

Date: July 20, 2009
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From: Sam Zimbabwe, Dena Belzer, Nadine Fogarty, Jeff Wood, Elizabeth Wampler
RE: *Twin Cities CTLUS Initiative / Identifying and Evaluating Regionally Significant Walkable Urban Places*
Total of 15 Pages

About This Report

This report was completed in partnership with ULI Minnesota and the ULI/Curtis Regional Infrastructure Project as part of the *Connecting Transportation and Land Use Systems (CTLUS) Initiative*. Funding was provided through a grant from the McKnight Foundation. The findings and recommendations contained in this report were developed through a series of workshops convened by ULI Minnesota—involving regional and national practitioners, experts, and elected officials—and independent analysis by the Center for Transit-Oriented Development.

The Center for Transit-Oriented Development is the only national nonprofit effort dedicated to providing best practices, research and tools to support market-based transit-oriented development. We partner with both the public and private sectors to strategize about ways to encourage the development of high-performing TOD projects around transit stations and to build transit systems that maximize the development potential. The Center for TOD is a collaboration among Reconnecting America, the Center for Neighborhood Technology, and Strategic Economics.

The Need for Regionally Significant Walkable Urban Places

As demographic trends, quality of life concerns, and personal preferences shift, more and more residents of the Twin Cities region are looking to live in walkable neighborhoods with access to shops and services and alternatives to driving. These demands—also seen in national trends—will form an ever-greater segment of the real estate market in the coming decades. Responding to these trends will be necessary to preserve the economic strength and competitiveness of the Twin Cities region.

However, a recent study by the Brookings Institution found that the Twin Cities region ranked below average in the number of regionally significant walkable urban places compared to other American cities.¹ Walkable urban places are locations where there is greater intensity of both commercial and residential development than typical suburban development. While walkable urban places can function without significant transit service, they are most successful when linked by high-capacity transit. Nationally, regionally significant walkable urban places have been shown to confer great economic

¹ Leinberger, Christopher B. “Footloose and Fancy Free: A Field Survey of Walkable Urban Places in the Top 30 Metropolitan Areas.” Washington, DC: The Brookings Institution, Metropolitan Policy Program.

development value on a region as a whole, but success requires support and investment from both the public and private sectors.

The Brookings study found only two regionally significant walkable urban places in the region: Downtown Minneapolis and Downtown St. Paul. Beyond these two regionally significant places, there are additional existing walkable neighborhoods in the region, often focused around residential neighborhoods with commercial “main streets”. Because of the often historic nature of these residential neighborhoods and their existing local catchment areas, these residentially focused places do not have a substantial increment for additional growth. For this reason, this report has focused on how to create additional regionally significant centers.

Successful policy and investment in the emergence of walkable urban places will help the Twin Cities region remain competitive economically, reduce the combined housing and transportation costs of the region’s residents, and reduce regional greenhouse gas emissions. There is the potential for a range of walkable centers to emerge in the region, but there has not been a comprehensive regional strategy to support these centers through public policy and both public and private investment.

This report outlines an approach to identifying and analyzing existing and potential walkable urban places in the Twin Cities region and outlines policy and investment recommendations that can support the transformation of existing centers of activity into walkable urban places. Through this transformative process, the region can preserve and promote economic competitiveness and quality of life.

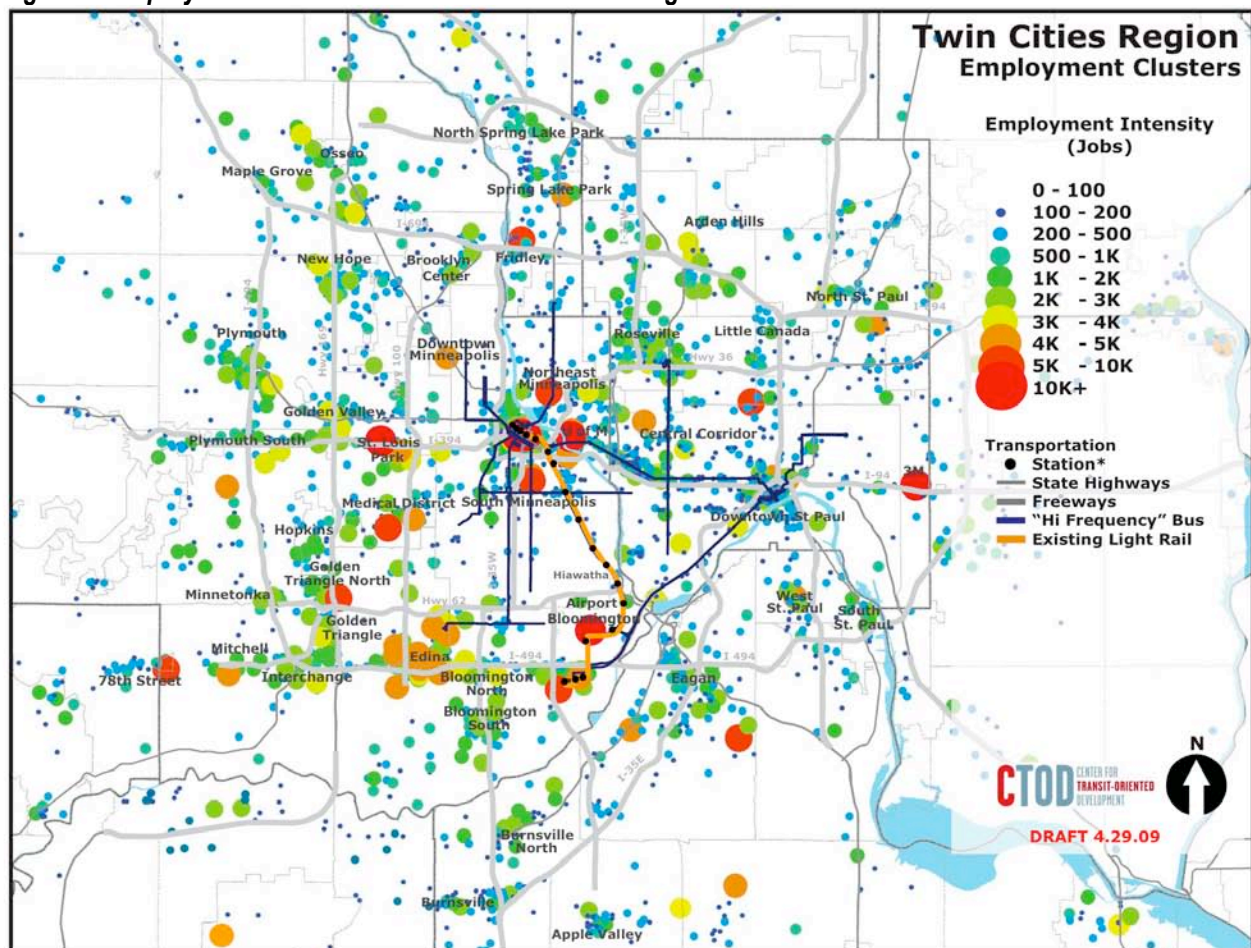
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Identifying Potential Walkable Urban Places in the Twin Cities Region

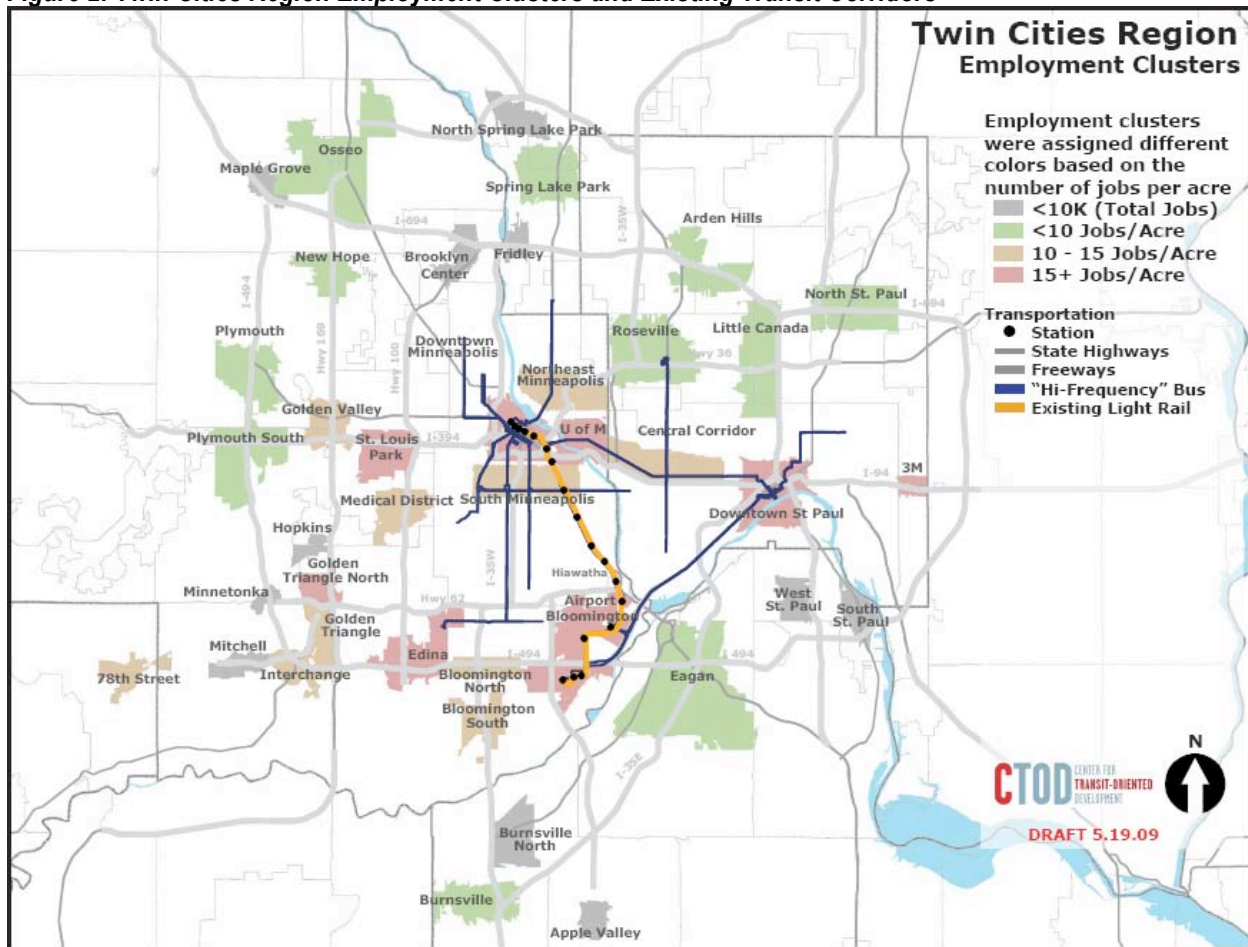
To identify potential walkable places, we began by focusing on existing job clusters, which have the greatest potential for growth and change. We began gathering data from the Census LEHD which provides block level data on employment, and mapped the number of workers in each census block in the Twin Cities region (see Figure 1).² The areas that appeared with the highest intensity, or the most workers/block, were grouped into 40 employment clusters. These 40 clusters represent a total of 930,000 jobs, or 57% of all jobs in the region. We then totaled the jobs inside each cluster to calculate a total employment number and an average jobs/acre for each employment center. Finally, we mapped the employment cluster densities against future transit scenarios possible in the region (see Figure 2, and the Appendix for a full sequence of regional maps).

Figure 1: Employment Locations within the Twin Cities Region



² Data was gathered from the 2004 Longitudinal Employer-Household Dynamics (LEHD) dataset. More information can be found at <http://lehd.did.census.gov/led/>. LEHD data should be aggregated to the census tract due to identity protection features in the data. When adding employment numbers together, we aggregated to the employment cluster, which is often larger than a tract.

Figure 2: Twin Cities Region Employment Clusters and Existing Transit Corridors



Figures 1 and 2 show that the Twin Cities region is already a place defined by concentrated clusters of employment spanning a range of densities. These employment clusters, moreover, represent some of the best opportunities for the region to create *walkable centers* in addition to downtown Minneapolis and St. Paul.

There is also fairly good overlap between planned transit expansion and regional employment clusters. Linking regional and federal investment in quality public transit and multimodal transportation will help catalyze the transformation from suburban to urban centers. However, there are some opportunities for additional future transit investments to reinforce existing employment clusters. Currently, transportation is planned as a hub and spoke model, and there are linkages already planned and under construction while others are currently being studied and debated. In thinking about future transit investments, it is important for the investments to reinforce existing employment locations and connect them with high-density residential neighborhoods.

Evaluating Potential Regionally Significant Walkable Urban Places

To fully analyze current walkability and make recommendations on how each center could be transformed into a more walkable place, we identified points within the seven densest employment clusters (3M was excluded because it is a single campus with one employer and land owner).

Table 1. Employment Clusters and Central Points

Cluster	Jobs	Jobs/ Acre	Center Point
Downtown Minneapolis	146,129	55.33	Nicollet/5 th LRT Station
3M	13,230	30.32	(not chosen for analysis)
Edina	72,830	27.22	Southdale
Downtown St. Paul	74,895	23.77	10th/Cedar Future LRT Station
Bloomington Airport	46,312	22.43	Bloomington Corporate Center LRT Station
University of Minnesota	35,478	21.08	East Bank Future LRT Station
Golden Triangle N (Opus Area)	17,824	20.79	Bren Blvd E/Bren Blvd W (Opus Future LRT Station)
St. Louis Park	37,013	19.24	Laurel Ave./Xenia Ave.

Where possible, the center points are current, planned, or proposed fixed-rail stations. For Edina, Bloomington Airport, and St. Louis Park, the center point was chosen based on existing conditions and local interest. Beginning from these center points, we gathered data within a one half-mile radius.

Indicators for Walkable Urban Places

The first need is to identify what makes a walkable urban place. There are several indicators CTOD uses to define and evaluate walkable urban places, gathered from existing research and practice wherever possible. These indicators are related to (1) land use, (2) access, and (3) multi-modal system performance. The evaluation of places based on these indicators depends on the availability of data to support fact-based planning and policymaking. Each indicator is described and defined below, and these indicators can be used in additional locations seeking to become walkable urban places in the future.

Table 2. Walkable Urban Place Indicators and Thresholds

Indicator Type	Indicator	Explanation	Ranges	Data Source
Land Use	Mix of Uses	Ratio of jobs to residents	<ul style="list-style-type: none"> High: 0.8-1.2 Moderate: 0.4-0.8; 1.2-2.0 Low: 0-0.4; 2.0+ 	US Census SF1 File LEHD Dataset
Land Use	Intensity of Uses	Total number of jobs and residents per acre	<ul style="list-style-type: none"> High: > 28.4 persons/acre Moderate: 14.2-28.4 persons/acre Low: <14.2 persons/acre³ 	US Census LEHD Dataset
Land Use	Employment Gravity	Distance to jobs in the region	<ul style="list-style-type: none"> High: highest quintile Moderate: 4th quintile Low: < 4th quintile 	CTOD + US Census
Land Use	Walk Score	Walk Score of centroid	<ul style="list-style-type: none"> High: 70-100 Moderate: 50-70 Low: <50⁴ 	Walkscore.com
Access	Block Size	Average acreage of blocks	<ul style="list-style-type: none"> High: < 4 acres/block Moderate: 4-8 acres/block Low: > 8 acres/block 	US Census TIGER Files

³ Peter Newman and Jeffrey Kenworthy, *Cities and Automobile Dependence: An International Sourcebook*, Gower Publishing, 1989. Persons per acre includes residents and jobs, and is a gross measure over all land area. There is a threshold at 35 persons/hectare (~14.2 persons/acre) below which driving increases markedly.

⁴ www.walkscore.com

Indicator Type	Indicator	Explanation	Ranges	Data Source
Access	Connectivity Index	Roadway links divided by roadway nodes	<ul style="list-style-type: none"> High: > 1.6 Moderate: 1.4-1.6 Low: <1.4⁵ 	US Census (Met Council?)
Access	Intersection Density	Number of intersections per square mile	<ul style="list-style-type: none"> High: > 300 intersections/sq. mi Moderate: 150-300 intersections/sq. mi Low: <150 intersections/sq. mi.⁶ 	US Census (Met Council?)
Multi-Modal System Performance	Presence of transit and bicycle facilities	Accessibility of existing or planned high-quality transit and/or bike facilities	<ul style="list-style-type: none"> High: 75% of land area within ½-mile of high-quality transit service + bicycle facilities Moderate: 50% of land area within ½-mile of high-quality transit service + bicycle facilities Low: < 50% of land area within ½-mile of high-quality transit service + bicycle facilities⁷ 	Met Council
Multi-Modal System Performance	Origin (Residents) Mode Split	Mode of travel for commute trips from the center to an employment location	<ul style="list-style-type: none"> High: > 32.3% walk/bike/transit Moderate: 14.6%-32.3% Low: <14.6% walk/bike/transit⁸ 	US Census CTPP
Multi-Modal System Performance	Destination (Workers) Mode Split	Mode of travel for commute trips with an employment destination in the center.	<ul style="list-style-type: none"> High: > 32.3% walk/bike/transit Moderate: 14.6%-32.3% Low: <14.6% walk/bike/transit⁹ 	US Census CTPP

The following sections outline in greater detail the factors and considerations for each indicator.

