route, and crosses major intersections. The D1-nb series (Figure 2.1, left) is recommended, with D1-nc (Figure 2.1, center) used where destination distance is far enough to show mileages. The

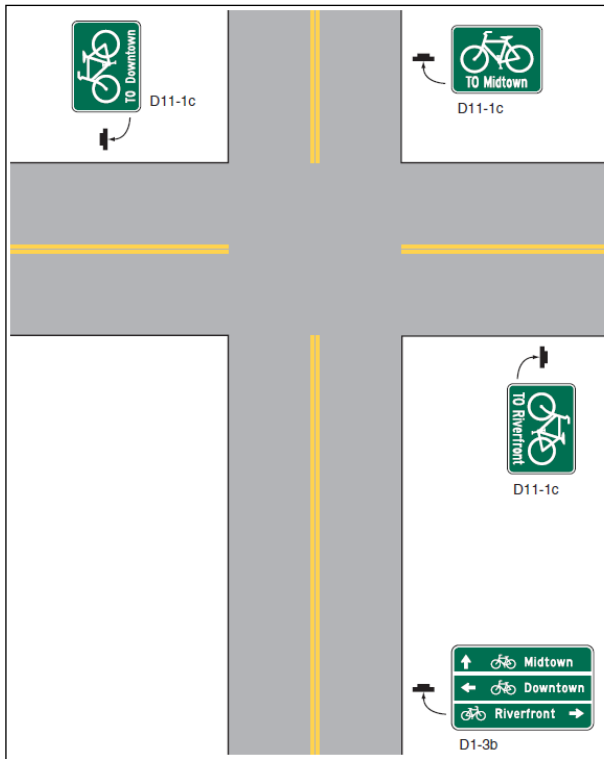


Figure 2.2. Example of signage placement.

D11-1c confirmation signs (Figure 2.1, right) should be placed periodically, too. Besides MUTCD, the NACTO guide gives detail on signage content and placement.

The City of Des Plaines, IL provides an interesting example to consider: proposed 7.5” X 4” stickers on the backs of their bikeway wayfinding signs. The city’s bicycle webpage and corresponding QR code are listed. The webpage has background information – and bikeway maps.



Figure 2.3. DesPlaines QR code sticker.

Trails

Multi-use trails are physically separated from motor vehicle traffic, except at road crossings. Trails accommodate a variety of users, including pedestrians, bicyclists, and others, for both recreation and transportation purposes. Trails away from roads, on easements or their own rights-of-way, tend to be more pleasant and popular. The Lincoln Prairie Grass Trail is the best example in Charleston.



Figure 2.4. Multi-use trail on its own right-of-way

Sidepaths

Sidepaths are trails running immediately parallel to a roadway, essentially a widened sidewalk. Compared to trails on their own rights-of-way, most sidepaths have a larger fraction of use for transportation purposes.

While the physical separation from traffic provides a sense of security to sidepath users, intersections present inherent conflicts and visibility problems – especially for sidepath (and sidewalk) cyclists riding against the flow of adjacent traffic. Understanding these inherent conflicts can help in efforts to improve sidepath safety.

Figures 2.5 and 2.6 illustrate the visibility problems leading to intersection conflicts. In Figure 2.5, Car B crosses the sidepath to turn right onto the parallel street. Rarely do motorists stop at the stopline – usually stops are in the crosswalk or at the street edge, if at all. Many will look only to their left. Cyclist 2 might be seen. Cyclist 1 is much less likely to be seen.

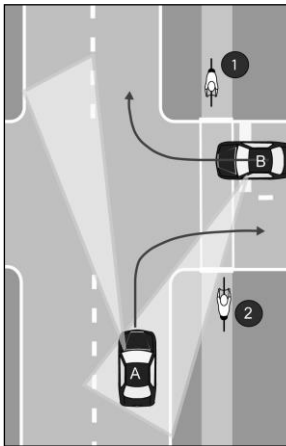


Figure 2.5. Right turns across sidepaths.

Car A turns right off the parallel road then crosses the sidepath. Again, Cyclist 2 might be seen but Cyclist 1 is less visible. Particularly where a large turning radius permits fast turns, many motorists do not yield to cyclists entering or already in the crosswalk.

In Figure 2.6, Car C looks ahead, waiting for a traffic gap to turn left, then accelerates through the turn while crossing the crosswalk. Cyclist 4 might be seen. Again, the contra-flow cyclist (3) is less likely to be seen. If the traffic gap is short, sudden stops would be difficult.

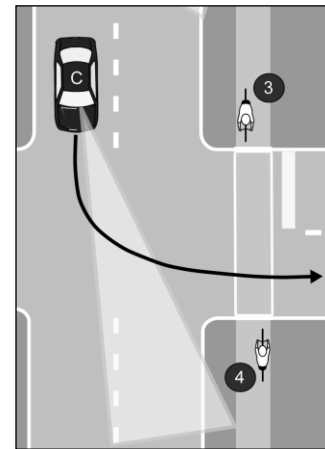


Figure 2.6. Left-turn across sidepath.

It should be noted that a contributing factor in at least some of these conflicts is disregard of pedestrian crosswalk laws and possibly traffic controls by bicyclists. Education and enforcement of both motorists and bicyclists can help somewhat in controlling sidepath problems. Chapter 6 provides some recommendations.

In addition, sidepath conflicts can be reduced through engineering by:

- Bringing the sidepath closer to the road at intersections, for better visibility during all turning motions and better stopline adherence for right-turners
- Using pedestrian refuge islands to break up major crossings and right-in-right-out entrances – right-turn corner islands (“porkchops”) are particularly effective
- Using higher visibility crosswalks – see the trail recommendations in Chapter 4
- Bicycle Signal Faces for bikeway-specific phases at signalized intersections. This treatment has Interim Approval from the Federal Highway Administration.

On-road Bikeways

Expanding Charleston’s bicycle network requires the determination of appropriate bikeway choices for various contexts.

Due to the fear of getting hit by a car from behind, many believe sidepaths or sidewalks are *always* safer than on-road bicycling. Surprisingly, this is *not* the case where there are many side streets, residential driveways, and commercial entrances – especially for “contra-flow” cyclists biking against the flow of traffic.² The visibility issues described above are a prime reason. Note that for each motorist turning motion illustrated in Figures 2.5 and 2.6, an on-road cyclist

² Moritz, W.E., “Survey of North American Bicycle Commuters: Design and Aggregate Results”, Transportation Research Board, 1997.

on the right side of the road is within the motorist’s viewing area. In fact, especially in urban areas during the day or when the bike is well-lit at night, most car-bike crashes occur at intersections – not from cars striking bikes from behind³.

The AASHTO guide describes the above and other sidepath issues in discouraging their use in inappropriate locations. In general, sidepaths may be better choices than on-road bikeways for faster, busier roads without lots of crossings. Since that is not the case for most of the City’s other roads, various on-road bikeway options are usually recommended in this plan.

Bike Lanes

Bike lanes are portions of the roadway designated for bicyclist use. Bike lanes are typically between five and six feet wide (including gutter pan) on each side of the road with a stripe and pavement markings. Bike Lane (MUTCD R3-17) signs are optional to supplement markings but are not recommended here. For one-way streets, bike lanes *usually* are better placed on the right side of the road. 6th, 7th, Grant, and 4th all have bike lanes.



Figure 2.7. Bike lanes (other side not shown).

Cyclists in each bike lane travel one-way with the flow of traffic. Sample results^{2,4,5} around the country for roads with bike lanes include:

- More predictable movements by both cars and bikes
- Better cyclist adherence to laws about riding on the right side of the road
- Dramatic increases in bike usage with lower car-bike crash rates



Figure 2.8. Buffered bike lanes (NACTO).

Parking is not permitted in designated bicycle lanes. When a road has bike lanes and adjacent parking, the bike lanes should be striped between the parking space and the travel lanes.

When a road has bike lanes but no on-street parking, indicate the parking prohibition using No Parking (MUTCD R8-3) or No Parking Bike Lane (MUTCD R7-9) signs.

Bike lane options are evolving, to provide benefits in various situations. Buffered Bike Lanes are now accepted by the Federal Highway Administration and detailed in the NACTO Urban Bikeway Design Guide. A buffer space may be added between travel lane and bike lane, or between bike lane and curbside parking. This plan calls for Buffered Bike Lanes on some segments.

³ AASHTO Guide for the Development of Bicycle Facilities, pp. 3-8 and 3-9, 2012.

⁴ AASHTO Guide for the Development of Bicycle Facilities, p. 22, 1999.

⁵ Reynolds, C, et al., “The Impact of Transportation Infrastructure on Bicycling Injuries and Crashes: A Review of the Literature”, *Environmental Health*, 2009.

Protected Bike Lanes (PBL) use bollards, curbs, or parking to separate bike lanes from travel lanes. American use of PBLs has grown significantly this decade in dense urban cores. While no PBLs are listed in the plan, they may be considered as an option – especially where intersection conflicts can be closely controlled, and motorist stop line compliance is high on cross streets and other intersections.

National standards are continually evolving on handling bike lanes at intersections. The AASHTO guide has long detailed advance merge areas and, where space allows, continuing bike lanes to intersections. New tools are colorized pavement and extensions of bike lanes *through* intersections.

Insufficient pavement width due to the presence of turn lanes may necessitate interruption of bike lanes at intersections. Where this occurs with a right-turn only lane, shared lane markings may now be used for straight-ahead bicycle travel in the right-turn lane (Figure 2.9). Where this occurs with a left-turn lane but no right-turn only lane, use shared lane markings in the center of the rightmost through lane.

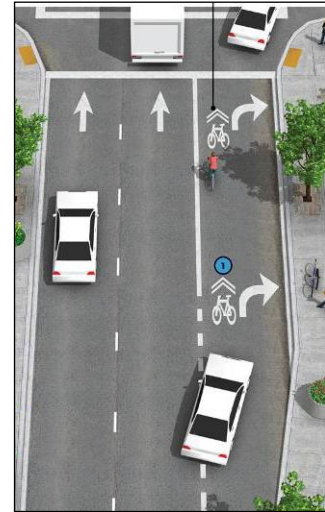


Figure 2.9. Shared Lane Markings in right-turn only lane. (NACTO)

Green-Colored Pavement may now be used to enhance the conspicuity of bicycle lanes, or extensions of those lanes at intersections. The NACTO guide provides details.

Regular sweeping is important, as bike lanes tend to collect debris.

Shared Lane Markings

Shared lane markings (aka “Sharrows”) inform cyclists of optimum lane positioning. Bicycle positioning on the roadway is important to avoiding conflicts with cars turning at intersections and doors opening on parked cars. Also, SLMs are more effective than signage alone in reminding drivers of the possibility that they will see a bicyclist in the road.

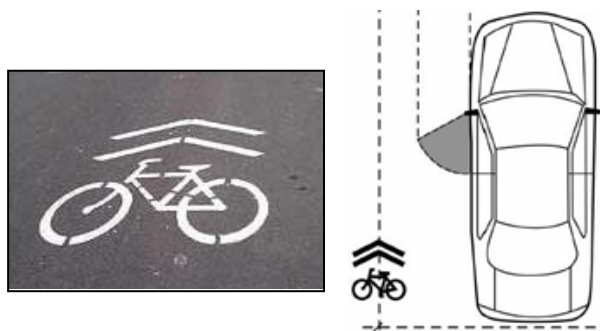


Figure 2.10. Shared Lane Marking.

Shared lane markings may only be used on streets with speed limits of 35 mph or lower. Sometimes SLMs are used in lieu of bike lanes on relatively comfortable roads that would still benefit from a higher level of guidance to bicyclists and motorists. More often, however, SLMs are a fallback treatment where there is insufficient width for bike lanes.

On roads with no permitted parking, the center of the marking shall be 4 feet (or more) from the curb. On roads with permitted and *any level* of occupied parking, the center of the marking

shall be 11 feet (or more) from the curb. SLMs that far from the curb are best at higher (>30-40%, perhaps) parking occupancies. This plan recommends SLMs for some road segments having parking and others that do not.

The markings should be placed right after an intersection and spaced at intervals of 250 feet thereafter. See MUTCD Part 9 for more installation guidance. The shared lane marking also can be used to indicate correct straight-ahead bicycle position at intersections with turn lanes, where bike lanes or combined bike/parking lanes have been temporarily dropped.

Signed Bike Routes

Some roads may be identified by signage as preferred bike routes, because of particular advantages to using these routes compared to others. These “signed shared roadways” only use the bike network wayfinding signage described above, with no pavement striping or marking. Signed Bike Routes may be appropriate where:

- There is not enough roadway width for bike lanes,
- Relatively low – but nonzero – parking occupancy makes shared lane markings less desirable, or
- Low traffic and comfortable conditions reduce the need for the cost of pavement stripes and/or markings.

A road does not require a specific geometry to be signed as a Bike Route, providing flexibility. A Bike Route may be a striped or unstriped street, or a road with paved shoulders.

Combined Bike/Parking Lanes

Some residential collector streets with wide lane widths permit on-street parking, but parked cars are sparse – under 5% or 10% occupancy – except perhaps on special occasions (“party-parking”). While this may be an opportunity for dedicated bike lanes, removal of parking on even one side may be politically infeasible – even though the wider lanes often encourage faster traffic speeds through neighborhoods.



Figure 2.11. Combined Bike/Parking Lanes.

A fallback option is to stripe off 7-8 feet (including gutter pan) for the occasional parked car. This space, essentially an “urban paved shoulder”, may be used by bikes, too. Sign the road with bike route wayfinding signage, but do not include any designated bike lane signage or pavement markings. Cyclists in this space would pass parked cars just as they do on road shoulders and unstriped roads. Benefits include:

- An increased perception of comfort by the cyclist
- Lower likelihood of the occasional parked car being hit by another car
- The traffic-calming effect of narrower lanes, i.e., slowing car speeds

“Combined Bike/Parking Lanes” (CBPLs) allow parking, but bike lanes do not. Steps should be taken to avoid confusion. Combined bike/parking lanes should use signage indicating parking permission information. As mentioned earlier, bike lanes should use “no parking” signs – where there is no adjacent on-road parking.

Three-Foot Law Signage

Nationally, the “Share the Road” sign has been falling out of favor, due to recent studies showing misinterpretation by many motorists. To deliver a clearer message, IDOT recently approved local agency use of a regulatory sign informing drivers of the state’s three-foot lateral clearance law when passing bikes. Installation should be limited to locations where the operation of the two vehicle types is demonstrating a problem or crash history. Several agencies have installed them, in partnership with Ride Illinois.

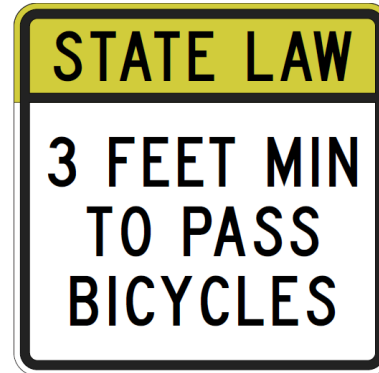


Figure 2.12. 3-ft law sign.

Three-foot law signs are recommended in this plan on some roads popular with more traffic-tolerant bicyclists riding out of town. The signs are meant to improve their safety, but the roads are not considered as part of the City’s designated bicycle network for a broader range of users.



Figure 2.12. Signal activation marking and sign.

Signal Activation by Bicycles

Both bicycles and motorcycles have difficulty activating demand-actuated traffic signals. Cars may not be present to trip the signal, or cars may be stopped too far back of a bike. Pedestrian push-button actuation, if present, is often inconveniently located for on-road bikes.

Illinois now has a law by which bicyclists and motorcyclists may treat stoplights like stop signs, after two minutes of not being detected. Engineering solutions are safer and preferred.

For existing intersections, the MUTCD-approved Bicycle Detector Pavement Marking (MUTCD Fig. 9C-7) in Figure 2.12, together with the R10-22 Bicycle Signal Actuation Sign, can indicate a detector trigger point for actuating the signal. For standard detectors, the detector’s perimeter – such as its right edge – is more sensitive to bicycles. Correct tuning of the detector may be needed, too. Alternatively, a special detector loop can be installed for bikes.

For new intersections, quadrupole loop detectors, microwave or new camera detection technology could be used, as they are more sensitive to bikes and motorcycles.

Chapter 4 includes a recommendation on this issue.

3 Guidelines For Bikeway Recommendations

Introduction

A bikeways network is comprised of routes that are particularly important because they serve key destinations and facilitate travel across barriers. Although all City streets, except where prohibited, will be used by cyclists, a designated bikeways network helps direct them to particularly favorable routes, especially for mid- and long-distance trips in town. Developing a plan for a bikeways network establishes priorities for improvements, such as striping for bike lanes, adding shared lane markings, completing sidepaths and trails, installing wayfinding signs and improving crossings.

Charleston's bikeways network was developed with a variety of inputs:

- **Public Involvement:** On August 3, 2017, a “Public Brainstorming Workshop” was attended by roughly 50 residents. The purposes of the workshop included: a) gather local resident knowledge on biking needs; b) prioritize road corridors and other routes to study for potential improvements; c) build community support for the plan and its implementation. Each attendee marked individual maps with suggestions. A group exercise followed in which top priorities from three geographic regions of the City were discussed and reported. See Appendix 1 for results.

In addition, Eastern Illinois University was part of the public involvement process through EIU's Student Senate meeting presentation on January 25, 2018, and through student comments and feedback. EIU's staff, faculty and administration were also involved in the process and were all given the same opportunity to provide feedback and comments.

- **Consultation with Staff and Steering Committee:** In addition to the workshop, two meetings were held between the consultant and the Steering Committee of the Charleston Bicycle Plan, consisting of City staff and other partners. The committee guided the project approach and the principles used in making recommendations, and extensively discussed the preliminary recommendations of the plan.
- **Bicycle Level of Service Analysis:** The Bicycle Level Of Service⁶ (BLOS) measure quantifies the “bike-friendliness” of a roadway, helping to remove a wide range of subjectivity on this issue. The measure indicates adult bicyclist comfort level for specific roadway geometries and traffic conditions. Roadways with a better (lower) score are more attractive – and usually safer – for cyclists. BLOS has been used in IDOT's bicycle maps for years, and it has been added to the Highway Capacity Manual. More information and an online calculator is at rideillinois.org/blos/blosform.htm. BLOS is

⁶ Landis, Bruce, "Real-Time Human Perceptions: Toward a Bicycle Level of Service," Transportation Research Record 1578 (Washington DC, Transportation Research Board, 1997).

used in the Charleston Bicycle Plan to measure existing and future conditions, to set on-road comfort goals for the bikeway network, and to justify recommendations.

- **Review of standards, guidelines and best practices:** The plan draws heavily from AASHTO, the MUTCD (FHWA), and NACTO, nationally recognized resources for bicycle facility design. See Bikeways Types discussion in the previous section.

Guiding Principles and Selecting Bikeway Type

The following general guiding principles were used for the plan’s recommended improvements to Charleston’s bikeway network.

- Plan for a target audience of casual adult cyclists. At the same time, address the needs of those who are more advanced and those who are less traffic-tolerant, including children.
- Strive for a network that is continuous, forming a grid of target spacing of ½ to 1 mile to facilitate bicycle transportation throughout the City.
- As much as possible, choose direct routes with lower traffic, ample width, stoplights for crossing busy roads – and at least some level of traffic control priority (minor collectors or higher classification) so that cyclists do not encounter stop signs at every street.
- Look for spot improvements, short links, and other small projects that make an impact.
- Be opportunistic, implementing improvements during other projects and development. An example is restriping during resurfacing. Widening a road to add an on-road bikeway will be considered as part of a major road reconstruction, but not as a standalone project.

These guidelines were used for making recommendations for specific route segments:

- Consider both on-road and off-road improvements, as described in Chapter 2. Narrowing lane width to 11-ft or 10-ft will be considered if necessary to implement an on-road bikeway on local roads with lower speed and lower truck traffic.
- Where on-road bikeways are recommended, try to achieve a BLOS rating of B or better for designation in the network – with high-C marginally acceptable if there are no other options. BLOS “B” is an appropriate goal for accommodating the casual adult bicyclist. Use wayfinding signage to indicate inclusion in the network.
- For the on-road segments designated as being in the network, raise the priority of filling sidewalk or sidepath gaps on at least one side of the road. This recognizes that children – and more traffic-intolerant adults – will ride on the sidewalk. However, sidewalks with width under sidepath standards should not be designated or marked as part of the bikeway network.
- Only in special cases should sidepaths be recommended where there are too many crossing conflicts (driveways, entrances, cross streets) or where residential front yards will be impacted. Where sidepaths are recommended, use the design techniques described above to somewhat reduce the risks at intersections.
- Where there is sufficient width and need, and speeds are moderate to low, use striping to improve on-road cyclist comfort level. Depending on available width and parking

occupancy, the striping may be in the form of either traditional bike lanes, buffered bike lanes, or combined bike/parking lanes. Where such roads have insufficient width for striping, shared lane markings or bike network wayfinding signs alone are recommended, depending on parking occupancy and assuming an on-road comfort level meeting the target BLOS.

- Use Shared Lane Marking and bike signal actuation pavement markings to indicate proper on-road bicycle position, especially where heavy bicycle traffic is expected. Shared Lane Markings should be used in straight-ahead lanes, at intersections where turn lanes require the interruption of striped bike lanes or Combined Bike/Parking Lanes.

Generating Public Support

To improve public support for plan implementation, these additional approaches are suggested:

- Achieve early, easy successes (“low-hanging fruit”) to gather momentum.
- Avoid removing on-road parking if at all possible, especially by businesses and on roads with more than very low parking occupancy. When a primary recommendation calls for the removal of any parking, list secondary, fallback recommendations as options.
- Where appropriate, use road striping to serve not only bicyclists but adjacent residents, as well. Cite the traffic calming (slowing) and other benefits of striped, narrower roads.
- Do not widen 4-5 foot sidewalks to 8-10 foot sidepath widths where at least some residential front yards would be impacted.
- Do not widen residential roads solely for bikeways.
- Work with local businesses and media to help promote the plan and highlight progress.

