

# Resident Requests

2022 *thru* 2026

Department Resident Request

## City of Lawrence, Kansas

Contact

**Project #** RR-22-0001  
**Project Name** Naismith: 19th-23rd with Bicycle Track

**Type** Improvement  
**Useful Life**  
**Category** Unassigned

Score 31

**Status** Active

**Total Project Cost:** \$810,000

**Description**  
 Reconstruct Naismith Dr., 19th to 23rd, with four motor vehicle lanes each 12 feet wide, by extending curb lines into median. Construct bus turnouts with shelters at 21st St. on east and west sides. Reconstruct sidewalk on west side to 5 feet. Construct a 10 foot wide bicycle track on east side. Purchase ROW at NE corner of 20th St. and others if needed. Relocate utilities as needed.

**Justification**  
 Motor vehicle pavement has failed. Lanes are dangerously narrow for use by buses and bicyclists. Increased capacity needed to accommodate increased traffic from K.U. Central District, which K.U. considers their "front door". K.U. traffic should be directed to 23rd St. and not 19th St. eastbound. The 2019 Lawrence Bikes Plan has designated this corridor as a Priority Network Bikeway. The 10 foot wide bicycle track will connect with the 10 foot wide Naismith Valley Trail south of 23rd St.  
 This proposal would coordinate and synchronize the reconstruction of Naismith motor vehicle lanes with construction of ped/bike/transit facilities.  
 This proposal would be a substitute for lane reduction under PW23E02CIP, and a substitute for a pre-emptive sidewalk on the east side under CIP# MS-20-8000 to MS-24-8000.

Expenditures	2022	2023	2024	2025	2026	Total
Planning/Design	50,000					50,000
Land Acquisition	50,000					50,000
Construction/Maintenance		710,000				710,000
<b>Total</b>	<b>100,000</b>	<b>710,000</b>				<b>810,000</b>

  

Funding Sources	2022	2023	2024	2025	2026	Total
Unfunded	100,000	710,000				810,000
<b>Total</b>	<b>100,000</b>	<b>710,000</b>				<b>810,000</b>

**Budget Impact/Other**  
 Combined revenue streams will be \$330,000 street maintenance funds (PW23E02CIP) for widening the street, \$30,000 transit funds (T102) for the bus turn-outs, \$150,000 Sidewalk Mitigation funds (PW19E5CIP) for the west side sidewalk, and \$300,000 Bike/Ped Improvement funds (CI09CIP) for the bicycle track, for a total of \$810,000.  
 \$326,000 KDOT Access, Innovation & Collaboration grant will cover part of the costs for bus turnouts and shelters, sidewalk, and bicycle track. Local 10% match from Bike/Ped Improvement Project CIP# MS-20-8000 to MS-24-8000.

# Resident Requests

2022 thru 2026

Department Resident Request

## City of Lawrence, Kansas

Contact

**Project #** RR-22-0002  
**Project Name** Citizen Request Wireless gate at 19th-0'Connell

**Type** Improvement  
**Useful Life**  
**Category** Unassigned

Score 11

**Status** Active

**Total Project Cost:** \$15,000

**Description**  
 Install a motorized gate at 19th St. and O Connell Rd., including utility supplied power, solar supplied power, and battery backup. The gate shall open for programmable time lengths, initiated only by predetermined signals from all emergency and transit vehicles. Several technologies are available such as: infrared transponders, optical transponders. RFID transponders, or siren activated receivers. If the chosen system uses transponders, install units in each of City fire engines, police cruisers, ambulances, and buses. Selection of a preferred technology shall be guided by research into the greatest reliability and the least cost, reliability being the more important.

**Justification**  
 The 19th Street Neighborhoods Coalition finds this method of emergency access into Venture Business Park via 19th St. to not only meet the requirements of emergency responders and buses to have a secondary and time-saving point of entry in addition to coming from 23rd St., but also to meet the neighborhoods need and City policy objectives for keeping traffic volume and speeds low along all of 19th St.