Land Use Indicators:

Employment gravity measures the distance each job is to other clusters of jobs in the region (as employment centers, these areas will all score high on this indicator). However, all of these employment clusters also score low on the **mix of uses** indicator. The centers analyzed here all have ratios of well above 2 workers per resident, and they range from 3 in Golden Triangle North (Opus Area) to 35 in Bloomington. A mix of uses and activity increases the walkability of an area by expanding the time of day in which people actively use a place.

⁵ Reid Ewing (1996), *Best Development Practices; Doing the Right Thing and Making Money at the Same Time*, Planners Press, 1996.

⁶ The LEED-ND Program Credit SLL-1 roughly conforms to these levels

⁷ LEED-ND Transit access pre-requisite is 50% of du within ¼-mile of bus/streetcar or ½-mile of LRT/heavy rail/commuter rail.

⁸ 2000 TZ Average in the Twin Cities was 32.3%, regional average was 7.3%

⁹ 2000 TZ Average in the Twin Cities was 32.3%, regional average was 7.3%

The other land use indicators add to the picture of how land uses affect walkability. The **intensity** of uses points to how many people are using the space; areas with a lack of activity are not attractive places to walk, and tend to be auto-oriented in design. Both downtown centers analyzed here scored high for the intensity of uses, as well as the University of Minnesota campus. These are all areas that have a natural inclination towards walkability due to their history and current use. The downtown areas were built before the automobile age and were designed for pedestrian travel. These areas contrast with the centers that function more like business parks: Bloomington and Golden Triangle North. Areas with high intensity and a low mix of uses will produce activity during only one portion of the day or week. Even active, dense employment centers like the downtown areas tend to have reduced activity on weekends and evenings. Figure A6 (see appendix) shows a regional picture of intensity of land uses in the Twin Cities.

A combination of a mix of uses and increased intensity will be necessary to support walkable urban places that are primarily residential today. Neighborhoods with a high degree of walkability, linked by transit to walkable employment centers help support the regional transportation system.

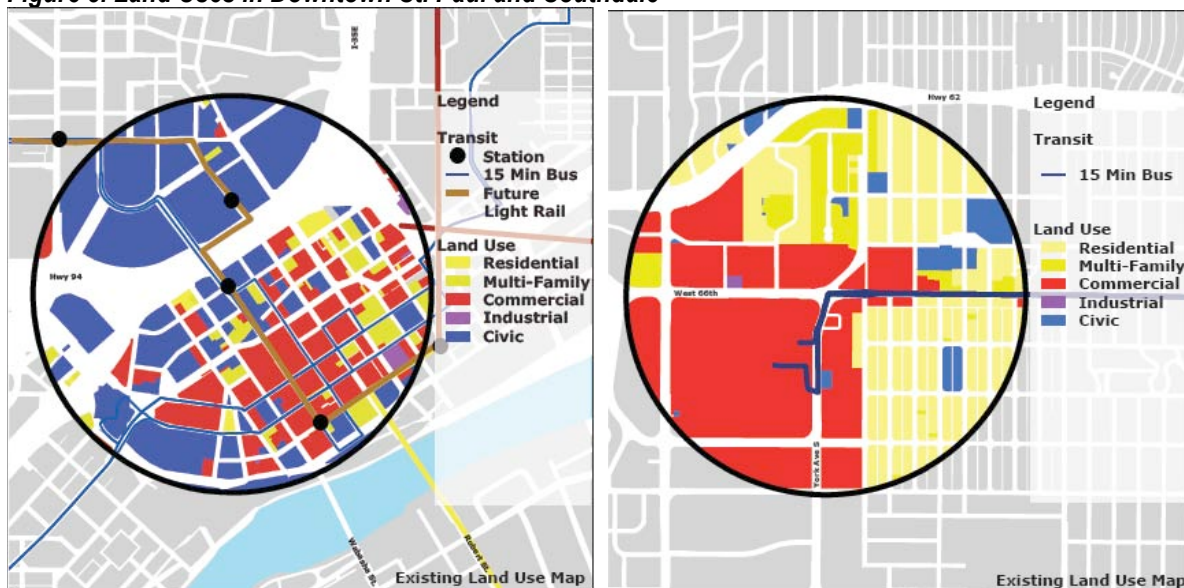
The **walkscore** indicator, taken from the Walkscore.com website, analyzes number of amenities in an area, including business types (restaurants, cafes, grocery stores, etc.) as well as civic uses like parks and libraries. This indicator is a good measure of whether there are destinations for people to walk to and can help differentiate an industrial park from an office and retail oriented center. Again, the highest scoring areas are downtown centers and the University campus.

The Southdale area also scores high on both intensity of uses and the walkscore.com indicator, because of the variety of activities located within ½-mile of the center point we selected. It should be noted and a caution that in the Southdale example, the mall contributes to a lot of the destinations measured by WalkScore. Table 3 shows the similarity in numerical scores between Southdale and Downtown St. Paul. However, the pattern of land uses in Southdale varies substantially from that in the downtowns and University campus.

Table 3. Land Uses in Downtown St. Paul and Southdale

Indicator	Downtown St. Paul	Southdale
Mix of Uses (workers/residents)	6.83	6.02
Intensity of Uses (workers + residents per acre)	74.25	46.39
Walkscore	92	92

Figure 3. Land Uses in Downtown St. Paul and Southdale



The land use maps above show downtown St. Paul on the left and Southdale on the right. These maps show that the geographical mix of land uses is also an important factor in considering the walkability of an area. The commercial, residential, and civic uses (the primary land uses in both areas) are separated and distinct in Southdale, while integrated and adjacent in downtown St. Paul.

Access:

The conditions in downtown St. Paul and Southdale demonstrate the importance of factors beyond simply land use to assess walkability and determine what needs to change to support more walkable places. The Access indicators measure the walkability of an employment center by analyzing features of the street network that contribute to creating a walkable place. The **connectivity index** measures the proportion of road “links,” the sections between intersections, to “nodes,” or the intersections themselves. This indicator measures the connectedness or permeability of the street network in a particular area. More connected street networks have been shown to support increased walking and biking, as well as other benefits.

Figure 4. Street Network Types



Connectivity Index: 1.75 = High

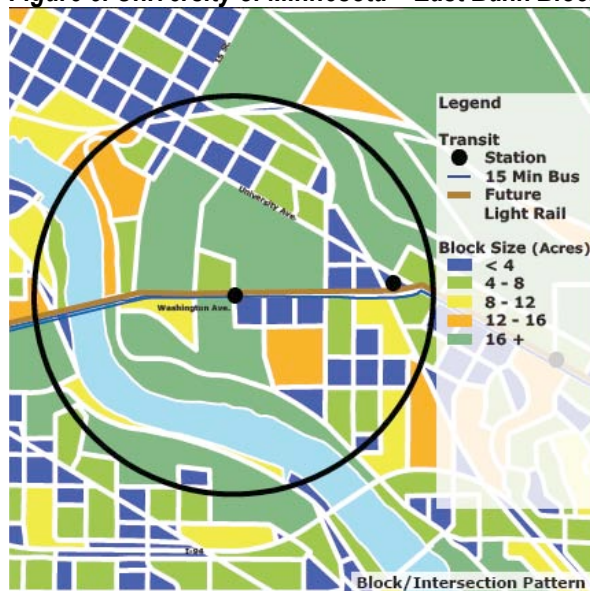
Connectivity Index: 1.47 = Moderate

Locations with higher scores for this indicator tend to have gridded street patterns, as seen in Figure 4 to the left, whereas low scoring areas have fewer intersections for every link due to cul de sacs and dead ends. All of the areas analyzed here score over 1.6, showing a high degree of connectivity.

The connectivity index does not, however, account for variations in block size, which also influences walkability. The **intersection density** indicator measures the number of intersections within a square mile. More intersections means shorter blocks and easier walking distances for pedestrians. None of the employment centers score high (over 300 intersections/square mile) but both downtown Minneapolis and downtown St. Paul have moderate intersection density.

Block size is another means of measuring walkability. This indicator can show the difference between a grid with one-mile long blocks (as in Phoenix) and or a place with 200 foot by 200 foot blocks, as in downtown Portland, Oregon. Higher scores in this case mean smaller blocks. Again, both downtown areas score high with an average block size of about 3-4 acres in both places.

Figure 5. University of Minnesota – East Bank Block/Intersection Pattern



The University of Minnesota's campus, shown above, scored moderate on both intersection density and block size. However, because the analysis was based on the street grid, it may miss non-auto walking paths that are more common in college campuses. The area may have a more walkable street layout than the numbers alone show. The appendix shows block size and intersection patterns for each employment center.

The access indicators show a clear division between those areas with a street layout that supports walkable centers and those areas that currently lack that infrastructure. Southdale, St. Louis Park, Golden Triangle North, and Bloomington all score low for intersection density and block size, and the street networks in these centers support and encourage auto-mobility and not walkability.

Multi-Modal System Performance:

The multi-modal system performance indicators reveal how each location is currently performing in terms of non-auto commute use. The mode available to and chosen by commuters is one factor in determining the building form and street grid in employment centers. Where there are good transportation options and workers choose to take alternatives to the car, fewer parking spaces are needed, and less public space overall is devoted to the car. This becomes a positive feedback loop, in which public space is used by pedestrians walking to work, transit, lunch, and/or home, and more resources and space can then be allocated to improving the pedestrian realm. Transit especially supports the walkable street layouts

identified in the “Access” indicators while allowing the intensity of uses identified in the “Land Uses” indicators. Beyond solely physical characteristics, there can be strategies—such as Transportation Demand Management or more transit-reliant populations—that support high performance on these indicators.

The areas that score “high” for **transportation options** are downtown Minneapolis, downtown St. Paul, the University East Bank campus, and Bloomington, meaning that those centers have at least 75 percent of land area within ½-mile of high-quality transit service (rail or high frequency bus) and bicycle facilities. The other employment centers largely lack the transit and bicycle infrastructure that can encourage non-auto commuting, but several locations are on future planned transitways.

Origin mode split shows the percentage of residents in each area who take transit, bicycle, or walk to get to work. The clear division is again between the downtown areas and the university campus, where 47 percent or more of residents do not drive to work, and Southdale, St. Louis Park, Golden Triangle North, and Bloomington, where fewer than 10 percent of all residents choose alternatives to the car.

The **destination mode split** indicator shows the percentage of people working in each area who take transit, bicycle or walk to work. Given that these areas are employment centers that have substantially more workers than residents, these numbers may more accurately represent overall travel patterns in each area. Only two areas had high scores, and none had moderate. 54 percent of East Bank University employees used non-auto modes to commute to work, while only 33 percent of downtown Minneapolis employees did. 14 percent of downtown St. Paul’s workers chose non auto modes, but each of the other employment centers had less than seven percent of all workers arriving by transit, biking or walking.

This set of indicators also splits the employment centers into two groups. One group, with downtown Minneapolis and University of Minnesota East Bank, has the necessary transportation infrastructure and rider statistics to support a walkable area. The other, with Southdale, St. Louis Park, Golden Triangle, and Bloomington lack both the infrastructure and the ridership habit that leads to more walkable centers. Downtown St. Paul falls in between these two groups with nearly twice as many workers commuting by non-auto modes as in the low scoring group, but still only half of those in the high scoring group. This shows the importance of investments in high-quality transit, walking, and cycling infrastructure in order to support increased use of alternative modes. This also shows that transit investments may need to lead the market in creating transformation opportunities, rather than solely focusing on and seeking to capture existing demand.

Indicator Summary

Assessing all of these locations across the various indicators shows how each is both similar and different from the other employment clusters.

Table 4. Walkability Scores of Employment Clusters

Cluster	Land Uses				Access			Multi Modal System Performance		
	Employment Gravity	Mix of Uses	Intensity of Uses	Walkscore	Connectivity Index	Intersection Density	Block Size	Transportation Options	Origin Mode Split	Destination Mode Split
Downtown Minneapolis (Nicollet)	High	Low	High	High	High	Moderate	High	High	High	High
Southdale	High	Low	High	High	High	Low	Low	Moderate	Low	Low
St. Louis Park	High	Low	Moderate	Moderate	High	Low	Low	Low	Low	Low
Golden Triangle North	High	Low	Low	Moderate	High	Low	Low	Low	Low	Low
UMinnesota East Bank	High	Low	High	High	High	Low	Moderate	High	High	High
Downtown St. Paul	High	Low	High	High	High	Moderate	High	High	High	Low
Bloomington	High	Low	Low	Moderate	High	Low	Low	High	Low	Low

See the Appendix for a detailed assessment on each of these places.

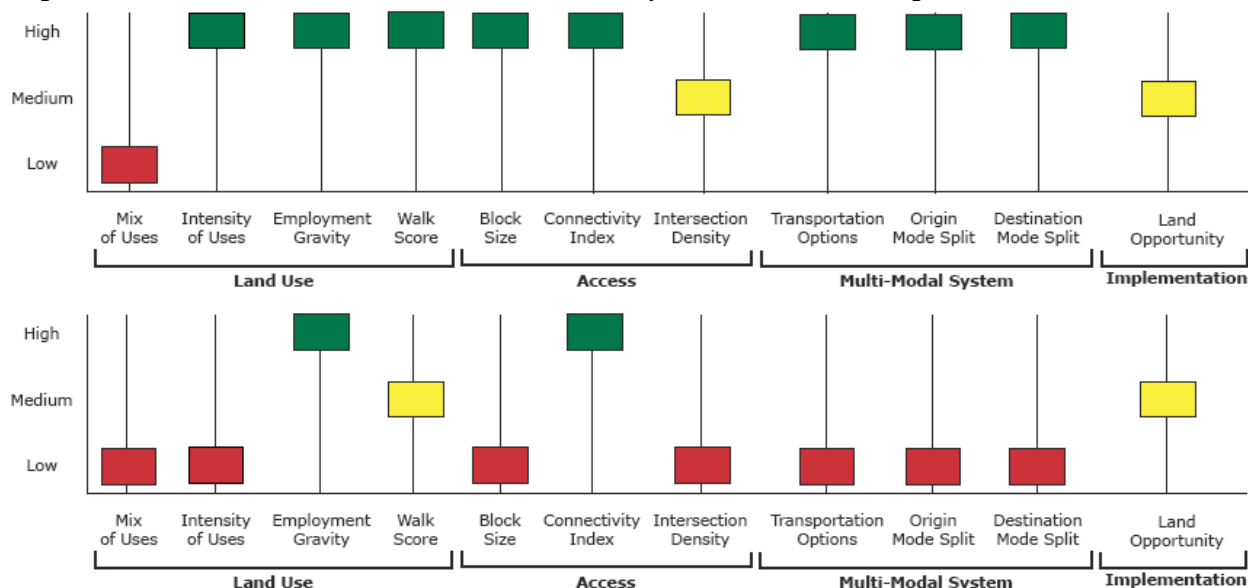
Opportunities To Create More Walkable Places

Highly walkable areas should score “high” on each of these indicators. However, none of these employment centers achieved a perfect score of 10/10. Two of the areas that consistently scored the highest (downtown Minneapolis and downtown St. Paul) are the two places that Leinberger identified as walkable places in the Twin Cities. However, even those areas could become more pedestrian friendly places.

It is useful to think about each indicator as a “lever” that can be shifted to support the emergence of walkable urban places. Not all walkable places will take the same path or have exactly the same components. There is no “one-size-fits-all” solution to creating walkable urban places.

Figure 6 shows the levers for two very different places: downtown Minneapolis and Golden Triangle North (Opus Area). Downtown Minneapolis’s walkability would be enhanced by the addition of residential uses to increase the mix of uses, but otherwise scores high on the walkability indicators. Golden Triangle North, in contrast, could improve under almost all of the indicators applied in this analysis. This section will explain how the Twin Cities may begin thinking about how to transform their employment centers into walkable places.

Figure 6. Walkable Center Levers for downtown Minneapolis and Golden Triangle North



Land Use

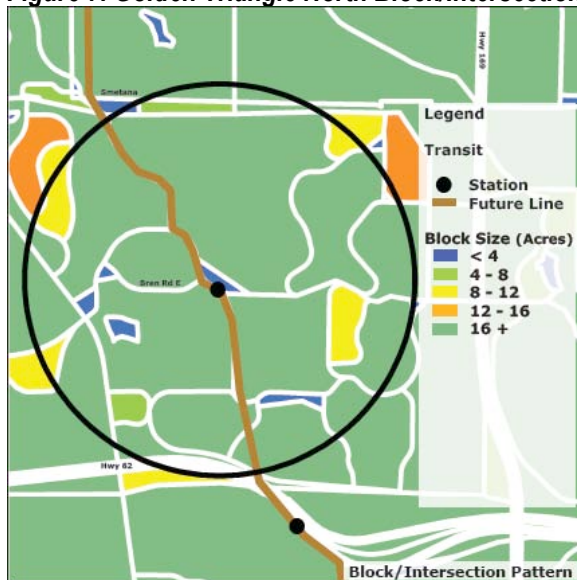
Improving the **land use scores** of these job centers requires adding more, different uses. As the employment gravity of each of these employment clusters is high, increasing the residential population will be the best strategy to increase the mix and intensity of uses, creating a balance between the workers and residents present in each place and increasing the amount of activity overall.