4 Bikeway Network Recommendations

Introduction

The Charleston Bicycle Plan proposes an expanded network of bicycle routes to facilitate travel to all sections of the City and beyond. The recommended projects in this section will also help fill gaps, tackle barriers and improve conditions to complete the network. See Chapter 3 for more information on how routes and projects were selected, and Chapter 2 for suggested Bike Network Wayfinding Signage standards to be used for each designated segment of the network.

A major caveat for the vast majority of these recommendations is that both the primary and secondary/other option recommendations assume the existing pavement width. Future reconstruction or expansion projects are opportunities to consider better bike accommodations, especially in those places where the bikeway network's comfort level target could not previously be met. Chapter 5's recommended roadway design standards could be used when widening is possible.

Understanding the Maps

The plan's maps provide a snapshot of needs and recommendations.

- **Figure 4.1) Existing Conditions – All Studied Routes, Trails and On-Road Comfort Level:** Shows *existing* on-road conditions for bicyclists on studied roads, including, but not limited to, all routes studied for the network. It also provides information on existing trails.
- **Figure 4.2) Recommended Bike Improvements - All Priorities:** Recommended on- and off-road bike facilities, including low priority projects resulting in only a minor improvement or a somewhat denser network. Includes existing bikeways.
- **Figure 4.3) Recommended Bike Improvements – High and Medium Priorities:** A subset of the map above, with low priority projects removed. Includes existing bikeways.
- **Figure 4.4) Built-out Conditions – Proposed Bike Network, Trails and On-Road Comfort Level:** Portrays how the off-road trail system and on-road bicycle level of service will change, if the recommended projects are implemented. Only those on-road segments “in the network” are shown.

Consider Polk Avenue as an example in using the maps and the spreadsheet in Appendix 2. The existing conditions map shows Polk's Bicycle Level of Service comfort level ranging from high- to low-C west of Reynolds, high-C between Reynolds and 7th, and a low-B between 7th and 9th. A BLOS of C is considered acceptable for more experienced cyclists, as is B for casual adult cyclists – the minimum target of this plan.

The recommended bikeways maps call for bike lanes on Polk from Reynolds to Division, where enough pavement width is possible for such striping. East of Division, shared lane markings are the recommendation, as is 3-foot law signage west of Reynolds. As long as consistent wayfinding signage is used, it is acceptable to vary a road's bikeway treatments according to the contexts of its segments. The implementation details for each are described in the spreadsheet.

Figure 4.1. Existing Conditions - All Studied Routes Trails and On-Road Comfort Level (BLOS)

Bicycle Level of Service (BLOS): A and B appropriate for casual adult bicyclists, C or better for more experienced, traffic tolerant cyclists. D or worse uncomfortable for all cyclists.

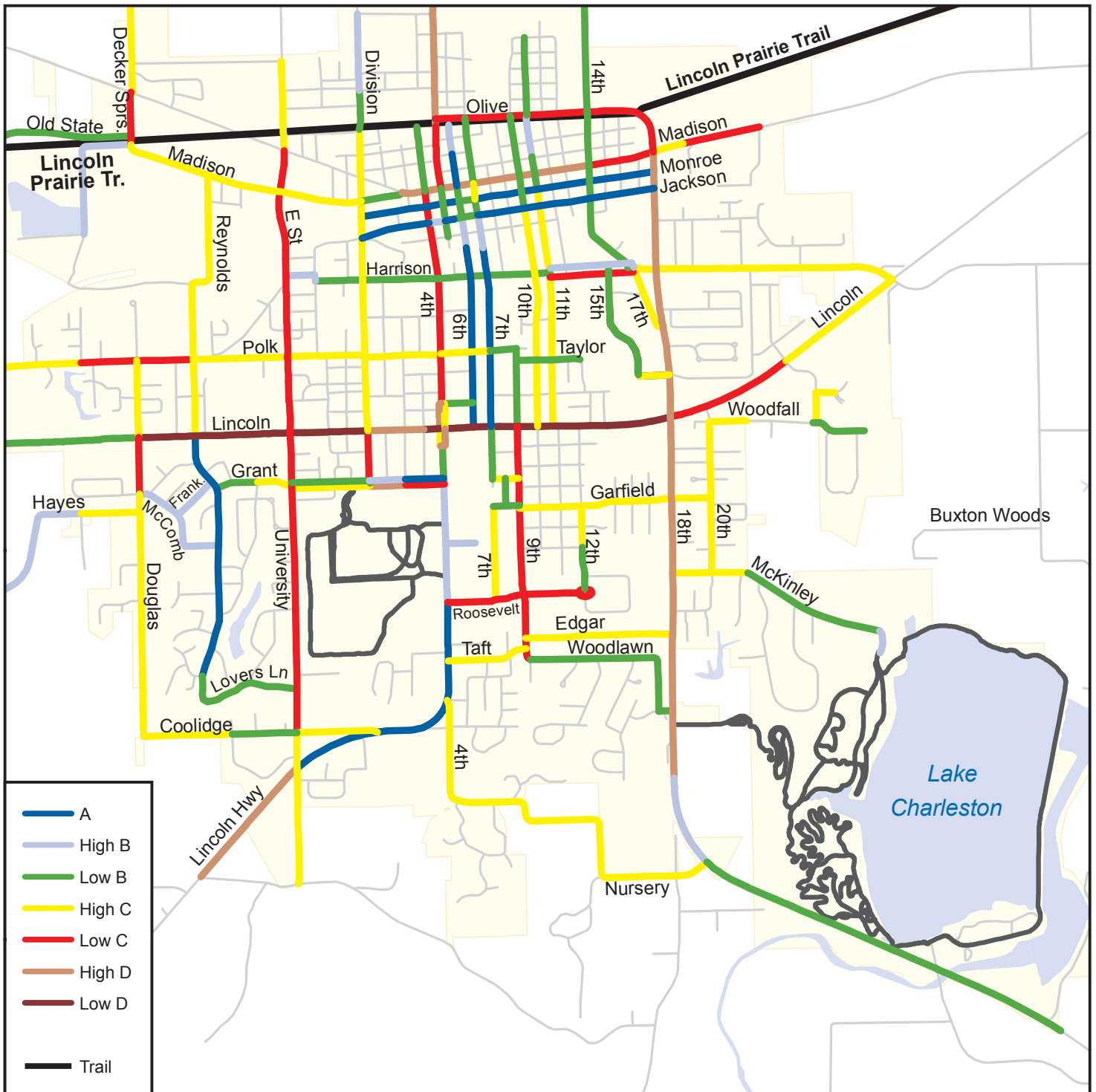


Figure 4.2

Recommended Bike Improvements

All Priorities (existing routes shown)

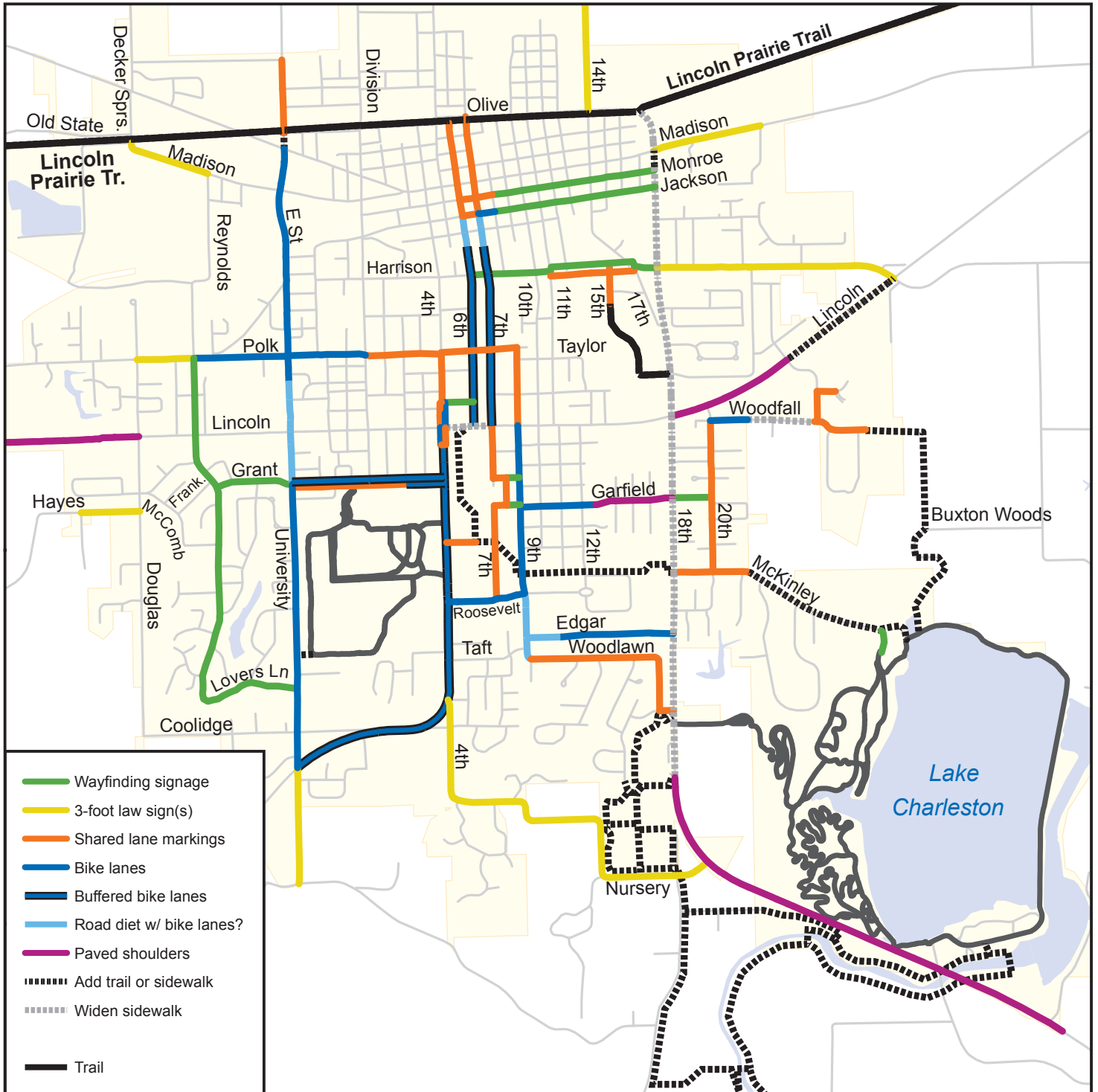


Figure 4.3

Recommended Bike Improvements

High and Medium Priorities

(existing routes shown)

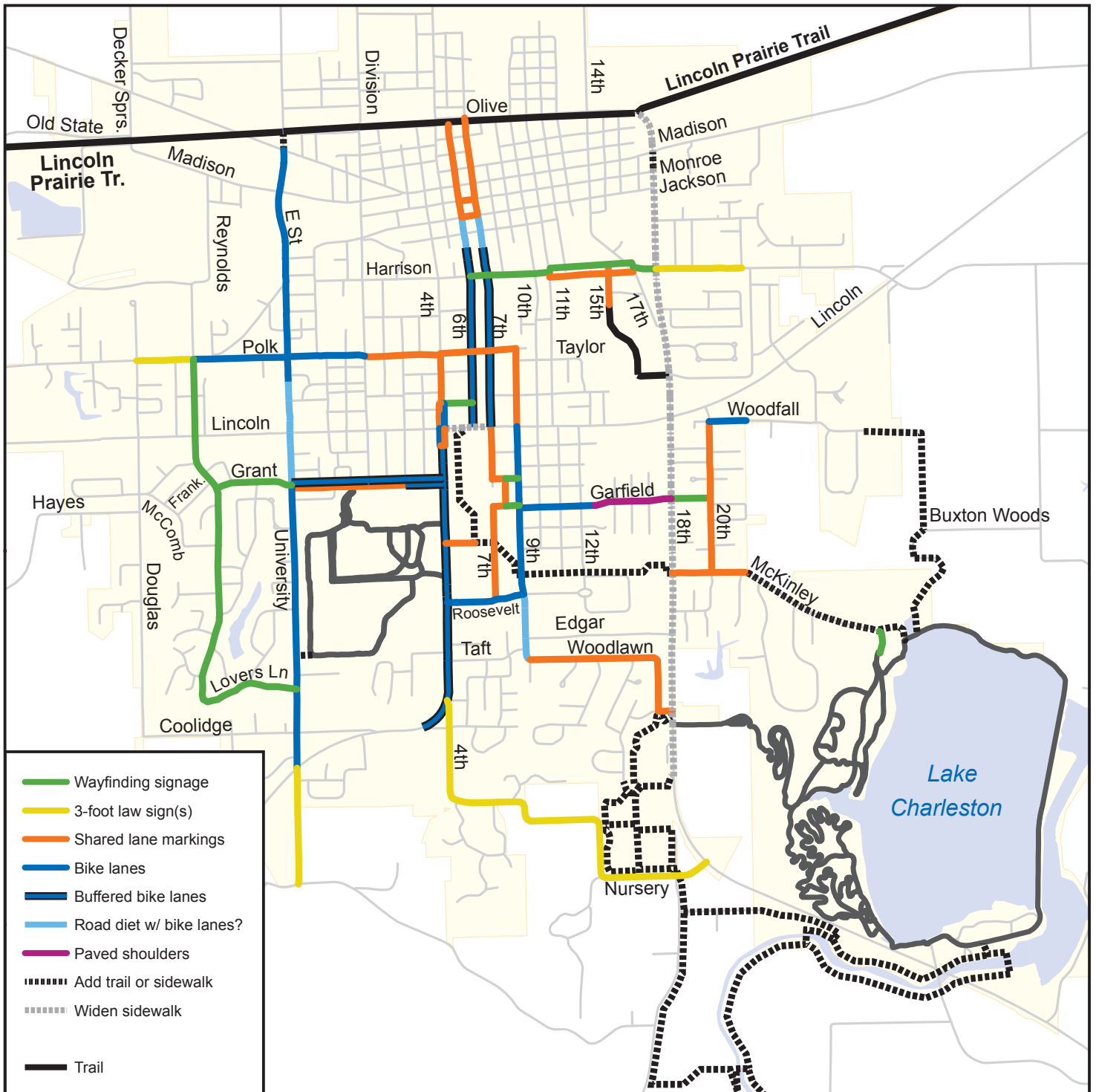
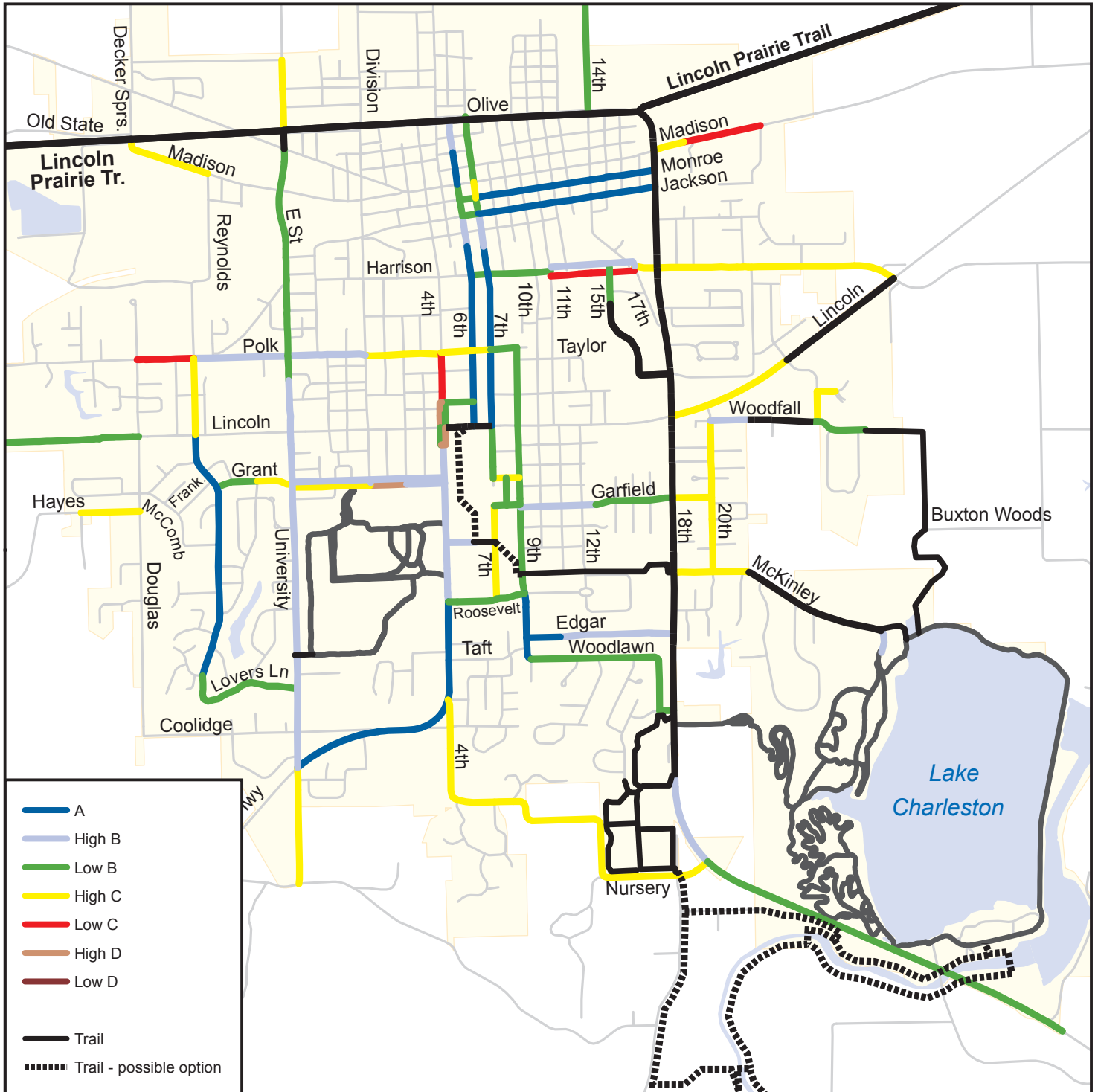


Figure 4.4 - Built-out Conditions - Proposed Bike Network Trails and On-Road Comfort Level

Bicycle Level of Service (BLOS): A and B appropriate for casual adult bicyclists, C or better for more experienced, traffic tolerant cyclists. D or worse uncomfortable for all cyclists.



The spreadsheet also indicates the priority of each segment’s treatment: high for the bike lanes and shared lane markings, and medium for the 3-foot law sign. Priority is assigned primarily by network significance and public demand.

The built-out conditions map and spreadsheet show that bike lane striping would improve the Reynolds-Division segment from a high-C Bicycle Level of Service to a high-B. Shared lane markings would not significantly change comfort level, but would provide network connectivity.

Understanding the Project List

Extensive data collection on existing bicycling conditions informed the development of this plan. Most of this information, such as roadway geometry, traffic conditions, Bicycle Level of Service, sidewalk coverage, recommendation details and implementation notes, is housed in a spreadsheet that helps create the maps. See Appendix 2 for the entire dataset by road segment.

The table below summarizes recommended projects by road name, with east-west roads listed first. Table 4.1 lists high and low priority routes; Table 4.2 lists lower priority routes less important to the network. Following the tables is text on some specific, high priority areas – including potential off-road trail projects (in Eastern Illinois University and to Lake Charleston/ Fox Ridge State Park) not listed in the tables.

