Appendix C
LOCAL ACCESSIBILITY AND MOBILITY ANALYSIS

LAMA

INTRODUCTION

Long range transportation planning usually takes place at the regional level, but many of the factors and decisions that impact transportation are inherently local. Transportation infrastructure and behavior vary significantly throughout the Champaign-Urbana urban area, yet these differences are difficult to identify in a region-wide transportation plan.

The purpose of the neighborhood analysis is to explore the regional variation in land use and transportation factors and to relate these differences to local travel patterns and transportation options. The analysis examines variation along four primary axes:

- *Mobility* describes how easily residents can move around the community. The neighborhood analysis considers mobility for four modes of transportation: driving, transit, bicycle and walking. However, since local conditions impact pedestrians, cyclists and transit riders most directly, the analysis focuses on these modes.
- *Accessibility* relates to the location of common destinations such as employment centers, school, parks, grocery stores and service businesses. Neighborhoods located near these destinations offer the best accessibility via non-motorized means of transportation.
- *Travel behavior* describes the transportation choices made by residents of a neighborhood. These choices include the mode of transportation used, the number of vehicles owned by the average household and the average number of miles driven per household per day.
- *Affordability* measures the financial costs incurred by households as a result of their transportation choices. Since transit, bicycling and walking costs are small in comparison to driving costs, and since they depend on factors that are difficult to generalize at the neighborhood level, this analysis focuses exclusively on the costs associated with driving.

Relationships among Factors

Mobility and accessibility work in combination to determine the transportation options available to residents of a neighborhood. For example, a neighborhood with frequent transit service and a well-connected sidewalk network might offer higher accessibility than similar neighborhoods without these features. However, if the neighborhood has low accessibility because it is far away from common destinations, walking and riding the bus still are not viable transportation options. Conversely, residents of a neighborhood located close to destinations might be limited by low mobility due to a lack of sidewalks, an absence of bicycle lanes, or a poorly connected street network. As a result, the neighborhoods that offer the most transportation options are those that combine high mobility with high accessibility.

Travel behavior and affordability are similarly linked at the neighborhood level. Neighborhoods in which residents make most of their trips by car and in which they drive more miles and own more vehicles have higher transportation costs than neighborhoods that rely on other modes of transportation. Since they are more dependent on a single mode of transportation, these neighborhoods are also more severely impacted by rising fuel prices and recessions in the local economy.

Neighborhood Analysis Process

In the first part of the neighborhood analysis, variables related to mobility and accessibility are calculated for residential traffic analysis zones (TAZs) in the Champaign-Urbana urban area. These variables are then summarized to produce mobility and accessibility indices that can be used for purposes of comparison.

Next, travel behavior and affordability measures are estimated for the same TAZs. These measures serve as the inputs for regression models that help to explain how factors like mode share, car ownership and vehicle miles traveled (VMT) vary throughout the region.

Finally, the mobility, accessibility, travel behavior and affordability measures are aggregated into 30 neighborhood units that are defined based on comprehensive planning areas. The relationships among these variables are explored, and patterns are compared to the themes from public comments received as part of the long range transportation planning process.

History and Limitations

The neighborhood analysis is based on the Local Affordability and Livability Index (LALI), a tool developed at the Champaign Urbana Urbanized Area Transportation Study (CUUATS). LALI is modeled after the Housing and Transportation Affordability Index developed at the Center For Neighborhood Technology.

Unlike the analyses that preceded it, the neighborhood analysis presented here splits the concept of "livability" into its mobility and accessibility components. Recognizing that cost is only one of several drivers of transportation choices in the urban area, it also places less emphasis on generating precise transportation cost estimates. Instead, it uses modeling as a tool to explore overall relationships among local transportation and demographic variables.

Like all such analyses, the neighborhood analysis is limited by the availability and accuracy of the input datasets. Though the analysis incorporates the best data currently available, the small geographic unit of analysis leads to small sample sizes and relatively high margins of error. Where possible, multiple data sources are used to improve the accuracy of the results and to provide some level of validation.

Because of these limitations, and because many of the factors considered lack objective standards, the results of the neighborhood analysis are most useful for comparing one neighborhood to another and to the urban area average. They are less useful as objective performance measures, and caution should be exercised in comparing the results to external data sources and third-party analyses that may be based on significantly different methodologies and assumptions.

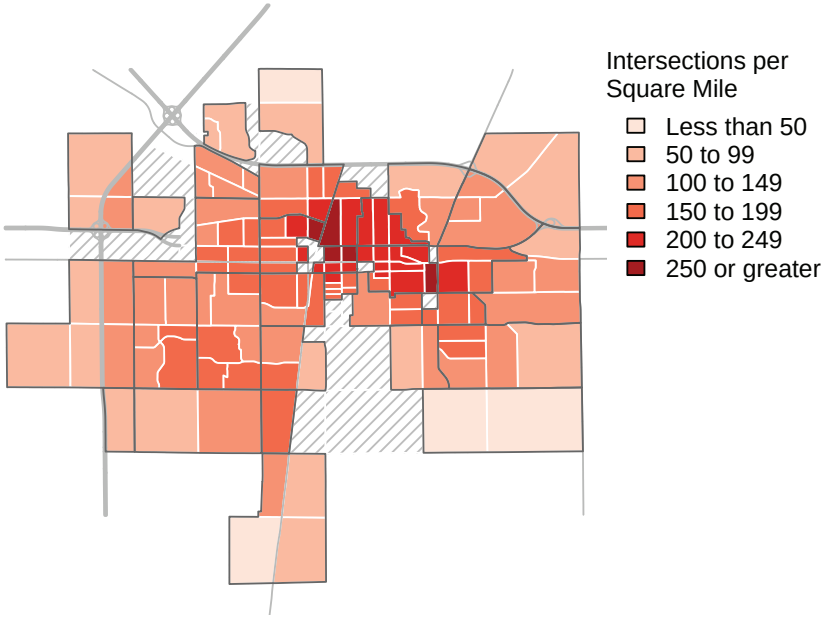
BUILT ENVIRONMENT AND TRANSPORTATION VARIABLES

Mobility and accessibility were examined in the Champaign-Urbana urban area using 17 built environment and transportation variables. These variables were evaluated at the TAZ level for TAZs meeting the following criteria:

- At least five residential parcels. Parcels were categorized according to use based on Champaign County property tax records.
- At least 35 housing units. Housing units were estimated for each residential parcel based on property codes and aerial imagery.
- TAZs classified as urban.

TAZs with few housing parcels or housing units were excluded from the analysis because variables were evaluated from the perspective of residents of the TAZ and because many variables were distributed to the TAZ level based on estimated housing units. Rural TAZs were excluded from the analysis because they require accessibility and mobility considerations different from the urban TAZs and because data availability was limited outside the urban area.

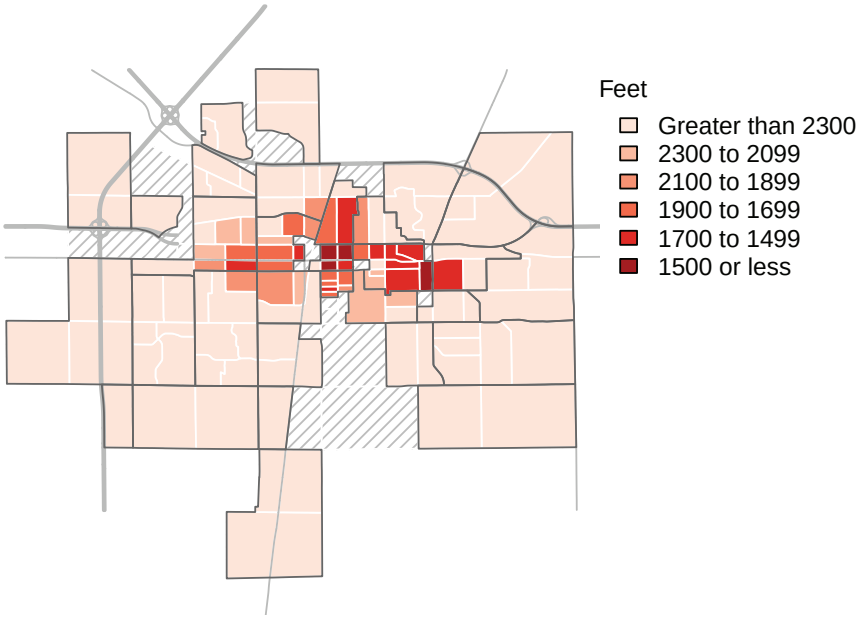
The sections that follow present the variable values at the TAZ level and explain the procedures used to calculate or derive these values. In all cases, darker color represent higher-scoring values.



INTERSECTION DENSITY

Intersection density is an indicator of how well-connected the street network is. A high density of intersections indicates that the street network offers users a variety of routes and allows them to reach destinations without going out of their way.

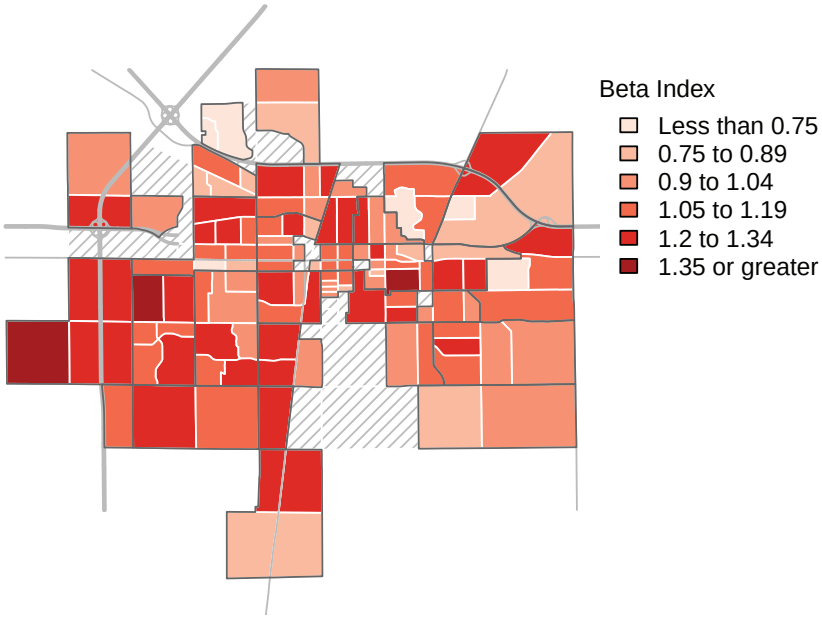
Intersection density was calculated by dividing the number of intersections in each TAZ by the TAZ's area in square miles.



MEDIAN BLOCK PERIMETER

Block size has an impact on the distance walkers, bicyclists and other users of the street network have to travel to reach their destinations. Street networks with small blocks provide a variety of routes and minimize the amount of wasted travel.

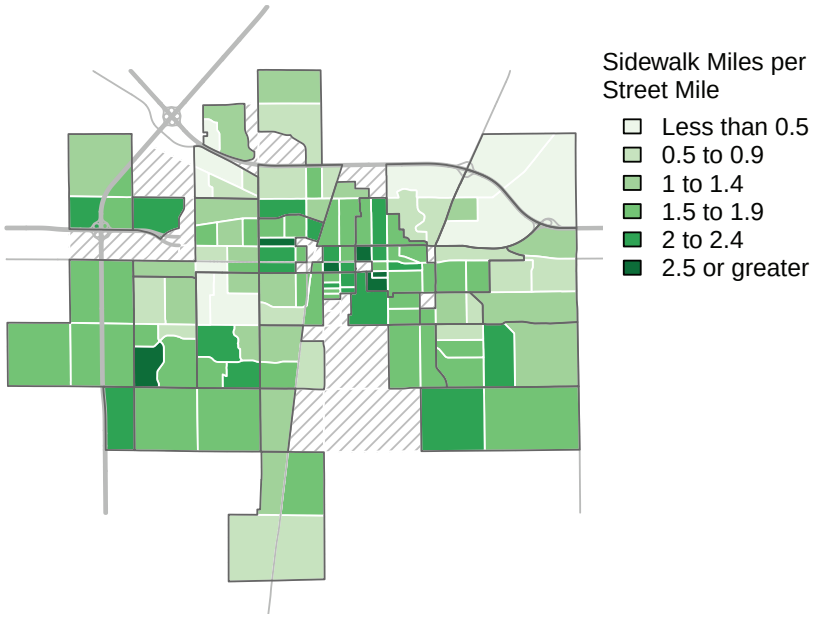
To measure block size, the perimeter of each block was calculated in feet, and the median block perimeter for each TAZ was selected.



STREET CONNECTIVITY

Street connectivity describes how easily and directly users can move from one part of the street network to another. Grid-like street networks tend to have higher connectivity than those with irregular street patterns.

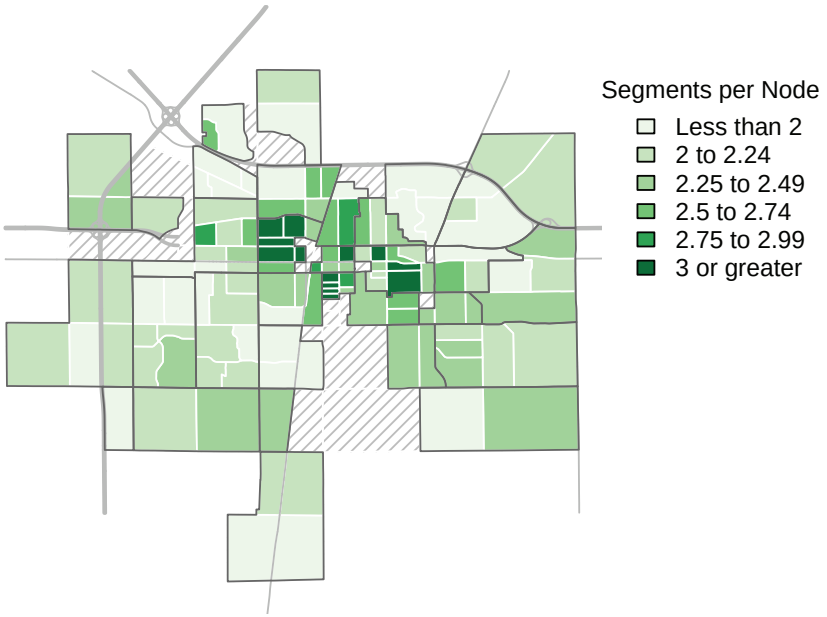
To measure connectivity, the beta index of the street network was calculated for each TAZ. Beta index is defined as the ratio of links (road segments) to nodes (intersections) in the network. One drawback of the particular methodology used is that it tends to overstate the connectivity of neighborhoods with a high proportion of cul-de-sacs, since these cul-de-sacs are counted as links as well as nodes.



SIDEWALK COVERAGE

Sidewalk coverage measures how complete the sidewalk network is in comparison to the street network. It was calculated by dividing the total length of sidewalks in the TAZ by the total length of streets.

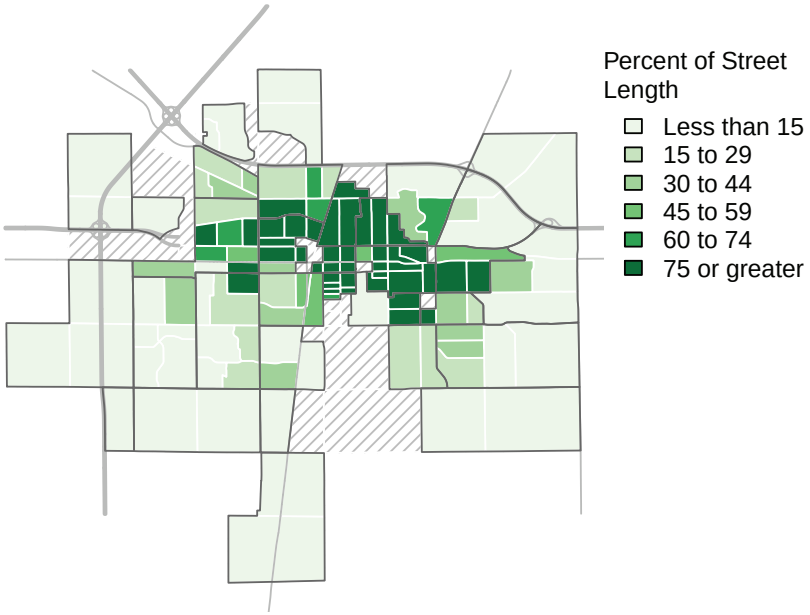
A connectivity value of one indicates that, on average, streets in the TAZ have sidewalks on one side of the street, while a value of two suggests sidewalks on both sides of the street. Values greater than two indicate the presence of off-street pedestrian paths in addition to sidewalks adjacent to the street.



SIDEWALK CONNECTIVITY

Sidewalk connectivity is a measure of how well-linked the sidewalk network is. Sidewalk networks with high connectivity allow pedestrians to reach their destinations without leaving the sidewalk or taking a detour to avoid sidewalk gaps.

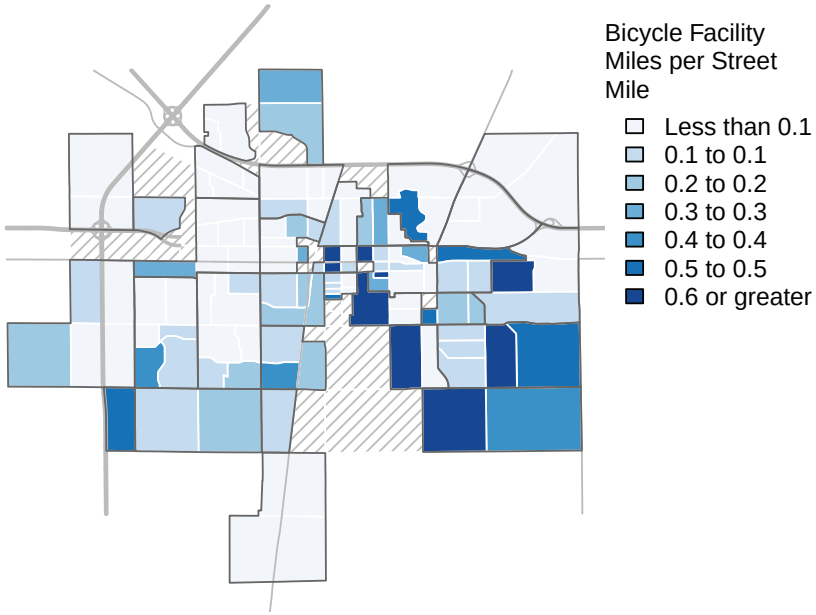
Sidewalk connectivity was estimated by calculating the average number of sidewalk segments connected to each node, or intersection (i.e., in how many directions can a pedestrian choose to travel, on average, at a sidewalk intersection in the TAZ).



STREETLIGHT COVERAGE

Streetlights are an important safety feature for pedestrians, allowing them to travel before and after daylight hours. Municipal streetlight data for the cities of Champaign and Urbana were used to estimate the percentage of the street network in each TAZ illuminated by streetlights. Unfortunately, data for privately-owned lighting were not available.

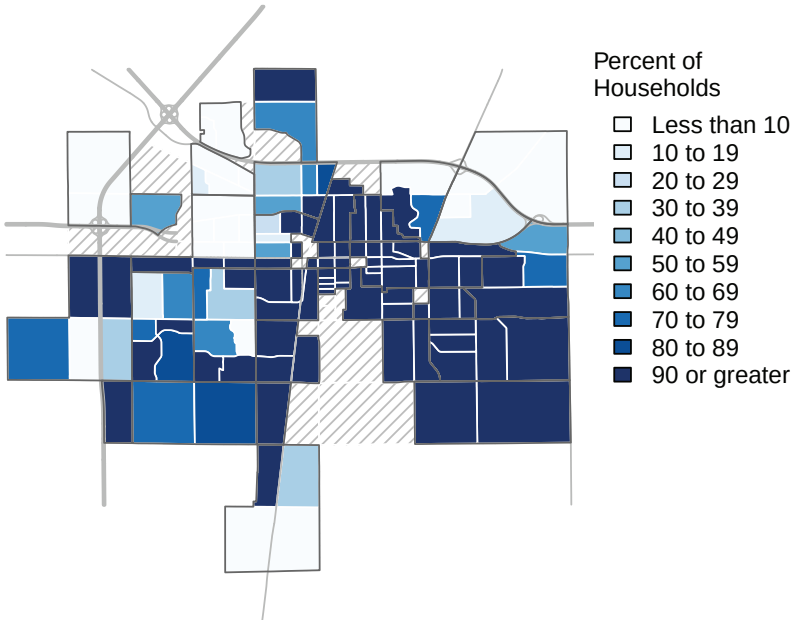
In order to calculate coverage, a circle with a 20-meter radius was drawn around each streetlight point, approximating its illumination area. The length of streets within the illuminated area was divided by the total length in the TAZ to produce a coverage estimate.



BICYCLE FACILITY COVERAGE

Bicycle facility coverage compares the length of bicycle facilities within a TAZ to the length of streets in that TAZ. TAZs with a high concentration of bicycle facilities provide more potential routes for cyclists.

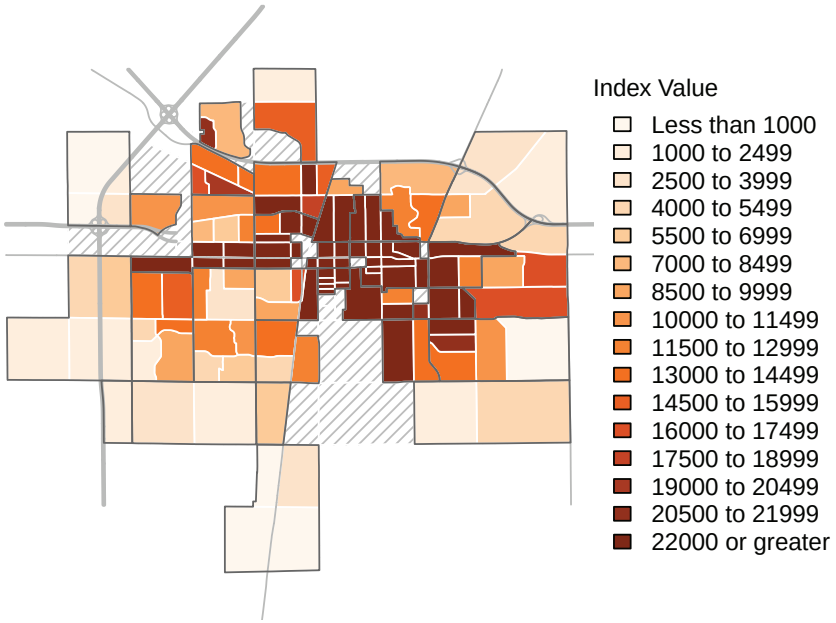
To calculate bicycle facility coverage, the total length of on- and off-street bicycle facilities in the TAZ was divided by the length of streets in that TAZ. One drawback of this methodology is that it exaggerates the effect of coverage in TAZs with relatively few streets. In addition, all types of bicycle facilities are counted equally, though some types (e.g., on-street bicycle lanes) may improve mobility more than other types.



BICYCLE FACILITY ACCESS

Bicycle facility access represents the share of housing units with access to a nearby bicycle facility. Access is a useful counterpart to coverage because it takes into consideration the spatial distribution of population.

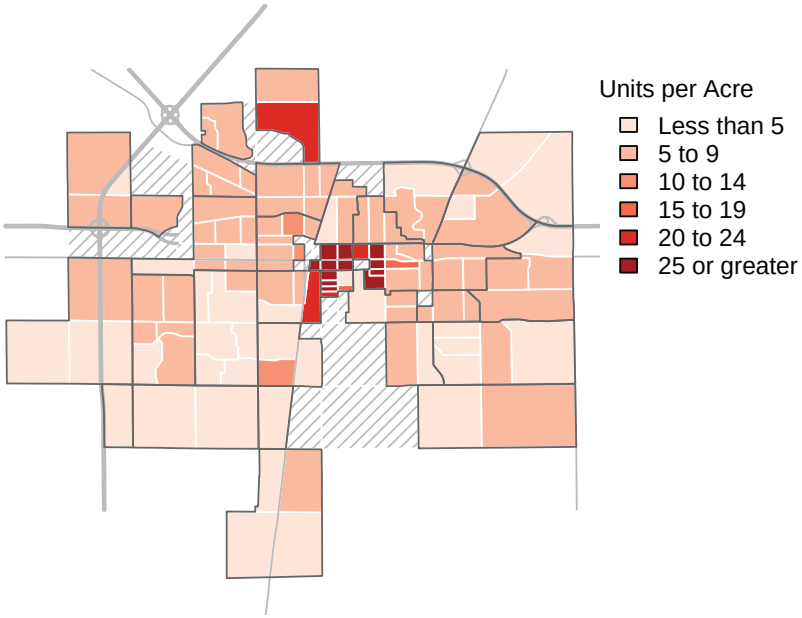
A 1/4-mile area was drawn around bicycle facilities, representing the area from which each facility might reasonably draw cyclists. The number of housing units within this "bikeshed" was divided by the total number of housing units in the TAZ to determine the percentage of households with access. A drawback of considering only the nearest facility is that it does not represent connectivity to the regional bicycle network.



TRANSIT CONNECTIVITY INDEX

Transit connectivity measures transit service availability by combining density of transit stops with frequency of service. High transit connectivity makes transit service easily accessible and promotes use of public transit.

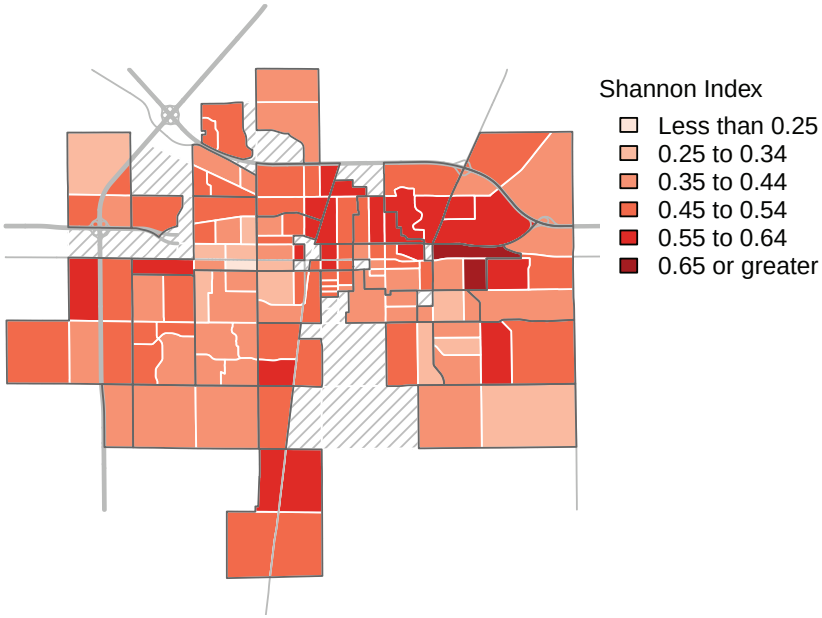
Transit connectivity was estimated as kernel density of transit stops where each stop was weighted by the number of transit trips that connect to the stop during a typical week. As such, transit stops that were serviced by multiple routes were given a higher weight. Mean kernel density was estimated for each TAZ by averaging kernel density values across all the parcels in the TAZ that were not vacant.



MEDIAN RESIDENTIAL DENSITY

Residential density is a measure of how many housing units are located in a given area. Higher densities of housing can support more frequent transit service and more neighborhood-oriented businesses and destinations.

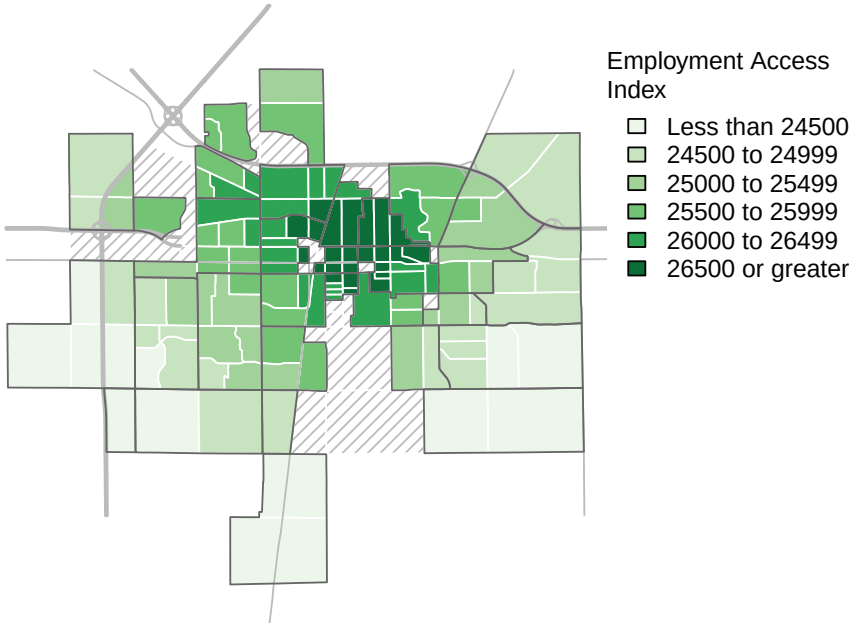
Median residential density was calculated by dividing the estimated number of housing units on each residential parcel by the size of that parcel in acres and selecting the median value. The number of housing units was estimated using parcel property codes, adjusted based on aerial imagery and validated using Census housing unit counts.



LAND USE MIX

Land use mix measures diversity of land uses in close proximity to each other. Neighborhoods that have high land use mix bring different types of destinations close together and create more opportunity for walking and biking.

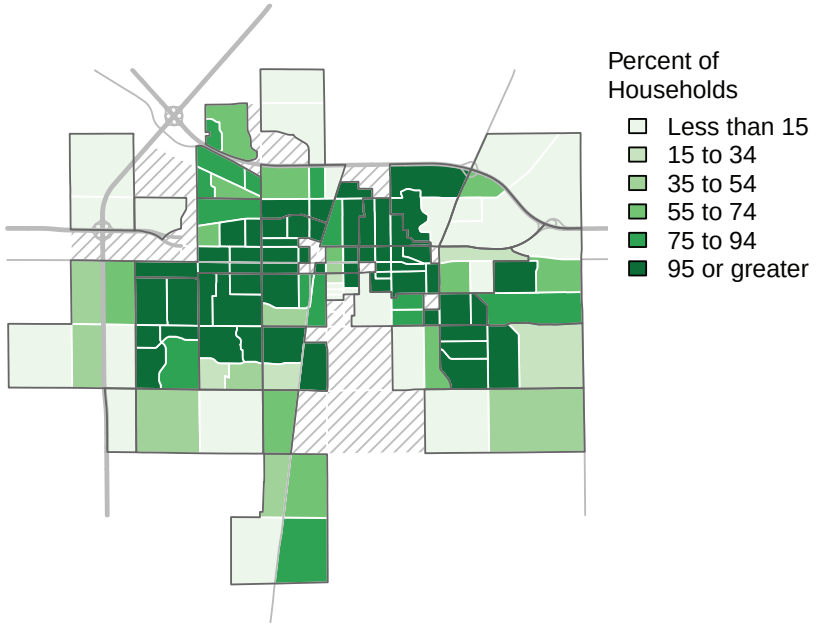
Six land use categories were identified and land use mix was estimated as entropy index. Land use mix was calculated as a raster surface where each cell was an estimation of land use mix within 1/4 mile of the cell. Land use mix for each TAZ was then calculated as the mean value of the raster in the TAZ.



EMPLOYMENT ACCESS

Employment is one of the primary drivers of travel behavior, and proximity to employment destinations determines the modes of transportation available to commuters.

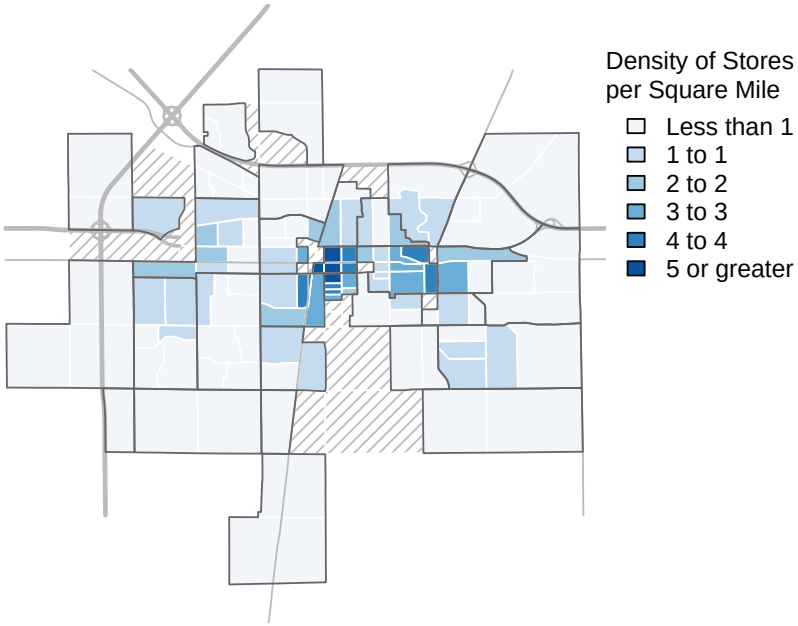
Employment access was calculated using a logarithmic distance decay function. This function weights jobs based on distance such that jobs at a business one mile away from the TAZ have twice as much impact as jobs at a business ten miles away. Using jobs data from ESRI Business Analyst, the weighted number of jobs accessible to each TAZ was summed to give its employment access index value.



SCHOOL ACCESS

Proximity to schools determines whether children can walk or ride a bicycle to school and influences the travel behavior of the entire family.

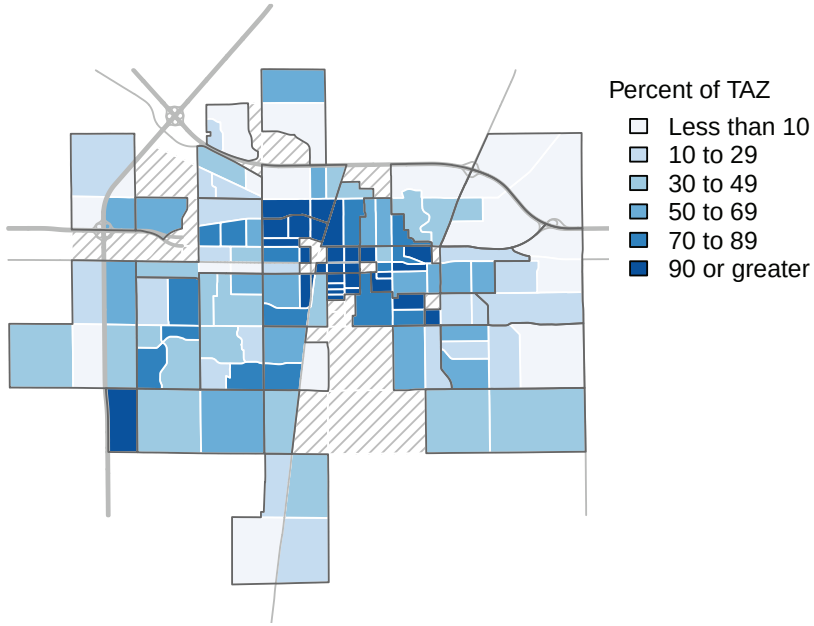
School access was calculated by dividing the number of housing units within 1/2 mile of a school by the total number of housing units in the TAZ. The analysis considered only public and private elementary, middle and high schools. Universities, colleges, preschools, daycare centers, alternative schools and adult education centers were not considered because their transportation impacts are more difficult to predict.



GROCERY STORE ACCESS

Grocery store access measures density of and proximity to grocery stores. High grocery store access value indicates presence of one or more grocery stores that can be accessed without travelling very far.

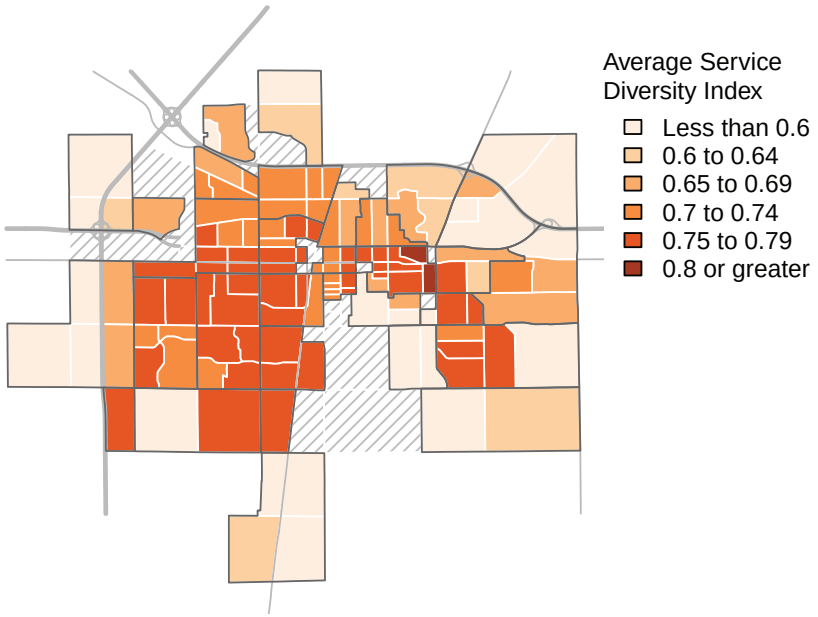
Grocery store access was calculated as kernel density raster of major grocery stores. In the raster, value at each cell was the density of grocery stores located within a mile of the cell with stores located closer to the cell weighted higher than the ones located further away. Mean value of the raster in each TAZ was estimated as the average grocery store access in the TAZ.



PARK ACCESS

Park access measures availability of a public park within walking distance from any point. Access to parks encourages use of active mode of transportation and increases residents' levels of physical activity.

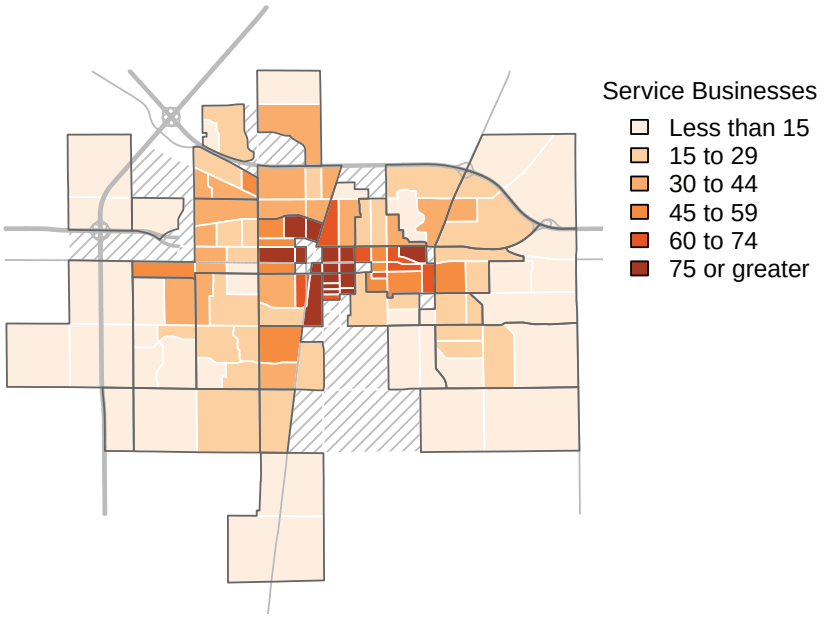
Access to parks was defined as having a park within seven-minute walking distance using the sidewalk network. ArcGIS Network Analyst was used to define service area of each park using the seven-minute walking distance criterion. Parks coverage for each TAZ was calculated as percentage of non-vacant parcels in the TAZ that have access to a park.



SERVICE DIVERSITY

Service diversity measures the variety of services available in an area, a factor that influences the length of common trips.

Service diversity was calculated using the Herfindahl–Hirschman Index (HHI). An HHI value of one indicates complete homogeneity, while lower values indicate increasing diversity. Service businesses were identified using ESRI Business Analyst data and coded using 2-digit NAICS codes. The HHI was calculated for services within 1/2 mile of each housing unit, averaged at the TAZ level and subtracted from one, so that higher service diversity index values indicate greater diversity.



SERVICE DENSITY

Like diversity, density of services impacts travel behavior. Areas with a high density of services minimize the need for long trips, making active transportation a viable option.

Service density was estimated by calculating the average number of services businesses within 1/2 mile of a housing unit in the TAZ. Service business locations were identified using ESRI Business Analyst data. Comparing service locations to housing locations indicated not only the absolute density of service businesses but also their proximity to population centers.

MOBILITY AND ACCESSIBILITY INDICES

Though individual variables provide a rich body of information about the physical characteristics of an area, a long list of variable values can be difficult to understand and interpret. Indices offer a way of condensing multiple variables into a more digestible format.

In order to assess mobility and accessibility at the neighborhood level, the built environment and transportation variables were categorized into the two indices documented in the right column: a mobility index and an accessibility index. The point values, displayed in parentheses, correspond to the legends in the preceding maps, with the first category in the legend receiving a score of zero.

The mobility index collected variables related to the four local modes of transportation: car, walking, bicycle and bus. These variables were combined to assess how easily residents could move around the neighborhood using the four modes.

The accessibility index brought together variables related to the proximity of key destinations, such as employment centers, schools, grocery stores, parks and service businesses. It also assessed the overall land use patterns in the neighborhood for compatibility with access to these destinations.

As with any form of simplification, the mobility and accessibility indices represent a particular set of assumptions and priorities. In general, variables were weighted equally in each category except where one was judged to be a more reliable indicator of the mode or destination type.

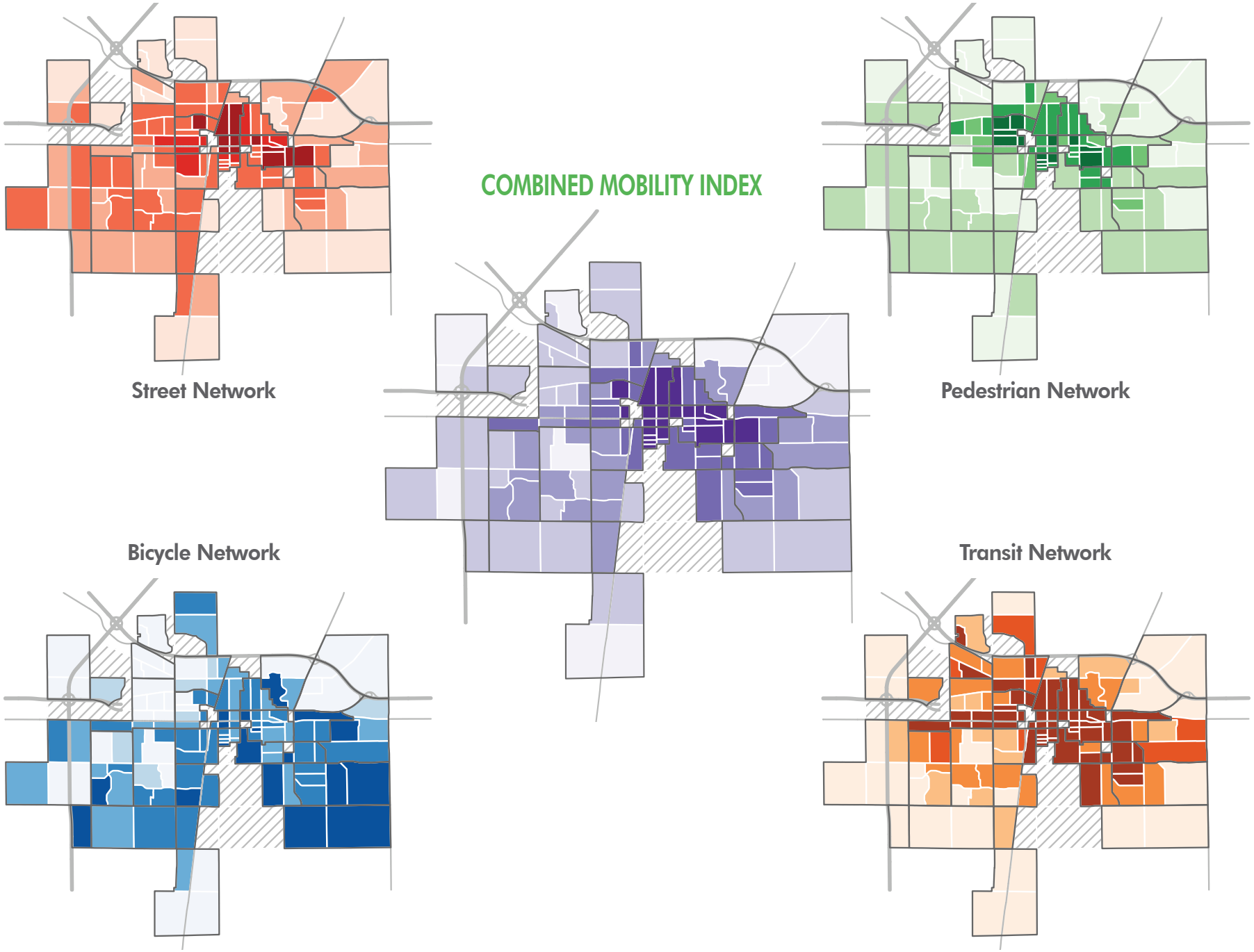
The maps that follow show the index categories as well as the combined index scores. Darker colors indicate higher scores.