Increasing the **Walkscore** of these areas requires increasing the amenities available. This may mean increasing the amount of retail options available, including grocery stores and restaurants, as well as cafes and smaller scale retail stores. However, civic spaces are also important in gaining a high walk score, so ensuring that parks, libraries, and schools are within each area is essential.

Access

Increasing access indicator scores requires changing the street pattern in these locations. This change is easier to make in areas with very large parcels of land with few existing buildings.

Figure 7. Golden Triangle North Block/Intersection Pattern



Golden Triangle North (the Opus Area) is a good example of how breaking the large blocks up into smaller ones would improve both the **block size score** as well as **intersection density**. The older downtown areas may find this task much more difficult, unless there are large blocks of parking that could be transformed into smaller blocks as redevelopment occurs in those spaces.

Multi-Modal System Performance

The Twin Cities is working already to improve **transportation options** in some of these job centers. The Central Corridor LRT will bring high quality transit options to both the University of Minnesota campus and the downtown St. Paul centers, and Golden Triangle North has a proposed stop along the future Southwest Corridor. However, there are no official plans to connect St. Louis Park or Southdale via a fixed rail system.

Methods of increasing the proportion of people who choose to commute to and from these centers by non auto modes include many of the factors that affect walkability, but can also include Transportation Demand Management strategies and outreach and education efforts to ensure workers and residents know about existing transit options.

Table 5. Mode Split for Employment Centers

Employment Cluster	Origin Non-Auto	Destination Non-Auto	Overall Walkability Rank ¹⁰
University of Minnesota - East Bank	59.0%	54.5%	2
Downtown Minneapolis	56.0%	32.7%	1
Downtown St. Paul	47.5%	14.3%	2
Bloomington	9.5%	6.9%	6
Southdale	9.4%	4.5%	4
St. Louis Park	7.3%	2.9%	5
Golden Triangle North	2.9%	1.1%	6

Table 5 shows how the proportion of people using non auto modes correlates to walkability. The three centers that scored consistently lower on walkability indicators have fewer people commuting by taking transit, bicycling, and walking.

Implementation

The potential for walkability at any of these locations partly reflects the potential for transformative change, which includes the land available for new development and also factors like market momentum or potential. Because many of the indicators of implementation potential are not quantifiable, we have focused on underutilized land as a primary driver of potential implementation.

The **land opportunity score** indicates how much land can be counted as underutilized. This measure shows the amount of vacant land, or commercial and industrial land where the assessed value of the building is less than the assessed value of the land. This measure can tend to over count industrial uses, where buildings tend to be lower in value than residential or commercial buildings, though they provide many potentially higher value jobs, and so should be thought of as a guide, rather than a definitive total.

Because these areas are all active employment centers, the percent of underutilized land is below 33 percent of the total land, but ranges between seven percent in downtown St. Paul to 30 percent in Golden Triangle North. Downtown St. Paul and the University of Minnesota have fewer land opportunities than the other four centers—but they already scored higher on many of the walkability indicators. While downtown Minneapolis had the most consistently high scores out of all of these centers, about 20% of the land in the area still qualifies as underutilized. The downtown currently has a significant acreage dedicated to parking. This land use should be converted to more active, productive uses to create a more walkable downtown.

In Southdale, St. Louis Park, and Bloomington, about a quarter (25 percent) of the land can be categorized as underutilized. The majority of these spaces are dedicated to parking, though often the parcel contains a commercial or industrial building and is surrounded by surface parking on all sides. These land uses demonstrate in part why transit is such an essential piece of creating walkable places. To reach these destinations currently, most people chose to drive out of convenience or necessity. However, with more people arriving by transit, the parking demand would be reduced and this land could be developed into more active, walkable spaces. Golden Triangle North has just over 30% underutilized land, primarily in parking lots, and vacant industrial and commercial land.

¹⁰ This rank is based on the overall scoring for all indicators. High = 1 pt, Moderate = .5 pts, Low = 0 pts.

Table 6. Land Opportunity at Employment Centers

Station	Land Opportunity
Downtown Minneapolis (Nicollet)	Moderate
Southdale	Moderate
St. Louis Park	Moderate
Golden Triangle North	Moderate
East Bank University of Minnesota	Low
Downtown St. Paul	Low
Bloomington	Moderate

Policy and Investment Recommendations

Opportunities for creating more walkable urban places in these locations will come from two broad areas: (1) policy changes, and (2) capital investment strategies. In both of these two areas, there will be the need to address land use *and* transportation simultaneously. Building from the analysis of where these employment clusters are today, and how the levers of change can be shifted to support more walkability, we recommend the following approach:

Policy Changes

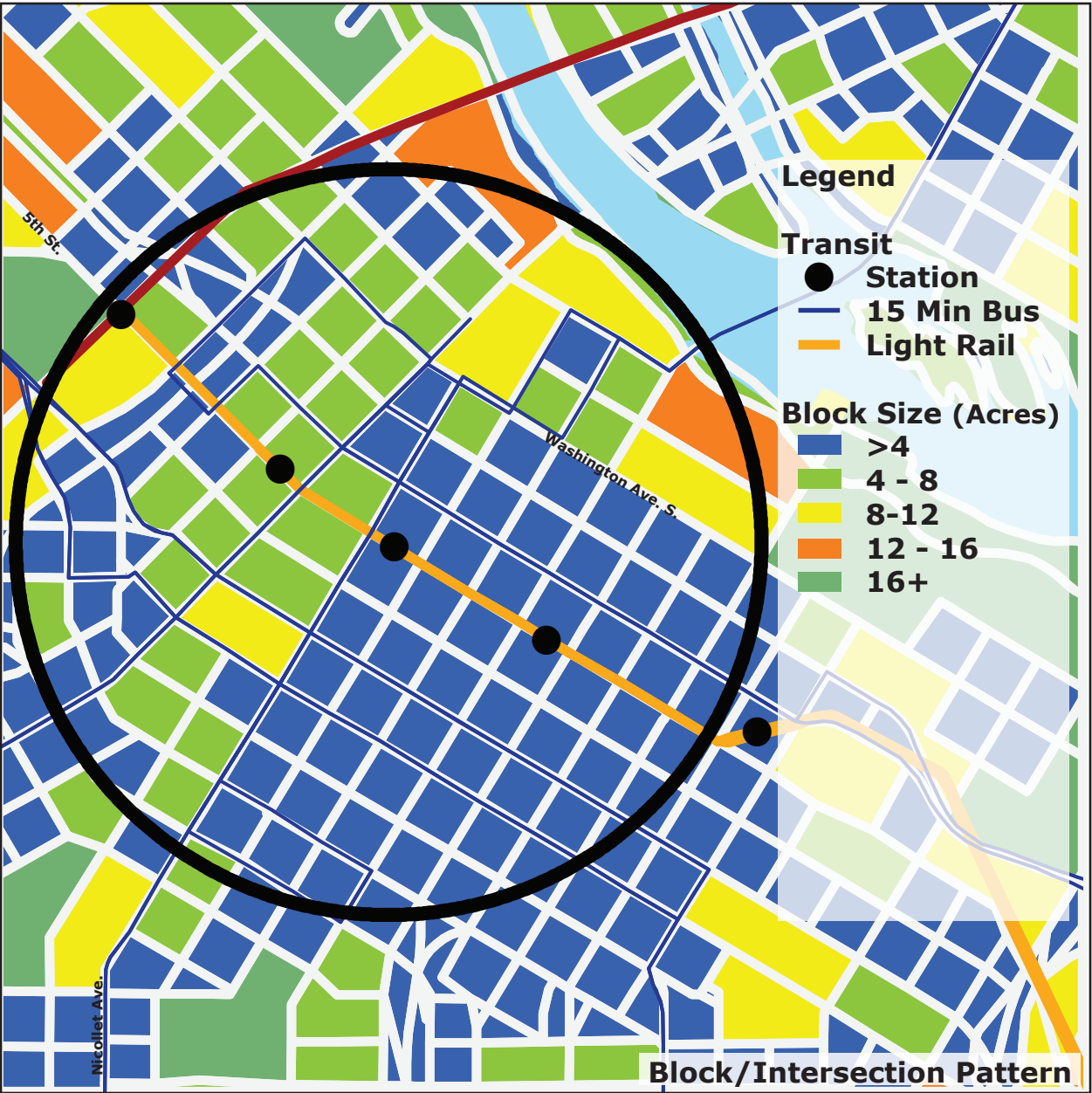
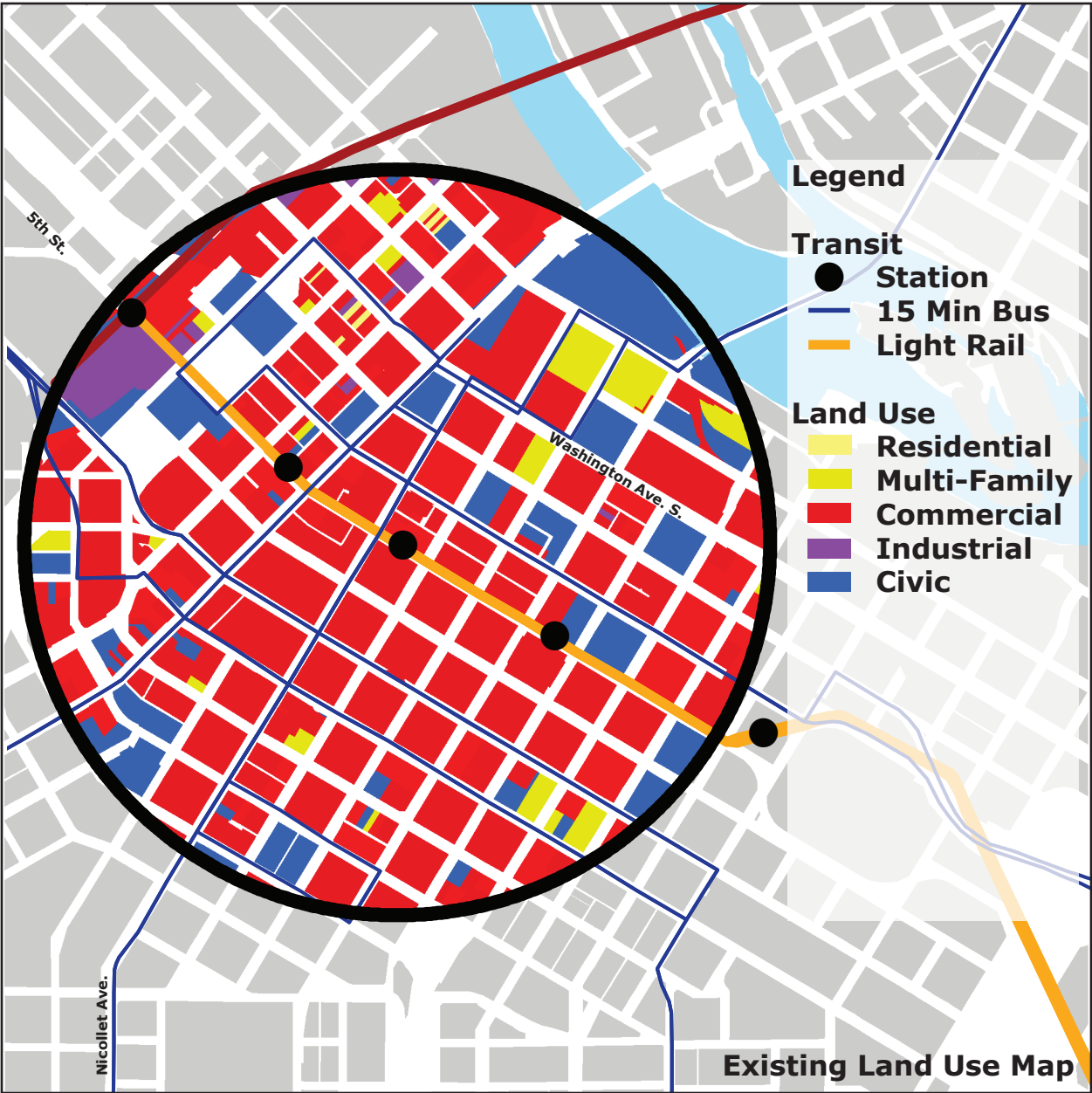
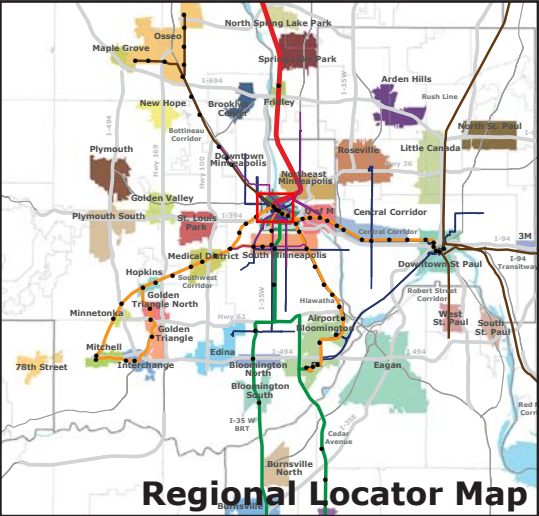
- Develop policies to require connectivity and reduced block size in new development or redevelopment of existing sites. The City of Charlotte, North Carolina has legislation requiring this approach.
- Coordinate economic development and industrial planning/preservation to delineate strong industrial areas (to keep jobs) vs weak areas (that could be transformed into more mixed use residential and commercial/light industrial areas)
- Develop policies to link strategic planning processes for job centers with transit investments
- Invest in transportation planning studies that connect job centers (high employment gravity) with residential centers (high residential density) for the next generation of transit corridors in the region.
- Support local Transportation Demand Management (TDM) and/or Business Improvement District (BID) efforts to provide local transit alternatives such as circulators, and identify strategies beyond physical development to improve multi-modal system performance.

Investment Strategies

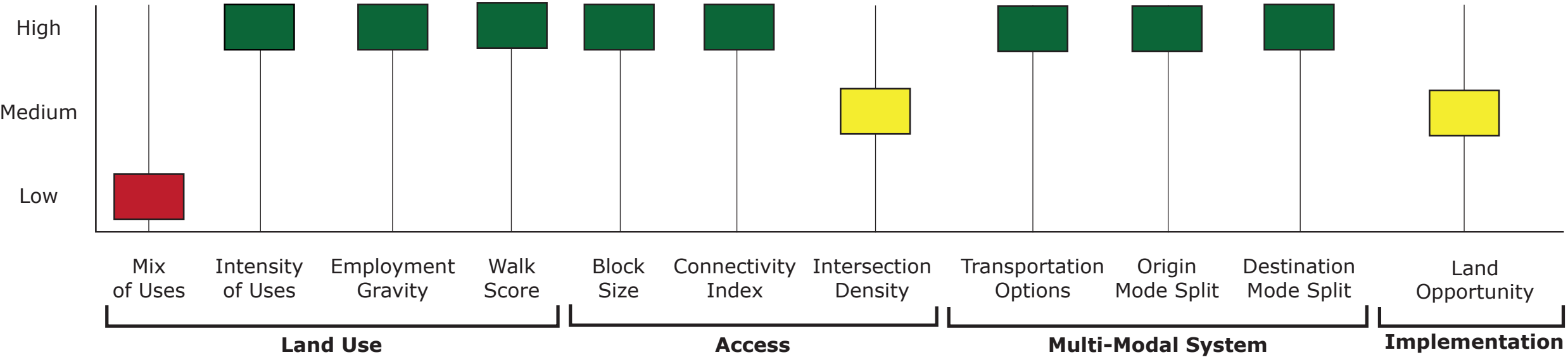
- Support the transition of surface parking lots into more intense development through the Livable Communities Demonstration Account and other regional programs.
- Support improved mixed-use opportunities by offering funding to developers in these job clusters who build mixed-use and mixed-income housing developments.
- Invest in increased residential and residential amenities (such as shops, grocery stores, and services) that support increased residential investment in existing employment clusters.
- Provide regional capital funding for road network connectivity, multi-modal streets, and other improvements that support the transition to more walkable urban places.
- Establish employment center enterprise districts or other incentives that would support increased mix of uses and intensity, while reinforcing existing employment clusters.