Table 4.1. Recommended Projects - High and Medium Priorities

Street	From (NW)	To (S/E)	On Road Recommendation	Off Road Recommendation	Priority
Lincoln Prairie Trail	W-end	E-end		Improve crossings - crosswalks, signage	High
Olive	5th	Lincoln Prairie Trail		Improve trail crossing - crosswalk, signage	High
Madison	6th	7th		Add bike crossing warning signs	Medium
Monroe	6th	7th	Shared lane markings		Medium
Jackson	6th	7th	Shared lane markings		Medium
Harrison	6th	11th	Bike route wayfinding signage		Medium
Harrison	11th	14th	Shared lane markings (E-bound); Bike route signage (W-bound)		Medium
Harrison	14th	18th	Bike route wayfinding signage		Medium
Harrison	18th	22nd	3-Ft Law sign; future bike lanes?		Medium
Polk	Douglas	Reynolds	3-Ft Law sign		Medium
Polk	Reynolds	Division	Bike lanes		High
Polk	Division	9th	Shared lane markings		High
Buchanan	4th	6th	Bike route signage (W-bound)		High

Street	From (NW)	To (S/E)	On Road Recommendation	Off Road Recommendation	Priority
Lincoln	4th	6th		Widen sidewalk to sidepath width (south)	High
Lincoln	6th	7th		Widen sidewalks to sidepath width; add Lead Pedestrian Interval at 6th	High
Woodfall	20th	E-end of pavement	Bike lanes		Medium
Woodfall	E-end of pavement	Hawthorne		Add trail link (medium); widen sidewalk to sidepath width (low)	Medium
Grant	Reynolds	University	Bike route wayfinding signage		Medium
Grant	University	2nd	Add buffer to W-bound bike lane; Shared lane markings E-bound		High
Grant	2nd	4th	Buffered bike lanes		High
Grant	7th	8th	Shared lane markings		High
Grant	8th	9th	Bike route wayfinding signage		Medium
Hayes	7th	8th	Shared lane markings		High
Hayes	8th	9th	Bike route wayfinding signage		Medium
Garfield	9th	250' E of 12th	Bike lanes		Medium
Garfield	250' E of 12th	18th	Stripe paved shoulders		Medium
Garfield	18th	20th	Bike route wayfinding signage	Improve 18th crossing	Medium
McKinley	18th	Hidden Lake	Shared lane markings	Improve 18th crossing	Medium
McKinley	Hidden Lake	Lake Charleston trail		Add sidepath	Medium
Roosevelt	4th	9th	Bike lanes		High
Lover's Lane	Reynolds	University	Bike route wayfinding signage		Medium
Woodlawn	9th	Salem	Shared lane markings		High
Woodlawn/ Krishire	Salem	Sister City	Bike route wayfinding signage		High
Nursery	4th	18th	3-Ft Law sign		Medium
Reynolds	Polk	Eden	Bike route wayfinding signage		Medium
E Street	Lincoln PrairieTrail	State	Shared lane markings	Add sidewalk (east); improve State crossing	High
E Street	State	N of Pierce	Bike lanes		High
E Street/ University	N of Pierce	Grant	Study road diet (lane reduction) with bike lanes		High
University	Grant	Lincoln Hwy	Bike lanes		High
University	Lincoln Hwy	Sunnydale	3-Ft Law sign		Medium
4th	Madison	Polk	Remove bike ban signs		High
4th	Polk	Buchanan	Shared lane markings (N-bound)		High
4th	Buchanan	Lincoln	Bike lane (N-bound); Shared lane markings (S-bound)		High
4th	Lincoln	1/2 blk S of Lincoln	Shared lane markings (N-bound); bike lane (S-bound)		High
4th	1/2 blk S of Lincoln	Coolidge	Stripe buffers for bike lanes		High
4th	Coolidge	Nursery	3-Ft Law sign		Medium

Street	From (N/W)	To (S/E)	On Road Recommendation	Off Road Recommendation	Priority
6th	Lincoln PrairieTrail	Railroad	Add trail link		High
6th	Railroad	Jackson	Shared lane markings (S-bound)		High
6th	Jackson	1/2 blk S of Van Buren	Remove one lane, add buffered bike lane		High
6th	1/2 blk S of Van Buren	Lincoln	Move bike lane to right side, add buffer		High
7th	Olive	Jackson	Shared lane markings (N-bound)		High
7th	Jackson	1/2 blk S of Van Buren	Remove one lane, add buffered bike lane		High
7th	1/2 blk S of Van Buren	Lincoln	Move bike lane to right side, add buffer		High
7th	Lincoln	Grant	Shared lane markings		High
7th	Hayes	Roosevelt	Shared lane markings		High
8th	Grant	Hayes	Shared lane markings		High
9th	Polk	Lincoln	Shared lane markings		Medium
9th	Lincoln	Roosevelt	Bike lanes		Medium
9th	Roosevelt	Woodlawn	Study road diet (lane reduction) with bike lanes		High
15th	Harrison	Football field	Shared lane markings		Medium
18th	Lincoln PrairieTrail	Madison		Widen sidewalk to sidepath width (west)	High
18th	Madison	Monroe		Add sidepath (west)	High
18th	Monroe	S-end of Sister City Park		Widen sidewalk to sidepath width (west)	High
20th	Woodfall	McKinley	Shared Lane Markings		Medium
<i>Off-road trails in Eastern Illinois University and the Lake Charleston/Grand Prairie Friends/Fox Ridge State Park area are described later in Chapter 4.</i>					

Table 4.2. Recommended Projects - Lower Priority

Street	From (NW)	To (S/E)	On Road Recommendation	Off Road Recommendation	Priority
Madison	Decker Springs	Reynolds	3-Ft Law sign		Low
Madison	18th	Tree Line	3-Ft Law sign		Low
Monroe	7th	8th	Shared lane markings		Low
Monroe	8th	18th	Bike route wayfinding signage		Low
Jackson	7th	8th	Bike lane		Low
Jackson	8th	18th	Bike route wayfinding signage		Low
Harrison	22nd	Lincoln	3-Ft Law sign		Low
Lincoln	18th	Hawthorne	Widen paved shoulders		Low
Lincoln	Hawthorne	Harrison	Widen paved shoulders	Add sidewalk or sidepath (south)	Low
Bostic (Panther)	Hawthorne	Bostic Pl	Shared lane markings		Low
Woodfall	Hawthorne	E-end	Shared lane markings		Low
Hayes	Kings	Douglas	3-Ft Law sign		Low
Edgar	9th	tennis courts	Study road diet (lane reduction) with buffered bike lanes		Low
Edgar	tennis courts	18th	Bike lanes		Low
Lincoln Hwy	Coolidge	University	Stripe buffers, add markings for bike lanes		Low
E Street	Ne-Co field	Lincoln Prairie Trail	Shared lane markings		Low
14th	N-end	Olive	3-Ft Law sign		Low
Hawthorne	Bostic	Woodfall	Shared lane markings		Low

Lincoln Prairie Grass Trail Improvements

This 12-mile converted rail-to-trail between Mattoon and CR 1800E east of Charleston is to be paved within the cities with compacted limestone outside. An Illinois Transportation Enhancements Program grant will allow more of the trail to be paved. The Lincoln Prairie Grass Trail experience should be enhanced through the development of a beautification plan for the trail which will include expanded recreational, natural, cultural and historical features along this trail.

The trail has 14 road crossings with a general configuration consisting of advance W11-1 Bicycle Warning signs on the road approaches, and D11-1 Bicycle Route Guide signs with M6-4 horizontal arrows – and little to no marked crosswalk – at the crossings.

The recommendation for improved signage includes:

- Continental or ladder-style crosswalks
- At each direction at the crossings, a W11-15 combined Bicycle/Pedestrian sign with W16-7P down arrow sign – with the option of a W11-15P “TRAIL X-ING” sign between them



Figure 4.5.
W11-15, W11-5P,
W16-7P signs.

- For each road’s approach, use the W11-15 and W11-15P signs with a W16-9P “AHEAD” sign
- All signs should be in FYG (fluorescent yellow-green) color

In addition, at several streets’ northbound approaches to the trail and Olive Avenue, the Stop signs are currently placed between the trail and Olive. These would be better located directly before the trail, with painted stop lines.

A public input focus group for the trail, with a user survey and 50 interviewed respondents, generally had very positive results. Some common themes to improve the Lincoln Prairie Grass Trail experience included:

- Safety –road crossing improvements and higher perceived personal safety through lighting, call boxes, more users, and better sightlines to prevent hiding by potential criminals.
- Aesthetics – flowers, fencing, murals, etc.
- Comfort – parking, water, restrooms, benches, and wind blocking
- Space – welcome and interpretative signage; signs with distances, wayfinding, destinations/”places to go”.

At this plan’s August 3, 2017 public brainstorming workshop, one group included a priority of a trailhead near 6th Street. With improvements coming to the trail and the City’s bike network, this is an idea worth exploring further.

Trail Options to Lake Charleston and Fox Ridge State Park

The Lumpkin Family Foundation, the Grand Prairie Friends organization, and the City of Charleston have collaborated in purchasing land and making plans to explore a multi-modal trail from the city, to Grand Prairie Friends trails, then towards Fox Ridge State Park. This would enhance the City’s transportation and recreational opportunities.

The map in Figure 4.6 includes six options to head south from the city. These and an idea for a Lake Charleston trail spur were investigated at a preliminary planning level:

- Option 1: Add a new, multi-modal paved trail (shown as “A” in Figure 4.6 map) along and from McKinley to the existing trail (“B”) on the north (to be paved) and east (already paved) sides on Lake Charleston. A new, paved trail would then lead to a new bridge to cross the river just west of the spillway dam (“C”), then follow an elevated “shelf” (“D”) near the river’s south bank, under the Bypass Road and IL130 bridges, to Grand Prairie Friends property and the proposed Fox Ridge-bound trail (“E”).

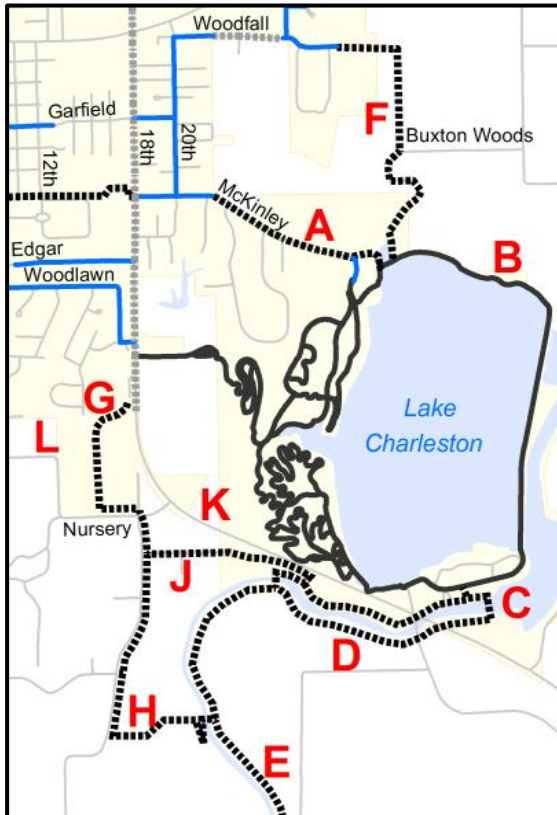


Figure 4.6: Lake, Fox Ridge Trail Options

- **Option 2:** A multi-modal paved trail (“F”) starting at the east end of Woodfall Drive and heading 1000 feet to the east, south an estimated 2700 feet to Buxton Woods Road, on (with wayfinding signage) or along Buxton Woods to its end, then south – through the woods and between two ravines – to the trail (to be paved) on the north side of Lake Charleston. From there, continue as described in Option 1.
- **Option 3:** An off-road trail extension (“G”) south from Sister City Park to the intersection of Nursery and 18th, south along the 18th Street corridor, then east (“H”) and down to the river, with a bridge crossing to the proposed Fox Ridge-bound trail.
- **Option 4:** The same trail from Sister City to Nursery/18th, then south along 18th, east along 600N (“J”), with a trail extending from the end of 600N down the bluff with a bridge across the river. If bridge is not feasible here, then extend the trail along the north side of the river, under the existing Bypass and IL130 bridges to connect to the new bridge shown as “C” on the map.
- **Option 5:** An off-road sidepath along IL130 (“K”) to Bypass Road, crossing the existing bridge and connecting to the Fox Ridge-bound trail.
- **Option 6:** Use the 4th Street and Nursery Road corridor (“L”) to the Nursery/18th intersection, where options 3 or 4 could be used.

It is recommended that an engineering study focus on the feasibility and cost estimates of Option 1 first, with Options 3 and 4 as backups. Option 2 would provide additional access to the trails, and could be added during site development or as a retrofit project after a separate engineering study.

Option 6’s on-road conditions (700-1100 daily traffic count, high-C Bicycle Level of Service for 4th and Nursery, plus hills and sharp turns) are not comfortable enough for a broader, off-road trail audience, and opportunities for on-road or off-road improvements of that road’s corridor seem unlikely. Option 5’s IL130 corridor topography includes a major pinch point that likely precludes an off-road sidepath. If one were possible on the east side of IL130, two crossings of the busy road would probably be required.

For backup Options 3 and 4, an off-road trail between Sister City Park and Nursery/18th looks very feasible. County Road 600N is quiet enough (estimated daily traffic count under 200) that wayfinding signage alone would suffice. However, 18th Street is not comfortable enough (traffic count 950 north, 450 south; 35mph speed limit) for on-road with wayfinding signs only,

as a broader range of users would want to use this corridor to access the Fox Ridge trail. An off-road sidepath along the east side of 18th looks feasible. The key to Options 3 and 4 is whether either option's trail can appropriately descend the slope to the river. If both can, then Option 3 could be the one alternative.

Eastern Illinois University

Figure 4.7, with map reference notes in italics below, are plan comments received from Eastern Illinois University regarding improvement generally on their property. Following each comment are the plan's recommendations, which also appear in the maps of Figures 4.2-4.3, but not in the table of projects for the City.

1 – We are interested in bi-directional [sidepath] north of Old Main. The bushes may be removed or relocated. We support the idea the City mentioned of all-way red lights to allow pedestrian and bicycle traffic at the intersections of 4th and Lincoln and 6th and Lincoln.

The plan briefly addresses possible “pedestrian scramble” signalization in “Transition from 4th to the 6th/7th Couplet,” below.

2 – Enhance the sidewalk and route from 9th St to 18th St, north along the parking lot and north of Greek Court. That route gets cyclists to 18th St without using active roadways and ends up close to McKinley Drive.

The proposed trail would require widening existing sidewalk segments to 10-ft and adding trail elsewhere. One or both parking lots between 9th and 12th could be reconfigured, with bollards or other barriers added, to create the trail from existing pavement. The segment by Greek Court could be on- or off-road, and the trail may have to jog north to avoid the Renewable Energy Center property. A crossing of 18th would be enhanced with manually-activated Rectangular Rapid Flashing Beacons (if patent issues are resolved and FHWA allows) or other actuated warning beacons. If this trail is built, the Edgar Drive recommendation lowers in priority.

3 – Enhance the existing diagonal sidewalk south of Tarble with [a bike trail]. We are interested in replacing the old white box light fixtures with the campus standard green light poles. It is a well-traveled route and extends access to the sculpture garden.

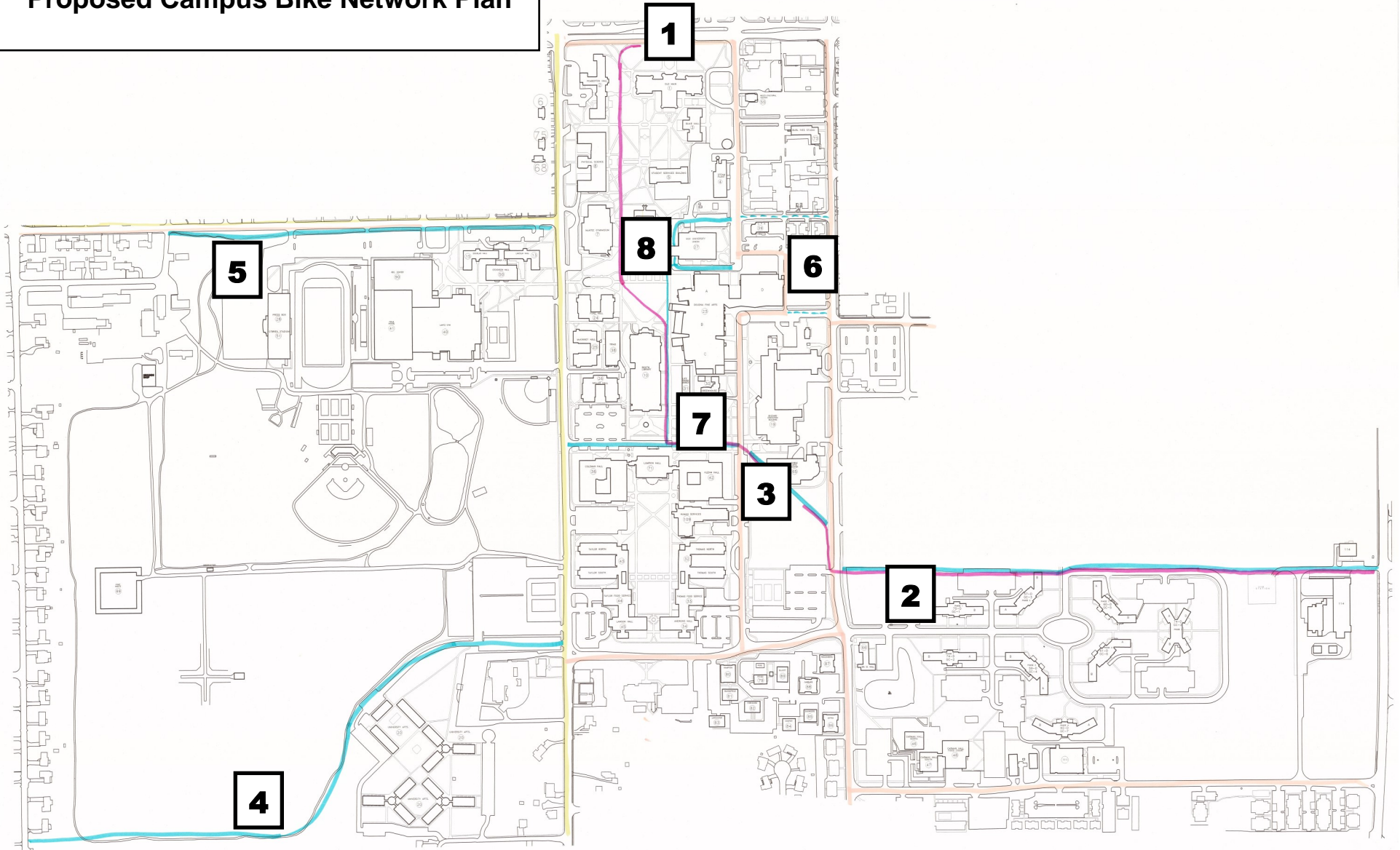
With heavy pedestrian traffic, the sidewalk would have to be widened to 10-ft (more, optimally) to designate it as a bikeway. With trees lining the sidewalk, there might not be adequate width for the widened sidewalk/trail and the required 2-ft minimum side clearances.

4 – Add access to the southwest corner of campus with a trail that extends to 4th St with a separate bike path. The walking trail is considered an athletic facility and used by walkers and joggers. A previous Master Plan shows that route as a potential future extension of Roosevelt.

The current trail's gravel surface would be maintained, but a 270-ft link would be needed to University and either a new link or designation of an interior driveway would be needed to 4th.

5 – Grant Ave., from Orchard Dr. (west) to 4th St.; consider co-locating the sidewalk and bike trail along the current sidewalk on the south side of Grant. There are concerns about the

**Figure 4.7: Eastern Illinois University
Proposed Campus Bike Network Plan**



current situation with east-bound cyclists traveling in the west-bound lane. This would get bicycles off the road in a somewhat busy area.

The plan's recommendations for Grant include buffered bike lanes on each side from 2nd to 4th. East of 2nd has a westbound buffered bike lane and eastbound shared lane markings. The on-road treatments should reduce wrong-way riding and improve on-road cyclist comfort level.

6 – There is concern about routing a path east of Doudna, through the alleyway, and suggest an alternate path out to 9th St due to congestion. University Police, students, and staff report near misses in the current configuration.

Re-routing north-south bike traffic further east to 9th has its own issues. Before making this change, further study is needed regarding the alleyway, with two possibilities being closing it off to motorized vehicles or restricting vehicles to one-way, north-to-south only.

7 – Develop a path from 4th St to 7th St along what was once Garfield Ave north of Coleman/Lumpkin/Klehm Halls. A separate path is recommended north of Klehm Hall due to pedestrian traffic on the sidewalks. It gains access to core buildings and Booth library at the clock tower.

To separate bike and pedestrian traffic, it is recommended to use Garfield between 4th and its east end, then add a 300-ft long, 10-ft wide trail between the east end and 7th. Center bollards in the center of the trail at its ends would restrict vehicular traffic. Shared lane markings could be added to Garfield, centered in the eastbound lane (away from perpendicular parking) and 4-ft from the curb westbound.

8 – There is interest in developing a path next to the north-south sidewalk that runs east of Booth Library, from the MLK Union to just south of Booth. It presents a challenge due to his pedestrian traffic and will require further review and discussion.

Optimal routing would have to be studied.

General notes:

1 – Dr. Gordon Tucker is interested in providing input toward the consideration of native grasses along the bike trails.

2 – There is support for a marked path along Garfield from 9th St to 18th St, with crossing lights/signage on 18th St, similar to those at the Sister City Park crossing.

The plan calls for bike lanes and then paved shoulders for Garfield. Similar manually-activated crossing beacons could be studied with IDOT, although Rectangular Rapid Flashing Beacons are currently unavailable due to patent issues.

Transition from 4th to the 6th/7th Couplet

This plan makes recommendations for adding stripes to buffer the 4th Street bike lanes and moving the southbound 6th and northbound 7th existing bike lanes from the left side of those streets to the right, with a buffer. The transition between these streets is critical to bicycle flow in that key area of the city, so more specificity is provided here.

For southbound cyclists heading to 4th while on 6th, approaching Buchanan:

- The primary route continues on the 5-ft bike lane of 6th, with a 2-ft buffer (parallel stripes) separating the bike lane from the 8-ft parking lane on the right side of the street.
- Approaching Lincoln, on-road parking discontinues, replaced with an 11-ft right-turn lane. Follow the AASHTO or NACTO guides for bike lane dashed striping, across which cars turning right onto Lincoln would have to merge.
- Across the Lincoln intersection, cyclists would transition to off-road, entering the (recommended to be widened to 8-10 ft) crosswalk of the intersection's west face, crossing the center median, and entering Lincoln's south side sidepath at a curb ramp.
- It is recommended that Lincoln's south sidewalk be widened to 10-ft sidepath width, not only to 4th, but also to 7th to accommodate northbound cyclists on 7th wanting to cross Lincoln by "jogging" west to the traffic signal at 6th.
- The route to 4th continues west on Lincoln's proposed south sidepath, crossing most of 4th at a crosswalk to be widened to 8-10 ft.
- Cyclists would then turn left onto 4th, where it is recommended that the 5-ft southbound bike lane start immediately past the crosswalk, using dashed lines until the south end of the pizza restaurant entrance.
- As a secondary, alternative route to the above: bike route wayfinding signage is recommended for Buchanan to 4th, with shared lane markings on 4th centered 4-ft from curb and then in the left part of the right-turn lane approaching Lincoln.

For northbound cyclists heading to 7th while on 4th, approaching Lincoln:

- The Appendix 2 spreadsheet details how the recommended buffered bike lane on 4th could be extended to roughly 175-ft south of Lincoln, where dashed merge lines and shared lane markings in the left part of the right-turn lane could make the (space-constrained) transition easier for bikes.
- Cyclists would enter Lincoln's south sidepath, continuing east to 6th. The stoplight there would have a manually-activated Lead Pedestrian Interval phase to provide people walking or biking with a couple seconds head-start in crossing Lincoln – before southbound 6th car traffic turns left across the (widened) east crosswalk.
- Once across Lincoln, cyclists would turn right onto Lincoln's north sidepath, recommended to be widened to 10-ft between 6th and 7th. This widening will require right-of-way acquisition from local businesses. If not enough right-of-way exists for the 10-ft sidepath and 1-ft clearance from barriers, the sidepath width could be narrowed as low as 8-ft. A width narrower than 8-ft would need a sign instructing cyclists to dismount and walk their bikes for that segment.
- At 7th, cyclists would cross most of the crosswalk before entering an on-road buffered bike lane heading north.

- As a secondary, somewhat less comfortable route, northbound cyclists could continue on 4th across Lincoln, where a bike lane is possible to Buchanan, shared lane markings after that to Polk. At Polk, cyclists would turn east on that designated bikeway, to reach 7th.

An additional treatment for the City and IDOT to consider at the 4th/Lincoln and 6th/Lincoln intersections is a “pedestrian scramble”, a traffic signal movement that temporarily stops all vehicular traffic, thereby allowing pedestrians to cross an intersection in every direction. One example is at Green/Wright in Champaign-Urbana.

