

**City of Lawrence, Kansas
Multi-modal Transportation Commission
Non-motorized Projects Prioritization Policy**

SUBJECT Non-motorized Projects Prioritization Policy		APPLIES TO Infrastructure	
EFFECTIVE DATE September 9, 2019	REVISED DATE May 2022	NEXT REVIEW DATE TBD	
APPROVED BY Multi-modal Transportation Commission		TOTAL PAGES 7	POLICY NO. TC19-001

1.0 Purpose

In order to improve the built environment for people who walk, bicycle, or wheel, this policy implements recommendations of the Lawrence Pedestrian Plan, the Lawrence Bikes Plan, the Lawrence Safe Routes to School Plan and establishes a data-driven ranking procedure for prioritizing non-motorized projects and identifying those that confer the greatest benefit to the community.

2.0 Scope

This policy applies to all non-motorized projects, including but not limited to the following: ADA curb ramps, sidewalks, curb extensions, shared-use paths, bike lanes, protected bike lanes, bicycle boulevards, signage, crossing improvements, and other projects that improve the built environment for people who walk, bicycle or wheel. This policy does not apply to non-motorized aspects of larger roadway projects that are not funded with pedestrian and bicycle funds (although such non-motorized projects may be ranked), standalone ADA curb ramp projects or to sidewalk maintenance, which is the responsibility of abutting landowners.

3.0 Development of Project Lists

3.1 Non-motorized projects will be sorted into three lists: pedestrian gaps/crossings, sidewalk replacement and bikeways.

3.2 Non-motorized projects will be identified in specific non-motorized plans for new projects, and sidewalks requiring replacement will be annually added based on the sidewalk improvement program. Each project will be placed on the appropriate list.

3.3 Annually, all non-motorized projects appearing on the lists will be scored in accordance with Section 4.0 and ranked in accordance with Section 5.0. If new non-motorized projects are added, those new projects will also be scored and ranked. It must be noted that inclusion on a project list does not guarantee funding or implementation for a particular project.

4.0 Project Scoring

Non-motorized projects appearing on the Project Lists will be scored annually according to the following criteria:

4.1 Pedestrian Gap/Crossings Prioritization Criteria

(a) Priority Networks- 5points max

Projects that improve connectivity along priority networks recognized in adopted plans are accorded the highest weight. This criterion follows the Lawrence Pedestrian Plan Priority network: Safe Routes to School Plan identified gap followed by Arterial and Collector street classification & routes on local streets identified to support access to transit, parks and healthy food destinations and finally Local streets without sidewalk on either side and Local streets with sidewalk on one side.

(b) Pedestrian Access to Priority Destinations – 5 points max

Pedestrian demand is calculated based on adding cumulative points for each destination within range of the proposed project. Projects within closer proximity to destinations are given higher priority in order to promote access to high-demand pedestrian destinations and school destinations are equalized. These scores are broken into quintiles and assigned a point range of 1 to 5.

Weighted Equalized Scoring Matrix

Facility Category	Within 1/8 mile	Within 1/4 mile	Within 1/2 mile	Equalization Multiplier (Ex)
Schools K-12	12 (720)	8 (480)	4 (240)	60
Park Entry Points, Public Attraction, Public Transit Stops	6	4	2	Not applied
Public Government Institution, Health, Daycare, Higher Education, Non Profit, Retail	3	2	1	Not applied

(c) Safety- Road Volume – 5 points max

Higher volume roadways are granted greater priority based on higher speed and volume of traffic. While crash history is not necessarily considered in project scoring, project design will consider crash history.

(d) Transportation Disadvantaged Population – 5 points max

Projects within areas of higher percentages of census populations: low-moderate income households, minorities, households with an individual with a mobility disability people who have less than a high school education, single-parent households, households without vehicles, youth (under 18) and senior citizens (65+) are scored based on the Transportation Disadvantaged Population index¹. The greater intensity of the populations the higher the score.

