



Saturday, July 28, 2018 – Noon – 4:00 PM
East Lawrence Rec Center
1245 E 15th St
Lawrence, Kansas 66044

BICYCLE ADVISORY COMMITTEE – Discussion Topics

- 1. Potluck Lunch (see attached food list)**
- 2. Discussion of the Es of bicycle planning. (refer to the attached draft existing conditions white paper)**
 - a. Evaluation**
 - i. Is there anything surprising about the data/information?
 - ii. Are there additional measures that should be considered?
 - b. Education**
 - i. What existing strategies are most successful?
 - ii. What programming should be considered?
 - c. Enforcement**
 - i. What strategies should be considered?
 - d. Encouragement**
 - i. What existing strategies are most successful?
 - ii. What strategies should be considered?
 - e. Equity**
 - i. Who are we missing in the planning process?
 - ii. Are there equity concerns about policy, programming or project implementation?
 - f. Engineering – [NACTO Urban Bikeway Design Guide](#) and [Small Town & Rural Design Guide](#)**
 - i. Map exercise
- 3. Next steps**
 - a. Phase 2 engagement**
 - i. What do we need to know from the public to prioritize education/enforcement/engineering elements?
 - b. Do we need further work sessions?**
 - c. Plan Details**

Special Accommodations: Please notify the Lawrence-Douglas County Metropolitan Planning Organization (L-DC MPO) at (785) 832-3150 at least 72 hours in advance if you require special accommodations to attend this meeting (i.e., qualified interpreter, large print, reader, hearing assistance). We will make every effort to meet reasonable requests.

The L-DC MPO programs do not discriminate against anyone on the basis of race, color, national origin, sex, age, or handicap/disability, according to Title VI of the Civil Rights Act of 1964. For more information or to obtain a Title VI Complaint Form, see www.lawrenceks.org/mpo/title6 or call (785) 832-3150.

Mexican Potluck on July 28

Bring the item you sign up for and your own beverage

Meat

Black beans – Ashley

Refried beans – Bill

Fajita veggies – Jacki

Mexican rice

Cheese – Ashley

Chips – David

Sour cream – Steve

Shredded lettuce

Queso – Kathryn

Tortillas – Ryan

Hard shell tacos – David

Salsa – Jacki

Guac – Bill

Staff will bring: plates, plastic ware

Evaluation (Plans and Policies)

Metropolitan Transportation Plan (2018)

<http://assets.lawrenceks.org/assets/mpo/T2040/T2040.pdf>

Since 2013, the Lawrence and Douglas County Commissions formally acknowledged the latest Metropolitan Planning Organization (MPO) approved Metropolitan Transportation Plan (MTP) as the transportation chapter of the Lawrence-Douglas County Comprehensive Plan. This means Transportation 2040 (T2040) serves as the transportation chapter in the Comprehensive Plan for Unincorporated Douglas County & the City of Lawrence.

T2040 is the blueprint for our future transportation system; it is a vision for a healthy, safe, and efficient transportation system which adequately serves the metropolitan region that includes Lawrence, Eudora, Baldwin City, Lecompton and all remaining unincorporated areas of Douglas County into the future. The plan identifies future transportation needs, investments, and improvement strategies for all forms of transportation (automobile, public transit, bicycle, pedestrian, etc.) necessary to meet the transportation needs of the region through 2040.

KU Bike Plan (2016)

<https://sustain.ku.edu/sites/sustain.ku.edu/files/docs/KU%20Bike%20Plan.pdf>

The KU Bicycle Advisory Committee (KUBAC) recently worked to develop a bicycle plan for the KU campus. The plan includes a toolbox of policy, program, and infrastructure ideas, and feasible strategies the university could take to improve the bicycling environment at KU. The plan is designed to address the following goals:

- Enhance the bikeway network linking residential, academic, and recreational destinations on campus and in the community.
- Promote a safe, healthy campus environment
- Increase the percentage of bicycle and pedestrian users on campus through the implementation of new policies, programs, and infrastructure
- Improve coordination with the City of Lawrence and create seamless transitions between university and city bike infrastructure and routes
- Create movement uphill by identifying policy, program, and infrastructure solutions that encourage people to overcome the real and perceived barrier of steep routes to campus

Parks and Recreation Master Plan

<https://assets.lawrenceks.org/assets/lprd/lprdmasterplan17-draftupdate-01-18-17.pdf>

The Parks and Recreation Master Plan is a comprehensive, community-input document developed through a year-long process that looked at the existing recreational facilities, programs and services and determined the current and future level of service for the community. The survey process identified walking and bicycling as highly valued recreational activities because they require little equipment or financial investment to get started, and are open to participation by nearly all segments of the population.