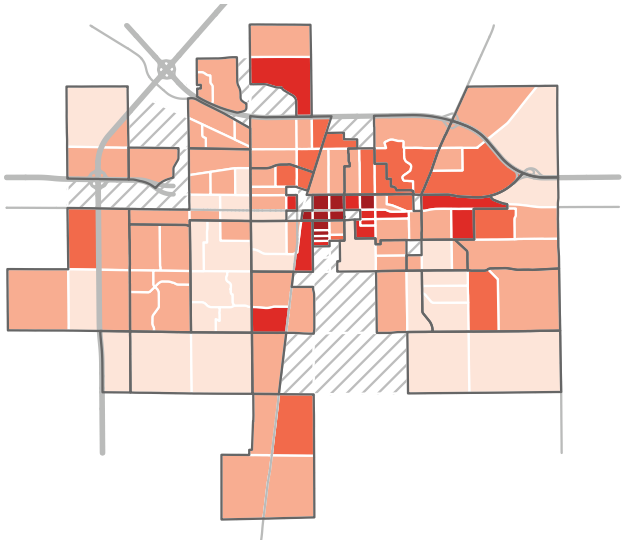
Mobility Index (60)

- Street Network (15)
  - Intersection Density (5)
  - Median Block Perimeter (5)
  - Street Connectivity (5)
- Pedestrian Network (15)
  - Sidewalk Coverage (5)
  - Sidewalk Connectivity (5)
  - Streetlight Coverage (5)
- Bicycle Network (15)
  - Bike Facility Coverage (6)
  - Bike Facility Access (9)
- Transit Network (15)
  - Transit Connectivity Index (15)

Accessibility Index (40)

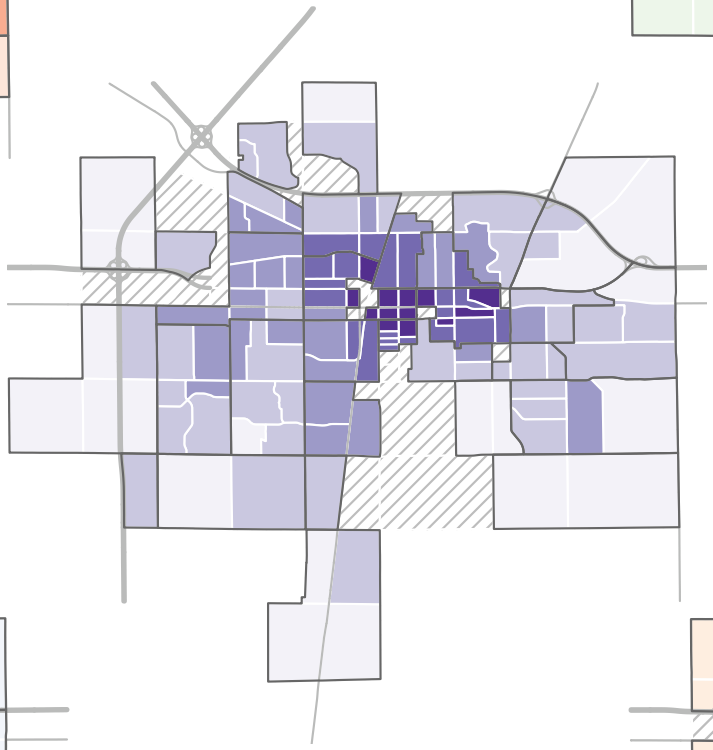
- Land Use (10)
  - Residential Density (5)
  - Land Use Mix (5)
- Employment and Education (10)
  - Employment Access (5)
  - School Access (5)
- Food and Recreation (10)
  - Grocery Store Access (5)
  - Park Access (5)
- Services (10)
  - Service Diversity (5)
  - Service Density (5)

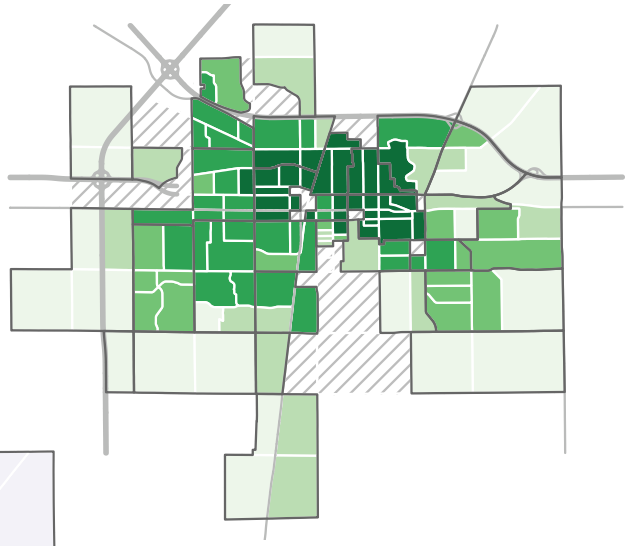

COMBINED MOBILITY INDEX
Street Network
Pedestrian Network
Bicycle Network
Transit Network



Land Use

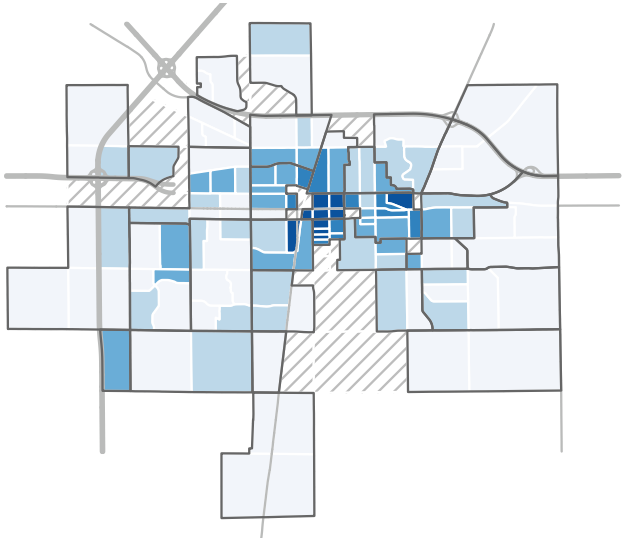
COMBINED ACCESSIBILITY INDEX



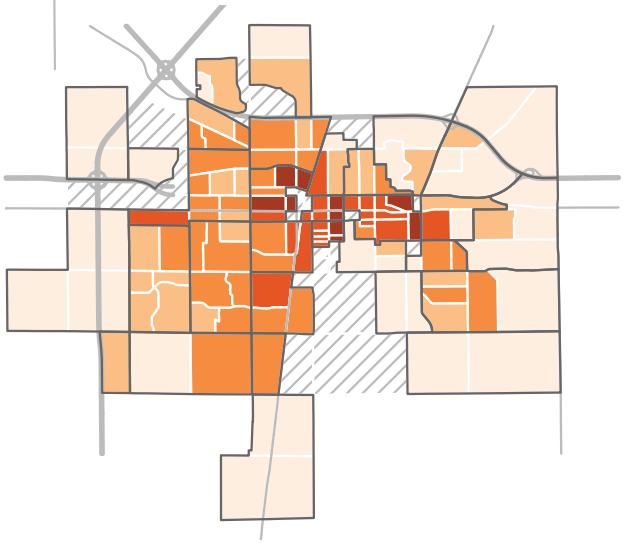


Employment and Education

Food and Recreation



Services



TRAVEL BEHAVIOR

Variables described in the previous sections are all important attributes of the built environment that, among other things, influence travel behavior. This section presents spatial distributions of a few important measures that describe travel behavior, and also establishes a quantitative relationship between the built environment and travel behavior.

Travel behavior was characterized using three variables: vehicle ownership, vehicle miles traveled, and mode share. Each of these three variables was found to have a significant relationship with the built environment. Analysis revealed how combinations of variables related to mobility and accessibility were reflected in households' travel-related decisions such as owning more than one car or biking to work.

Vehicle ownership and vehicle miles traveled were further combined to estimate transportation costs for different neighborhoods. Considering that transportation costs make up a large proportion of households' expenses, travel behavior and hence, the built environment can be linked to affordability.

AVERAGE VEHICLE OWNERSHIP

Household vehicle ownership is an important attribute that can be linked to households' travel behavior. The number of vehicles that a household decides to own is based on a wide array of factors. For transportation planning purposes, it is important to understand how the built environment influences households' decisions regarding vehicle ownership. This understanding can then be used to design planning processes that can manage travel demand in a way that reduces vehicle ownership and the associated costs.

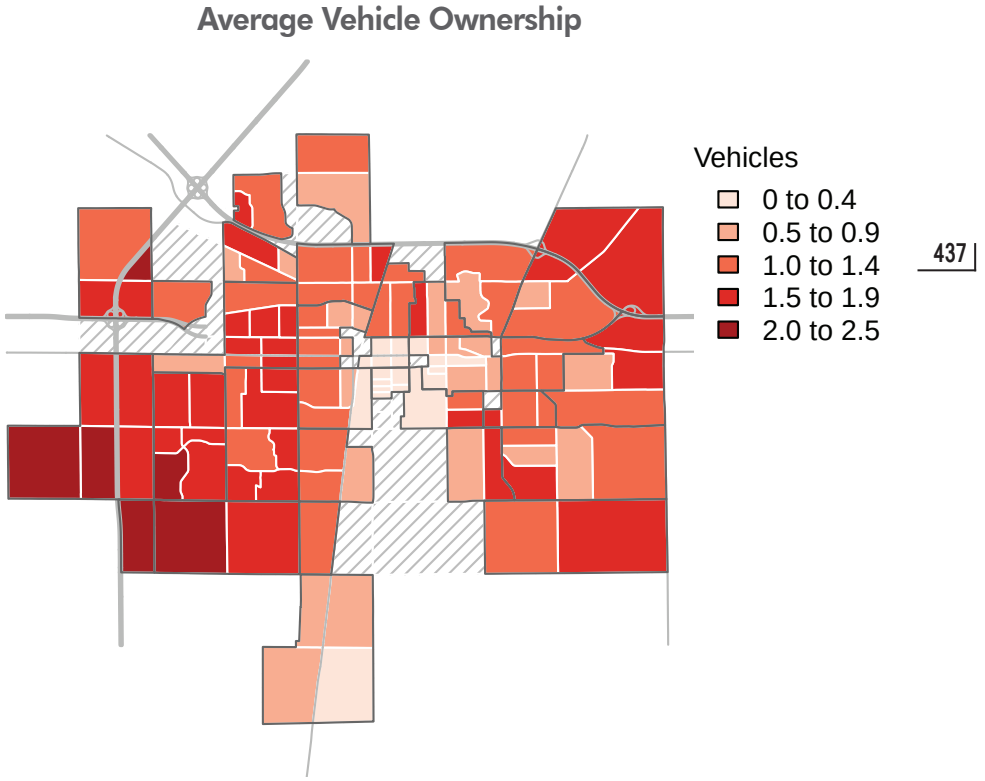
Vehicle ownership was estimated from vehicle registration data obtained from the Illinois Secretary of State. This data was cleaned and geocoded to analyze the spatial distribution of vehicle ownership. It is important to note that vehicle registration data does not capture all vehicle ownership, especially that of the student population. Even so, vehicle registration data gives a reliable indication of spatial distribution of vehicle ownership in Champaign-Urbana urbanized area. Spatial distribution reveals that vehicle ownership per household tends to increase moving away from the university district and the downtowns.

A simple linear regression model was designed to establish a relationship between average vehicle ownership of each TAZ, and socioeconomic and built environment characteristics of the TAZ. The table shows results of a simple regression model which considers three socioeconomic variables: household income, household size, and percentage of college students. All of the three socioeconomic variables were found to be very significant in predicting vehicle ownership. The model predicts that vehicle ownership increases with income and household size, and decreases with increase in percentage of college students. As such, all the socioeconomic variables had the expected correlation with vehicle ownership.

Different combinations of built environment variables were modeled and ultimately, residential density and land use mix were found to be most significant predictors of vehicle ownership. Both density and land use mix were found to be negatively correlated with vehicle ownership. As such, high-density neighborhoods with heterogeneous land use have relatively lower vehicle ownership. Residents of such neighborhoods have different types of services available to them within a short distance, and may have shorter commutes to work. Consequently, such neighborhoods reduce auto-dependency, which can result in lower rates of vehicle ownership. Low density and homogeneous neighborhoods, on the other hand, make households more auto-dependent and, as such, increase household vehicle ownership rates.

Vehicle Ownership Model

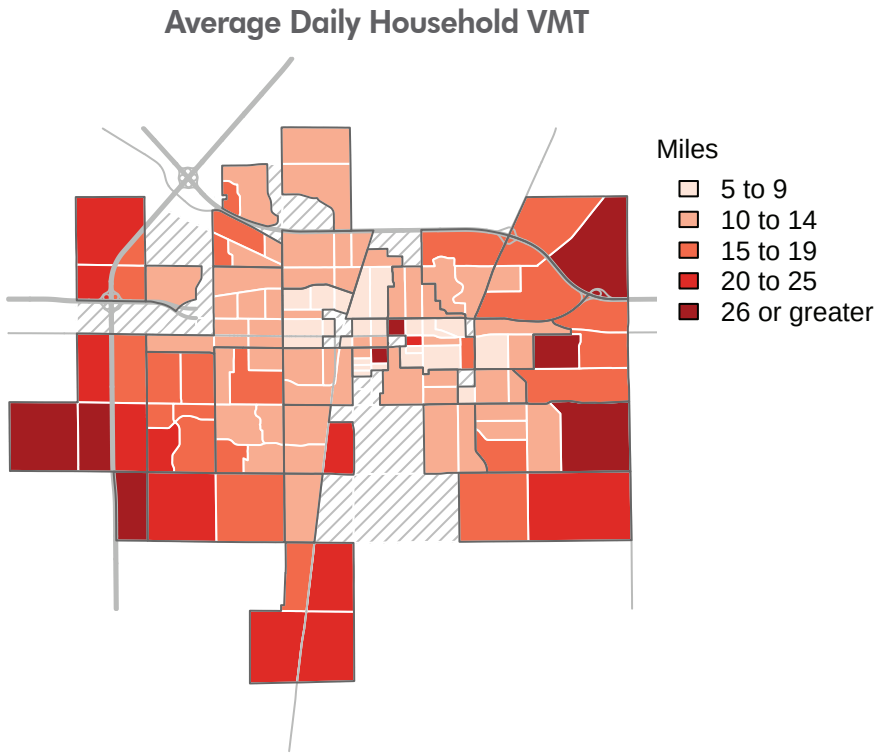
Variable	Coefficient	Significance
Log(Household Income)	0.249	**Very High**
Log(Household Size)	0.824	**Very High**
% College Age	-1.148	**Very High**
Log(Residential Density)	-0.177	**Very High**
Log(Land-use Mix)	-0.319	**High**



VEHICLE MILES TRAVELED

Vehicle Miles Traveled (VMT) can be used to measure use of auto use in a given time period. VMT is an insightful measure of travel behavior, as it captures not only how often people drive, but also distance travelled while driving. In transportation planning, VMT is a commonly-used performance metric as it is an outcome of people's travel behavior and urban form, and can be further linked to other metrics such as GHG emissions, traffic safety, and so on.

CUUATS Travel Demand Model (TDM) was used to estimate total number of trips produced by households located in each TAZ. TDM also generated a production-attraction matrix, which was used to estimate distances travelled for each trip. Of the total trips, auto trips were estimated using mode choice estimates for each TAZ. Final result was an estimate of VMT per household for each TAZ. Map of household VMT shows that VMT is generally higher along the fringes of the urban area.



Regression analysis was used to quantify the relationship between VMT per household and different socioeconomic and built environment characteristics. The table to the right shows results of the regression analysis. Household size was found to be most significant socioeconomic variable, and had an expected positive correlation with VMT per household. Many different combinations of built environment variables were tested. The final model had five built environment variables and, with the exception of transit connectivity, all of them were reasonably significant.

According to the model, household VMT increased with distance from the geographic center where the university district was considered as the geographic center. Since the university district is the biggest attractor of trips, one can conclude that moving away from the district should increase VMT, which is exactly what the model predicts. Access to employment and service density had a negative correlation with household VMT, which was also expected. High employment access and service density would mean that there are more jobs and services located near the households. This should not only encourage use of active modes of travel but also reduce distance travelled by auto. High street connectivity was also related to low VMT per household. High street connectivity can reduce distance between any two points within or between neighborhoods. Even though transit connectivity was not found to be as significant, VMT per household generally decreased with increase in transit connectivity. Overall, improving accessibility and transportation infrastructure connectivity can bring households and destinations closer to each other. This would reduce VMT by reducing both auto use and distance travelled by auto.

VMT Model

Variable	Coefficient	Significance
Log(Household Size)	0.338	**Very High**
Log(Distance to Geog. Center)	0.164	**High**
Log(Employment Access)	-4.014	**Very High**
Log(Service Density)	-0.047	**High**
Log(Street Connectivity)	-0.152	**Medium**
Log(Transit Connectivity)	-0.024	**Low**

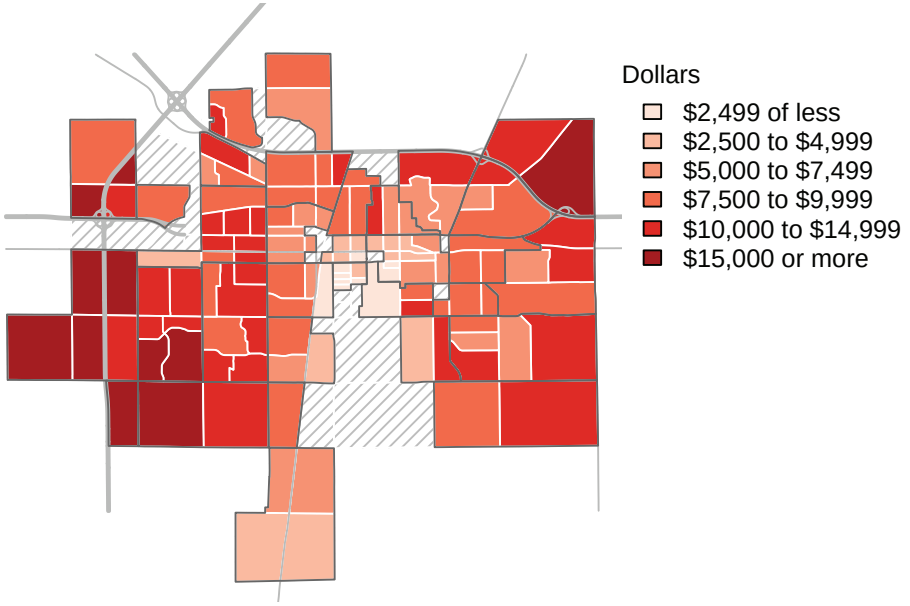
TRANSPORTATION COSTS

Transportation costs often make up a large percentage of total household costs. For this analysis, costs incurred by households on vehicle ownership and driving were estimated as transportation costs for the households. Previous sections discuss the relationship between the built environment, and vehicle ownership and VMT. Consequently, the built environment also plays a significant role in shaping households' transportation costs. For instance, households located in neighborhoods that allow residents to drive less would have relatively low transportation costs. Transportation costs can further be linked to affordability of neighborhoods. For this analysis, affordability of neighborhoods is characterized only by transportation costs. In reality, affordability of neighborhoods is influenced by many other elements of household costs, such as rent, costs of utilities and services, etc.

Transportation cost for a household was estimated as a function of number of vehicles owned and number of miles driven in a year. Cost of driving was calculated using data published by the American Automobile Association (AAA). AAA estimates that annual cost of ownership of a medium-sized sedan is about $5,974, which includes insurance, license, registration, taxes, depreciation, etc. Operating cost was estimated to be 19.1 cents per mile, which includes gas, maintenance, tires, etc. Using these estimates, average transportation cost was estimated for each TAZ. The cost of using active modes of transportation were estimated to be negligible compared to driving costs and were ignored from the cost estimation.

Spatial distribution of transportation cost is theoretically a combination of spatial distributions of vehicle ownership and household VMT.

Annual Household Transportation Cost



Transportation costs were estimated to be lowest near major employment centers such as the university district and downtowns. Neighborhoods located along the periphery of the urbanized area, particularly along southwest Champaign, and northeast Urbana, were estimated to have very high transportation costs. A separate quantitative model was not developed for transportation cost, as it can be easily derived from models designed for vehicle ownership and VMT. All the built environment variables that were found to have an impact on vehicle ownership and VMT would have a similar impact on transportation costs. As such, improving accessibility and mobility should result in lower transportation costs.

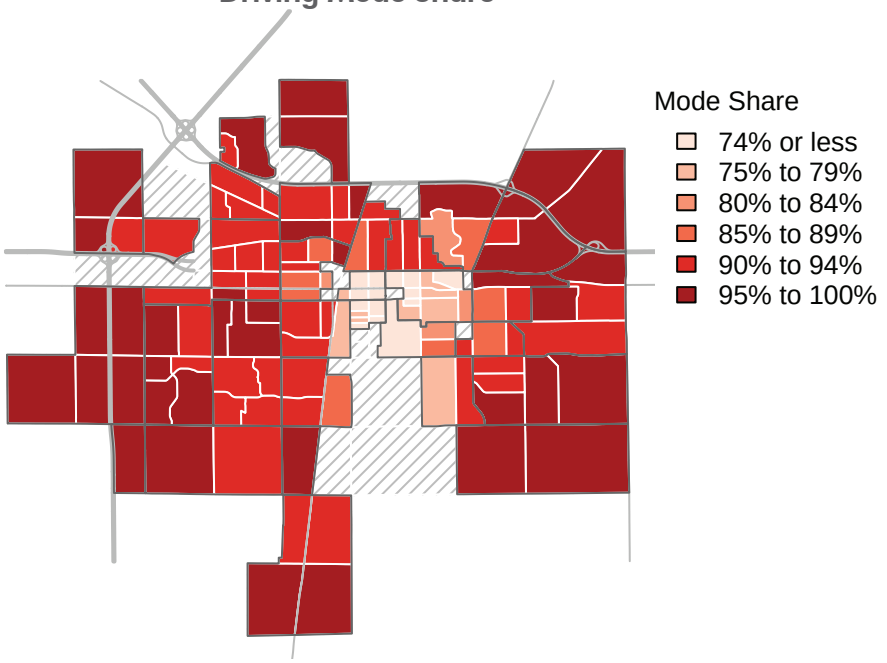
MODE CHOICE

Mode choice is an insightful representation of people's travel behavior. It shows how people choose between different modes of transportation, such as driving, biking, walking and public transit. Decisions regarding transportation mode choice are based on many factors, including the built environment. Driving has the largest mode share in the urbanized area. As such, promoting use of active modes of transportation requires planning for a built environment that can support use of public transit and other active modes of transportation.

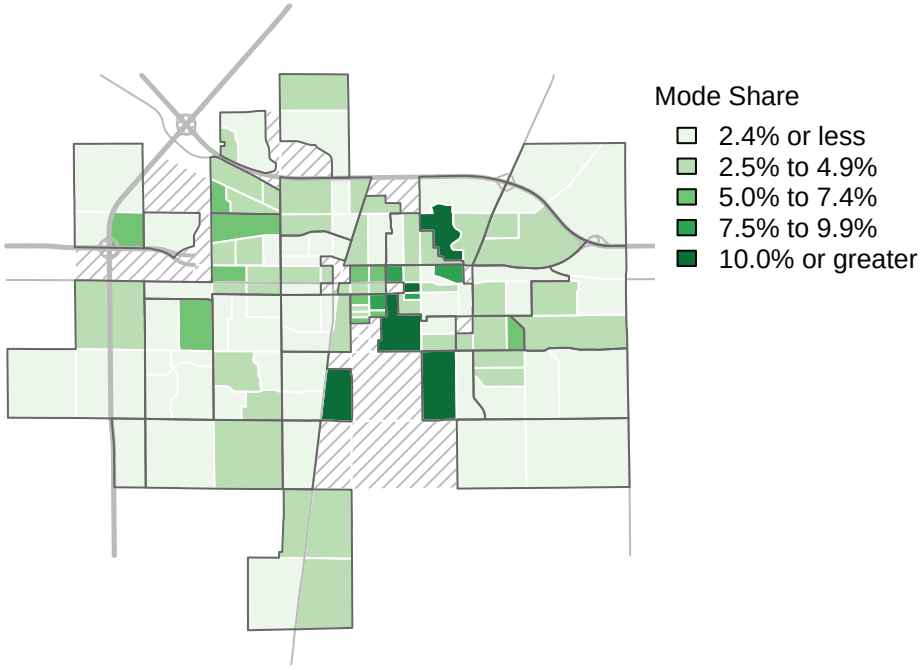
For Champaign-Urbana urbanized area, mode choice behavior was estimated by combining data from multiple sources. CUUATS TDM estimates mode choice by combining travel time and distance travelled as costs and developing a utility function for different modes. Census Transportation Planning Product (CTPP) data, based on ACS 2006-2010, documents people's commuting travel behavior and provides data regarding mode choice and travel time at different census aggregation levels. These two data sets were used as reference for estimating mode choice for each TAZ. Minor adjustments were made using MTD ridership data and results from a travel survey that was conducted by CUUATS in 2002. The final result was mode choice distribution by TAZ for four modes of transportation: driving, walking, biking and public transit.

Regression analysis was used to understand the relationship between mode choice and the built environment. Two regression models were designed: one for explaining the mode share of driving, and other for explaining the use of active modes of transportation (biking and walking).

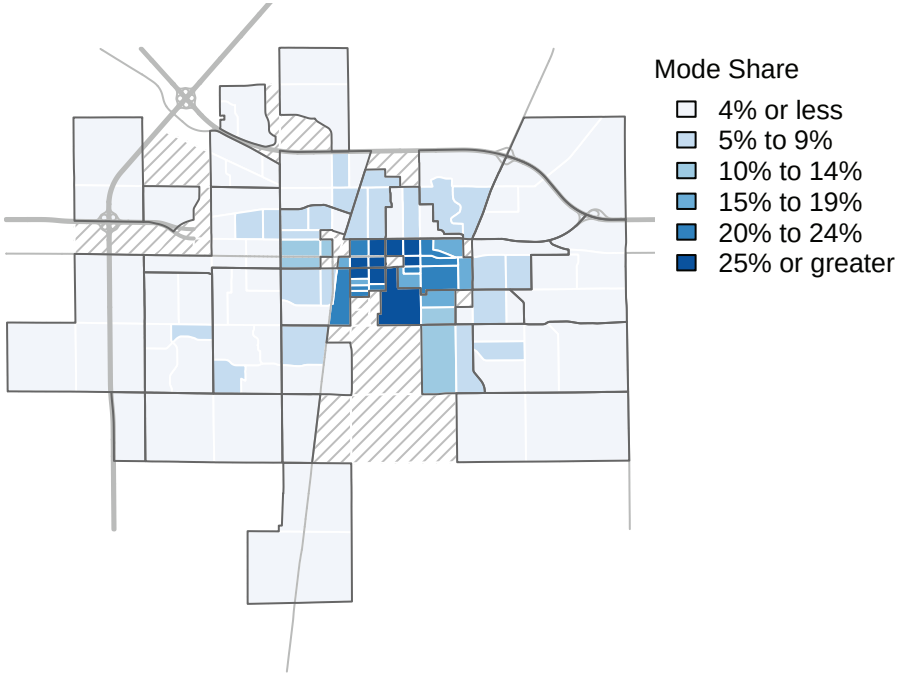
Driving Mode Share



Transit Mode Share



Active Transportation Mode Share



Driving Mode Choice Model

Variable	Coefficient	Significance
% College Age	-0.181	**Very High**
Residential Density	-0.003	**Medium**
Log(Employment Access)	-0.293	**High**
Grocery Store Access	-0.005	**Low**
Log(Street Connectivity)	-0.002	**Low**
Log(Transit Connectivity)	-0.008	**Medium**
Log(Bike Route Access)	-0.002	**Low**
Log(Sidewalk Coverage)	-0.009	**High**

Mode share of driving was modeled as a function of percentage college students and a group of built environment variables as presented in the table. As expected, percentage of college-age students was negatively correlated with driving mode share. All the correlations with the built environment were also as expected. Access to employment was the most significant of built environment variables and it had a negative correlation with mode share of driving. Increasing access to employment brings jobs closer to households, which encourages use of active modes of transportation. Similarly, low employment accessibility means that residents are travelling relatively long distances while commuting, in which case driving is often the only feasible option. Mode share of driving was found to negatively correlated with transit connectivity, bike route access and sidewalk coverage. All of these variables measure availability of transit and other active modes of transportation. As such, the model predicts that providing facilities for active transportation modes should reduce mode share of driving.

Active Mode Choice Model

Variable	Coefficient	Significance
% College Age	0.124	**Very High**
Residential Density	0.005	**Very High**
Log(Employment Access)	0.264	**High**
Grocery Store Access	0.008	**High**
Parks Coverage	7.00E-05	**Low**
Log(Street Connectivity)	0.002	**Medium**
Log(Bike Route Access)	0.002	**High**
Log(Sidewalk Coverage)	0.01	**High**

Mode share of active modes of transportation were modeled as a function of active transportation network availability and other built environment variables related to accessibility. Results of the regression analysis show that percentage of college students was found to be positively correlated with walking and biking mode share. Bike route access and sidewalk coverage were both found to be significant and positively correlated with active transportation mode share. As such, increasing coverage of bike lanes and sidewalks results in more people walking and biking. Similarly, improving accessibility was also associated with higher active transportation mode share. Density, employment access, and grocery store access were all found to be very significant predictors of active transportation mode share. Overall, the model predicts that mode share of active transportation modes could be improved by improving accessibility and creating opportunities for walking and biking.

Analysis of spatial distribution of travel behavior measures reveals that residents are influenced by the built environment in their respective neighborhoods when it comes to making decisions regarding vehicle ownership, travel mode and so on. Mobility and accessibility, which were used to characterize the built environment, reflect the variety of transportation choices that are available to the residents. As such, the analysis links variety of choices to use of choices. For instance, neighborhoods that make it feasible for residents to use active modes of transportation through combination of high mobility and high accessibility generally have more people that use active modes of transportation. This understanding of the impact of the built environment on travel behavior establishes a relationship that is not only quantitatively significant but also causal. The following sections continue exploration of this relationship by presenting built environment and travel behavior attributes for each neighborhood in Champaign-Urbana urbanized area.

NEIGHBORHOODS

For the purpose of interpreting the index results, the 124 TAZs were grouped into 30 neighborhood units. The bases for these groupings were the *Champaign Tomorrow Comprehensive Plan* (2011) and the *City of Urbana 2005 Comprehensive Plan*. Where possible, the neighborhood boundaries and names were taken from the future land use maps contained in these plans.

In some cases, TAZs appeared in more than one map or the map boundaries did not align with the TAZ boundaries. In these cases, the TAZs were grouped with the neighborhood unit with the most similar index scores.

In other cases, a single land use map included a large number of TAZs, as in the downtown areas of Champaign and Urbana. These neighborhoods were split into smaller neighborhood units with at most ten TAZs.

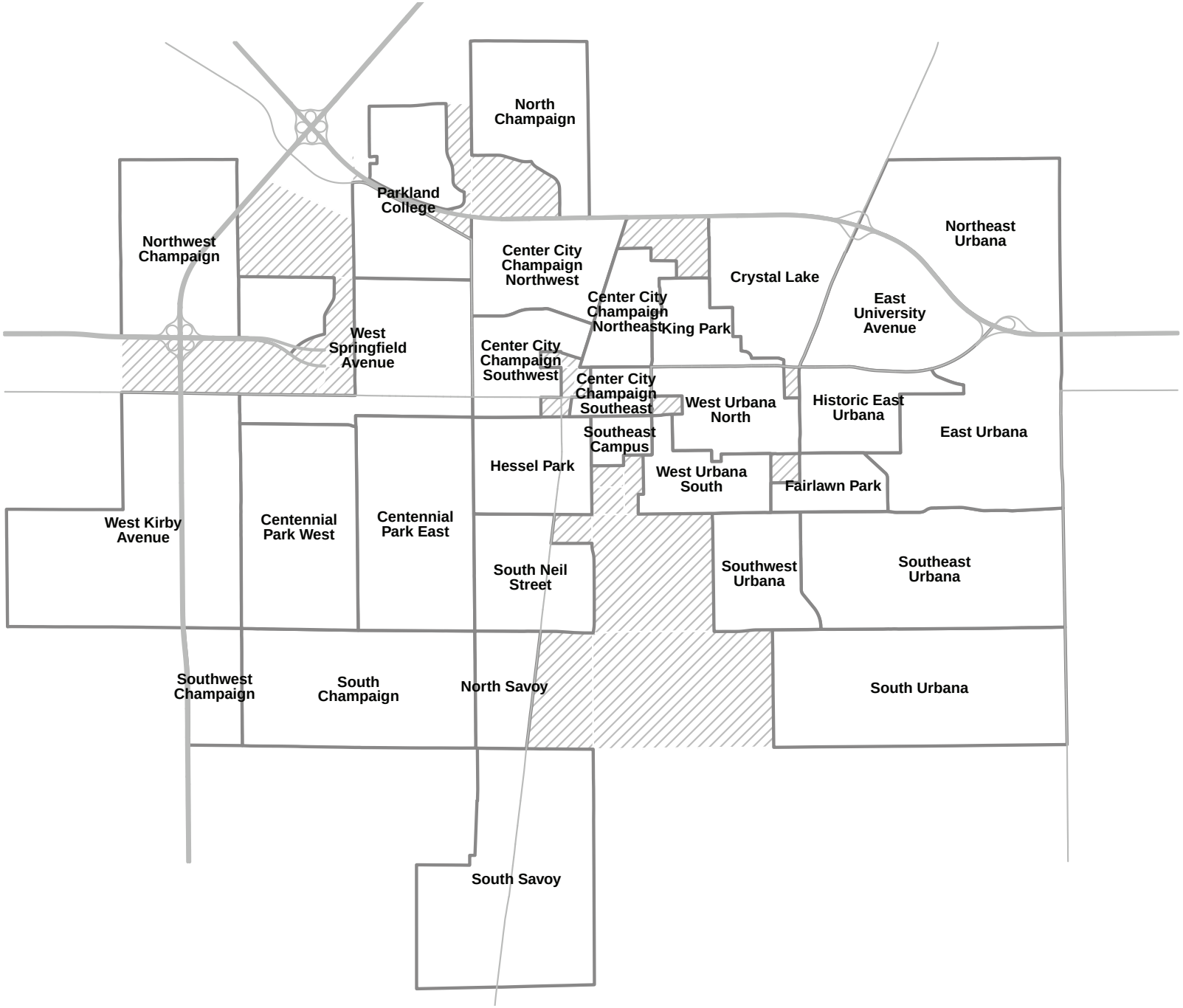
Within each neighborhood, the individual TAZ scores were aggregated using a housing-unit weighted average. As a result, TAZs with a large number of housing units had a larger influence on the combined neighborhood scores than TAZs with few housing units. The housing unit-weighted average was used to best approximate the conditions experienced by the neighborhood's residents.

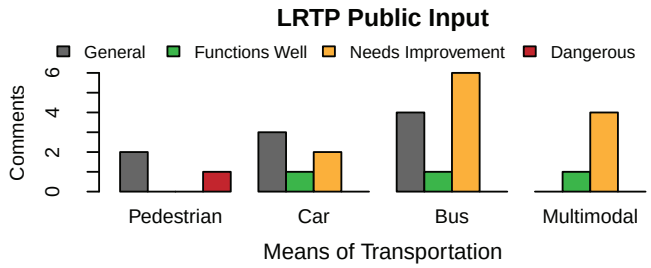
In addition, public comments received as part of the LRTP existing conditions survey were geocoded and mapped according to the address or intersection indicated by the respondent. Themes from these comments were compared to the index values for the neighborhood in which the comment was located.

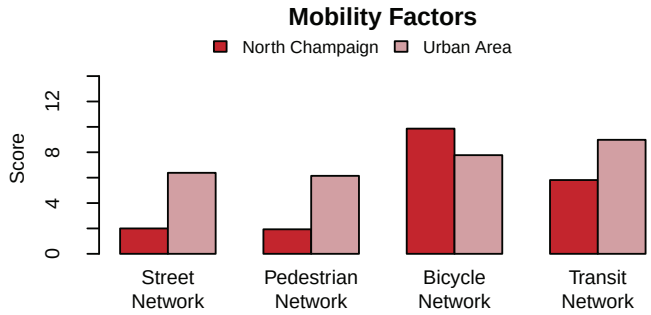
Though the term "neighborhood" is used throughout the analysis, the boundaries of the geographic areas may not correspond exactly with what residents think of as their neighborhood. In order to address this limitation, future versions of the neighborhood analysis may include an interactive component that allows users to define their own neighborhood by selecting a group of TAZs. Such a tool also could allow users to change the weights assigned to particular indicator variables, allowing them to customize the mobility and accessibility indices to match their own priorities. However, the development of any interactive features depends on the availability of funding, which has not yet been secured.

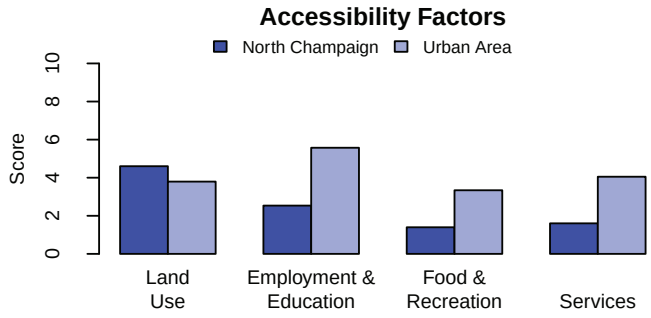
The neighborhood analyses that follow present the mobility and accessibility index values as well as the values of each major component of these indices. They compare the neighborhood values to the urban area averages and explore possible connections between these patterns and public comments received for the neighborhood. Finally, the analyses present the estimated mode share and affordability indicators for the neighborhood and describe similarities and differences between these estimates and the trends observed in the indices and public comments.

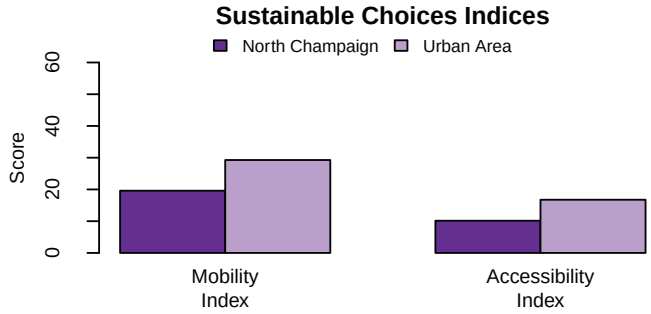
LAMA: 30 Neighborhood Units











North Champaign

Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

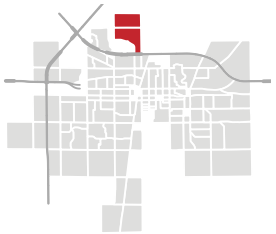
LRTP Public Input

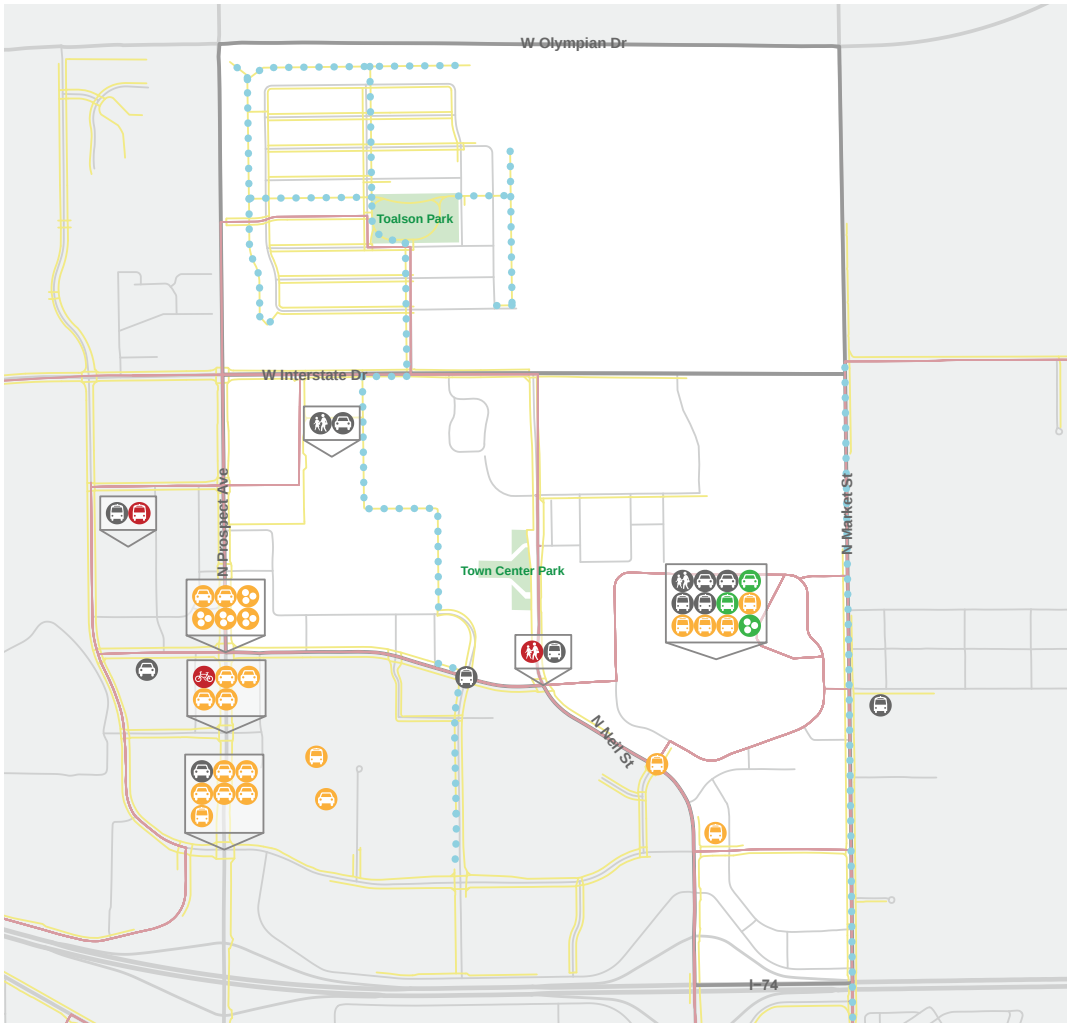
Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous





NORTH CHAMPAIGN

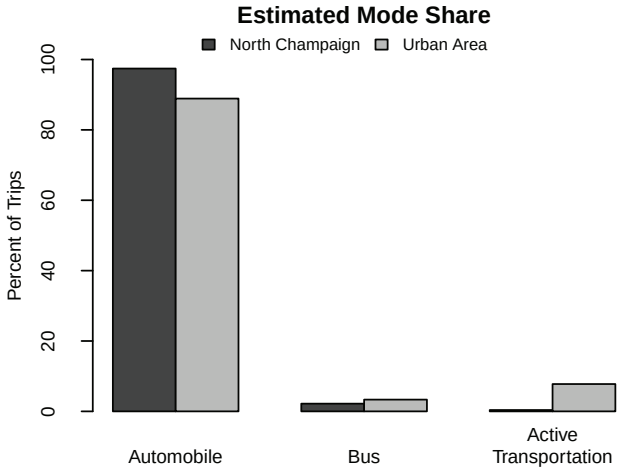
The North Champaign neighborhood, composed of two TAZs north of I-74 between Prospect Avenue and Market Street, scored below the urban area average on both mobility and accessibility. Mobility was particularly problematic for pedestrians in this neighborhood dominated by large retail establishments. Public comments identified the area as a dangerous one for walkers and highlighted gaps in the sidewalk network, particularly in the commercial portion of the neighborhood. These conditions, exacerbated by an irregular street network, were reflected in the low street network and pedestrian network scores.

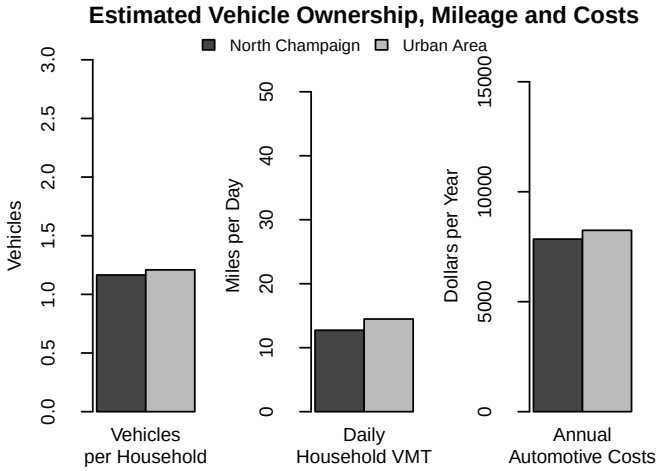
Most of the comments related to automotive transportation centered on congestion in the North Prospect corridor. However, a high concentration of bicycle facilities in the residential portion of the neighborhood led to an above-average bicycle network score.

Public comments about the bus network were mixed. Some respondents indicated that bus service provided a useful means of transportation for university students to reach shopping destinations. Others suggested that stop placement, frequency of service and delays due to congestion made it time-consuming and difficult to reach destinations. These concerns were reflected in the below-average transit network score, which captured the limited bus frequency and number of routes.

