PRELIMINARY ANALYSIS
Demand for Biking

UNDERSTANDING LATENT DEMAND

- Where would people bike if it was safe and comfortable to do so?

- Use national research to guide assumptions about how and where people would ride

- Align that data with local conditions to determine areas of high latent demand
Demand for Biking

POPULATION, EMPLOYMENT, DESTINATIONS
Demand for Biking
Level of Traffic Stress Cycling Levels

**LTS 1**
8 - 80
LTS 1 is a level that most children & their parents would find comfortable and safe for riding.

**LTS 2**
INTERESTED and CONCERNED
LTS 2 bicycle riders are representative of a typical mainstream adult & can accept some degree of stress while riding along a roadway.

**LTS 3**
ENTHUSED and CONFIDENT
LTS 3 bicycle riders can tolerate some stress even though they may prefer to ride with a lower level of traffic stress.

**LTS 4**
STRONG and FEARLESS
LTS 4 is tolerated for any significant distance only by “strong and fearless” bicycle riders who are comfortable riding in a mixed-traffic environment.
Level of Traffic Stress Facilities

INCREASING LEVEL OF COMFORT, SAFETY, AND INTEREST IN BICYCLING FOR TRANSPORTATION

**LTS 4**
No bike lane on a busy street

**LTS 3**
Narrow bike lane or shoulder on a busy street

**LTS 2**
Buffered bike lane on a calm street

**LTS 1**
Separated bike lane
Level of Traffic Stress

![Graph showing the relationship between separation and comfort with an upward trend](image-url)
Level of Traffic Stress

TRAFFIC SPEED

Legend
- <Null>
- 20
- 25
- 30
- 35
- 40
- 45
- 55

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Level of Traffic Stress

TRAFFIC VOLUME
## Level of Traffic Stress

### EVALUATION MATRIX

<table>
<thead>
<tr>
<th>Street Characteristics</th>
<th>Typical Street Designation</th>
<th>Typical # of Lanes</th>
<th>Prevailing Speed</th>
<th>Traffic Volume</th>
<th>Shared Street</th>
<th>Bicycle Boulevard</th>
<th>Bike Lane</th>
<th>Buffered Bike Lane</th>
<th>Protected Bike Lane</th>
<th>Two-Way Cycle Track</th>
<th>Separated Bike Facility</th>
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<tbody>
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### Most NKC Roads Today

- **Diamond Parkway**

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This table represents the level of traffic stress for different street designs and traffic volumes, indicating the appropriate bike facility type according to the prevailing speed and traffic volume.
Level of Traffic Stress
Weakest Link
Level of Traffic Stress
LOW STRESS CLUSTERS

Legend
LTS1

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community.
Level of Traffic Stress

NETWORK GAPS
Level of Traffic Stress

PEDESTRIAN CRASHES

Legend
- FATAL
- DISABLING INJURY
- MINOR INJURY
- PROPERTY DAMAGE ONLY

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Level of Traffic Stress

CAR CRASHES
Feasibility for Comfort

TOPOGRAPHY