Participation in these activities is often promoted as a means of spurring physical activity and increasing public health. The design of a community's infrastructure is directly linked to physical activity - where environments are built with bicyclists and pedestrians in mind, more people bike and walk.

Downtown Parking Study

https://assets.lawrenceks.org/assets/agendas/cc/2017/07-18-17/cm_strategic_parking_plan_report.pdf

The 10-year Parking Operations and Development Plan was created to address current challenges and to prepare for the impact of potential future development in the downtown area. Downtown Lawrence has begun to experience the parking-related issues of a modern urban center and proactive steps will be necessary to mitigate parking shortages before they are fully realized. The study found parking demand generated downtown and at the University of Kansas are overwhelming certain residential neighborhoods immediately bordering each area, suggesting prioritizing additional modes of transportation could help reduce the growing demands on existing parking facilities.

19th Street Safety Assessment

<https://assets.lawrenceks.org/assets/mpo/corridor/19thStRSA.pdf>

The ultimate goal of the road safety assessment (RSA) is to help communities build streets that are safer for people walking, bicycling, and taking public transportation. It is intended to open the dialogue, share knowledge, identify patterns that leads to gaps, and build relationships leading to safer pedestrian and bicycle networks over time. The RSA is an essential step to addressing non-motorized transportation safety by bringing together federal, state and local stakeholders to experience the system from the perspective of those who use the transportation system by foot or on a bike. The assessment found that the 19th Street corridor between Iowa Street and Barker Avenue is an ideal location for road improvements that improve the important east-west connection near the University of Kansas campus for all vehicle types.

Complete Streets Policy

<https://assets.lawrenceks.org/assets/pds/planning/documents/CSPolicy.pdf>

The complete streets policy establishes guiding principles and practices to create an equitable, balanced, and effective transportation system that encourages walking, bicycling, and transit use, to improve health and reduce environmental impacts, while simultaneously promoting safety for all users of the streets. The purpose of the Complete Streets Policy is to use an interdisciplinary approach to incorporate the needs of all users into the design and construction of street projects within Lawrence where feasible and fiscally appropriate. Complete street elements mean design features that contribute to a safe, convenient, and comfortable travel experience for all users.

Lawrence – Douglas Countywide Bikeway System Plan (2014)

<https://assets.lawrenceks.org/assets/mpo/study/reports/bike.pdf>

The Lawrence – Douglas Countywide Bikeway System Plan was completed in 2014 as part of the Multimodal Planning Studies. The Countywide Bikeway System Plan details the existing and planned bikeway network for the Lawrence urbanized area and proposes bikeway connections throughout the remainder of Douglas County, including the Cities of Eudora, Baldwin City, and LeCompton. The plan made significant strides for improving bicycling in the region, but there is a lack of design options, lack of established metrics, lack of project prioritization, and a need for stronger E's which needs to be addressed before implementation. The new bikeway plan is intended to fill any gaps from the last version and create concrete implementation strategies.

Pedestrian-Bicycle Task Force (2016)

<https://assets.lawrenceks.org/assets/mpo/pedbike/pbitf-draft-report-01-25-16.pdf>

The City Commission created the Pedestrian-Bicycle Issues Task Force to develop built environment and programming recommendations which improve the city’s pedestrian and bicycle networks by 2030. The task force has identified implementation priorities for the city to consider. The bicycle related priorities are:

1. Complete the Lawrence Loop
2. Improve safety on roads with the highest bicycling crash rates
3. Develop a highly visible network of bicycle boulevards-existing streets that have been optimized for bicycle traffic.

Performance Measures

<http://assets.lawrenceks.org/assets/mpo/T2040/T2040.pdf#page=425>

In T2040, performance measures are used to assess progress toward meeting goals and objectives, and are integral to implementing a performance-based plan. The results of the performance measures advise the outcomes of the implemented projects and strategies. The bicycle related performance measures are tracked using Kansas Department of Transportation (KDOT) crash data, which is collected in the event of a traffic crash that occurs on public roadways and involves property damage of at least \$1000 or an injury or fatality. Metrics are used to track performance trends on an annual basis. Existing performance measures from T2040 that relate to bicycling include:

PM1: Percentage of people who have access within a ¼ mile to the bikeway network

	2015 Population Estimate	Bike Route	Bike Boulevard	Bike Lane	Protected Bike Lane	Shared Use Path	Total Bikeway Network Access
Lawrence	95,096	62%	0%	35%	0%	38%	87%
EJ Zone	50,627	76%	0%	37%	0%	33%	87%
Eudora	5,685	0%	0%	0%	0%	39%	39%
Baldwin City	4,677	0%	0%	0%	0%	17%	17%
Lecompton	611	0%	0%	0%	0%	0%	0%
Unincorporated Douglas County	13,822	0%	0%	0%	0%	0%	0%