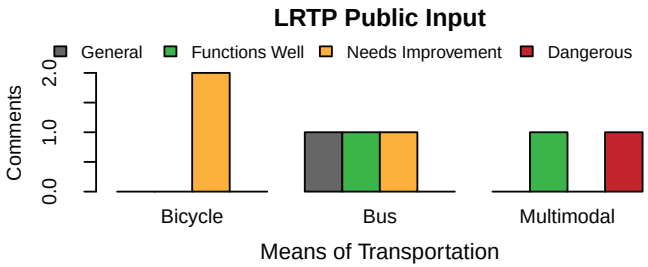
While the variety of retail and services available in the southern portion of the neighborhood boosted its accessibility scores, the predominance of residential uses in the northern TAZ led to below-average accessibility scores in most categories. However, the mix of land uses and relatively high residential density in the southern portion of the neighborhood contributed to an above-average score in the land use category.

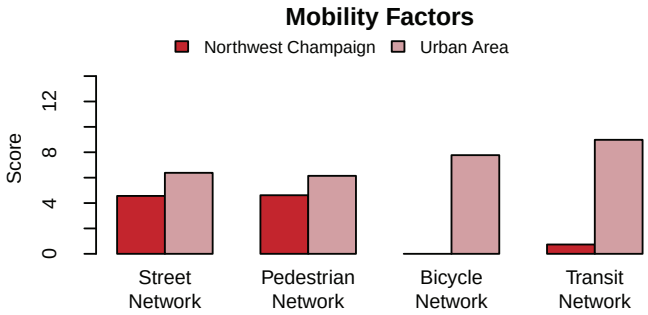
Low mobility and accessibility in the neighborhood were reflected in the estimated mode share, which was heavily auto-dependent. However, estimated vehicle ownership and VMT were below average, leading to slightly below-average automotive costs.

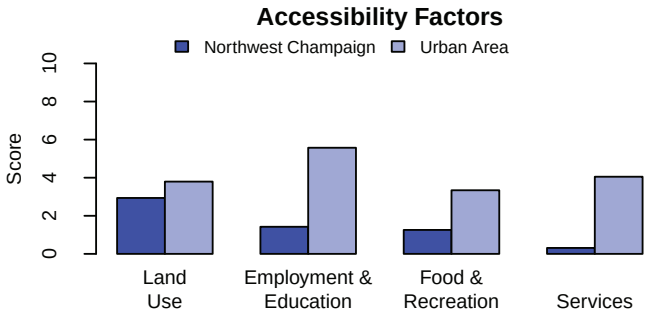


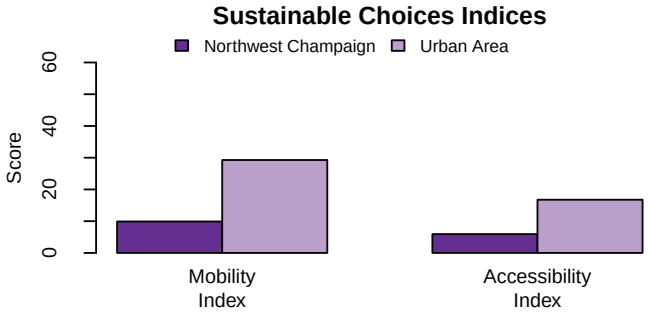


Northwest Champaign









Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

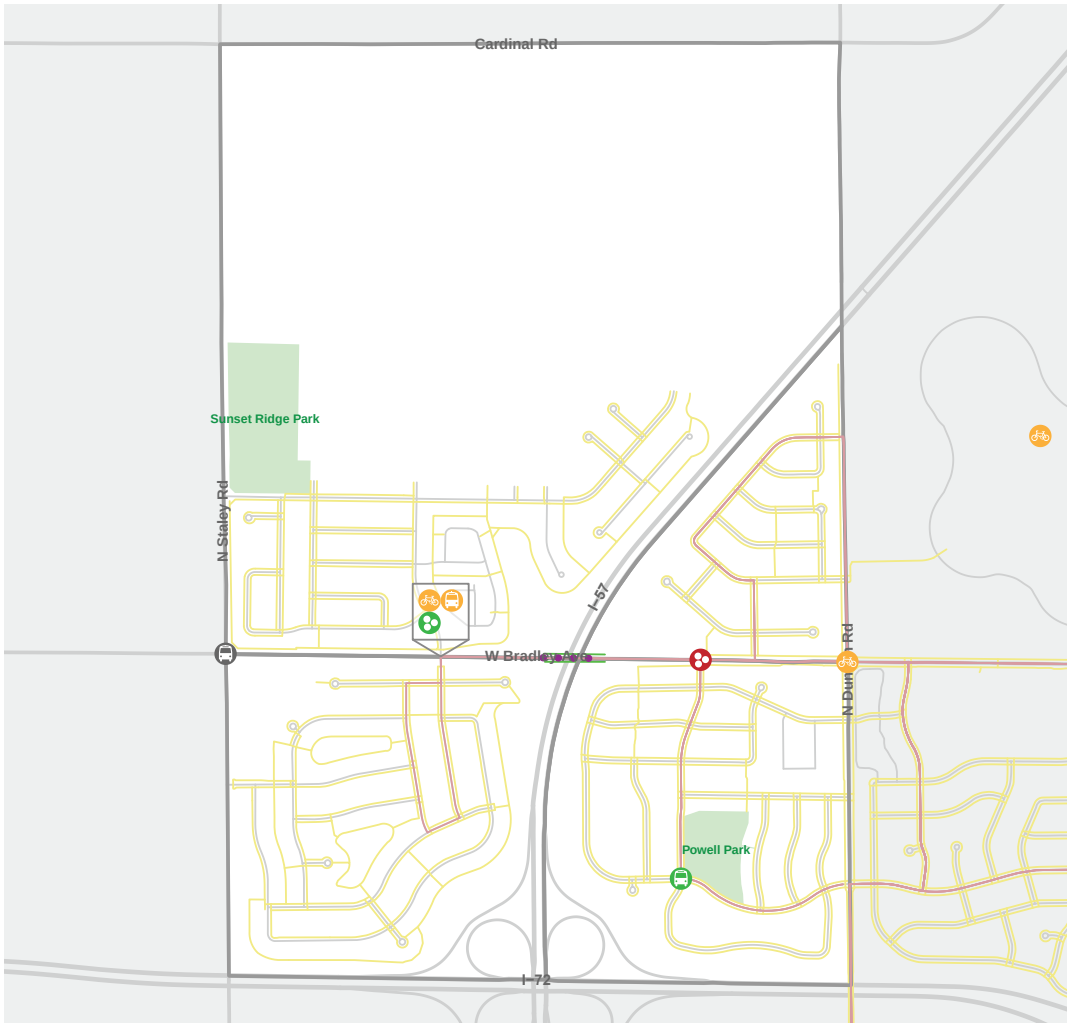
LRTP Public Input

Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous



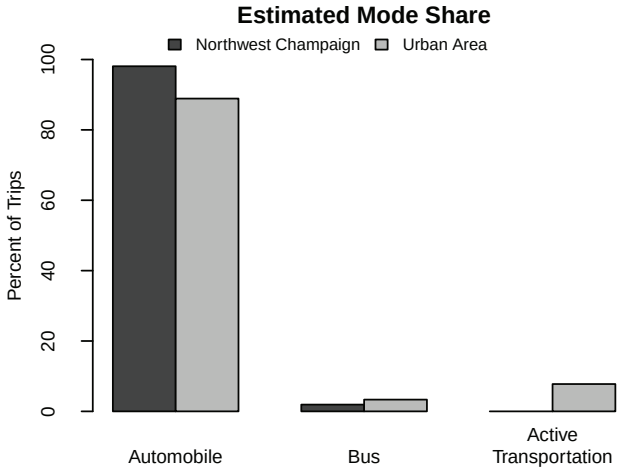
NORTHWEST CHAMPAIGN

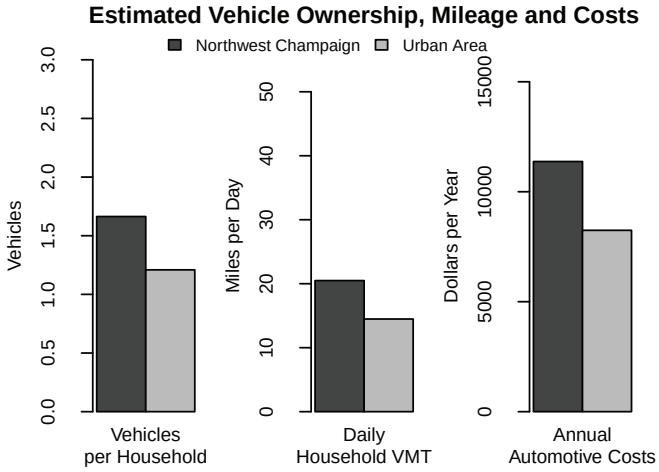
The Northwest Champaign neighborhood, made up of four TAZs just north of the I-57 / I-72 interchange in northwest Champaign, scored well below the urban area average in both mobility and accessibility. Low scores for both the bicycle network and the transit network contributed to the low mobility score. Public comments focused on safety issues faced by cyclists and pedestrians, particularly at the I-57 / Bradley Avenue overpass, and the low frequency of bus service. These comments reflected the lack of bike infrastructure in the neighborhood and limited availability of bus service on the urban fringe.

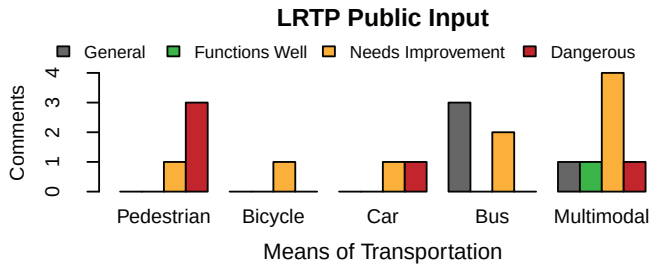
The neighborhood scored only slightly below average on the street and pedestrian networks. The street network score was the result of relatively good street connectivity within each TAZ and a relatively high density of intersections in the developed portion of the neighborhood. However, street connectivity between TAZs, a factor not considered in the analysis, was limited by the presence of interstate highways. While the neighborhood had a high level of sidewalk coverage, including some off-street pedestrian paths, the lack of municipal streetlights and limited sidewalk connectivity as a result of the irregular street network resulted in a lower overall pedestrian network score.

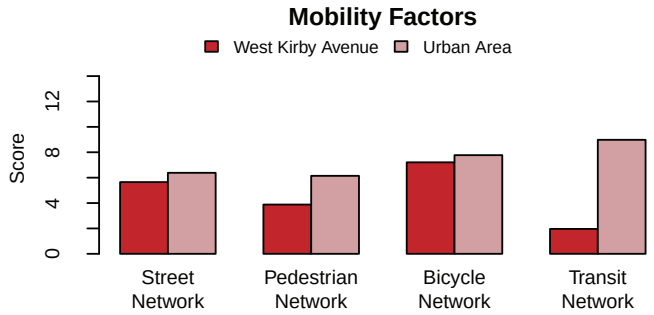
The Northwest Champaign neighborhood scored below average on all of the accessibility factors, particularly in access to employment, education and services. These low access scores, largely the result of the neighborhood's location on the periphery of the urban area, suggest that few destinations are accessible on foot or by bicycle. Though the neighborhood is largely residential, the presence of several non-residential uses as well as commonly-held open space improves its land use mix somewhat.

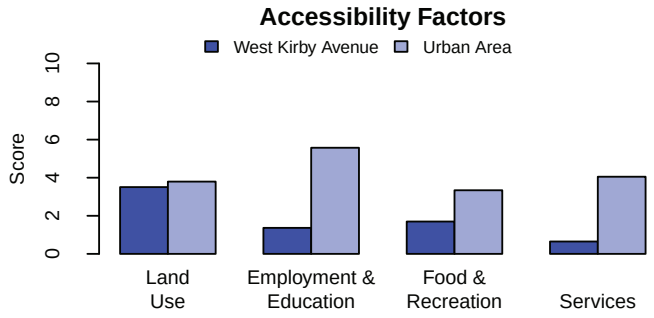
The neighborhood's estimated mode share, which showed heavy dependence on the automobile and very little use of active transportation, mirrored its low mobility and accessibility index scores. Improving transportation choice by strengthening the neighborhood's bicycle and pedestrian networks and increasing access to destinations could help to lower the neighborhood's above-average transportation costs.

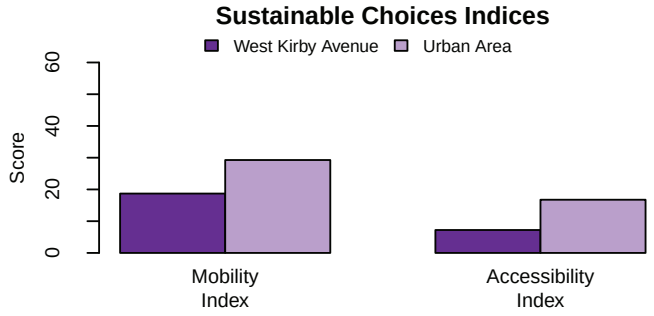












West Kirby Avenue

Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

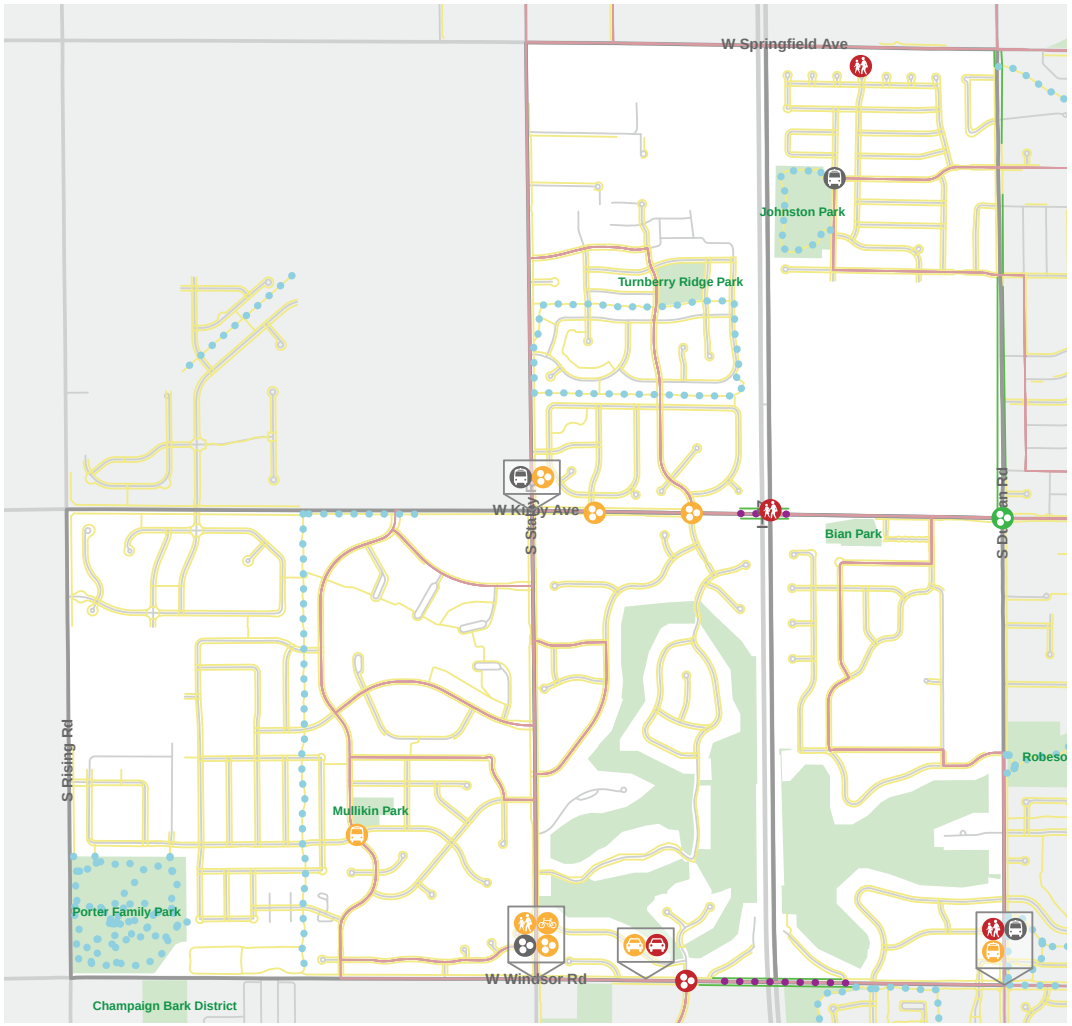
LRTP Public Input

Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous



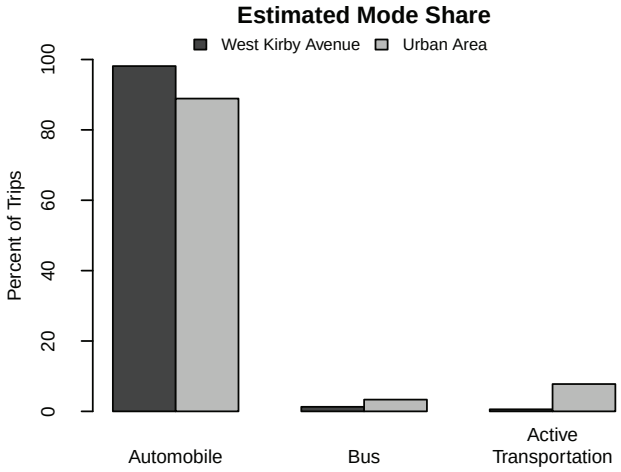
WEST KIRBY AVENUE

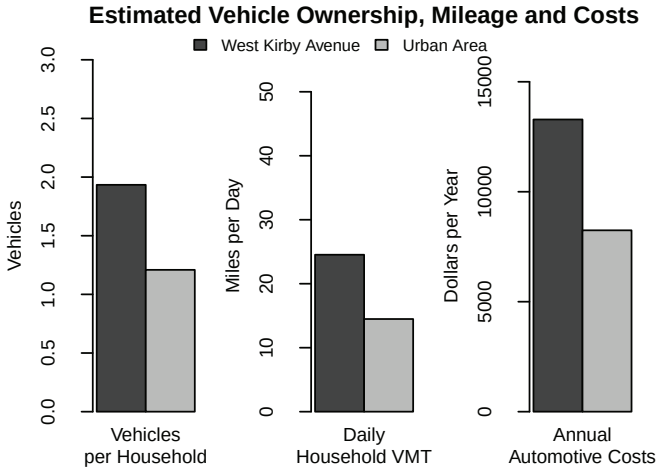
The West Kirby Avenue neighborhood, composed of five TAZs on both sides of I-57 in western Champaign, scored well below the urban area average on accessibility and slightly below the average on mobility. Most of the public comments in this neighborhood revolved around the need for more frequent bus service and the challenges faced by cyclists and pedestrians. Though neighborhood is served by the green, navy and pink daytime bus routes, fewer daily trips and longer headways led to a transit network score well below the urban area average.

Street connectivity in the neighborhood was similar to the urban area average, reflecting a mix of grid-based and cul-de-sac streets. Though sidewalk coverage in the residential subdivisions was generally high, a lack of sidewalks along major streets led to a below-average pedestrian network score. Public comments identified several locations that were dangerous for pedestrians, including the Kirby Avenue / I-57 overpass.

Many of the residential subdivisions in the West Kirby Avenue neighborhood included some type of bicycle facility, leading to a bicycle network score similar to the urban average. However, these bicycle facilities tended to be isolated with poor connectivity to the regional bicycle network. Public comments highlighted a need for bicycle lanes and sidepaths along major streets such as Kirby Avenue and Staley Avenue.

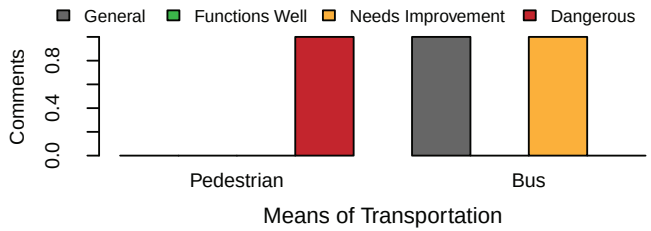
Though the neighborhood included a mix of land uses similar to the urban area average, the accessibility of most common destinations was low. The part of the neighborhood east of I-57 had somewhat higher accessibility, particularly to employment and education destinations, while the western TAZs had limited accessibility due to their location on the periphery of the urban area. A lack of nearby destinations increased the importance of improving mobility in all parts of the neighborhood, particularly for transit riders and cyclists. Doing so could help to alter the neighborhood's auto-centric transportation behavior, reflected in vehicle ownership, VTM and automotive cost estimates well above the urban area average.



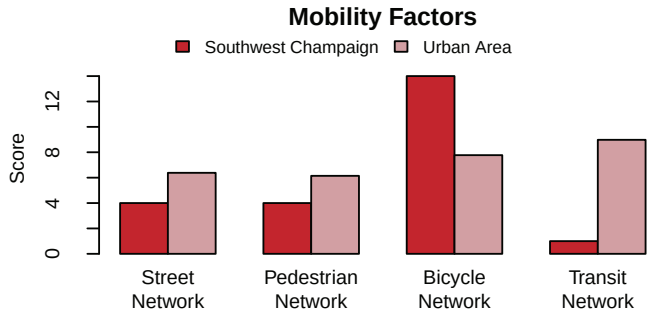


Southwest Champaign

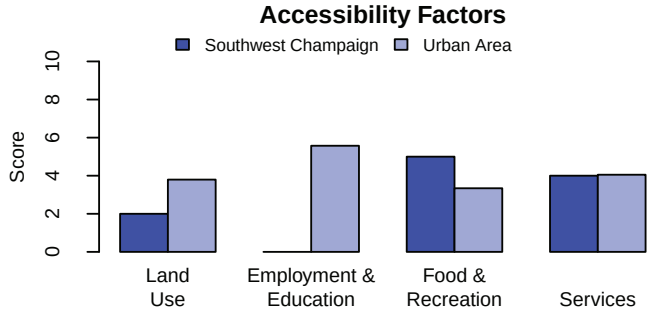
LRTP Public Input



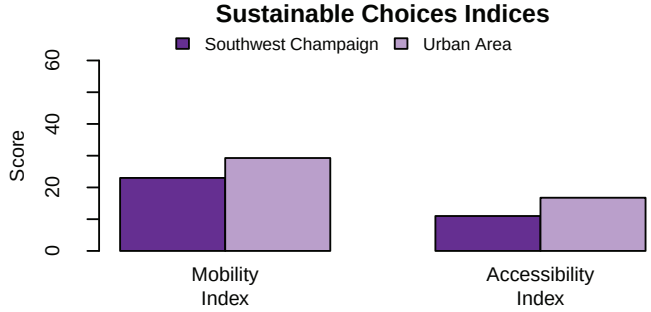
Mobility Factors



Accessibility Factors



Sustainable Choices Indices



Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

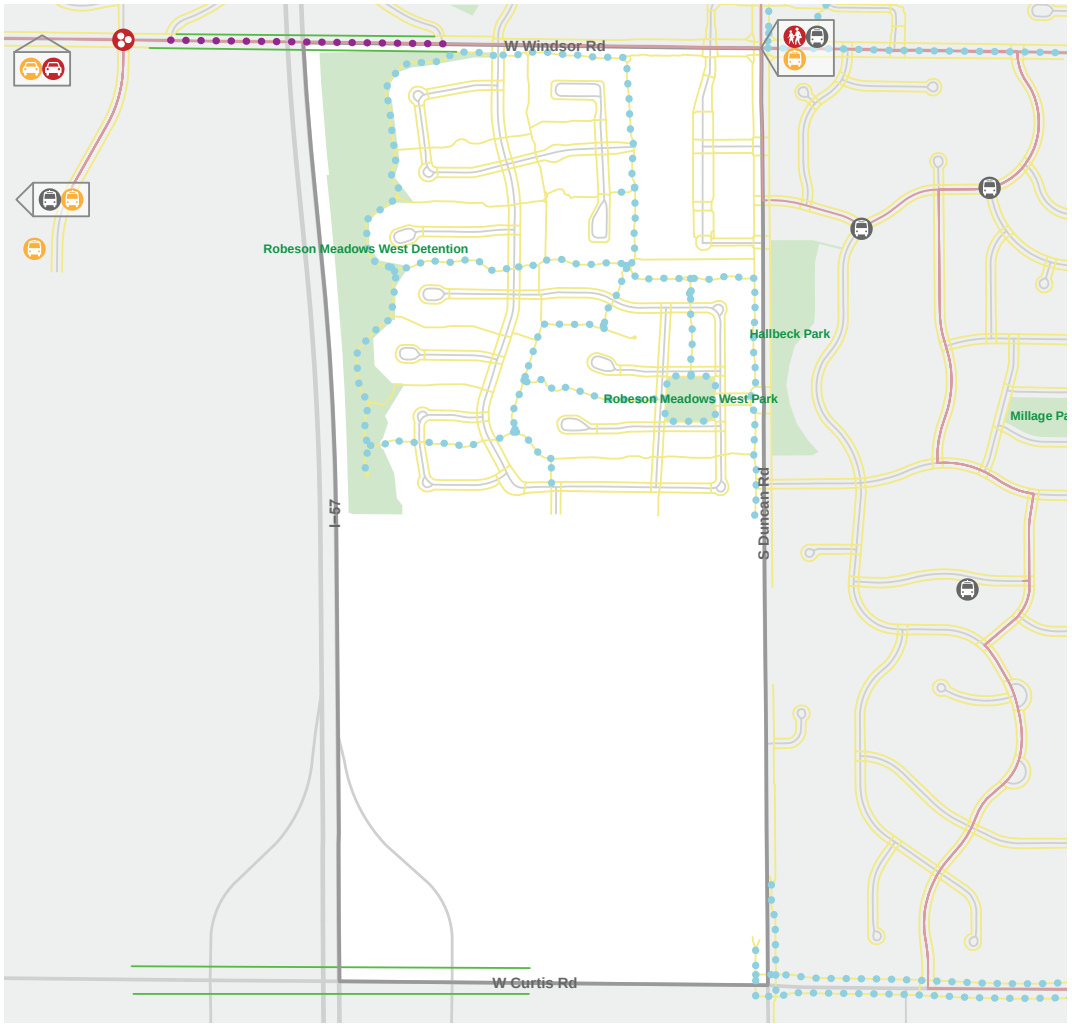
LRTP Public Input

Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous



SOUTHWEST CHAMPAIGN

The Southwest Champaign neighborhood, currently composed of a single TAZ bounded by Windsor, Duncan and Curtis Roads and I-57, scored below the urban area average on accessibility and slightly below the urban area average on mobility. Two of the three public comments received for this neighborhood related to the frequency of bus service, mirroring the neighborhood's low transit accessibility score.

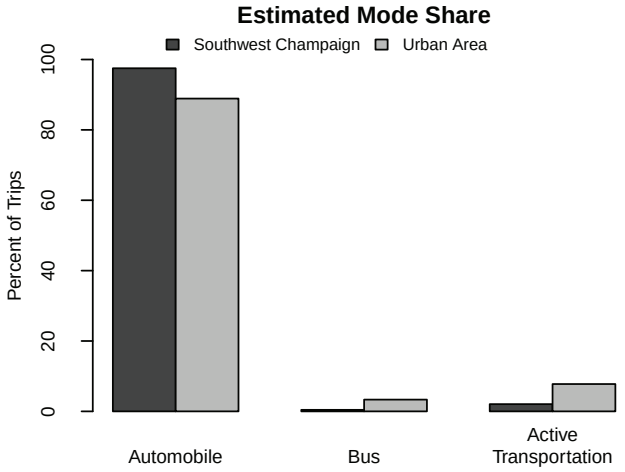
Another comment described the difficulty faced by pedestrians. While the interior of the neighborhood has sidewalks on both sides of every street, the bounding streets lack sidewalks in some areas, leading to a slightly below average pedestrian network score. Similarly, the large blocks and high proportion of cul-de-sacs decreased the overall street network score, increasing travel distances for transit and motorists.

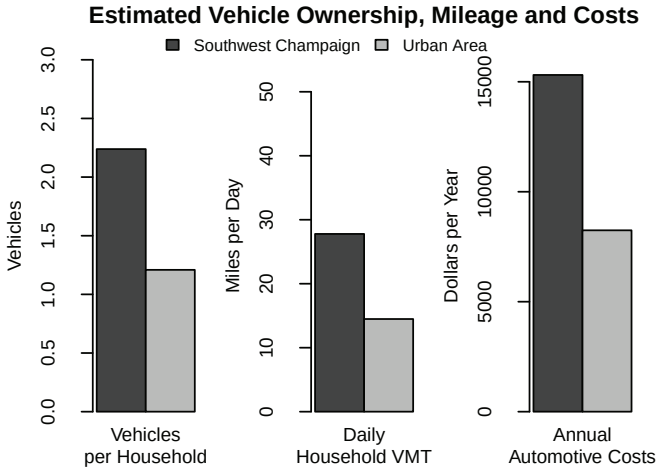
The high concentration of bicycle paths in the neighborhood led to a high score for the bicycle network within the TAZ. However, the mobility benefits of these bicycle facilities were limited by missing connections to the regional bicycle network.

The Crossing commercial area at the southwest corner of Windsor and Duncan Roads contributed to higher overall accessibility scores for Southwest Champaign, particularly for access to services. The neighborhood's proximity to Hallbeck Park also boosted its food and recreation accessibility score, despite the lack of a nearby grocery store.

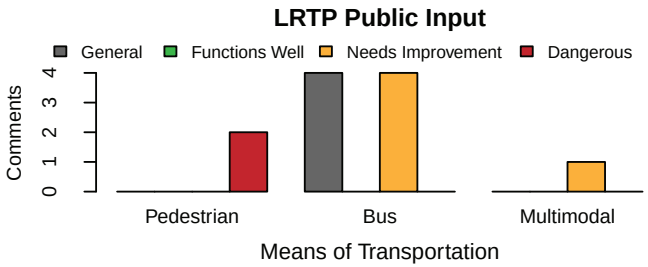
Land uses were somewhat more segregated in Southwest Champaign than in the rest of the urban area. In addition, the neighborhood was far from most jobs and schools.

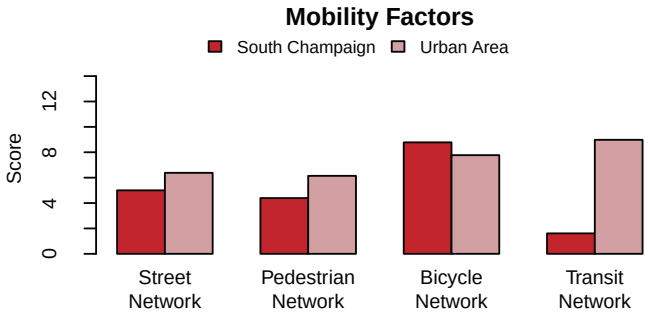
Reflecting its low accessibility and mobility scores, the neighborhood was heavily dependent on the automobile, with among the highest estimated vehicular transportation costs in the region. Strengthening the transit network and working to increase access to employment and education destinations could help to increase transportation options by make bus a viable means of transportation for residents.

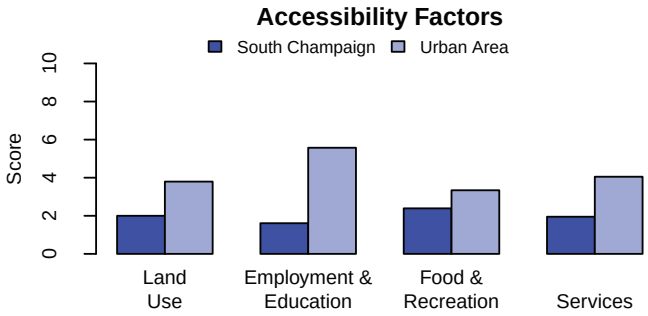


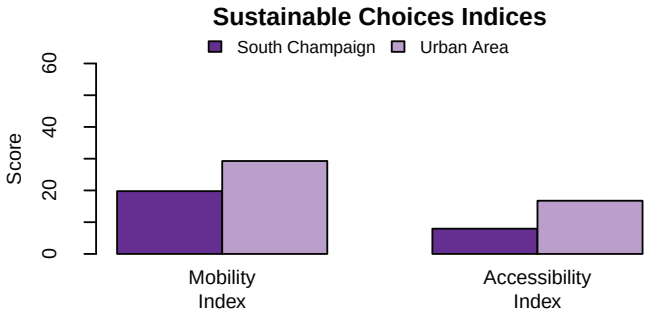


South Champaign









Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

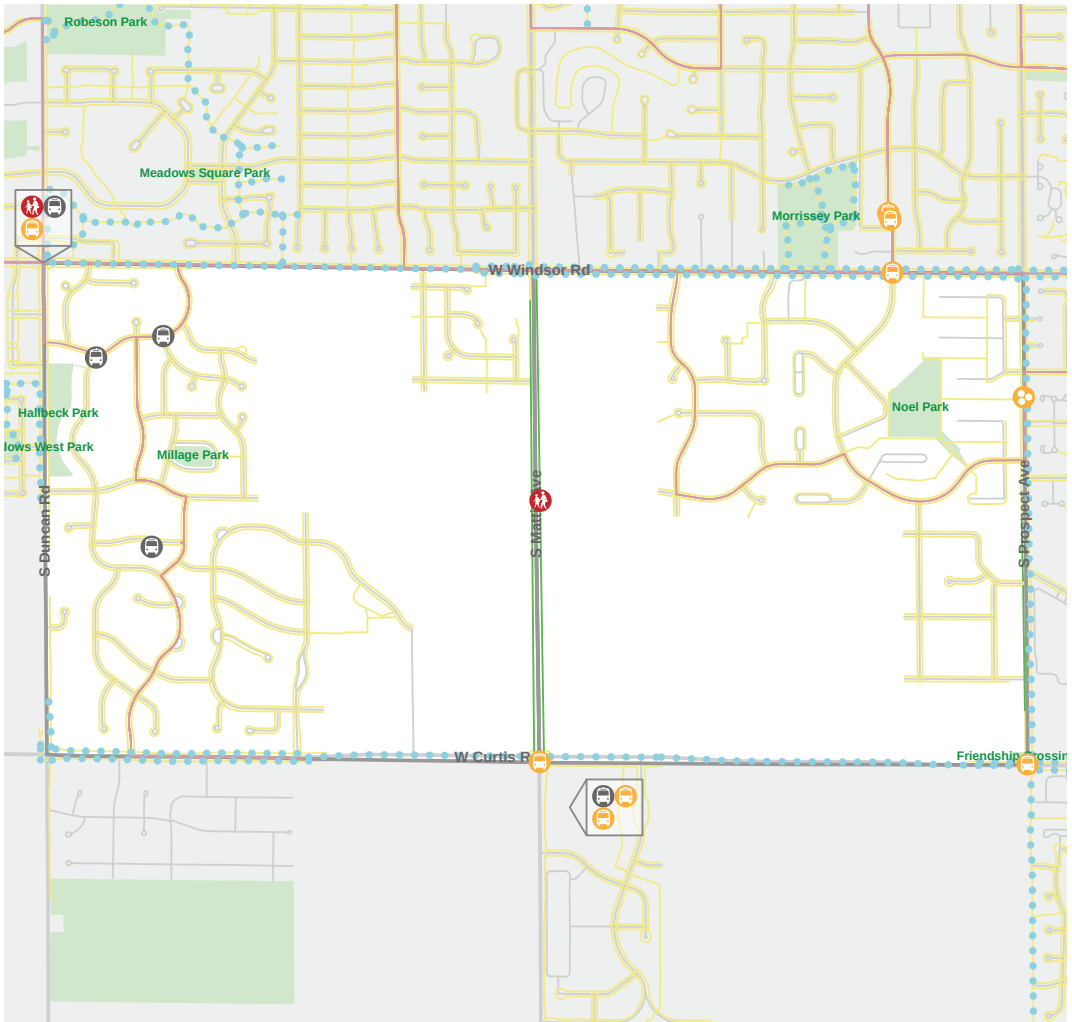
LRTP Public Input

Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous



SOUTH CHAMPAIGN

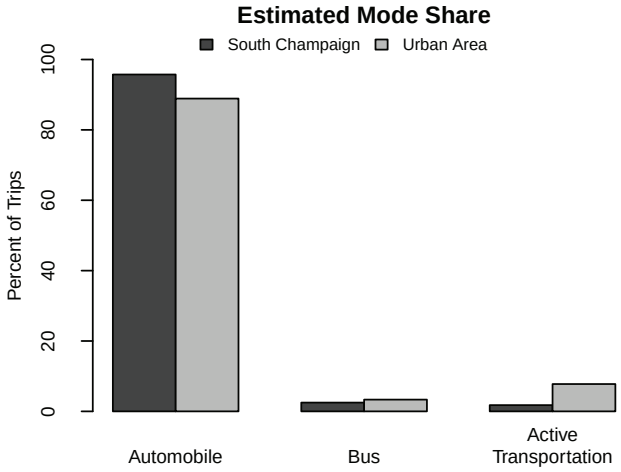
The South Champaign neighborhood, comprised of two large TAZs on either side of Mattis Avenue south of Windsor Road, scored below the urban average for mobility and well below the average for accessibility. A high proportion of the public comments received for the neighborhood focused on bus service, with several comments highlighting the need for more frequent service, particularly during evenings and weekends. These comments mirrored the low transit network score resulting from infrequent service and a relatively low concentration of routes.

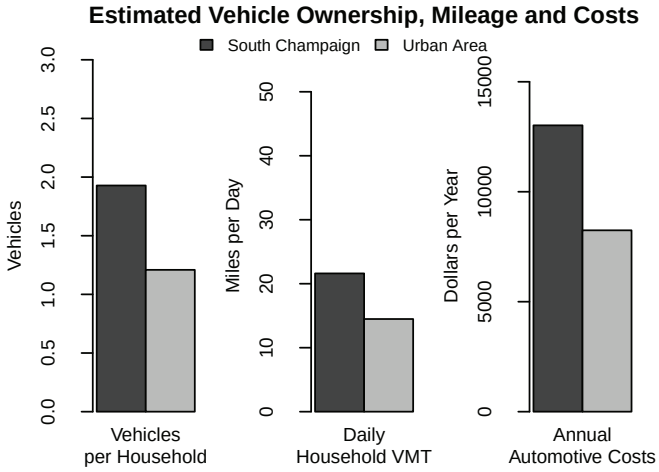
Public comments identified two locations in the neighborhood that respondents thought were dangerous for pedestrians. Despite good sidewalk coverage, the neighborhood received a below-average pedestrian network score due to low sidewalk connectivity and a lack of municipal streetlights. In addition, an irregular street pattern, relatively large blocks and low intersection density led to a below-average street network score.

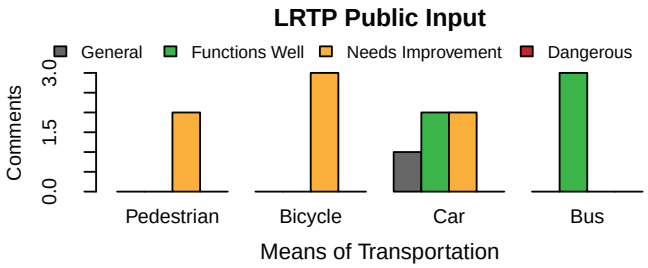
South Champaign scored slightly above average on its bicycle network thanks to bicycle facilities on Windsor Road, Curtis Road and Prospect Avenue. However, the neighborhood lacked internal bicycle facilities.

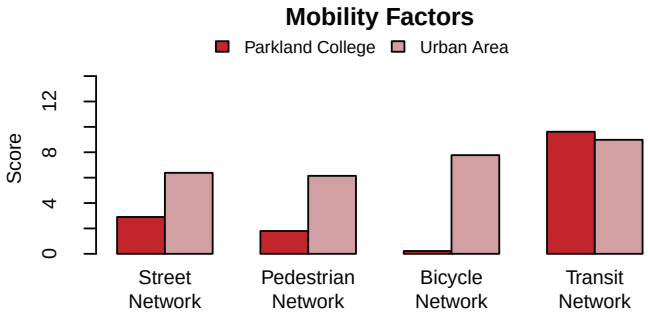
With a high concentration of residential uses, the neighborhood's land use mix was well below the urban area average, as were its accessibility scores for common destinations. Access to employment and education destinations was particularly problematic, as was access to grocery stores. The neighborhood had relatively high park access. The eastern portion of the neighborhood had a high diversity of service businesses, but the density of services throughout the neighborhood was relatively low.

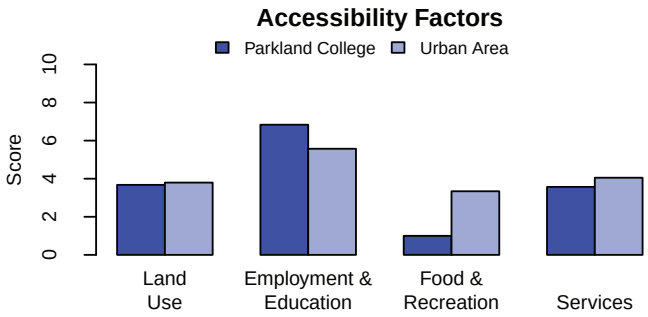
Based on estimated mode share, the neighborhood was highly auto-dependent with few walking and bicycling trips. High estimated automotive costs resulting from above-average car ownership and VMT highlighted the importance of increasing both mobility and accessibility in the neighborhood.

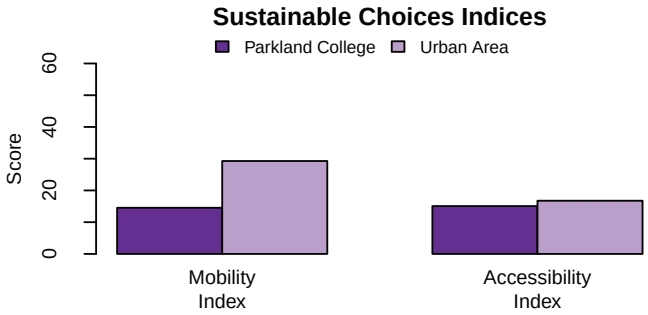












Parkland College

Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

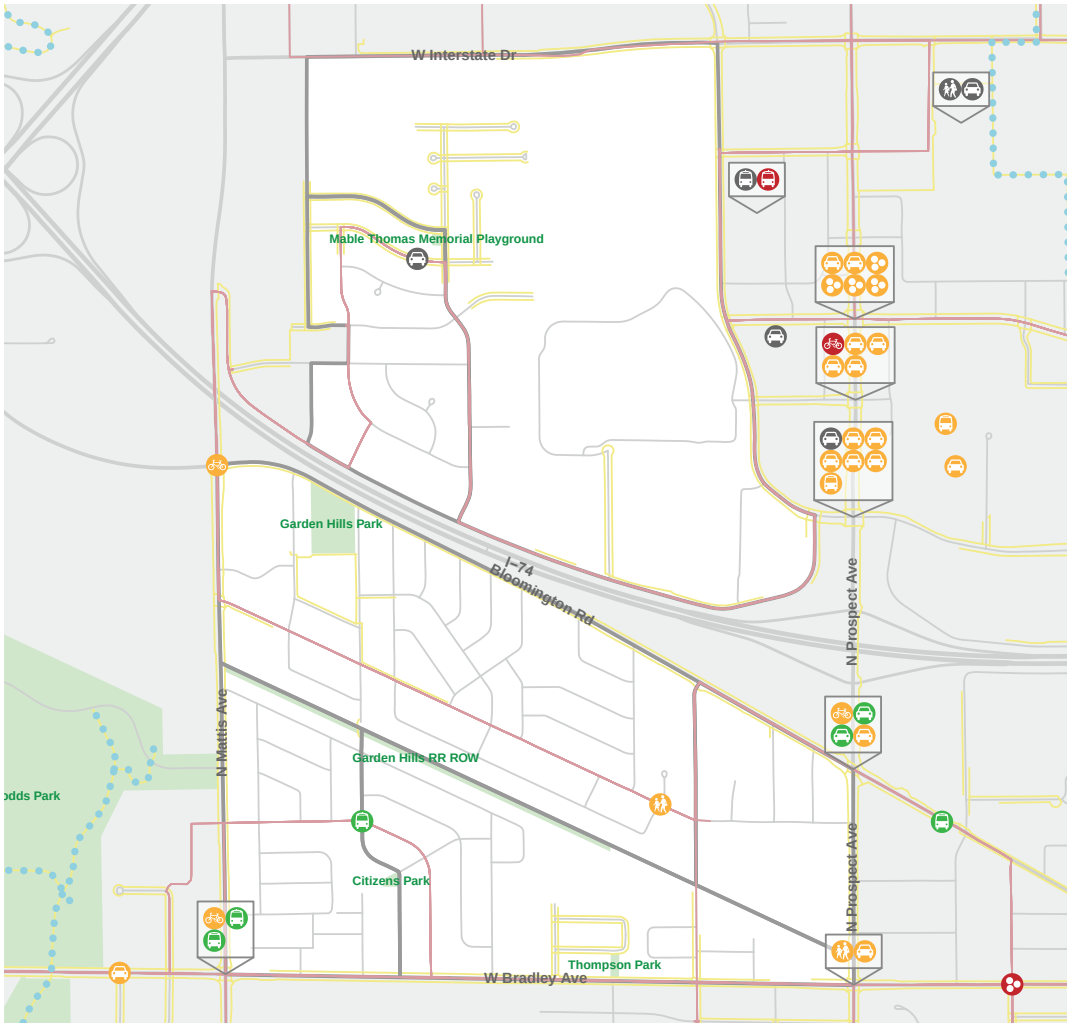
LRTP Public Input

Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous



PARKLAND COLLEGE

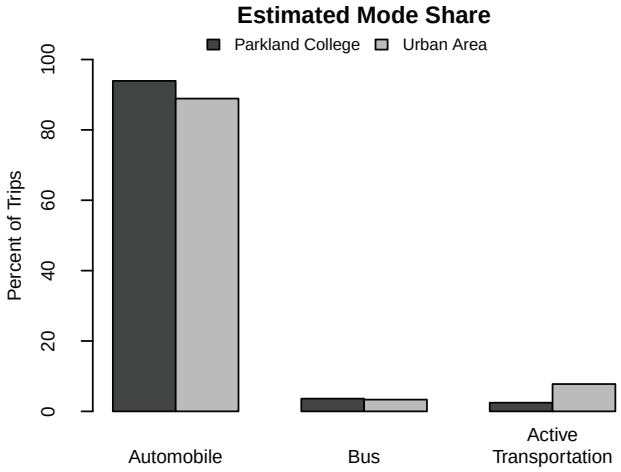
The Parkland College neighborhood, composed of six TAZs north of Bradley Avenue between Mattis Avenue and Prospect Avenue, scored below the urban area average for mobility and similar to the average for accessibility. Despite the name given to the neighborhood in the Champaign Tomorrow comprehensive plan, the TAZ containing the campus of Parkland College was not included in this analysis because of a lack of residential housing.

