METRONEXT

BETTER TRANSIT FOR A MORE CONNECTED REGION

Appendix A

Transit Suitability Index

m metro

Transit Suitability Index

April 2022

The **Transit Suitability Index** is a composite scoring matrix that was developed to evaluate connectivity in the transit system. It considers demographics, density, and the built environment to compare land area characteristics across the region. This information is applied to a uniform grid that is scored to find locations with high, medium, and low transit suitability.
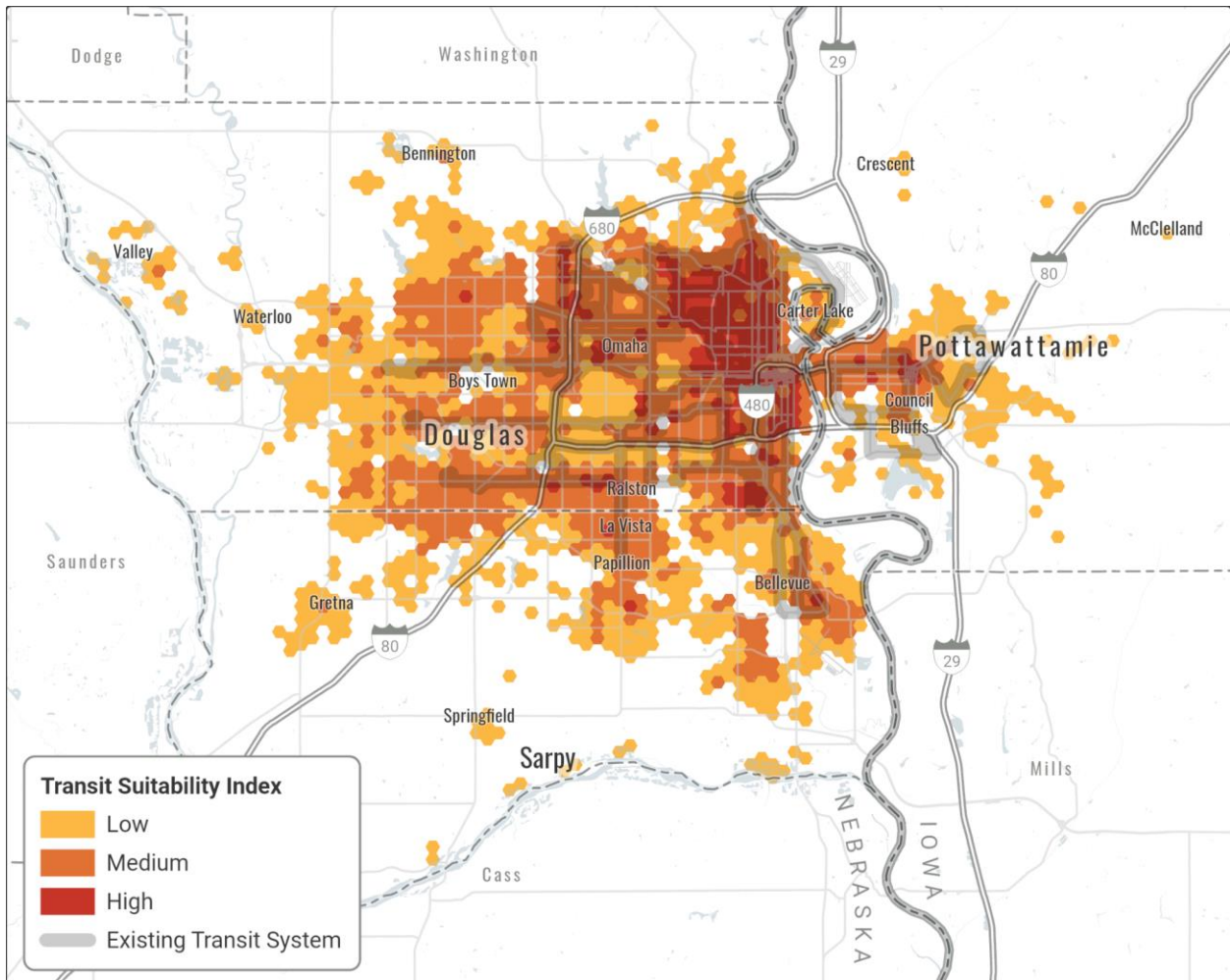
Indicators were applied to half-mile hexagonal grids. Indicators within the area of each grid were aggregated to a grid total. In cases where indicators were overlapping or larger than the grid area the values were area weighted based on the proportion of the shared area within each grid.