Note: EJ zone percentage includes only the EJ zone, not all of Lawrence
Source: 2015 Population Estimate and Bikeway Network (2017)

PM3: Percentage of public streets with bikeway network

	Bike Route	Bike Boulevard	Bike Lane	Protected Bike Lane	Shared Use Path	Total Bikeway Network Access
Lawrence	11%	0%	4%	0%	7%	22%
EJ Zone	12%	0%	4%	0%	5%	20%
Eudora	0%	0%	0%	0%	2%	2%
Baldwin City	0%	0%	0%	0%	3%	3%
Lecompton	0%	0%	0%	0%	0%	0%
Unincorporated Douglas County	1%	0%	0%	0%	0%	1%

Note: EJ zone percentage includes only the EJ zone, not all of Lawrence
 Source: Lawrence-Douglas County MPO (2017)

PM13: Number of non-motorized fatalities & serious injuries

Rolling Averages	Baldwin City	Eudora	Lawrence	Lecompton	Douglas County Unincorporated	Douglas County
2007-2011	0.4	0.0	6.2	0.0	1.2	7.8
2008-2012	0.4	0.0	6.4	0.0	0.8	7.6
2009-2013	0.4	0.0	6.8	0.0	0.6	7.8
2010-2014	0.4	0.0	6.2	0.0	1.0	7.6
2011-2015	0.4	0.0	6.0	0.0	1.0	7.4
2012-2016	0.0	0.0	6.6	0.0	0.8	7.4

5-Yr Rolling Avg Targets for Douglas County	
2018	7.2
2019	7.1
2020	7.8

Source: KDOT (2017)

PM26: Percentage of mode choice

2013						
	Drove Alone	Carpooled	Bus	Walked	Biked	Taxicab, Motorcycle or Other
Lawrence	74.6%	10.7%	2.3%	6.0%	16%	0.8%
Baldwin City	72.1%	16.5%	0.0%	4.9%	0.2%	2.2%
Eudora	86.5%	8.0%	0.0%	2.6%	0.0%	2.7%
Lecompton	81.2%	10.6%	0.0%	1.0%	0.0%	0.0%
Douglas County	75.9%	10.7%	1.9%	5.2%	1.4%	0.9%

2014						
	Drove Alone	Carpooled	Bus	Walked	Biked	Taxicab, Motorcycle or Other
Lawrence	74.3%	10.9%	2.4%	6.1%	1.3%	0.8%
Baldwin City	75.4%	12.3%	0.0%	4.5%	0.1%	2.4%
Eudora	89.0%	6.0%	0.0%	3.0%	0.0%	0.6%
Lecompton	93.4%	4.9%	0.0%	0.0%	0.0%	1.0%
Douglas County	76.4%	10.5%	2.0%	5.3%	1.0%	0.8%