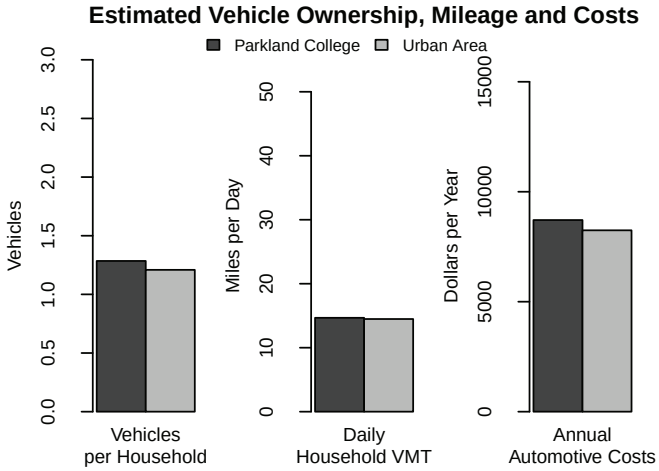
Many of the public comments received for the neighborhood described the difficulties faced by cyclists and pedestrians, particularly in reaching destinations such as Parkland College and the Interstate Research Park. These challenges were reflected in the neighborhood's low bicycle and pedestrian network scores. The absence of bicycle infrastructure and limited sidewalk coverage and connectivity were the major factors contributing to these low scores.

Public comments about driving and public transportation suggested that these modes generally worked well, though some comments noted heavy automotive traffic. However, the irregular street network and high proportion of cul-de-sacs, particularly in the northern TAZ, led to a street network score well below the urban area average.

With its proximity to the North Prospect commercial district and Garden Hills Elementary School, the neighborhood had above-average access to employment and education. However, these destinations were accessible primarily via driving and transit. Despite the presence of Meijer and Walmart on Prospect Avenue, the neighborhood scored well below average on access to food and recreation because these grocery stores were not within walking or bicycling distance of most housing units in the neighborhood.

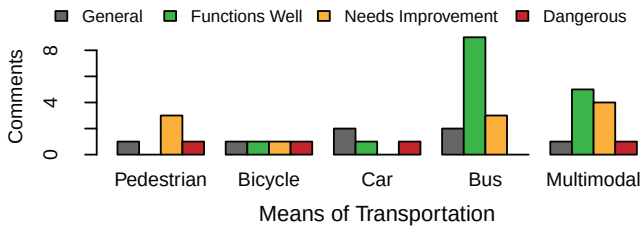
Though estimated mode share showed average bus ridership, active transportation trips were below average for the urban area. Strengthening the bicycle and pedestrian networks could help to encourage bicycling and walking in the neighborhood.



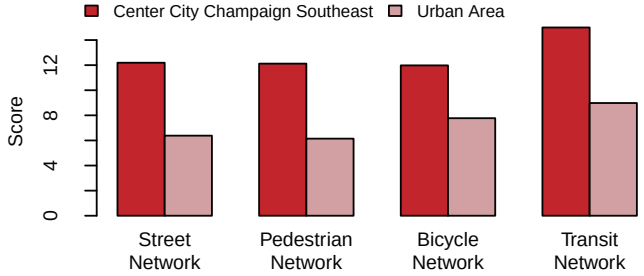


Center City Champaign Southeast

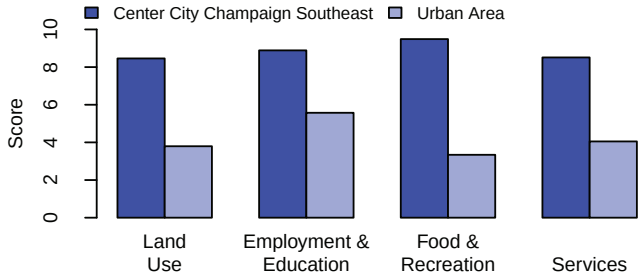
LRTP Public Input



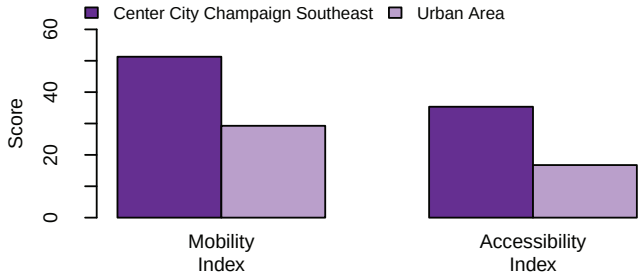
Mobility Factors



Accessibility Factors



Sustainable Choices Indices



Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

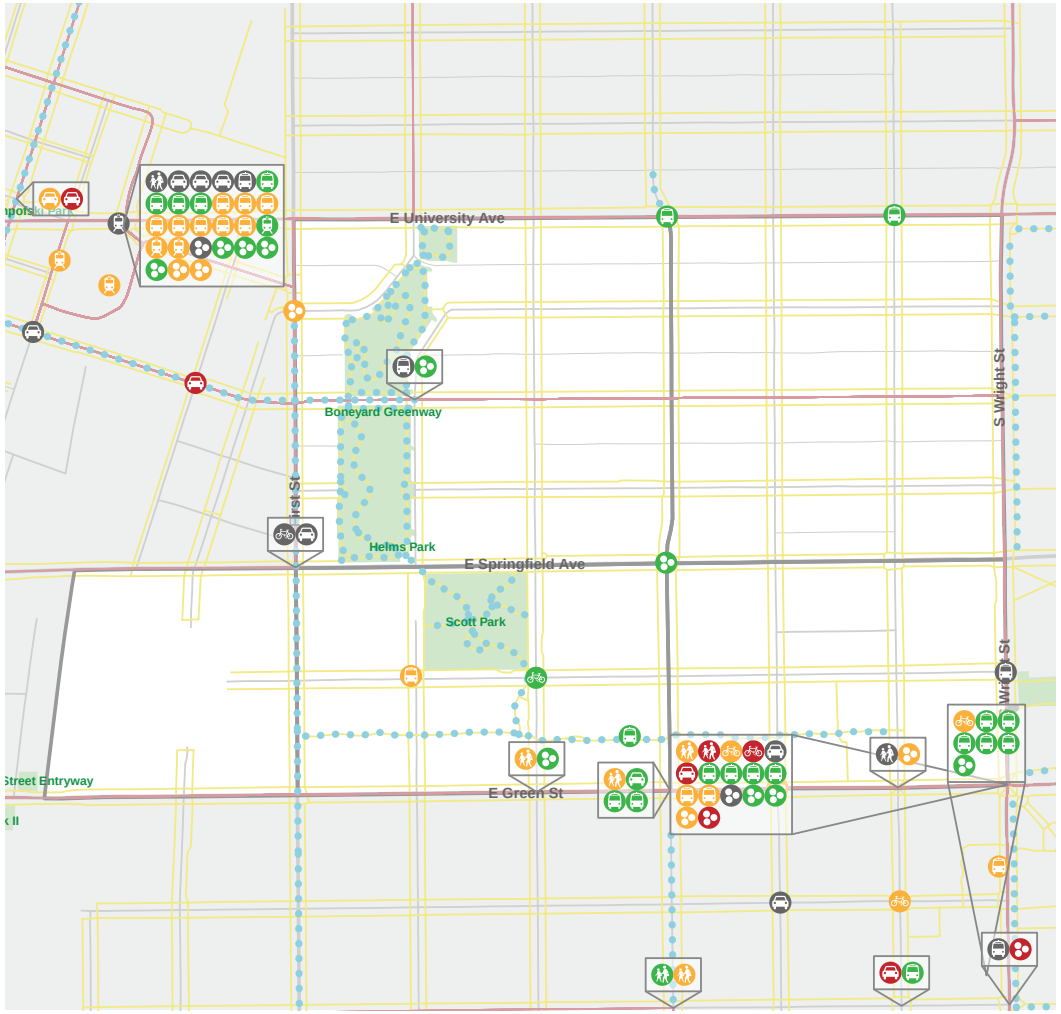
LRTP Public Input

Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous



CENTER CITY CHAMPAIGN SOUTHEAST

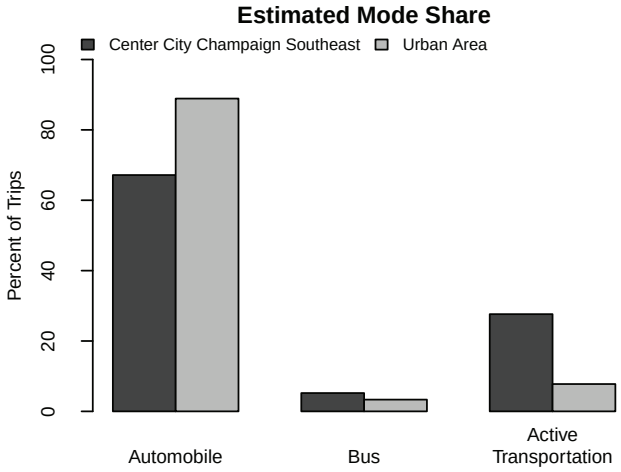
The Center City Champaign Southeast neighborhood consists of seven TAZs immediately southeast of downtown Champaign. The neighborhood scored well above the urban area average for both mobility and accessibility due to its compact urban form, extensive active transportation infrastructure, frequent transit service and proximity to a wide variety of destinations.

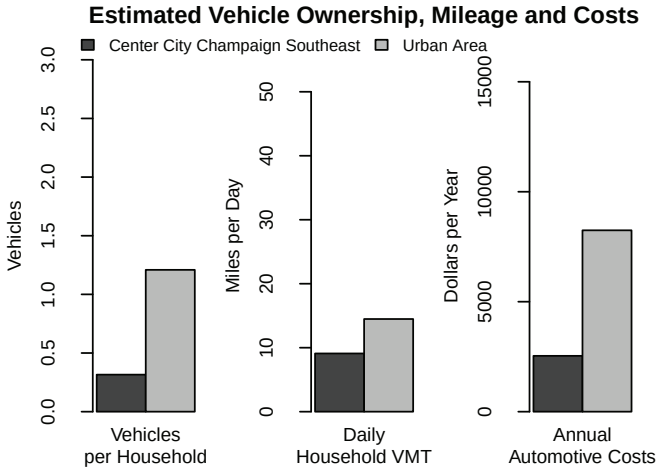
Because of its location between the University of Illinois campus and downtown Champaign, the neighborhood is served by a wide variety of bus routes, leading to its high transit network score. Many public comments described the bus system as functioning well, and suggestions for improvement mostly involved scheduling changes.

A grid-pattern street network with small blocks and sidewalks on both sides of the street led to above-average street network and pedestrian scores. A well-connected bicycle network linking residential areas to parks and activity centers yielded a high bicycle network score. While public comments for these modes were mixed, many of the comments labeled as dangerous or needing improvement related to the behavior of cyclists and pedestrians rather than the physical conditions on the street.

The neighborhood scored well above average in all of the accessibility factors, with high residential density, a diverse mix of land uses and access to a wide variety of destinations. Given the neighborhood's high mobility score, the analysis suggests that residents are able to reach these destinations by walking, bicycling, driving or riding transit.

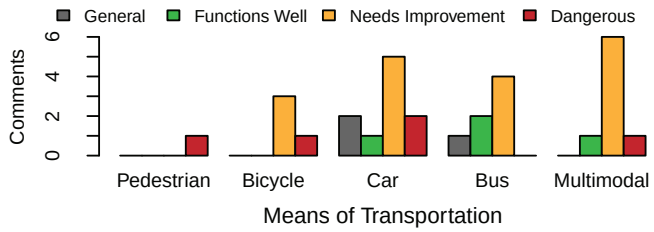
Estimated mode share and travel behavior variables reflected the neighborhood's high mobility and accessibility scores, with high levels of active transportation, low vehicle ownership and low VMT. With a wide variety of transportation options and nearby destinations, residents chose to walk, bicycle and ride the bus at above-average levels, leading to significantly below-average driving costs.



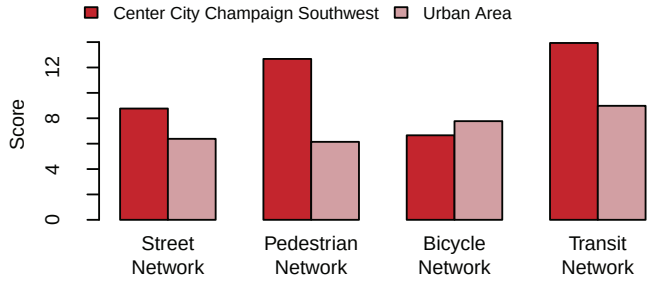


Center City Champaign Southwest

LRTP Public Input



Mobility Factors



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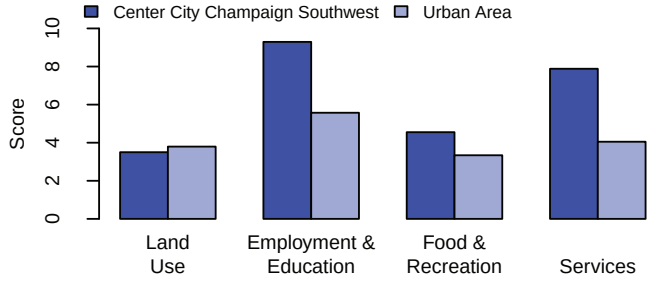
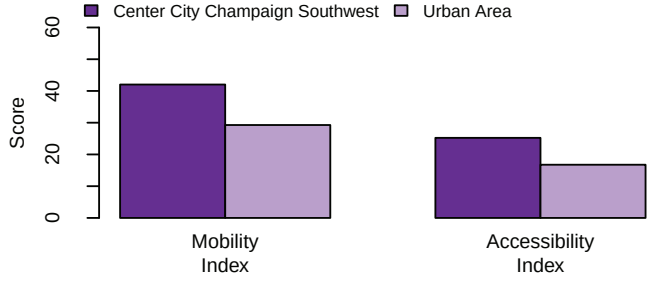


Sustainable Choices Indices



Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

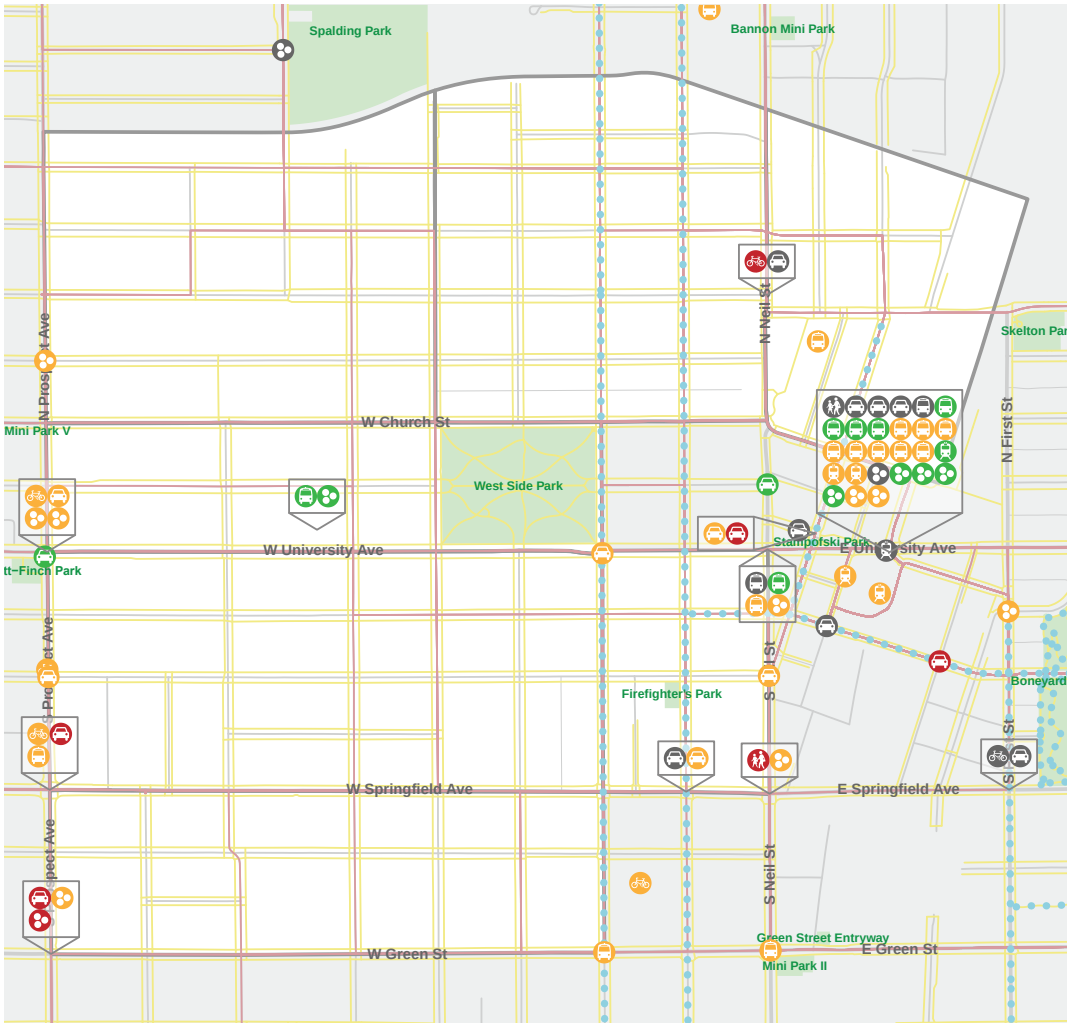
LRTP Public Input

Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous



CENTER CITY CHAMPAIGN SOUTHWEST

The Center City Champaign Southwest neighborhood contains seven TAZs and is located west of downtown Champaign. The neighborhood scored above the urban area average for both mobility and accessibility due to its strong pedestrian and transit networks and its ready access to employment, education and service destinations.

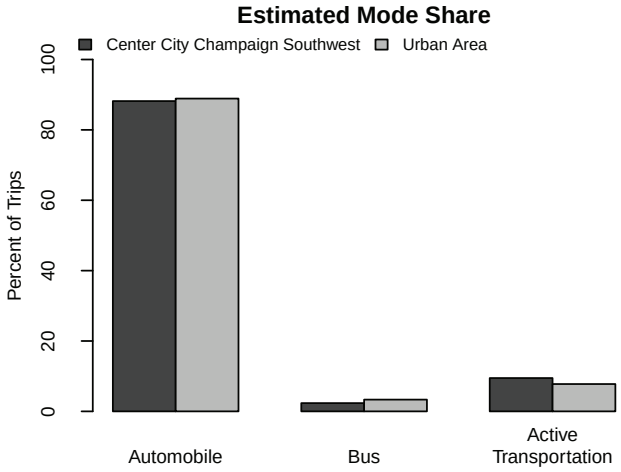
Because of its grid-like street structure, the neighborhood scored above average on its street network, though large blocks in the western portion of the neighborhood lowered the score somewhat. With high sidewalk coverage and many four-way intersections, the neighborhood had among the highest sidewalk connectivity in the urban area.

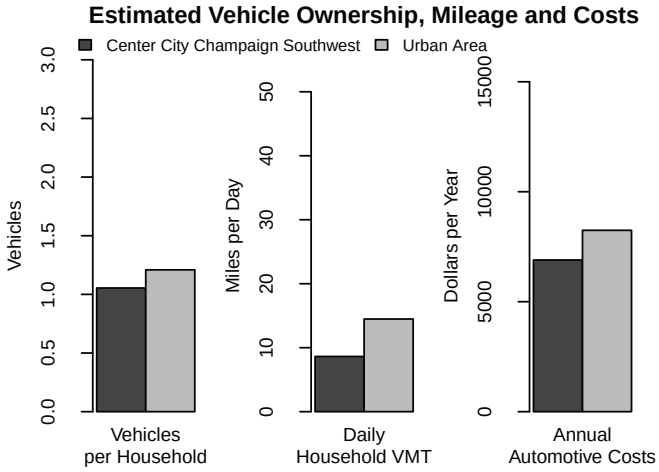
Bicycle lanes on State Street and Randolph Street increased the neighborhood's bicycle network score, but a lack of bicycle facilities in the western portion of the neighborhood led to a bicycle network score slightly below the urban area average. Transit access was strong throughout the neighborhood, with bus lines providing access to a wide variety of destinations via Illinois Terminal.

Public comments identified Neil Street and Prospect Avenue as problematic corridors in the neighborhood, highlighting points of conflict among modes of transportation. Respondents were divided in their responses, with some suggesting more lanes to ease congestion and others recommending road diets and additional bicycle lanes.

The neighborhood scored well above average in its access to employment, education and service destinations, with a high density and diversity of service businesses. Residents had strong parks access thanks to the central location of West Side Park, but access to grocery stores via active transportation was limited

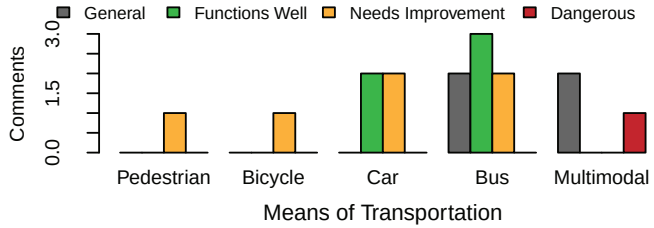
Despite above average mobility and accessibility, estimated mode share was similar to the urban area average. However, vehicle ownership and VMT were estimated to be below average, suggesting shorter trips and lower driving costs.



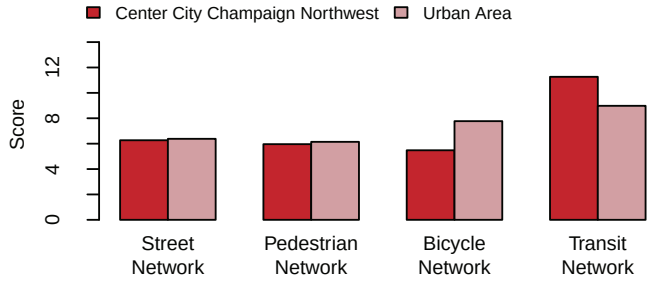


Center City Champaign Northwest

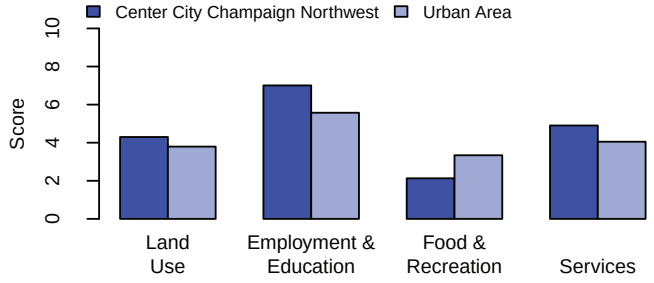
LRTP Public Input



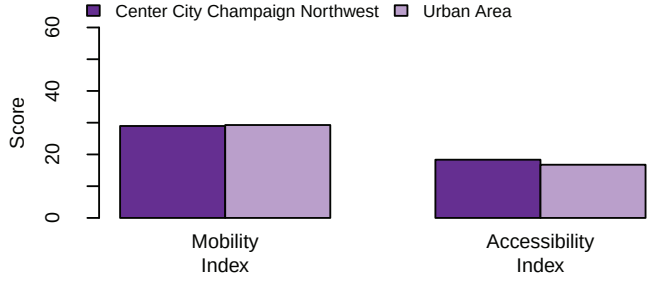
Mobility Factors



Accessibility Factors



Sustainable Choices Indices



Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

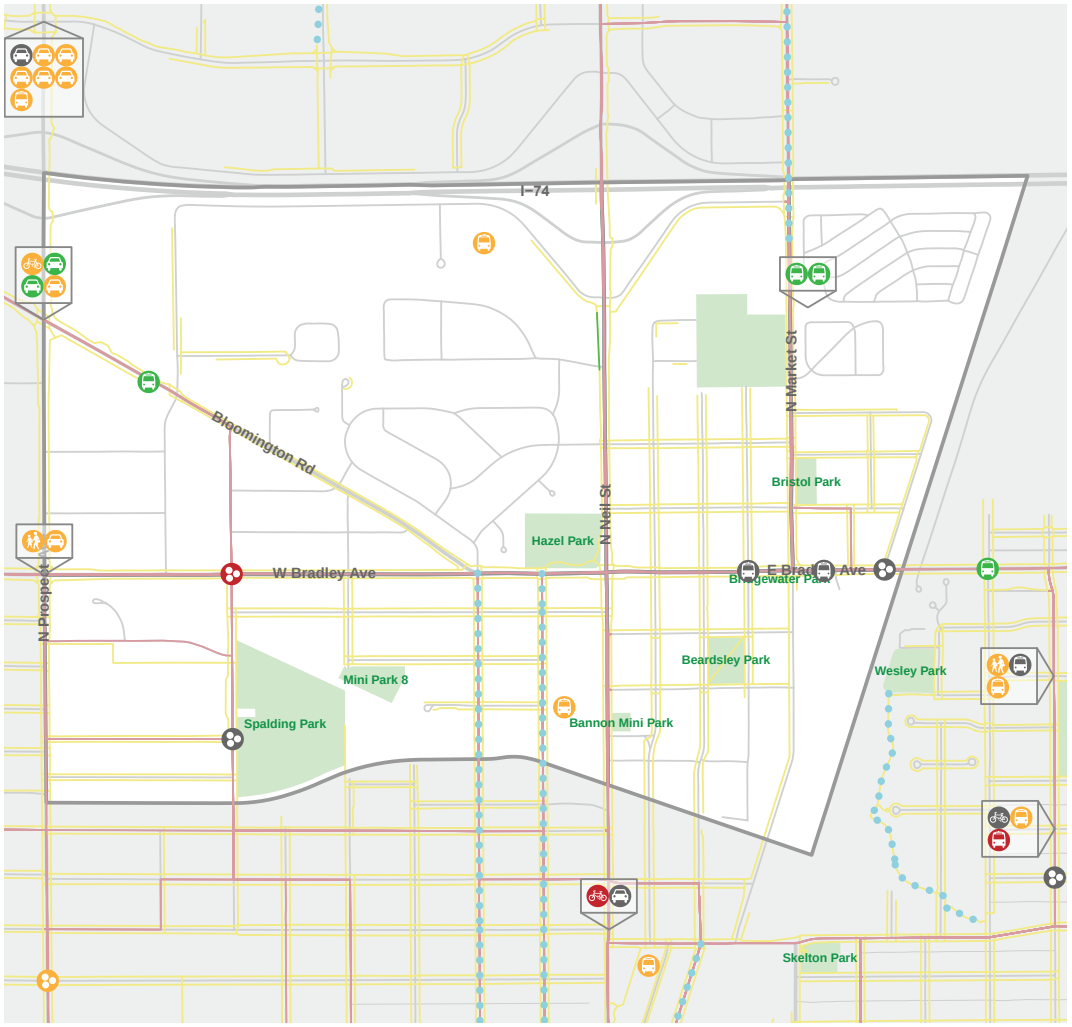
LRTP Public Input

Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous



CENTER CITY CHAMPAIGN NORTHWEST

The Center City Champaign Northwest neighborhood includes five TAZs located northwest of downtown Champaign and south of I-74. The neighborhood's overall mobility and accessibility were similar to the urban area average.

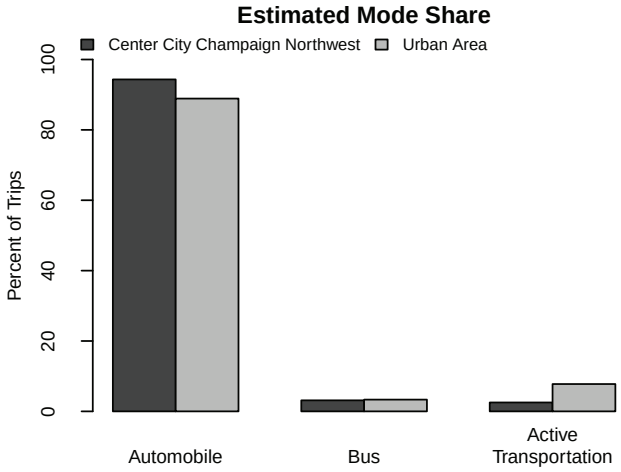
The street network was relatively regular in the southern portion of the neighborhood and irregular in the northern portion. Despite relatively high intersection density and street connectivity, large blocks lowered the neighborhood's street network score. Public comments were divided between those that felt that driving worked well in the neighborhood and those that felt that major streets were too congested.

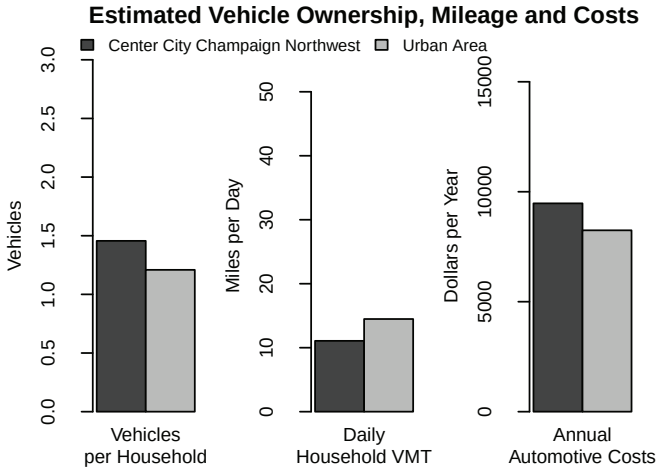
Sidewalks were available primarily in the southern portion of the neighborhood, and public comments identified key intersections with missing sidewalk links. Meanwhile, access to bicycle facilities was strongest in the eastern part of the neighborhood. As a result, the pedestrian network and bicycle network scores were similar to and below the urban area average, respectively.

Some public comments suggested that the bus network functioned well, while others identified areas that could benefit from new stops. Access to transit was strongest in the southern TAZs as well as in the Neil Street and Market Street corridors, and the neighborhood scored above the urban area average as a whole.

Residential density was relatively low throughout the neighborhood, and the land use mix was similar to the urban area average. Access to schools and employment destinations was above average, as was access to services. Many residents had ready access to parks, but access to grocery stores via walking and cycling was limited.

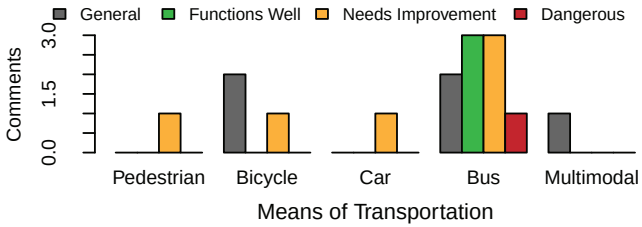
While the neighborhood's estimated auto mode share and vehicle ownership were above average, VMT was below the urban area average. Improving active transportation infrastructure, particularly in the northern TAZ, could help to encourage these modes.



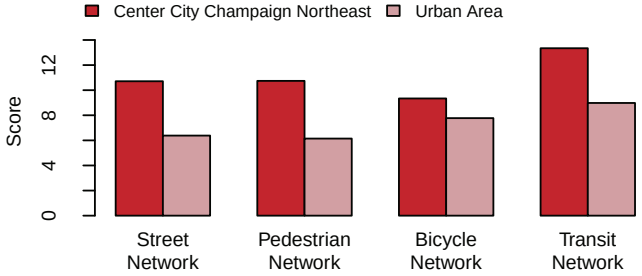


Center City Champaign Northeast

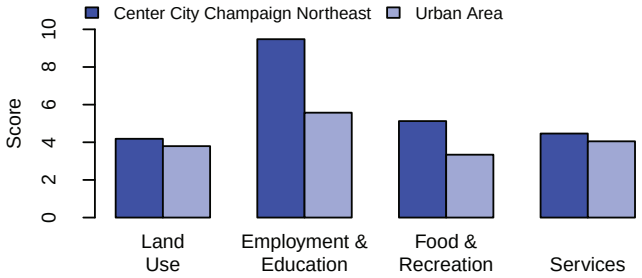
LRTP Public Input



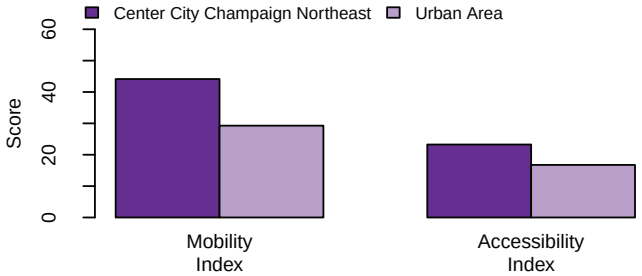
Mobility Factors



Accessibility Factors



Sustainable Choices Indices



Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

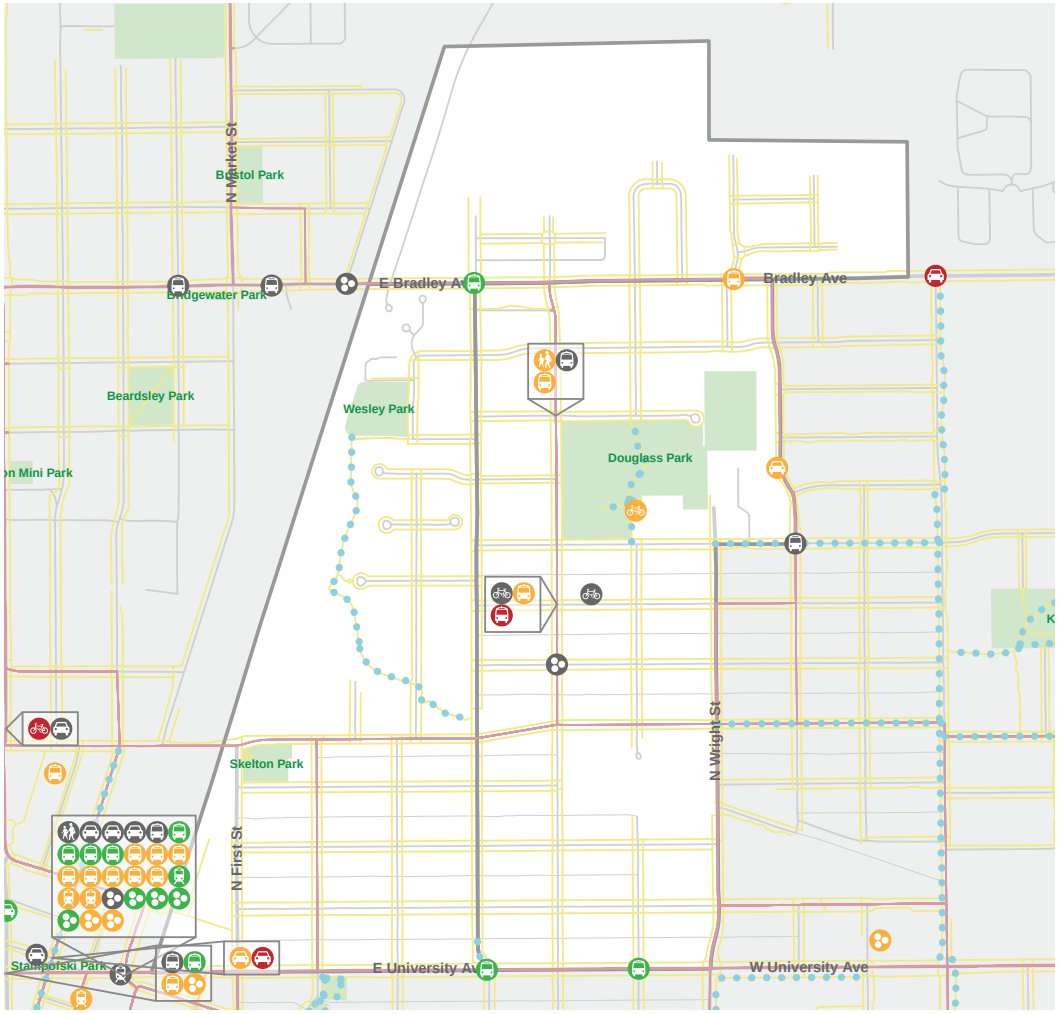
LRTP Public Input

Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous



CENTER CITY CHAMPAIGN NORTHEAST

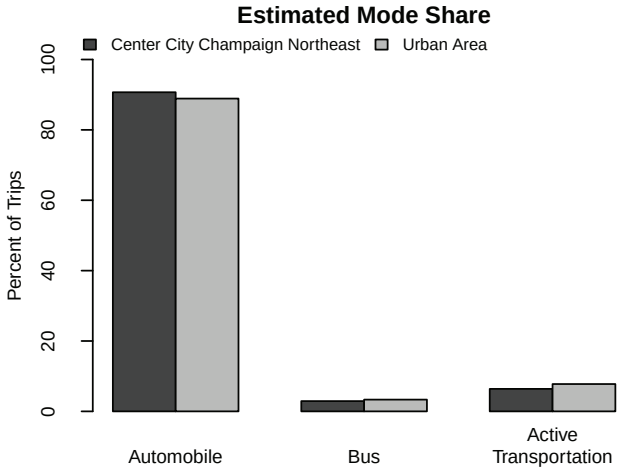
The Center City Champaign Northeast neighborhood consists of three TAZs north of University Avenue and northeast of downtown Champaign. The neighborhood scored above the urban area average for mobility and slightly above the average for accessibility.

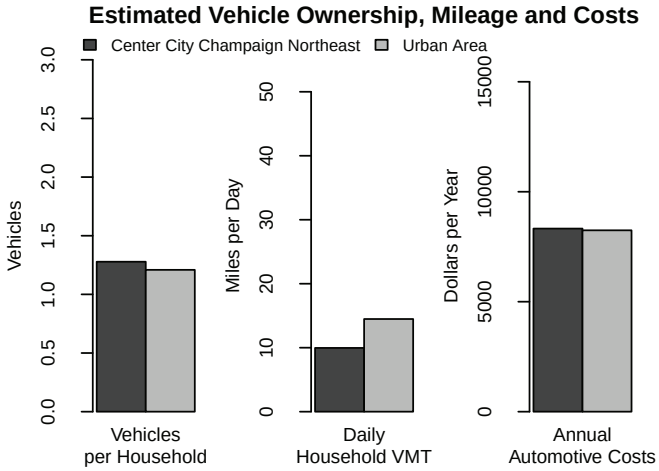
The neighborhood scored highly on transit connectivity as a result of multiple bus routes and its proximity to Illinois Terminal. Public comments about bus service were mixed depending on the respondent's desired destination. The street network scored above average, with small blocks, a high density of intersections and good connectivity within TAZs. However, east-west connectivity between TAZs was limited by the availability of railroad crossings.

The Center City Champaign Northwest neighborhood provided a high level of pedestrian mobility due to strong sidewalk connectivity and coverage and a high level of streetlight coverage. The bicycle network scored similar to the urban area average. While most residences had access to a bicycle facility, both bicycle facilities within the neighborhood were relatively isolated with limited connections to the regional bicycle network.

Both the land use characteristics and access to services in the neighborhood were similar to the urban area average. Most residents had easy access to a public park, but access to grocery stores via walking and bicycling varied throughout the neighborhood. In addition, the neighborhood had a high level of access to employment destinations due to its proximity to downtown Champaign and the University of Illinois.

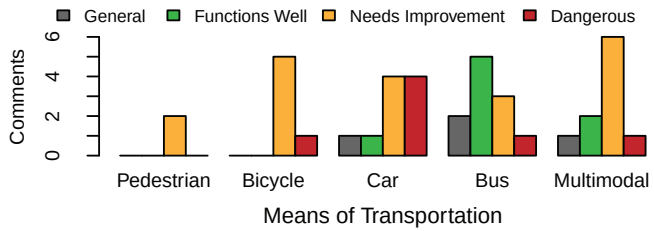
Despite its high mobility and accessibility, estimated mode share, vehicle ownership and automotive expenses in the neighborhood were similar to the urban area average. However, below-average VMT suggested shorter than average trips as a result of the neighborhood's proximity to destinations.



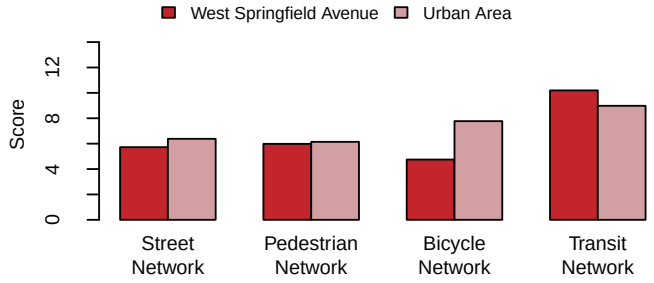


West Springfield Avenue

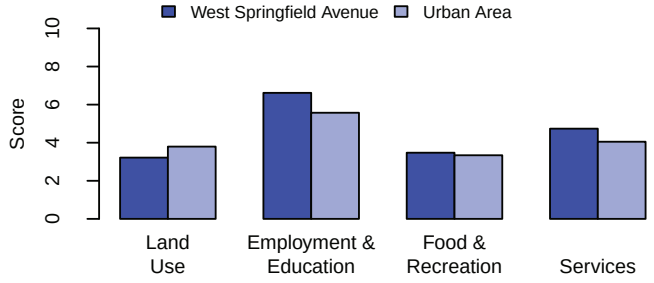
LRTP Public Input



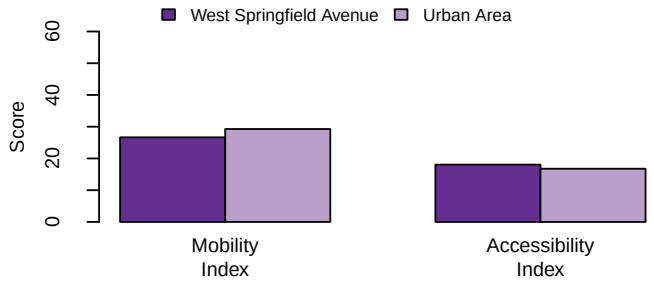
Mobility Factors



Accessibility Factors



Sustainable Choices Indices



Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

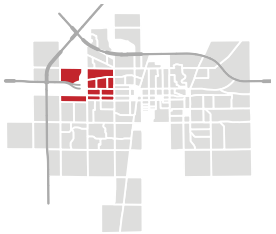
LRTP Public Input

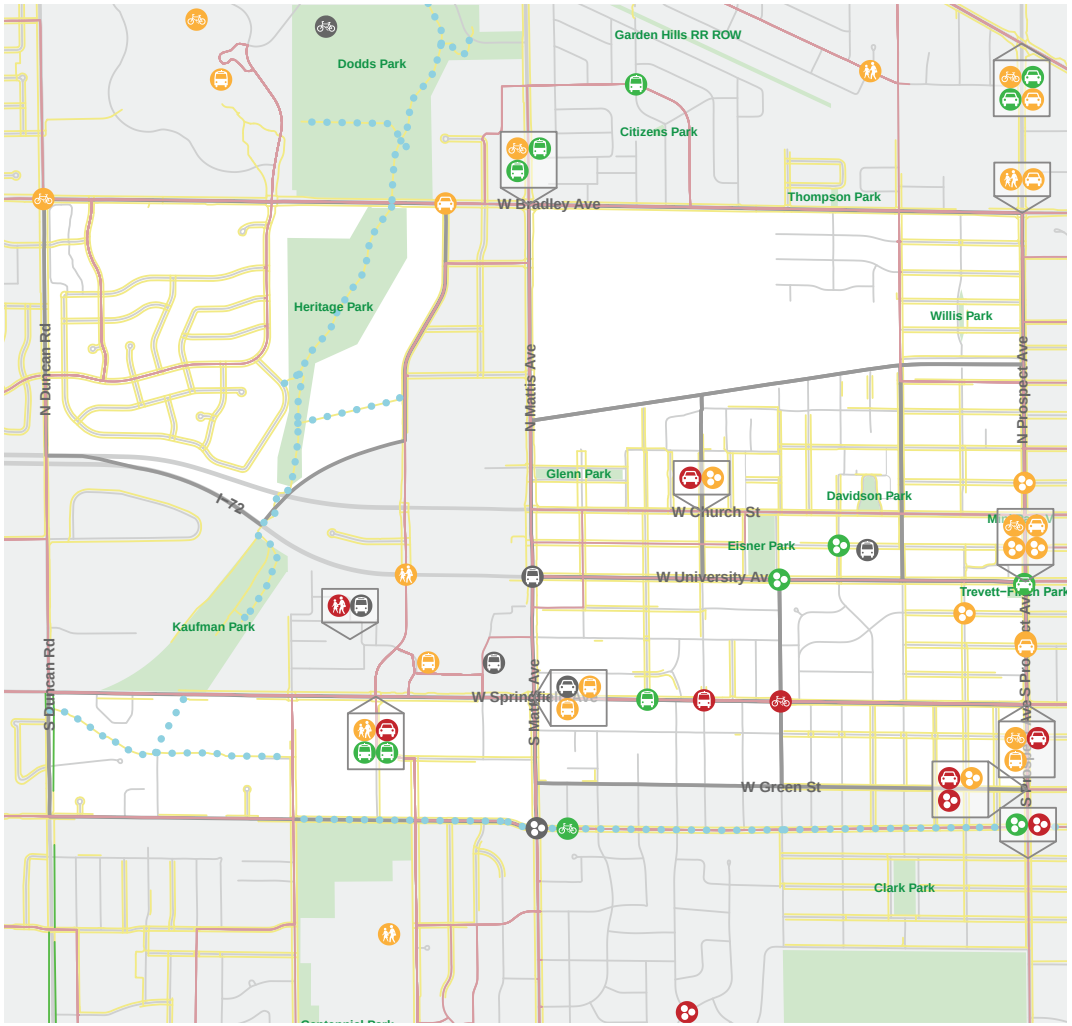
Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous





WEST SPRINGFIELD AVENUE

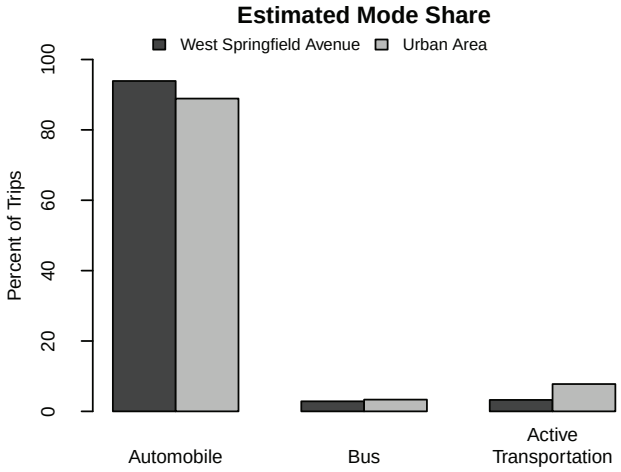
The West Springfield Avenue neighborhood consists of ten TAZs centered on the Country Fair shopping center. However, the central TAZs in the neighborhood, including the one containing Country Fair, are excluded from the analysis due to a lack of residential housing units. The neighborhood scored near the urban area average for both mobility and accessibility.

