Lawrence – Douglas County Bicycle Plan



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1.0 Introduction

The Lawrence Douglas County Bicycle Plan is a strategic plan used to guide the City of Lawrence and Douglas County, Kansas in providing a safe and attractive environment for bicycling as a transportation mode.

This plan is also described as the Bike Plan. Previous versions were known as the Bicycle Work Program or Bicycle Facilities Plan. Lawrence's original bicycle study and plan, entitled Pedalplan, was prepared in 1976 as the first comprehensive review of bicyclist transportation needs.

2.0 Participation

The organization responsible for development and update of the Bike Plan in Lawrence and Douglas County is the Lawrence/Douglas County Metropolitan Planning Office (L/DC MPO). Within the L/DC MPO, a Transportation Planner/Bicycle Coordinator is designated to coordinate project activities. These activities include policy development, grant writing for transportation funding at the Federal and State levels, public relations, as well as serving as the staff liaison for the Lawrence/Douglas County Bicycle Advisory Committee (BAC).

The Lawrence/Douglas County Bicycle Advisory Committee is comprised of seven members that provide a link for communication regarding bicycle issues to each of the City of Lawrence and Douglas County Commissions. Many of the objectives of this Bike Plan evolved from continuous participation from the BAC in monthly meetings, and from input into the long range planning documents produced by the Planning Office.

Another committee that has provided public input for long-range transportation needs is the Citizens Advisory Committee on Transportation (CAT). The CAT is comprised of members interested in or representing different modes of transportation, such as public transit, pedestrian, bicycle, aviation, railroad, trucking - as well as a representative from the L/DC Metropolitan Planning Commission. Because this committee's mission is participation in development of the regional long-range transportation plan, Transportation 2025, the committee convenes intermittently, as needed. At this time, the CAT is suspended until the next long-range plan update.

Other groups and participants in the Bike Plan development include the Lawrence-Douglas County Fire & Medical Services, Lawrence Departments of Public Works, Parks and Recreation, and the Police Department, as well as Douglas County Public Works Department. The Kansas Department of Transportation and Federal Highway Administration are also involved through funding and oversight.

3.0 Mission

Transportation 2025 identified motorized vehicles as the prevailing mode of transportation in Lawrence and Douglas County. However, it also recognized that other modes of transportation are important as well and that a balanced transportation system is desirable. Therefore, as new streets and roads are considered or older streets are redesigned, other uses are provided with due consideration. It is believed that in doing so, the environmental conditions of as many residents as possible are enhanced and the community character is more scenic, inviting and appealing to drivers passing through.

The Lawrence/Douglas County Bicycle Plan serves to enhance this vision with the mission statement that originated from "Lawrence Bikes...An Alternative Transportation Plan" developed in 1995.

"To advance bicycling as a safe and efficient means of transportation through facility development, educational programs, and progressive governmental policy, with the ultimate goal of connecting Lawrence's areas and neighborhoods, improving quality of life, and meeting transportation and recreation needs."

Further, it is believed that the effectiveness of the Bike Plan is increased when government efforts are coordinated with community efforts.

4.0 Bicyclist Profiles

Depending on the type of use, bicyclists may be categorized into three general classifications.

- Ohild For children, the bicycle means being able to go places on your own. This instrument of empowerment is extremely important and beneficial to children; however, they are usually using their bicycles before they have full awareness of the realities of operating a vehicle within the right-of-way of a street.
- Commuter The bicycle is used as the primary mode of transportation for everyday trips to employment, school, shopping and entertainment. Further, these riders are versed in the "rules of the road" for bicycling and prefer using the street as their primary routes.
- Recreational The bicycle may be used primarily for recreation, or used infrequently, by novice riders, or used by riders uncomfortable bicycling on the street, or by those accustomed to riding only on the University of Kansas campus during times when access to campus is restricted.

It should be noted that the classifications may overlap, and because of the types of use, bicyclists can and will need different access requirements to various locations at varying times of the day. Therefore, maximum flexibility is important in accessing all parts of the community such that whichever route bicyclists need or choose to use, that route is as safe as possible for bicyclists, pedestrians and motorists. In addition, the facility designs for bicyclists and pedestrians should be convenient and integrated so that *not* using a

motorized vehicle remains a viable choice for transportation. Bicycle facilities need to be located and designed with the needs of all bicyclists in mind but also suitable for all levels of expertise.