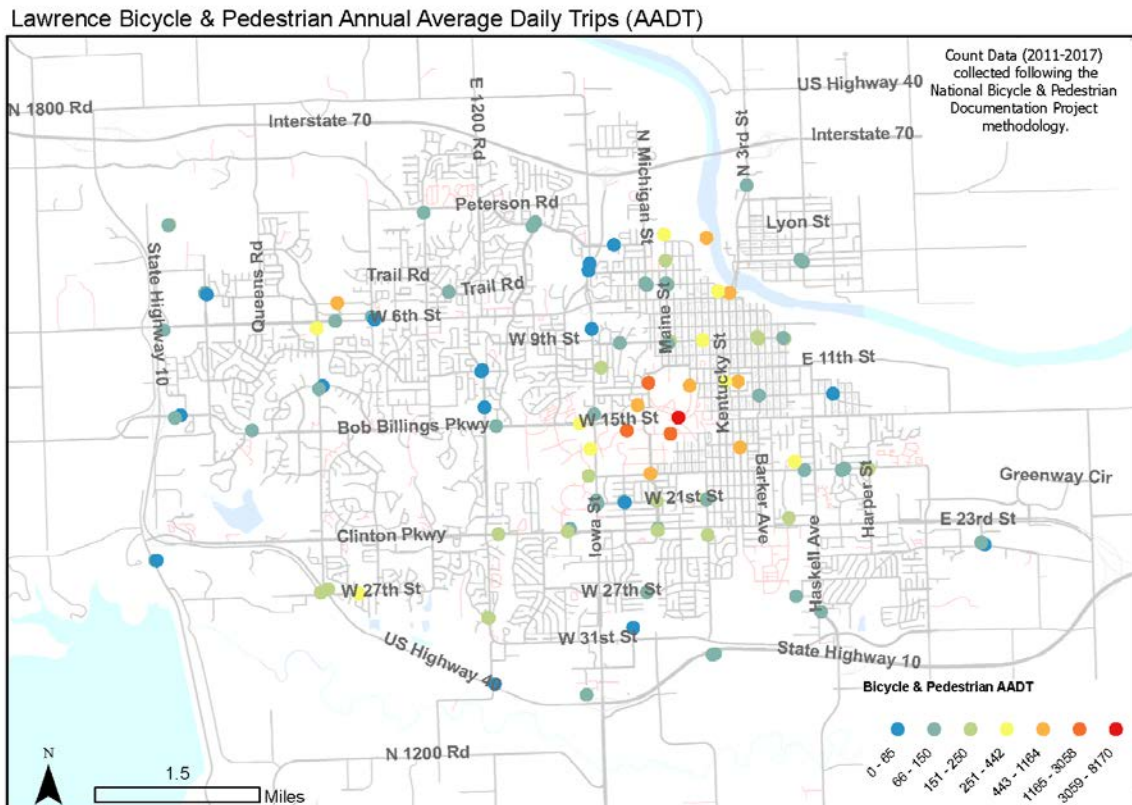
2015						
	Drove Alone	Carpooled	Bus	Walked	Biked	Taxicab, Motorcycle or Other
Lawrence	75.4%	10.7%	2.4%	5.7%	1.0%	0.8%
Baldwin City	74.8%	12.0%	0.0%	5.4%	0.1%	2.1%
Eudora	89.3%	5.5%	0.0%	3.3%	0.0%	0.5%
Lecompton	92.1%	5.9%	0.0%	0.0%	0.0%	0.7%
Douglas County	76.8%	10.2%	2.0%	5.1%	0.9%	0.8%

Source: ACS 5-year estimates (S0801)

Bike/Pedestrian Counts

<https://lawrenceks.org/mpo/bikepedcount>

The MPO collects bicycle and pedestrian counts to calculate an average annual daily number of bicycle and pedestrian trips for each location. Additionally, KDOT provides annual average daily vehicle traffic count numbers which are used to calculate the travel percentage breakdown of trips by mode. Aside from simply understanding how the non-motorized network is used, the counts strengthen grant applications to leverage additional federal funding for bicycle and pedestrian projects, and help determine the location of future investments.



DISCLAIMER NOTICE
The map is provided "as is" without warranty or any representation of accuracy, timeliness or completeness. The burden for determining accuracy, completeness, timeliness, merchantability and fitness for or the appropriateness for use rests solely on the requester. The City of Lawrence makes no warranties, express or implied, as to the use of the map. There are no implied warranties of merchantability or fitness for a particular purpose. The requester acknowledges and accepts the limitations of the map, including the fact that the map is dynamic and in a constant state of maintenance, correction and update.

Evaluation – How Lawrence Compares to Other Communities

League of American Bicyclists

<https://bikeleague.org/community>

The League of American Bicyclists awards communities that have made significant efforts towards becoming more bicycle friendly. Lawrence has been a Bronze Bicycle Friendly Community since 2004 and the current recognition expires in 2020. Bronze is the lowest recognition out of five levels of bicycle friendliness and it indicates preliminary efforts to create the safest network possible. The designation takes

into consideration engineering, education, encouragement, enforcement, evaluation and planning, with key goal outcomes including maximizing commuter ridership, and minimizing the number of crashes and fatalities. To improve the score and become a Silver Community the following feedback was provided:

- Continue to complete the Lawrence Loop and ensure that people can safely access the loop and community destinations from the loop.
- Increase staff time on improving conditions for people who bike and walk.
- Continue to create a connected network that helps people safely access transit and schools.

STAR Communities

<http://www.starcommunities.org/about/our-communities>

In 2016, Lawrence was designated as a 4-STAR Community. The STAR Community Rating System works to evaluate, improve, and certify sustainable communities by providing a clear, data-driven approach to assessing communities' sustainability efforts. The STAR framework integrates economic, environmental, and social aspects of sustainability in order to provide a sustainability rating, either a 3-STAR Community, 4-STAR Community, or 5-STAR Community. In order to reach a 5 STAR level, the following bicycle related strategies were provided:

- Increase mileage of buffered bicycle lanes, cycle-tracks, and other dedicated facilities
- Establish or support a community-wide public bike share program
- Retrofit transportation infrastructure to meet ADA standards
- Implement specific programs or create facility upgrades that transition the community towards the use of alternative modes of transportation and low-emission vehicles
- Require or incentivize bicycle and pedestrian amenities in new major development projects in high-density, mixed-use areas or near transit stations.