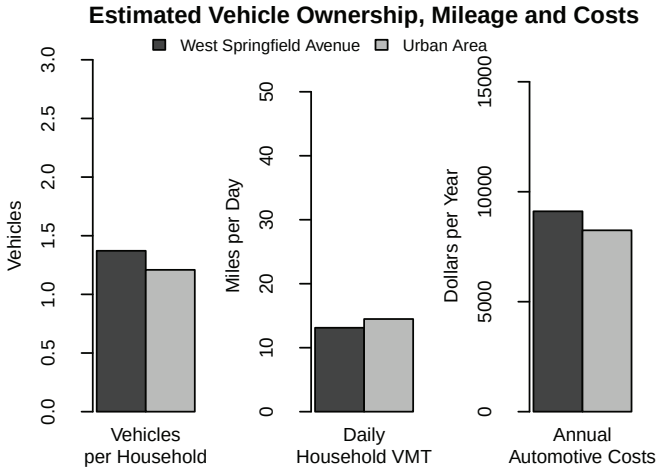
The street network scored similar to the urban area average. Public comments identified Prospect Avenue and Springfield Avenue as corridors presenting particular challenges for motorists due to lane width and other factors. The pedestrian network also scored similar to the urban area average, with significant gaps in the sidewalk network and streetlight coverage that varied from TAZ to TAZ.

The neighborhood's bicycle network scored below the urban area average, with connections to the regional bicycle network available only via Heritage Park and John Street. Public comments related to cycling were generally negative, and respondents identified high traffic volumes and lack of dedicated bicycle facilities as particular challenges. The transit network scored slightly above the urban area average, and bus-related public comments were split between those who thought the system functioned well and those who identified conflicts between buses and other modes.

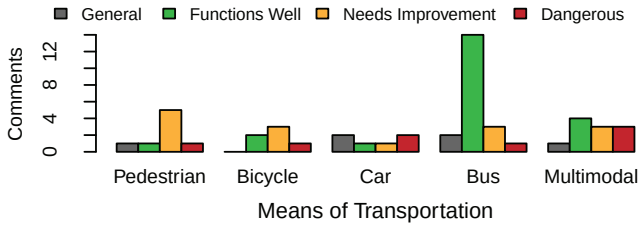
The West Springfield Avenue neighborhood was similar to the urban area average for all four accessibility factors. Of these factors, access to employment and education was the strongest due to the neighborhood's location between employment centers to the north and south and its proximity to several schools.

Estimated driving behavior was mixed, with above average vehicle ownership but below average VMT. Adding bicycle facilities and closing gaps in the sidewalk network could help to increase mobility in the neighborhood and boost its below average active transportation mode share.

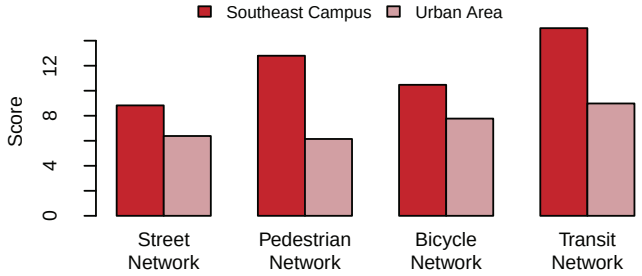




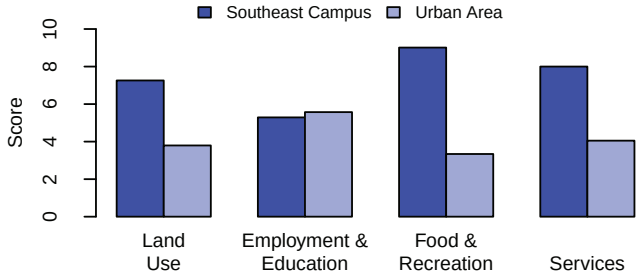
LRTP Public Input



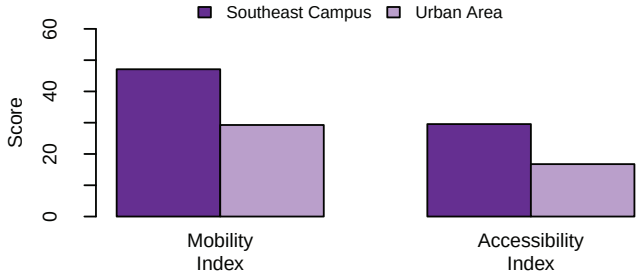
Mobility Factors



Accessibility Factors



Sustainable Choices Indices



Southeast Campus

Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

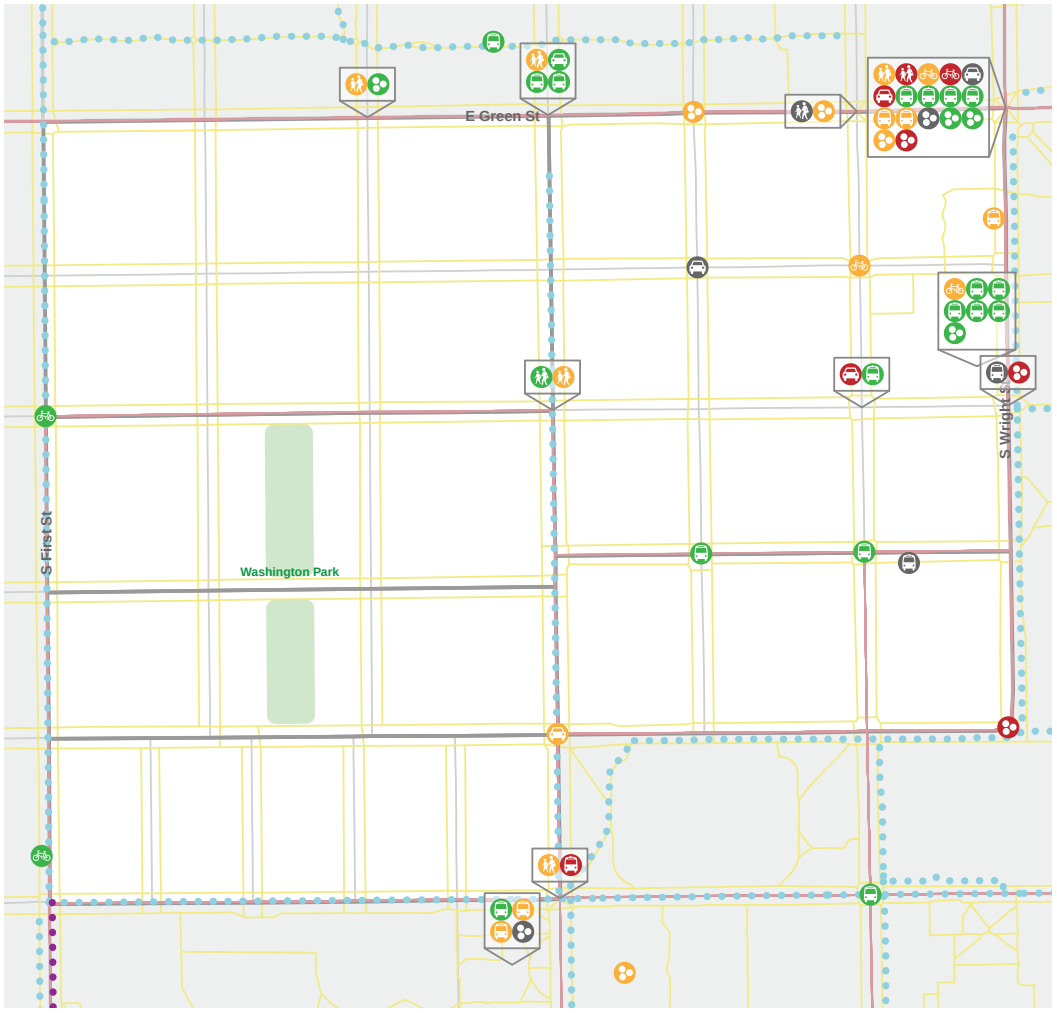
LRTP Public Input

Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous



SOUTHEAST CAMPUS

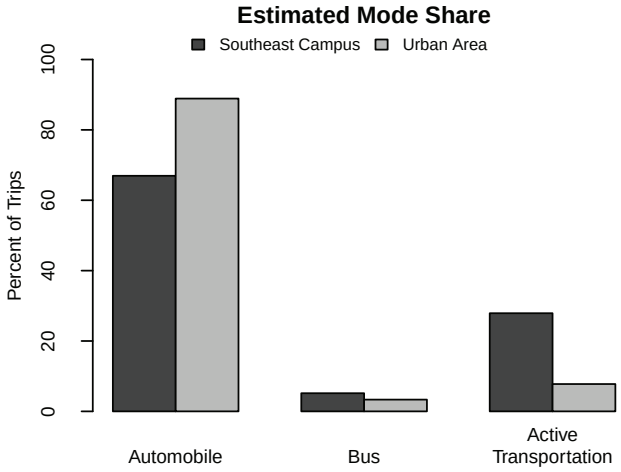
The Southeast Campus neighborhood is made up of six TAZs south of Green Street between First Street and Wright Street in Champaign. Due to its robust active transportation infrastructure, frequent transit service and high level of access to most common destinations, the neighborhood scored well above the urban area average for both mobility and accessibility.

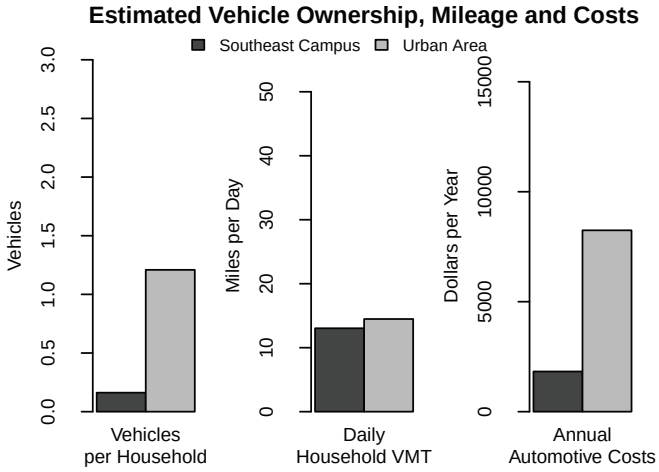
Many of the public comments received for the neighborhood were focused on Green Street and Wright Street, two of the major activity centers in the campus area. Respondents overwhelmingly felt that the bus system functioned well, mirroring the neighborhood's high transit network score. Comments for other modes were mixed, though many of the comments in areas flagged as needing improvement related to behavior of cyclists and pedestrians rather than infrastructure.

With a connected network of bicycle facilities and sidewalks along both sides of every street, the neighborhood scored well above average for both the pedestrian and the bicycle networks. The pedestrian experience was particularly enhanced by a high level of municipal streetlight coverage and well-connected sidewalks.

The western TAZs in the South Campus Northeast neighborhood had among the highest residential densities in the region. All the TAZs in the neighborhood had access to parks and multiple grocery stores as well as a diverse array of services. Access employment was generally strong; access to K-12 schools was limited.

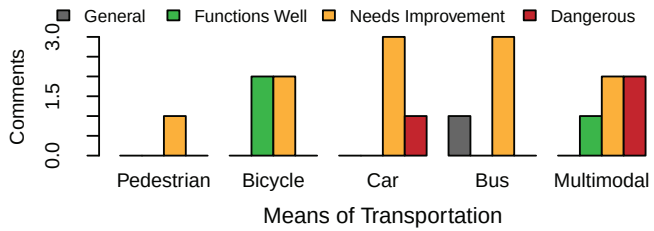
High mobility and high accessibility in the South Campus Northeast neighborhood combined to provide residents with ample opportunities to walk, bicycle, drive or ride the bus, as reflected in the neighborhood's above average bus and active transportation mode shares. This combination of mobility and accessibility was particularly important for the neighborhood's student population since it corresponded to low levels of car ownership and significantly reduced driving costs.



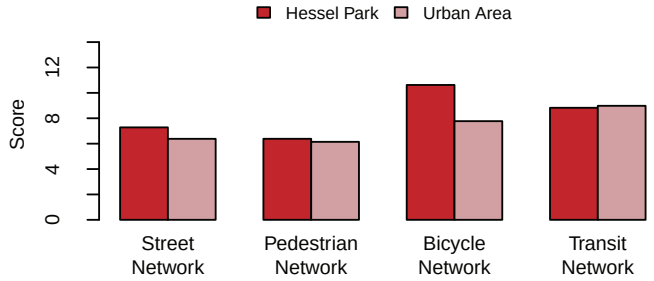


Hessel Park

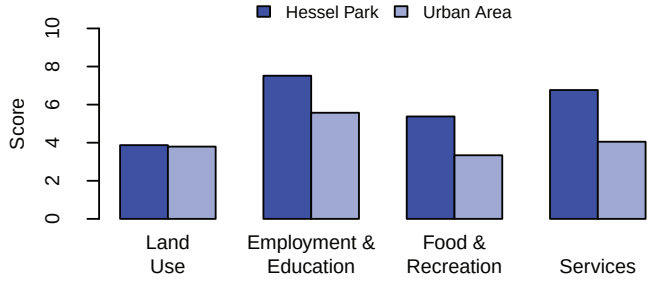
LRTP Public Input



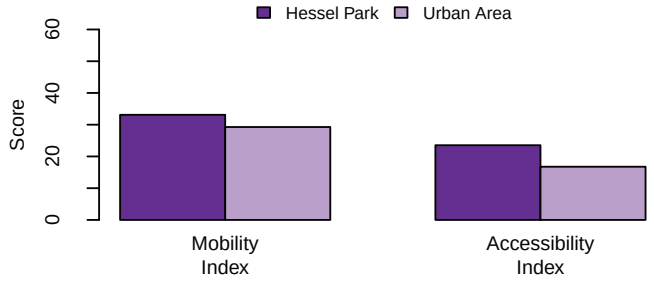
Mobility Factors



Accessibility Factors



Sustainable Choices Indices



Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

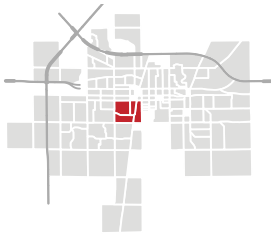
LRTP Public Input

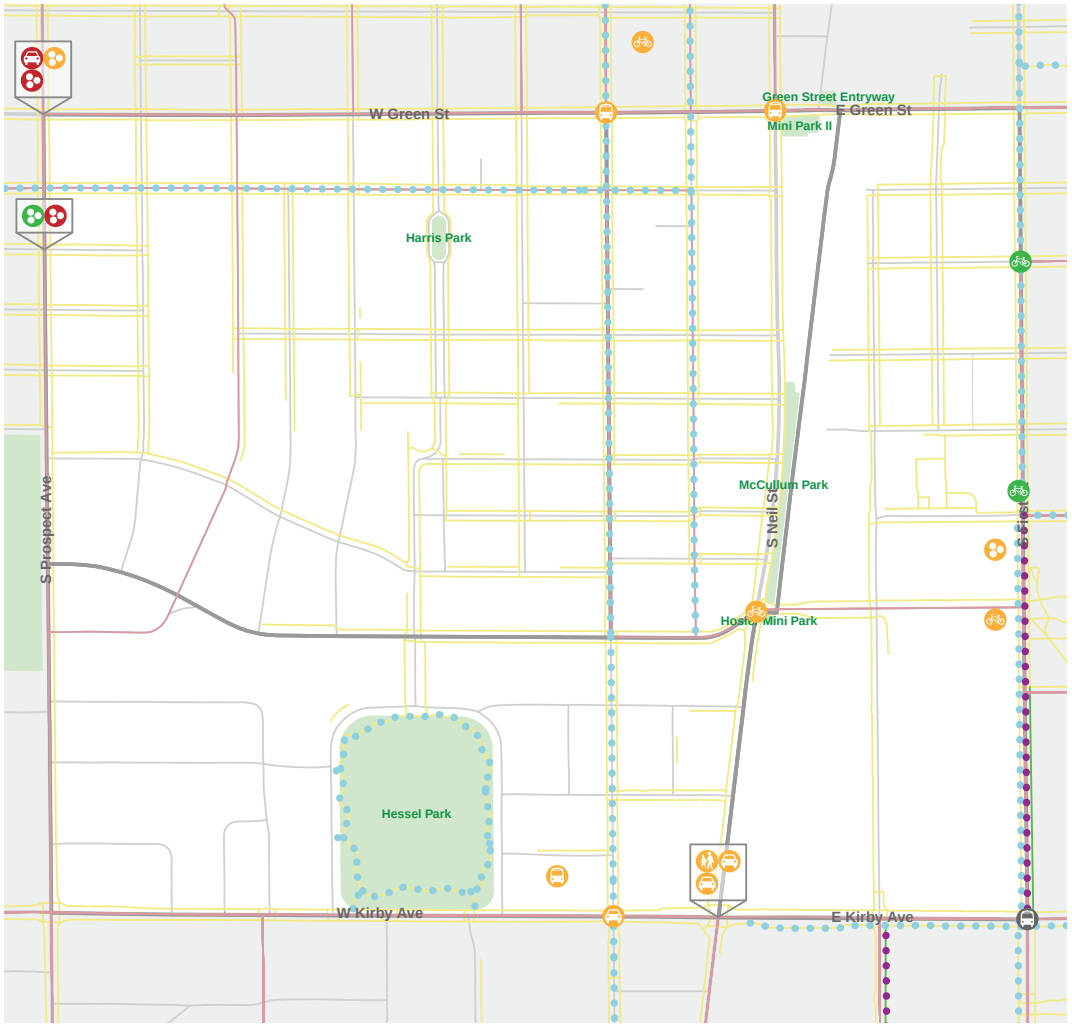
Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous





HESSEL PARK

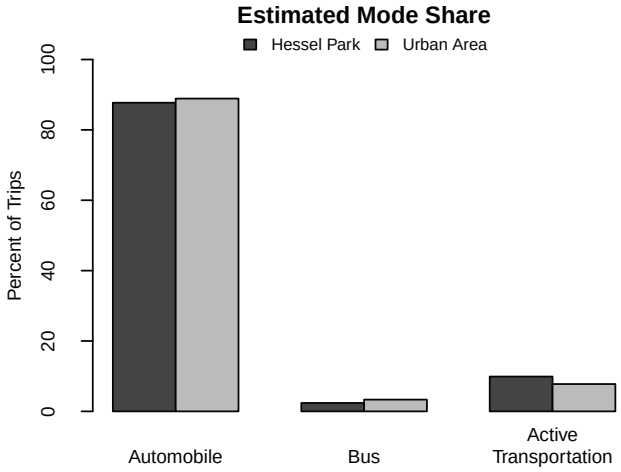
The Hessel Park neighborhood is composed of four TAZs along Neil Street between Green Street and Kirby Avenue in Champaign. The neighborhood scored similar to the urban average for mobility and slightly above average for accessibility due to its proximity to the University campus and destinations along Kirby Avenue.

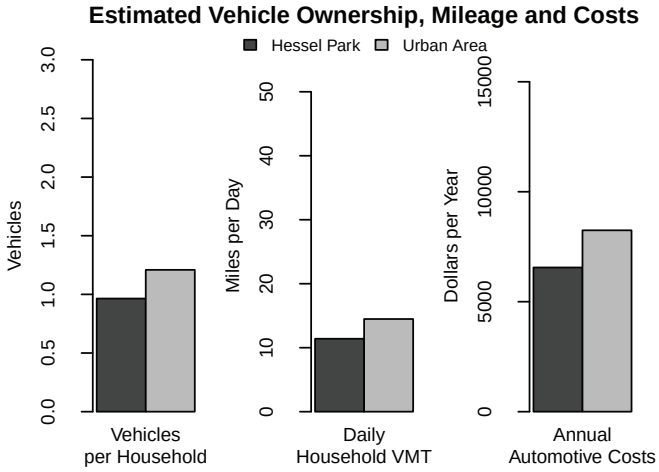
The Hessel Park neighborhood had a relatively connected street network with medium intersection density, but large blocks led to a street network score similar to the urban area average. Public comments described the timing of stoplights, particularly near the intersection of Kirby Avenue and Neil Street, as problematic. The northern portion of the neighborhood had a connected sidewalk network, but lack of sidewalks in the southern TAZ and gaps in streetlight coverage led to an average pedestrian network score.

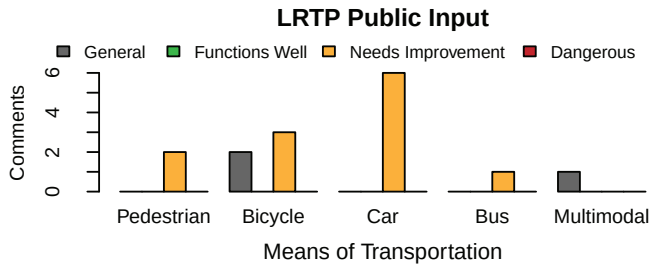
Most residents in the neighborhood had easy access to bicycle facilities. Some comments described these facilities as functioning well, while others identified pavement condition and signal detection as issues in need of improvement. Meanwhile, transit connectivity was high in the eastern TAZs and lower in the western TAZs. Public comments described service delays and the location of some stops as challenges for transit riders.

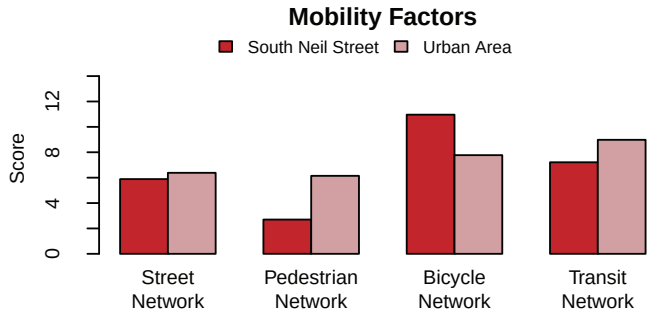
Most residents had access to employment and education, but public comments described the section of Prospect Avenue between Green Street and Daniel Street as being dangerous, particularly for students walking to South Side Elementary School. Access to food and recreation was highest near Hessel Park and the neighboring County Market. Meanwhile, access to services was above average, particularly near campus.

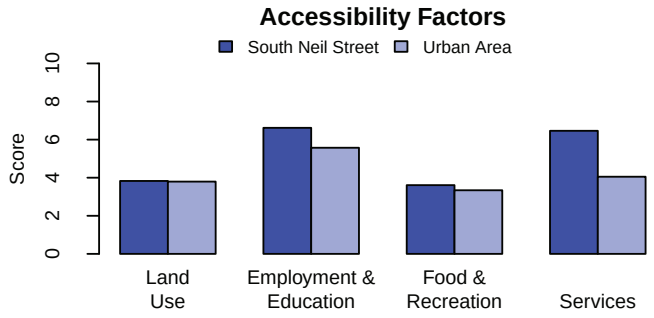
While the Hessel Park neighborhood had relatively high levels of access to services, lack of sidewalks, infrequent transit service and problematic intersections in some area limited mobility for residents. As a result, estimated mode share was similar to the urban area average. However, vehicle ownership, use and costs were below average, perhaps due to the presence of nearby destinations.

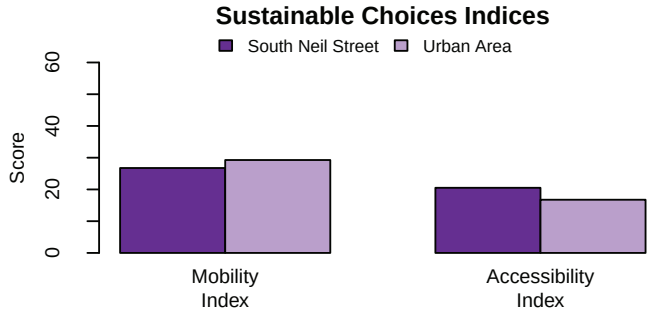












South Neil Street

Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

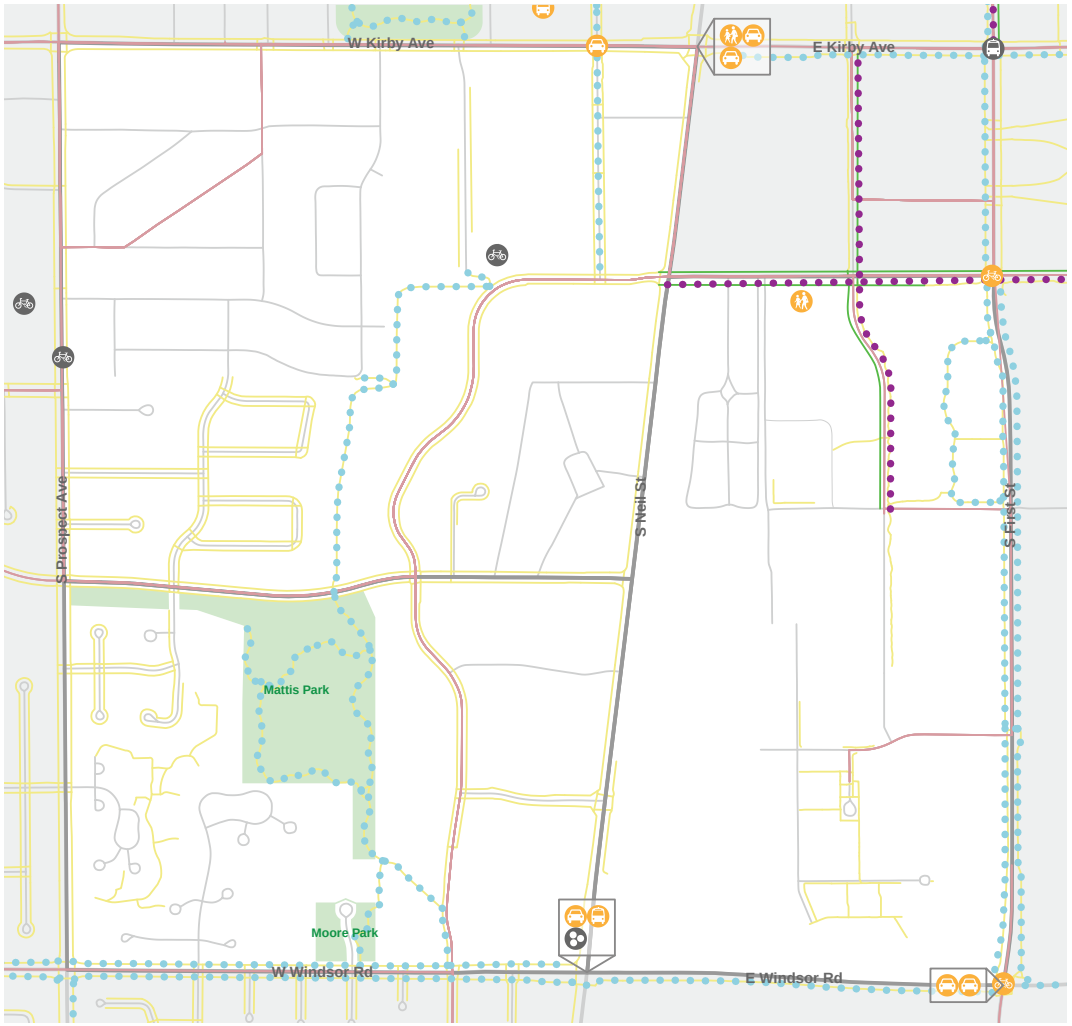
LRTP Public Input

Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous



SOUTH NEIL STREET

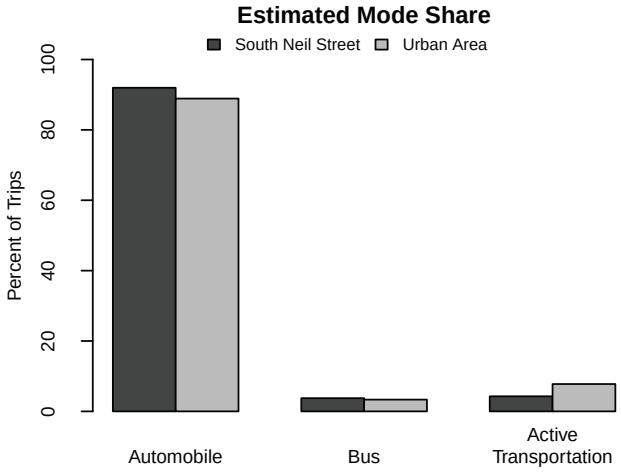
The South Neil Street neighborhood contains three TAZs located along Neil Street between Kirby Avenue and Windsor Road in Champaign. The neighborhood scored slightly below the urban area average for mobility and slightly above for accessibility.

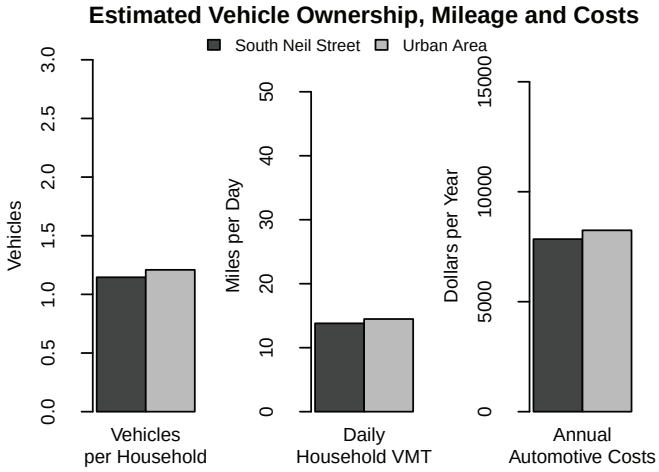
The neighborhood's irregular pattern of streets and large blocks led to a slightly below average street network score. However, most public comments related to driving focused on stoplight timing issues, particularly in the Neil Street corridor. Sidewalks were available in parts of the neighborhood but missing in many others, an issue identified in public comments.

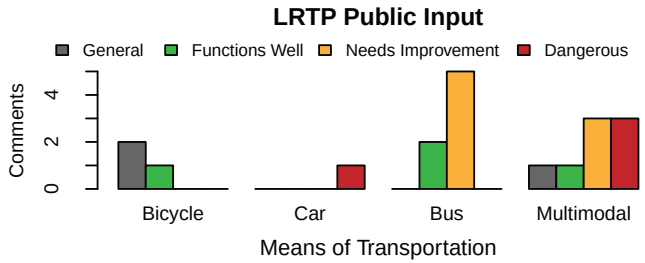
Despite the neighborhood's extensive network of bicycle facilities, which led to an above-average bicycle network score, public comments identified several intersections in need of better bicycle infrastructure. And while bus routes served most parts of the neighborhood, less frequent service led to a below-average transit network score.

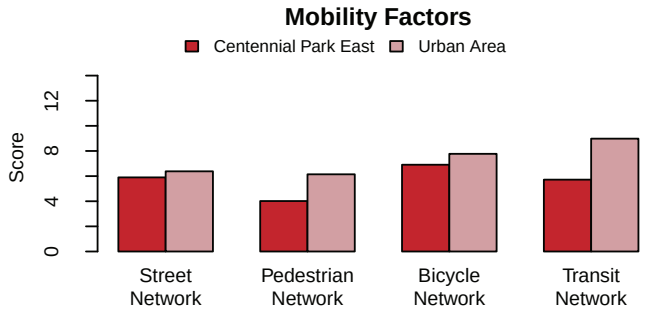
Residents of the South Neil Street South neighborhood had access to most common destinations at levels similar to the urban area average. Access to services was above average, particularly for the part of the neighborhood adjacent to Kirby Avenue. Access to employment centers and schools was slightly above average, and residents living west of Neil Street had ready access to public parks. However, parks access was limited for those living east of Neil Street.

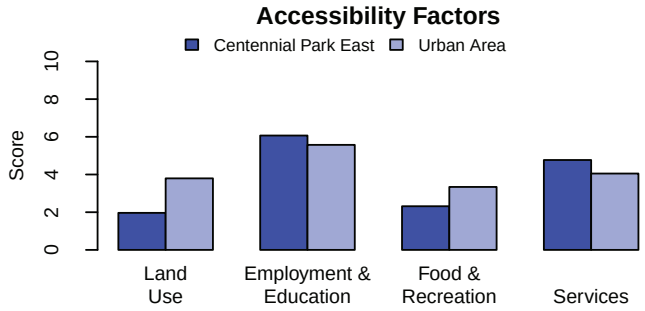
Though the South Neil Street neighborhood was similar to the urban area average for both mobility and accessibility, estimated active transportation mode share was lower than average. Addition of sidewalks throughout the neighborhood and improved access to parks and other destinations east of Neil Street could improve transportation choices for residents and further decrease vehicle-related transportation costs.

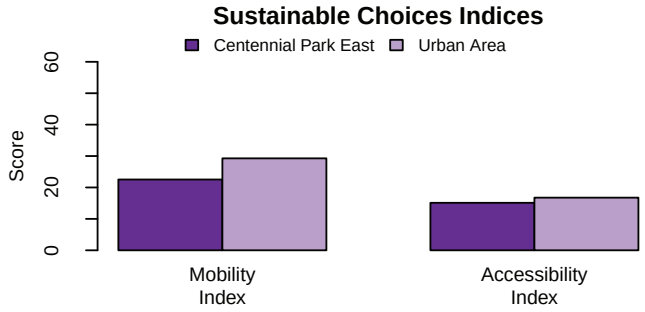












Centennial Park East

Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

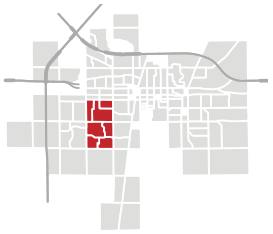
LRTP Public Input

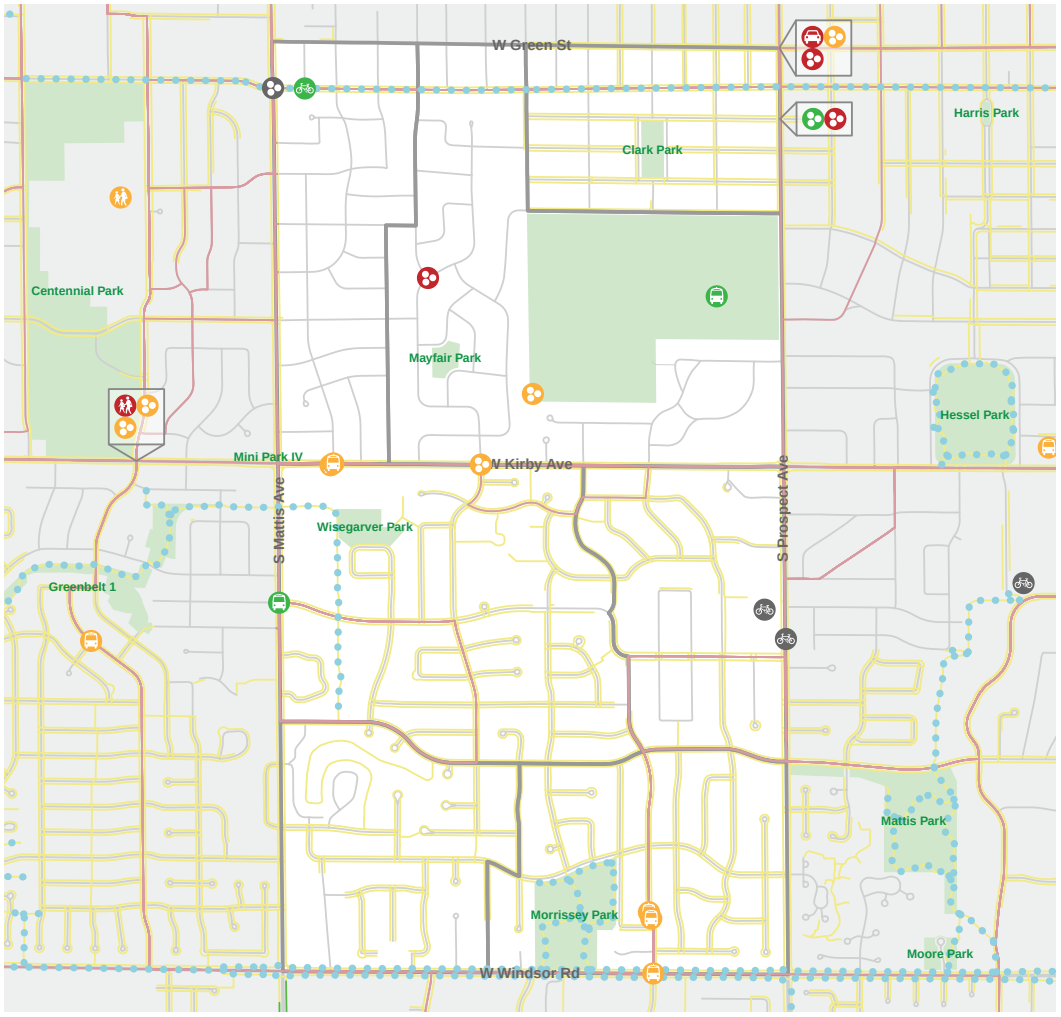
Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous





CENTENNIAL PARK EAST

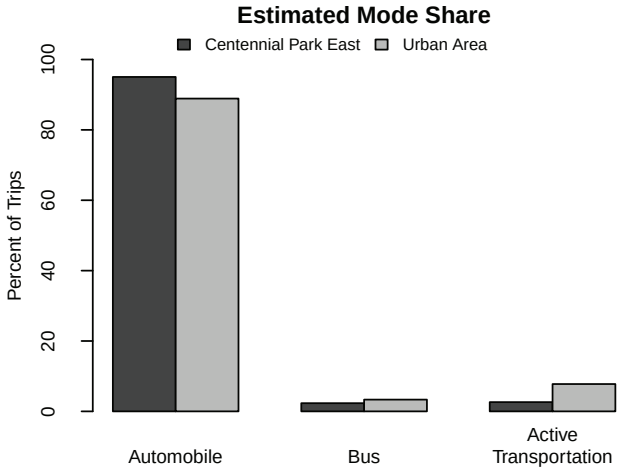
The Centennial Park East neighborhood is composed of seven TAZs bounded by Green Street, Windsor Road, Prospect Avenue and Mattis Avenue in Champaign. The neighborhood scored slightly below average for both mobility and accessibility.

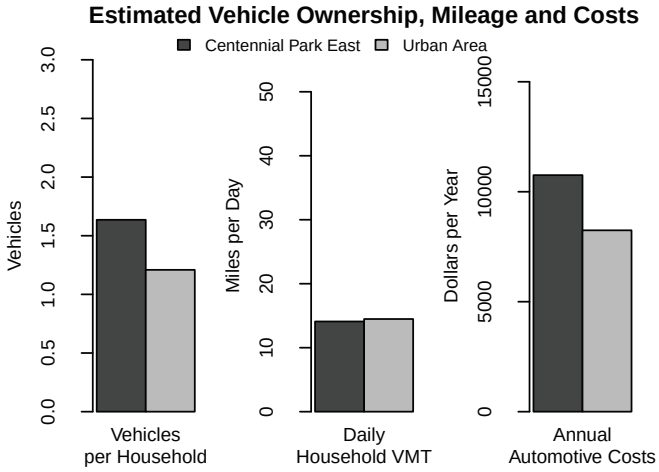
Despite the availability of bus routes both north and south of Kirby Avenue, the neighborhood scored well below average for transit connectivity. Some public comments described the transit network as functioning well, while many identified a need for extended service and more route options. The street network had a medium density of intersections, but large blocks and inconsistent street patterns limited route choices in some parts of the neighborhood.

Missing sidewalks and limited municipal streetlight coverage in some areas resulted in a below-average pedestrian network score. And while the northern and southern sections of the neighborhood were served by bicycle facilities, residents in the central portion of the neighborhood had limited access to the regional bicycle network.

Low residential densities in the neighborhood yielded a relatively low land use score. Despite the neighborhood's distance from major employment centers, most residents were within walking or bicycling distance of a school. With limited access to grocery stores and mixed access to parks, the neighborhood scored slightly below average for food and recreation accessibility. A combination of low service density and high service diversity resulted in a service accessibility score slightly above the urban area average.

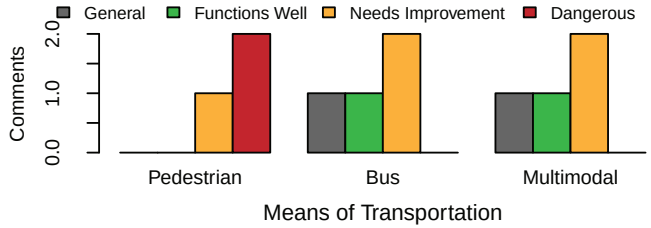
Low mobility and average accessibility indicated that, though some types of destinations are nearby, residents may have limited mode choice in reaching them, an assessment supported by mode share estimates. Completing the neighborhood's sidewalk network, increasing transit service on some routes and adding bicycle connections in the central part of the neighborhood could provide residents with additional choices in reaching these destinations and could help to reduce above-average driving costs.