The spreadsheet details the recommended configuration of 6th and 7th north to the Lincoln Prairie Trail, including buffered bike lanes on the right sides of the streets, shared lane markings, warning signage for drivers on Madison, and a short trail link to 6th. On the Square, the shared lane markings should be centered between parked cars on the right and left sides.

Bike Lane Implementation

The AASHTO guide says: “Bike lanes are the appropriate and preferred bicycle facility for thoroughfares in both urban and suburban areas.” Implementation of some of the plan’s bike lane recommendations (e.g., parts of Polk and Woodfall) is relatively straightforward, with sufficient pavement width under current conditions. However, other locations involve tradeoffs or other special considerations.

Reduction of lanes – “road diet.” For parts of south 9th Street and Edgar Drive, the recommendation is to study whether the continuous left-turn lane of a three-lane street can be removed, creating space for bike lanes in each direction.

For 6th and 7th Streets for 1 ½ blocks south from Jackson, the recommendation is to convert two narrow de facto one-way travel lanes to one travel lane with a buffered bike lane – while retaining parking on both side of the road.

For University/E Street for north of Pierce Avenue to Grant Avenue, the plan recommends a traffic study of a conversion from four to three lanes: one travel lane in each direction, a continuous left-turn lane – and bike lanes. The suggested cross section is 2-ft gutter, 4-ft bike lane, 2-ft buffer, and 12-ft travel lane on each side – with a 12-ft continuous left-turn lane in the middle. At Lincoln, where both northbound and southbound have one approach lane and two receiving lanes, this lane configuration seems feasible and would allow the left turn lanes to be aligned. For both the north and south approaches to Lincoln, the two stripes of the bike lane buffer would transition to a single, dashed merge line.

Each of the lane reduction recommendations above considered traffic level and utilization of the continuous left-turn lane. The plan’s recommendations regarding road diets are considered relatively conservative compared to some bicycle planning industry “rules of thumb” – and the Federal Highway Administration’s “Road Diet Informational Guide”. Still, the plan’s recommendation is for a traffic engineer to do analyses before City approval of the road diets.

Marginal width bike lanes. The pavement width of several road segments recommended for bike lanes is less than ideal, yet still meet minimum bike lane and travel lane widths. In most of these cases, a travel lane width of 10-ft would be required to make bike lanes possible.

The AASHTO bike guide calls for a 5-ft minimum bike lane width on curbed streets, except for low-speed, constrained roads with no gutter seams. Roosevelt and the east part of Edgar fit this exception, allowing for the plan’s recommendation of 10.4-ft travel lanes and 4.4-ft bike lanes.

Of AASHTO’s 5-ft minimum bike lane width, it is *recommended* that 4-ft be to the left of the gutter seam. NACTO’s guide says that 4-ft is desirable, while 3-ft is the minimum and can be used when travel lanes have been reduced to their minimum widths. That 3-ft minimum would apply to the west part of Garfield, 9th Street, and the two lane sections of E Street/University – all of which have 2-ft gutters (for 5-ft total bike lane width) and would have 10-ft travel lanes. Future reconstruction of these roads could consider the feasibility of narrowing gutter pans to 1-ft – thus allowing bike lane width to the left of the seam to meet the desired 4-ft – or slight widening of the overall road width.

In one case, east Garfield, there is not enough width to meet these bike lane minimum widths. The fallback recommendation is to simply stripe 10-ft travel lanes and 4.3-ft “urban paved shoulders” – inclusive of 1.3-ft gutter pans. No bike lane pavement markings could be added as these would not officially be bike lanes.

Pavement markings and signage. Bike lane pavement markings are sparse on the existing 4th and Grant bike lanes, and the lanes are marked with “Bike Route” signs. More frequent markings are needed. The AASHTO guide suggests markings after intersections, but does provide flexibility and further guidance. Also, it is recommended that the Bike Route signs be removed, to be replaced with bike network wayfinding signage defined in Chapter 2.

Miscellaneous

No bikes signs – and other City ordinances. It is recommended to repeal the ordinance banning bicycles on 4th Street north of Lincoln and any other street where bikes are now technically banned. The bike ban signs should be removed from 4th. Usually, a bike ban is not appropriate on non-expressway streets, and 4th – at a moderate Bicycle Level of Service comfort level of low-C, and in part proposed for the designated bike network – certainly is not appropriate for forbidding bicycle travel.

It is recommended that all bicycle regulations adopted by the City to be reviewed and to repeal bicycle related ordinances that do not align with today’s bicycle travel standards. These include:

- Repealing the requirement to use bike lanes where they exist. Bike lanes will naturally be used by most cyclists in most situations. However, there are situations for which some cyclists will choose not to do so, usually for safety reasons that are not obvious to others. It is not good practice to legislate such a requirement.

- Repealing or revising the ban on sidewalk bicycling. While sidewalk bicycling is not advised – and often less safe – in many contexts. However, in other contexts it may be the best option, especially for cyclists for are less traffic-tolerant. Towns that do ban sidewalk bicycling usually restrict the ban to adults in central business districts only.

Investigation of Traffic Signals for Bicycle Actuation. An advantage of using collector streets in a bikeway network is that these roads usually have traffic signals to aid in crossing busier, arterial roads. There is a strong possibility that these stoplights are demand-actuated for those traveling on the collectors. Bicycles must be able to actuate the traffic signals’ detectors – otherwise the routes become less useful to the network.

It is recommended that the demand-actuated signals slated for the routes of the bikeway network be field-tested for bicycle actuation. Chapter 2 lists some possible remedies.

Additional routes and fallback options. Many of the suggested “routes to study” by the public did not result in a recommendation, due to lack of feasibility, redundancy with a nearby network segment, and/or other factors. However, for a subset of these routes, the spreadsheet in Appendix 2 provides suggestions on what bikeway type(s) would be appropriate if those segments were added to the network.

In addition, the spreadsheet sometimes lists “fallback options” for routes in which it is decided not to implement the plan’s primary recommendation. In other cases, lower priority enhancements to the primary recommendation are suggested, when desired.

5 Standards for Road Design and Development

Introduction

Complete Streets refers to a way of thinking about roadways that emphasizes the safety needs of all the people who travel along and across them—whether they are in a car, on a bike, on foot, in a wheelchair, or pushing a stroller. A busy street that efficiently moves cars but provides no room for bicyclists or no convenient crossing for school children might be considered “incomplete.”

In recent years, agencies from all levels of government have developed policy and planning tools to ensure that road project designs accommodate those who walk or bike by choice or necessity. In 2010, IDOT adopted design policy changes to implement a Complete Streets law for their larger-scale road projects. That same year, the US Department of Transportation also voiced support for Complete Streets with a new bicycle and pedestrian accommodation policy statement:

“Every transportation agency, including DOT, has the responsibility to improve conditions and opportunities for walking and bicycling and to integrate walking and bicycling into their transportation systems. Because of the numerous individual and community benefits that walking and bicycling provide — including health, safety, environmental, transportation, and quality of life — transportation agencies are encouraged to go beyond minimum standards to provide safe and convenient facilities for these modes.”

The National Complete Streets Coalition (smartgrowthamerica.org/program/national-complete-streets-coalition) provides resources for communities to adopt and implement a Complete Streets policy. An adopted ordinance can instruct relevant City departments to “make Complete Streets practices a routine part of everyday operations” and “approach every transportation project and program as an opportunity” to improve safety and convenience for all roadway users. A recommendation of this plan is for Charleston to develop and adopt such an ordinance.

Roadway Design Guideline Recommendations

By adopting this bicycle plan, the City of Charleston has established priorities for road corridors that need improvement. However, to ensure that all road projects—whether or not their corridors are addressed specifically in this plan—consider the needs of all potential travelers, the plan provides suggestions to consider as guidelines or for separate adoption into the City’s roadway design standards.



Figure 5.1: Filling in sidewalk gaps and improving intersections helps complete a street.

City-Maintained Roads: To implement a Complete Streets ordinance on a practical level, local road design standards may need to be modified. As a major part of that, the tables below may be used to specify appropriate bikeway accommodation and conditions for sidewalk construction. A “network route” is one that is or could be part of the designated bike network.

Table 5.1. Suggested Bicycle Accommodation in Road Designs

Minor urban 25-30 mph roads				
	<i>No parking</i>	<i>Parking <10%</i>	<i>Parking 10-30%</i>	<i>Parking >30%</i>
<i>Under 1000 ADT</i>	None	None	None	None
<i>(Network route)</i>	BR	BR	BR	BR
<i>Over 1000 ADT</i>	None	None	None	None
<i>(Network route)</i>	SLM-4 (or BL*)	CBPL	BR (and 3-ft S*)	SLM-11 (or BL*)

Arterial or Major Collector (Urban unless noted)			
	<i>2000-8000 ADT</i>	<i>8000-15000 ADT</i>	<i>Over 15000 ADT</i>
<i><35 mph</i>	BL-5 (or BBL*)	BBL (or BL-5)	BBL or SP [Note A]
<i>35-40 mph</i>	BBL or SP [Note A]	SP (or BBL) Note A	SP (or BBL) Note A
<i>>40 mph</i>	SP	SP	SP
<i>55 mph rural</i>	SH-4 (or SH-6*)	SH-6 (or SH-8*)	SH-8

- (Parentheses) indicate the secondary option.
- A secondary with an asterisk* indicates the option may be used at the higher ends of a range or where the need is greater.

BR: Bike network wayfinding signage only. D1-nb and D1-nc (n= # of destinations), and D11-1c are recommended.

SLM-4: Shared Lane Markings centered 4-ft from curb faces. Bike network wayfinding signage recommended as a supplement.

SLM-11: Shared Lane Markings centered 11-ft from curb faces (on-street parking present). Bike network wayfinding signage recommended as a supplement.

CBPL: Combined Bike/Parking Lanes, solid stripes 7-8 ft from curb faces. Parking permission indicated with signage. Bike network wayfinding signage recommended as a supplement.

3-ft S: "State Law - 3 Feet Min To Pass Bicycles" sign, which has been approved by IDOT.

BL-5: Bike Lanes of width 5-ft, with pavement stencils per AASHTO and bike network wayfinding signage recommended as a supplement.

BBL: Buffered bike lanes of 3.5 to 5-ft width, plus 1.5 to 3-ft buffers on travel and/or parking (if present) sides. May substitute with Protected Bike Lanes. Wayfinding signage supplements.

SP: Off-road sidepath trail designed per AASHTO, on at least one side of road.

SH-4, SH-6, or SH-8: Paved shoulders of width 4, 6, or 8-ft, respectively. Any rumble strips should have longitudinal breaks and a minimum 4-ft clear zone for bikes.

Note A: As the frequency of crossings (side streets, commercial entrances, driveways) increase, the choice of buffered bike lanes or sidepath moves closer to buffered bike lanes.

Table 5.2. Federal Highway Administration’s Guidelines for New Sidewalk Installation

Roadway Classification and Land Use	Sidewalk Requirements	Future Phasing
Highway (rural)	Min. of 1.525 m (60 in) shoulders required.	Secure/preserve ROW for future sidewalks.
Highway (rural/suburban - less than 2.5 d.u./hectare (1 d.u./acre))	One side preferred. Min. of 1.525 m (60 in) shoulders required.	Secure/preserve ROW for future sidewalks.
Suburban Highway (2.5 to 10 d.u./hectare (1 to 4 d.u./acre))	Both sides preferred. One side required.	Second side required if density becomes greater than 10 d.u./hectare (4 d.u./acre).
Major Arterial (residential)	Both sides required.	
Collector and Minor Arterial (residential)	Both sides required.	1.525 m (60 in)
Local Street (Residential - less than 2.5 d.u./hectare (1 d.u./acre))	One side preferred. Min. of 1.525 m (60 in) shoulders required.	Secure/preserve ROW for future sidewalks.
Local Street (Residential - 2.5 to 10 d.u./hectare (1 to 4 d.u./acre))	Both sides preferred. One side required.	Second side required if density becomes greater than 10 d.u./hectare (4 d.u./acre).
Local Street (Residential - more than 10 d.u./hectare (4 d.u./acre))	Both sides required.	
All Streets (commercial areas)	Both sides required.	
All Streets (industrial areas)	Both sides preferred. One side required.	

Note: *d.u. stands for dwelling unit*

Development Ordinances: Create development guidelines to help new developments contribute to Charleston’s efforts to become more pedestrian and bicycle-friendly. Possible topics:

Developments shall contribute to the City of Charleston’s efforts to become more pedestrian and bicycle friendly. This includes:

- *Considering bicycle and pedestrian traffic and facilities during the traffic impact analysis process.*
- *Installing bikeways as part of any required roadway improvements, per the table above, and consulting the Charleston Bicycle Plan for specifically-defined bikeway improvements.*
- *Installing sidewalks (with a minimum preferred width of 5 ft.) according to FHWA New Sidewalk installation guidelines, above.*
- *Considering pedestrian and bicycle access within the development as well as connections to adjacent properties.*
- *Considering connectivity between developments for pedestrians and bicyclists to minimize short-distance trips by motor vehicles. These can be provided as “cut through” easements in suburban cul-de-sac developments, and as part of connected street grids in traditional neighborhood development.*
- *Building out pedestrian and bicycle facilities concurrent with road construction, or in an otherwise timely manner, to prevent gaps due to undeveloped parcels.*

IDOT, County, and Other Agency Roadways: Work closely with IDOT, Coles County Highway Department, and other appropriate agencies to identify opportunities to improve roadways as part of new, reconstruction and maintenance projects. These are the most cost-efficient times to also make improvements (as needed) for those walking and biking.

Additional Policies and Ordinances: Other policies and ordinances may be adopted by the City of Charleston to make adequate bicycle and pedestrian accommodation part of standard practice for any improvement in town.

The University of Albany provides simple and specific policy text⁷ appropriate for:

- The City comprehensive plan
- Subdivision regulations and site plan review
- Zoning laws
- School board policy on Safe Routes to School

The bicycle parking section of this plan suggests modifying the parking development ordinance to include bicycle racks.

⁷ “Planning and Policy Models for Pedestrian and Bicycle Friendly Communities in New York State” by the Initiative for Healthy Infrastructure, University at Albany, State University of New York (www.albany.edu/ihl/files/NY_Planning_And_Policy_Models_iHi.pdf)

6 Other Recommendations

Introduction

Engineering improvements to the physical environment for cycling should be accompanied by work in the “other E’s”: Education, Encouragement and Enforcement. The recommendations below will raise awareness of new facilities and motivate more people to safely and comfortably bike in Charleston. Bicycle Parking is treated as a separate category, given the breadth of the topic and its relationship to both engineering and encouragement.

Bicycle Parking

Secure bicycle parking is a necessary part of a bikeway network, allowing people to use their bikes for transportation and reducing parking in undesirable places. Successful bicycle parking requires a solid bike rack in a prime location. It is recommended that the City address bike parking by adopting a development ordinance requirement and by retrofitting racks at strategic locations in town.

General bicycle parking considerations are covered below. For more details, consult *Bicycle Parking Guidelines, 2nd Edition: A Set of Recommendations from the Association of Pedestrian and Bicycle Professionals*, at www.apbp.org.

Style: A good bicycle rack provides support for the bike frame and allows both the frame and wheels to be secured with one lock. The most common styles include the inverted “U” (two bikes, around \$150-300) and “post and loop.” The preferred option for multiple spaces is a series of inverted “U” racks, situated parallel to one another. These can be installed as individual racks or as a series of racks connected at the base, which is less expensive and easier to install and move, if needed. See Figure 5.1.

Old-fashioned “school racks,” which secure only one wheel, are a poor choice for today’s bicycles (Figure 5.2). Securing both the wheel and frame is difficult, and bicycles are not well supported, sometimes resulting in bent rims.

Locations: The best locations for bike parking are near main building entrances, conveniently located, highly visible, lit at night, and—when possible—protected from the weather. When placing a bicycle rack in the public right-of-way or in a parking lot, it should be removed from



Figure 6.1. Inverted U, single (top) and in a series (bottom).

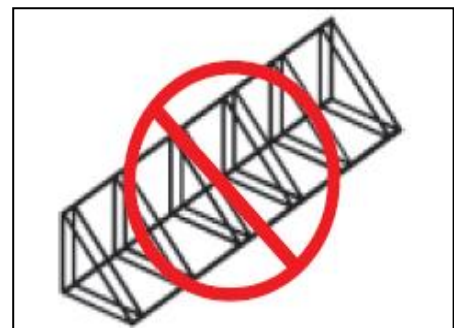


Figure 5.2. “Schoolyard” rack, not recommended.

the natural flow of pedestrians, avoiding the curb and area adjacent to crosswalks. Racks should be installed a minimum of 6 feet from other street furniture and placed at least 15 feet away from other features, such as fire hydrants or bus stop shelters.

The installation recommendations below are from the Kane County Bicycle & Pedestrian Plan:

- Anchor racks into a hard surface
- Install racks a minimum of 24-in from a parallel wall
- Install 30-in from a perpendicular wall (as measured to the closest inverted U.)
- Allow at least 24-in beside each parked bicycle for user access, although adjacent bicycles may share this access.
- Provide a 6-ft aisle from the front or rear of a bicycle parked for access to the facility.

Ordinances: Ideally, all multi-family and non-residential buildings should provide bike parking. A simple ordinance may call for one bike parking space for every 10 or 20 required car spaces, with a minimum of two spaces. The City of Naperville has a very good ordinance (Section 6-9-7) specifying bike rack standards and a detailed list of required spaces per land use. Most uses call for 5% of car spaces, with higher amounts for multi-family dwellings, schools, recreation facilities, etc. For suggestions on bike parking requirements according to land use type, consult the APBP bicycle parking guide referenced above.

The bicycle parking section in the City of Champaign's zoning ordinance (Section 37-376 to 37-379) not only specifies amount of bike parking per land use, but also bike rack type and general requirements for on-site location.

Other Retrofits: Retrofit bike parking is recommended in places of latent demand, including public buildings, recreation facilities, and commercial centers. Local bicycle advocates might be tasked with providing suggestions. Note that retrofitting racks on commercial properties and other private property will require cooperation from the property managers.

Education

There is a big educational gap – for both bicyclists and motorists – on how to legally and properly share the road. The result: avoidable crashes, too many people afraid to bike, and lots of anger and resentment. Education of both road user types is crucial to improving real and perceived bicycling safety in Charleston. Investing some resources on public outreach and education would greatly leverage the City's infrastructure investment.

Many of the safety resources listed below are free, except for the time to get and use them. Much of this time could come from volunteers.

Bicyclists: Many people are afraid to bike, or bike only on off-road trails, because of their concern about safety. Improving education can lessen these concerns and instill the skills and confidence to bike to more places around town more safely.

The following safety materials could be distributed through schools and PTAs, at public places such as City Hall and the library, and on the City’s and park district’s websites:

- *Bicycle Rules of the Road*, a free guide from the Illinois Secretary of State: www.cyberdriveillinois.com/publications/pdf_publications/dsd_a143.pdf
- *Bike Safety*, a free brochure from the Illinois State Police: www.isp.state.il.us/docs/5-035.pdf
- Ride Illinois’ single-page summaries for children and their parents. rideillinois.org/safety/kids-and-biking-resources
- Illinois Bicycle Law cards, free from Ride Illinois. Relevant state laws, folds to business-card size. rideillinois.org/wp-content/uploads/2015/10/BikeLawCard2015.pdf

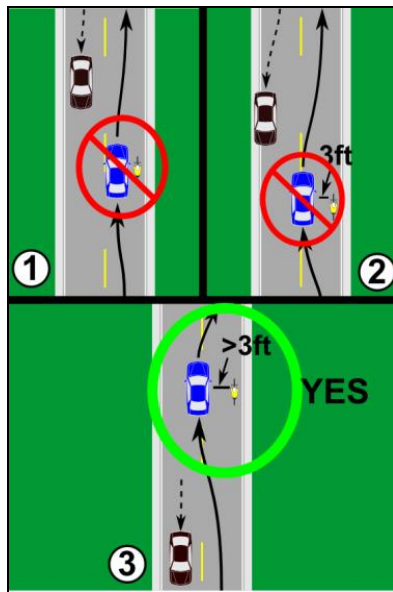


Figure 5.4. Motorist Quiz at www.bikesafetyquiz.com.

In addition, Illinois has a network of bicycle safety instructors, nationally-certified by the League of American Bicyclists, to teach a menu of classes for children and adults. These classes – or training of new instructors – could be conducted in Charleston. Instructors are listed at www.bikeleague.org/bfa/search/list?bfaq=illinois#education.

An online interactive resource on relevant laws and safety techniques is Ride Illinois’ www.bikesafetyquiz.com. Concise quiz-based lessons are freely available for Adult Bicyclists, Child Bicyclists, and Motorists. Besides individual use, the application has functionality for easy use by schools, driver education programs, scouts, YMCAs, and more. Ride Illinois has brief text promoting the quiz, available for municipal newsletters and websites.

Motorists: Drivers not trained on car-bike interactions are much more likely to make mistakes that are dangerous to people on bikes. The following safety resources are available

from Ride Illinois, for driver education programs and existing motorists:

- The “Motorist” and “Driver Education” quizzes in the www.bikesafetyquiz.com resource mentioned above.
- “Share the Road: Same Road, Same Rights, Same Rules”, a 7-minute video available at www.youtube.com/watch?v=S1PXvxh_6MI and as a DVD

The plan recommends that local high schools and private driver education programs be encouraged to use www.bikesafetyquiz.com and/or the video and its accompanying lesson. Both resources could be added to the City website. During warmer months, the video could be shown on the local cable channel and the articles could be published for residents.

Enforcement

A vital component of a safe bicycling environment is enforcement with education to reduce common car-bike collision types.

According to Illinois law, bicyclists have both the rights and responsibilities of other vehicle users. Many cyclists do not know about the law as it applies to bikes and how following the law leads to safe cycling. Other cyclists ignore the law while riding in traffic, not only creating dangerous situations but also causing motorist resentment toward other cyclists trying to share the road safely.

Police are encouraged to stop cyclists if the situation dictates, to educate, issue warning citations, or issue tickets. Changing their behavior could save their lives. The aforementioned Illinois bike law cards are available from Ride Illinois. Also, Ride Illinois has piloted a bicycle ticket diversion program in Urbana, Champaign, and Highland Park. To reduce a ticket to a warning, offenders take the Adult Bicyclist quiz at www.bikesafetyquiz.com, emailing their completion certificate to the police department. This has been received well and is suitable for Charleston, too.