Places for Bikes City Rating

<https://peopleforbikes.org/placesforbikes/city-rating-system>

Places for Bikes offers a data-driven approach to focus on quickly building better bike infrastructure. In order to qualify for a Places for Bikes rating, communities must address and improve the following: ridership, safety, network, reach, and acceleration. Lawrence has a score of 1.3/5. In order to improve the score, Lawrence was provided the following feedback:

- Hold a monthly social ride for new bikers
- Create a "Vision Zero" policy with measureable goals and a clear timeline
- Install a small network of neighborhood bikeways/bike boulevards by improving a few residential streets
- Implement one pop-up event or pilot bikeway project using temporary material
- Build a diverse mobility advisory team

Education

[Share the Road: Rules of the Road](#)

On its website, the City of Lawrence provides detailed information for motorists, bicyclists, and pedestrians about how to safely interact along the shared roadway. The resources provided can be used as a guide for residents to more confidently understand the rules of the road and reach the intended destination more safely. The webpage includes links to instructional videos, basic bike repair and maintenance tips, and information on how to use a bicycles as safely as possible.

[Association of Pedestrian and Bicycle Professionals Webinars \(APBP\)](#)

The APBP publishes a range of webinars related to bicycle and pedestrian planning. The webinars are hosted by the Lawrence-Douglas County Metropolitan Planning Organization and can only be viewed on-site.

[Bicycle Rideability Map](#)

A bicycle rideability map is a tool to help residents determine the best route for your skill level. The map varies from the future and existing bicycle facilities map, which is a comprehensive map used as a system planning tool. A new rideability map will be created as part of the ongoing bikeway plan update process. The maps are developed by the MPO BAC.

[Safe Routes to School \(2015 – ongoing\)](#)

The Lawrence Safe Routes to School (SRTS) initiative is a collaborative effort between the Lawrence-Douglas County Health Department, Lawrence Public Schools, the City of Lawrence, and the Lawrence-Douglas County Metropolitan Planning Organization to improve the health and wellbeing of children by enabling and encouraging them to safely walk and bicycle to school. The SRTS program includes regular data collection regarding student travel patterns and parent concerns, identification of safe routes to school for all 18 public elementary and middle schools in Lawrence, supporting annual walk and bike to school celebrations, creating pedestrian and bicycle safety curriculum, and revising the school crossing policy.

[Bike Lesson and Safety Training Program \(BLAST\)](#)

Lawrence Public Schools offers the Bicycle Lesson and Safety Training program to all fourth and fifth grade students as part of the physical education curriculum. In four classes, students learn about proper helmet fit, rules of the road, bicycle safety checks, road hazards and how to safely navigate through an intersection. Some students learn how to ride a bike.

[League of American Bicyclists, League Certified Instructors](#)

The League of American Bicyclists (LAB) has a national bicycle education program (Bike ED) that includes training to become certified League Cycling Instructors (LCI's). The training seminar focuses on teaching and demonstration techniques to use when instructing a Smart Cycling class, which LCI's are ideally equipped to host after becoming certified. The seminar emphasizes how to teach bicycle safety and skills to provide increased comfort and confidence for new and returning bicyclists and youth. League instructors should be used to teach bicycle classes and support bicycle education throughout the community.

Confident, Capable, Commuters Bike Class

This class is taught by instructors certified by the League of American Bicyclists, and is designed to be beneficial to all levels of riders. Participants will learn how to ride safely in traffic and on the sidewalk, basic bike maintenance, and group riding skills. This course consists of two class room sessions in the evenings and a Saturday morning outdoor on-bike session.

Pre Drivers Education Camp

This camp introduces the rules of the road and teaches participants the skills needed to safely and effectively use their bike as a form of transportation. Each day kids learn and practice new skills before going on a group ride to a popular destination. Participants ride on sidewalks as well as roads and must provide their own bike and helmet.

Bicycle Friendly Driver Program

The Bicycle Friendly Driver program presented by the Lawrence Bicycle Club is quick class designed to expand awareness on the ways in which motor vehicles are supposed to interact with bicycles. Topics include sharing the road/taking the lane, infrastructure, bicycle laws, common points of conflict/crashes. A short wrap-up exam is used to ensure that the messages are being relayed.



Bicycle Ambassador Program

A bicycle ambassadors program is an important bicycle outreach and education component of a bicycle plan, as it promotes bicycle safety and awareness. City staff and other groups may volunteer to be ambassadors as well as recruiting community members to be ambassadors. Ambassadors host and attend programs, demonstrations, and activities at events, summer camps, and schools. The most successful ambassador programs typically include adult and junior ambassador programs to reach the largest amount of users. Local bicycle shops are often involved.