Expenditures	2022	2023	2024	2025	2026	Total
Planning/Design	500					500
Construction/Maintenance	13,500					13,500
Other	1,000					1,000
<b>Total</b>	<b>15,000</b>					<b>15,000</b>

Funding Sources	2022	2023	2024	2025	2026	Total
Unfunded	15,000					15,000
<b>Total</b>	<b>15,000</b>					<b>15,000</b>

**Budget Impact/Other**  
 Staff have added anticipated maintenance costs related to the request.

Budget Items	2022	2023	2024	2025	2026	Total
Maintenance		1,000	1,000	1,000		3,000
<b>Total</b>		<b>1,000</b>	<b>1,000</b>	<b>1,000</b>		<b>3,000</b>

# Resident Requests

2022 thru 2026

Department Resident Request

## City of Lawrence, Kansas

Contact

**Project #** RR-22-0003  
**Project Name** Burroughs Creek Trail Extension downtown

**Type** Improvement  
**Useful Life**  
**Category** Unassigned

Score 25

**Status** Active

**Total Project Cost:** \$739,000

**Description**  
 Construct a 10 foot wide by 6 inch concrete trail from the north terminus of the Burroughs Creek Trail at 11th St. to join an existing side trail at the 9 Del Lofts. Purchase 900 E. 11th St. as trail right-of-way, and to become part of Hobbs Park as being the #1 priority in the Burroughs Creek Corridor Plan. The trail will extend north from 11th St. through this proposed Hobbs Park Annex, continue north in an easement along the Allen Press property line, continue northwest along the north edge of the Allen Press parking lot to the existing 10 foot wide side trail along Delaware St. An easement agreement is needed from Allen Press. Another easement behind the quonset hut can take it from Delaware and 8th St. to the Santa Fe depot. See attached letter and map.

**Justification**  
 Since BNSF has rejected trail alignments along their tracks, MSO is looking at options. A so-called "eastern alignment" would go northeast to the Kansas River and double back to downtown. Eastside workforce residents, both bicyclists and electric wheelchair users, need a more direct commuter route downtown rather than a scenic river route at twice the length. The Burroughs Creek Corridor Plan designates 900 E. 11th St. as the #1 priority acquisition by the City, which also is a longstanding goal of East Lawrence Neighborhood. This proposal will invest more in ROW purchase and less in construction costs than other options.

Additional Comments:  
 900 East 11th St. is not listed for sale, so \$500,000 is an estimated price and subject to negotiation. Douglas County has appraised it at \$189,560. Allen Press may grant a use easement or a long term lease. Quonset Hut LLC at 620 East 8th St. may want an outright easement purchase along their north property line. It would be wise to negotiate all options.

Expenditures	2022	2023	2024	2025	2026	Total
Planning/Design	35,000					35,000
Land Acquisition	500,000					500,000
Construction/Maintenance	204,000					204,000
<b>Total</b>	<b>739,000</b>					<b>739,000</b>

Funding Sources	2022	2023	2024	2025	2026	Total
Unfunded	739,000					739,000
<b>Total</b>	<b>739,000</b>					<b>739,000</b>

**Budget Impact/Other**  
 The 2019 Capital Improvement Plan budget item #PR2121CIP has \$600,000 allocated to this project, and KDOT has awarded a \$480,000 Transportation Alternatives grant to the City for this project (with a 20% local match).

Budget Items	2022	2023	2024	2025	2026	Total
Maintenance	1,000	1,000	1,000	1,000		4,000
<b>Total</b>	<b>1,000</b>	<b>1,000</b>	<b>1,000</b>	<b>1,000</b>		<b>4,000</b>

# Resident Requests

2022 thru 2026

Department Resident Request

## City of Lawrence, Kansas

Contact

**Project #** RR-22-0004  
**Project Name** Bicycle Track--Iowa St to 31st

**Type** Improvement  
**Useful Life**  
**Category** Unassigned

Score 26

**Status** Active

**Total Project Cost:** \$495,000

**Description**  
 Construct of a 10-foot wide by 6 inch thick two-way concrete bicycle track on the east side of South Iowa St., adjacent to the existing sidewalk, from 31st St. to the SLT Trail (Lawrence Loop). Enough right-of-way exists to fit the bicycle track and sidewalk, except 1/6 acre of ROW will need to be purchased. The bicycle track shall be marked with a yellow center stripe, directional pavement arrows, and wayfinding signs. Where the bicycle track shares intersection pavement with motor vehicles, there shall be green pavement markings installed. No utilities need to be relocated. The bicycle track will be an upgrade of an SUP designated in the 2014 Multi-modal Plan and the 2018 Transportation 2040 Plan for this segment, achieving modal separation and greater safety.