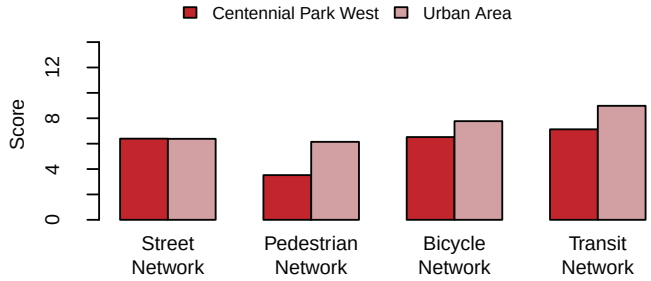


Centennial Park West

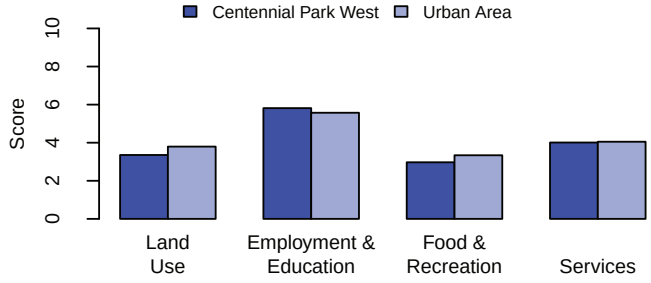
LRTP Public Input



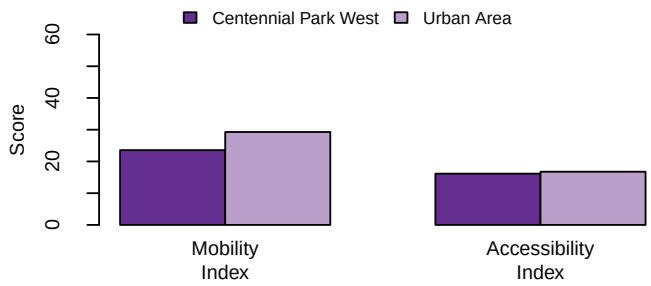
Mobility Factors



Accessibility Factors



Sustainable Choices Indices



Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

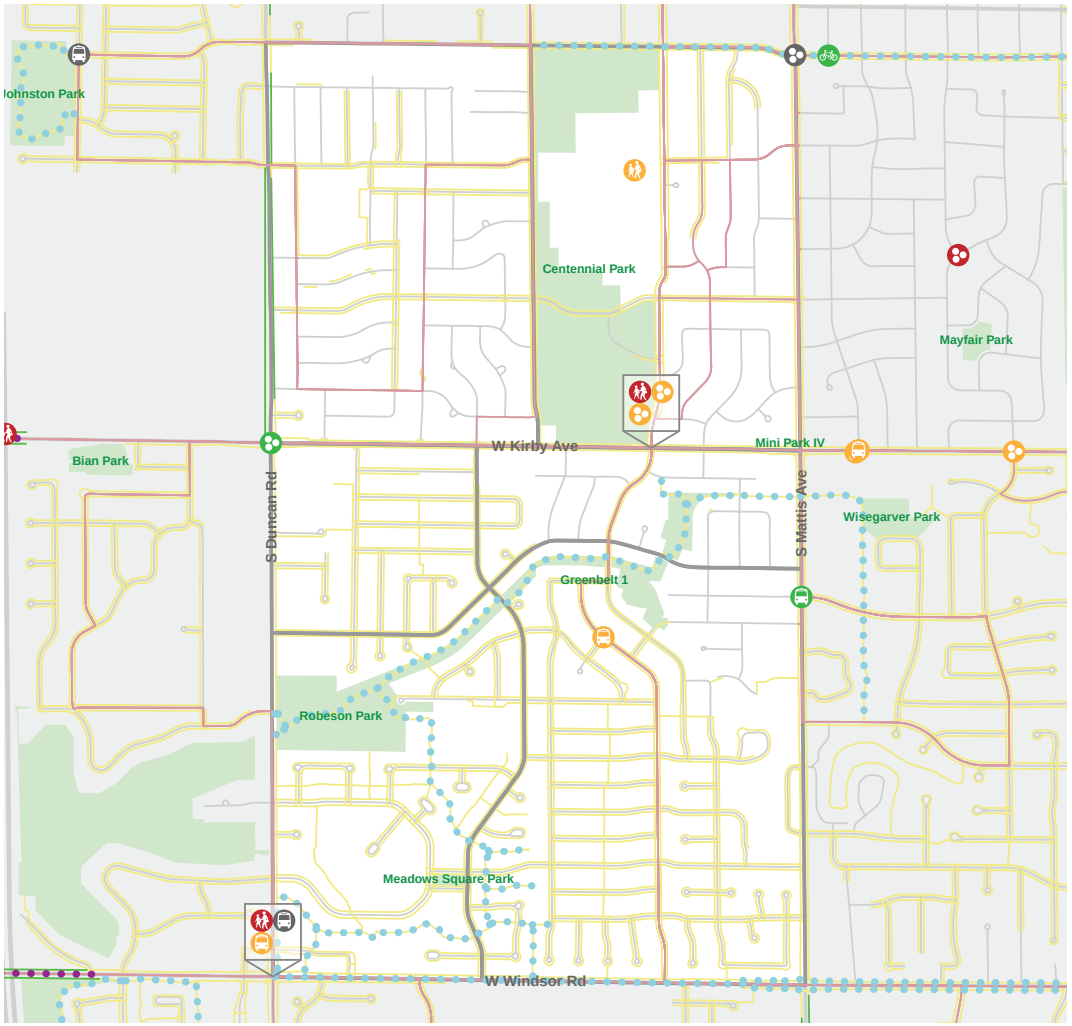
LRTP Public Input

Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous



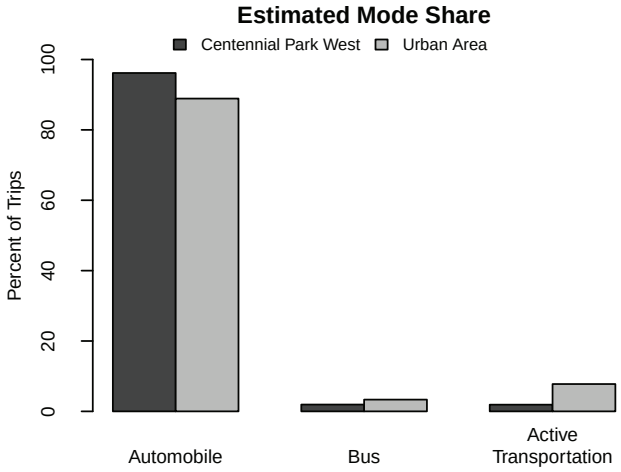
CENTENNIAL PARK WEST

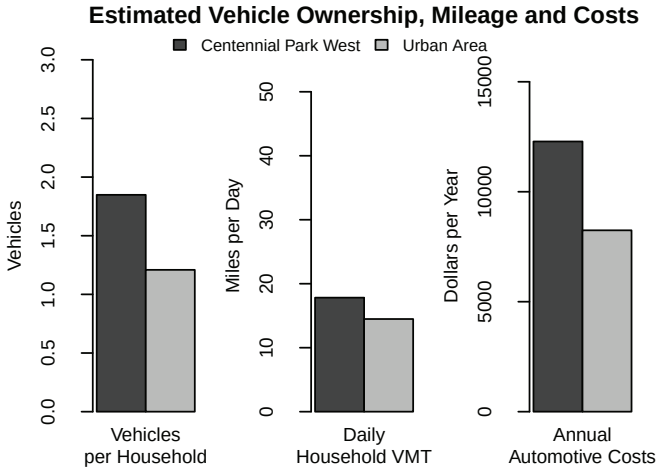
The Centennial Park West neighborhood, composed of six TAZs surrounding Centennial Park, scored slightly below the urban area average for both mobility and accessibility. The pedestrian network was particularly problematic, with gaps in sidewalk coverage and limited sidewalk connectivity, particuarlly in the northern part of the neighborhood. Public comments suggested that the lack of sidewalk, as well as speeding in some corridors, puts pedestrians at risk.

The neighborhood's bicycle and transit network scored below average, while the street network had similar characteristics to the urban area as a whole. The southern portion of the neighborhood had access to the regional bicycle network via the Windsor Road corridor, but some residents in the northern portion lacked easy access. Public comments were divided on the frequency of bus service, but fewer bus trips contribute to the relatively low transit network score.

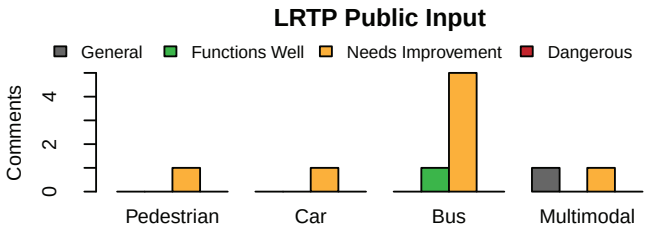
The Centennial Park West neighborhood ranked similar to the urban area average in all four accessibility characteristics. Low to medium residential densities were offset somewhat by a more diverse land use mix than surrounding neighborhoods. Meanwhile high school accessibility combined with relatively low job accessibility to produce a score slightly above average. Parks were more readily accessible than grocery stores, and services were concentrated in the northeast corner of the neighborhood.

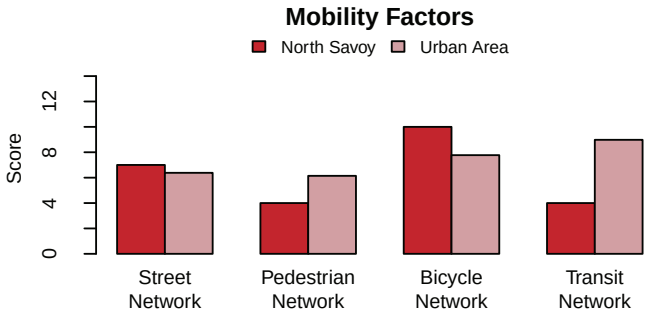
Estimated mode share for active transportation was well below the urban area average, while driving-related expenses were higher than average. Completing the neighborhood's sidewalk network and connecting existing bicycle facilities on John Street and Windsor Road could help to improve mobility, making retail destinations and schools within the neighborhood more easily accessible via active transportation.

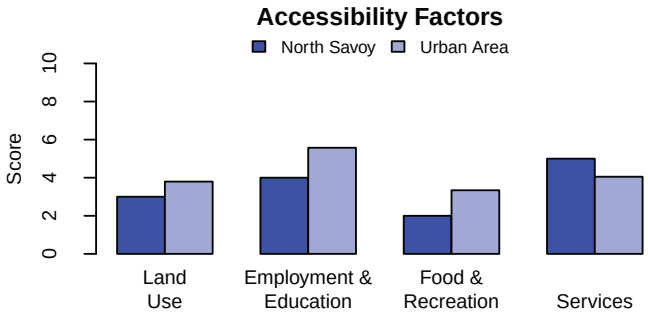


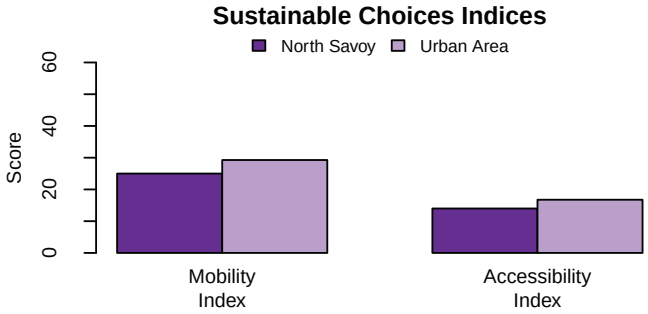


North Savoy









Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

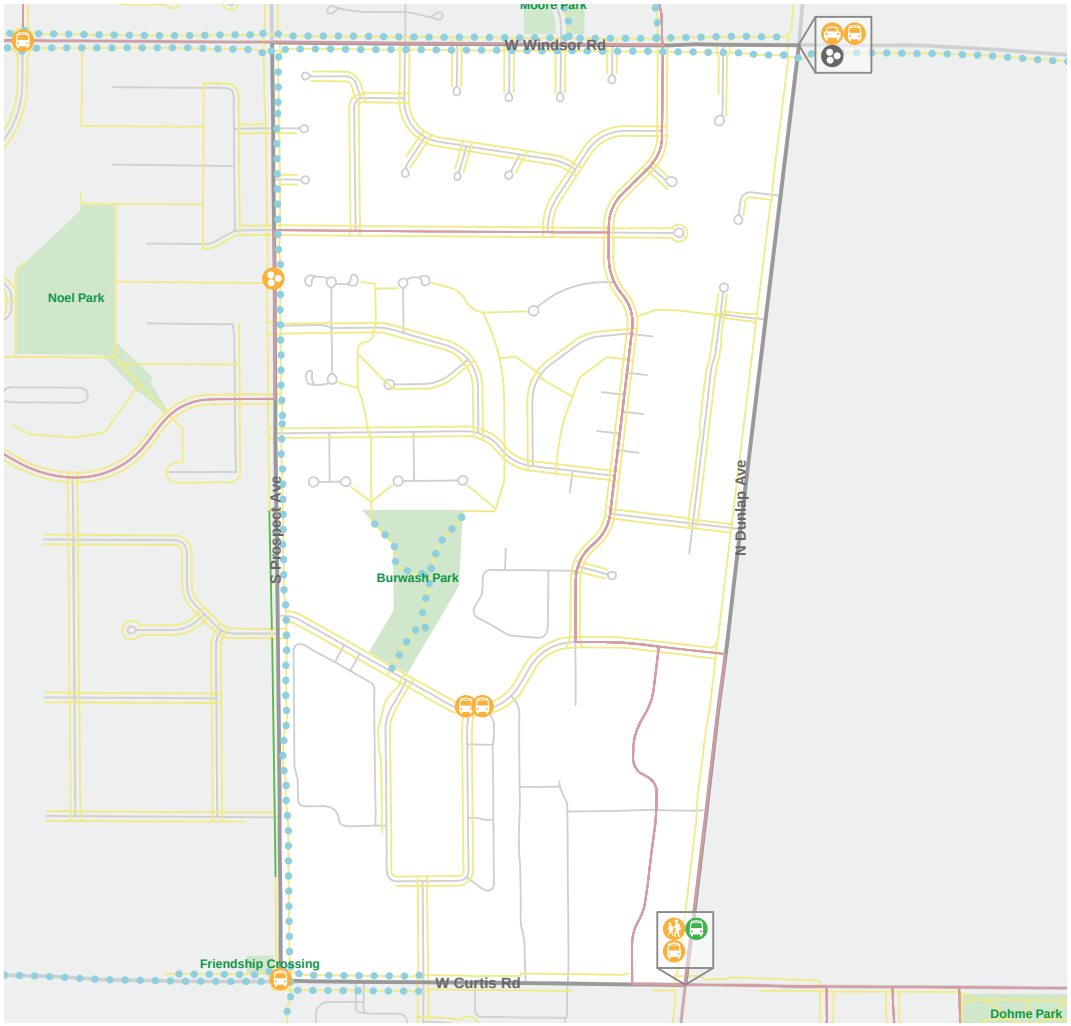
LRTP Public Input

Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous



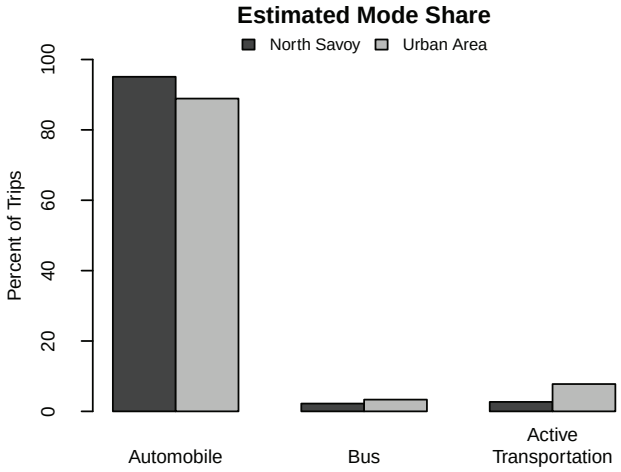
NORTH SAVOY

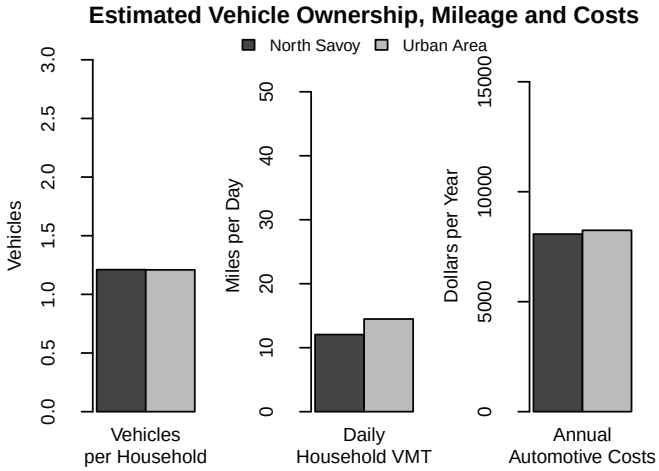
The North Savoy neighborhood, made up of a single TAZ along U.S. 45 south of Windsor Road, scored slightly below the urban area average for both mobility and accessibility. The neighborhood's transit network scored well below average, and public comments identified several locations that could benefit from longer or more frequent transit service.

Despite its large block size, the neighborhood scored slightly above the urban area average for its street network. Bicycle facilities along Windsor Road, Prospect Avenue and Curtis Road provided connections to the regional bicycle network for most residents. However, lack of sidewalks on some streets and missing connection between sidewalks contributed to a below-average pedestrian network score.

Due to its low residential density, North Savoy scored below the urban area average for land use despite a relatively diverse land use mix. Access to services was high, but the services available were not as diverse as in some other neighborhoods. In particular, residents did not have a grocery store within walking or bicycling distance, though they enjoyed relatively easy access to parks. School access was better than many surrounding neighborhoods, but North Savoy's distance from major employment centers suggested above-average commute times for most residents.

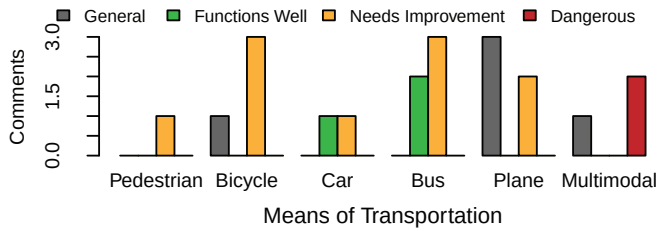
Mode share estimates showed that North Savoy was more auto-dependent than the urban area as a whole, reflecting its below-average mobility. However, the neighborhood had estimated driving costs similar to the urban area average despite below-average accessibility. Improving sidewalk coverage extending bicycle facilities to common destinations and ensuring the availability of transit service could provide residents with more choices in reaching the services available in North Savoy.



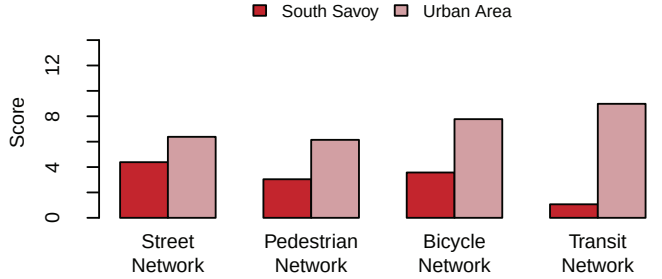


South Savoy

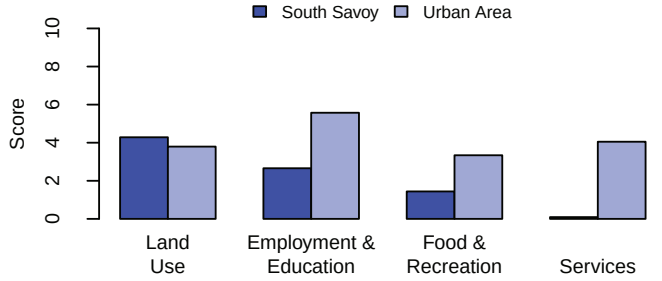
LRTP Public Input



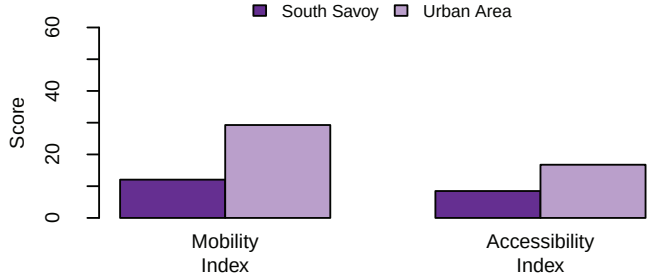
Mobility Factors



Accessibility Factors



Sustainable Choices Indices



Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

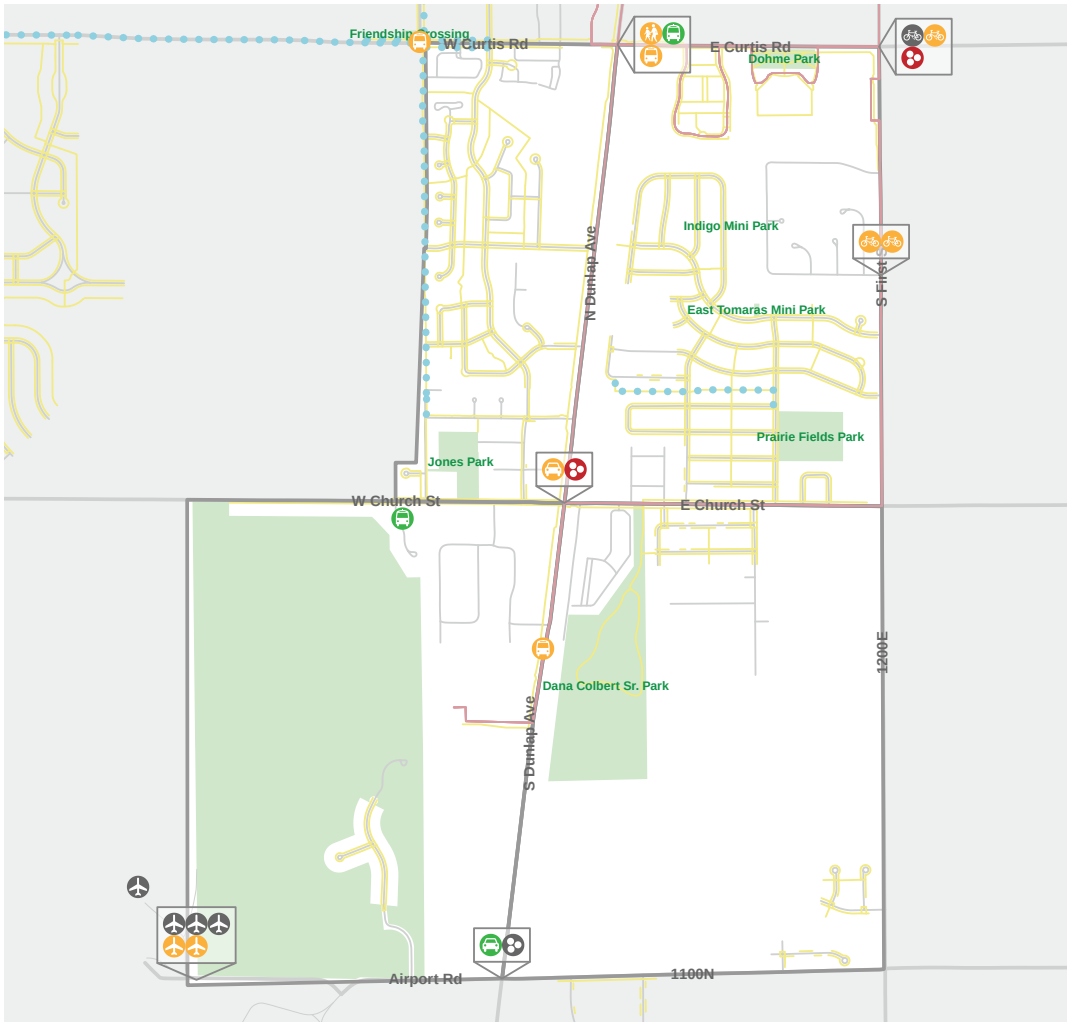
LRTP Public Input

Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous



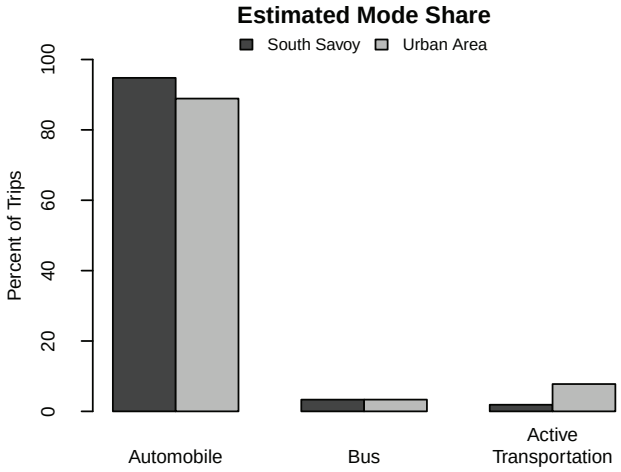
SOUTH SAVOY

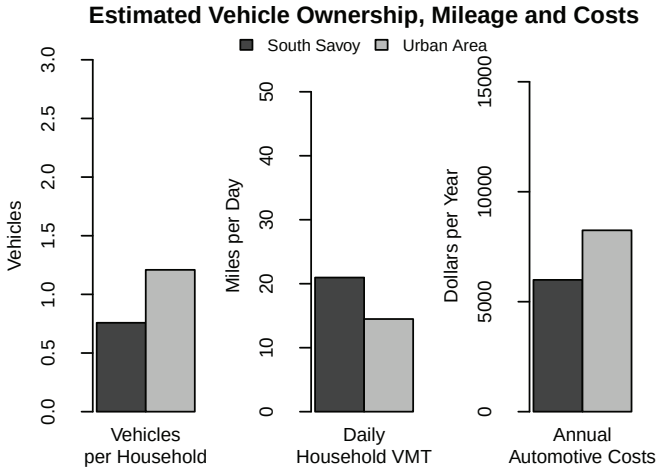
The South Savoy neighborhood, which consists of four TAZs along U.S. 45 south of Curtis Road, scored well below the urban area average for both mobility and accessibility. The neighborhood's transit network was its weakest mobility factor, with infrequent service and poor coverage of some residential areas. Several public comments indicated the need for more transit service, though some comments in areas with service indicated that the system functioned well.

Sidewalk coverage varied significantly throughout the neighborhood, and a relatively small proportion of residents had access to the regional bicycle network via the bike path along the neighborhood's western edge. Similarly, low intersection density and a lack of street connectivity in some areas limited route options for all modes. Public comments identified Curtis Road and First Street as corridors that presented particular safety challenges for pedestrians and cyclists.

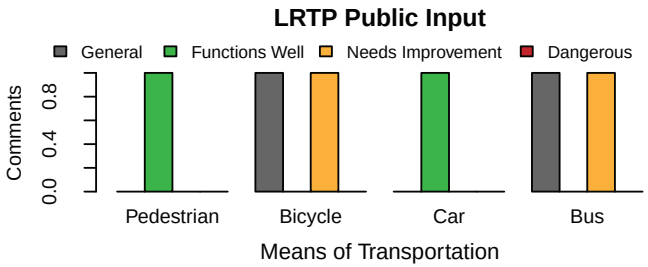
Despite some diversity of land use, South Savoy had relatively little access to common destinations compared to the urban area as a whole. Access to services was particularly problematic, with few destinations within walking or bicycling distance. Most residents had easy access to parks and schools but had to drive to reach grocery stores and employment centers.

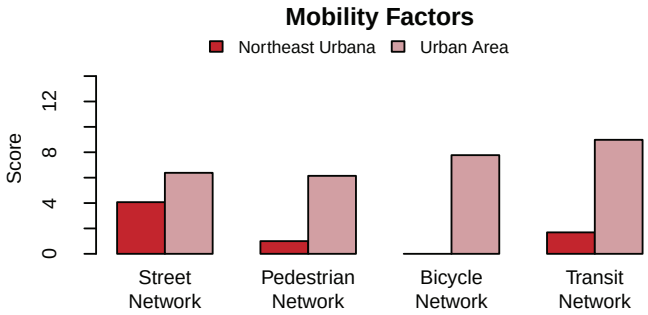
Overall, residents of South Savoy were limited in their transportation choices, both by a lack of accessible destinations and by incomplete pedestrian, bicycle and transit networks. Consequently, mode share estimates for the neighborhood reveal that relatively higher percentage of residents rely on driving to get around. Mode share of active modes of transportation was estimated to be very low compared to the urban area average. Household VMT was estimated to be relatively high which could be an outcome of low accessibility. Vehicle ownership rates, however, were lower than average and were expected to be higher. One explanation could be the lack of vehicle registration data for Savoy.

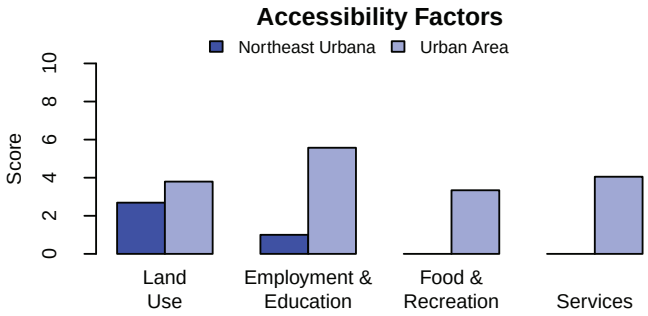


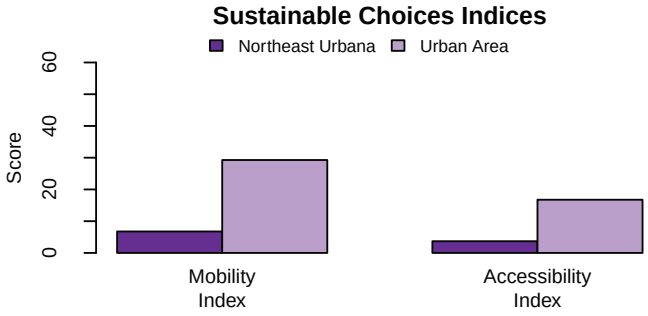


Northeast Urbana









Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

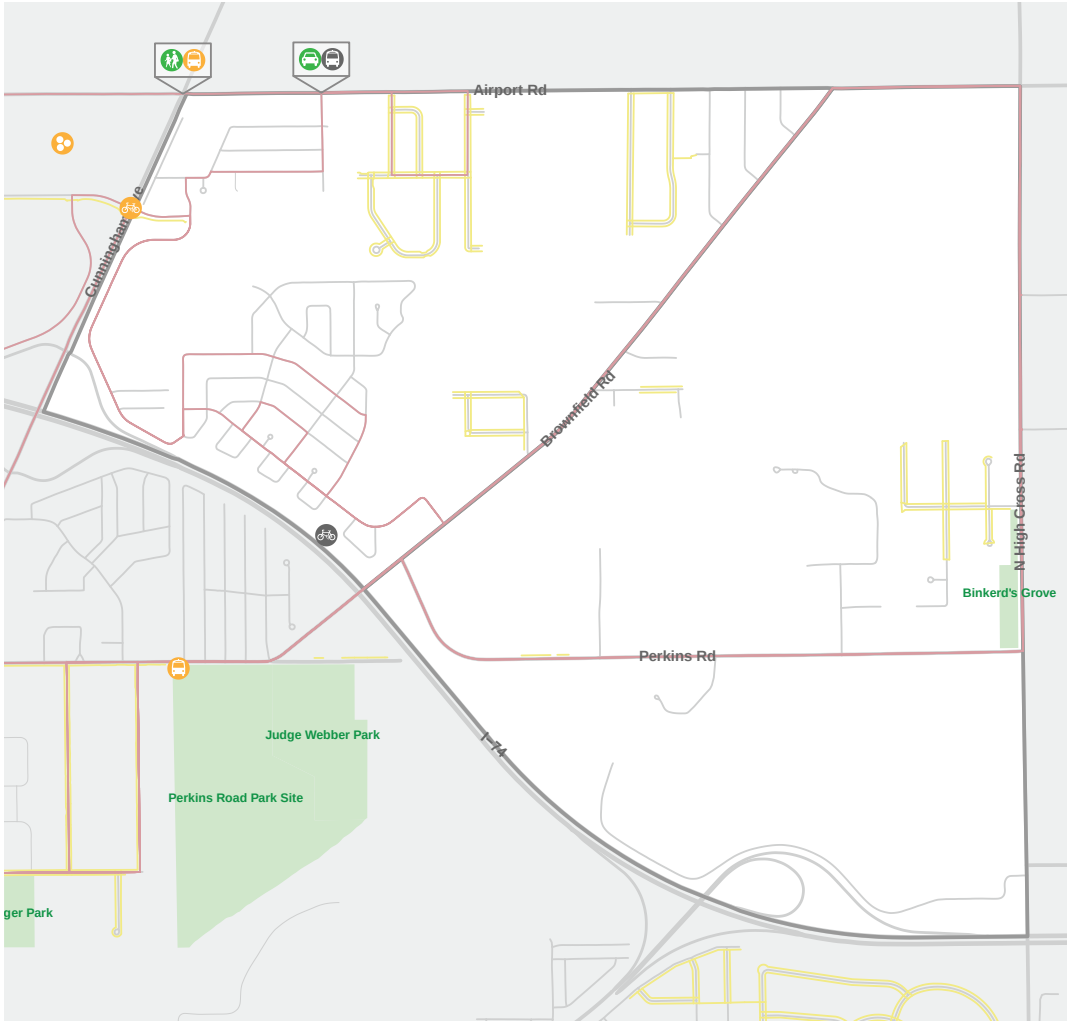
LRTP Public Input

Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous



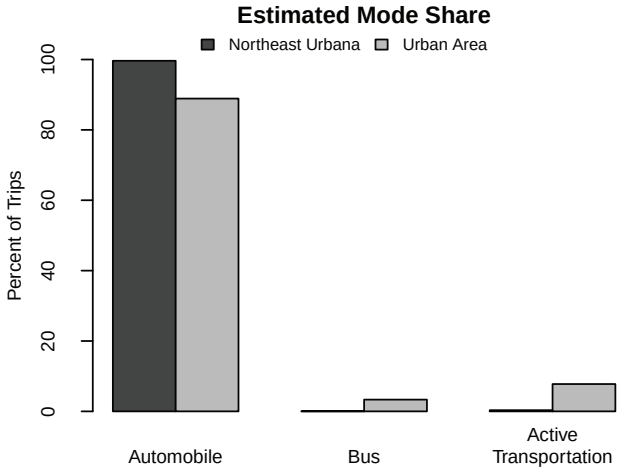
NORTHEAST URBANA

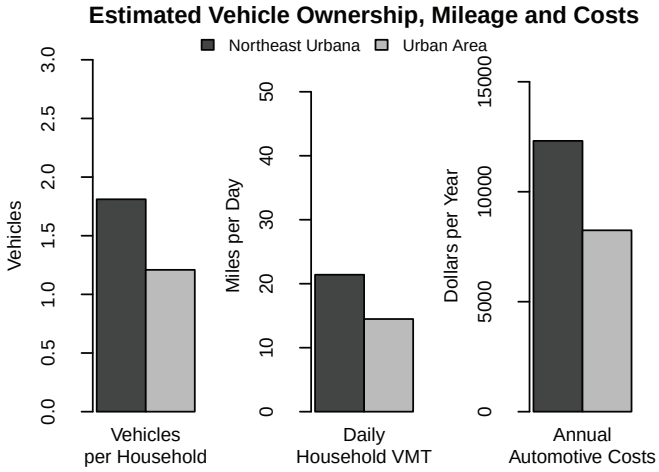
The Northeast Urbana neighborhood includes two TAZs located at the northeast edge of the study area. Only a small portion of the neighborhood is developed mostly as single-family residential land use. The neighborhood scored very low on both mobility and accessibility.

Developed portions of the neighborhood are somewhat disconnected from each other which results in low street network connectivity. Moreover, most of the road links in the neighborhoods do not have sidewalks. Public comments also point out lack of sidewalks as a cause for concern. There are no bike lanes in or even near the neighborhood. As such, walking and biking are not feasible alternatives to get around. Transit connectivity is also very low, as there are not many bus routes that link this neighborhood to major employment and commercial areas.

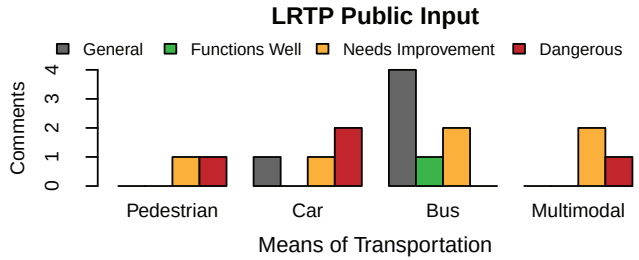
Based on where it is located, it is not surprising that this neighborhood scored very low on accessibility. The neighborhood is primary residential and there are no businesses and services nearby. Moreover, I-74 acts as major barrier to access jobs and services in the urbanized area. Residents would have to travel long distances to get to work or to shop for groceries.

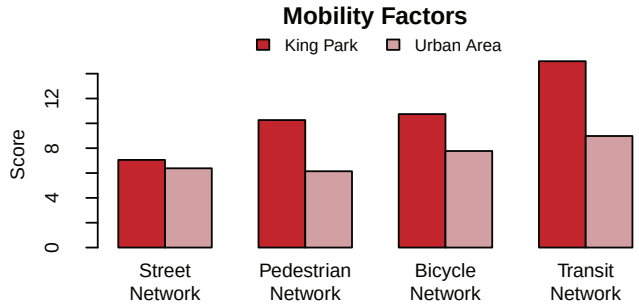
The transportation infrastructure in the neighborhood discourages walking and biking. This is reflected in public comments, where people have expressed concerns regarding developments along the fringes that do not offer any incentive to walk or bike. Using public transit is also not feasible given that accessibility is very low and residents face long commutes for work or any other purposes. This is confirmed by the neighborhood's mode share estimates which reveal that mode share estimates, for public transit and active modes of transportation is very low. Moreover, vehicle ownership rates, household VMT, and transportation costs are all significantly higher than the urban area average.

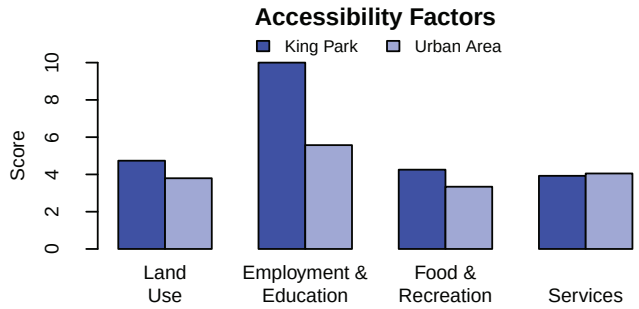


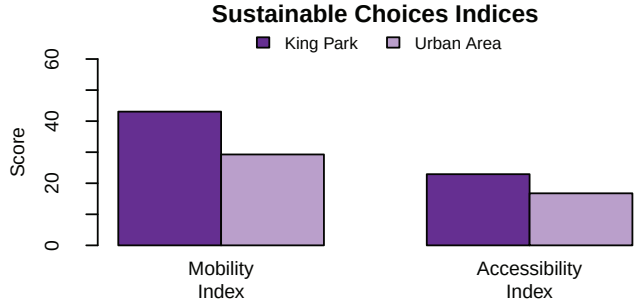


King Park









Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

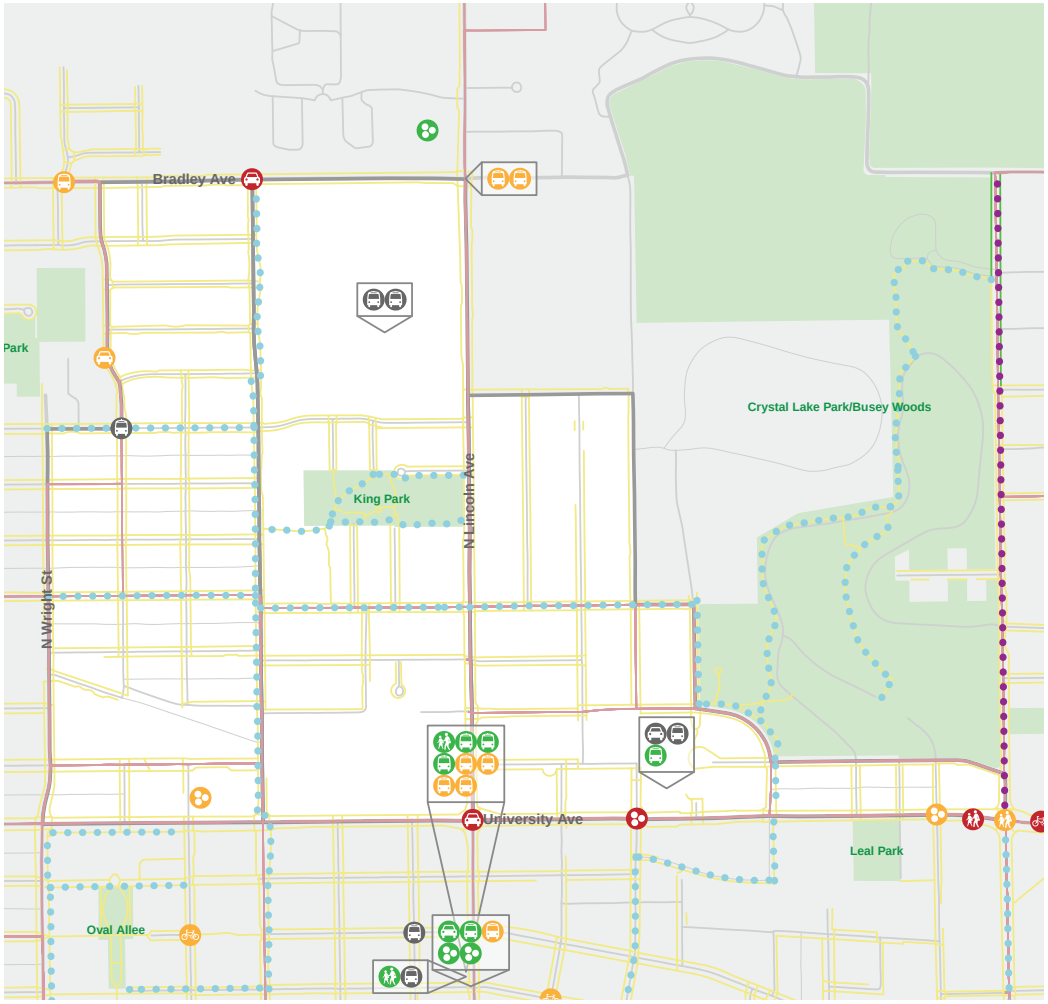
LRTP Public Input

Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous



KING PARK

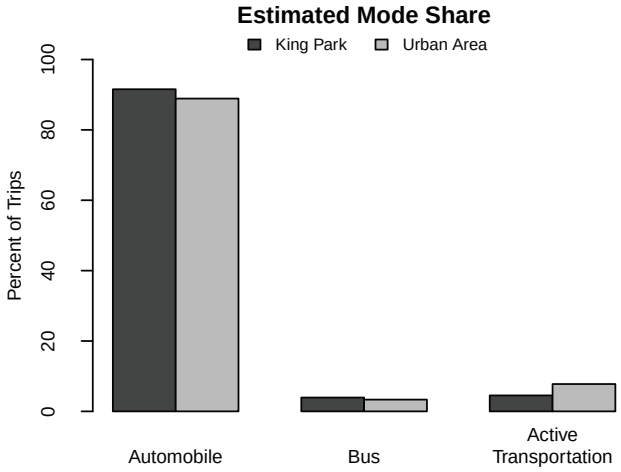
The King Park/Lincoln Avenue neighborhood consists of three TAZs and is located north of the university district. The neighborhood is largely residential with some businesses and institutions along the southern edge. The neighborhood scored high on both accessibility and mobility.

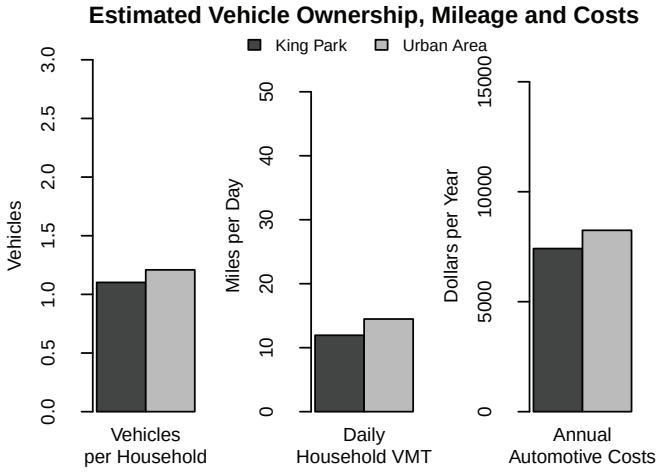
The neighborhood has a somewhat regular grid street network which provides high connectivity. Despite relatively large block sizes, street network connectivity was evaluated to be slightly above average. There are sidewalks on almost all road links. There are a few bike lanes that connect the neighborhood to the university district.

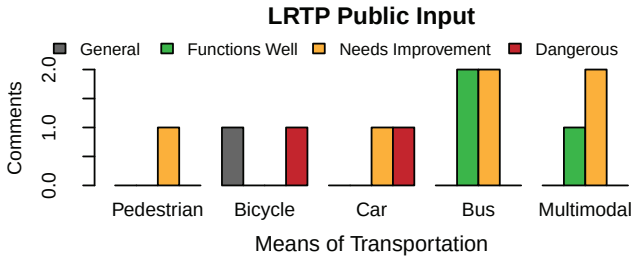
The neighborhood is served by a few bus routes, resulting in a high transit network score. Public comments, however, highlight the need for improving transit connectivity. There are many university students who live in this neighborhood and they rely on the MTD service to connect to the university. From the public comments, it seems that there is a need for additional routes connecting to different locations, such as Parkland College.

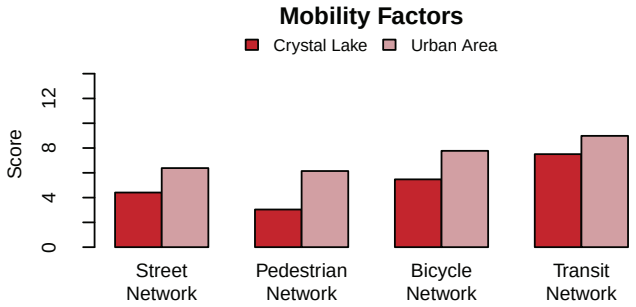
The neighborhood is located close to the university district and is not far from downtown Urbana. Thus, accessibility to jobs is very high. However, there are not many service-oriented businesses in or near the neighborhood. Residents would have to travel relatively long distances to get to grocery stores.

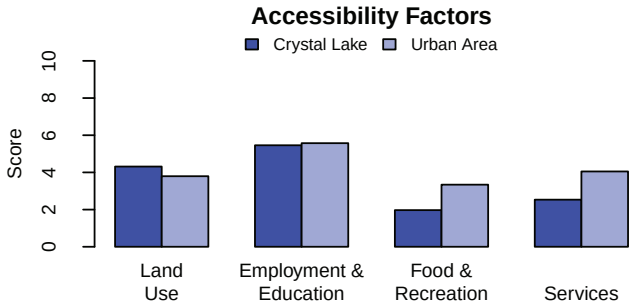
Overall, this neighborhood has a good combination of high mobility and good accessibility. Mode share estimates, however, reveal that the mode share of driving is higher than average. Vehicle ownership, household VMT, and transportation costs are all lower than average, as expected for a neighborhood scoring high on both accessibility and mobility.

