

Charlie Bryan, Chair
Lawrence Transportation Commission
6 E. 6th St.
Lawrence KS 66044

14 September 2017

re: Bicycle and Pedestrian Prioritization Criteria

Mr. Bryan and Commissioners:

As the Program Chair for our organization's Bicycle Transportation Program, I am writing to you instead of attending your study session, because it conflicts with our monthly meeting. However, I have requested for several years that the City develop bikeway prioritization protocols, so I appreciate your attention, and the work that the City staff has put into this.

When we walk, we move within the limits of our bodies – our personal age, strength, abilities – typically from 3-5 mph. Walking is a form of mobility, but it is not a vehicle. Vehicles of any sort enhance our mobility, enabling us to travel more efficiently. The bicycle is the most efficient vehicle of all, using only 100 Watts to travel at 20 mph, 400 miles per gallon equivalent, powered entirely on carbohydrates, not hydrocarbons.

An automobile, on the other hand, is the least efficient vehicle. According to physicist Amory Lovins, regardless of fuel type, 99% of a car's energy is consumed to move the 4000lb car, and 1% to move the driver. According to the U.S. Department of Energy, fully one third of U.S. petroleum consumption is by single occupancy autos. Fewer trips by autos, and more trips by bicycle is the easiest way for Lawrence to cut our greenhouse gases and carbon footprint.

With well designed, unimpeded bicycle thoroughways, a cyclist could get across Lawrence in 20 minutes, while walking would take from 1 ½ to 2 hours. For all these reasons, Sustainability Action advocates for bicycle transportation. As the body that oversees Lawrence transportation options, we encourage the Transportation Commission to do all within your power to develop safe and efficient bikeways.

Proposed protocols by Sustainability Action:

The Transportation Planning staff is right when they say that developing bikeway locational priorities is the first step before design and construction. Two years ago, Sustainability Action proposed a set of prioritization protocols. They are:

- 1) An origin-destination study (O.D.S.), conducted on a five year cycle – to identify the most likely bicycle trip origins and destinations, the current bicyclists counts, and the level of cyclists latent demand, if safe bikeways actually existed.
- 2) A level of service (L.O.S.) evaluation, conducted annually – to correlate the data from the O.D.S. with the type, size, speeds and volume of adjoining motorways. This data is used initially to size and locate bikeways, and to re-evaluate their performance over time.
- 3) A Functional Conditions Index (F.C.I.), conducted annually – to maintain bikeways according to a 0-100 scoring protocol of multiple factors such as: pavement condition and markings, protective barriers, signage, ramps, curbs, and presence of sand or debris, etc.

Comments on the staff prioritization criteria:

The Bicycle-Pedestrian Prioritization Criteria rubric before you this evening is a good beginning by the staff. My comments are focused on the bicycle components only. Staff essentially covers the O.D.S. protocol that we proposed, and half of the L.O.S. protocol. It is good, as far as it goes, but I see four shortcomings.

Some of the chosen metrics such as housing and schools are excellent, but others are missing, or else ones based on outdated assumptions. The principal missing metrics are “employment centers”, “public service centers”, and “entertainment”. People are far more likely to bicycle somewhere if there’s little to carry, such as trips to jobs, public agencies, entertainment, or the library (the Lawrence Library Board missed the boat when they under-specified bicycle parking). In contrast, retail trips most often entail carrying packages that are bulky or heavy.

A very important metric that staff missed is “socio-economic”. There is an off-handed reference to “environmental justice areas” for later consideration, but this should actually be one of the highest priorities. Lower socio-economic populations (concentrated in the east side of Lawrence) have a lower percent ownership of automobiles, and greater reliance on bicycles.

The metric relating to bicycle lanes is based on an outdated policy. When pushed at the turn of the century, Lawrence grudgingly adopted a bicycle lane policy to include bicycle lanes in any repaving, reconstruction, or new construction of collector streets or arterials at less than 45 mph. After 17 years, it’s widely recognized that a mere 16% of potential bicyclists consider a single 6” white stripe as safe. The other 84% won’t ride in those lanes, a waste of concrete and City funds. Only protected bicycle lanes are worth investing in.

The shared use path is also an anachronism, an outgrowth of the 1990’s when Parks and Recreation built trails in the parks. When Public Works took over bicycle funding in 1999, they followed the same model, but alongside streets, building “bicycle paths” by simply widening sidewalks for shared use. This design is recognized as one of the more dangerous for bicyclists at driveways and intersections, as well as for conflicts with pedestrians, dog walkers, baby strollers, the elderly, etc. Mode-separated facilities are now preferred by all users – motorists, walkers, and bicyclists – for reasons of speed, predictable expectations, and safety.

We are grateful that Lawrence is coming to grips, after 41 years since the adoption of the Pedalplan for Lawrence, with methods to identify construction priorities for bikeways. But the criteria must accurately reflect reality among the bicycling population, and be done right. Please direct staff to rework the Bicycle-Pedestrian Prioritization Criteria using the protocols listed above.

Thank you,

Michael Almon