



711 SE Grand Avenue
Portland, OR 97214
503.230.9862
www.altaplanning.com

Memorandum

TO	Scott Wadle	DATE	September 4, 2015
FROM	Karen Vitkay, Paul Wojciechowski	PROJECT	Wichita Bicycle Wayfinding System Plan
RE	Wayfinding Improvement Prioritization - Draft	PROJECT	2015-088

Wayfinding Improvement Prioritization

The installation of wayfinding improvements is important to the success of Wichita's growing bicycle network, because wayfinding improvements will help individuals navigate the Wichita bicycle network and encourage use of the facilities. The scope and scale of the Wichita bicycle network and the lack of funding programmed to implement wayfinding improvements means they will likely need to be installed as part of capital improvement projects or in phases over time.

In order to help prioritize the phasing of the wayfinding improvements, the following criteria have been identified. They are based on an analysis of available data; input from community members and stakeholders; and best practices in bicycle wayfinding system design. This memorandum describes each of the five (5) criteria and provides an evaluation matrix to establish wayfinding improvement priorities.

Prioritization Criteria

Route Readiness

While bicycle facilities and wayfinding improvements are not codependent, they are typically employed in tandem to provide for safe, comfortable, and simple bicycle travel. The status of a bicycle facility, simply defined as existing, planned, or no facility, is an important prioritization criterion and should be weighted accordingly. This criterion is weighted more heavily than others due to the importance of existing infrastructure to a safe travel experience. Weighting is reflected in the total number of points possible.

Proximity to Destinations

Not all destinations are located along a bikeway. Wayfinding improvements can provide a vital link between bikeways and high priority destinations, particularly where safe and comfortable routes support bicycle travel. The more destinations a bicycle route connects, the greater the prioritization of wayfinding improvements. Routes connecting fewer destinations should receive a lower prioritization score. The

relationship to destinations is a key aspect of wayfinding, thus the scores for this criterion are weighted more heavily than other categories.

Need

Need for wayfinding improvements may be derived from a number of factors. These include bicycle count data; data from third-party fitness and bicycle activity tracking devices and apps (like Strava and MapMyRide); and community input derived through this and other planning processes. Utilizing this input, places with high need are expected to include locations where multiple bikeways intersect and key connections such as bridges. Available data sources should be examined to identify reliable community input that indicates need for wayfinding improvements.

Gap Closure

Wayfinding improvements offer a cost-effective means for connecting existing bikeways along safe and comfortable routes. Wayfinding improvements should be prioritized based on their potential to address critical gaps, thereby expanding the utility of the bicycle network.

Bicycle Level of Traffic Stress

Bicycle level of traffic stress (BLTS) is an analysis tool which measures the user experience or comfort level along a bikeway or at an intersection. Less stressful routes for bicycling can support a wider variety of bicyclists, from experienced recreational and commuter bicyclists to casual adult, teen, and even child riders. By prioritizing wayfinding improvements based on BLTS, Wichita can ensure that bicycle travel along designated routes is accessible and comfortable for a broad segment of the population.

BLTS is not included in the evaluation due to the lack of an existing model at the time of this writing. It is recommended that a BLTS model be developed to help inform the wayfinding prioritization process. The model should consider traffic volumes, posted speed limits, presence of dedicated bicycle facilities, number of travel lanes, quality of intersection crossings, and functional classification. The score for any route is only as good as the weakest point along the journey.

Evaluation Matrix

Based the five criteria described above, the following evaluation matrix may be used to prioritize wayfinding improvements throughout the City of Wichita.

Prioritization Criteria: is the prioritization criterial described in the section above.

Variable: is the level or degree to which the proposed wayfinding improvement would meet the criteria.

Score: this is the weighted score that the proposed project would earn based on the variable.

Prioritization Criteria	Variable	Score
Route Readiness	Existing	8
	Planned	4
	No Facility	0
Proximity to Destinations	Route occurs within 0.5 miles of more than two Level I and II destinations	8
	Route occurs within 0.5 miles of at least two Level I or II destination	6
	Route occurs within 0.5 miles of multiple lower level destinations	4
	Route occurs within 0.5 miles of one lower level destination	2
	Route provides no direct or near access to any destinations	0
Need (Public Input)	High level of usage, input, or support	8
	Moderate level of usage, input or support	5
	Low level of usage, input or support	3
	No input	0
Gap Closure	Segment or route connects two existing bicycle facilities less than ½ a mile apart	5
	Segment or route connects two existing bicycle facilities greater than half a mile apart	3
	Segment safely extends the length of an existing bicycle facility	2
	Segment does not connect to any existing bicycle facility or close a gap in the bike network	0

Approach

Facilities evaluated in this prioritization process include those identified as priority bikeways in the 2013 Wichita Bicycle Master Plan. It is important to note that two categories of planned facilities were excluded from the evaluation: planned trail facilities not in design or construction phases, and all planned on-street bikeways not identified as priority bikeways in the 2013 Wichita Bicycle Master Plan. These two groups of facilities were excluded from the analysis given the longer timeframe for project development and their relatively lower readiness for wayfinding improvements, respectively.

The following map displays the results of the prioritization scoring exercise based on three of the four prioritization criteria listed in the Evaluation Matrix above. As mentioned above, facility stress was not used in the assessment due to the lack of a working model. Need (Public Input) has not yet been included due to a lack of quantifiable data. Instead, results shall be verified via steering committee input. Also, a public input survey will gather additional information about public needs or preferences.