In a car-bike crash, the motor vehicle does the most damage. Some aggressive motorists intentionally harass cyclists, while others simply don't know how to avoid common crash types. As with cyclists, police are encouraged to stop motorists if needed, to educate, issue warnings, or issue tickets. An annually-conducted, brief but well-publicized targeted enforcement campaign (aka "sting") can raise community awareness about particular problem issues. Warning tickets would be issued, along with instructions to complete the appropriate www.bikesafetyquiz.com lesson.

Officers are encouraged to learn or refresh their own knowledge on the common crash types through completion of the Motorist and Adult Bicyclist quiz lessons.

Finally, police might consider replicating an earlier Hoffman Estates "bike safety kit" program. There, the police regularly noticed 50-60 mostly low-income workers, relying on their bicycles for year-round transportation to their jobs. These residents, riding at dark on busy roads, were often at risk due to a lack of bike lights and reflective clothing. Officers distributed a kit of these items when they witnessed a cyclist in that situation. This low-cost program was a much-appreciated success that could be duplicated here.

These and other enforcement ideas are detailed in the Illinois Association of Chiefs of Police's magazine: rideillinois.org/wp-content/uploads/2016/01/PoliceChiefsArticle_Spring2014.pdf

Encouragement

Suggestions for encouraging visitors or residents to explore Charleston by bicycle include:

- Creating and distributing a bicycle map – showing the trails, preferred road routes, and bicycle safety information – at public buildings and during events.
- Proclaim the City's observance of National Bike Month, Week, or Day. As part of the event, challenge residents to do the www.bikesafetyquiz.com. Have the Mayor lead by example, holding his own certificates of completion from the Adult Bicyclist and Motorist quizzes in a press release photo publicizing the event.

- On Bike to Work Day, encourage bicycling to work, errands, or other destinations. Offer token incentives, such as refreshments at City Hall or coupons for ice cream.
- Work with the school districts to observe National Bike to School Day, in early May.
- Promote Charleston as being bicycle-friendly in the City's advertising.

7 Plan Implementation

Introduction

A key recommendation of this plan is to develop a way to ensure its implementation. Continued progress will require a commitment of time and financial resources over many years. Little by little, project by project, the City of Charleston will become even more bike-friendly.

Bicycle and Pedestrian Advisory Commission and Coordinator

Perhaps the most important implementation tool is time. The plan recommends dedicating some fraction of a staff member's time as the City's Bicycle and Pedestrian Coordinator. This individual would work on plan implementation and other active transportation issues. Also, the coordinator would regularly collaborate with other City staff and relevant agencies to ensure their work conforms to the goals of the plan. Routine review of development plans and road project designs is a prime example.

In addition, the plan recommends the establishment of an ongoing Charleston Bicycle and Pedestrian Advisory Commission (BPAC), reporting to City Council or to the City Administrator/Mayor's Office. Volunteer involvement by a few energetic, knowledgeable, and dedicated residents can greatly leverage the staff time investment of the Bicycle/Pedestrian Coordinator, who would serve as the lead staff liaison to the BPAC.

BPAC membership should be limited to 4-7 residents, mostly bicyclists ranging in experience. Some may come from the bike plan's August 3, 2017 public brainstorming meeting, and/or others who have been involved locally in bike issues. If these individuals lack interest in pedestrian-only issues, too, then at least 1-2 members should specifically represent these topics. Ideally, the residents who volunteer for BPAC should have some relevant, specialized expertise – and/or be willing to work on tasks outside of the meetings.

Other BPAC members may come from other City departments (Planning/Community Development, Public Works, Parks and Recreation, Police) or relevant agencies (such as Eastern Illinois University and Charleston School District). However, it may be best for these departments and agencies to name representatives as "ex-officio" members, attending only when relevant topics are discussed. Meetings should be held every one to four months, depending on level of activity.

The BPAC should routinely be given the opportunity to provide input into these City processes:

- Capital Improvement Program – How can designs of the CIP's road projects and other capital projects implement bicycle plan recommendations or otherwise impact bicycling (and walking) positively? Also, the BPAC should propose stand-alone bike and/or pedestrian projects as priorities for the next CIP, each year.

- Site design and other development review – Provide bicycle and pedestrian perspective to the City’s review of new development or re-development projects.
- Maintenance – The BPAC should periodically review conditions on the City’s bikeway system and make prioritized maintenance recommendations.

In addition, the BPAC members should be empowered to work on several one-time and ongoing recommendations from this plan and other efforts. Examples include:

- Prioritize specific locations where bicycle parking is needed.
- Prioritize Charleston bikeways needing wayfinding signage, and specifying destination content for each sign based on general guidelines from this plan.
- “Field test” demand-actuated traffic signals along the planned bikeway network, to determine and prioritize where bicycle-actuation improvements are needed.
- Bring or apply a variety of available education, enforcement, and outreach resources – such as those detailed earlier in the plan – to Charleston.
- Act as volunteer “bicycle ambassadors” at community events.
- Lead bike-related events, such as Bike to Work Day/Week/Month or Bike to School Day.
- Head the effort to win national Bicycle Friendly Community designation, including filling out the application, and strategizing which areas need improvement.

It is strongly recommended that each commission member should have “ownership” of at least one topic or effort. This will keep members energized and ensure the commission is a net positive in City time investment.

Multi-Year Work Plan

This plan recommends a variety of strategies, from adopting policies to coordinating with other agencies, to quickly implement “high priority, ready to go” projects. One of the first steps of plan implementation should be to go through the listed recommendations and draft a five year work plan. Some projects may be components of larger road projects in Charleston’s Capital Improvement Program. Others may be stand-alone retrofit projects. Projects that do not get completed on a given year move into a future year’s work plan. Dividing plan implementation across a span of years makes it more manageable, especially in terms of funding.

Implementation Funding

Recommendations in this plan range from low-cost improvements to major capital investments. Project costs depend on myriad factors. It is usually most cost effective to address bicycling improvements as part of larger projects, instead of retrofitting. Estimates for projects are below.

- **Trail or Sidepath:** The cost of developing trails varies according to land acquisition costs, new structures needed, the type of trail surface, the width of the trail, and the facilities that are provided for trail users. Construction costs alone can run \$125,000 per

mile for a soft surface trail to \$2,000,000 or more per mile in an urban area for a paved trail.

- **Bike Lanes:** The cost of installing bike lanes on both sides of the road is estimated at \$28,000 per mile where two stripes are needed. Where four stripes are needed due to adjacent parking or buffering, the estimate is \$48,000 per mile. These costs include stripe painting, bike lane pavement markings, and wayfinding signage – but not removal of existing stripes. It is most cost efficient to create bike lanes during reconstruction or resurfacing.
- **Combined Bike/Parking Lanes:** With two stripes and no markings, combined bike/parking lanes on both sides of the road are estimated to cost \$25,000 per mile.
- **Signed Bike Routes:** Only wayfinding signs and their posts are needed. At \$200 per installation, the estimated cost is \$2,500 per mile, for both sides of the road. Sign installation can be done at any time.
- **Shared Lane Markings:** Also known as “sharrows”, the total per-mile estimate of \$4,500 per mile includes pavement markings every 250-ft plus wayfinding signage. Again, shared lane markings can be done with other roadwork.
- **Maintenance:** In addition to initial costs of bikeways, maintenance costs are ongoing.

These may be funded in a number of ways. First, the City of Charleston may dedicate an annual budget for a bicycle implementation program. If needed, one strategy may entail a smaller first year budget for the highest priority projects, as a way to build momentum for following years.

Another major builder of bikeways is developers. Plan recommendations may be implemented opportunistically when a new residential or commercial development is added.

Other opportunities include road projects by the City, Coles County, or the State. Addressing intersection improvements, bikeways, and sidewalks as part of a larger road project is substantially cheaper and easier than retrofitting. Even resurfacing work can be used to add on-road bikeway striping. In fact, it is likely that resurfacing projects will be a major component of plan implementation.

Finally, outside government funding sources can be used for bikeway retrofit projects. A number of state and federal grant programs are available and summarized in Appendix 3.

Technical Resources and Training

City staff should have access to up-to-date resources to help with the details of design and implementation. In addition to including the printed resources below in the City planner’s and engineer’s library, seek out opportunities to participate in webinars and workshops on best practices. Not only do these events provide useful information, they are an opportunity to interact with other planners and engineers grappling with similar issues.

Manuals and Guidelines:

- *AASHTO Guide for the Development of Bicycle Facilities*, 4th Edition, 2012. Available at www.transportation.org

- *Bicycle Parking Guidelines, 2nd Edition: A Set of Recommendations from the Association of Pedestrian and Bicycle Professionals*, 2010, available at www.apbp.org.
- *NACTO Urban Bikeway Design Guide*. Online at www.nacto.org.
- *Manual on Uniform Traffic Control Devices*. Online at mutcd.fhwa.dot.gov.

Websites and Professional Organizations:

- The Pedestrian and Bicycle Information Center: Offers a wealth of information on engineering, encouragement, education and enforcement, including archived webinars and quarterly newsletters: www.pedbikeinfo.org
- The Association of Pedestrian and Bicycle Professionals: provides continuing education, technical resources and an online forum for exchanging questions and ideas. www.apbp.org
- Ride Illinois: A planning and advocacy resource, with many on-line materials focused on best practices nationally as well as issues unique to Illinois: www.rideillinois.org

Bicycle-Friendly Community Designation

A goal of plan implementation should be official designation as a “Bicycle Friendly Community” (BFC). This national League of American Bicyclists award program has Honorable Mention, Bronze, Silver, Gold, Platinum, and Diamond gradations. The program comprehensively assesses a community based on Engineering, Education, Enforcement, Encouragement, and Evaluation. Appendix 5 is an infographic summarizing how Bronze and higher communities have fared in key criteria.

Winning BFC designation is not easy. However, the recommendations in this plan encompass most of the award criteria.

Ride Illinois, a longtime observer of and “local reviewer” for the BFC program, believes Charleston could achieve the Bronze level within 4 years, with steps such as:

- Adopting this plan, officially naming a Bicycle/Pedestrian Coordinator, and creating a Bicycle (or Bicycle/Pedestrian) Advisory Commission – described earlier
- Adopting a Complete Streets policy and bicycle/pedestrian friendly road design standards, such as those suggested in Chapter 5
- Adopting a bike parking ordinance
- Implementing several more high-priority segments on on-road bikeways, especially bike lane sections
- Implementing at least two of the Education recommendations from this plan
- Implementing at least one of the Enforcement recommendations from this plan



Figure 6.2.. *Bicycle Friendly Community sign.*

- Proclaiming Bike to Work Day, Week, or Month, with some accompanying public educational outreach

As suggested later, Bicycle and Pedestrian Advisory Commission members could lead several of these efforts.

Annual Evaluation

Another way to keep up momentum and public support is to plan for a yearly evaluation (often called the fifth “E”) and celebration of plan progress. For example, publish a yearly plan status report in conjunction with a ribbon cutting ceremony or community event, Bike to Work Day or Bike to School Day, a community bike ride, or other event. This keeps local stakeholders focused on the progress that has been made and energizes everyone to keep moving forward. Also, consider updating this plan every 5-10 years to reflect progress and reevaluate priorities.

Appendix 1

Public Brainstorming Workshop Results

On August 3, 2017, a “Public Brainstorming Workshop” was attended by roughly 50 residents. The purposes of the workshop included:

- Gather local resident knowledge on biking needs
- Prioritize road corridors and other routes to study for potential improvements
- Build community support for the plan and its implementation.

Each attendee marked individual maps with suggested “routes to study” for improvements. The map at the end of Appendix 1 shows the results of this input, with each recommended segment color-coded by the number of participants suggesting that it be considered.

A group exercise followed in which top priorities of tables from four geographic regions of the City were discussed and reported. These include:

Table 1, Northwest (north of Lincoln, west of 4th/5th Streets):

- Access to post office from E Street, north of Lincoln Prairie Trail
- E Street, to Ne-Co Fields
- Division and Walnut to North Park and Baker Field entrance road

Table 2, Northwest (north of Lincoln, west of 4th/5th Streets):

- Bad intersection at E Street and State
- Polk Avenue
- E Street and Lincoln – Starbucks/Ace Hardware area – difficult to maneuver

Table 1, Southwest (south of Lincoln, west of 4th Street):

- EIU area – bicycling signage, marking, education to maneuver through campus
- Reynolds to Douglas
- Grant, one-way bike lane, wrong way
- 4th Street – difficult by Lincoln (and getting to 6th/7th)

Table 2, Southwest (south of Lincoln, west of 4th Street):

- Reynolds – Carl Sandburg School, signs, education; continue on Lovers Lane (with speed bump removed) to University
- Douglas (and Coolidge) – widen
- Grant – only one-side bike lane, need eastbound; complete a Douglas-4th route
- 4th – Lincoln Highway – Coolidge to University

Table 1, Northeast (north of Lincoln, east of 4th/5th Streets):

- East-west connectors on Monroe and Jackson
- Sidepath along 18th from trail to the south, eventually to Fox Ridge State Park
- Bike lane around Square

- Lincoln Prairie Grass Trail trailhead by 9th
- Polk Avenue

Table 1, Southeast (south of Lincoln, east of 4th Street):

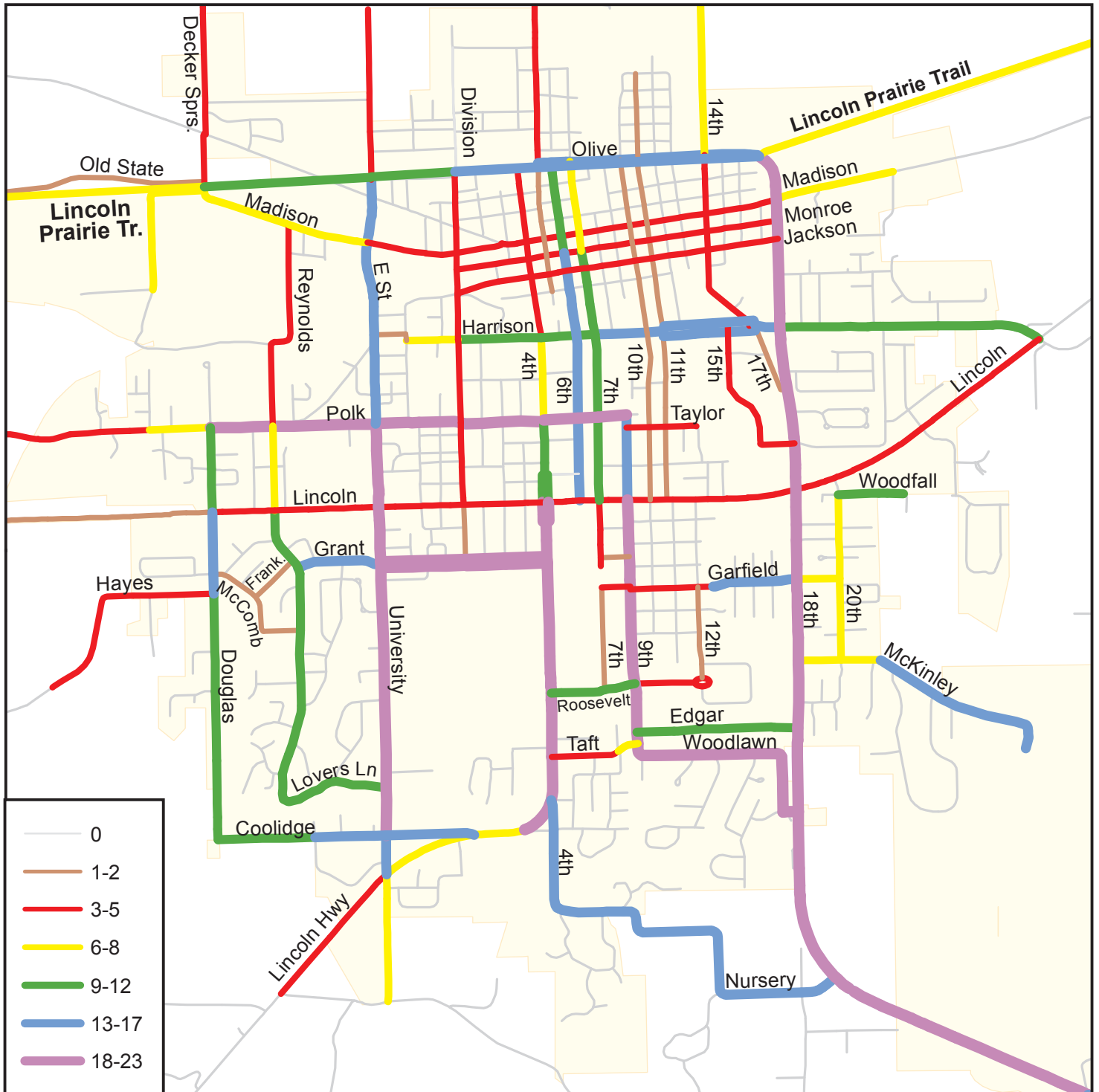
- Connect to Lake Charleston trails
- EIU students heading out to Wal-Mart – Woodfall, 20th
- Woodlawn
- Nursery

Table 2, Southeast (south of Lincoln, east of 4th Street):

- Sidepath along 18th/IL130 from Lincoln Prairie Trail to Lake Charleston and beyond
- 9th Street
- From 4th: Taft to Edgar to 18th Street sidepath
- 4th/Nursery

Routes to Study "Votes"

August 3, 2017 Public Meeting



Appendix 2: Road Segment Data

Extensive data collection on existing bicycling conditions informed the development of this plan. Most of this information, such as roadway geometry, traffic conditions, Bicycle Level of Service scores, sidewalk coverage, recommendation details and implementation notes, is housed in the spreadsheet beginning on the next page. The legend for the spreadsheet is below:

Segment Definition

Street	Street name of road segment
From (W/N)	West or North segment end
To (E/S)	East or South segment end

Existing Conditions

Lanes	Number of through lanes (excludes center/other turn lanes)
Traffic ADT	Traffic count in vehicles/day. Gray or blue indicate estimates.
Speed Limit	Posted speed limit
Lane Width	Width from lane edge (often the gutter seam/pavement edge) to next lane, in feet
Extra Width	Pavement width from outer lane edge to gutter seam/pavement edge. May include paved shoulders, parking areas, bike lanes.
Gutter Pan	Width of cement gutter pan in feet
Parking Occ%	Estimated % occupancy rate of on-street parking - excludes driveway areas. Averaged over 2-sides unless noted.
% Truck	Estimated % of heavy truck traffic
BLOS score	Bicycle Level of Service score of road segment - measure of on-road comfort level for a range of adult cyclists, as a function of geometry and traffic conditions
BLOS grade	BLOS converted to a grade range. B (or better) might be considered "comfortable" for casual adult cyclists, C (or better) for experienced cyclists
Comments	Further details
Sidewalk Status	Are there sidewalks (SW) or sidepaths (SP) on each side (N-north, S-south, E-east, W-west)

Recommendations

Primary Recommendation	Description of the recommendation (if any) considered best for this segment.
Notes and other options	Either further detail on the primary recommendation, or "fallback" recommendation(s) if the primary cannot be achieved.
New BLOS	Shown only if an on-road, primary recommendation bikeway is implemented.