Twin Cities Region
Walkable Centers
Analysis

*Downtown
Minneapolis
(Nicollet Mall
@ 5th Street S)*



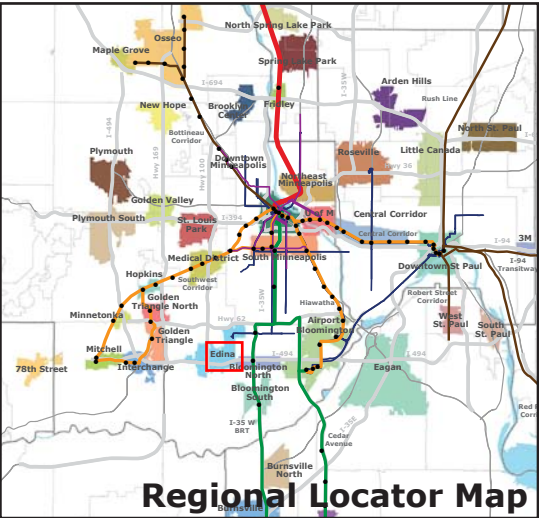
Walkable Centers Indicators



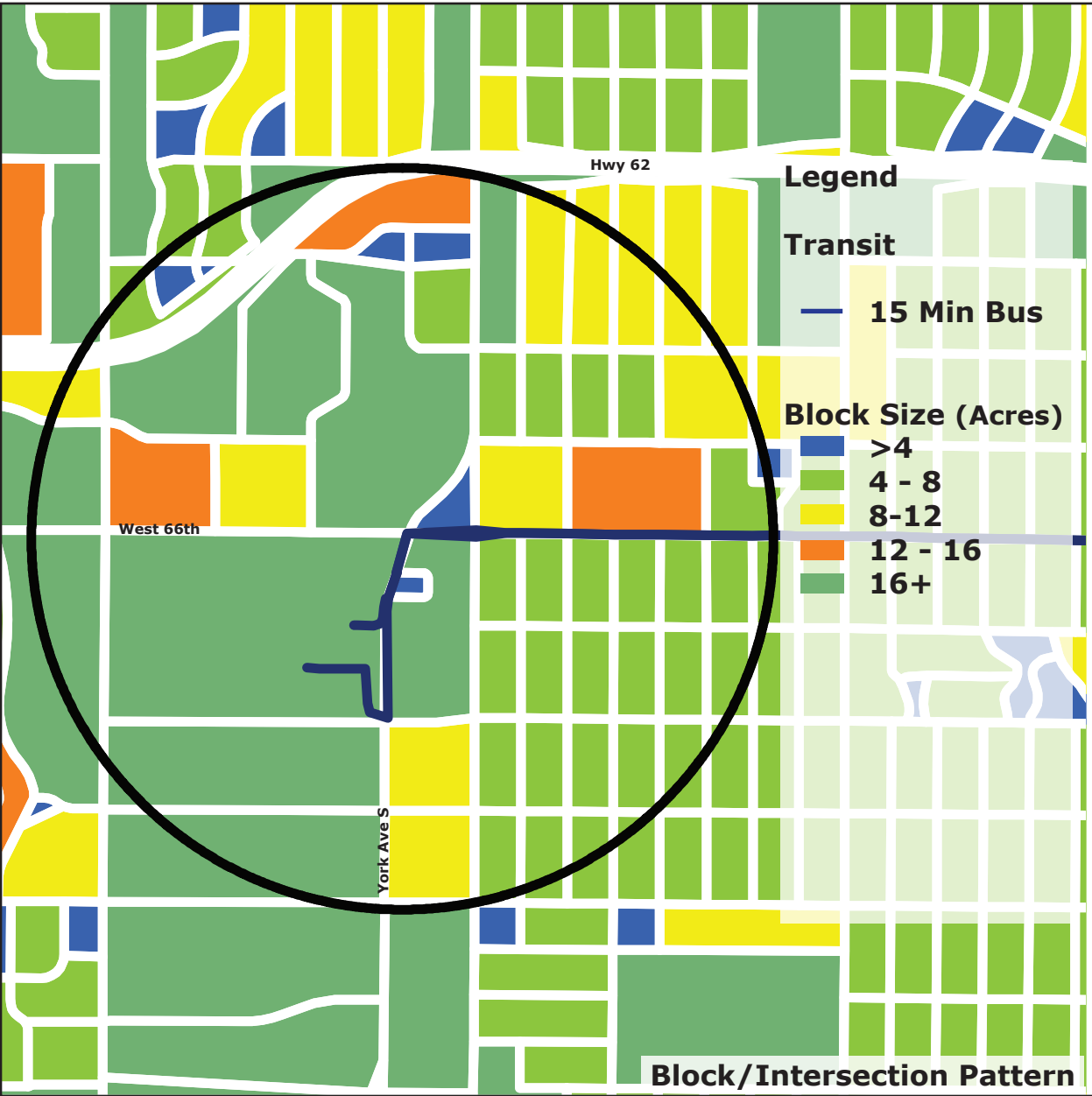
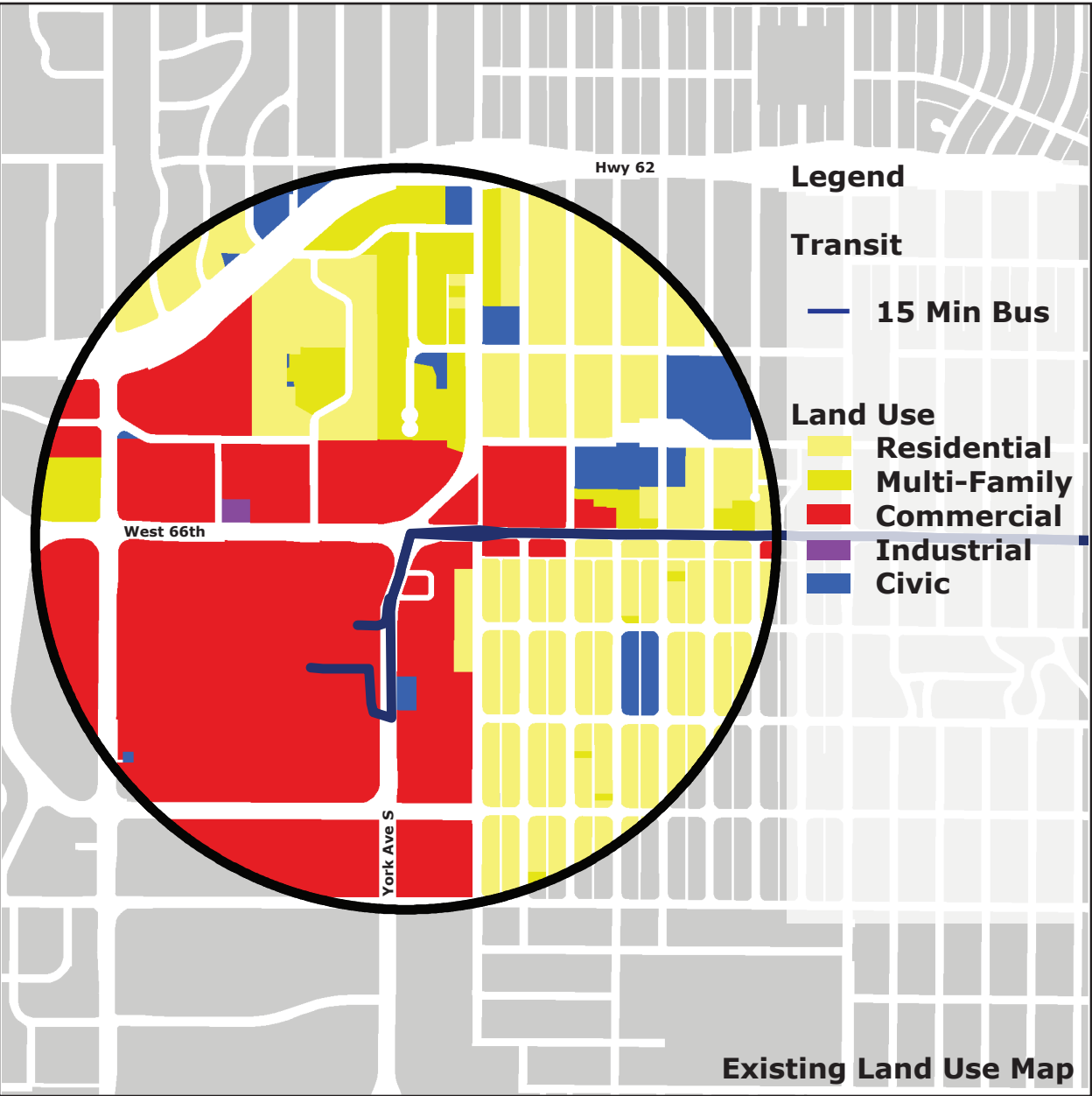
Indicator	
Mix of Uses (Workers/Residents)	23.7
Intensity of Uses (Work. + Res./Acre)	214.7
Employment Gravity	High
Walk Score	98
Average Block Size	3.94 Acres
Connectivity Index	1.89
Intersection Density	167/sq mi
Origin Mode Split	56% Non-auto
Destination Mode Split	33% Non-auto
Land Opportunity	109 Acres

Twin Cities Region
Walkable Centers
Analysis

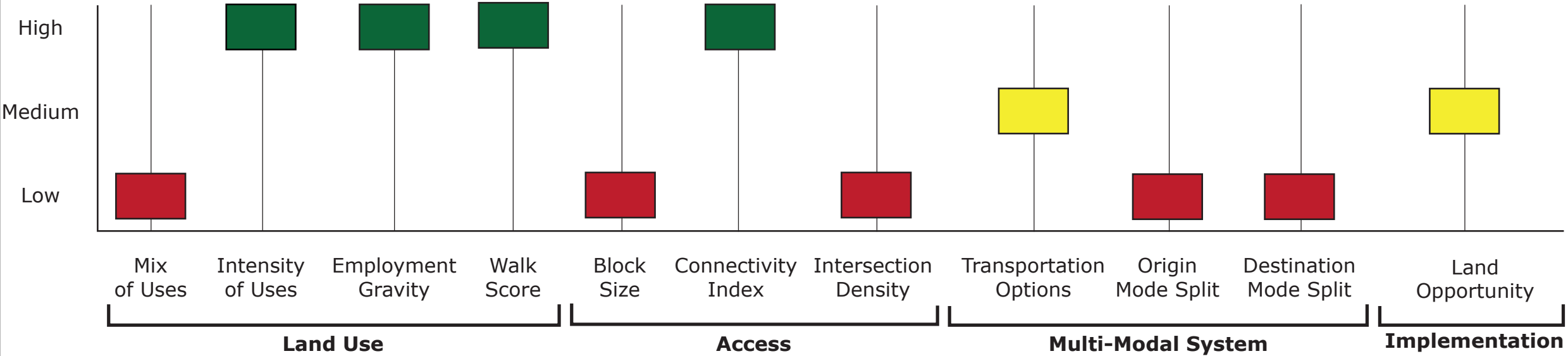
Southdale Area
(W 66th Street @
York Ave S, Edina)



Indicator	
Mix of Uses (Workers/Residents)	6.0
Intensity of Uses (Work. + Res./Acre)	46.4
Employment Gravity	High
Walk Score	92
Average Block Size	10.0 Acres
Connectivity Index	1.8
Intersection Density	40/sq mi
Origin Mode Split	9% Non-auto
Destination Mode Split	4% Non-auto
Land Opportunity	116 Acres

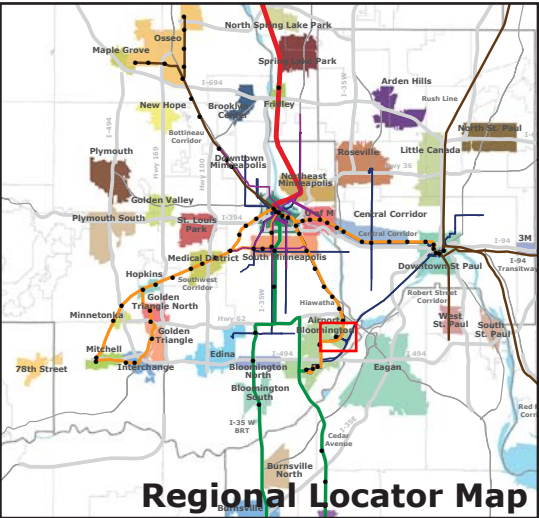


Walkable Centers Indicators



Twin Cities Region Walkable Centers Analysis

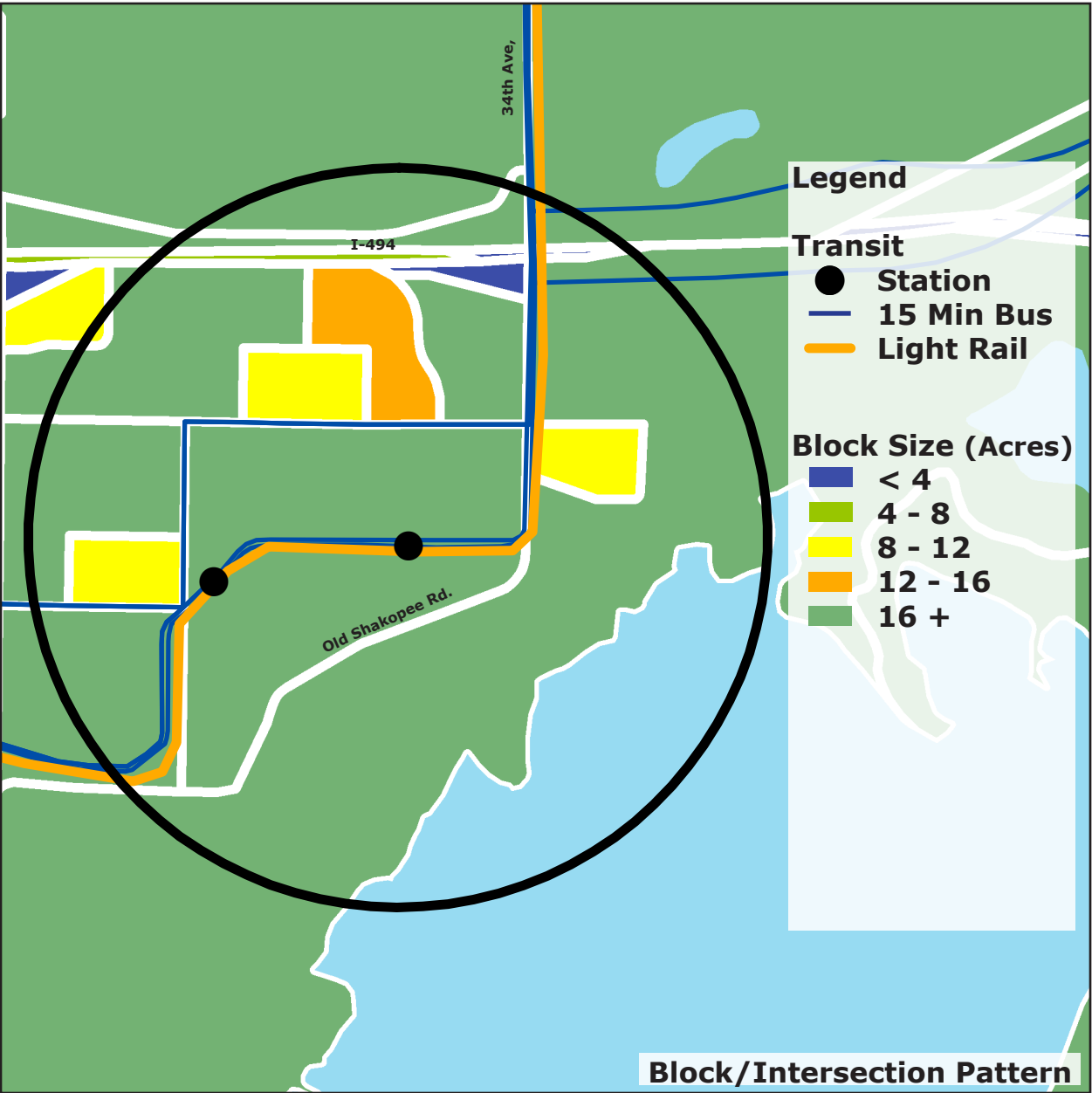
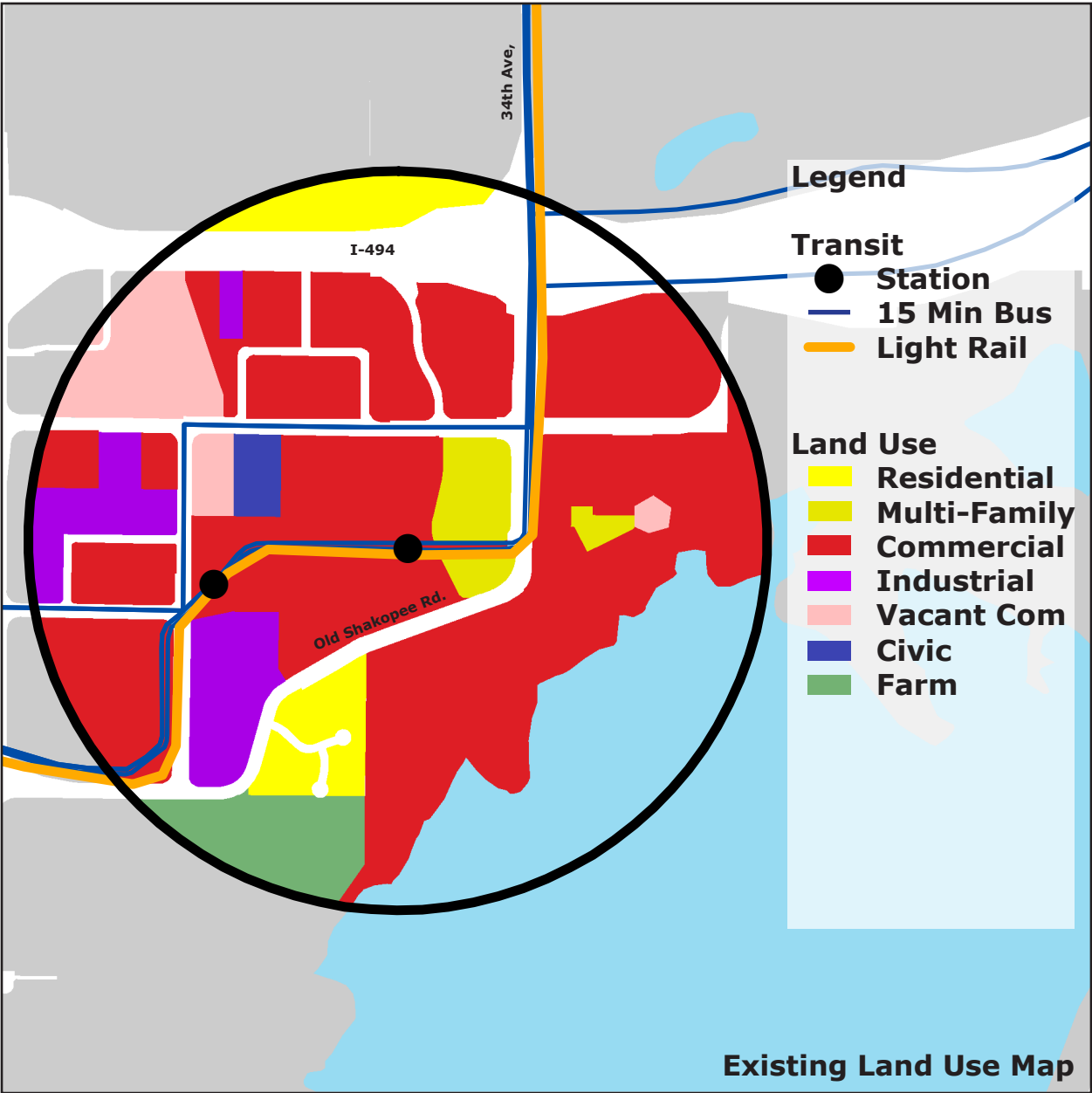
Bloomington Area (E 80th St @ 28th Ave S, Minneapolis)