Results

On the following Network Wayfinding Prioritization map, the dark green lines indicate existing and planned facilities with the greatest cumulative scores, thus representing the highest priority or most suitable routes for wayfinding improvements. The red lines indicate planned facilities with the lowest cumulative scores, and therefore are currently less ready for wayfinding improvements.

The results of this prioritization exercise indicate numerous existing facilities that are highly suited for wayfinding improvements. High priority bikeways include the Arkansas River Path, I-135 Path (17th St to Pawnee), Redbud Path (I-135 to Woodlawn), and 1st and 2nd Street bike lanes (Seneca to Edgemoor).

While nearly all existing facilities scored higher than all planned facilities, a number of planned bikeways in and around Downtown Wichita scored very high as well, a reflection of their proximity to high concentrations of landmarks and destinations. It is notable that the evaluation results reflect initial input received from steering committee members.

Network Prioritization

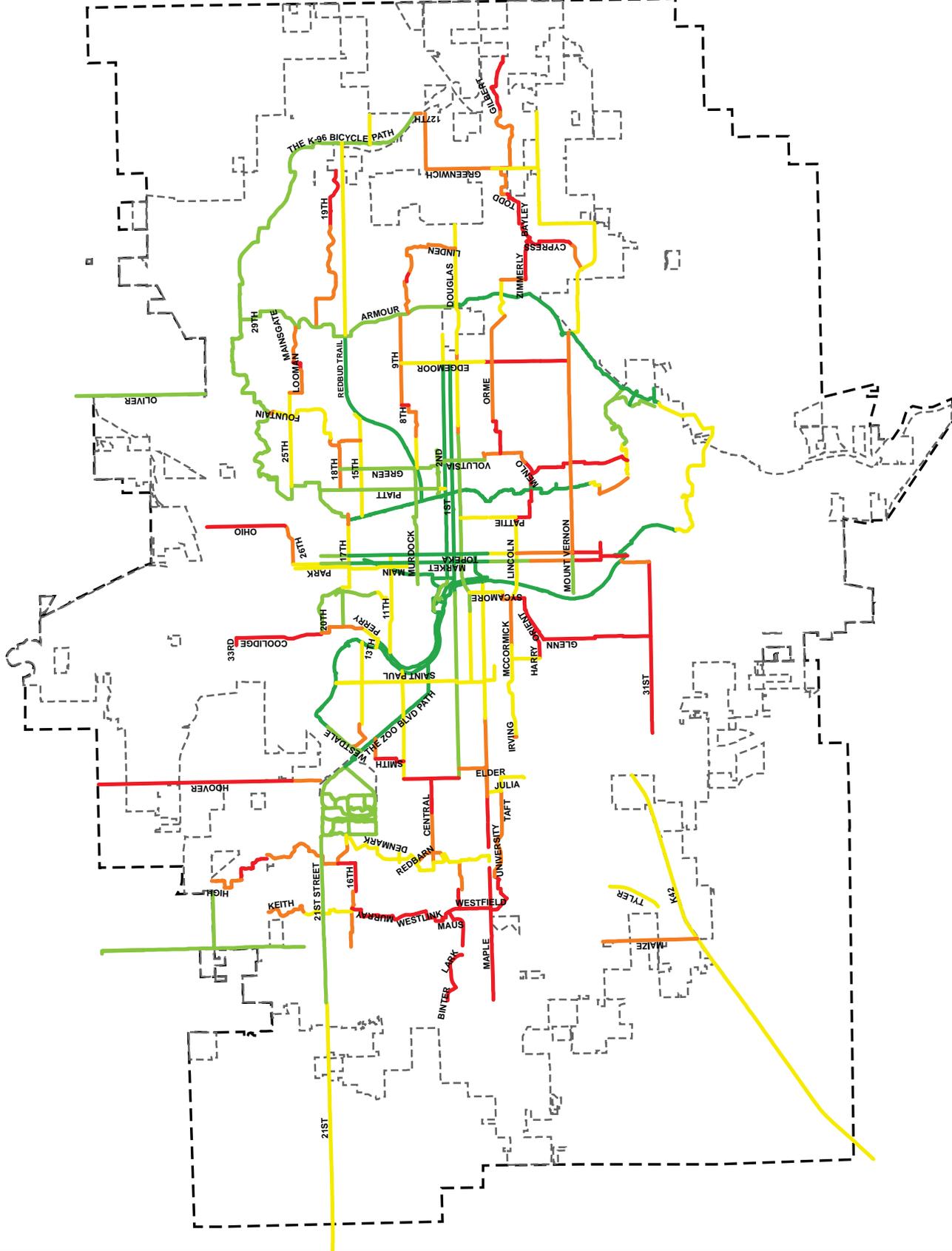
Wichita Bicycle Wayfinding Plan

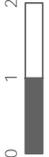
LEGEND

Prioritization Ranking

- Lowest (0 - 4 total score)
- 5 - 8 total score
- 9 - 12 total score
- 13 - 16 total score
- Highest (17 - 21)

The prioritization ranking indicates the results of the prioritization scoring process based on three criteria - route readiness, proximity to destinations and landmarks, and bike network gap closure. These scores will be modified to incorporate the fourth and final category (Need/Public Input) following feedback from the client and/or steering committee.



 Data obtained from the City of Wichita and Sedgewick County
 Map created September, 2015