Implementation

Public "Votes"	Number of 8-3-17 public brainstorming workshop attendees suggesting this segment
Priority	Recommended implementation priority of segment

Street	From (N/W)	To (S/E)	Lane s	Traffic ADT	Spd Limit	Lane Width	Extra Width	Gutter Pan	Park Occ %	% Truc k	BLOS score	BLOS grade	Comments	Sidewalk Status	Primary recommendation	Notes and Other Options	New BLOS Score	Public input votes	Priority
Old State	W-end	Decker Springs	2	650	30	11.6	0	0	0	1	2.43	B	W - turns into county road. Hill	None	None			2	
Lincoln Prairie Trail	W-end	Decker Springs													Improve road crossings	Add continental crosswalks for all trail crossings. For each road direction, add W11-15/W11-15P/W16-9p sign assembly in advance and W11-15/W16-7p at (or very near) Xing. All signs would be better in MYP color.		6	High
Lincoln Prairie Trail	Decker Springs	E Street													Improve road crossings	See above		9	High
Lincoln Prairie Trail	E Street	5th St													Improve road crossings	See above		12	High
Lincoln Prairie Trail	5th St	18th St													Improve road crossings	See above		15	High
Lincoln Prairie Trail	18th St	E-end													Improve road crossings	See above		8	High
Olive	5th	Lincoln Prairie Trail	2	3300	30	13.5	0	0	0	3	3.35	C	3 lanes. 39' total, 12' center lane. Concrete. No Xwalk at trail (could add median island), just W11-1 advance signs.	S-SP, N-SW	Improve trail crossing	See above		15	High
18th	Lincoln Prairie Trail	Madison	2	3300	30	13.5	0	0	0	3	3.35	C	3 lanes. 39' total, 12' center lane. Concrete. Narrow sidewalk.	W-SW	Widen W-SW to sidepath width	Only medium priority because (narrower) sidewalk exists.		20	High
Madison	W-end	Decker Springs	2	150	30	9	0	0	0	1	1.95	B	Undeveloped	None	None			6	
Madison	Decker Springs	Reynolds	2	600	30	9.6	0	0	0	1	2.60	C		None	3' law sign	E-bd just past Decker Springs recommended.		6	Low
Madison	Reynolds	E Street	2	1250	30	10.3	0	0	0	1	2.90	C	County fairgrounds N. Wider/concrete at/near E Street	S-SW	None	3' law sign by Decker Springs suffices.		8	
Madison	E Street	B Street	2	1250	30	10	0	0	0	1	2.93	C	Diagonal RR in E St intersection. Cemetary N.	E-SW	None	3' law sign by Decker Springs suffices.		5	
Madison	B Street	Division	2	1250	30	11.5	0	0-pvd	10	1	2.88	C		Both	None	3' law sign by Decker Springs suffices.		5	
Madison	Division	State	2	450	25	11.5	0	0-pvd	10	1	2.17	B	E-bd only. 20mph. Used parking bays by school. S-side parking only.	Both	None			4	
Madison	State	4th	2	8900	30	11	0	1	0	2	3.98	D	IDOT road. Businesses	Both	None			4	
Madison	4th	7th	2	7000	30	12	0	1.5	0	2	3.74	D	IDOT road. 3 lanes, businesses.	Both	Add warning signs	W11-15, W16-7P (FYG) warning signs on Madison at 6th and 7th.		4	Medium
Madison	7th	11th	2	7000	30	11.2	0	0-pvd	0	2	3.84	D	IDOT road.	Both	None			4	
Madison	11th	14th	2	5500	30	11.2	0	0-pvd	0	2	3.71	D	IDOT road.	Both	None			4	
Madison	14th	18th	2	5000	30	15	0	0-pvd	0	2	3.17	C	IDOT road. Carriage SWs.	N-SW; S-SW most	None	Enough room for bike lanes 4-11		4	
Madison	18th	500' E of 18th	2	2450	30	11.2	2	2	0	3	2.95	C	IDOT road. E-bd 11+6' shldr. W-bd 11.5+2' shldr+2' gutter.	N-SW	3' law sign	Only one E-bd sign recommended, near 18th. State route, so must wait for IDOT to approve usage on their roads.		6	Low
Madison	500' E of 18th	Tree Line	2	2450	30	10.9	1.5	1	0	3	3.14	C	IDOT road. 21' 6" total. E-bd 10'9"+2' paved shldr+6' gravel. W-bd curbed 10'9"+1' shldr+1' gutter and N-SW.	N-SW	3' law sign	Only one E-bd sign recommended, near 18th. State route, so must wait for IDOT to approve usage on their roads.		6	Low
Monroe (W-bd)	Division	4th	1	500	30	29.2	0	0-pvd	60	1	0.63	A	29'2" total, 14'6" lane. Parking both sides, lighter W. Stop at 4th.	N-SW; S-SW most	None			3	
Monroe (W-bd)	4th	5th	1	600	30	29.2	0	0-pvd	40	1	0.23	A	29'2" total. Parking both sides, but off-street lots keeps occupancy low. Stop at 4th.	N-SW; S-SW most	None	If denser network desired and 4th added north of Polk, add bike route wayfinding signage.		3	
Monroe (W-bd)	5th	6th	1	850	30	20.7	8	1	40	1	0.00	A	38' 8" total includes 1' gutters. Marked parking stalls both sides, but off-street parking N.	Both	None	If bikeway desired: Bike lane 5.7' between 15' travel lane and marked parking on R (N) side. Upgrading parking hashes to a second stripe is optional. If no bike lane, bike route wayfinding signage.		3	
Monroe (W-bd)	6th	7th	2	1400	25	13.8	8	1.5	100	1	2.35	B	20mph. On square. Diagonal parking (not long enough) N-side (right). S-side (left) parallel parking. 37'2" total not including diagonal.	Both	Shared lane markings	Center SLMs between parking on L and R sides. If lane striping forces a different location, use the leftmost part of the right lane.		3	Medium
Monroe (W-bd)	7th	8th	2	650	25	10.5	8	0-pvd	40	1	1.24	A	37' total. Marked parking stalls both sides. Right turn lane.	Both	Shared lane markings	In left part of right-turn lane - see NACTO guide graphic (combined bike lane/turn lane section). Bike route wayfinding signs are a close backup.		3	Low

Street	From (N/W)	To (S/E)	Lanes	Traffic ADT	Spd Limit	Lane Width	Extra Width	Gutter Pan	Park Occ %	% Truck	BLOS score	BLOS grade	Comments	Sidewalk Status	Primary recommendation	Notes and Other Options	New BLOS Score	Public input votes	Priority
Monroe (W-bd)	8th	18th	1	650	25	30	0	0-pvd	10	0.5	0.00	A	Parking both sides, higher further W (30%?). No stop signs until square. Sidewalk gaps 16th-18th. ADT 750 E, 400 W.	Most	Bike route wayfinding signage	If a denser network is desired, otherwise, start W-bd designation at 8th. Striping off 8' parking on one or both sides could be done to reduce speeding, but % occupancy too high for right-side striped-off area to be considered as an ideal "combined bike/parking lane".		3	Low
Jackson (E-bd)	Division	2nd	1	450	25	20	0	0-pvd	10	0.5	1.21	A	Parking N-side only.	S-SW; N-SW most	None			3	
Jackson (E-bd)	2nd	4th	1	450	25	27.5	0	1.3	40	0.5	0.26	A	Brick (much of sidewalks, too).	Both	None			3	
Jackson (E-bd)	4th	5th	1	750	25	14	8	0-pvd	80	1	1.96	B	30' total. Parking stalls both sides.	Both	None	If bikeway desired and 4th north of Polk added: SLMs centered 11' from R (S) curb. Bike route wayfinding signs are a close backup.		3	
Jackson (E-bd)	5th	City Hall	1	750	25	17.6	7.6	1.3	60	1	0.77	A	35'5" total includes gutters. Parking stalls both sides.	Both	None	If bikeway desired and 4th north of Polk added: SLMs centered 11' from R (S) curb. Bike route wayfinding signs are a close backup.		3	
Jackson (E-bd)	City Hall	6th	2	750	25	10	0	0-pvd	0	1	2.48	B	Right lane is turn lane.	Both	None	If bikeway desired and 4th north of Polk added: SLMs in left part of right-turn lane.		3	
Jackson (E-bd)	6th	7th	2	1050	25	13.8	8	1.3	100	1	2.20	B	20mph. On square. Diagonal parking (not long enough) E-side (right). W-side (left) parallel parking. 37' total not including diagonal.	Both	Shared lane markings	Center SLMs between parking on L and R sides. If lane striping forces a different location, use the leftmost part of the right lane.		3	Medium
Jackson (E-bd)	7th	8th	2	950	25	19.8	8	0-pvd	30	1	0.00	A	Marked parking stalls both sides.	Both	Bike lane 5.8-14	Bike lane between travel lane and marked parking on R (S) side. Stripe on travel lane side. Upgrading from parking hashes to second stripe, between bike lane and that parking, is optional. If no bike lane, bike route wayfinding signage.		3	Low
Jackson (E-bd)	8th	18th	2	800	25	30	0	0-pvd	30	0.5	0.00	A	Parking both sides, higher further W (30%?). No stop signs after square.	S-SW; N-SW most	Bike route wayfinding signage	If a denser network is desired. Otherwise, stop E-bd designation at 8th. Striping off 8' parking on one or both sides could be done to reduce speeding, but % occupancy too high for right-side striped-off area to be considered as an ideal "combined bike/parking lane".		3	Low
Harrison	E Street	C Street	2	150	30	9	0	0	0	0	1.81	B	uncurbed	None	None	If bikeway desired, bike route wayfinding signage recommended.		2	
Harrison	C Street	Division	2	375	30	9	0	0	0	0	2.27	B	uncurbed	None	None	If bikeway desired, bike route wayfinding signage recommended.		7	
Harrison	Division	4th	2	750	30	14	0	0-pvd	20	0	2.31	B	Parking higher (W-bd) by Kiwanis Park, no parking E-bd. Bad E-bd sightline at 4th (tree), w/ 2-way stop.	S-SW; N-SW some	None	If Division and Harrison bikeways desired, bike route wayfinding signage recommended, with W11-15, W16-7P (FYG) warning signs on 4th.		11	
Harrison	4th	6th	2	850	30	11	0	0.8	0	0	2.48	B	Concrete.	Both	None	If Division and Harrison bikeways desired, bike route wayfinding signage recommended, with W11-15, W16-7P (FYG) warning signs on 4th.		12	
Harrison	6th	7th	2	850	30	14	0	0-pvd	0	0	2.11	B	Uphill E-bd, no parking. W-bd parking ok but unused.	Both	Bike route wayfinding signage			12	Medium
Harrison	7th	11th	2	1300	30	14	0	0-pvd	10	0	2.46	B	No parking E-bd. W-bd 30%, esp. by church. No parking both sides 9th-11th.	Both	Bike route wayfinding signage	Can supplement no parking sections with 4' shared lane markings, if desired.		15	Medium
Harrison (E-bd)	11th	14th	2	1450	30	9	0	1.5	20	0.5	3.19	C	Center striping (unlike W of here). By high school, much wider lane - for diagonal parking?	N-SW	Shared lane markings 4'	BLOS lower, so SLMs justified here. E-bd only, and only until widens by high school.		15	Medium
Harrison (W-bd)	11th	14th	2	1450	30	10	6.5	1.5	20	0.5	1.59	B	See above. No extra width parking stripe 11th-12th.	N-SW	Bike route wayfinding signage	Striped off shoulder acts as a "combined bike/parking lane" due to low occupancy.		15	Medium
Harrison	14th	18th	2	1300	30	13	0	1.2	0	0.5	2.53	C	Unsignalized Xing of 18th. Some stone shoulders.	N-SW	Bike route wayfinding signage	Could be supplemented with 4' SLMs, as a low priority. W11-1, W16-2P (FYG) advance warning signs on 18th.		15	Medium
Harrison	18th	22nd	2	1450	30	10	0	0	0	0.5	2.93	C	Uncurbed, some stone shoulders.	N-SW	3' law sign, future 4-10 bike lanes?	Add E-bd 3' law sign. If possible in future, pave 4' of shoulders, mark as bike lanes.		10	Medium

Street	From (N/W)	To (S/E)	Lane s	Traffic ADT	Spd Limit	Lane Width	Extra Width	Gutter Pan	Park Occ %	% Truck	BLOS score	BLOS grade	Comments	Sidewalk Status	Primary recommendation	Notes and Other Options	New BLOS Score	Public input votes	Priority
Harrison	22nd	Lincoln	2	750	30	10	0	0	0	0.5	2.60	C	900 ADT W, 600 E. Uncurbed, some stone shoulders. Modified share the road sign.	None	3' law sign	Replace W-bd Share the Road with 3' law sign.		10	Low
Polk	Lincoln	Fox Crest	2	750	30	10	0	0	0	1	2.67	C	ADT 600 W, 850 E. Uncurbed. Center stripes.	None	None			5	
Polk	Fox Crest	Douglas	2	1500	30	10	0	0	0	1	3.02	C	Uncurbed	None	None	3' law sign by Reynolds suffices.		6	
Polk	Douglas	Reynolds	2	1800	30	10	0	0	0	1	3.12	C	Uncurbed	S-SW	3' law sign	Add one sign W-bd after bike lane ends.		19	Medium
Polk	Reynolds	E Street	2	2400	30	14	0	1	0	1	2.78	C	Concrete. Some hills.	S-SW	Bike lanes 5-10		1.76	21	High
Polk	E Street	Division	2	2700	30	15	0	0-pvd	0	0.5	2.62	C	Paved. Carriage S-SW.	S-SW	Bike lanes 5-10		1.75	20	High
Polk	Division	4th	2	2050	30	12.2	0	2	0	0.5	2.86	C	ADT 1950 E, 2150 W. Carriage N-SW.	N-SW	Shared lane markings 4'	If no SLMs, then E-bd 3' law signage past Division (plus bike route wayfinding signs).		20	High
Polk	4th	6th	2	1350	30	11	0	2	0	0	2.72	C	Carriage N-SW	N-SW	Shared lane markings 4'			21	High
Polk	6th	7th	2	1250	30	11.9	0	0	0	0	2.58	C	Concrete. Carriage N-SW	N-SW	Shared lane markings 4'			22	High
Polk	7th	9th	2	750	30	11.9	0	0	0	0	2.32	B	Concrete. Carriage N-SW	N-SW	Shared lane markings 4'			20	Medium
Taylor	9th	10th	2	450	30	8.8	0	0-pvd	0	0	2.38	B	Concrete	Both	None	If bikeway desired, bike route wayfinding signage recommended.		3	
Taylor	10th	13th	2	450	30	10	0	0-pvd	0	0	2.27	B	2-way stops at 10th, 11th	Both	None	If bikeway desired, bike route wayfinding signage recommended.		3	
Buchanan	4th	6th	2	500	30	10	0	0-pvd	0	0.5	2.39	B	30' total. Nearly 100% parking E-bd, no parking W-bd.	Both	Bike route wayfinding signage, W-bd only	Option from S-bd 6th to S-bd 4th. Could supplement W-bd with SLM 4'.		0	High
Lincoln	W-end	Douglas	4	15800	55	12	6	0	0	2	2.29	B	IDOT road. Divided. Deep ditches.	None	None	Any future rumble strips should leave >4' of clear zone R of the rumbles.		1	
Lincoln	Douglas	Reynolds	4	19800	40	11	0	0-pvd	0	2	4.26	D	IDOT road. 5 lanes. 52' total. 4' sidewalks.	Both	None	Use any opportunity to widen sidewalks on Lincoln, throughout town.		3	
Lincoln	Reynolds	University	4	19800	35	11	0	0-pvd	0	2	4.17	D	IDOT road. 5 lanes. 52' total. 4' SWs. Right-turn lane at University.	Both	None	See above.		4	
Lincoln	University	Division	4	20300	35	11	0	0-pvd	0	2	4.18	D	IDOT road. 5 lanes. 52' total. 4' SWs.	Both	None	See above.		4	
Lincoln	Division	3rd	4	20700	35	13	0	0-pvd	0	2	3.95	D	IDOT road. 5 lanes. 71' total includes 9' W-bd: right-turn lane by Division, (mostly unoccupied) parking by park, unused buffered further E.	Both	None	See above.		5	
Lincoln	3rd	4th	4	21800	35	11	0	0-pvd	0	2	4.22	D	IDOT road. 66' total widens by 6th. Raised median 5.5' also widens E. Left-turn lanes.	Both	None	See above.		5	
Lincoln	4th	6th	4	21800	35	11	0	0-pvd	0	2	4.22	D	IDOT road. 66' total widens by 6th. Raised median 5.5' also widens E. Left-turn lanes.	Both	Widen S-SW to sidepath width	To become the primary option from N-bd 4th to N-bd 7th or from S-bd 6th to S-bd 4th. Also, 4th, 6th intersection improvements as suggested to IDOT.		5	High
Lincoln	6th	7th	4	21800	35	11	0	0-pvd	0	2	4.22	D	IDOT road. 76' total. Raised median 15'. E-bd left turn lane.	Both	Widen both sidewalks to sidepath width. Add LPI signal phasing at 6th.	N-sidepath (requires ROW acq) to become the primary option from N-bd 4th to N-bd 7th. S-sidepath to get to 7th - direct 7th users to cross at light at 6th. Manually-activated Lead Pedestrian Intervals at traffic signal at 6th to reduce conflicts with turning cars.		4	High
Lincoln	7th	9th	4	21800	35	12	0	0-pvd	0	2	4.10	D	IDOT road. Varying total, raised median width. Left-turn lanes, E-bd right-turn lane at 9th.	Both	None			5	
Lincoln	9th	18th	4	17200	35	11	0	0-pvd	0	2	4.10	D	IDOT road. 5 lanes. 52' total. 4' SWs. Raised median, left turn lanes by 18th.	Both	None			4	
Lincoln	18th	20th	4	12200	45	12	3	0	0	2	3.07	C	IDOT road. Raised or painted median. 5' E-bd shoulder (by right-turn lane) but pinch points at intersections. W-bd shoulder 3' paved + extra gravel width.	S-SW	Widen paved shoulders to 4' or more	In future roadwork, remove shoulder width pinch points at intersections, and add paved width of W-bd shoulder.	2.69	4	Low
Lincoln	20th	Hawthorn	4	12200	45	12	3	0	0	2	3.07	C	IDOT road. 5 lanes with left turn lanes and painted median, 60' total. Right-turn lane by Hawthorn.	S-SW	Widen paved shoulders to 4' or more	In future roadwork, remove shoulder width pinch points at intersections, and add paved width of W-bd shoulder.	2.69	3	Low
Lincoln	Hawthorn	Harrison	4	4700	45	12	3	0	0	2	2.59	C	IDOT road. Transitions from 4 to 2 lanes excluding turn lanes. 5' shoulders, E-bd <4' bike lane and right-turn lane approaching Harrison.	None	Widen paved shoulders, add sidewalk or sidepath	In future roadwork, add paved width for 4' or more consistently. As developed, add sidewalk or sidepath (high priority).	2.21	3	Low
Bostic (Panther)	Hawthorne	Bostic intersection	2	1150	30	11.5	0	1	0	0.5	2.65	C	CLTL estimated 37' total.	Both	Shared lane markings 4'	Wayfinding signs alone could suffice, as is. Need for SLMs rises, if developed to increase traffic.		0	Low
Woodfall	20th	E-end of pavement	2	3400	30	14.9	0	1.2	0	1	2.83	C	Much off-street parking. Back entrance to mall, Walmart	N-SW	Bike lanes 5.1-11		1.71	12	Medium
Woodfall	E-end of pavement	W-end of gap											Dirt driveway	None	Add trail link			0	Medium
Woodfall sidewalk	W-end of gap	E-end of gap											Gap in the road, but sidewalk exists.	N-SW	Widen sidewalk to sidepath width			0	Low

Street	From (N/W)	To (S/E)	Lanes	Traffic ADT	Spd Limit	Lane Width	Extra Width	Gutter Pan	Park Occ %	% Truck	BLOS score	BLOS grade	Comments	Sidewalk Status	Primary recommendation	Notes and Other Options	New BLOS Score	Public input votes	Priority
Woodfall	Hawthorne	E-end	2	800	30	13.5	0	1	0	0.5	2.22	B	Parking in back alleys	Both	Shared lane markings 4'	Wayfinding signs alone would suffice, as is. Need for SLMs and priority rise, if trail to Lake Charleston built or developed to increase traffic.		0	Low
Franklin	McComb	Reynolds	2	400	25	14	0	0-pvd	0	0.5	1.63	B	20mph.	None	None	If Douglas bikeway desired, bike route wayfinding signage recommended here.		1	
McComb	Douglas	Franklin	2	700	30	19.1	0	0-pvd	20	0.5	1.60	B	20mph.	W-SW	None	If Douglas bikeway desired, bike route wayfinding signage recommended here.		2	
McComb	Franklin	Reynolds	2	1000	30	19.1	0	0-pvd	20	0.5	1.78	B	20mph.	W-SW	None			1	
Grant	Reynolds	Meadowlake	2	1250	30	14.3	0	0-pvd	0	1	2.41	B		Both	Bike route wayfinding signage	Supplement with 4.3-10 paved shoulders (or 4' SLMs) - low priority		15	Medium
Grant	Meadowlake	University	2	1900	30	14.3	0	0-pvd	0	1	2.62	C		Both	Bike route wayfinding signage	Supplement with 4.3-10 paved shoulders (or 4' SLMs) - low priority		15	Medium
Grant (E-bd)	University	Division	2	2750	30	12.1	6.9	1	80	1	2.78	C	Concrete. Hashed parking, low usage in summer.	Both	Shared lane markings 11'	Not enough room for a bike lane, so center shared lane markings 11' from curb.		22	High
Grant (W-bd)	University	Division	2	2750	30	12	3	1	0	1	2.21	B	Concrete. 36' total incl. 1' gutters.	Both	Buffered bike lane 4.5-1.5-10	Add a second stripe dividing the 12' lane into a 10' lane and 1.5' buffer for the 4.5' (incl. gutter) bike lane. Add proper signage and pavement markings, to reduce wrong-way riding.	1.63	22	High
Grant (E-bd)	Division	2nd	2	4100	30	19.7	0	0-pvd	100	1	3.56	D		Both	Shared lane markings 11'	Not enough room for a bike lane, so center shared lane markings 11' from curb.		23	High
Grant (W-bd)	Division	2nd	2	4100	30	12	4.3	0-pvd	0	1	1.91	B		Both	Buffered bike lane 4.8-1.5-10	Add a second stripe dividing the 12' lane into a 10' lane and 1.5' buffer for the 4.8' bike lane. Add proper signage and pavement markings, to reduce wrong-way riding.	1.76	23	High
Grant (E-bd)	2nd	4th	2	4450	30	11.5	0	0-pvd	0	1	3.41	C	32' total, incl. gutters.	Both	Buffered bike lane 4.5-1.5-10	Restripe road for each side for 10' travel lanes, 1.5' buffers, and 4.5' (incl. gutters) bike lanes.	1.87	23	High
Grant (W-bd)	2nd	4th	2	4450	30	16.3	4.3	0-pvd	0	1	0.97	A	Bike Route sign. 32' total, incl. gutters.	Both	Buffered bike lane 4.5-1.5-10	Restripe road for each side for 10' travel lanes, 1.5' buffers, and 4.5' (incl. gutters) bike lanes.	1.87	23	High
Grant	7th	8th	2	1450	30	12.3	0	0	0	0.5	2.68	C	No parking	Both	Shared lane markings 4'	Backup: bike route wayfinding signage		2	High
Grant	8th	9th	2	1450	30	12.3	0	0	0	0.5	2.68	C	No parking	Both	Bike route wayfinding signage	Could use shared lane markings, but want to differentiate 7th and 8th alley route from 9th. If alley route not accepted, use SLMs to 9th.		2	Medium
Hayes	W-end	Kings	2	150	30	9.5	0	0	0	1	1.90	B	Curves, trees	None	None	W-bd 3' law sign before Kings suffices.		5	
Hayes	Kings	Douglas	2	950	30	10.3	0	0	0	1	2.76	C	Modified Share the Road sign	N-SW	3' law sign	Replace W-bd Share the Road with 3' law sign.		5	Low
Hayes	7th	8th	2	650	30	13.4	7.5	1	100	1	2.20	B	Dead end for cars at Doudna Fine Arts Center, but road bends S with bollards (could be used by bikes). Parking lots. Perpendicular parking not included in Park Occ%.	Both	Shared lane markings	Center E-bd SLM to keep bikes away from perpendicular parking. W-bd could use SLMs or wayfinding signage alone.		1	High
Hayes	8th	9th	2	650	30	13.4	7.5	1	100	1	2.20	B	Slight jog at 9th. Parking lots. Perpendicular parking not included in Park Occ%. Full parallel parking W-bd shown.	Both	Bike route wayfinding signage	Could use shared lane markings, but want to differentiate 7th and 8th alley route from 9th. If alley route not accepted, use SLMs to 9th.		1	Medium
Garfield	4th	dead end	2	400	25	13.8	0	1	0	1	1.71	B	Perpendicular parking S.	Both	Shared lane markings	Centered in E-bd lane to avoid perpendicular parking; 4' from curb for W-bd. EIU jurisdiction. Contingent on trail built to 7th.			Medium
Garfield	9th	250' E of 12th	2	2600	30	13	0	2	0	1	2.96	C		Both	Bike lanes 5-10	See text about gutter width and backup option of simply striping as paved shoulders.	1.80	10	Medium
Garfield	250' E of 12th	18th	2	2200	30	13	0	1.3	0	1	2.87	C	Concrete	Most for both	Paved shoulders 4-10	Stripe 10' lanes, 3' (+1.3' gutter) shoulders, but no bike lane markings or signs.	2.10	13	Medium
Garfield	18th	20th	2	1000	30	10.5	0	0	0	0.5	2.69	C	Some stone shoulders. Unsignalized at 18th.	N-SW	Bike route wayfinding signage	W11-1, W16-2P (FYG) advance warning signs on 18th. Supplement with 4' SLMs is low priority.		7	Medium
McKinley	18th	20th	2	1300	30	11.4	0	0	0	0.5	2.73	C		S-SW	Shared lane markings 4'	Backup: bike route wayfinding signage. This segment only if Greek Court trail built (with Xing improvements) at 18th.		8	Medium
McKinley	20th	Hidden Lake	2	1300	30	11.4	0	0	0	0.5	2.73	C		S-SW	Shared lane markings 4'	Backup: bike route wayfinding signage		8	Medium
McKinley	Hidden Lake	road bend	2	450	30	10.7	0	0	0	0.5	2.27	B	Many trees. Cars speed here.	None	Add sidepath	Traffic count, BLOS suggest wayfinding signage alone would suffice, but speeding - and trail access - raise sidepath need. High priority is this becomes main route to lake, Fox Ridge.		14	Medium