5.0 Definitions

The following are terms associated with bicycle facilities or for provisions that accommodate bicycle use.

- Bikeway a general term for any path, lane or route, designated for bicycle use.
- Recreational Path (also known as Class I bikeway, RecPath, shared-use, side path).
 A RecPath is a separate path adjacent to and independent of the street and is intended solely for non-motorized travel. This type of facility is suited for all bicyclist uses. The width of a RecPath is eight to ten feet.
- Bicycle Lane (also known as Class II bikeway) is defined as a separate space designated with striping, signage or pavement markings for exclusive use by bicycles within a street or road. This facility is utilized by the commuter bicyclist but also increases the comfort level for novice bicyclists. Its width of four feet is less than a Recreational Path.
- Bicycle Route (also known as Class III bikeway) a network of streets to enable direct, convenient and safe access for bicyclists. In determining a design, volumes of motorized vehicles, speeds and physical characteristics of streets are analyzed. Bike Routes are designated with signs that indicate shared use for automobiles and bicycles.
- Bicycle\Transit Integration provides storage for the bicycle on the public bus system. A two-mile ride to a bus stop is considered easy bicycling distance. Incorporating the two overcomes barriers to bicycling such as steep terrain and poor weather conditions, and it extends the range that people can reach without using a vehicle.
- Parking is considered a vital component for bicycle facilities. It should be visible, accessible, and easy to use. Parking can be bike racks, bike parking mounts on posts and meters, or permissible use of public meters, signs or poles.
- Signs A motorist only gets a quick glance at a sign, therefore signs should be strategically placed with no misinterpretation. For instance, Designated Bicycle Routes signs do not imply that bicyclists must use only those routes. And Share the Road signs do not infer that motorized vehicles share the lane along side a Bicyclist.
- Ancillary Facilities infrastructure that supports bicycling activity; examples are water fountains, rest rooms, trashcans, showers and clothing lockers.
- Other bicycle facilities are other miscellaneous enhancements that remain important for the safety of bicyclists and motorists. Some examples are adequate

lighting for safety purposes or that manhole covers and grates should be flush with the surface, and railroad crossings should not cause wheels to be caught in tracks.

- Bicycle Coordinator a professional employee at the City, State or Federal level, with varied tasks relative to planning bicycle facilities. In general, the Bicycle Coordinator ensures bicycle travel is reflected early in the design of transportation projects, and makes certain projects are appropriately linked with each other, as well as managing communication with agencies for completion of bicycle developments.
- Education Unlike motor vehicle operators, there is no mandatory education that provides understanding of bicycle safety and regulations for bicycle operators. Further there may not be enough educational material relative to bicycling for motorists. Therefore, education about bicycle safety and regulations is considered essential and may be promulgated thorough mediums such as publications, activities, videotape, news media, and other avenues of communication.

Some bicycle facilities or provisions are constant and/or may target a specific type of bicycle use. For instance, because most bicycle crashes occur at ages fifteen and under, education is used most often for this age group.

As enhancements are needed or as situations arise, they are brought forth from members of the Lawrence Douglas County Bicycle Advisory Committee (BAC) to the City or County Commissions via Traffic Safety Commission. However, any citizen may contact the City or County Commissions, Traffic Safety Commissions, or L/DC MPO regarding bicycling issues. People in the community may have current or more detailed information than that which may be available to City staff; therefore public comment and concerns are considered essential.

6.0 Bikeways

The built and natural environments within the City of Lawrence and Douglas County affect the use of bikeways. For example, the Massachusetts Bridge is the logical access to North Lawrence where the levee bicycle trail is a major destination for recreation bicyclists. Because the Massachusetts Bridge was built prior to larger vehicles of today, the safety of bicyclists and motorists is compromised when both bicyclists and motorists share the roadway. Therefore, bicyclists are encouraged to use the sidewalk on the bridge with pedestrians.