**Justification**  
 Normally MSO would construct a planned bikeway in conjunction with the 2021 mill and overlay project, but they have excluded it from the project scope. Iowa St. is U.S. Hwy 59/40, a 75 foot wide, five-lane arterial, with additional 15 foot wide right turn lanes in much of the roadway, and a 45mph speed limit. Federal and local design standards disallow on-street bikeways on this roadway. It will achieve modal separation and safety. It will also close the gap between the SLT section of the Lawrence Loop and the 31st St. shared use path, opening up cyclist access to this highly utilized commercial district.  
 This bicycle track will be funded by City Connecting Link Improvement Program (CCLIP) through KDOT. The safety, capacity, and operational need for bicyclists as a distinct class of transportation will be markedly improved. As geometric improvements, the bicycle track will qualify for funds under the Geometric Improvement category of CCLIP as 80-20% state-local split. Of the \$495,300 project, KDOT would pay \$396,240, and Lawrence would pay \$99,060.  
 Project cost figures are approximate based on comparable City projects. We don't have detailed access to the range of MSO design and cost data.

Expenditures	2022	2023	2024	2025	2026	Total
Planning/Design	10,000					10,000
Land Acquisition	60,000					60,000
Construction/Maintenance		425,000				425,000
<b>Total</b>	<b>70,000</b>	<b>425,000</b>				<b>495,000</b>

Funding Sources	2022	2023	2024	2025	2026	Total
Unfunded	70,000	425,000				495,000
<b>Total</b>	<b>70,000</b>	<b>425,000</b>				<b>495,000</b>

**Budget Impact/Other**  
 \$405,300 - construction of bicycle track, and realign sections of sidewalk  
 \$60,000 - right-of-way purchase  
 \$10,000 - design  
 \$20,000 - contingencies  
 Geometric Improvement category of CCLIP pays an 80-20% split, or \$396,240 and \$99,060

Budget Items	2022	2023	2024	2025	2026	Total
Maintenance	1,000	1,000	1,000	1,000	1,000	5,000
<b>Total</b>	<b>1,000</b>	<b>1,000</b>	<b>1,000</b>	<b>1,000</b>	<b>1,000</b>	<b>5,000</b>

# Resident Requests

2022 thru 2026

Department Resident Request

## City of Lawrence, Kansas

Contact

<b>Project #</b>	<b>RR-22-0005</b>
<b>Project Name</b>	<b>Bicycle Track, Lakeview Rd, Iowa-Kasold</b>

**Type** Improvement  
**Useful Life**  
**Category** Unassigned

Score 21

**Status** Active

**Total Project Cost:** \$808,000

Description
Construct a 10-foot wide by 6-inch thick two-way concrete bicycle track, with a striped center line, directional pavement arrows, and wayfinding signs, on the south side of Lakeview Rd., from Iowa St. to Kasold Dr. (E. 1200 Rd.). This bicycle track will fill the gap between Iowa St. bicycle lanes and the popular Farmers' Turnpike bicyclist road. The bicycle track is to be in place of unprotected white-stripe bicycle lanes, which shall be deleted from MSO plans to mill and overlay and curb and gutter the street in 2021. Wherever the bicycle track crosses a commercial driveway, green pavement markings shall be installed. No utilities need be moved.

Justification
The unprotected white-stripe bicycle lanes proposed by MSO are an attractive nuisance and a liability for the City. They are dangerous to child, novice, and family cyclists, and appealing only to a small contingent of performance cyclists, and understandably have the worst comfort level rating of 5. In terms of frequency of use, they're not worth doing. In June of 2018, two experienced Lawrence cyclists traveling in white-stripe bicycle lanes were struck in separate collisions with motor vehicles and hospitalized. Research in 2020 by BikeMaps.com show that 65% of fatal bicyclist collisions with motor vehicles occurred on arterial streets with speed limits up to 45mph. Lakeview Rd. is an arterial with a speed limit of 45mph. Neither the 2014 Multi-modal Plan nor the 2018 Transportation 2040 Plan call for white-stripe bicycle lanes here, calling it only a generic "bike route".
Mayor Stuart Boley said in 2018, "Let me express my interest in separating bicycles from motor vehicles. I'm really interested in options for separating bicycles from motor vehicles. I want to say that flat out, unapologetically". And the Multi-modal Transportation Commission has instructed staff on several projects to abandon white-stripe bicycle lanes in favor of separated bikeways. Formal or informal, separate bikeways is as much a policy as there ever was one. But MSO keeps installing the unsafe white-stripe bicycle lanes. It is time staff acknowledges this policy, and stops installing white-stripe bicycle lanes.