Street	From (N/W)	To (S/E)	Lanes	Traffic ADT	Spd Limit	Lane Width	Extra Width	Gutter Pan	Park Occ %	% Truck	BLOS score	BLOS grade	Comments	Sidewalk Status	Primary recommendation	Notes and Other Options	New BLOS Score	Public input votes	Priority
McKinley	road bend	Lake Charleston trail	2	100	30	10.7	0	0	0	0.5	1.50	B		None	Bike route wayfinding signage	If proposed sidepath and trail to lake completed, signage from trail's departure to road's end would suffice.		14	Medium
Roosevelt	4th	7th	2	4750	30	14.8	0	0	0	1	3.01	C	Concrete	S-SW	4.4-10.4 Bike Lanes	Allowable width for concrete w/o gutter pan.	2.26	12	High
Roosevelt	7th	9th	2	4550	30	13.8	0	0	0	1	3.13	C	Concrete. 3 lanes. 39'7" total.	S-SW	4.4-10.3 Bike Lanes	4.4' bike lanes; other three lanes 10.3' each.	2.26	12	High
Roosevelt	9th	12th	2	2450	30	12.8	0	2	10	0.5	3.00	C	No parking except a few marked stalls. Bad gutter seams.	Both	None	If bikeway desired, bike route wayfinding signage is recommended.		3	
Edgar	9th	tennis courts	2	2000	30	12.5	0	0	0	1	2.89	C	Concrete. 36' total. 3 lanes.	Both	Study feasibility of 3-to-2 lane road diet w/ buffered bike lanes	If center left turn lane is not needed, restripe for buffered bike lanes 5 (incl. gutter)-2-11. Fallback option SLM 4'. If Greek Court trail built, this may be redundant.	1.02	10	Low
Edgar	tennis courts	18th	2	2000	30	14.8	0	0	0	1	2.57	C	Concrete. No parking.	S-SW	4.4-10.4 Bike Lanes	Allowable width for concrete w/o gutter pan. If Greek Court trail built, this may be redundant.	1.83	10	Low
Lover's Lane	Reynolds	University	2	650	25	9.7	0	0	0	0.5	2.38	B	In park. 15mph. Speed bumps - W-bd edge gap ok for bikes, E-bd could be widened.	None	Bike route wayfinding signage	Widen E-bd speed bump gap for bikes		11	Medium
Taft	4th	8th	2	2200	30	13	0	2	0	0.5	2.80	C	Concrete. "Gutter seam" very narrow. No parking.	N-SW	None	If bikeway desired, bike route wayfinding signs adequate. Or, bike lanes 5-10 possible - see text about gutter width and backup option of simply striping as paved shoulders.		5	
Taft	8th	9th	2	2200	30	13	0	2	0	0.5	2.80	C	Concrete. "Gutter seam" very narrow. No parking.	N-SW	None	If bikeway desired, bike route wayfinding signs adequate. Or, bike lanes 5-10 possible - see text about gutter width and backup option of simply striping as paved shoulders.		6	
Woodlawn	9th	Village	2	1500	30	14.4	0	0-pvd	0	0	2.34	B	Parking not allowed	S-SW; N-SW most	Shared lane markings 4'	Backup: bike route wayfinding signage alone		19	High
Woodlawn	Village	Salem	2	900	30	14.4	0	0-pvd	0	0	2.08	B	Parking not allowed	S/W SW; most N/E	Shared lane markings 4'	Backup: bike route wayfinding signage alone		19	High
Woodlawn	Salem	Krishire/ Sister City	2	900	30	14.4	0	0-pvd	5	0	2.15	B		S/W SW; most N/E	Bike route wayfinding signage			19	High
Krishire	Woodlawn	18th	2	900	30	14.4	0	0-pvd	5	0	2.15	B	Parking allowed E of Salem	S/W SW; most N/E	Bike route wayfinding signage	Sister City Park entrance eastern limit of signage.		19	High
Nursery	4th	18th	2	800	30	9.9	0	0	0	1	2.71	C	Curves, some hills	None	3' law sign	E-bd soon after 18th.		13	Medium
Coolidge	Douglas	Quail Run	2	650	30	9	0	0	0	0	2.55	C	Hilly, forested. Uncurbed.	None	None	If bikeway desired (with Douglas), bike route wayfinding signs adequate.		11	
Coolidge	Quail Run	University	2	850	30	14	0	0	0	0	2.11	B		None	None	If bikeway desired (with Douglas), bike route wayfinding signs adequate.		13	
Coolidge	University	Lincoln Hwy	2	1600	30	10	0	0	0	0	2.91	C	Uncurbed.	None	None			13	
Lincoln Hwy	Coolidge	University	2	1500	30	12.3	5	0	0	1	1.04	A	Shoulders, not signed Bike Route.	None	Buffered bike lanes	Could sign and mark bike lanes as-is. Then at next resurfacing, restripe for 4.3(bike lane)-2(buffer)-11, also helping to slow traffic.		8	Low
Lincoln Hwy	University	S -end	2	2650	55	10.7	0	0	0	1	3.58	D		None	None	Southwest from town, 375' segment from Sunnydale to 600N often used.		5	
Decker Springs	N-end	State	2	650	30	9.1	0	0	0	1	2.69	C	ADT 850 S, 450 N. One hill.	None	None	If desired, add one N-bd 3' law sign.		4	
Decker Springs	State	Lincoln Prairie Trail	2	1050	30	10	0	0	0	3	3.18	C	Industrial. D11-1 w/ arrows at trail Xing, W11-1 in advance.	None	None			3	
Douglas	Polk	Lincoln	2	1050	30	10.5	0	0	0	0	2.65	C	Uncurbed. ADT 950 N, 1150 S.	None	None	If bikeway desired, bike route wayfinding signage adequate, although SLM 4' possible.		11	
Douglas	Lincoln	McComb	2	2700	30	11.5	0	1.5	0	0	3.01	C			None	If bikeway desired, SLM 4' recommended.		14	
Douglas	McComb	Hayes	2	2700	30	13	0	2	0	0	2.83	C	Concrete. Douglas segment with most bike use, per Strava.	W-SW	None	If bikeway desired, 5-10 bike lane feasible, SLM 4' recommended, bike route wayfinding signs as backup.		15	
Douglas	Hayes	Woodbury Ridge	2	1500	30	9.5	0	0	0	0	2.93	C	Small park. Sidewalks where residential.	Most SW	None	If bikeway desired, bike route wayfinding signage adequate, although SLM 4' possible.		12	
Douglas	Woodbury Ridge	Coolidge	2	750	30	9.5	0	0	0	0	2.57	C	Small park. Sidewalks where residential.	Most SW	None	If bikeway desired, bike route wayfinding signage adequate, although SLM 4' possible.		12	
Reynolds	Madison	Cobble	2	600	30	9.4	0	0	0	0.5	2.54	C	Big S-bd downhill to Cobble. Sight lines. One-way bridge with traffic signal.	None	None			4	
Reynolds	Cobble	Polk	2	600	30	9.2	0	0	0	0.5	2.56	C	Big S-bd uphill from Cobble.	None	None			4	
Reynolds	Polk	Fillmore	2	1100	30	11	0	1.6	0	0.5	2.69	C	Carriage SW. 19" curb E-side only.	E-SW	Bike route wayfinding signage			6	Medium
Reynolds	Fillmore	Lincoln	2	1100	30	10.3	0	0	0	0.5	2.76	C		E-SW	Bike route wayfinding signage			6	Medium

Street	From (N/W)	To (S/E)	Lanes	Traffic ADT	Spd Limit	Lane Width	Extra Width	Gutter Pan	Park Occ %	% Truck	BLOS score	BLOS grade	Comments	Sidewalk Status	Primary recommendation	Notes and Other Options	New BLOS Score	Public input votes	Priority
Reynolds	Lincoln	Grant	2	1400	30	16	8	0-pvd	5	0.5	0.00	A	Carriage W-SW. N-bd L-turn lane @ Lincoln.	W-SW	Bike route wayfinding signage	Existing stripes, w/ low parking occupancy, creates "Combined Bike/Parking Lane".		11	Medium
Reynolds	Grant	McComb	2	1900	30	11.3	8	0-pvd	5	0.5	0.77	A	Carriage SWs.	Both	Bike route wayfinding signage	Existing stripes, w/ low parking occupancy, creates "Combined Bike/Parking Lane".		10	Medium
Reynolds	McComb	Meadowlake	2	1250	30	11.3	8	0-pvd	5	0.5	0.56	A		W-SW; E-SW some	Bike route wayfinding signage	Existing stripes, w/ low parking occupancy, creates "Combined Bike/Parking Lane".		12	Medium
Reynolds	Meadowlake	Eden	2	850	30	11.3	8	0-pvd	5	0.5	0.36	A	ADT 950 N, 700 S.	W-SW	Bike route wayfinding signage	Existing stripes, w/ low parking occupancy, creates "Combined Bike/Parking Lane".		12	Medium
E Street	Ne-Co field	Lincoln Prairie Trail	2	1150	30	9.5	0	0	0	1	2.94	C	Uncurbed. Trail Xing has Bike Route sign w/ arrows (D11-1, M6-4), no Xwalk.	SW 1 side	Shared lane markings 4'	SLMs are low priority since sidewalk to Ne-Co for kids already exists.		5	Low
E Street	Lincoln PrairieTrail	State	2	1150	30	9.5	0	0	0	1	2.94	C	Uncurbed.	None	Shared lane markings 4'; add sidewalk	Difficult intersection at State. Consider manually-activated beacon or RRFB and crosswalk (with north side landing) on W-face of intersection.		17	High
E Street	State	Madison	2	4750	30	13	0	2	0	1	3.26	C	ADT 4550 N, 4950 S. Tough Xing @ State. Skew RR Xing at Madison. Carriage SW further S.	W-SW	Bike lanes 5-10	See text about gutter width and backup option of simply striping as paved shoulders.	2.11	17	High
E Street	Madison	Polk	2	4750	30	13	0	2	0	1	3.26	C	ADT 4550 N, 4950 S. Tough Xing @ State. Skew RR Xing at Madison. Carriage SW further S.	W-SW	Bike lanes 5-10	See text about gutter width and backup option of simply striping as paved shoulders.	2.11	21	High
E Street	Polk	N of Pierce	2	7500	30	13	0	2	0	1	3.49	C		W-SW; E-SW some	Bike lanes 5-10	See text about gutter width and backup option of simply striping as paved shoulders.	2.34	22	High
E Street	N of Pierce	Lincoln	4	7500	30	11	0	2.3	0	1	3.38	C	Widens near Lincoln for S-bd L-turn lane, that doesn't align w/ N-bd L-turn lane. 52'6" total w/ gutters.	W-SW; E-SW some	Study feasibility of a 4-to-3 lane road diet with bike lanes	See text about possible configurations.	1.69	22	High
University	Lincoln	Grant	4	7450	30	11	0	2	0	1	3.38	C	4 lanes, but N-bd inner becomes L-turn lane by Lincoln. 52' total w/ gutters. Carriage SWs.	Both	Study feasibility of a 4-to-3 lane road diet with bike lanes	See text about possible configurations.	1.69	23	High
University	Grant	Coolidge	2	3350	30	13	0	2	0	1	3.09	C	ADT 3500 N, 3200 S. Concrete.	W-SW	Bike lanes 5-10	See text about gutter width and backup option of simply striping as paved shoulders.	1.93	23	High
University	Coolidge	Lincoln Hwy	2	2050	30	13	0	2	0	1	2.84	C	Concrete.	W-SW	Bike lanes 5-10	See text about gutter width and backup option of simply striping as paved shoulders.	1.68	14	High
University	Lincoln Hwy	Sunnydale	2	500	30	9	0	0	0	1	2.56	C	ADT 650 N, 450 S. Uncurbed.	None	3' law sign	One S-bound sign, just S of Lincoln Hwy.		7	Medium
Division	Maple	Vine	2	200	30	10.5	0	0	0	0	1.80	B		Some W-SW	None			0	
Division	Vine	Railroad	2	750	30	10.5	0	0	0	0	2.47	B	S-bd W11-1 for trail, then Bike Route (with arrows) sign at trail - no Xwalk. Park E. Wider, curbed by Railroad.	W-SW	None	If bikeway spur desired to North Park and Baker Field (via Walnut), bike route wayfinding signage adequate, although SLM 4' possible		0	
Division	Railroad	State	2	1000	30	9.5	0	0	0	0	2.72	C	Uncurbed. RR Xing. W11-1 pre-trail.	None	None	If bikeway desired, bike route wayfinding signage adequate, although SLM 4' possible.		4	
Division	State	Harrison	2	2000	30	12	0	1	0	0	2.80	C	2200 ADT S, 1750 N. 6' carriage SW. Concrete S of Jackson, asphalt N. State unsignalized, crossing just ok.	E-SW	None	If bikeway desired, bike route wayfinding signage adequate, although SLM 4' possible.		4	
Division	Harrison	Pierce	2	2400	30	13.9	0	0-pvd	0	0.5	2.72	C	Carriage SW	W-SW	None	If bikeway desired, bike route wayfinding signage adequate, although SLM 4' possible.		4	
Division	Pierce	Lincoln	2	2400	30	14.7	0	0-pvd	0	0.5	2.61	C	42'8" total: N-bd 13' angle parking (well used)+15' lane; S-bd 14'6". Carriage SW. S-bd right turn lane at Lincoln. Park E.	W-SW	None	If bikeway desired, center SLMs in N-bd travel lane. S-bd bike route wayfinding signage is adequate, although SLM 4' (or even 5-10 bike lane with slight N-bd narrowing) possible.		4	
Division	Lincoln	Grant	2	3550	30	13.3	0	1.7	40	0.5	3.45	C	EIU S-end. Sidewalk only one side at a time. No parking N-bd; S-bd ok but not overnight. Stoplight at Lincoln. Parking occupancy of two sides averaged.	E-SW most, W-SW some	None	If bikeway desired, SLM 11' recommended.		2	
4th	Railroad	Madison	2	300	30	11.7	0	0	20	0	2.09	B	Access to trail N-end. Rougher surface condition, brick at N-end. RR Xing. 125 ADT N.	Both	None	If bikeway desired, recommend bike route wayfinding signage		3	
4th	Madison	Jackson	2	2600	30	11	0	1	0	1	3.20	C	Bikes banned on road, per signs.	Both	Remove bike ban signs	If bikeway desired, recommend SLM 4'.		5	High
4th	Jackson	Harrison	2	3200	30	12	0	1	0	1	3.19	C	No bikes. Hills down to creek. Sidewalk ADA issues.	W-SW; E-SW most	Remove bike ban signs	If bikeway desired, recommend SLM 4'.		5	High
4th	Harrison	Polk	2	3600	30	12	0	1	0	1	3.25	C		Both	Remove bike ban signs	If bikeway desired, recommend SLM 4'.		7	High
4th	Polk	Buchanan	2	4100	30	12	0	0-pvd	0	1	3.31	C		Both	Shared lane markings 4', N-bd only	Not enough room for bike lane. N-bd only, as S-bd uses Buchanan from 6th.		10	High
4th (S-bd)	Buchanan	Lincoln	2	5850	30	11.1	0	0-pvd	0	1	3.60	D	By IL16: left turn, straight, right turn lanes 11.1' each; total 49'3".	Both	Shared lane markings 4'	Not enough room for bike lane. Approaching Lincoln, SLMs should go in left part of right-turn lane - see NACTO guide graphic (combined bike lane/turn lane section).		11	High
4th (N-bd)	Buchanan	Lincoln	2	5850	30	16	0	0-pvd	0	1	2.93	C	S-bd by IL16: left turn, straight, right turn lanes; N-bd 16'	Both	Bike lane 5-11		2.01	11	High

Street	From (N/W)	To (S/E)	Lane s	Traffic ADT	Spd Limit	Lane Width	Extra Width	Gutter Pan	Park Occ %	% Truck	BLOS score	BLOS grade	Comments	Sidewalk Status	Primary recommendation	Notes and Other Options	New BLOS Score	Public input votes	Priority
4th (S-bd)	Lincoln	1/2 blk S of Lincoln	2	6550	30	16.7	0	1.3	0	1	2.88	C	20mph. 51' total. S-face of Lincoln intersection has 5' curb cuts and bad jog on W-side.	Both	Bike lane 5-11	Start S-bd bike lane just past Lincoln's S crosswalk, with the bike lane line dashed from the crosswalk to the far end of Jerry's Pizza entrance.	2.07	18	High
4th (N-bd)	Lincoln	1/2 blk S of Lincoln	2	6550	30	11	0	1	0	1	3.67	D	20 mph. E-SW 5'10" w/ buffer <5', too narrow for sidepath.	Both	Shared lane markings	Not enough room for bike lane. Restripe painted median to extend bike lane (5-11, no buffer) to extend N to 175' S of Lincoln stopline. N of there, use merge dash lines for right-turn lane, with SLMs in left part of it.		18	High
4th	1/2 blk S of Lincoln	Grant	2	6550	25	12	4	1.5	0	1	2.08	B	20 mph. Bike lanes (Bike Route sign, BL marking - sparse).	Both	Buffered bike lanes 5.5-1.5-10.5	Add a second stripe dividing the 12' lane into a 10.5' lane and 1.5' buffer for the 5.5' (incl. gutter) bike lane. Add proper signage and pavement markings.	1.55	18	High
4th	Grant	Roosevelt	2	8000	25	12.7	5.3	0	0	1	1.54	B	20 mph. Bike lanes (Bike Route sign, BL marking - only 1/side whole length). L-turn lanes N-bd @Grant, S-bd @Roosevelt but BLs continuous. Ped Xings. Concrete.	Both	Buffered bike lanes 5.3-2-10.7	Add a second stripe dividing the 12.7' lane into a 10.7' lane and 2' buffer for the 5.3' bike lane. Add proper signage and pavement markings, to reduce wrong-way riding.		21	High
4th	Roosevelt	Taft	2	2950	30	12.7	5.3	0	0	1	1.22	A	W-SW to Harding, E-SW to Taft. No curbs S of Harding.	Some	Buffered bike lanes 5.3-2-10.7	Add a second stripe dividing the 12.7' lane into a 10.7' lane and 2' buffer for the 5.3' bike lane. Add proper signage and pavement markings, to reduce wrong-way riding.		23	High
4th	Taft	Coolidge	2	2950	30	12.7	5.3	0	0	1	1.22	A	W-SW to Harding, E-SW to Taft. No curbs S of Harding.	Some	Buffered bike lanes 5.3-2-10.7	Add a second stripe dividing the 12.7' lane into a 10.7' lane and 2' buffer for the 5.3' bike lane. Add proper signage and pavement markings, to reduce wrong-way riding.		23	High
4th	Coolidge	Nursery	2	1000	30	9.9	0	0	0	1	2.83	C	Edge falls off.	None	3' law sign	S-bd soon after Coolidge.		16	Medium
5th	N-end	Railroad	2	4500	35	12	0	2	0	3	3.85	D	3 lanes. 35' total + 2' gutters.	W-SW	None			3	
5th	Railroad	Madison	2	4350	30	14	0	1.7	0	1	3.08	C	Left turn lane, stoplight @ Madison. Carriage SWs	Both	None			2	
5th	Madison	Van Buren	2	900	30	12.7	0	1.7	0	1	2.46	B		Both	None			2	
6th	Lincoln PrairieTrail	Railroad									0.76		Currently does not exist		Add trail link			11	High
6th	Railroad	Adams	2	200	30	13	0	0	0	2	1.82	B	Stops at RR tracks, no access to trail or Olive. Adams-Railroad business area.	Some	Shared lane markings, S-bd only	Center in middle of S-bd lane. Fallback is wayfinding signage alone.		11	High
6th	Adams	Madison	2	400	25	22	0	0.7	40	1	1.05	A	20mph. ADT 275-550.	Both	Shared lane markings, S-bd only	Centered 11' out in S-bd lane. Fallback is wayfinding signage alone.		11	High
6th	Madison	Monroe	2	800	25	10.3	6.5	1.5	80	1	2.22	B	20mph. Gutters 1', 2'. Marked parking.	Both	Shared lane markings 11', S-bd only	Also, add W11-15, W16-7P (FYG) warning signs on Madison.		11	High
6th (S-bd)	Monroe	Jackson	2	1350	25	13.8	8	1.5	100	1	2.33	B	20mph. On square. Diagonal parking (not long enough) W-side (right). E-side (left) parallel parking. 37'2" total not including diagonal.	Both	Shared lane markings	Center SLMs between parking on L and R sides. If lane striping forces a different location, use the leftmost part of the right lane.		14	High
6th (S-bd)	Jackson	1/2 blk S of Van Buren	2	1300	25	10	8	0-pvd	40	1	1.68	B	ADT 1250 N, 1500 S. 20mph.	Both	Remove one lane, add buffered bike lane	L-to-R: 8 (parking)-13 (travel lane)-5 (bike lane)-2(buffer)-8(parking). If travel side buffer also added: 8-12-2-4-2-8. If kept 2 lanes, SLM 11'.	1.57	14	High
6th (S-bd)	1/2 blk S of Van Buren	Harrison	1	1550	30	17	5.2	0-pvd	0	1	0.19	A	Bike Route sign, but not at start. "Bike lane" left side, striped parking lane right (20% occupied).	Both	Move, buffer bike lane	Move bike lane to the right side, add solid line buffer. 15 (lane)-5 (bike lane)-2(buffer)-8 (parking). Option: if travel lane buffer also added, then 14 (lane)-2 (buffer)-4 (bike lane)-2 (buffer)-8 (parking).	0.25	14	High
6th (S-bd)	Harrison	Polk	1	1550	30	17	5.2	0-pvd	0	1	0.19	A	Bike Route sign, but not at start. "Bike lane" left side, striped parking lane right (20% occupied).	Both	Move, buffer bike lane	See above	0.25	15	High
6th (S-bd)	Polk	Lincoln	1	2200	30	17	5.2	0-pvd	0	1	0.37	A	"Bike lane" L side, striped parking lane right (20%). Last 100 ft: BL and parking lane drop, R and L turn lanes.	Both	Move, buffer bike lane	See above. Near Lincoln: 11 (right-turn lane)-5 (bike lane)-15 (left-turn lane). Add manually-activated Lead Pedestrian Interval N-bd from S-SP at Lincoln.	0.42	15	High
7th	Olive	Madison	2	650	30	14.6	0	0-pvd	25	1	2.37	B	S-bd parking only. Bike Route sign before Railroad St, meant for trail. No Xwalk at trail.	Both	Shared lane markings 11', N-bd only	Perhaps parking % too low for SLM 11' to look reasonable. If so, wayfinding signage only.		8	High
7th	Madison	Monroe	2	1150	25	9.9	8	0-pvd	100	1	2.71	C	35'8" total.	Both	Shared lane markings 11', N-bd only	Also, add W11-15, W16-7P (FYG) warning signs on Madison.		8	High