In older or already developed parts of the City, retrofitting to add bicycle facilities is more of a challenge. As a result, use of residential streets instead of arterial streets is the safer alternative. While this serves the neighborhoods, it does cause discontinuities in a bikeway system. However, the City of Lawrence is committed to the mission of Transportation 2025, and welcomes ideas to provide bicycle facilities that maximize access for as many citizens as possible.

Following is a list of four general regions with descriptions about the area, some major destinations known at this time – including elementary, junior high and high schools, and comments about specific characteristics.

East and Central

is considered as incorporated areas east of lowa street, south of the Kansas River. It is the most intensively developed area of Lawrence and includes high-density residential areas east and north of the KU campus.

- ♦ USE: mixed
- MAJOR DESTINATIONS: Downtown Lawrence area, Haskell Indian Nations University, University of Kansas, Lawrence Aquatic Center
- EMPLOYMENT: Many destinations are in this core area.
- ◆ SCHOOLS: Broken Arrow, Centennial, Cordley, East Heights, Hillcrest, Kennedy, New York, Pinckney, Prairie Park, Schwegler, Sunset Hill Elementary, Schools, Central and South Junior High Schools, and Lawrence High School

North

generally the incorporated areas north of the Kansas River

- USE: residential, industrial
- ♦ MAJOR DESTINATIONS: Kansas River Levee trails for recreational purposes, Union Pacific Depot.
- ◆ EMPLOYMENT: North 2nd Street Corridor
- ♦ SCHOOLS: Woodlawn Elementary
- ◆ IMPEDIMENTS: Access to area is an obstacle because the only point of crossing is the bridge at Massachusetts & North 2^{ND.} Also the railroad bridge north of the river over North 2nd is narrow under this grade separated crossing.

Northwest

Generally bounded by US-40/6th Street, Folks Road, County Route 438\Farmers Turnpike, E 900 Road

- USE: Low density and large lot residential are being developed.
- ♦ MAJOR DESTINATIONS: Lawrence Indoor Aquatic Center
- ♦ EMPLOYMENT:
- SCHOOLS: Deerfield Elementary and Free State High School
- ◆ IMPEDIMENTS: Planning for RecPaths, Bike Lanes, and Bike Routes is being integrated in all development.

<u>Southwest</u>

South of 6th Street, West of Iowa Street

- USE: Primarily residential with some nodes of commercial and office developments.
- MAJOR DESTINATIONS: Commercial areas on South Iowa street
- EMPLOYMENT: Oread West Corporate and Research Park, University of Kansas
- SCHOOLS: Langston Hughes, Quail Run, Sunflower, Wakarusa Valley Elementary Schools, and Southwest Junior High School
- COMMENTS: Recreational riding is in high demand.

♦ IMPEDIMENTS:

These descriptions are only generalities. The purpose is to provide awareness about travel from the perspective of a bicyclist or pedestrian. Understanding characteristics from these regions is useful in determining objectives for the entire City of Lawrence and surrounding area and ultimately for a bikeway system which will be a viable alternative mode of travel.

7.0 Objectives

As an effort to provide a safe and attractive environment for bicycling as a transportation mode, the City of Lawrence and Douglas County strive towards these six core objectives and accompanying program activities.

Objective 1

Provide logical bikeway connectivity within Lawrence and Douglas County to schools, parks, the downtown, and other major activity areas.

Program activities:

- 7.1.01 Through planning, expand and extend the bikeway system in future growth areas to provide a connected system.
- 7.1.02 Evaluate the existing bikeways for opportunities to provide Recreational Paths, Bicycle Lanes or Bicycle Routes.
- 7.1.03 Identify potential bicycle corridors within Douglas County that could be integrated with existing and future City bicycle facilities.
- 7.1.04 Coordinate with Haskell Indian Nations University and the University of Kansas to provide a seamless transition of bikeways in and through the City.
- 7.1.05 Prioritize and implement construction of critical segments that provide continuity for the bikeway system.
- 7.1.06 Incorporate bicycle and pedestrian facilities into public works projects

Objective 2

Provide consistent design standards for typical situations in consideration of bicyclists and pedestrians.