Expenditures	2022	2023	2024	2025	2026	Total
Planning/Design			20,000			20,000
Construction/Maintenance			750,500			750,500
Other			37,500			37,500
<b>Total</b>			<b>808,000</b>			<b>808,000</b>

Funding Sources	2022	2023	2024	2025	2026	Total
Unfunded			808,000			808,000
<b>Total</b>			<b>808,000</b>			<b>808,000</b>

Budget Impact/Other
\$734,000 - construction of bicycle track
\$16,500 - green pavement markings at eight commercial drives
\$20,000 - design
\$37,500 - contingencies
The project shall be funded by MS-23-8000 Bike/Ped Improvements funds, intended for stand-alone projects.
Project cost figures are approximate based on comparable City projects. We don't have detailed access to the range of MSO design and cost data.

Budget Items	2022	2023	2024	2025	2026	Total
Maintenance			1,000	1,000	1,000	3,000
<b>Total</b>			<b>1,000</b>	<b>1,000</b>	<b>1,000</b>	<b>3,000</b>

# Resident Requests

2022 thru 2026

Department Resident Request

## City of Lawrence, Kansas

Contact

**Project #** RR-22-0006  
**Project Name** Atchison Creek Trail, W19th-Bob Billings

**Type** Improvement  
**Useful Life**  
**Category** Unassigned

Score 28

**Status** Active

**Total Project Cost:** \$573,000

### Description

Sustainability Action Network proposes that the City of Lawrence enter into a cost-share agreement with K.U. Endowment Association and Evergy Inc. to construct a north-south, 10-foot wide by 6-inch thick two-way concrete bicycle track from West 19th St. to Bob Billings Parkway at Lawrence Ave. The bicycle track would be on K.U. Endowment property on the west side of Atchison Creek, and just east of Evergy's site for a new sub-station, and pass under Evergy's new bridge over Atchison Creek. It shall be marked with a striped center line, directional pavement arrows, and wayfinding signs. There also will be a 50-foot wooden bridge over W. 19th St. tributary, two 36" X 20' cross-trail pipes, and a HAWK crossing beacon and green pavement markings at Bob Billings Prkw.

### Justification

This 1/2 mile section of bikeway along Atchison Creek would fill the most important gap in a Lawrence Loop "spoke" along Lawrence Ave., connecting south with the existing Yankee Tank Trail to the Clinton Parkway SUP and points south to the Loop, and north on Lawrence Ave. to bicycle lanes on Princeton Blvd., and then to the Peterson Rd. section of the Loop. This spoke is part of the Lawrence Bikes Plan Funding Secondary Network, but when completed, would be a much preferred option than the Primary Network alternative on Kasold Dr. This is because Kasold Dr. has too many steep hills, whereas the Atchison Creek Trail/Lawrence Ave. alignment has gradual slopes the entire distance.

For Evergy to access their landlocked site, they will build a street westward from Westbrooke St. across a bridge over Atchison Creek – a 20-foot deep ravine. Evergy's contribution to the bikeway cost-share would be to make the bridge tall enough for the bicycle track to pass under it. K.U. Endowment's contribution to the cost-share would be their providing bikeway access across their land, though further negotiations might gain a cash contribution as well. Negotiations should begin immediately to anticipate Evergy's construction schedule of 2022-23.

Expenditures	2022	2023	2024	2025	2026	Total
Planning/Design	20,000					20,000
Construction/Maintenance	526,000					526,000
Other	27,000					27,000
<b>Total</b>	<b>573,000</b>					<b>573,000</b>

Funding Sources	2022	2023	2024	2025	2026	Total
Unfunded	573,000					573,000
<b>Total</b>	<b>573,000</b>					<b>573,000</b>

### Budget Impact/Other

\$526,200 - excavation, bicycle track, wood bridge, culverts, HAWK beacon, green pavement markings

\$20,000 - design

\$26,300 - contingencies

Project shall be funded by the Sales Tax Reserve Fund, and/or contributions by Evergy and K.U. Endowment

Project cost figures are approximate based on comparable Douglas County projects. We don't have access to detailed design and cost data.