Enforcement

Police Enforcement (Bicycle)

The Lawrence Police Department is primarily responsible for the enforcement of local bicycle ordinances, which are described in Chapter 17 Article 7 of the Code of the City of Lawrence. Proper interpretation of specific circumstances and events is critical for proper enforcement and respect between motorists and bicyclists. The Lawrence Police Department has a bicycle patrol unit which aims to make police officers more approachable throughout the community, while allowing for maximum mobility when engaging residents.

Crossing Guard Program

Adult crossing guards can lead to more parents feeling comfortable about their children walking or bicycling to school, and allow for expanded independence for children. The City of Lawrence funds and locates crossing guards at locations that fit the criteria outlined in the City of Lawrence School Crossing Control Policy. Crossing guards can be a quick solution to improve crossing conditions for difficult roads or intersections where engineering solutions may be out of the discussion.

Speed monitoring program

A radar speed unit is place in neighborhoods to alert drivers to their speed and allow City staff to collect speed data. Speed monitoring programs often have a limited long-term effectiveness in changing driver behavior but it can be useful for short-term behavior change.

Traffic Concern Reporting Website

A web-site for citizen traffic concerns helps paint a picture of problematic segments of the road network. It allows police to coordinate their responses and concentrate on those areas where there are numerous complaints. Residents need to provide information on the time of day and day of week when the violations are most prevalent to allow the police to better focus their resources.

3 Foot Passing Enforcement Device (BSMART)

Three-foot passing laws require drivers to give people on bikes at least that much clearance when passing them on the road, however such laws are extremely difficult to enforce. A new device (BSMART) helps give the law some teeth by allowing police officers to easily measure the distance that a motorist provides when passing. With the device, a police officer rides along the roadway, constantly checking the passing distance of each vehicle. Another officer is located down the road, ready to pull over the driver and issue either a warning or a citation to the motorist who does not obey the three foot passing law. This scenario allows for a high contact rate between residents and local law enforcement, which helps establish a more respected police presence.

Pace-Car Campaigns

Resident pace-car drivers agree to drive courteously, at or below the speed limit, and follow other traffic laws. Programs usually require interested residents to register as a pace car driver, sign a pledge to abide by the rules, and display a sticker on their vehicle.

Encouragement

Bicycle Registration

The Lawrence Police Department operates a bicycle registration program which seeks to alleviate any concerns regarding theft or vandalism by creating a system which identify and links stolen bikes to the proper owner. Residents who know their bikes serial number can register them with the Lawrence Police Department at the Law Enforcement Center on 11th Street and New Hampshire for only \$0.25.

Travel with Care Campaign

In the summer of 2016, the Lawrence-Douglas County Health Department adopted a new and creative ad campaign to encourage physical activity and safety. The campaign, Travel with Care, is a national initiative through People for Bikes and coincides with Douglas County's Be Active Safe Routes initiative. The campaign not only encourages pedestrian-bicycle safety, but it also highlights everyday people who are bicyclists, making it relatable and encouraging more local residents to bicycle.



Helmet & Safety Fair

Helmet fairs can be used to create awareness around bicycling and allows involved leaders and ambassadors to establish a presence in the community. A helmet fair is an event designed to distribute helmets to children that do not already own one, while providing accurate information on how to properly adjust the straps to fit accordingly. There is often simple safety instruction involved with the helmet distribution.

Mileage clubs

Online or community-based mileage club programs encourage bicycling and provide incentives for reaching mileage goals either individually or in groups. The National Bicycle Challenge is one example of a mileage club that has been successful, but there are many options available which can be custom tailored to suit anyone. Residents can either compete as part of a teams or independently.

Adopt-A-Park/Trail

Local clubs and organizations provide great volunteer services for maintaining and patrolling trails. This idea could be extended to follow tour routes or specified streets/sidewalks. A sign to recognize the club or organization could be posted as an incentive to sustain high quality volunteer service.

Bike-to-Work Day (Third Friday in May)

Bike-to-Work Day is an annual event held on the third Friday of May across the United States that promotes the bicycle as an option for commuting to work. Leading up to Bike-to-Work Day, national, regional, and local bicycle advocacy groups encourage people to try bicycle commuting as a healthy and safe alternative to driving by providing route information and tips for new bicycle commuters. On Bike-to-Work Day, these groups often organize bicycle-related events, and in some areas, pit stops along bicycle routes with snacks.