Program Activities:

- 7.2.01 Design Recreational Paths (Class I) with a width of 8-10' along designated Arterial streets and drainage ways, per the Bicycle Facilities Map.
- 7.2.02 Design safe and logical outlets and connectivity for Recreational Paths to other elements of the bikeway system.
- 7.2.03 Design Bicycle Lanes (Class II) along designated Collector Streets (per the Bicycle Facilities Map). Collector Streets that carry bike lanes shall have a minimum pavement width of 36 feet for accommodation of a four-foot wide bicycle lane on each side. Further, there should be no, or minimal, private driveway access onto Collector Streets and there should be no on-street parking permitted.

- 7.2.04 Designate Bicycle Routes (Class III) along lower-volume, lower speed Local Streets and on designated Collector Streets (per the Bicycle Facilities Map) in already-developed areas where it is impractical to retrofit for on-street bike lanes.
- 7.2.05 Design County roads that carry significant bicycle traffic with a shoulder width of ten feet so that the shoulder contains a rumble strip four feet wide that separates a bicycle lane, six feet wide.
- 7.2.06 For bicycle routes that will not readily be updated to bicycle lanes, strategically install "Share the Road" signs.
- 7.2.07 Continue Bike-Rack-for-Buses for the City's bus transit program (The T), for which loading and unloading a bicycle on the bike rack is easy for the bicyclist.
- 7.2.08 Make available parking or lockers at major destination centers, preferably near business entrances.
- 7.2.09 Construct parking or lockers for bicycles in visible and well-lit areas.

Objective 3

Minimize crashes and/or injuries of bicyclists and motorists caused from existing hazards or barriers.

Program Activities:

- 7.3.01 Where it appears construction could pose impediments to bicyclists, that construction should be published in the City's main newspaper or communicated by other media that targets motorists and bicyclists.
- 7.3.02 Identify existing hazards or barriers by monitoring safety statistics from accident or police reports.
- 7.3.03 Systematically remove existing hazards and barriers or determine an alternate design.

Objective 4

Maintain a citizen-based bicycle advisory committee as an organized voice for bicycling issues in Lawrence and in Douglas County, Kansas.

Program Activities:

- 7.4.01 Continue organization of the current Lawrence/Douglas County Bicycle Advisory Committee (L/DC BAC), including staff support from Transportation Planner and/or Transportation Intern in the L/DC MPO.
- 7.4.02 Maintain list of current members in the L/DC BAC.
- 7.4.03 Utilize input from the public and from the BAC to help determine locations and maintenance needs for bicycle facilities.
- 7.4.04 Allow one meeting per month unless voted otherwise by the members of the L/DC BAC, as a forum for the public to voice bicycling concerns. See L/DC BAC by-laws.

Objective 5

Maintain on-going Bicycle Education Program that conveys safety messages and vehicular regulations to all segments of the population.

Program Activities

7.5.01 Dedicate annually the month of September to educate young bicyclists about safety.

- 7.5.02 Dedicate annually the month of May as Bicycle Awareness Month to educate all users about bicycle regulations and safety.
- 7.5.03 Enforce all traffic regulations and for bicyclists, ideally from the perspective of an officer on bicycle.
- 7.5.04 Provide safety messages and/or vehicular regulations as part of bicycle promotional materials.

Objective 6

Actively promote bicycling or walking as a viable alternative to motorized transportation in Lawrence and Douglas County, while maintaining safety of all users on the roadway.

Program Activities

- 7.6.01 Continue to publish and maintain a bicycle/trail facilities map for distribution.
- 7.6.02 Encourage employers to provide bicycle parking or lockers and shower facilities at employment sites, especially if the employers promote a wellness program.

8.0 Funding Opportunities

This section identifies funding options that can potentially be used to fund bicycle-related projects. As in many communities, bicycle projects in Lawrence can be difficult to fund. Competing needs within a finite budget often result in very limited funding opportunities for projects such as bicycle facilities. However, there are options for increasing funding for bicycle projects, some of which the City is currently taking utilizing.