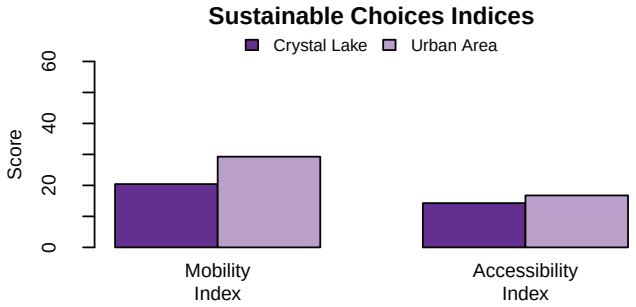












Crystal Lake

Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

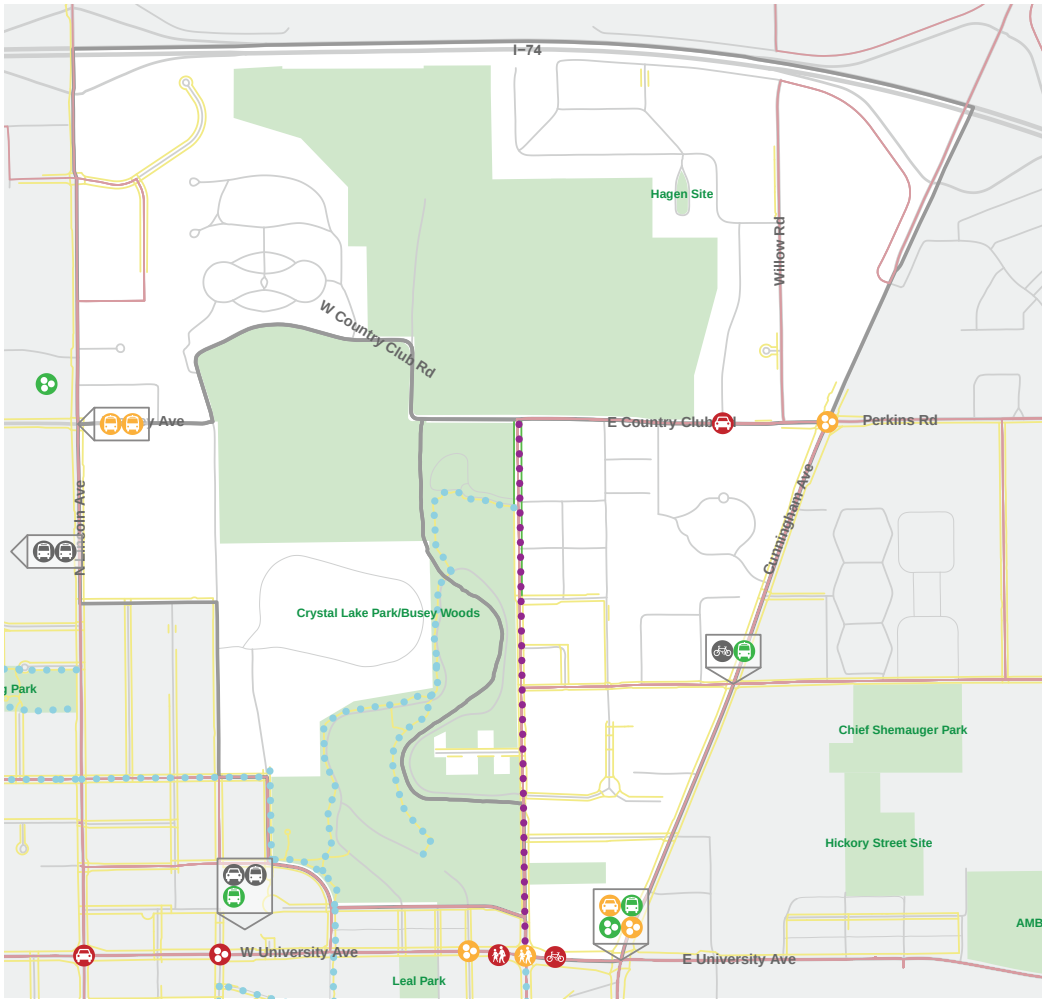
LRTP Public Input

Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous



CRYSTAL LAKE

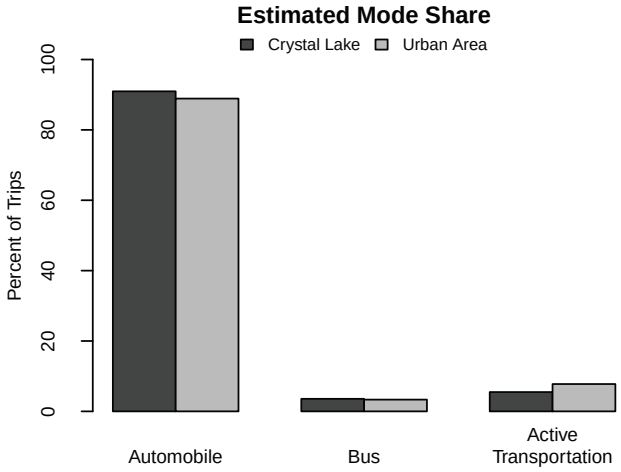
This neighborhood is comprised of three TAZs located between I-74 and University Avenue. A large portion of the neighborhood is open space with some residential developments along the eastern edge.The neighborhood scored low on mobility and slightly below average on accessibility.

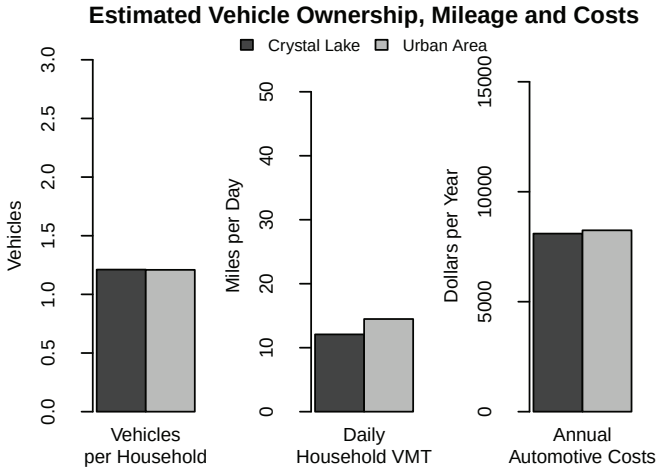
Low pedestrian mobility in the neighborhood can be attributed to the irregular street network in the developed portion of the neighborhood, and to the absence of sidewalks on many road sections. While there are trails and bike paths in the Crystal Lake Park, there are no bike lanes in the residential areas. Moreover, I-74 acts a major barrier which inhibits movement towards north.

Transit connectivity in the neighborhood is marginally below average. There are a few transit routes along the edge of the neighborhood. Since most of the developments in this neighborhood are along the edge, transit connectivity may be better that what the data suggests.

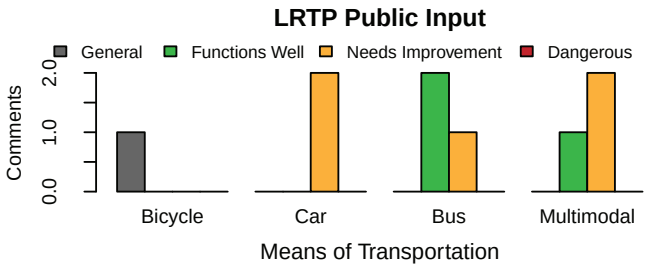
The neighborhood is located a few blocks north of downtown Urbana and as such, accessibility to jobs is about average, even though there are not many businesses within the neighborhood. The same is true for accessibility to services. The nearest grocery stores are in downtown Urbana, but it may not be possible to access those services by foot or bike, which is reflected in the low score for accessibility to grocery stores and other services.

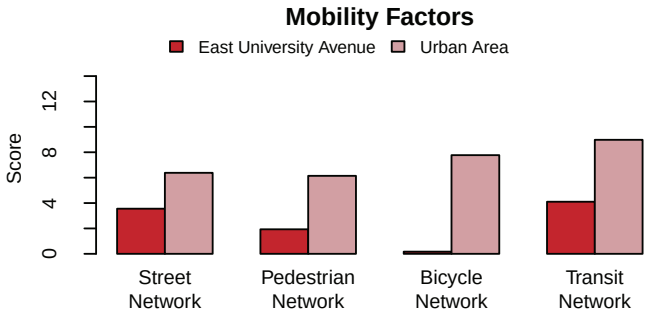
Overall, in spite of having average accessibility, residents may find it difficult to access jobs and services due to relatively low mobility. The active transportation infrastructure is limited in the neighborhood and travel behavior estimates reveal that mode share of alternative modes of transportation is relatively low. Household VMT and transportation costs were estimated to be lower than average, which is possibly due to accessibility being not as low as mobility.

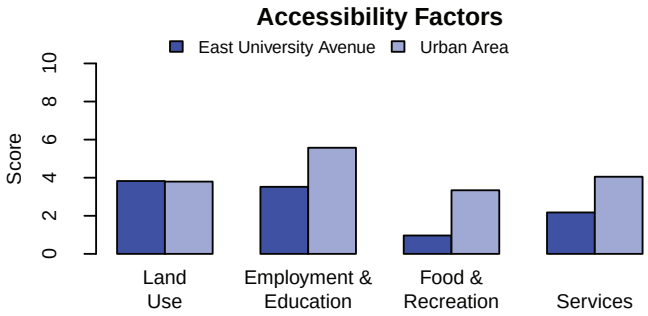


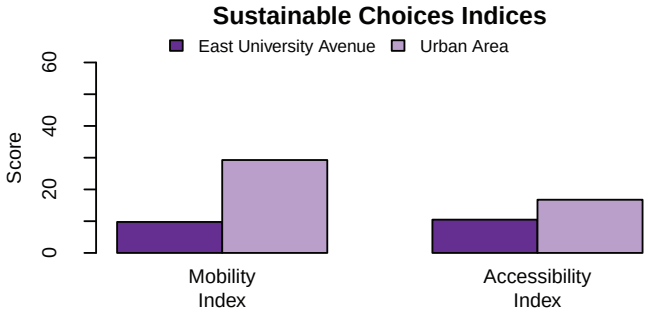


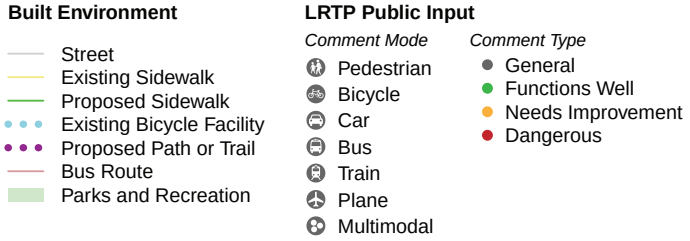
East University Avenue

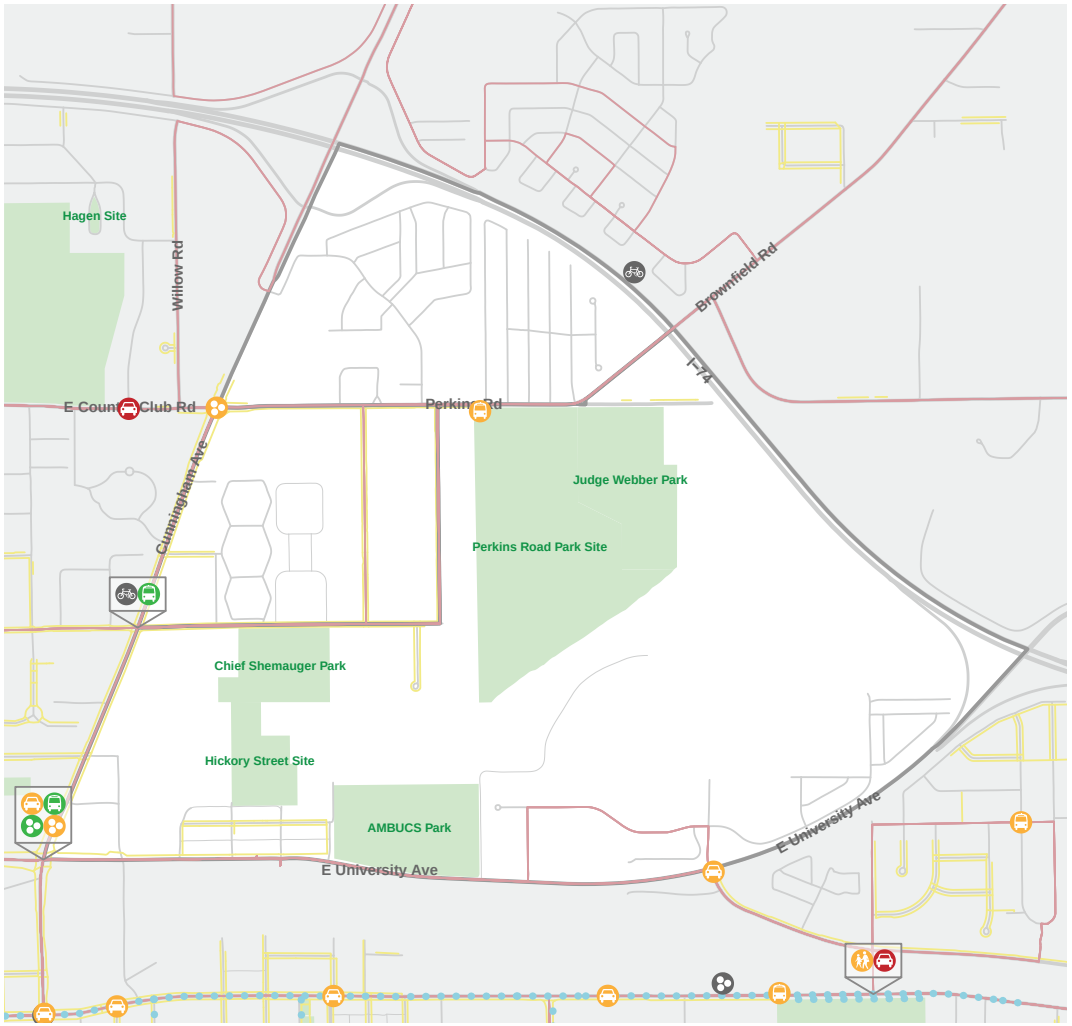












EAST UNIVERSITY AVENUE

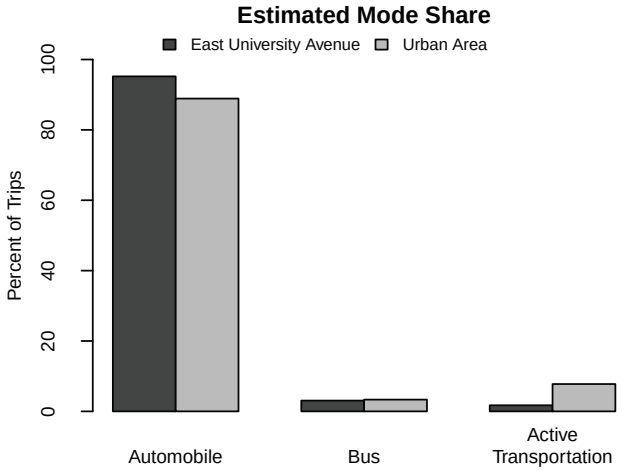
The East Urbana neighborhood consists of three TAZs located to the northeast of Urbana downtown. The neighborhood has a somewhat fragmented development pattern with large sections that are open spaces or vacant. This neighborhood scored very low on mobility and below average on accessibility.

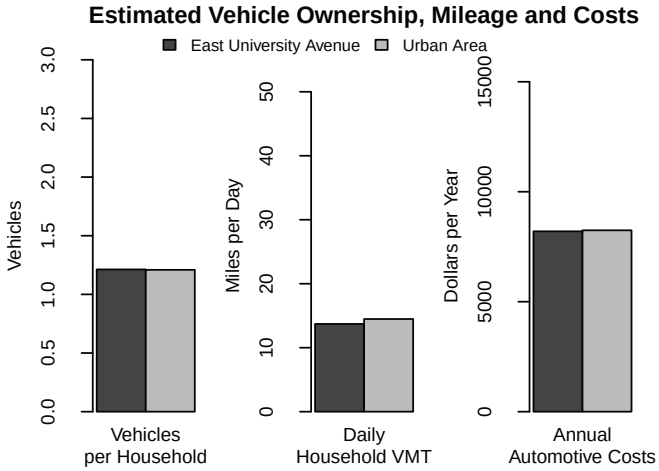
The street network is very irregular and there is almost no connectivity between different parts of the neighborhood. As such, block sizes are large which can discourage walking and biking. Moreover, most of the links do not have any sidewalks. There are no bike lanes within the neighborhood. This combination of low street network connectivity and deficient bike and pedestrian network discourages usage of active modes of transportation

While there are a few bus routes that serve the neighborhood, the overall transportation infrastructure is not conducive to using alternative modes of transportation. Public comments also talk about the existing transit service not being frequent or reliable.

The neighborhood has some diversity in term of land uses but owing to low mobility, different land uses seem disconnected. Access to employment is below average. Residents have to travel relatively long distances to access services such as grocery stores.

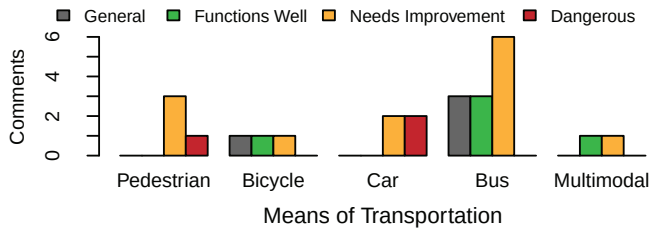
This neighborhood has an undesirable combination of low mobility and low accessibility. The transportation infrastructure makes driving a necessity, and mode share estimates reveal that relatively high percentage of people drive. Household VMT was estimated ot be slightly below average, which could be explained by proximity of downtown Urbana.



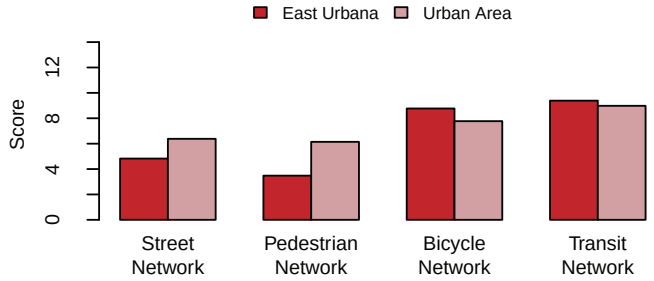


East Urbana

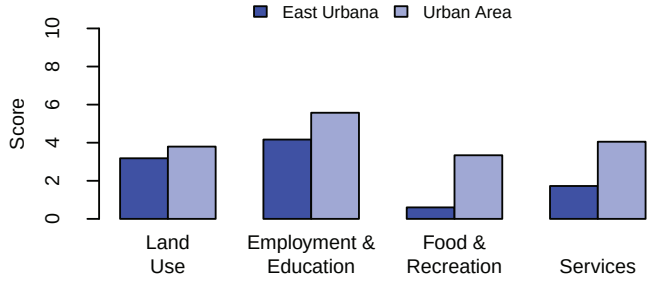
LRTP Public Input



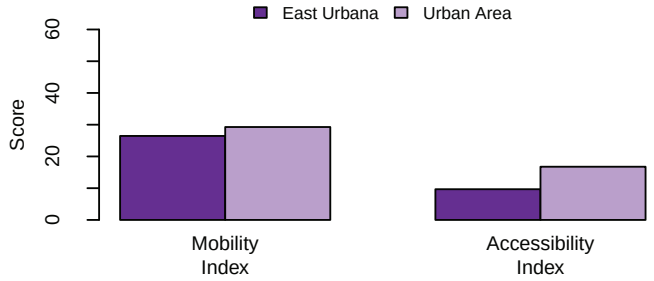
Mobility Factors



Accessibility Factors



Sustainable Choices Indices



Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

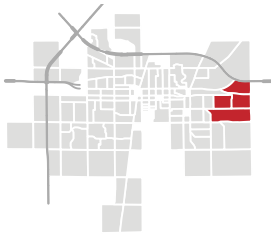
LRTP Public Input

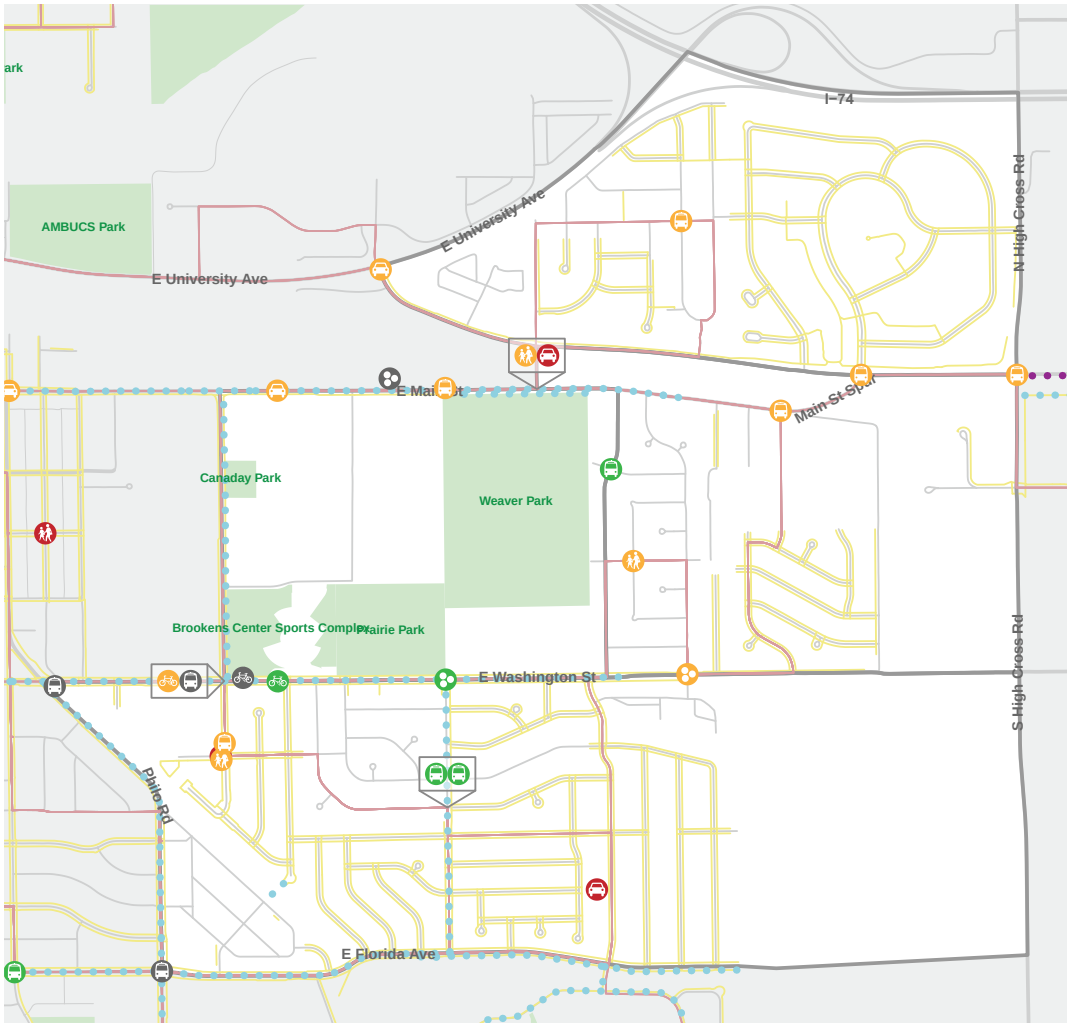
Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous





EAST URBANA

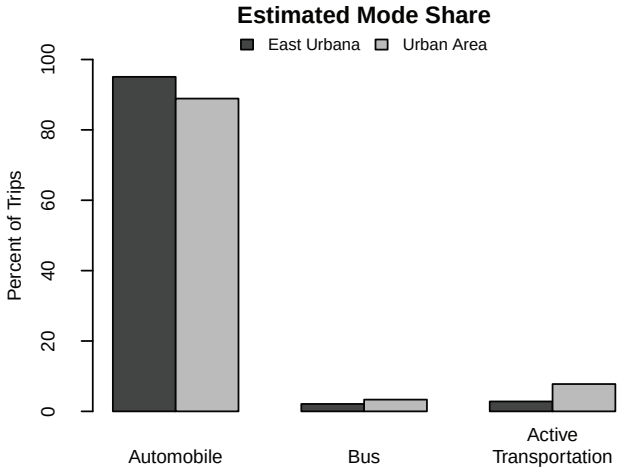
The East Urbana neighborhood includes four TAZs along the eastern periphery of the urbanized area. This neighborhood scored slightly below average on mobility and very low on accessibility. Large portions of the neighborhood consist of single-family housing, which explains low accessibility to employment and services.

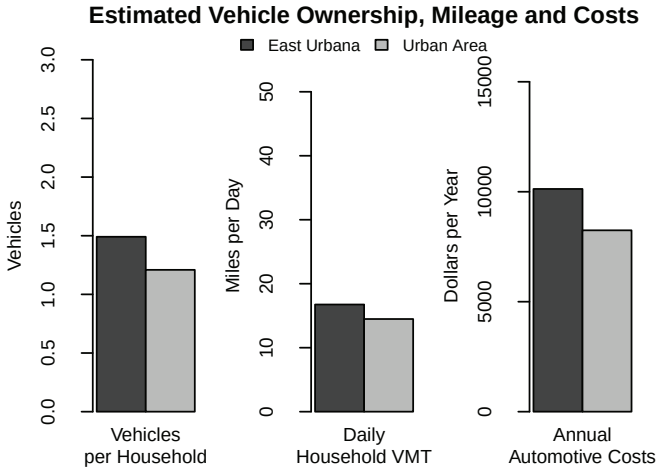
This neighborhood has a somewhat irregular street network, which results in low street network connectivity and can be a deterrent to using active modes of transportation. Public comments highlight a lack of sidewalks on many links. The existing sidewalk network was perceived to be poorly maintained. The neighborhood has bike lanes on some of the major roads. The addition of bike lanes, especially those on Washington Street, have been a major improvement to the neighborhood's transportation infrastructure.

There are a few transit routes that serve the neighborhood, and the neighborhood has a slightly above average transit connectivity score. Public comments, however, reveal that the transit service is somewhat deficient. Some bus routes have very limited or no service during weekends. Even during the regular schedule, people feel that buses should run more frequently.

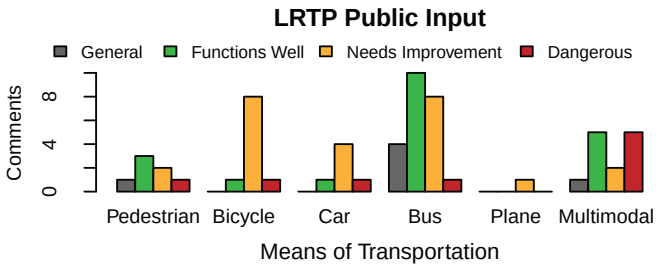
Accessibility to jobs and services is very low. There are not many nearby grocery stores and very few places people could potentially walk or bike to. This leaves driving as the only feasible option for commuting or for other purposes.

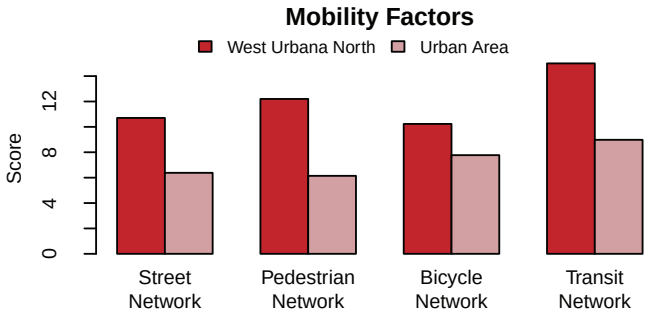
Overall, there are very limited opportunities for people to use alternative modes of transportation, and the mode share estimates confirm that few people are walking, biking or using transit services. Residents have to travel long distances to access destinations such as major employment centers, grocery stores, and recreation services. Household VMT and transportation costs of residents of this neighborhood are higher than the urban area average.

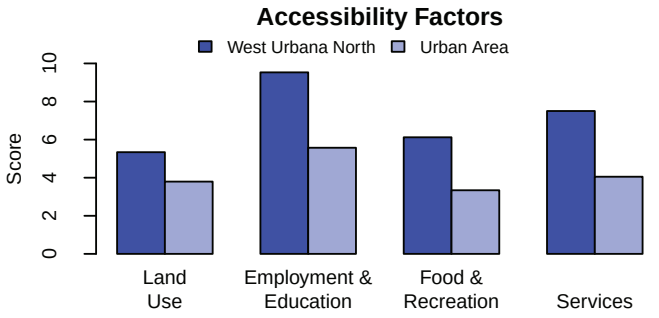


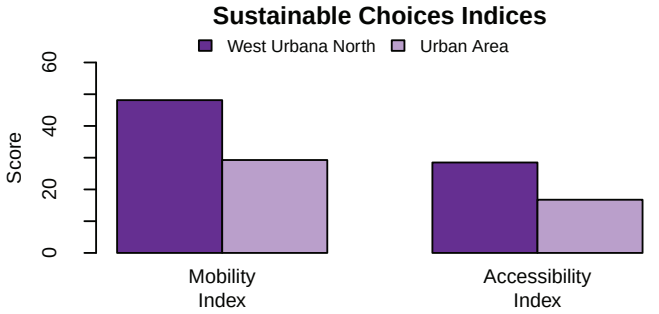


West Urbana North









Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

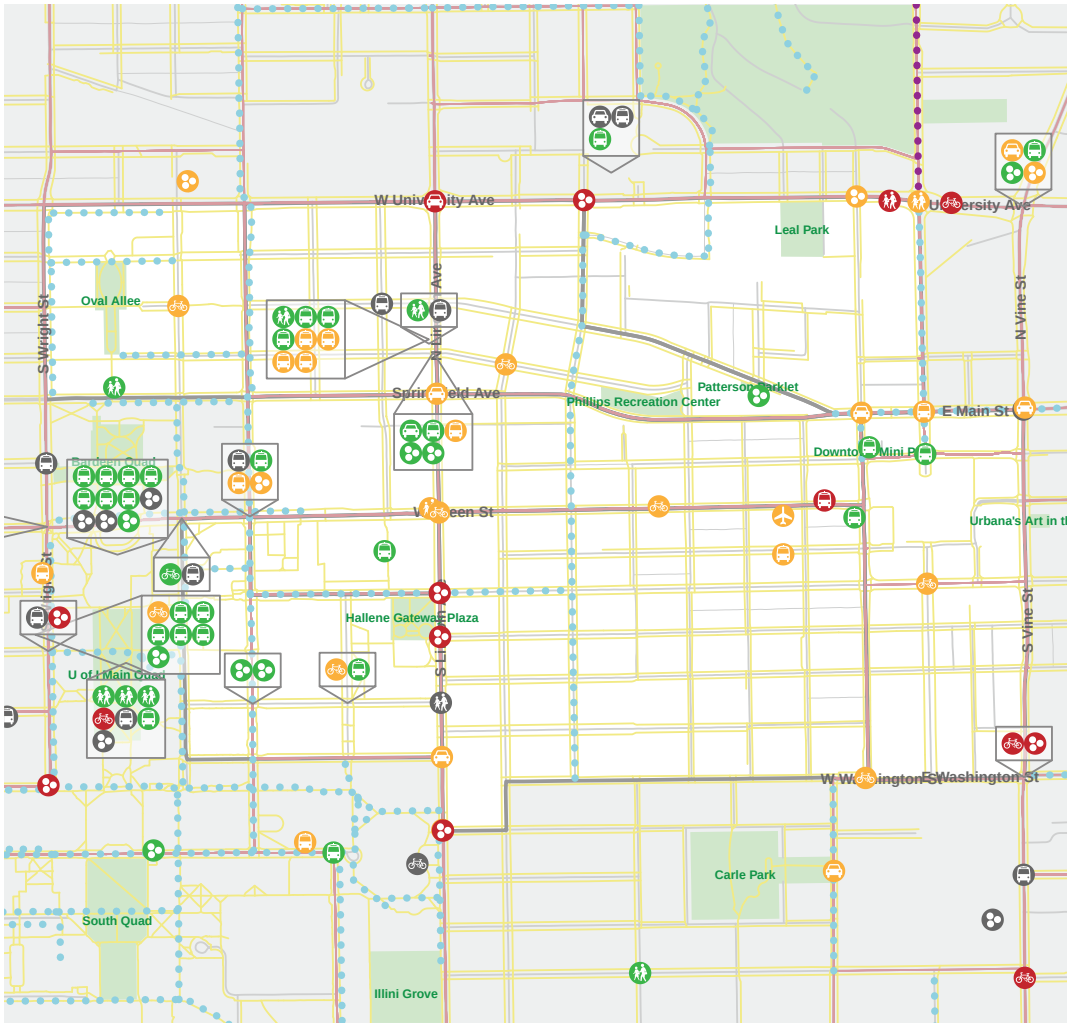
LRTP Public Input

Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous



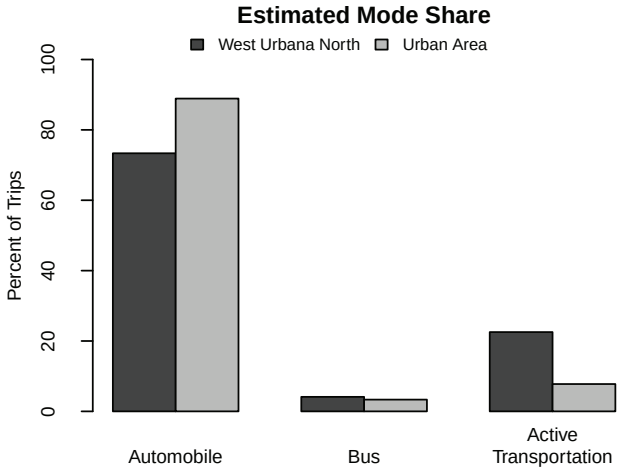
WEST URBANA NORTH

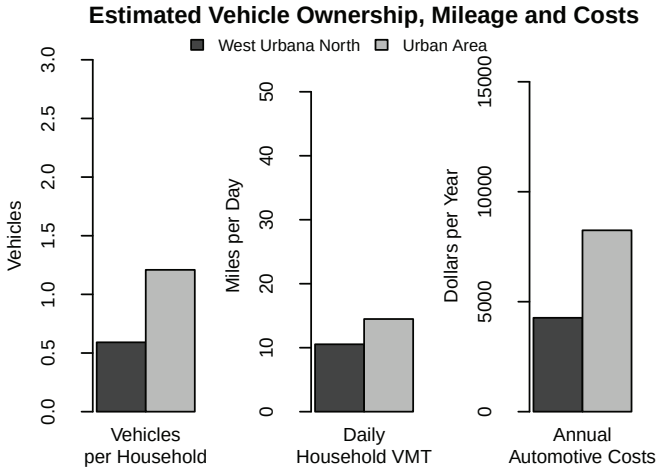
The West Urbana North neighborhood consists of ten TAZs and includes downtown Urbana. This neighborhood scored high on both mobility and accessibility. The location of this neighborhood makes it possible for residents to access a wide variety of services using different modes of transportation. This combination of high accessibility coupled with high mobility gives residents an opportunity to engage with the environment, which is reflected in the public comments.

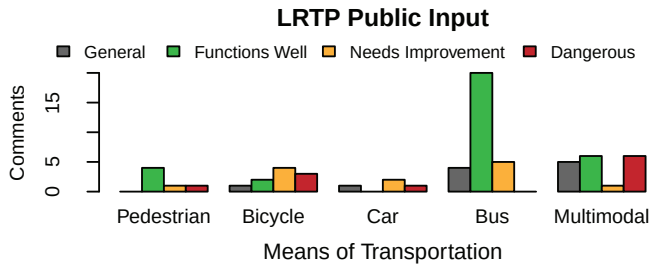
Most of this neighborhood has a regular grid street network, which provides high connectivity especially for pedestrians and bikers. The bike lane network is also easily accessible. However, public comments reveal that there is a need for additional bike lanes, especially along Green Street. Downtown Urbana serves as a major hub for the transit service and connects this neighborhood to all major destinations across the urbanized area. While people generally appreciate the high level of transit of connectivity, there are some concerns regarding safety when bikers are exposed to on-road traffic.

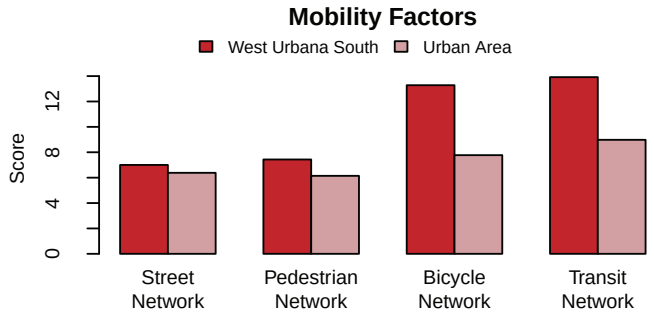
The neighborhood has a balanced mix of residential and non-residential land-uses, which is reflected in the above average land use score. The neighborhood is conveniently located between downtown Urbana and the university district, which gives residents very high accessibility to employment and services.

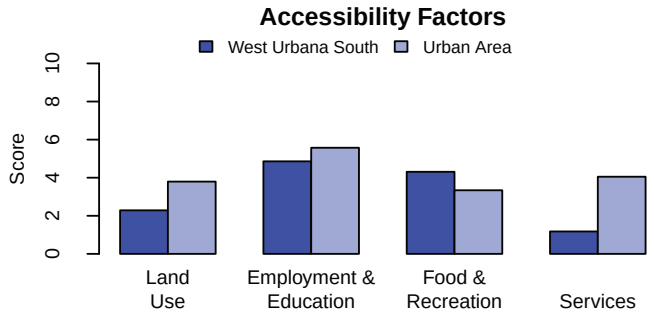
High accessibility combined with high mobility allows residents to drive less and own fewer cars, which is reflected in the mode share and vehicle ownership estimates for the neighborhood. There are many services within walking distance, and mode share of active transportation is very high. High accessibility is also reflected in low household VMT compared to the urban area average. Transportation costs for residents of this neighborhood were estimated to be very low, as they would have to drive less and for shorter distances.

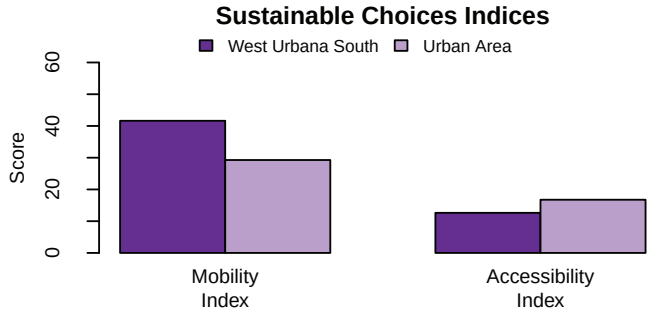












West Urbana South

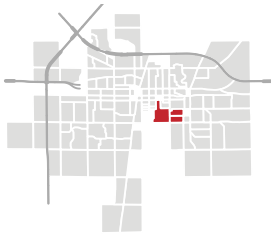
Built Environment

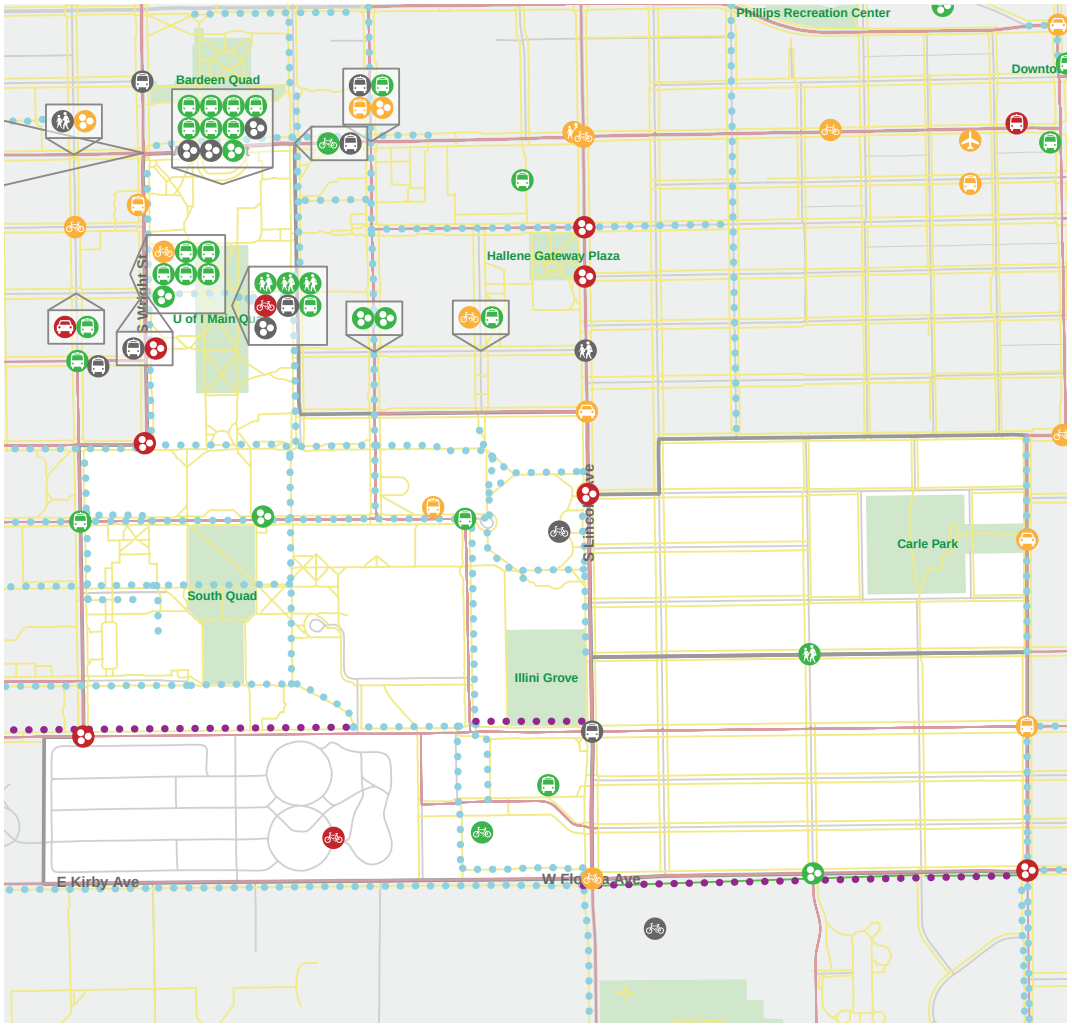
- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

LRTP Public Input

Comment Mode
- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type
- General
- Functions Well
- Needs Improvement
- Dangerous





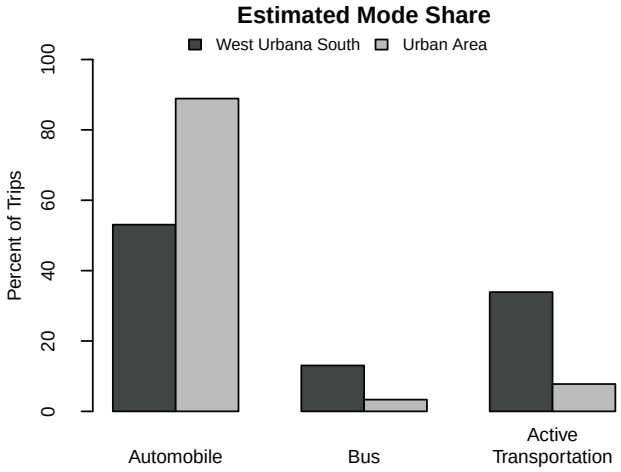
WEST URBANA SOUTH

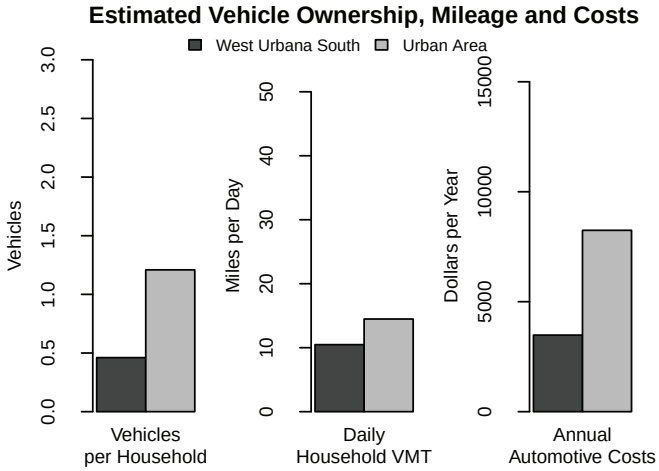
The West Urbana South neighborhood is composed of three TAZs and contains a large portion of the university district. The neighborhood scored high in mobility and about average in accessibility. There are many bike lanes in the area and the neighborhood is well-served by transit. In terms of accessibility, land use is somewhat homogenous since most of the area is grouped under educational use.

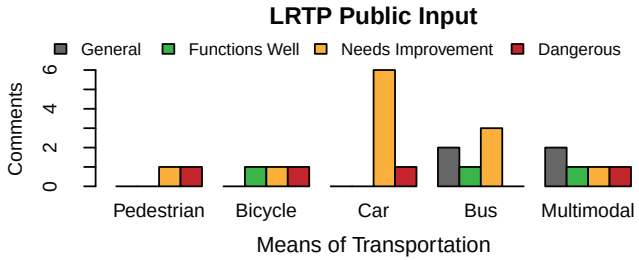
Public comments reveal that people like having bike lanes around the university campus. The pedestrian network is also well-connected. Bikers are, however, concerned about safety. Pedestrians and biker sometimes compete for space, especially when bikers use sidewalks to get around. As such, people prefer a dedicated bike lane network so that bikers are shielded from auto traffic and crashes between biker and pedestrians are minimized. The neighborhood has excellent transit connectivity. Major transit hubs like the Illini Union and the transit plaza offer many route choices. Students find it very convenient to get around campus by using the transit network. However, the high volume of buses, pedestrians, and bikers means that there are often conflicts between different modes.