Street	From (N/W)	To (S/E)	Lane s	Traffic ADT	Spd Limit	Lane Width	Extra Width	Gutter Pan	Park Occ %	% Truck	BLOS score	BLOS grade	Comments	Sidewalk Status	Primary recommendation	Notes and Other Options	New BLOS Score	Public input votes	Priority
7th (N-bd)	Monroe	Jackson	2	1150	25	14	7.9	1.3	100	1	2.22	B	20mph. On square. Diagonal parking (not long enough) E-side (right). W-side (left) parallel parking. 37'2" total not including diagonal.	Both	Shared lane markings	Center SLMs between parking on L and R sides. If lane striping forces a different location, use the leftmost part of the right lane.		12	High
7th (N-bd)	Jackson	1/2 blk S of Van Buren	2	1400	30	10.2	6.7	1.3	30	1	1.80	B	Parking needed more by square.	Both	Remove one lane, add buffered bike lane	L-to-R: 8 (parking)-13 (travel lane)-5 (bike lane)-2(buffer)-8(parking). If travel side buffer also added: 8-12-2-4-2-8. If kept 2 lanes, SLM 11'.	1.55	12	High
7th (N-bd)	1/2 blk S of Van Buren	Harrison	1	1400	30	17.2	5.2	0-pvd	0	1	0.09	A	"Bike lane" L side (no markings), striped 8' parking lane right (20%). 30'4" total. Bike Route sign needed at start.	Both	Move, buffer bike lane	Move bike lane to the right side, add solid line buffer. 15 (lane)-5 (bike lane)-2(buffer)-8 (parking). Option: if travel lane buffer also added, then 14 (lane)-2 (buffer)-4 (bike lane)-2 (buffer)-8 (parking).	0.19	12	High
7th (N-bd)	Harrison	Polk	1	1400	30	17.2	5.2	0-pvd	0	1	0.09	A	"Bike lane" L side (no markings), striped 8' parking lane right (20%). 30'4" total. Bike Route sign needed at start.	Both	Move, buffer bike lane	See above	0.19	15	High
7th (N-bd)	Polk	Lincoln	1	1400	30	17.2	5.2	0-pvd	0	1	0.09	A	"Bike lane" L side (no markings), striped 8' parking lane right (20%). 30'4" total. Bike Route sign needed at start.	Both	Move, buffer bike lane	See above	0.19	12	High
7th	Lincoln	200' S of Johnson	2	1000	30	14.6	0	1	0	1	2.25	B	In-street planters stop N-bd.	E-SW	Shared lane markings 4'	Could use just signage, but SLMs for consistency. Shared lane marking direct around planters.		3	High
7th	200' S of Johnson	Grant	2	1000	30	12.8	0	1	0	1	2.50	B	33'6"+1' gutters include 100% N-bd parking but not 100% S-bd perpendicular parking. Dead-end S.	E-SW	Shared lane markings	Shared lane markings centered 11' from N-bd curb, center of S-bd lane. Wayfinding signage a backup, but best to keep cyclists away from parked cars.		3	High
7th	Hayes	Roosevelt	2	2150	30	12	0	2	0	1	2.99	C	In-street planters stop N-bd. Concrete. 100% perpendicular parking (not included in lane width).	E-SW	Shared lane markings centered	In the center of the lanes. Wayfinding signage a backup, but best to keep cyclists away from parked cars. SLMs direct around planters.		1	High
8th	Grant	Hayes	2	500	30	9	0	0	0	0	2.42	B	Narrow alley adjacent to E-side of Fine Arts Center, more of an aisle for parking lots.	None	Shared lane markings 4'	S-bd 4' from poles, not building. Study whether to accept this route (possible traffic restrictions, if so) - if not, use Grant, 9th, Hayes instead.		1	High
9th	Polk	Lincoln	2	1000	30	11.8	0	0	0	0	2.48	B	Concrete. ADT 750 N, 1350 S.	E-SW; W-SW most	Shared lane markings 4'	Bike route wayfinding only may suffice, but SLMs for route consistency.		17	Medium
9th	Lincoln	Garfield	2	6900	30	13	0	2	0	1	3.45	C	Asphalt. N-bd R-turn lane @ Lincoln.	Both	Bike lanes 5-10	See text about gutter width and backup option of simply striping as paved shoulders. If bike lanes, start S-bd at Lincoln. N-bd SLMs in the left side of right-turn lane nearing Lincoln.	2.30	21	Medium
9th	Garfield	Roosevelt	2	5900	30	13	0	2	0	1	3.37	C	Concrete. L-turn lane @Roosevelt.	Both	Bike lanes 5-10	See text about gutter width and backup option of simply striping as paved shoulders. Near Roosevelt, see 9th from Roosevelt-Woodlawn recommendation.	2.22	22	Medium
9th	Roosevelt	Woodlawn	2	3700	30	12	0	2	0	1	3.26	C	CLTL 39' total: 2-12-11-12-2. Lower ADT (2050) S-end.	W-SW; E-SW most	Study feasibility of 3-to-2 lane road diet w/ buffered bike lanes	If center left turn lane not needed, buffered bike lanes 5.5 (incl. gutter)-2-12. Fallback option SLM 4'.	1.10	19	High
10th	Olive	Monroe	2	550	30	11	0	0	0	0	2.26	B	No Xwalk at trail; N-bd W11-1 warning sign well before.	Some	None			2	
10th (S-bd)	Monroe	Jackson	2	550	30	11	0	0	0	0	2.26	B		Some	None			2	
10th (S-bd)	Jackson	Lincoln	2	750	30	11.6	0	0	30	0	2.66	C	ADT 650-850 averaged. Parking W-side only.	W-SW; E-SW most	None			1	
11th	Poplar	Olive	2	250	30	12.5	0	2	40	0	2.11	B		Most	None			1	
11th	Olive	Jefferson	2	325	30	13.3	0	0	10	0	1.85	B	Trail issues: no crosswalk, N-bd stop sign after (not before). W11-1 N-bd warning sign well before.	E-SW	None			1	
11th	Jefferson	Monroe	2	1000	30	11.8	0	0	0	0	2.48	B	1000 ADT N of Madison, 325 N.	SW 1-side	None			1	
11th (N-bd)	Monroe	Lincoln	2	850	30	11.6	0	0-pvd	30	0	2.72	C	ADT 750-900.	W-SW	None			1	
12th	Garfield	Cleveland	2	1100	30	9.5	0	0	0	0	2.77	C		None	None	If bikeway desired, bike route wayfinding signage is recommended.		1	
12th	Cleveland	Greek Court	2	800	30	12.9	0	1.7	0	0	2.23	B	Prominent gutter seams. No parking.	Both	None	If bikeway desired, bike route wayfinding signage is recommended.		1	
14th	N-end	Olive	2	550	30	11	0	0	0	0	2.26	B	Uncurbed, rural.	None	3' law sign	N-bd 3' law sign 1 blk after Olive.		7	Low
14th	Olive	Harrison	2	350	30	10	0	1	0	0	2.14	B	Poor surface condition S. One side SW. 2-way stops @ Jackson, Monroe, Madison. Same trail crossing signage (W11-1 advance; BR and no Xwalk at).	Some E/W-SW	None			4	
17th	Harrison	18th	2	400	30	9.5	0	0	0	2	2.56	C	Middle school access S-end (some S-SW).	Some	None			2	

Street	From (N/W)	To (S/E)	Lane s	Traffic ADT	Spd Limit	Lane Width	Extra Width	Gutter Pan	Park Occ %	% Truc k	BLOS score	BLOS grade	Comments	Sidewalk Status	Primary recommendation	Notes and Other Options	New BLOS Score	Public input votes	Priority
15th	Harrison	Football field	2	600	25	10.5	0	0	0	0.5	2.26	B	20mph. High school football field W. No parking.	E-SW	Shared lane markings 4'	While not consistent with sidepath trail to the south, SLMs consistent with on-road Harrison to the north - and E-SW is available.		3	Medium
15th	Football field	Smith	2	600	25	11.5	0	0	0	0.5	2.15	B	20mph. High school W, middle school E. No parking. E-SP spur to middle school.	W-SP; E-SW some	None			3	
Smith	15th	18th	2	1600	25	11.5	0	0	0	0.5	2.65	C	20mph. High school S. No parking. N-SP to middle school.	N-SP	None			3	
18th	Madison	Monroe	2	7400	35	13.1	0	1.7	0	2	3.77	D	IDOT road. 3 lanes. 38'2"+20" gutters.	E-SW	Add W-sidepath	Closes gap, instead of two street crossings.		21	High
18th	Monroe	Harrison	2	7400	35	13	0	1.7	0	2	3.78	D	IDOT road. 3 lanes. 37'+20" gutters. 4' sidewalks w/ some ramps, poor Xwalks, many bikes on W-SW.	W-SW; E-SW some	Widen W-SW to sidepath width	Includes better ramps, crosswalks. Low priority since (narrower) sidewalk exists, plus cost. Also, add W11-1, W16-2P (FYG) advance warning signs before Harrison.		21	High
18th	Harrison	Lincoln	2	9300	35	13	0	1.7	0	2	3.89	D	IDOT road. 3 lanes. 37'+20" gutters. Some sidewalk ramps, poor Xwalks, many bikes on 4' W-SW (4.5' E-SW). Raised median, right & left turn lanes by Lincoln.	W-SW; E-SW most	Widen W-SW to sidepath width	Includes better ramps, crosswalks. Low priority since (narrower) sidewalk exists, plus cost.		22	High
18th	Lincoln	Garfield	2	10200	40	13.8	0	1.6	0	2	3.93	D	IDOT road. 3 lanes. 38'8"+18" gutters. Some sidewalk ramps, poor Xwalks, bikes on 4.5' sidewalks. Raised median, right & left turn lanes by Lincoln.	Both	Widen W-SW to sidepath width	Includes better ramps, crosswalks. Low priority since (narrower) sidewalk exists, plus cost. Also, add W11-1, W16-2P (FYG) advance warning signs before Garfield.		22	High
18th	Garfield	McKinley	2	8050	40	13.8	0	1.6	0	2	3.81	D	IDOT road. 3 lanes. 38'8"+18" gutters. Some sidewalk ramps, poor Xwalks, bikes on 4.5' sidewalks.	Both	Widen W-SW to sidepath width	Includes better ramps, crosswalks. Low priority since (narrower) sidewalk exists, plus cost.		21	High
18th	McKinley	Edgar	2	7750	45	13.5	0	2	0	2	3.90	D	IDOT road. 3 lanes. 38'+2' gutters.	W-SW	Widen W-SW to sidepath width	Includes better ramps, crosswalks. Low priority since (narrower) sidewalk exists, plus cost.		20	High
18th	Edgar	S-end of Sister City Park	2	6000	45	13.5	0	2	0	2	3.77	D	IDOT road. 3 lanes. 38'+2' gutters. Xwalk with RRFB at park, trail.	W-SW	Widen W-SW to sidepath width	Includes better ramps, crosswalks. Low priority since (narrower) sidewalk exists, plus cost.		21	High
IL 130	S-end of Sister City Park	Nursery	2	5500	55	12	8	0	0	2	1.62	B	IDOT road. 3 lanes. 34'+8' paved shoulders.	None	None	Off-road is potential (but difficult) fallback option to Lake Charleston, Fox Ridge		21	
IL 130	Nursery	Bypass (Lake Charleston)	2	5200	55	12	5	0	0	2	2.30	B	IDOT road. Transitions from 3 lanes (8' shoulders) to 2 lanes (10' shoulders) to 2 lanes (5' shoulders), N to S.	None	None	Off-road is potential (but difficult) fallback option to Lake Charleston, Fox Ridge		18	
IL 130	Bypass (Lake Charleston)	S-end	2	5200	55	12	5	0	0	2	2.30	B	IDOT road.	None	None	Off-road is potential (but difficult) fallback option to Lake Charleston, Fox Ridge		13	
20th	Woodfall	Garfield	2	1700	30	10.5	0	0	0	0.5	2.96	C		W-SW	Shared lane markings 4'	Backup: bike route wayfinding signage		7	Medium
20th	Garfield	McKinley	2	950	30	10.5	0	0	0	0.5	2.67	C		W-SW	Shared lane markings 4'	Backup: bike route wayfinding signage		8	Medium

Appendix 3

Summary of Major Funding Sources

Some of the most commonly used funding sources for bicycle projects are listed below.

Illinois Transportation Enhancements Program (ITEP)

- Federal source with 80% federal/state, 20% local cost shares.
- Administered by IDOT. Calls for applications are now every two years, in Fall during odd-numbered years.
- ITEP is one component of the federal Surface Transportation Block Grant Program (STBGP), along with Safe Routes to School, Recreational Trails Program, and sub-allocated STBGP dollars administered by Illinois' five largest urbanized regions.
- IDOT's Fall 2017 ITEP program is estimated to have \$40M in funding. There are other eligible uses, but the vast majority of funding has been used for bicycle-related projects.
- High funding demand to supply ratio (6:1 to 10:1, on average).
- Emphasis on transportation potential and inclusion in a larger, officially-adopted plan.

With more stringent federal engineering standards and review processes, this source is better suited for significant (\$400K to \$1M+) bikeway projects and those requiring substantial engineering work, such as bridges. In part to accommodate the tremendous demand, medium-sized projects are usually funded more than very large projects. Almost all ITEP bikeway grants have funded off-road trails and sidepaths. However, in at least two recent examples – including Effingham – a single ITEP grant is funding implementation of a significant fraction of the planned on-road bikeway network in a town. This could be an opportunity for Charleston in the future.

Illinois State Bike Grant Program

- State source for off-road trails and bikeways, with 50% state, 50% local cost shares and a \$200K grant (\$400K project) limit.
- Reimbursement grant administered annually (March 1) by IDNR.
- Pre-2007 average of \$2.5M per year, with a \$200K limit (except for land acquisition projects). After a five year hiatus due to the State's financial crisis, the program was reinstated in 2013 and 2014 with \$1M in grants. **However, the grant program has once again been put on hold due to the state's financial situation.**

Much simpler process and standards as these remain local, not IDOT/federal, projects. Good for simpler projects and those that can easily be phased. Many agencies prefer these over ITEP/TAP, even though the cost share is higher, due to grant administrative burden and costs. However, the likelihood of this grant program returning soon looks low.

Recreational Trails Program

- Federal source with 80% federal/state, 20% local cost shares.
- Administered by IDNR. Annual March 1 deadline.
- \$1.5M per year. About half is dedicated for non-motorized, off-road trails emphasizing underserved user types. \$200K limit (except for land acquisition projects).
- Much less competitive, with application demand usually not much more than grant supply.

This has been an underutilized source. Because of the decline of the Illinois State Bike Path Grant program, more standard multi-use (bike) trails are getting funded recently. A good target range is \$100-200K, or small trail projects.

Illinois Safe Routes to School program

- Federal source with 80% federal/state, 20% local cost shares; reimbursable grants. SRTS is a component of Surface Transportation Block Grant Program funding.
- Most funds go to pedestrian and/or bicycle infrastructure improvements within two miles of schools serving any K-8 grades, with some funding for education and encouragement programs for the same grades.
- Administered by IDOT.
- The last application cycle, for \$6M, occurred in 2014. There is talk of a 2018 cycle.
- Past demand to supply ratio was 2:1. Non-infrastructure grants have been much less competitive.

Sidewalk/sidepath, trail link, and road crossing projects fare well under the SRTS program.

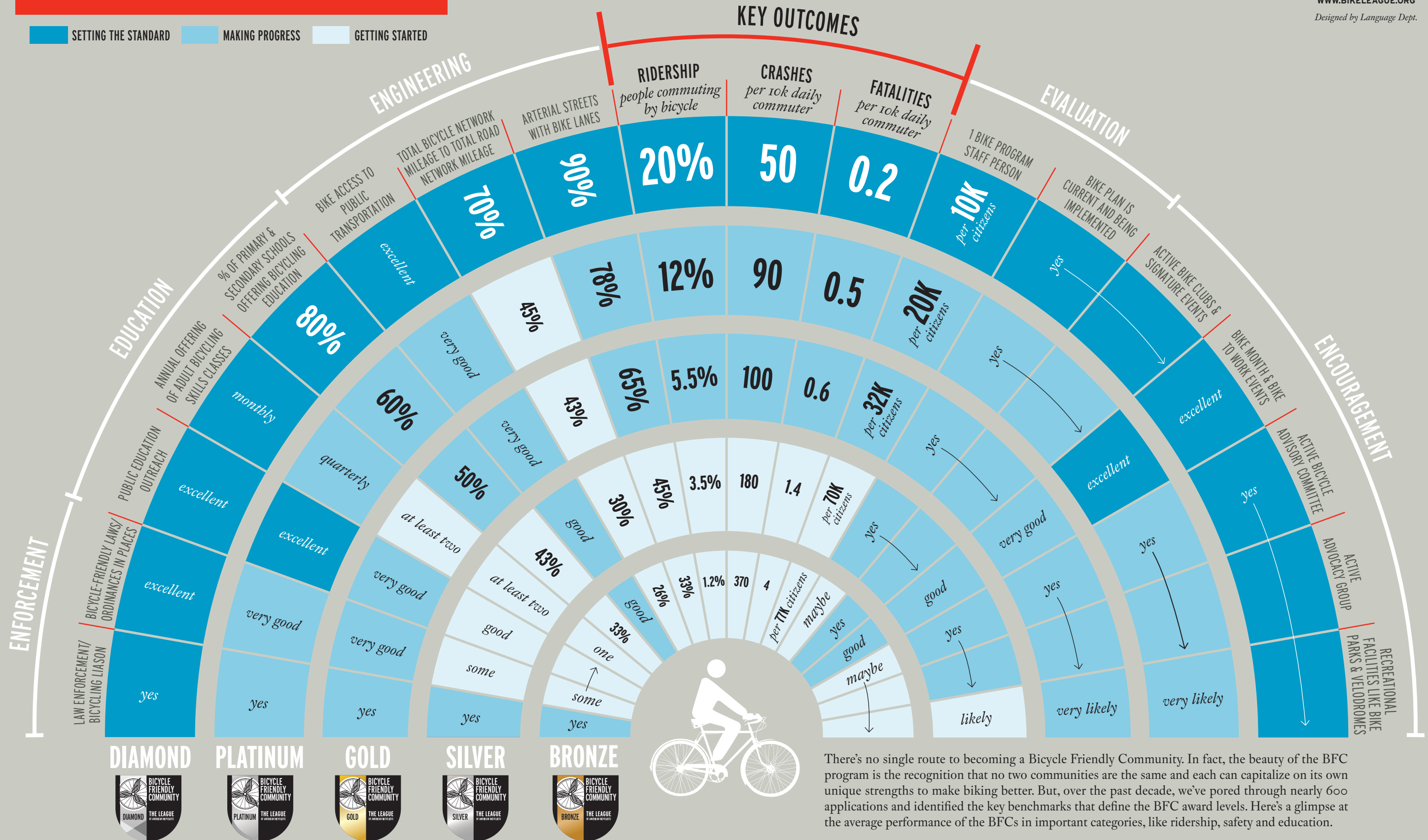
Non-Government Sources

Private foundations, local businesses and individual donors can be another resource, especially for high profile projects. The Lumpkin Family Foundation has actively supported future trail access to Fox Ridge State Park – as well as this plan. In nearby Effingham, at least \$500K in private, community donations have served as the 20% local agency match for millions of ITEP and other dollars building the TREC trail system.

THE BUILDING BLOCKS OF A BICYCLE FRIENDLY COMMUNITY

Appendix 4 - Building Blocks of a BFC

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There's no single route to becoming a Bicycle Friendly Community. In fact, the beauty of the BFC program is the recognition that no two communities are the same and each can capitalize on its own unique strengths to make biking better. But, over the past decade, we've pored through nearly 600 applications and identified the key benchmarks that define the BFC award levels. Here's a glimpse at the average performance of the BFCs in important categories, like ridership, safety and education.