Budget Items	2022	2023	2024	2025	2026	Total
Maintenance	1,000	1,000	1,000	1,000	1,000	5,000
<b>Total</b>	<b>1,000</b>	<b>1,000</b>	<b>1,000</b>	<b>1,000</b>	<b>1,000</b>	<b>5,000</b>

# Resident Requests

2022 thru 2026

Department Resident Request

## City of Lawrence, Kansas

Contact

**Project #** RR-22-0007  
**Project Name** Bikeway green pavement retrofit

**Type** Improvement  
**Useful Life**  
**Category** Unassigned

Score 17

**Status** Active

**Total Project Cost:** \$121,000

**Description**  
 Retrofit green pavement markings into several bikeway projects where they were left out. The green pavement markings shall be Methyl methacrylate (MMA) based material. MMA shall be applied across 50 identified intersections and commercial driveways in 2 foot X 10 foot bars, typically 6 feet on center. If desired, both ends of each bar can be white stripes. We have budgeted MMA at \$15/sq.ft. (prices range \$9 to \$27/sq.ft.). This augments the \$382,000 that was budgeted in the 2021 CIP for 151 locations where existing shared use paths (SUP) cross intersections or commercial driveways (item CI-21-0002).

**Justification**  
 In compiling the 2021 budget, the Budget Committee and the City Commission recognized the value of green pavement markings, and endorsed the \$382,000 without hesitation. The 2019 Lawrence Bikes Plan notes “The addition of green colored pavement enhances visibility and awareness for both drivers and bicycle riders . . . [and] may be used through an intersection, driveway, or ramp to guide the bicycle rider and increase turning drivers’ awareness”. However, since the approval of CI-21-0002, there have been additional bikeway projects where the markings were excluded from the scope – either a built project, or one in the pipeline, for which MSO neglected to include the green markings, or a project scheduled for upcoming construction without the markings.  
 In the future, these green pavement markings should be included as a design standard as a matter of course, to avoid the greater expense of retrofitting them. We request the City Commission direct staff to follow this guidance as set policy.

Expenditures	2022	2023	2024	2025	2026	Total
Planning/Design	5,000					5,000
Construction/Maintenance	111,000					111,000
Other	5,000					5,000
<b>Total</b>	<b>121,000</b>					<b>121,000</b>

Funding Sources	2022	2023	2024	2025	2026	Total
Unfunded	121,000					121,000
<b>Total</b>	<b>121,000</b>					<b>121,000</b>

**Budget Impact/Other**  
 \$110,850 - installation of pavement markings  
 \$5000 - design  
 \$5550 - contingencies  
 MMA is priced as materials and labor, for 50 identified locations. There is a range of prices from \$9 to \$27 per square foot, so the actual price would result from a bid process.  
 Project shall be funded from the Bike-Ped Improvement fund, MS-22-8000

# Resident Requests

2022 thru 2026

Department Resident Request

## City of Lawrence, Kansas

Contact

<b>Project #</b>	<b>RR-22-0008</b>
<b>Project Name</b>	<b>Safety Shoulders, Noria Rd, N 1400 Rd-RR</b>

<b>Type</b>	Improvement
<b>Useful Life</b>	
<b>Category</b>	Unassigned

Score 26

Status Active

Total Project Cost: \$569,000

Description
Remove deficient shoulders, and construct 6.5-foot wide shoulders of asphalt-over-compacted-base, with double solid white stripes next to travel lanes, on Noria Rd., from N. 1400 Rd. to the BNSF RR tracks. Layers shall be 6" sub-base Type AA density, 6" AB-3, 8" HMA base, and 1.5" HMA surface course. The wide safety shoulders are to be in place of unprotected single white-stripe bicycle lanes on the currently deficient 4-foot wide shoulders, bicycle lanes which shall be deleted from MSO plans to mill and overlay the street in 2021. This wide safety shoulder design south of the tracks will match the wide safety shoulder design of the 1/2 mile section north of the tracks maintained by Douglas County. No utilities need be relocated.

Justification
There will be multiple benefits by widening the shoulders, similar to the practice of wide shoulders installed on several Douglas County roads. They improve vehicle safety by giving drivers more space to avoid accidents. They improve bicyclist safety by providing a wide and marked space separate from motor vehicles. And they provide a larger overall pavement width to accommodate turning radii for trucks entering and exiting the East Hills Business Park. The unprotected white-stripe bicycle lanes proposed by MSO are an attractive nuisance and a liability for the City. They are dangerous to child, novice, and family cyclists, and appealing only to a small contingent of performance cyclists, and understandably have the worst comfort level rating of 5. In terms of frequency of use, they're not worth doing.
Research in 2020 by BikeMaps.com show that 65% of fatal bicyclist collisions with motor vehicles occurred on arterial streets with speed limits up to 45mph. Noria Rd. is an arterial with a speed limit of 45mph. Neither the 2014 Multi-modal Plan nor the 2018 Transportation 2040 Plan call for white-stripe bicycle lanes here. Mayor Stuart Boley said in 2018, "I'm really interested in options for separating bicycles from motor vehicles. I want to say that flat out, unapologetically". Formal or informal, separate bikeways is as much a policy as there ever was one. It is time staff acknowledges this policy, and stops installing white-stripe bicycle lanes.