Car Free Day

Car free days are when communities close a road or portion of road to vehicular traffic for a specified day and utilize the space for bicycle and pedestrian activities. In addition to walking and bicycling, various events and workshops can be integrated into the day's activities. Such a program should be designed to encourage residents to think differently about their city streets, to improve physical activity, or to highlight the cultural and physical amenities of the city. In communities that don't have enough support to run a communitywide car free day, slight variations have been employed to generate similar outcomes. Instead of closing a roadway, car free days can consist of pledges for residents to find creative transportation solutions on one specific day of the week, repeated each week throughout the year. Rather than having a single day of communitywide events, communities can encourage people to leave the car at home on the specified day of week.

Earth Day

Earth Day is a national awareness day that falls on April 22nd each year and offers a discussion opportunity to focus on helping the environment. Efforts can be made to encourage people to help the environment by bicycling to destinations and staying out of their automobiles.

Community Challenge

Community challenges acknowledge that many residents simply cannot commute without a car, so the emphasis is shifted towards more broad, positive goals beyond simply "not to drive" and instead encourages residents to reach beyond their comfort zones and try active transportation options whenever possible. A community challenge should ask residents to track bike, walk, bus, and carpool miles throughout a specified timeframe. Participants can compete with one another throughout the duration of the challenge, and prizes can be made available for the most successful residents.

Bicycle Friendly Business Program

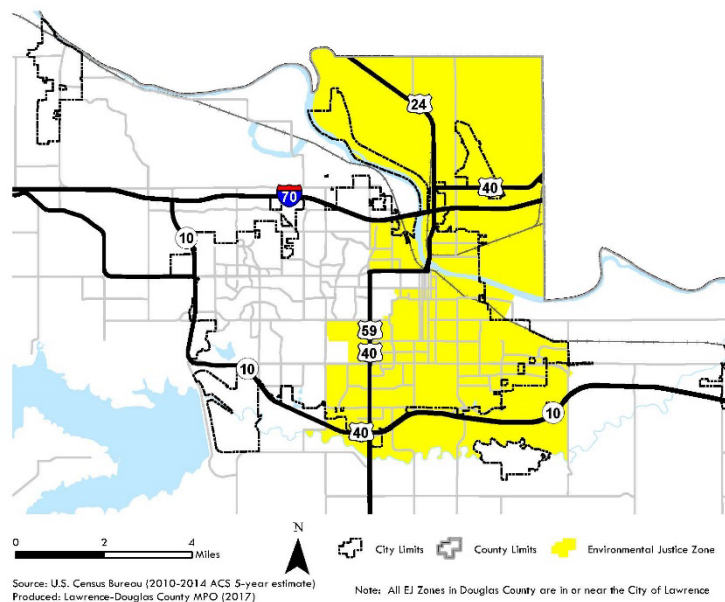
The League of American Bicyclists also provides criteria for local businesses to participate in the Bicycle Friendly Business program, in addition to the Bicycle Friendly Community and Bicycle Friendly University criteria. In the program, employers are recognized for their efforts to encourage a more welcoming atmosphere for bicycling employees, customers and the community. It involves a comprehensive inquiry which is designed to yield a holistic picture of an applicant's (employer) work to promote bicycling. The top award is the platinum designation, which is awarded to businesses that have excellent bike parking, showers, lockers, incentives to get people riding, great bike education programs and events, supportive policies and a strong biking culture seen both internally and externally. A bronze business may only have good bike parking, participate in the annual bike to work day or support internal bike club, but have significant work to be done in order to be more bicycle friendly. Lockers are a great option for businesses looking to establish themselves as a Bicycle Friendly Business. Ideally, there should be one lockable gym locker for every long-term bicycle parking space provided. Shower facilities also provide great assistance for someone looking to commute by bicycle, as it can quickly eliminate many of the hygiene concerns associated with actively commuting. Personal hygiene is often viewed as a worthy deterrent which prevents employees from comfortably using their bicycles to commute to work. Generally, many employees will not consider biking to work without the assurance that they can shower when they arrive.

Equity

There are two main concerns that relate to the essential elements of an equitable bicycle friendly community. The first challenge is spatial equity, which seeks to ensure that resources, programming, infrastructure, and network amenities are equally distributed throughout the community in a way that ensures no exclusionary gaps exist. The second concern regarding equity pertains to a resident's ability to own and maintain a bicycle despite a wide range of setbacks, whether it be due to a financial constraint or physical barrier. A successful bicycle network must be appropriate and accessible for all ages and abilities. Many of the existing bicycle facilities are only suitable for extremely confident riders, which tend to be adult men, and exclude people who might otherwise ride. Poor or inadequate infrastructure – which has disproportionately impacted low-income communities and communities of color – forces people to choose between feeling safe and following the rules of the road, and induces wrong-way and sidewalk riding.