Grids were evaluated throughout the Metro's service area including Douglas, Sarpy, and Pottawattamie counties.

Grid Scoring

The following indicators along with their weighting were evaluated as part of the analysis:

- **Household Characteristics (30 Points)**
    - Low income population (10%)
    - Minority Population (5%)
    - Households with more workers than vehicles (5%)
    - Households without a vehicle (5%)
    - Population with a disability (5%)
- **Residential Density (30 Points)**
    - Existing Population Density (25%)
    - Future Population Density (5%)
- **Destination Density (25 Points)**
    - Existing employment Density (10%)
    - Future employment Density (5%)
    - Essential employment areas (5%)
    - Presence of other major destinations (retail, entertainment, airport, universities, hospitals, public services, etc) (5%)
- **Built Environment (15 Points)**
    - Existing Sidewalk/Trail Connectivity (10%)
    - Future Bike/Trail network (5%)

Each grid was allocated a score based on a composite of these indicators with a maximum score of 100. Indicator values were reclassified relative to their percent weighting. Census Data for this analysis came from the 2015-2019 American Community Survey. Other data sources were compiled by the Metropolitan Area Planning Agency.

Household Characteristics

Low Income Population

This is a census derived measure of poverty status using the estimated population below poverty level for each census tract.

Minority Population

This is a census derived measure of race. For the purposes of the analysis 'minority' was defined as the total population in each census tract excluding individuals that self-reported as non-hispanic white alone.

Households with More Workers than Vehicles

This is a census derived count of households where there are more workers than vehicles by census tract.

Households without a Vehicle

This is a census derived measure of households in each census tract without any vehicles available.

Population with a Disability

This is a census derived measure of the total population with a disability in each census tract.

Residential Density

Existing Household Density

This measure uses MAPA's parcel based land use dataset to calculate the existing (2015) households per acre.

Future Household Density

This measure uses MAPA's parcel based land use dataset to calculate the future (2050) households per acre.

Destination Density

Existing Employment Density

This measure uses MAPA's parcel based land use dataset to calculate the existing (2015) employees per acre.

Future Employment Density

This measure uses MAPA's parcel based land use dataset to calculate the future (2050) employees per acre.

Essential Employment Areas

Essential employment is defined in the census Longitudinal Employment Household Dynamics dataset in the following categories:

NAICS Sector	Industry Type	Essential
11	Agriculture, Forestry, Fishing and Hunting	✓
21	Mining, Quarrying, and Oil and Gas Extraction	✓
22	Utilities	✓
23	Construction	
31-33	Manufacturing	✓
42	Wholesale Trade	✓
44-45	Retail Trade	✓
48-49	Transportation and Warehousing	✓
51	Information	
52	Finance and Insurance	
53	Real Estate and Rental and Leasing	
54	Professional, Scientific, and Technical Services	
55	Management of Companies and Enterprises	
56	Administrative and Support and Waste Management and Remediation Services	✓
61	Educational Services	
62	Health Care and Social Assistance	✓
71	Arts, Entertainment, and Recreation	
72	Accommodation and Food Services	✓
81	Other Services [except Public Administration]	
92	Public Administration	

This measure identified the number of workers in each qualifying NAICS category by tract.

Presence of Major Destinations

This measure uses MAPA's parcel based land use dataset to identify major destinations including retail, entertainment, airport, universities, hospitals, public services, etc. The building square footage was used to determine the scale of each destination. The following land use types were identified as significant to this analysis:

Retail
Street Front Commercial
Neighborhood Shopping Center
Community Shopping Center
Regional Shopping Center
Sit-down Restaurant

Post office / Shipping Office
Entertainment
Recreational Use
Stadium/Arena
Casino
Tourist Attractions

Cultural Facilities	Senior High
Active Park	**Hospitals**
Passive Park	Other Health Care
Convention Center	Hospital
Airport	**Public Service**
Commercial Airport	Library
Educational Facilities	Other Public Service
Post-Secondary	Prison/Jail
Major University	Government Office
Other School	Military

Built Environment

Existing Sidewalk/Trail Connectivity

A sampling of sidewalk data was digitized for the region generally within the vicinity of school facilities. To determine the regional sidewalk connectivity this sample data was used to create an interpolated measure of the length of sidewalk in each grid regionally. The total length of sidewalks (plus any trail miles) measures the sidewalk connectivity by grid.

Future Bike/Trail Network

The length of planned future trails was calculated for each grid.