Expenditures	2022	2023	2024	2025	2026	Total
Planning/Design	10,000					10,000
Construction/Maintenance	522,000					522,000
Other	37,000					37,000
<b>Total</b>	<b>569,000</b>					<b>569,000</b>

Funding Sources	2022	2023	2024	2025	2026	Total
Unfunded	569,000					569,000
<b>Total</b>	<b>569,000</b>					<b>569,000</b>

Budget Impact/Other
\$522,300 - excavation, traffic control, shoulders, and Methyl methacrylate (MMA) double stripes
\$10,000 - design
\$36,500 - contingencies
Project shall be funded by Street Maintenance Program
Project cost figures are approximate based on comparable Douglas County projects. We don't have access to detailed design and cost data.

Budget Items	2022	2023	2024	2025	2026	Total
Maintenance		10,000	10,000	10,000	10,000	40,000
<b>Total</b>		<b>10,000</b>	<b>10,000</b>	<b>10,000</b>	<b>10,000</b>	<b>40,000</b>



# Resident Requests

2022 *thru* 2026

## City of Lawrence, Kansas

**Project #** RR-22-0009

**Project Name** Inverness Roundabout Improvement

**Type** Improvement

**Department** Resident Request

**Useful Life**

**Contact**

**Category** Unassigned

**Score** 8

**Status** Active

### Description

**Total Project Cost:**

The current roundabout has a Q-lane before and after it but is in need of a Q-lane within the roundabout itself (main issue is the furthest west loop)

### Justification

During Sunflower arrival/dismissal times the roundabout gets blocked due to cars waiting in the arrival and dismissal lines. The blockage can last up to 25 minutes. This is a safety concern if any emergency vehicle were to need to get through the roundabout they would not be able to. In addition, the residents of the neighborhood the roundabout leads to are very inconvenienced and it also impacts city bus schedules. The enrollment at Sunflower is steady and I do not anticipate a decline anytime soon.

### Budget Impact/Other

# Resident Requests

2022 thru 2026

Department Resident Request

## City of Lawrence, Kansas

Contact

**Project #** RR-22-0010  
**Project Name** Algae Treatment Farmland

**Type** Improvement  
**Useful Life**  
**Category** Unassigned

Score 37

**Status** Active

**Total Project Cost:** \$5,180,000

### Description

This project consists of a pilot algae treatment system for nutrient-contaminated stormwater and groundwater at the former Farmland site (now VenturePark), followed by a full-scale system for long-term treatment. The algae system by Gross-Wen Technologies (GWT, algae.com) takes advantage of the phenomenon of eutrophication by growing algae before wastewater is discharged to surface water. The technology consists of a greenhouse containing a serpentine basin that directs water through a series of partly submerged rotating belts. These belts allow algae and other biomass to continuously uptake nutrients and other pollutants; they are periodically scraped to harvest accumulated biomass that can be used as a soil amendment or bioplastic feedstock.

Successful deployment begins with a pilot scale greenhouse that generates data used in the design of the full-scale system. Full greenhouse size cannot be estimated without pilot data, but will likely be under 1 acre, and can be located on the easternmost capped lagoon on the site - this is the direction groundwater flows and is not easily utilized otherwise.

Algae treatment is a long-term solution to contaminated groundwater treatment, and will produce clean water and usable biomass over the course of its life while requiring minimal O&M or energy input.

### Justification

As of 2017, impounded groundwater and stormwater were exceeding onsite storage capacity. Collected groundwater is currently being discharged to the Kansas River without treatment. The current NPDES permit requires only monitoring, but stricter limits on nutrients have been discussed by KDHE. Current recommendations by consultant (pending further data collection) include constructed wetlands, land application as fertilizer, industrial pretreatment, discharge to sanitary sewer, or surface discharge under NPDES permit.

The most recent GHD cost-benefit analysis report notes that pilot testing of potential treatment technologies is coming up in the anticipated sequence of events, so it appears reasonable that a low-energy/low-O&M approach is justified, especially since algae treatment is exceptionally suited to nutrient recovery.