Capital Improvement Program (CIP)

On an annual basis, program bicycle projects as a line item in the City's Capital Improvement Plan (CIP). Long-term implementation of a bicycle plan is dependent upon regular investment of local funds, both for matching state and federal funding, and to implement additional projects. This commitment of funds will assure funding of local projects, and provide readiness to match state or federal funding for bicycle projects, as well as easing implementation of smaller projects without the administrative requirements associated with grants. It is more economical to "piggy-back" bicycle improvements with basic transportation projects than it is to budget stand-alone bicycle projects.

Developer Contribution

Designated Collector and Arterial streets, as shown on the Bicycle Facilities Map, will have Class I or Class II bicycle facilities constructed in conjunction with road and street construction. Provision of infrastructure improvements, including streets, sidewalks, and bicycle facilities, is typically developer-financed, in whole or in part.

Park Excise Fee

Park Excise Fee through new development are used by many communities in the Kansas City area to help finance parks and Rec Paths in developing areas. This financial mechanism is seen as an equitable way for new development to pay for itself rather than the community at-large. Essentially a park excise fee is charged at the time of building permit applications for new residential, commercial and industrial

construction. The funds collected go towards the purchase of future park land and facility construction. A fee is charged for each residential unit and per square foot of commercial construction and industrial construction. This option could be offered to developers in place of land dedication giving the developer another option.

Transportation Enhancement Program (TE)

The Transportation Enhancement Program is a federal-aid discretionary grant program administered through the Kansas Department of Transportation. Funds are available for projects that augment traditional transportation activities. Bicycle projects are among the eligible categories of projects. These can facilitate project development with 20% local and 80% federal funding, allow for the use of ISTEA funds for many types of bicycle facilities, and for acquisition and development of rails-to-trails conversions.

Surface Transportation Program (STP)

The Surface Transportation Program (STP) is a federal-aid categorical program administered through the Kansas Department of Transportation. All counties and all cities over 5,000 population receive an annual allocation of STP funds for use for eligible activities on designated roadways. Bicycle-related project are eligible to use STP funding, either as stand-alone projects or in conjunction with roadway projects. Qualifying projects may include striping bike lanes, replacing drainage grates, paving shoulders, and similar projects.

National Highway System (NHS)

NHS funds are federal-aid categorical funds allocated to State DOTs for use on designated National Highway System routes. These funds may be use to construct bicycle transportation facilities where the facility is adjacent to or within the right-of-way of a NHS route. It is cost-effective and efficient to construct elements of the Bicycle Transportation Plan in conjunction with NHS projects where planned and appropriate.

Local Government Outdoor Recreation Grants (LGORG)

The Kansas Department of Wildlife and Parks administers this grant program which can be used to develop recreational trail and park facilities. This program provides funding on a 50/50 match basis. These grants could be applied for through the Lawrence Parks and Recreation Dept.

FTA Sec 5307

Certain bicycle improvements and facilities can be eligible in applications for Federal Transit Administration (FTA) grant funds. The FTA funds transit capital projects, which may include intermodal facilities such as bike racks on buses, or bicycle parking at parkand-ride or transit stations. This could promote intermodal transportation by allowing commuters to combine short bicycle trips with longer mass transit trips, and will facilitate multi-modal capital improvement projects with 20% local and 80% federal funding.

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Lawrence/Douglas County Bicycle Plan May 2004