¹Lawrence Transportation Disadvantaged Population Index Analysis
<https://lawrenceks.org/mpo/transportation-disadvantaged/>

Pedestrian Gap / Crossings Prioritization Criteria		Points
1	Priority Network (select one, max 5 pts)	
	Safe Routes to School Route	5
	Arterial/Collector Street Classification	4
	Gaps supporting Transit, Parks or Health Food access on Local Streets	3
	Local Street Classification of Roadway with no sidewalks on either side	2
	Local Street Classification of Roadway with sidewalk on one side	1
2	Pedestrian Access to Priority Destinations (select one, max 5 pts)	
	The values greater than the Fourth quintile	5
	The values greater than the Third quintile up to the Fourth quintile	4
	The values greater than the Second quintile up to the Third quintile	3
	The values greater than the First quintile up to the Second quintile	2
	The values greater than zero up to the First quintile	1
3	Safety - Roadway Volume (select one, max 5 pts)	
	Project on a road that has over 15,000 AADT on roadway	5
	Project on a road that has over 10,000 AADT on roadway	4
	Project on a road that has over 7,500 AADT on roadway	3
	Project on a road that has over 5,000 AADT on roadway	2
	Project on a road that has over 2,500 AADT on roadway	1
4	Equity - Transportation Disadvantaged Population (select one, max 5 pts)	
	The values greater than the Fourth quintile	5
	The values greater than the Third quintile up to the Fourth quintile	4
	The values greater than the Second quintile up to the Third quintile	3
	The values greater than the First quintile up to the Second quintile	2
	The values greater than zero up to the First quintile	1
Max Points:		20

4.2 Bikeway Prioritization Criteria

(a) *Adopted Plan Priorities- 6 points max*

Projects that improve connectivity along networks recognized in adopted plans are accorded the highest weight. This criterion recognizes the priority and secondary networks established by the Lawrence Bikes Plan.

(b) *Bicycle Demand Model – 5 points max*

Bicycle demand is calculated based on a scoring system that ranks areas based on 6 proximity factors: High-density housing, medium density, K-12 schools, college/university, and existing bike infrastructure and community service centers. Those factors affect the demand for bicycle transportation throughout the community. Areas of higher demand are prioritized.

- Proximity Factors (max points for bicycle demand model score is 125)
 - *High-Density Housing*
A buffer of high-density housing. High-density housing, as defined in the updated comprehensive plan, is greater than or equal to 16 people per acre.
 - *Medium-Density Housing*
A buffer of medium-density housing. Medium density housing, as defined in the updated comprehensive plan, is greater than or equal to 7 people per acre and less than 16 people per acre.
 - *Schools K-12*
A buffer distance from the property boundaries of public and private schools, kindergarten through 12th grade.
 - *College / University*
A buffer distance from college/university boundaries.

- *Existing Bikeway (Major/Minor/Shared Street)*
A buffer distance from existing bikeways by type.
- *Community Service Centers*
A buffer distance from the top 24% of retail employment centers based on traffic analysis zones and park entrances.

Proximity Factors & Scores

High Density Housing		Schools K-12		Community Service Centers/Parks	
within 0.25 mile	16	within 0.25 mile	18	within 0.25 mile	20
within 0.5 mile	12	within 0.5 mile	14	within 0.5 mile	18
within 1 mile	8	within 1 mile	6	within 1 mile	15
within 2 miles	4	within 2 miles	2	within 2 miles	7

Medium Density Housing		College/University	
within 0.25 mile	9	within 0.25 mile	20
within 0.5 mile	7	within 0.5 mile	18
within 1 mile	3	within 1 mile	15
within 2 miles	2	within 2 miles	7

Existing Bikeway Major Separation		Existing Bikeway Minor Separation		Existing Bikeway Shared Street	
within 0.25 mile	18	within 0.25 mile	14	within 0.25 mile	10
within 0.5 mile	14	within 0.5 mile	10	within 0.5 mile	6
within .75 mile	10	within .75 mile	6		

- (c) *Safety – 5 points max*
Higher volume roadways are granted greater priority, as well as projects that improve crossing on roadways over 7,500 AADT. While crash history is not necessarily considered in project scoring, project design will consider crash history.
- (d) *Transportation Disadvantaged Population – 5 points max*
Projects within areas of higher percentages of census populations: low-moderate income households, minorities, households with an individual with a mobility disability people who have less than a high school education, single parent households, households without vehicles, youth (under 18) and senior citizens (65+) are scored based on the Transportation Disadvantaged Population index².