By generating water with very low nutrient concentrations, nearby businesses could reuse this water in industrial processes or for irrigation; this would mean a NPDES permit is no longer necessary. Parks and Recreation can use the collected algae as fertilizer, or it can be sold to area farmers. Finally, compared to the anticipated \$40 million required to remediate the site (which presumably includes the cost of treatment equipment), the proposed algae treatment system represents not only a relatively low capital expenditure, but a lower cost of ownership than mechanical treatment or a constructed wetland, and less regulatory liability than a NPDES permit.

Staff time will be necessary to collect and analyze water samples, maintain equipment, and distribute harvested biomass wherever it's needed. 1 day every two weeks, or 0.1 FTE, is assumed for budgetary purposes.

Utility costs include electricity (belt movement, fans) and gas for heating.

The greenhouse can be utilized by the City or sold once treatment is considered complete.

Effluent water from the greenhouse can be reused as process or irrigation water, or discharged under a NPDES permit.

Expenditures	2022	2023	2024	2025	2026	Total
Planning/Design		75,000				75,000
Construction/Maintenance	5,000	1,000,000	4,000,000			5,005,000
Equip/Vehicles/Furnishings	100,000					100,000
<b>Total</b>	<b>105,000</b>	<b>1,075,000</b>	<b>4,000,000</b>			<b>5,180,000</b>

Funding Sources	2022	2023	2024	2025	2026	Total
Unfunded	105,000	1,075,000	4,000,000			5,180,000
<b>Total</b>	<b>105,000</b>	<b>1,075,000</b>	<b>4,000,000</b>			<b>5,180,000</b>

### Budget Impact/Other

Costs are broken down by year, since this is a phased approach. In 2022, costs include the pilot unit (\$100,000 for 12 months of operation), approximately \$5k for utility hookups, and \$5k for City staff to collect and analyze samples (estimated 0.1 FTE). Once the pilot is complete, 2023 costs include \$50k for data analysis, report writing, and design of the full-scale system; this will take approximately 6 months, assuming the algae pilot indicates satisfactory results and the City wants to move ahead with the full scale system. Civil engineering (\$25k) and site work (\$1m) can take place in late 2023 to prepare the capped east lagoon for the greenhouse in 2024. This includes utility work, an access road, and foundation construction.

## Resident Requests

2022 *thru* 2026

Department Resident Request

### City of Lawrence, Kansas

Contact

As stated above, the greenhouse's size will not be known until pilot testing and data analysis is complete, but a very conservative 1-acre greenhouse is assumed for site work and capital costs, estimated at \$4m. The system is largely autonomous, so subsequent costs fall under Maintenance and Supplies (utility costs) after construction. An conservative 2% of CapEx will be required for maintenance and utility costs, along with a continued 0.1 FTE of staff time for sampling and general O&M tasks.

<b>Budget Items</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>Total</b>
Maintenance			40,000	40,000	40,000	120,000
Staff Cost	5,000	5,000	5,000	5,000	5,000	25,000
Supplies/Materials			40,000	40,000	40,000	120,000
<b>Total</b>	<b>5,000</b>	<b>5,000</b>	<b>85,000</b>	<b>85,000</b>	<b>85,000</b>	<b>265,000</b>

# Resident Requests

2022 *thru* 2026

## City of Lawrence, Kansas

<b>Project #</b>	<b>RR-22-0011</b>
<b>Project Name</b>	<b>Centennial Skatepark Improvement</b>

<b>Type</b>	Unassigned	<b>Department</b>	Resident Request
<b>Useful Life</b>		<b>Contact</b>	
<b>Category</b>	Unassigned		
<b>Score</b>	17		

**Status** Active

<b>Description</b>	<b>Total Project Cost:</b>
Improvements to Centennial Skatepark are critical for providing a safe and welcoming space for riders. Centennial is the most popular and often extremely busy skatepark in the area. The popularity of skateboarding, rollerskating, and bike riding has been steadily increasing for years with no signs of slowing down soon. The proposed improvements would be to the South and East sides replacing the damaged old surface with smooth concrete and adding concrete and steel obstacles. The Lawrence skate community have many ideas of what obstacles to add (ie, plaza with stairs and handrail, quarter pipes, and many others).	