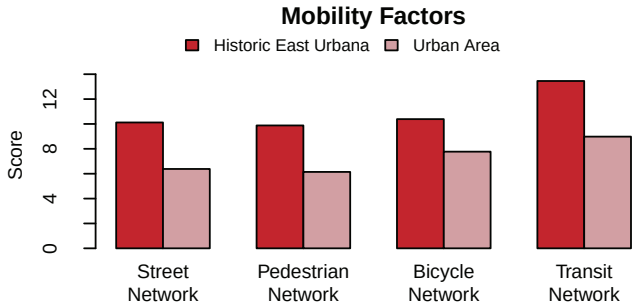
The university is the largest employer in the region and as such, this neighborhood's below-average score on employment and education is counterintuitive. This could be an outcome of clubbing employment with education where education refers to access to K-12 schools. The neighborhood itself does not have many service-oriented businesses and, thus it scored below average on services.

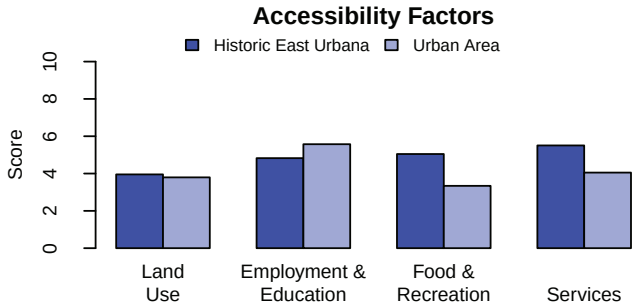
Overall, this neighborhood has a combination of high mobility and high accessibility. There are many opportunities for using alternative modes of transportation, which is evident in the estimated mode share for the neighborhood. This neighborhood had one of the highest mode shares for bus and active transportation modes. Vehicle ownership, VMT, and transportation costs were also estimated to be significantly lower than average.

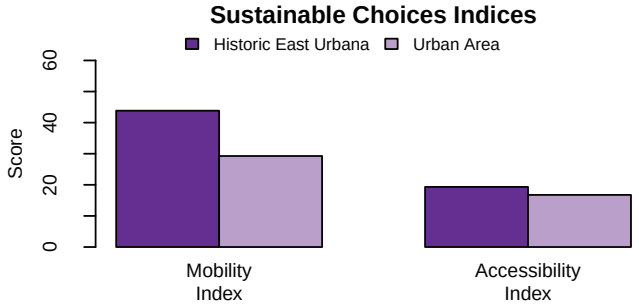












Historic East Urbana

Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

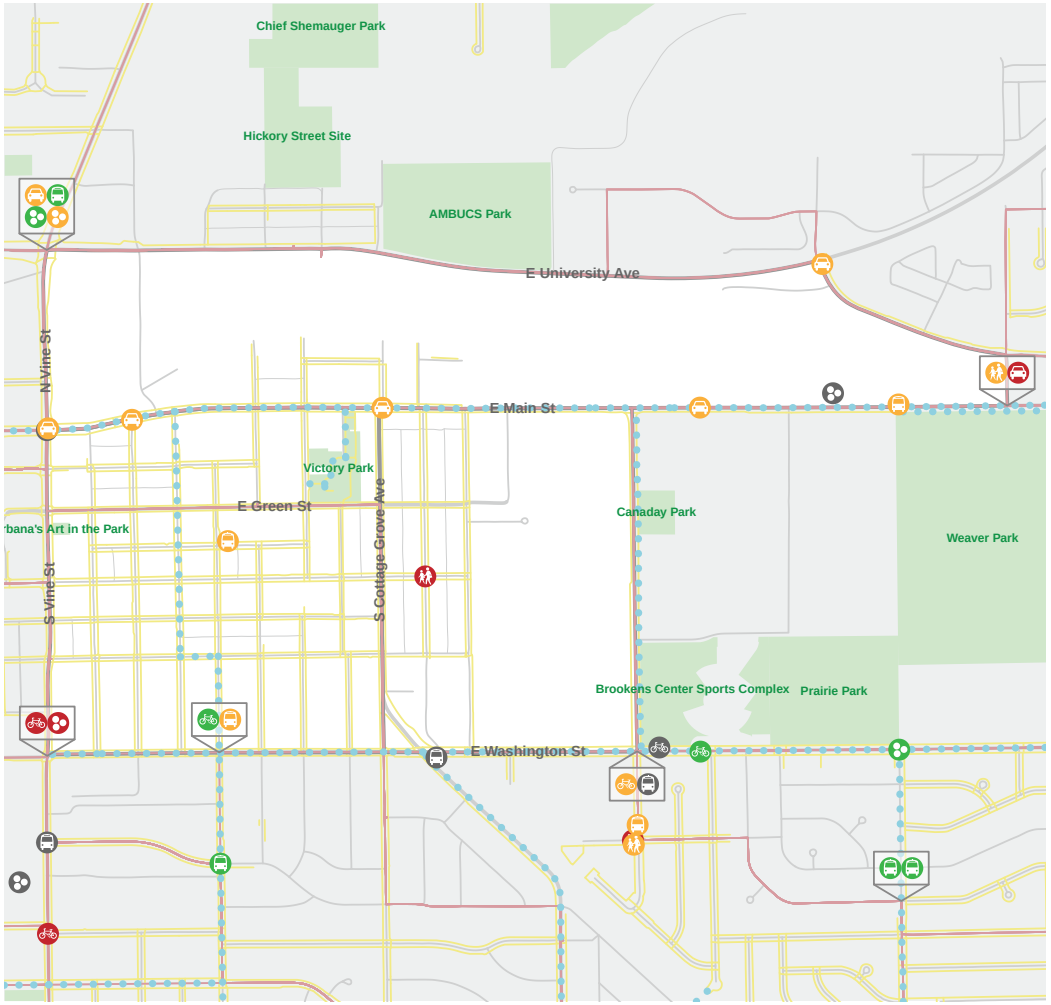
LRTP Public Input

Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous



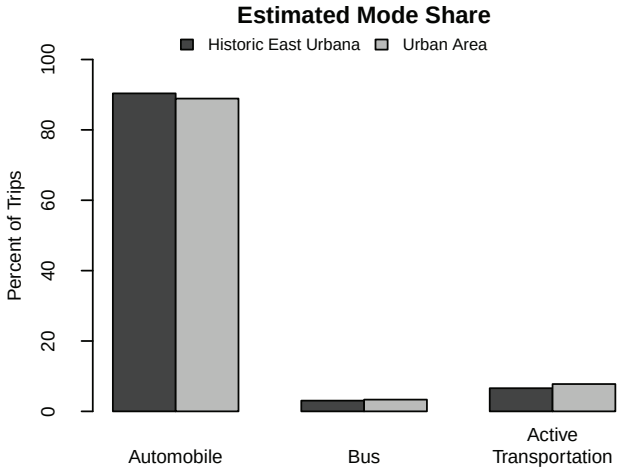
HISTORIC EAST URBANA

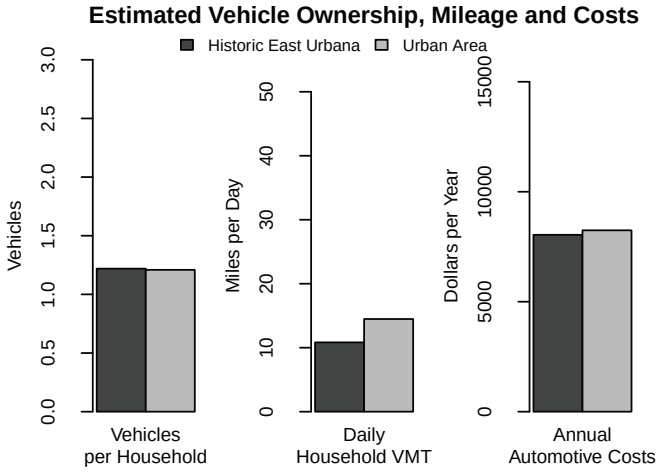
The Historic East Urbana neighborhood, made up of three TAZs east of Vine Street and North of Washington Street, scored similar to the urban area average for accessibility and well above average for mobility. Streets in the neighborhood were grid-like and well-connected in the southwestern TAZ, while the other TAZs had few street connections. Public comments identified several challenges facing drivers in the neighborhood, including congestion, visibility and road condition. Most housing units in the neighborhood were well-served by frequent bus service.

Sidewalk connectivity and coverage were relatively high in the residential portion of the neighborhood, but public comments identified the condition of sidewalks and ramps as an issue facing pedestrians. Though the neighborhood was well-connected to the regional bicycle network, public comments were mixed as to how well the bicycle network functioned. Conflict between vehicles and bicycles was identified by the public as a particularly problematic issue.

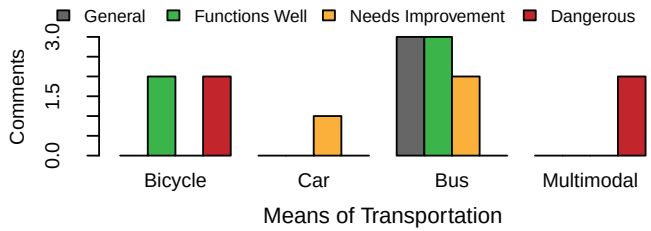
Land use patterns and access to jobs and schools in the neighborhood were similar to the urban area average. Access to parks was relatively high throughout the neighborhood, but the southwestern TAZ had the best access to grocery stores and services.

Despite high mobility scores, estimates suggested that residents of the neighborhood had similar mode share and vehicle ownership to the urban area average but that they tended to drive fewer miles. These trends suggested that the safety and infrastructure condition concerns identified in public comments may have prevented residents from taking advantage of the bicycle and pedestrian network. Addressing these concerns and working to increase access to nearby destinations could help to increase transportation choice for residents.

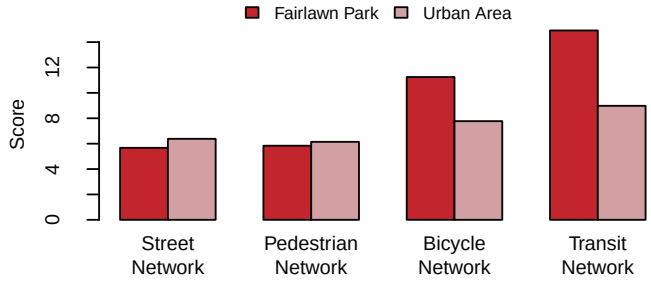




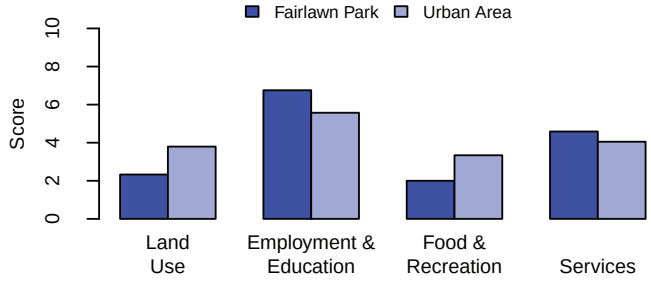
LRTP Public Input



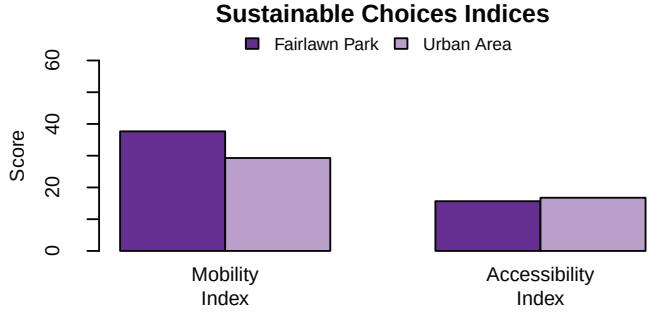
Mobility Factors



Accessibility Factors



Sustainable Choices Indices



Fairlawn Park

Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

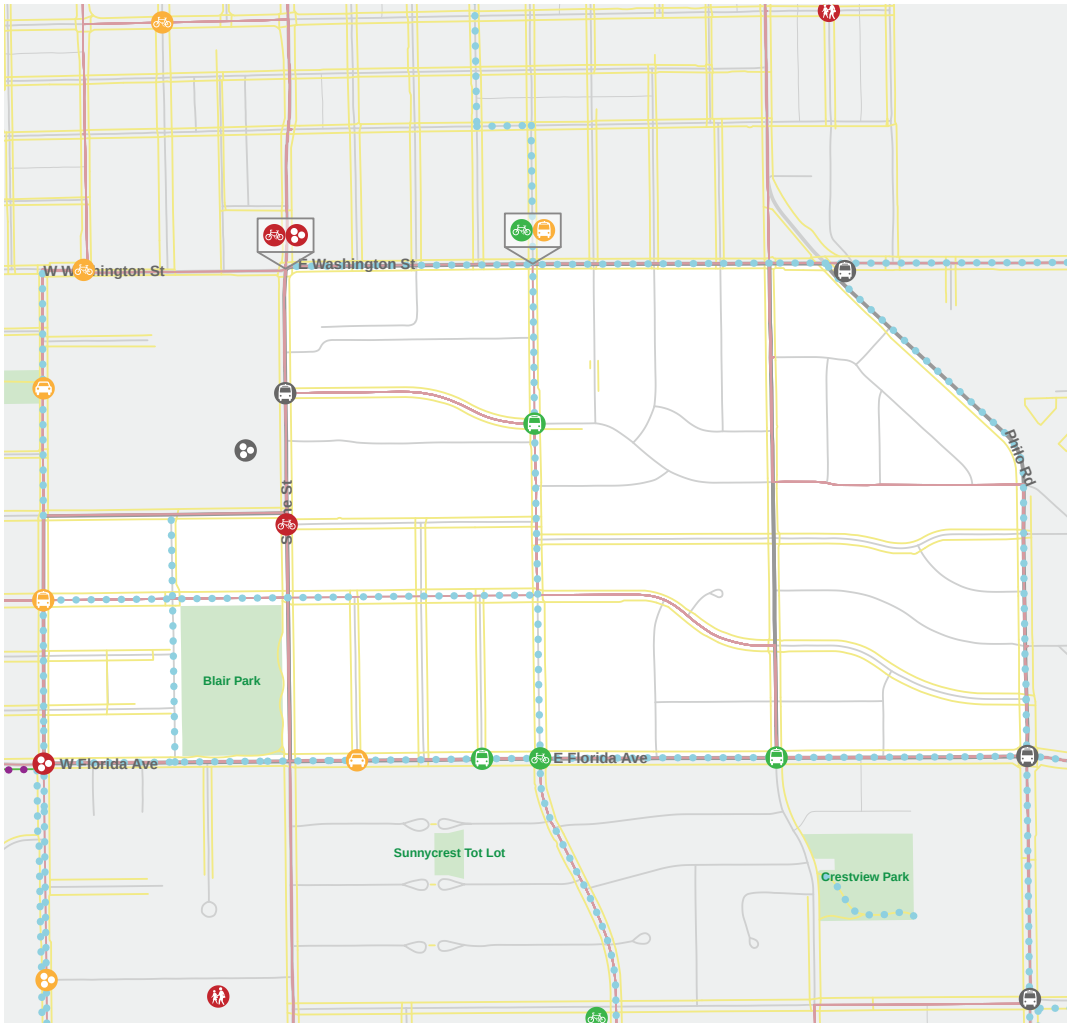
LRTP Public Input

Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous



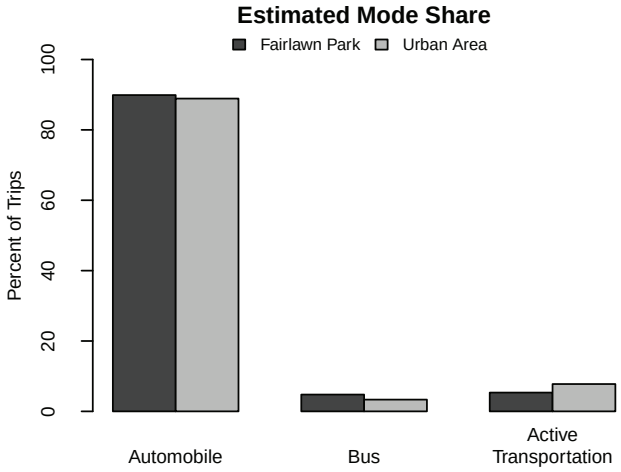
FAIRLAWN PARK

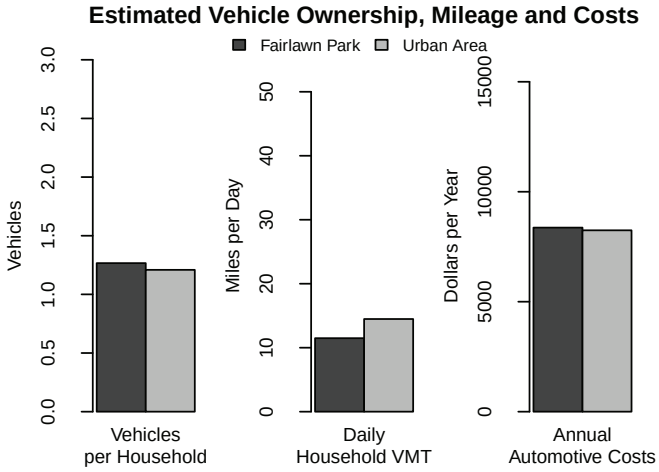
The Fairlawn Park neighborhood, which consists of three TAZs north of Florida Avenue between Race Street and Philo Road in Urbana, scored above the urban area average for mobility and similar to the average for accessibility.

Large blocks, missing sidewalk links and relatively low streetlight coverage contributed to slightly below-average scores for the street and pedestrian networks. The neighborhood was well served by bicycle facilities and transit routes. Public comments generally suggested that the bus system functioned well but noted points of conflict between buses and other modes, particularly at some intersections. Comments suggested that existing bicycle facilities were working well but identified Vine Street, a street without bicycle facilities, as a corridor where cyclists feel unsafe.

The neighborhood's density and land use mix were below-average, but most households had relatively easy access to schools and employment centers. Access to parks was strongest in the western part of the neighborhood, while access to services was strongest in the eastern section. Few households were within walking or bicycling distance of a grocery store.

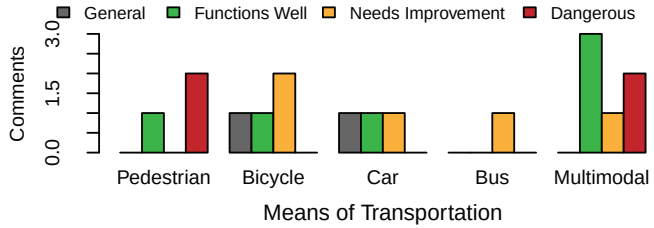
Estimates of mode share reflected the high transit connectivity score with above-average transit share, but the estimated active transportation share was below the urban area average. The proposed extension of bicycle facilities on Florida Avenue could help to encourage cycling to employment and education destinations to the west. In addition, closing gaps in the sidewalk network could improve the pedestrian experience in the neighborhood, encouraging additional pedestrian trips.



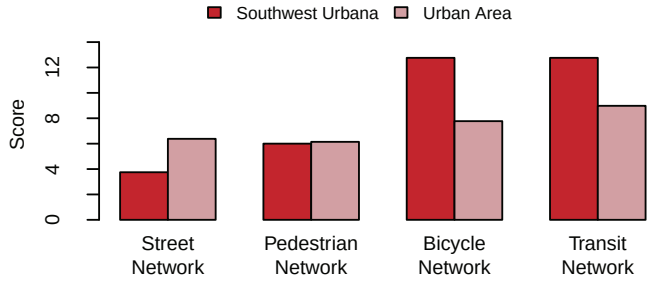


Southwest Urbana

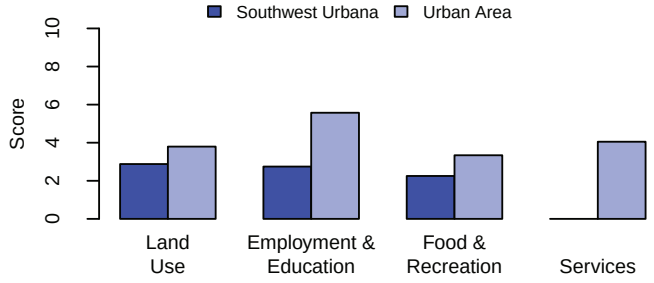
LRTP Public Input



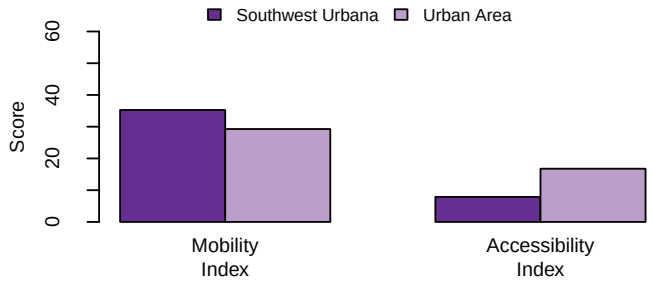
Mobility Factors



Accessibility Factors



Sustainable Choices Indices



Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

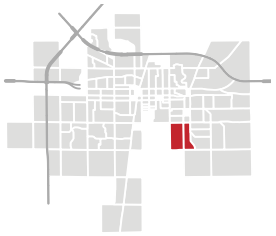
LRTP Public Input

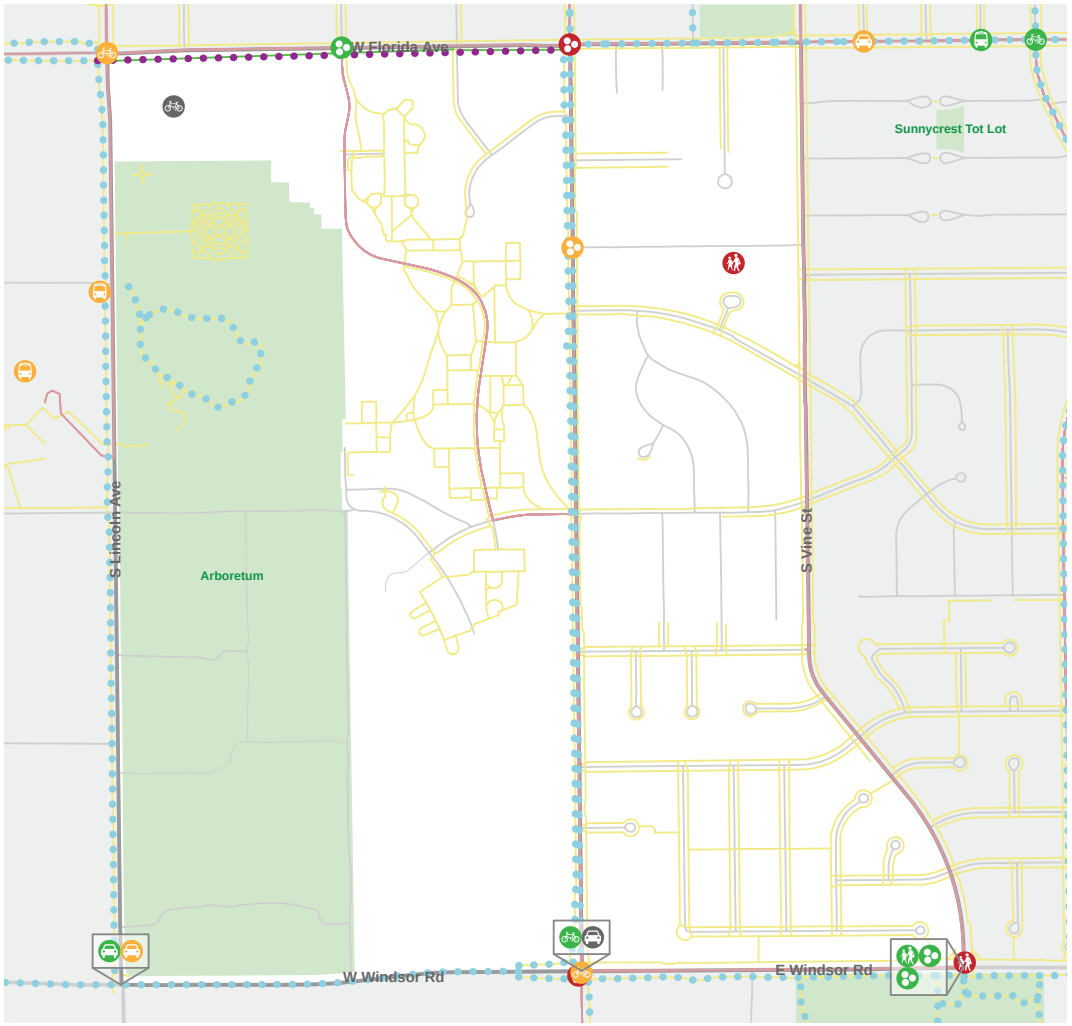
Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous





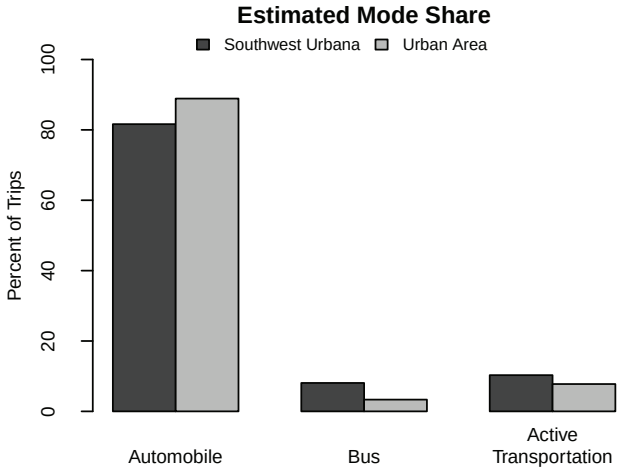
SOUTHWEST URBANA

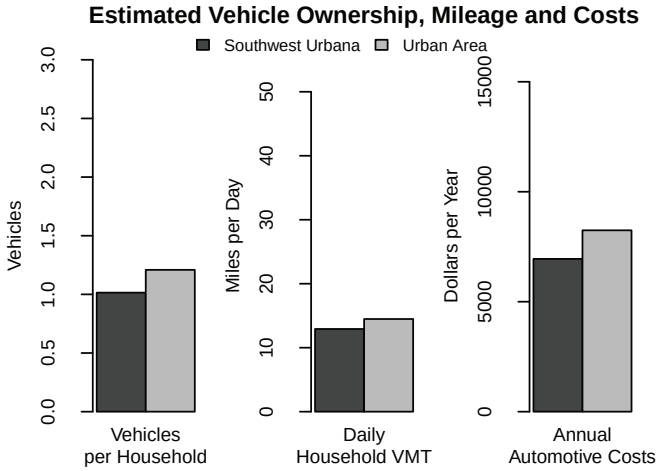
The Southwest Urbana neighborhood, composed of two TAZs south of Florida Avenue and west of Lincoln Avenue, scored slightly above the urban area average for mobility and well below the average for accessibility. The neighborhood was well-connected to the regional bicycle network. Frequent transit service provided connections to surrounding destinations, resulting in a high transit network score.

The neighborhood's streets were irregular in pattern and relatively poorly connected. Public comments suggested that, in general, signalized intersections in the neighborhood worked well, while some unsignalized intersections were susceptible to conflict among modes. Gaps in the sidewalk network and a low degree of streetlight coverage led to a pedestrian network score slightly below average. Similarly, public comments suggested that dark streets and lack of sidewalks created risks for pedestrians.

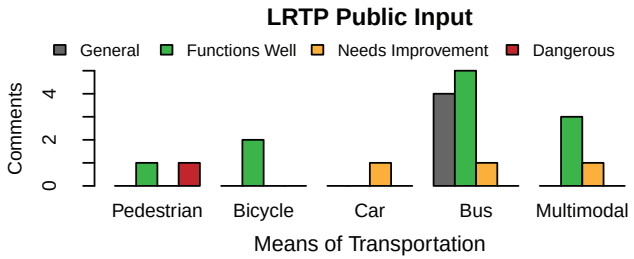
The neighborhood had a relatively low residential density and lacked a diversity of land uses, particularly in the eastern TAZ. Access to employment centers and K-12 schools was similarly limited. Residents had high levels of park access due to the neighborhood's location between the Arboretum and Meadowbrook Park, but in general they were not within walking distance of services and grocery stores.

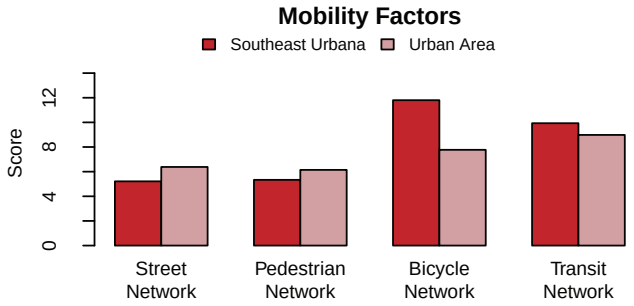
Estimated mode share was influenced by the student population at Orchard Downs and showed higher-than-average levels of transit ridership and active transportation. Similarly, lower levels of vehicle ownership and VMT resulted in lower-than-average automotive transportation costs. Despite the relative lack of nearby destinations, completing the sidewalk network, increasing streetlight coverage and constructing the proposed Florida Avenue bicycle facility extension could help to further increase mobility and increase transportation options for residents.

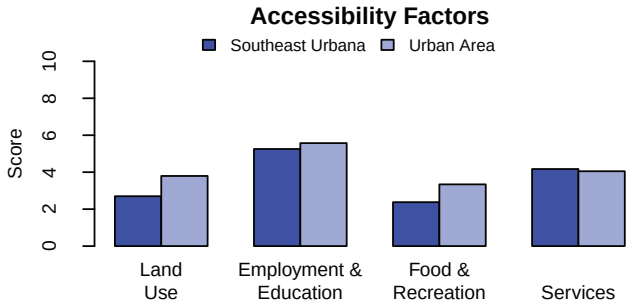


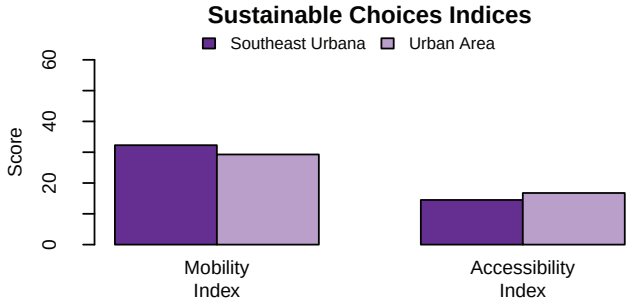


Southeast Urbana









Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

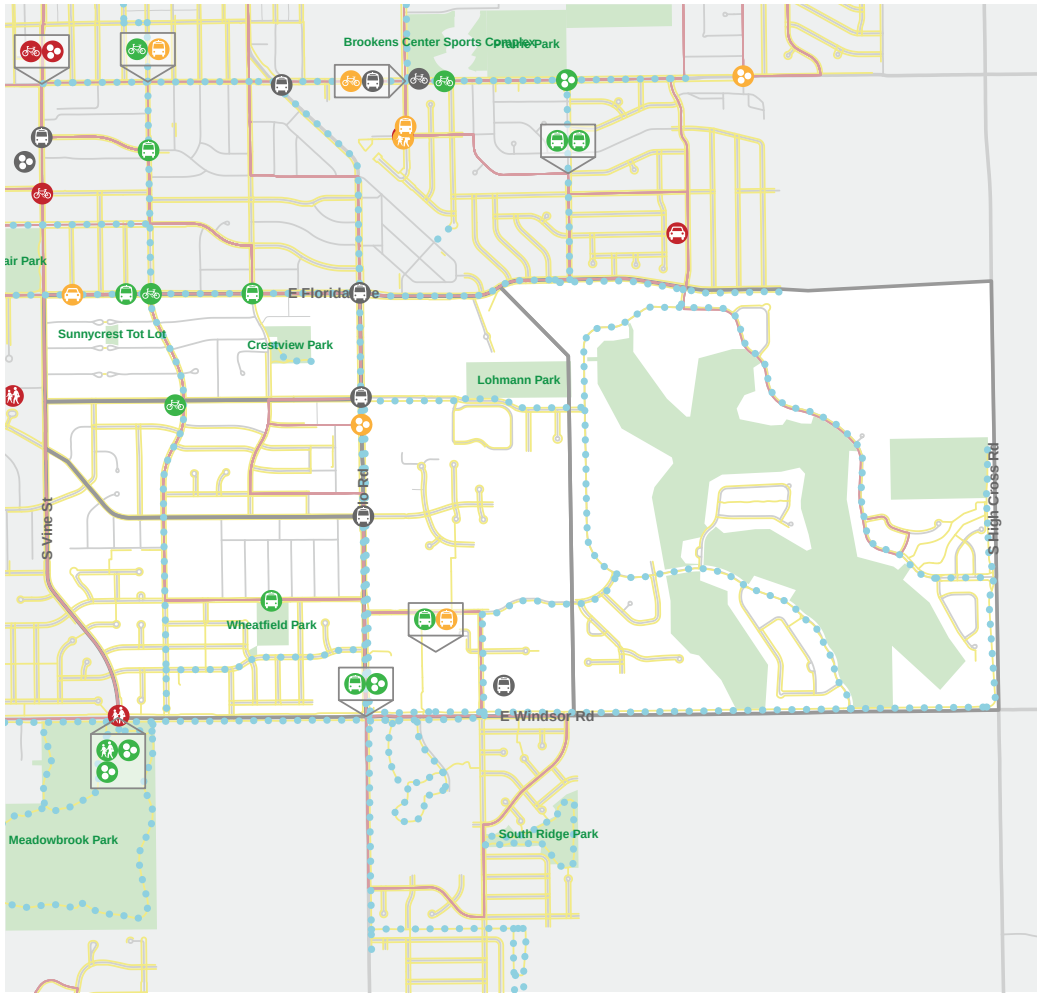
LRTP Public Input

Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous



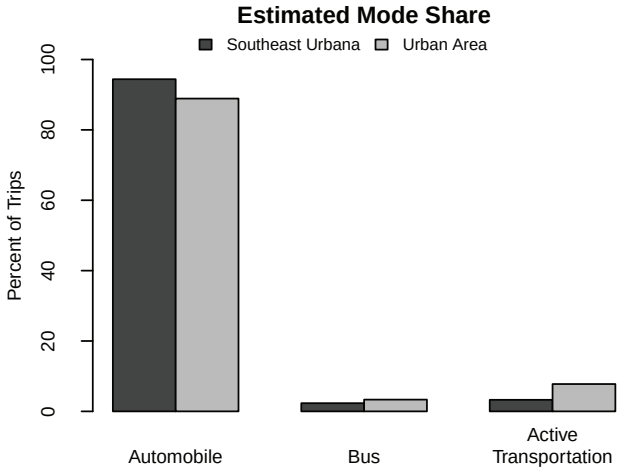
SOUTHEAST URBANA

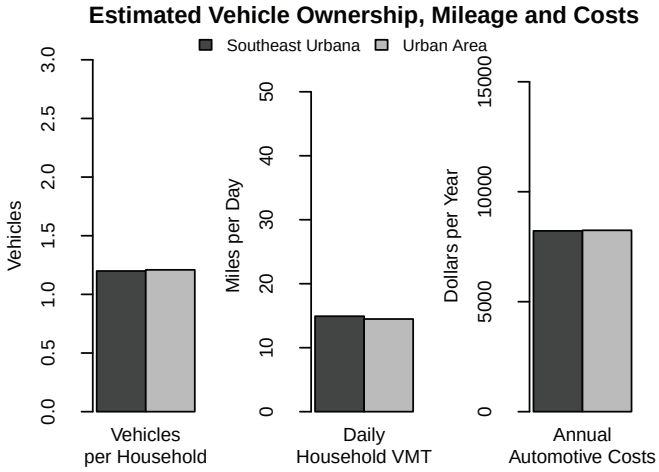
This neighborhood is comprised of five TAZs located southeast of downtown Urbana. Located between Florida Avenue and Windsor Road, this neighborhood is largely residential. This neighborhood scored slightly above average on mobility and slightly below average on accessibility.

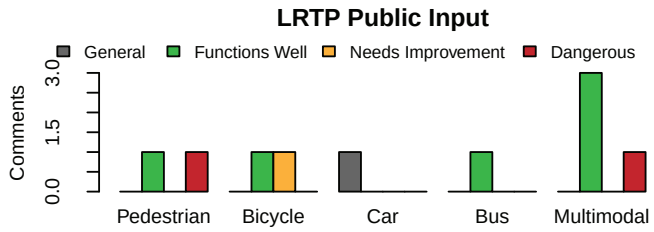
The street network in the neighborhood is marginally disconnected with many cul-de-sacs and relatively large blocks. Only a small portion of the neighborhood has a grid network, and street network connectivity was evaluated to be below average. Moreover, there are some links which do not have sidewalks. There are bike lanes on major arterials in the neighborhood, which can be used to connect to downtown Urbana. As such, the bike network in the neighborhood was evaluated to be significantly better than the average, which is also reflected in the public comments. There are multiple transit routes that link the neighborhood to downtown Urbana and the university district. Public comments characterize this neighborhood's transit connectivity as good and reliable. Low service on weekends, however, was identified as one of the concerns regarding transit connectivity.

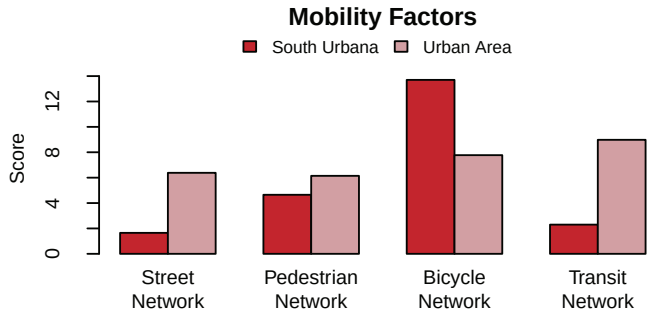
Although there are some businesses and services near the intersection of Florida Avenue and Philo Road and a few grocery stores and parks within the neighborhood, the neighborhood has lower than average accessibility to jobs and services.

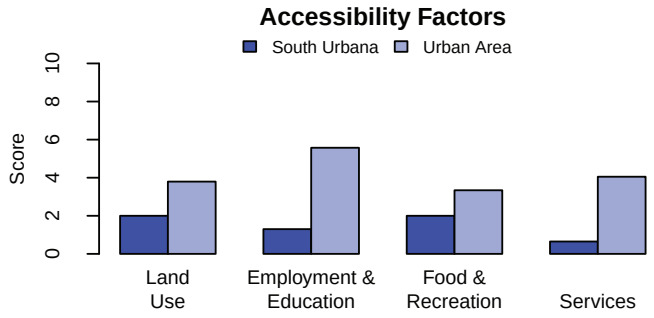
Overall, this neighborhood has well-functioning transportation infrastructure with accessible bike lanes and transit network. That, combined with about average accessibility, means that mode share of alternative modes of transportation is not as low as other neighborhoods located along the fringe of the urban area. Similarly, vehicle ownership, VMT, and transportation costs are same as urban area average and are also lower than expected for a neighborhood that is located far from Urbana downtown.

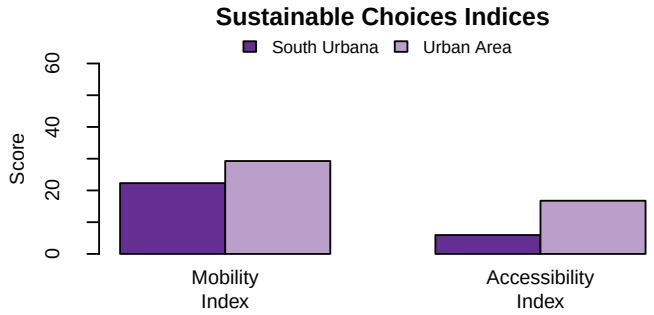












South Urbana

Built Environment

- Street
- Existing Sidewalk
- Proposed Sidewalk
- Existing Bicycle Facility
- Proposed Path or Trail
- Bus Route
- Parks and Recreation

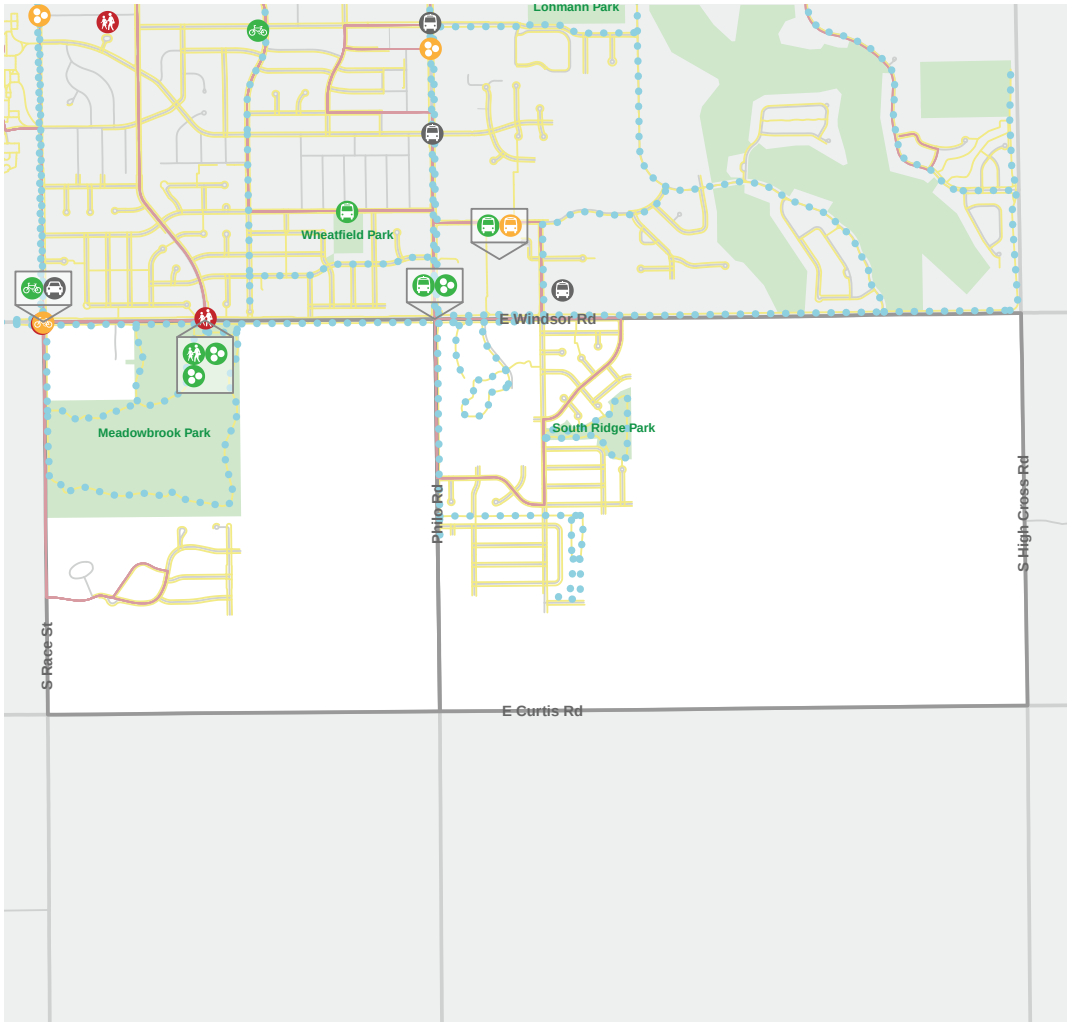
LRTP Public Input

Comment Mode

- Pedestrian
- Bicycle
- Car
- Bus
- Train
- Plane
- Multimodal

Comment Type

- General
- Functions Well
- Needs Improvement
- Dangerous



SOUTH URBANA

The South Urbana neighborhood consists of two TAZs located along the southern edge of Urbana. The neighborhood is bound by Windsor Road on the north, and only a small portion of the neighborhood is developed. The neighborhood scored below average on mobility and very low on accessibility.

It is hard to judge the street network since only a small part of the neighborhood has developments, but, even so, the existing street network is somewhat irregular with large block sizes. This can result in low pedestrian mobility, although most of the road links have sidewalks. There are some bike lanes in the neighborhood, and Meadowbrook Park and South Ridge Park have a few trails. Consequently, this neighborhood scored very high on bike network. Public comments also identify bike lanes and trails as a major strength of this neighborhood. The neighborhood has very limited transit connectivity ,which was identifies as one of the issues in public comments.

This neighborhood is located far from downtown Urbana and the university district, and scored very low on accessibility. The neighborhood is largely residential and there are not many employment centers nearby. Apart from a few parks, there are very few destinations that residents could potentially walk or bike to.

While this neighborhood's mobility was evaluated to be low, the transportation infrastructure is generally supportive of use of alternative modes of transportation. But the neighborhood has very low accessibility to jobs and services, which could explain why this neighborhood has relatively low mode share for bus and active transportation modes. Household VMT is also significantly higher than average, as residents have to travel long distances to access jobs and services. As a result, residents of this neighborhood are likely to own more vehicles than average and have high transportation costs.