²Lawrence Transportation Disadvantaged Population Index Analysis
<https://lawrenceks.org/mpo/transportation-disadvantaged/>

Bikeway Prioritization Criteria		Points
1	Adopted Plan Priorities (select one, max 6 pts)	
	Lawrence Bikes Plan Priority Network	6
	Lawrence Bikes Plan Secondary Network	4
	Lawrence Bikes Plan future bikeway Arterial/Collector with no Shared Use Path	3 2
2	Bicycle Demand (select one, max 5 pts)	
	<i>Bicycle demand is calculated on the bicycle demand heat map which is a prioritization score based on proximity to housing density, K-12 private/public schools, college/university and existing bikeway infrastructure.</i>	
	The values greater than the Fourth quintile	5
	The values greater than the Third quintile up to the Fourth quintile	4
	The values greater than the Second quintile up to the Third quintile	3
	The values greater than the First quintile up to the Second quintile	2
The values greater than zero up to the First quintile	1	
3	Safety - Roadway Volume (select one, max 5 pts)	
	Project on a road that has over 15,000 AADT on roadway	5
	Project on a road that has over 10,000 AADT on roadway	4
	Project on a road that has over 7,500 AADT on roadway	3
	Project on a road that has over 5,000 AADT on roadway Project on a road that has over 2,500 AADT on roadway	2 1
4	Equity - Transportation Disadvantaged Population (select one, max 5 pts)	
	The values greater than the Fourth quintile	5
	The values greater than the Third quintile up to the Fourth quintile	4
	The values greater than the Second quintile up to the Third quintile	3
	The values greater than the First quintile up to the Second quintile The values greater than zero up to the First quintile	2 1

Max Points: 21

4.3 Pedestrian Sidewalk Replacement Criteria

(a) Priority Networks- 5 points max

Projects that improve connectivity along priority networks recognized in adopted plans are accorded the highest weight. This criterion follows the Lawrence Pedestrian Plan Priority network: Safe Routes to School Plan identified gap followed by Arterial and Collector street classification & routes on local streets identified to support access to transit, parks and healthy food destinations and finally Local streets without sidewalk on either side and Local streets with sidewalk on one side.

(b) Pedestrian Demand- 5 points max

Pedestrian demand is calculated based on the shortest path analysis combining all the possible routes. Route origins are identified by using residential addresses within a 1-mile walking route within each destination. Destinations include: Schools K-12, Park entry points, public attractions, public transit stops, public government institution, Health, Daycare, Higher Education, Non-Profit, and Retail. Individual routes are drawn from each origin to each destination. Segments in the GIS layer have weighting based on street classification and existence of sidewalk and/or crosswalk/traffic control that adjusts their distance required to travel to reflect the attractiveness or unattractiveness to the path versus another option. The network assigns priority with these classes: High Prefer, Prefer, Slight Prefer, Neutral, Slight Avoid, Avoid, High Avoid, Restrict.

These routes are then added together to get a combined network that identifies the segments with the highest volume of trips or potential pedestrian demand. This shortest-path route composite is generated for every destination. All segments are weighted by the destination types and distances. Once the composite of all trips to all destinations is compiled, the segments are stratified by where that section falls with number of trips.