<b>Justification</b>
Centennial was never completed and has had many issues that cause an unsafe space for the community. One of the most notable is the surface that has large cracks and is crumbling under our wheels. This has contributed to many unexcusable injuries to riders (Including my 68 yr old mother dislocating her shoulder going over a crack). The remodel in 2012 did not provide enough funds to resurface the entire park. We are having more people attend the park cause crowding and even collisions between skaters. In addition, the mini ramp is damaged and rotting needing to be replaced. Without the mini ramp we will have even less space to share increasing the likelihood of collisions between riders. Lawrence Skaters Association and the P&R department continue to work together to discuss the future of public skateparks in the area. The LSA community is proud of the work accomplished so far including Edgewood Skatepark. Through fundraising and volunteer labor we have been able to provided the East Lawrence and surrounding community another safe space to enjoy healthy activities at the park. Edgewood is frequently used by riders daily, the addition to Centennial would ensure safe spaces for riders without overcrowding of the parks. The parks not only provide a safe place for riders they also foster a sense of responsibility and pride in the community

<b>Budget Impact/Other</b>
The new development to the pack will require added maintenance to operate safely. Estimated staffing and materials cost would be \$3000 per year.

# Resident Requests

2022 *thru* 2026

## City of Lawrence, Kansas

**Project #** RR-22-0012  
**Project Name** Pedestrian Crossing at Bauer Farm Dr. & Wakarusa

**Type** Improvement      **Department** Resident Request  
**Useful Life**      **Contact**  
**Category** Unassigned  
**Score** 24

**Status** Active

### Description

**Total Project Cost:**

For non-motorists:  
1- Create a pedestrian / bike crossing on the intersection of Bauer Farm Dr & Wakarusa St.

### Justification

1- Bauer Farm Dr & Wakarusa St. Crossing: To facilitate a safe continuity for bikers and pedestrians shopping in the West Lawrence grocery stores area. Creating a pedestrian crossing here will alleviate the burden of long walk and unsafe crossing to the 3-Route bus stop on Wakarusa St as well as to get to Walmart for continued basic shopping.

### Budget Impact/Other

Prioritizing the elimination of hazardous crossing in 2022 would be helpful. However, it would be appreciated as well to make less burdensome to non-motorists the access to grocery stores along the 23rd and the 31st street from the difficult street/with very high elevations such as Bob Billings, access at least to the highly populated stretch between Kasold St. & Iowa St.

# Resident Requests

2022 *thru* 2026

## City of Lawrence, Kansas

**Project #** RR-22-0013  
**Project Name** Atchison Creek Trail, Clinton Pkwy to 31st St.

**Type** Improvement      **Department** Resident Request  
**Useful Life**      **Contact**  
**Category** Unassigned  
**Score** 32

**Status** Active

### Description

**Total Project Cost:**

Wakarusa St.  
2- Prioritize / speed up bike trail project along flat (or at least less elevated) lands:

### Justification

2- The plan for a bike trail along the Atchison Tributary from Lawrence Ave already exists on the City's future bike loop/trail projects. But its importance for prioritization lies in making it easier to access HyVee and stores further down along the 31st St without having to climb to Kasold back&forth. This trail will serve 5 apartment complexes along this section of Bob Billings

### Budget Impact/Other

Prioritizing the elimination of hazardous crossing in 2022 would be helpful. However, it would be appreciated as well to make less burdensome to non-motorists the access to grocery stores along the 23rd and the 31st street from the difficult street/with very high elevations such as Bob Billings, access at least to the highly populated stretch between Kasold St. & Iowa St

# Resident Requests

2022 *thru* 2026

## City of Lawrence, Kansas

**Project #** RR-22-0014  
**Project Name** Bob Billings & Westbrooke St. Intersection Study

**Type** Improvement      **Department** Resident Request  
**Useful Life**      **Contact**  
**Category** Unassigned  
**Score** 24

**Status** Active

**Description**      **Total Project Cost:**

Bob Billings & Lawrence Ave along the Atchison Tributary.  
3- Calm traffic by Bob Billings & Westbrooke St crossing.

**Justification**

3- \*High-speed\* traffic nearing the essential crossings from/to multifamily housing & bus stops #288 & 285 along Bob Billings is very dangerous. Attention to this crossing is crucial not only because Bob Billings is a high-speed street but also the \*hill blocks westward traffic visibility\* to the frequent pedestrian crossings at the mentioned bus stops. There were two vehicle crashes in the year I lived here, and twice stuck between two speeding cars while I was already in the middle of street

**Budget Impact/Other**

Prioritizing the elimination of hazardous crossing in 2022 would be helpful.  
However, it would be appreciated as well to make less burdensome to non-motorists the access to grocery stores along the 23rd and the 31st street from the difficult street/with very high elevations such as Bob Billings, access at least to the highly populated stretch between Kasold St. & Iowa St