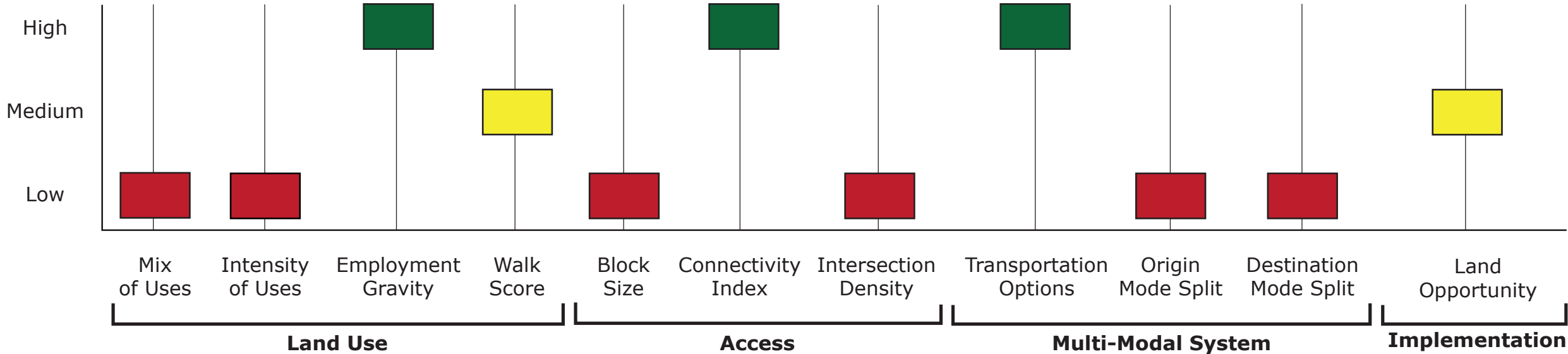
Indicator	
Mix of Uses (Workers/Residents)	35.5
Intensity of Uses (Work. + Res./Acre)	10.3
Employment Gravity	High
Walk Score	68
Average Block Size	15.6 Acres
Connectivity Index	1.7
Intersection Density	30/sq mi
Origin Mode Split	9% Non-auto
Destination Mode Split	7% Non-auto
Land Opportunity	133 acres



June 30, 2009

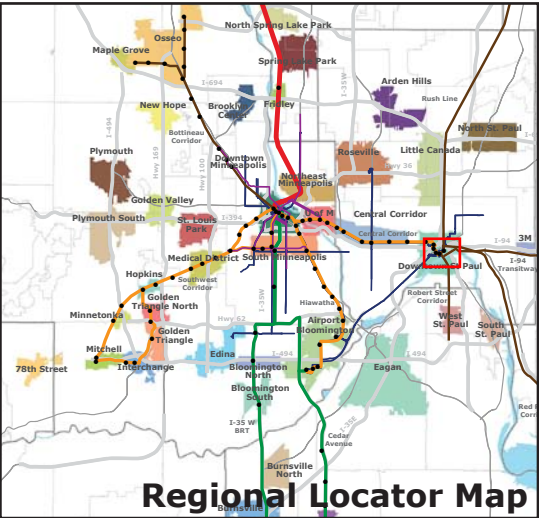


Walkable Centers Indicators

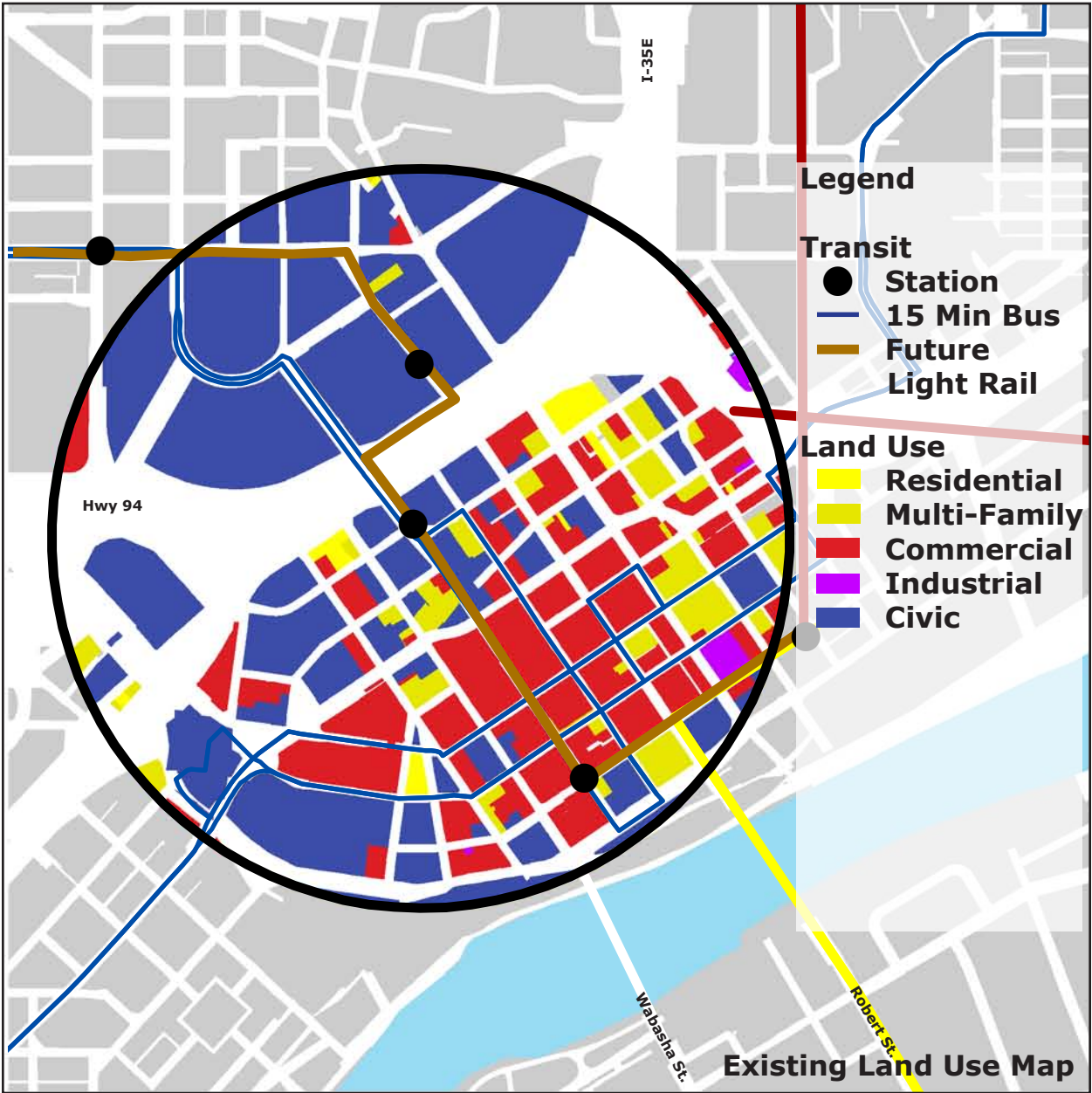


Twin Cities Region Walkable Centers Analysis

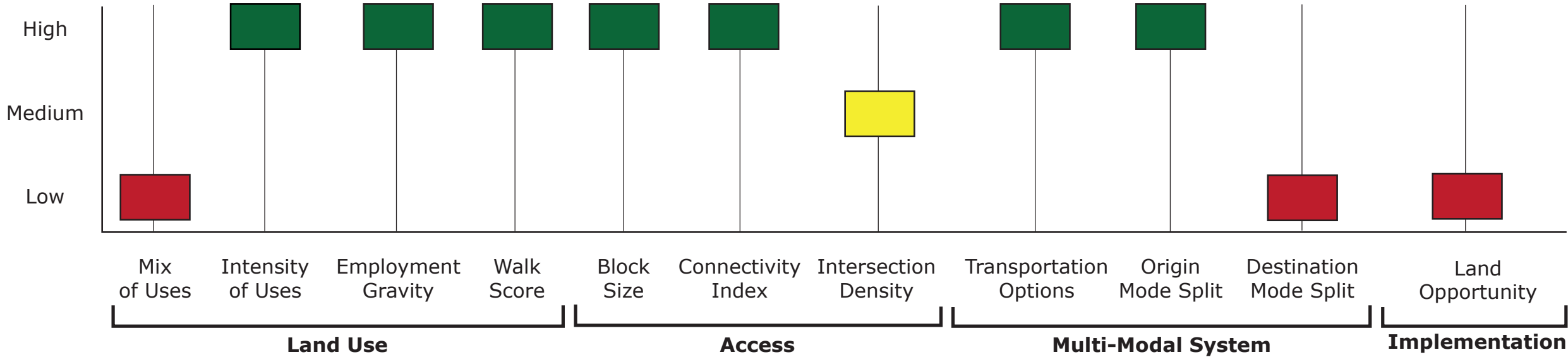
Downtown St. Paul (10th St E @ Cedar St N)



Indicator	
Mix of Uses (Workers/Residents)	6.8
Intensity of Uses (Work. + Res./Acre)	74.2
Employment Gravity	High
Walk Score	92
Average Block Size	3.4 Acres
Connectivity Index	2.0
Intersection Density	158/sq mi
Origin Mode Split	47% Non-auto
Destination Mode Split	7% Non-auto
Land Opportunity	36 acres

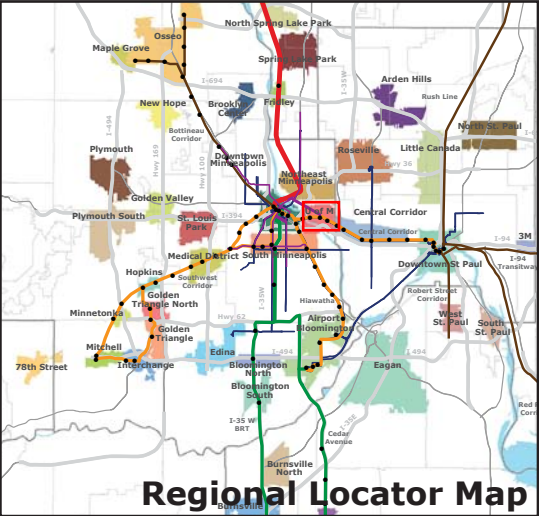


Walkable Centers Indicators

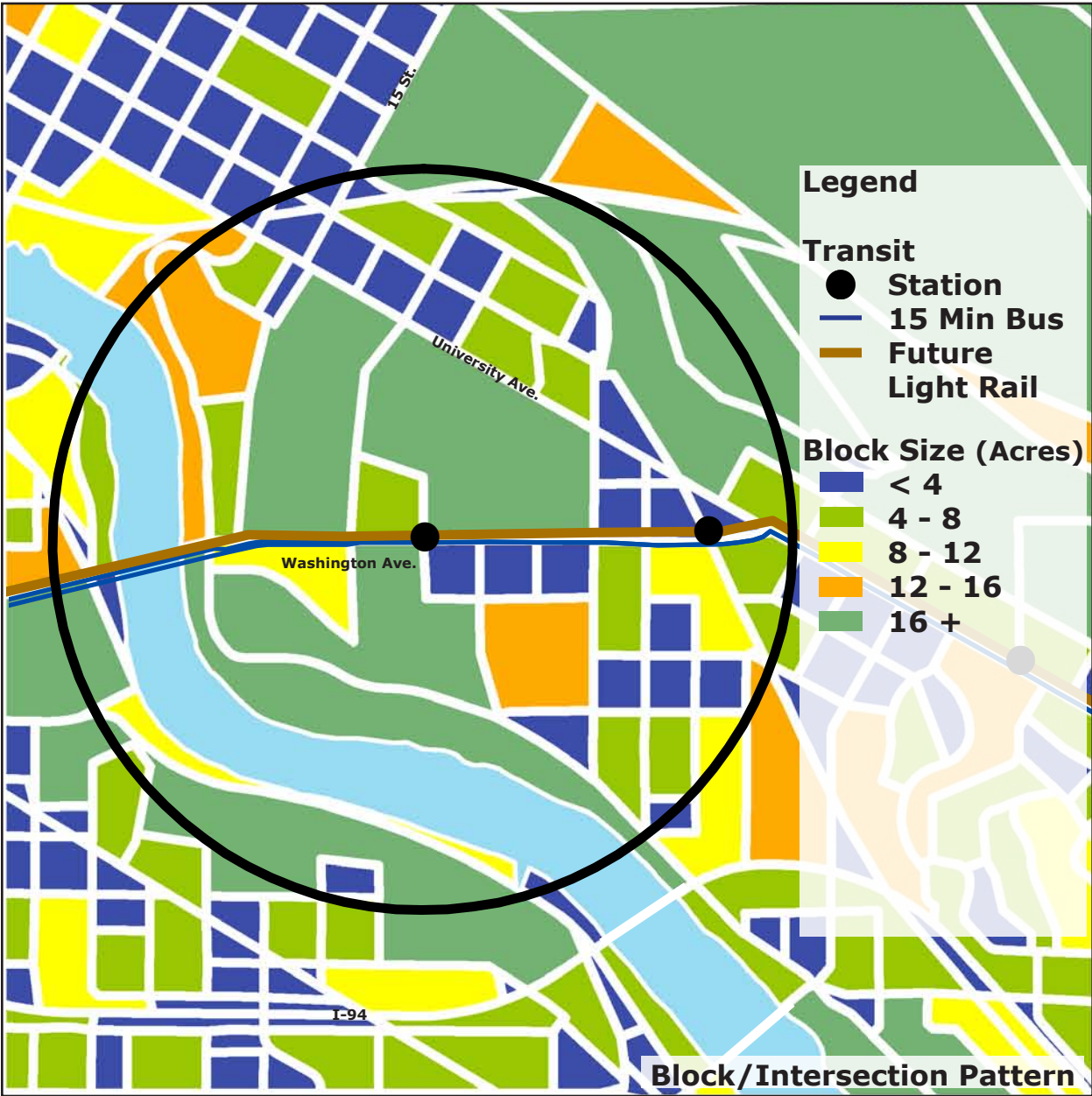
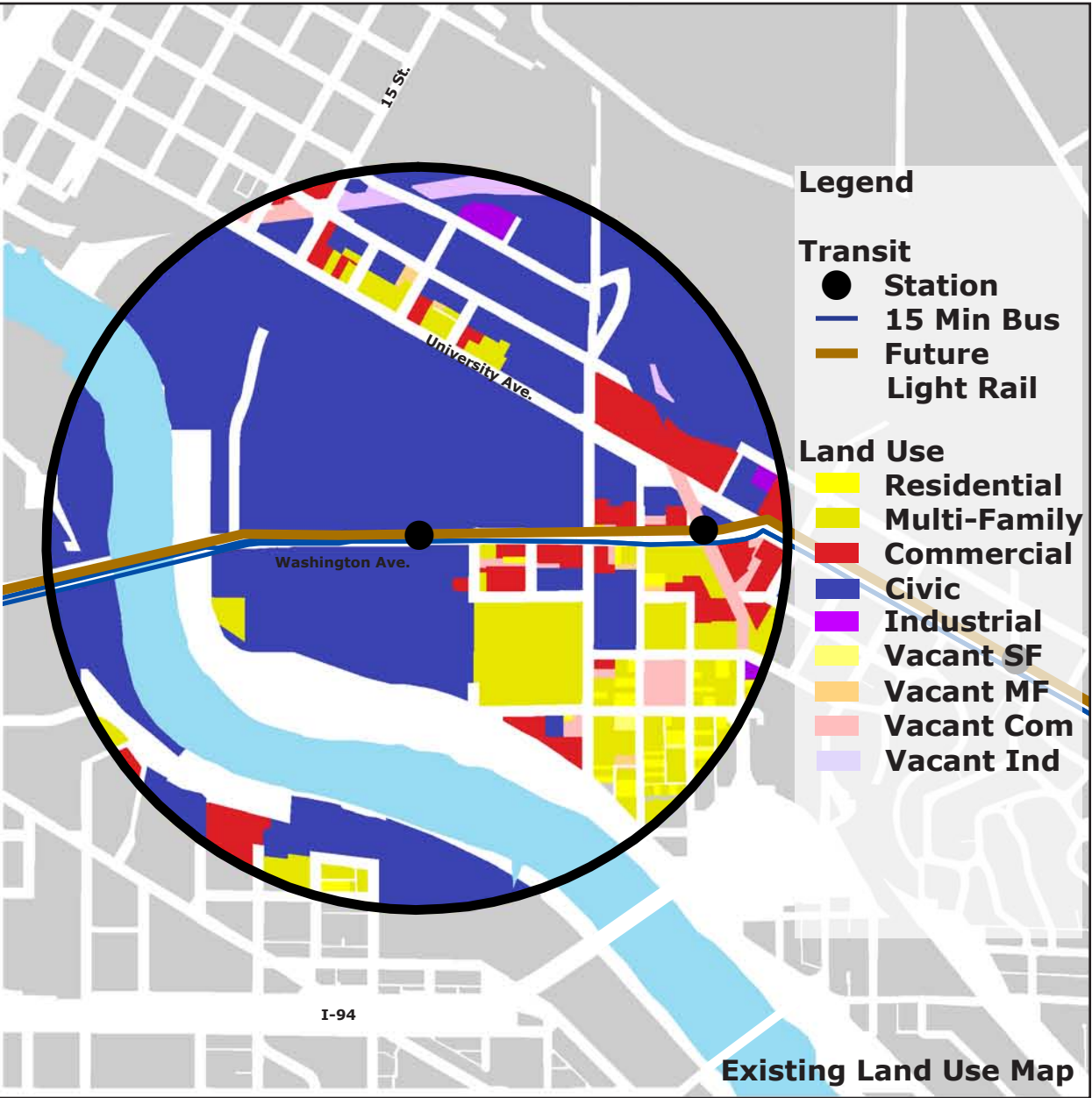