Environmental Justice Consideration in Project Selection

A majority of the existing bike lanes, bike routes with paved shoulders, and shared lane markings are within the environmental justice zone. The environmental justice (EJ) zone was established by identifying the low-income and minority populations. Currently T2040 identifies unprogrammed non-motorized funding will be spent on projects that continue to improve access, mobility, and safety for people who walk and bicycle. The non-motorized prioritization process also recognizes that consideration should be given to EJ areas in project selection.



Complete Streets Policy

The Complete Streets Policy establishes guiding principles and priorities to create an equitable, balanced, and effective transportation system that encourages bicycling (and walking and transit use) to improve health and reduce environmental impacts, while simultaneously promoting safety for all users of the streets.

Bike Share

A new bike share program aims to help get as many people on bikes as possible. Bike share programs are a great option for low income residents who are burdened by the high cost of transportation and for people

who want to avoid the high upfront costs associated with bicycle ownership. On the other hand, there are barriers such as smart phone ownership, options for unbanked residents, lessons on how to ride, that should be considered.

Lawrence Unchained Bicycle Coop

Lawrence Unchained is a local non-profit, volunteer-run community bike shop in Lawrence that works towards the goal of promoting self-reliance, sustainability, and healthful living throughout the community. The group recycles, repurposes, and distributes used bicycles and advocates for improved bicycle facilities along the transportation network. Additionally, Lawrence Unchained offers an Earn-A-Bike program, which offers volunteers access to a free bicycle after completion of 10 hours of community service towards a bicycle related project.

Bicycle Library

Bicycle libraries operate similarly to bike share programs, however they often provide bikes to residents free of charge. Bikes can be checked out for a specified amount of time, usually just a few hours, however long-term rental programs have been successful throughout the country in recent years. Bicycle libraries can be beneficial because they allow residents test various bicycle types (cruiser, cycle, cargo) before making a purchase of their own, while ensuring a diverse range of applications for all users of the roadway.

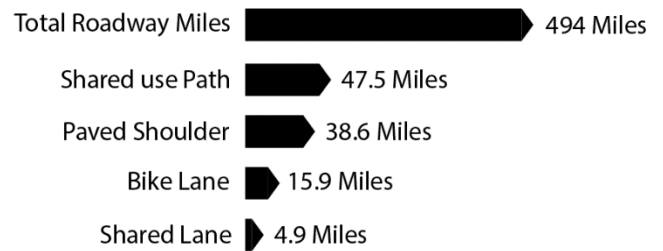
DRAFT

Engineering

Facility Infrastructure

Whichever route a bicyclist or pedestrian may choose or need to use, that route should be reasonably safe for bicycling. Issues may include hazards (e.g., drainage grates, overhead obstructions, etc.), lighting, vehicular conflicts, or conflicts with other sidewalk or bikeway users.

A significant constraint to ridership is the existing bikeway network is discontinuous. Bikeways frequently begin and end suddenly and often do not connect to other bikeways. Communities that have streets arranged in grid patterns have an inherent advantage and more options in establishing easier connections for bicyclists. The existing bikeway network is made up of three primary facility types: bike lanes, bike routes, and shared use paths. The lack of connectivity prevents them from being truly effective and more consistently utilized. As a result, many routes do not provide a direct, convenient, or safe means across busy streets. Other routes have conflicts with multiple user or they may not provide complete linkages to desired destinations.



Non-motorized Project Finance

Bicycle and pedestrian infrastructure projects have been historically incorporated into larger road projects budgets, unless they were funded through grants or special allocations. Lawrence has used KDOT Transportation Alternative (TA) grants to fund bicycle projects in the past, and it has been an effective strategy, however it limits the implementation of standalone bicycle projects. The first set aside funding for standalone bicycle and pedestrian projects in Lawrence was established in 2016. Based on the historical data it was assumed (in T2040) Lawrence will receive a TA grant of \$300,600 every five years for bike and pedestrian funding and the \$100,000 Community Development Block Grant (CDBG) sidewalk gap program funding would be available in Lawrence every year until 2040. Furthermore, Lawrence was awarded two TA grants for FY2018/19 totaling \$2 million.

Fiscal Year	Amount
FY2017-2020	\$4,697,069
FY2021-2025	\$5,579,600
FY2026-2030	\$5,752,300
FY2031-2035	\$6,196,800
FY2036-2040	\$6,675,300

Fiscal Year	Amount
FY2012	\$ -
FY2013	\$318,700
FY2014	\$1,028,500
FY2015	\$1,499,000
FY2016	\$130,312
5-Year Average	\$595,300

Source: Financial data from T2040