Facility Category	Within 1/8 mile	Within 1/4 mile	Within 1/2 mile
Schools K-12	12 (720)	8 (480)	4 (240)
Park Entry Points, Public Attraction, Public Transit Stops	6	4	2
Public Government Institution, Health, Daycare, Higher Education, Non-Profit, Retail	3	2	1

(c) Safety – 5 points max

Higher volume roadways are granted greater priority based on higher speed and volume of traffic. While crash history is not necessarily considered in project scoring, project design will consider crash history.

(d) Transportation Disadvantaged Population – 5 points max

Projects within areas of higher percentages of census populations: low-moderate income households, minorities, households with an individual with a mobility disability people who have less than a high school education, single-parent households, households without vehicles, youth (under 18) and senior citizens (65+) are scored based on the Transportation Disadvantaged Population index³.

Pedestrian Gap/Crossings Prioritization Criteria		Points
Priority Network (select one, max 5 pts)		
1	Safe Routes to School Route	5
	Arterial/Collector Street Classification	4
	Gaps supporting Transit, Parks or Health Food access on Local Streets	3
	Local Street Classification of Roadway with no sidewalks on either side	2
	Local Street Classification of Roadway with sidewalk on one side	1
Pedestrian Demand to Priority Destinations (select one, max 5 pts)		
2	The values greater than the Fourth quintile	5
	The values greater than the Third quintile up to the Fourth quintile	4
	The values greater than the Second quintile up to the Third quintile	3
	The values greater than the First quintile up to the Second quintile	2
	The values greater than zero up to the First quintile	1
Safety - Roadway Volume (select one, max 5 pts)		
3	Project on a road that has over 15,000 AADT on roadway	5
	Project on a road that has over 10,000 AADT on roadway	4
	Project on a road that has over 7,500 AADT on roadway	3
	Project on a road that has over 5,000 AADT on roadway	2
	Project on a road that has over 2,500 AADT on roadway	1
Equity - Transportation Disadvantaged Population (select one, max 5 pts)		
4	The values greater than the Fourth quintile	5
	The values greater than the Third quintile up to the Fourth quintile	4
	The values greater than the Second quintile up to the Third quintile	3
	The values greater than the First quintile up to the Second quintile	2
	The values greater than zero up to the First quintile	1
		Max Points: 20

³Lawrence Transportation Disadvantaged Population Index Analysis
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5.0 Project Ranking and Selection

- 5.1** The scoring procedure outlined above provides the first step in identifying corridors that should be considered for non-motorized improvements. There are also many other, non-exclusive factors that should be considered in the final selection of non-motorized projects and, ultimately, in project design. Those non-exclusive factors are as follow:
- Equity in project distribution
 - Opportunities for parallel routes
 - Grant funding opportunities
 - Economies of scale
 - Cost-sharing opportunities
 - Available funding
 - Other relevant factors such as cultural, social and economic benefit
- 5.2** The following procedure will be used to determine project selection for pedestrian gaps/crossings, and bikeways projects:
- (a)** The available funding for non-motorized infrastructure will be distributed between the two category areas (pedestrian gaps/crossings, and bikeways) by recommendation of the Multi-modal Transportation Commission.
 - (b)** City Staff will review the projects with the highest scores in each category. Project feasibility will be evaluated and planning-level cost estimates will be prepared.
 - (c)** City Staff will present to the Multi-modal Transportation Commission for consideration, a Five Year Plan, using the established criteria and other factors as outlined above, for pedestrian gap/crossings and bikeway projects.
 - (d)** The Multi-modal Transportation Commission will recommend to the City Commission for approval, a Five Year Plan for pedestrian gap/crossings and bikeway projects
- 5.3** The following procedure will be used to determine project selection for sidewalk replacement:
- (a)** The available funding for sidewalk replacement funding will be determined annually by the remaining amount of funding in the sidewalk improvement program after repairs or by any specific funding set aside for ADA/sidewalk replacement.
 - (b)** City Staff will review the projects with the highest scores. Project feasibility will be evaluated and planning-level cost estimates will be prepared.
 - (c)** City Staff will present annually a staff update to the Multi-modal Transportation Commission of the sidewalks that are planned for replacement.