Twin Cities Region
Walkable Centers
Analysis

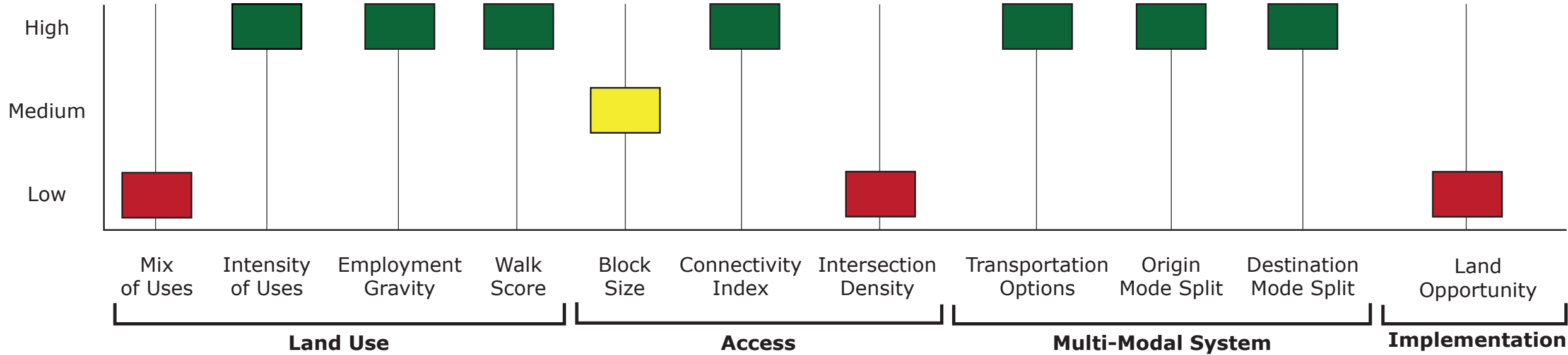
UM - East Bank
(Washington Ave SE
@ Union St SE)



Indicator	
Mix of Uses (Workers/Residents)	6.3
Intensity of Uses (Work. + Res./Acre)	69.0
Employment Gravity	High
Walk Score	88
Average Block Size	6.7 Acres
Connectivity Index	1.6
Intersection Density	108/sq mi
Origin Mode Split	59% Non-auto
Destination Mode Split	54% Non-auto
Land Opportunity	73 acres

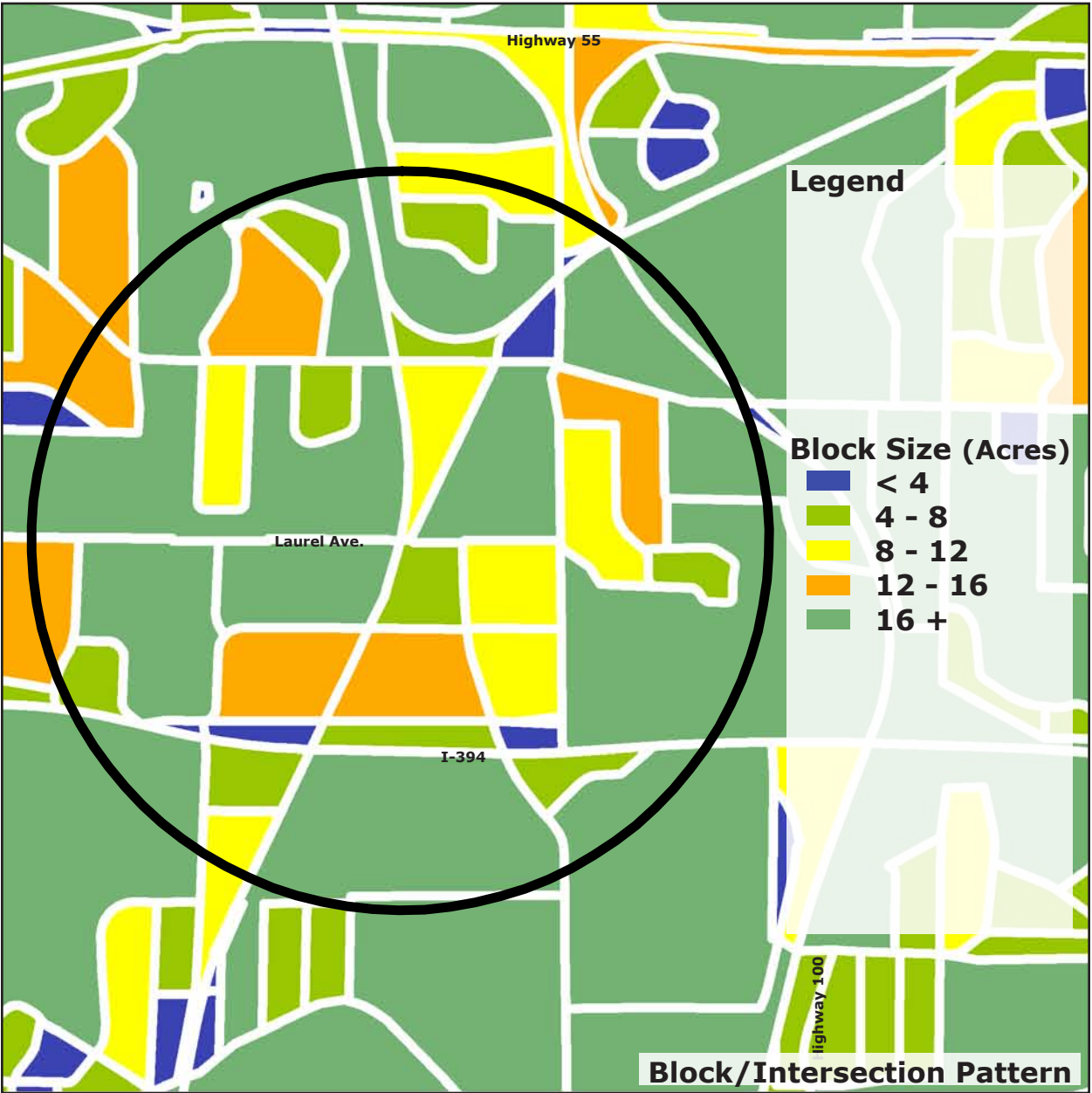
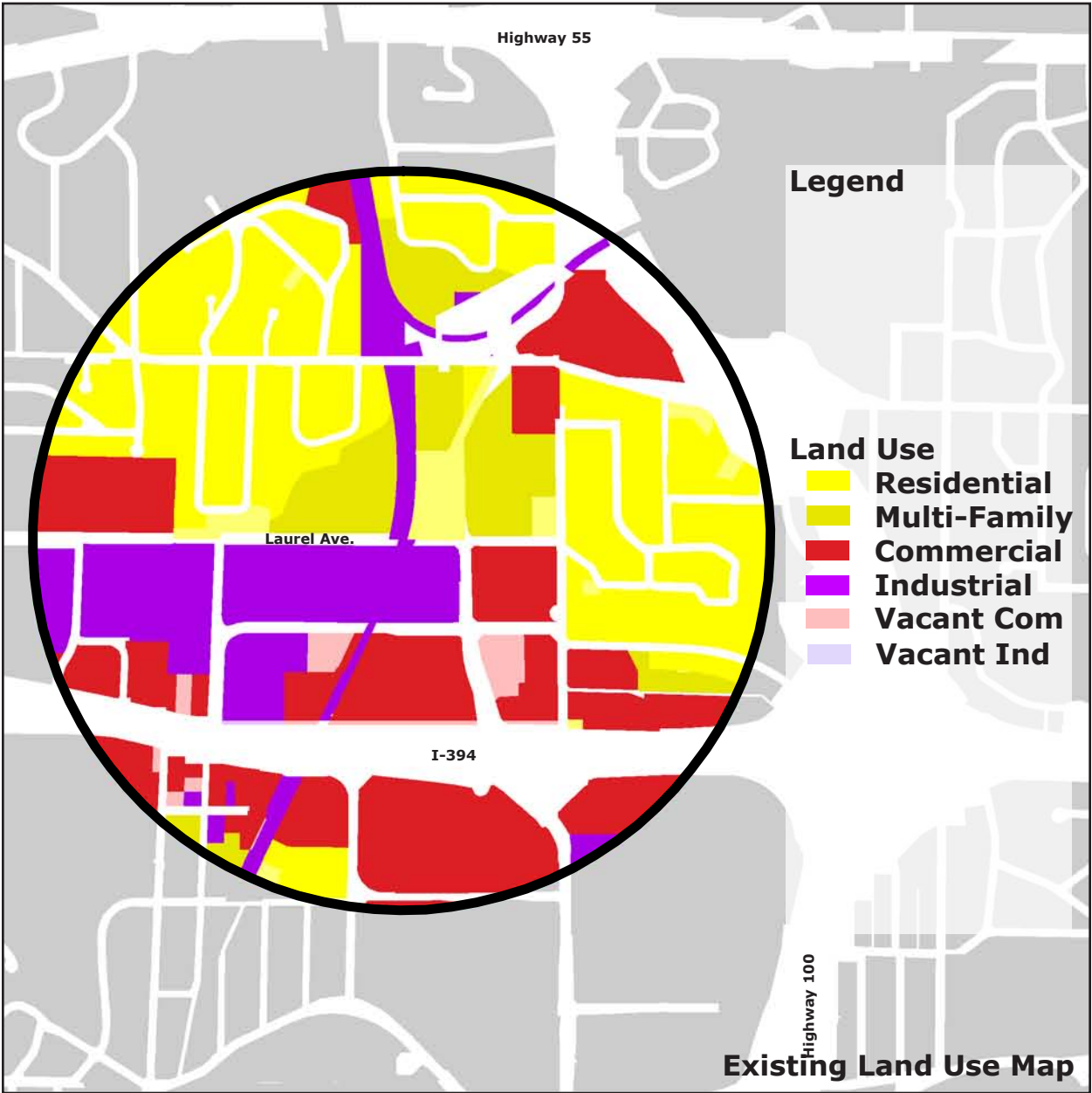
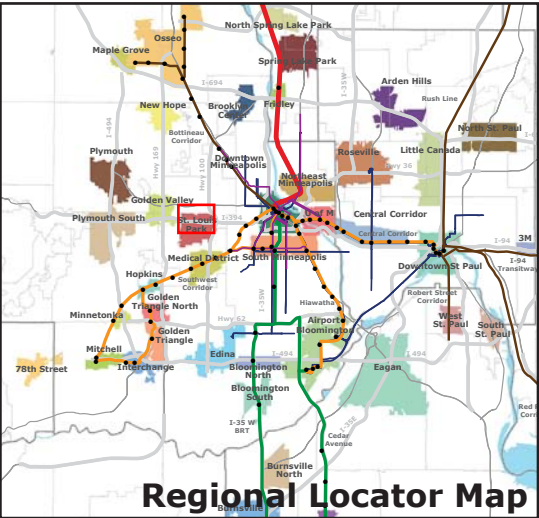


Walkable Centers Indicators

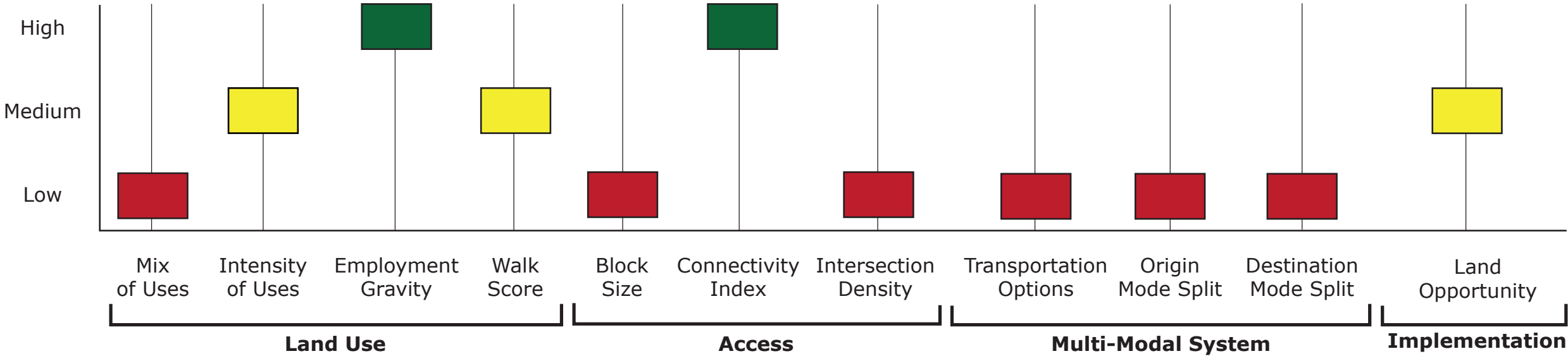


Twin Cities Region
Walkable Centers
Analysis

St. Louis Park
(Laurel Ave @
Xenia Ave S)