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est. construction cost*	\$361,750	\$177,700	\$266,200	\$37,700	\$30,000	\$708,600	\$142,750	\$132,500	\$610,000	\$134,050	\$262,850	\$52,000	\$53,540	\$887,000	\$346,350	n/a	\$139,300	\$361,720	\$15,940						
length (ft.)	7,235	1,777	2,662	754	009	14,172	2,855	2,650	12,200	2,681	5,257	2,600	2,677	17,740	6,927	5,662	6,965	18,086	797		-				
bicycle facility type		II	=	_	-	_		_		_	-	=	=		-	=	=	=	=	s III)					
functional classification	arterial	arterial	collector	N/A	A/A	arterial	N/A	arterial	arterial	arterial	arterial	collector	collector	arterial	arterial	collector	collector	collector	N/A	= Bike Route (clas		·	-	· · · · ·	
segment	West 2nd Street to Lakeview Road	West 6th Street to lowa Street	lowa Street to Michigan Street	connecting Rainer Drive & Flint Drive	connecting 'Steven Drive to Yale Road	Engle Road to Wakarusa Drive	West 15th Street to Atchison Ave end	Peterson Rd to Grand Vista Drive	K-10 to Peterson Rd. (N 1700 Rd.)	Hunters Hill Dr to Peterson Rd. (N 1700 Rd.)	Kasold Drive to Folks Road	Harvard Rd. to 6th St.	Queens Road to George Williams Way	Stoneback Drive to Queens Rd.	Wakarusa Dr. to Lakeview Road (N 1800 Rd)	Wakarusa Dr. to Stoneridge Drive	Peterson Rd to Harvard Road	Grand Vista to 15th Street	Railroad spur to Haskell Ave	Arterial = Rec Path (class I) \ Collector = Bike Lane (class II) \ Local = Bike Route (class III)	*CONSTRUCTION COST PER LINEAR FOOT:	Rec Path (class I) = \$50.00	Bike Lane (class II) on existing street = \$100.00	Bike Lane (class II) on new street = \$20.00	Bike Route (class III) = n/a
street	Iowa Street	Rockledge Road	West 2nd Street	West 26th St. (approx.)	Yale Road (approx.)	West 15th Street	non-existing	Kasold Drive	Martin Park Rd. (N 1750 Rd)	Martin Park Rd. (E 1130 Road	Peterson Road	Stoneridge Dr.	Overland Drive	Wakarusa Drive	Queens Road (E 1000 Rd.)	Queens Road	Folks Rd	Monterey Way	East 29th Street	Arterial					
ВАС УТІЯОІЯЧ									,																

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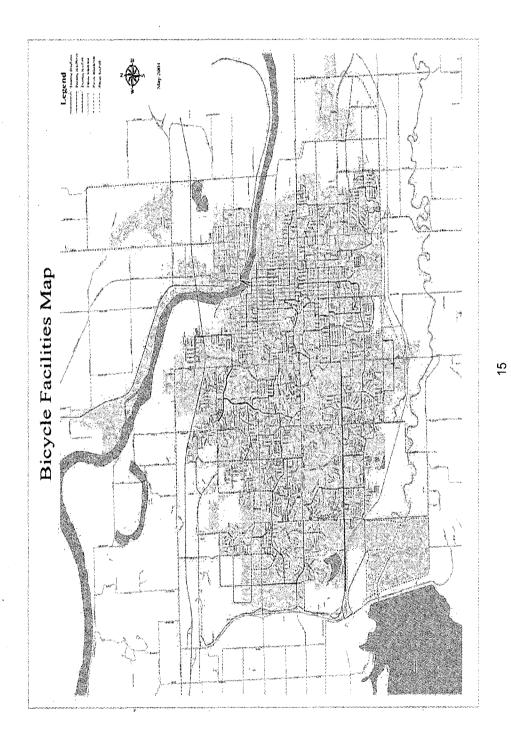
10.0 Bicycle Facilities Map

The Bicycle Facilities Map depicts existing and future bicycle facilities in Lawrence and Douglas County and serves to guide decisions and planning for new streets and roads and rehabilitation of existing streets with regard to bicycle facilities.

The designations of the future bicycle facilities as illustrated on the Bicycle Facilities Map are in accordance with the objectives of the Lawrence – Douglas County Bicycle Plan, and were determined through coordinated effort from members of the Bicycle Advisory Committee and from staff in the City of Lawrence Departments of Planning, Public Works, and Parks and Recreation and also Douglas County Public Works.

The Bicycle Plan and accompanying Bicycle Facilities Map also constitute the Bicycle System Plan element of Transportation 2025. Transportation 2025 states,

"... motorized vehicles are identified as the prevailing mode of transportation but sharing places along streets and roads with other uses such as bicyclists, pedestrians, children at play and wheelchair individuals is equally important. Therefore, as new streets and roads are considered or older streets are redesigned, the other uses are provided with due consideration. It is believed that in doing so, the environmental conditions of as many residents as possible are enhanced and the community character is more scenic, inviting and appealing to drivers passing through."



Lawrence/Douglas County Bicycle Plan May 2004