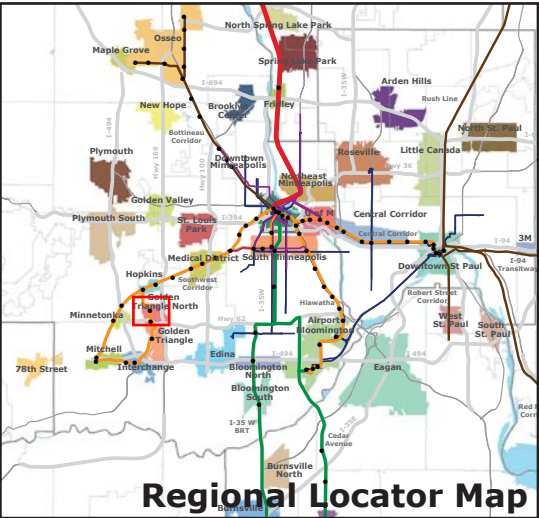
Walkable Centers Indicators



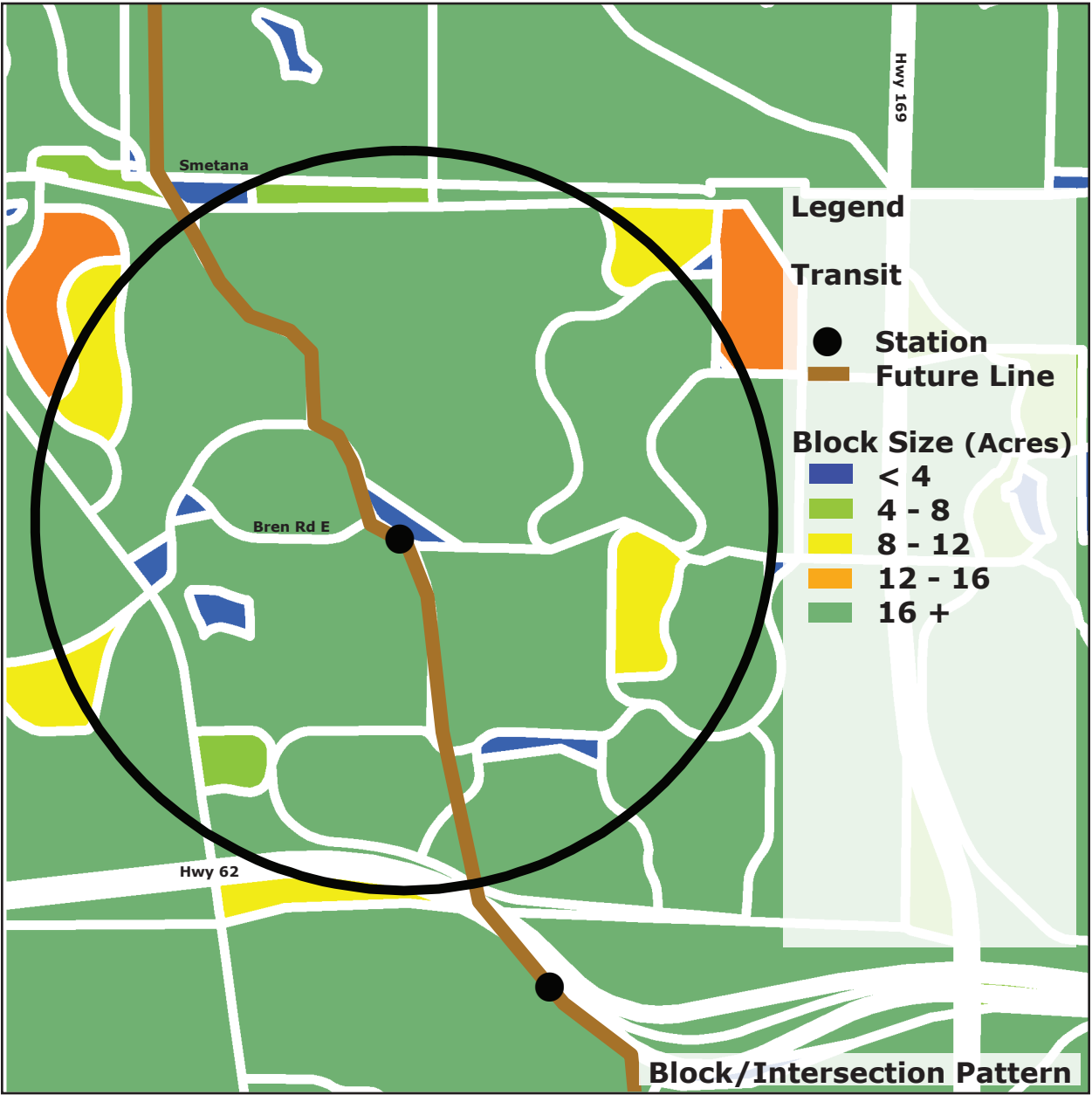
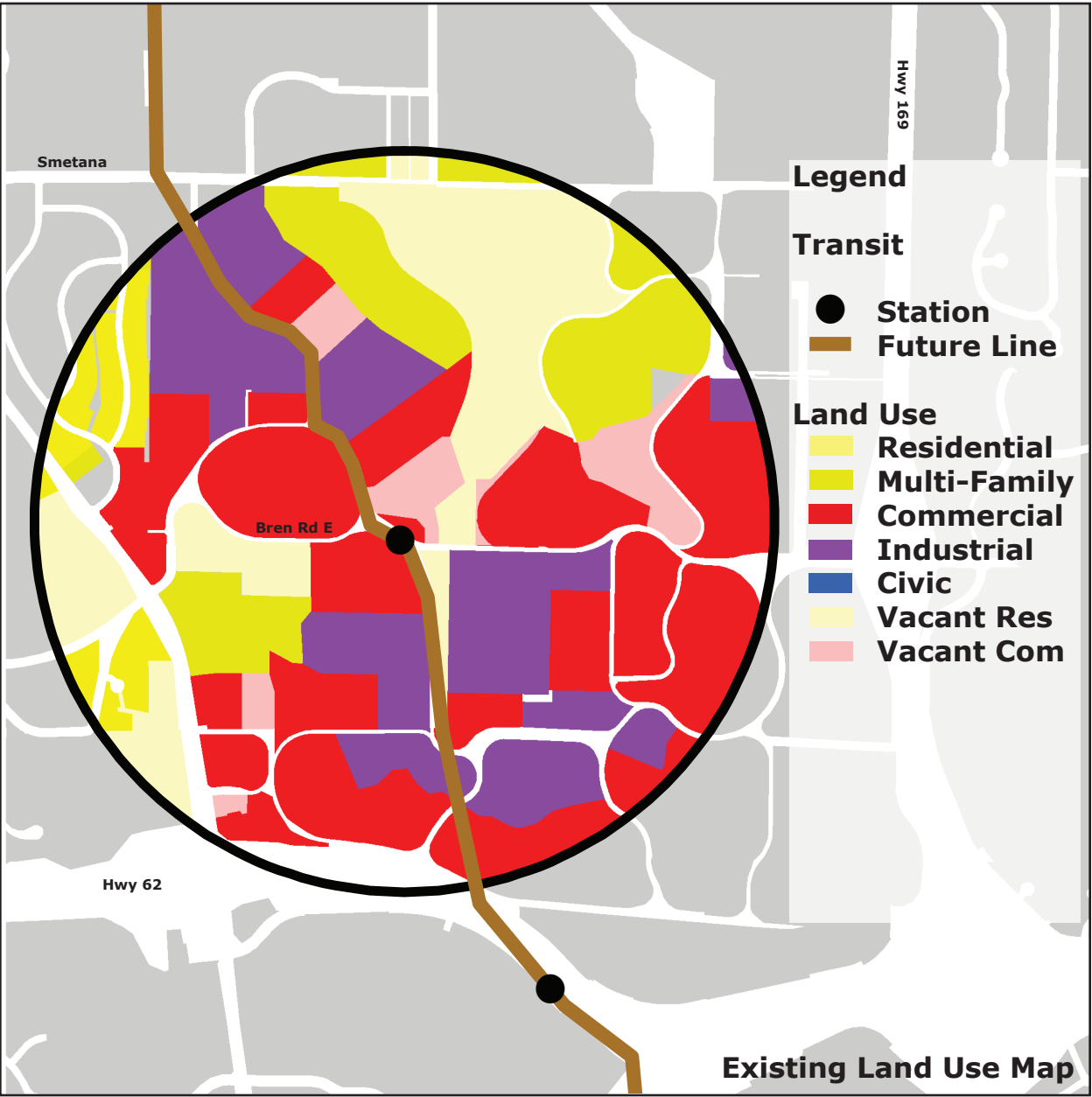
Indicator	
Mix of Uses (Workers/Residents)	4.9
Intensity of Uses (Work. + Res./Acre)	18.7
Employment Gravity	High
Walk Score	54
Average Block Size	13.1 Acres
Connectivity Index	1.7
Intersection Density	56/sq mi
Origin Mode Split	7% Non-auto
Destination Mode Split	3% Non-auto
Land Opportunity	117 acres

Twin Cities Region
Walkable Centers
Analysis

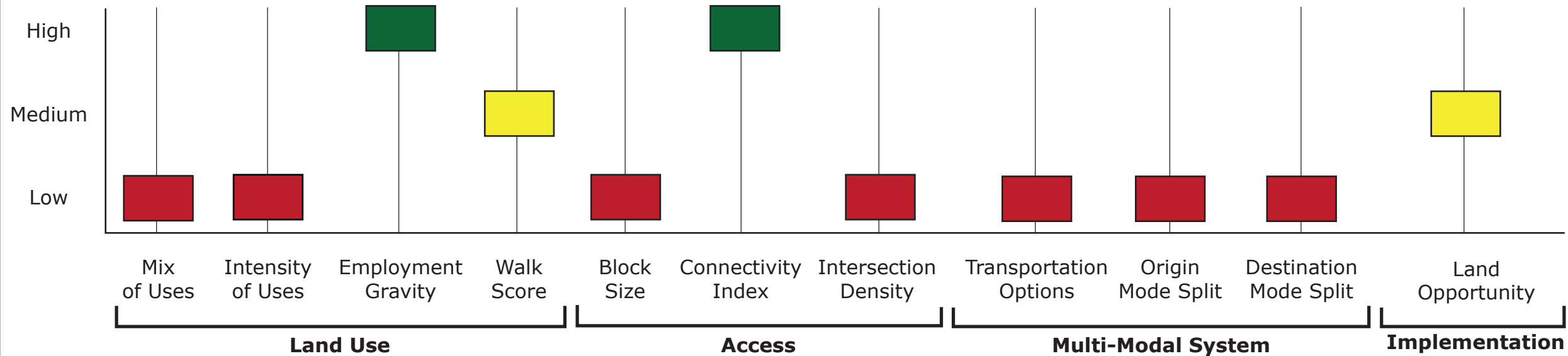
Golden Triangle N
(Bren Rd E @
Bren Rd W)



Indicator	
Mix of Uses (Workers/Residents)	3.2
Intensity of Uses (Work. + Res./Acre)	13.3
Employment Gravity	High
Walk Score	54
Average Block Size	21.3 Acres
Connectivity Index	1.9
Intersection Density	43/sq mi
Origin Mode Split	3% Non-auto
Destination Mode Split	1% Non-auto
Land Opportunity	156 acres



Walkable Centers Indicators



Appendix

Figure A1: Employment Locations within the Twin Cities Region

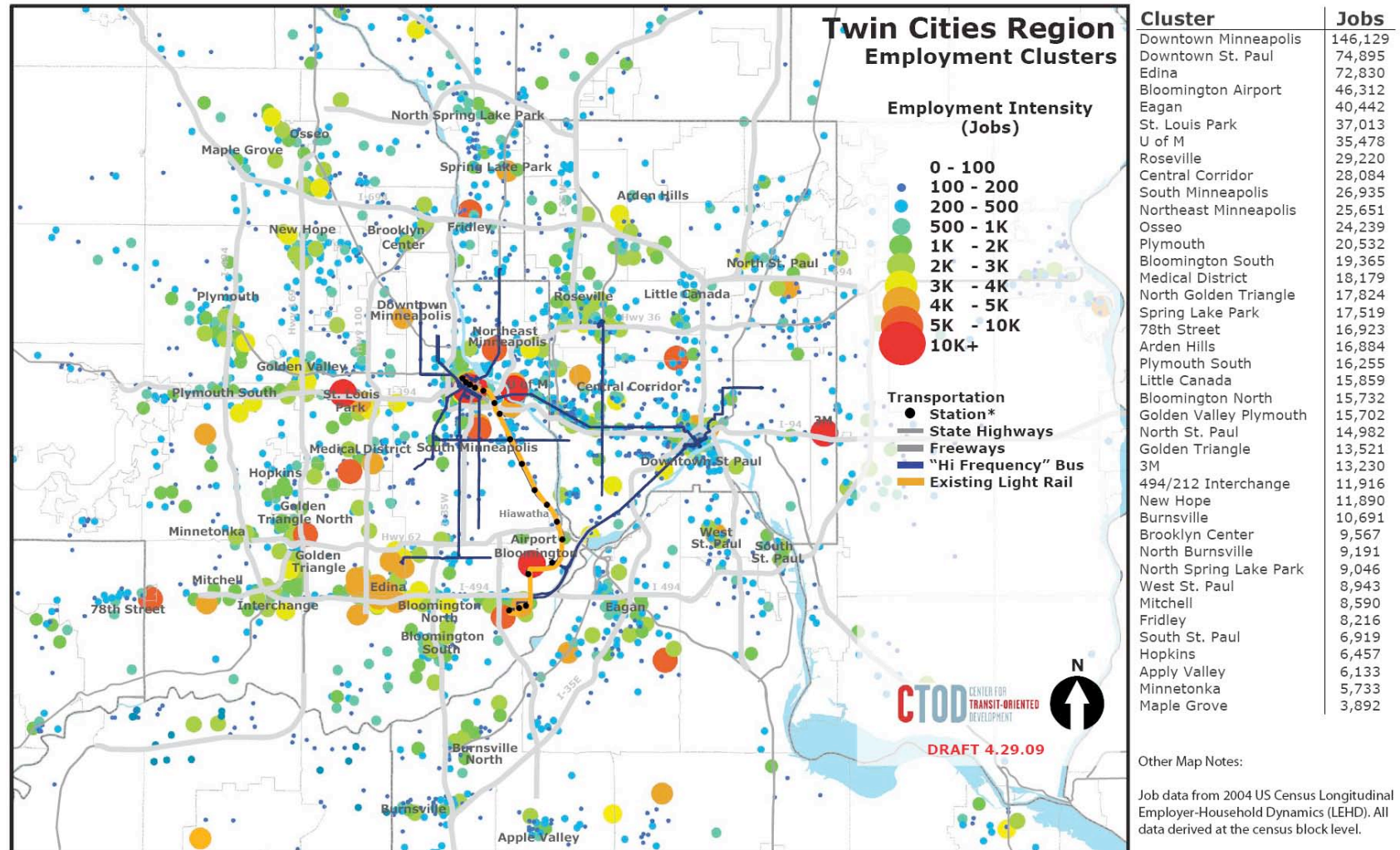


Figure A2: Defining Employment Clusters within the Twin Cities Region

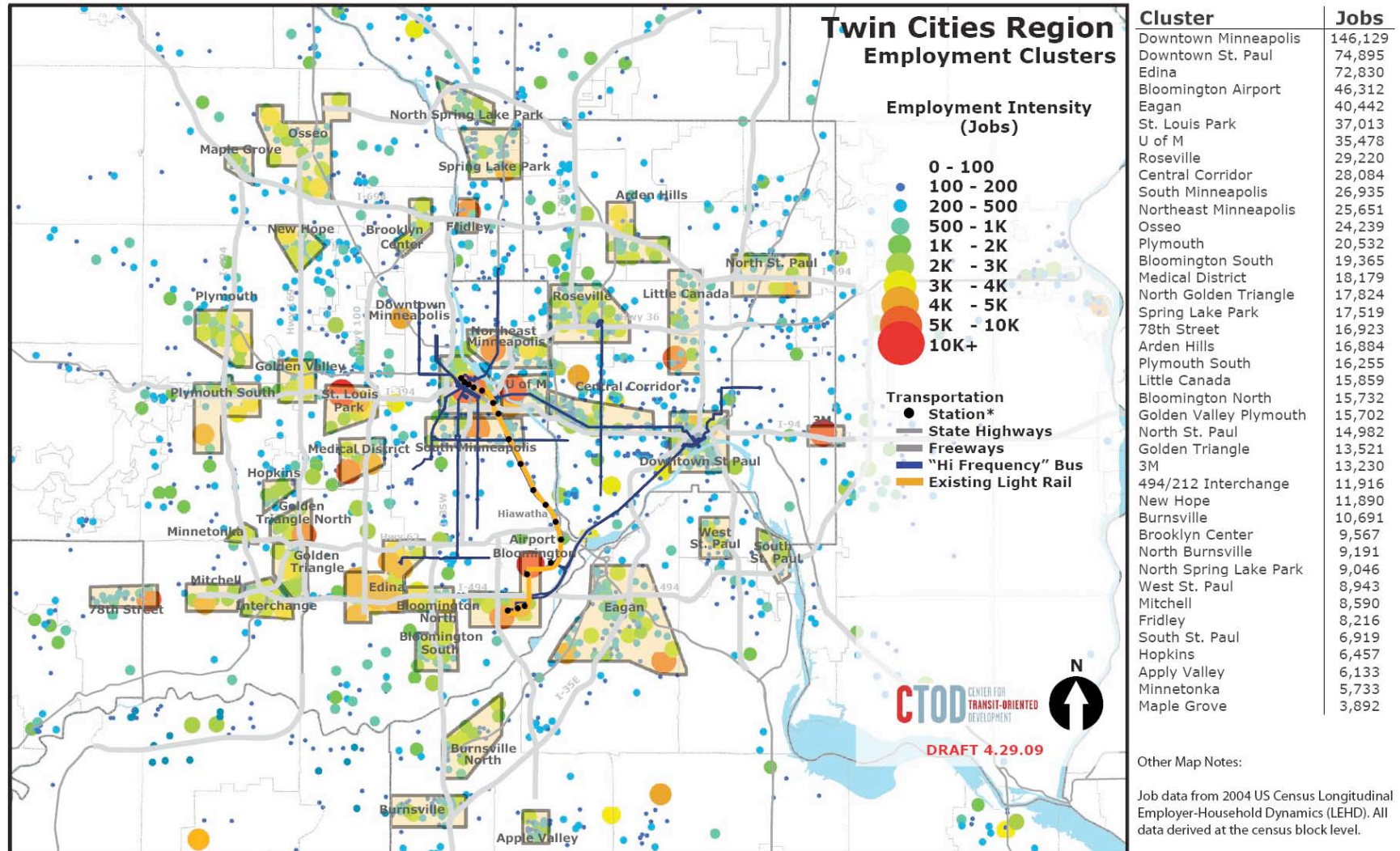


Figure A3: Intensity of Jobs in Employment Clusters in the Twin Cities Region

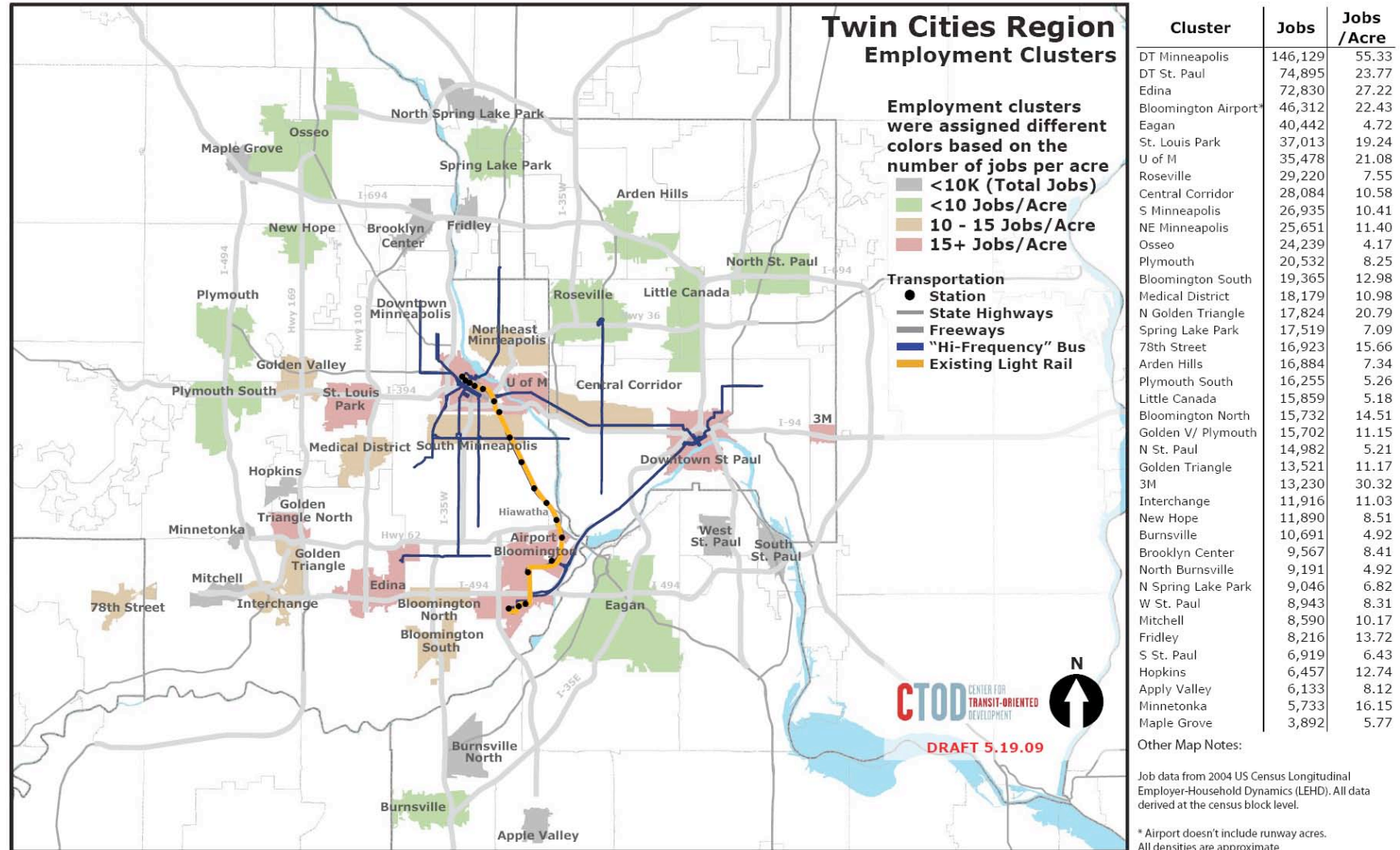


Figure A4: Employment Clusters connected by 2020 Transit

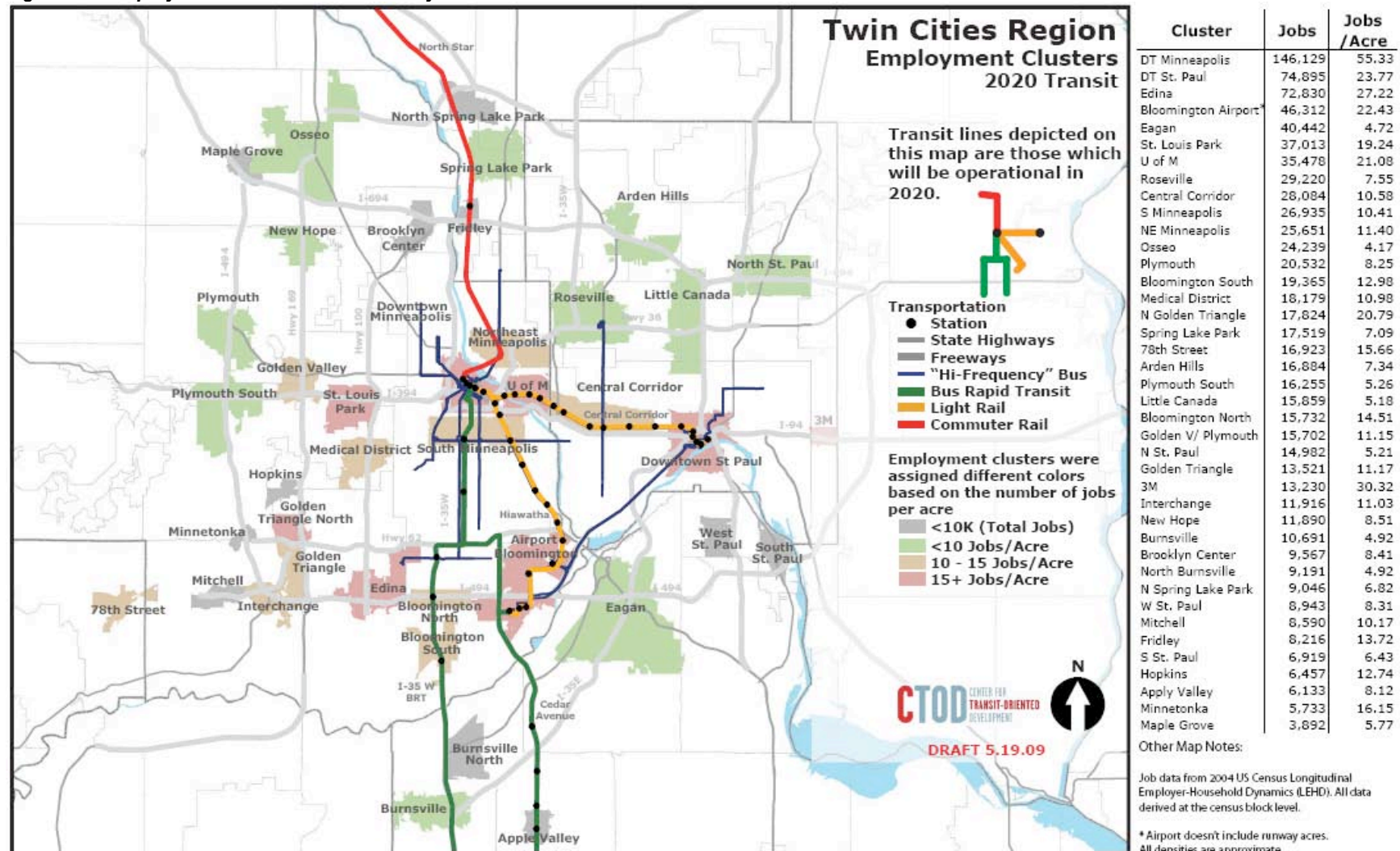


Figure A5: Employment Clusters connected by 2030 Transit

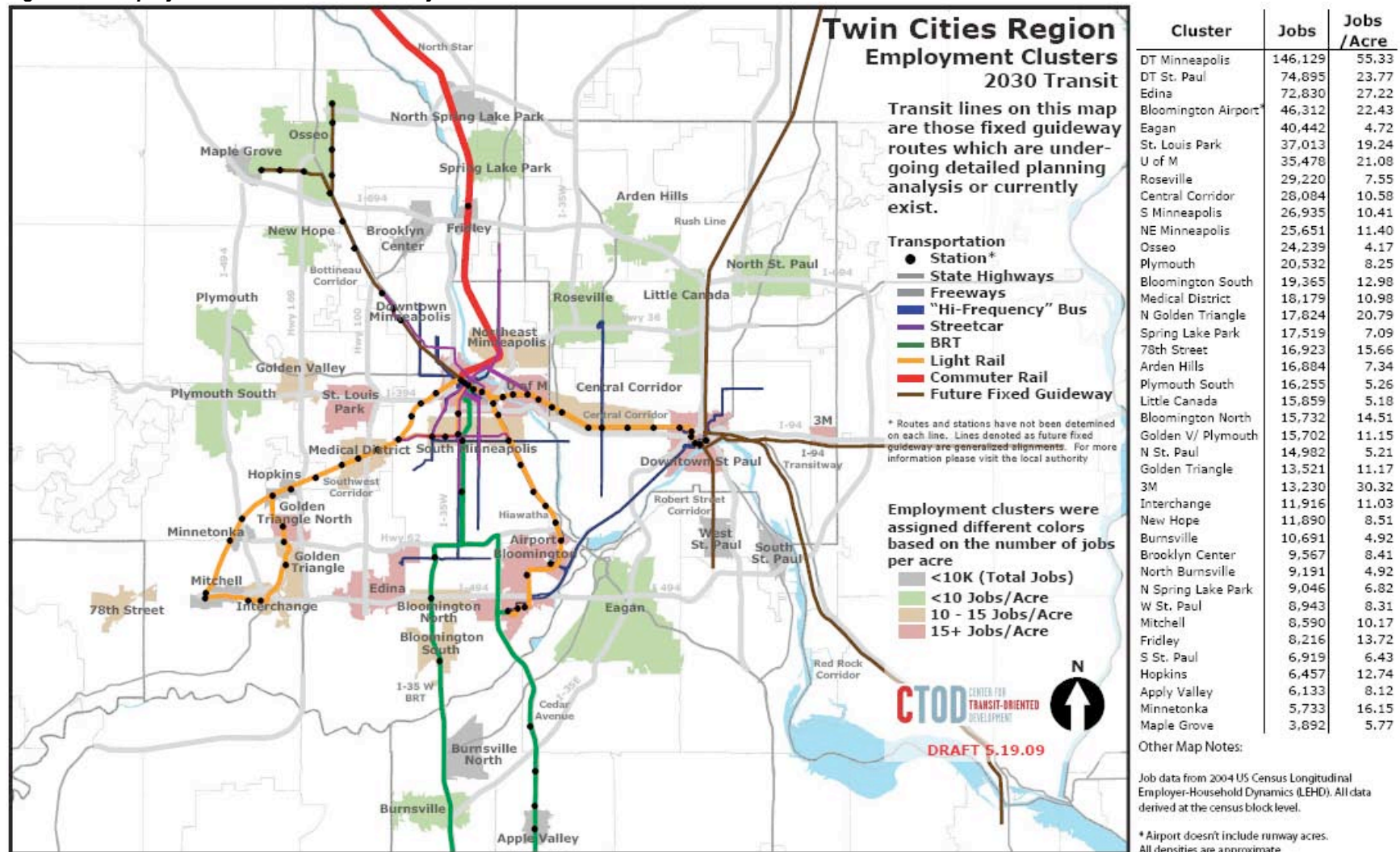


Figure A6: Intensity of Land Uses in the Twin Cities Region

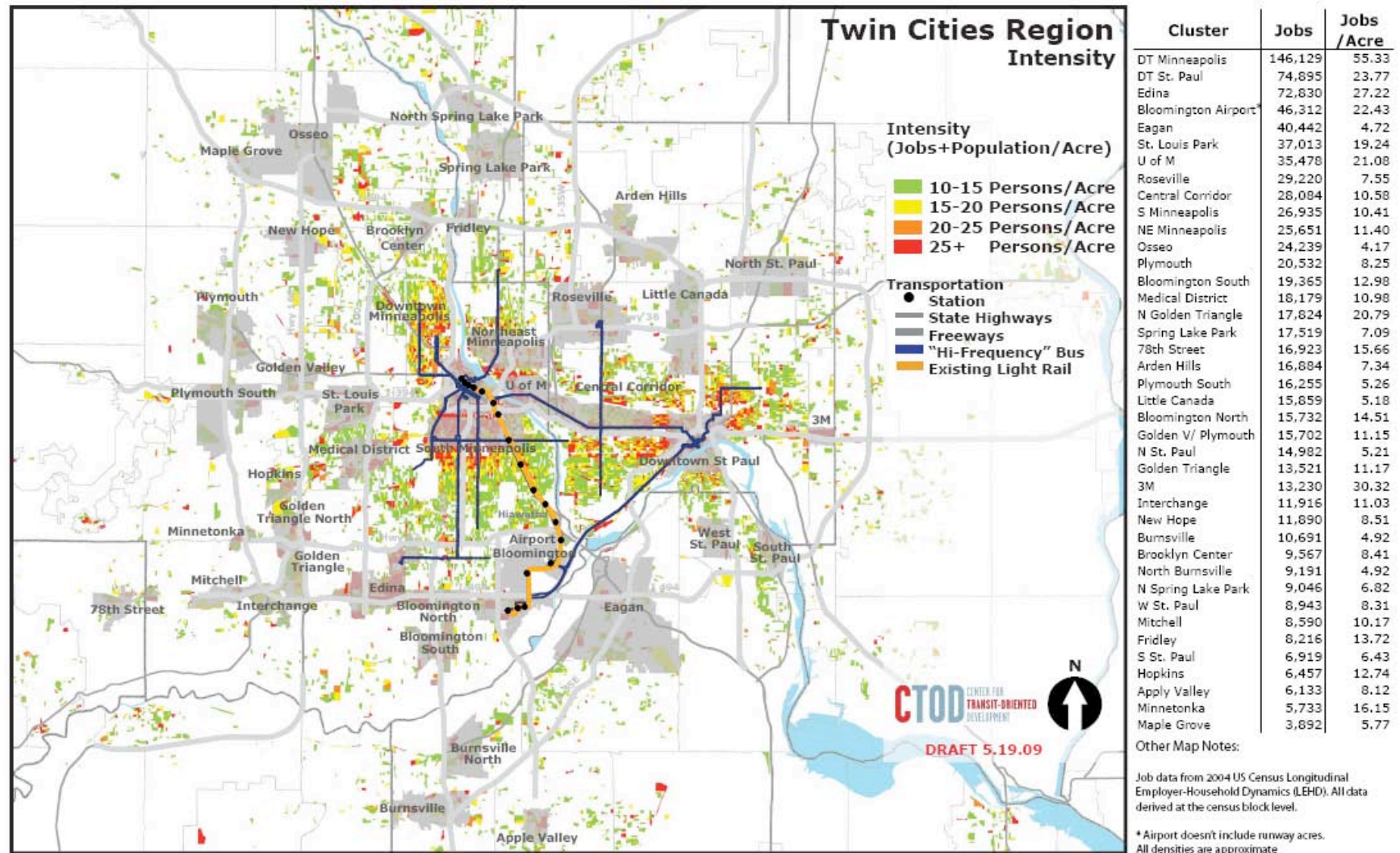


Figure A7: Downtown Minneapolis Walkability Analysis

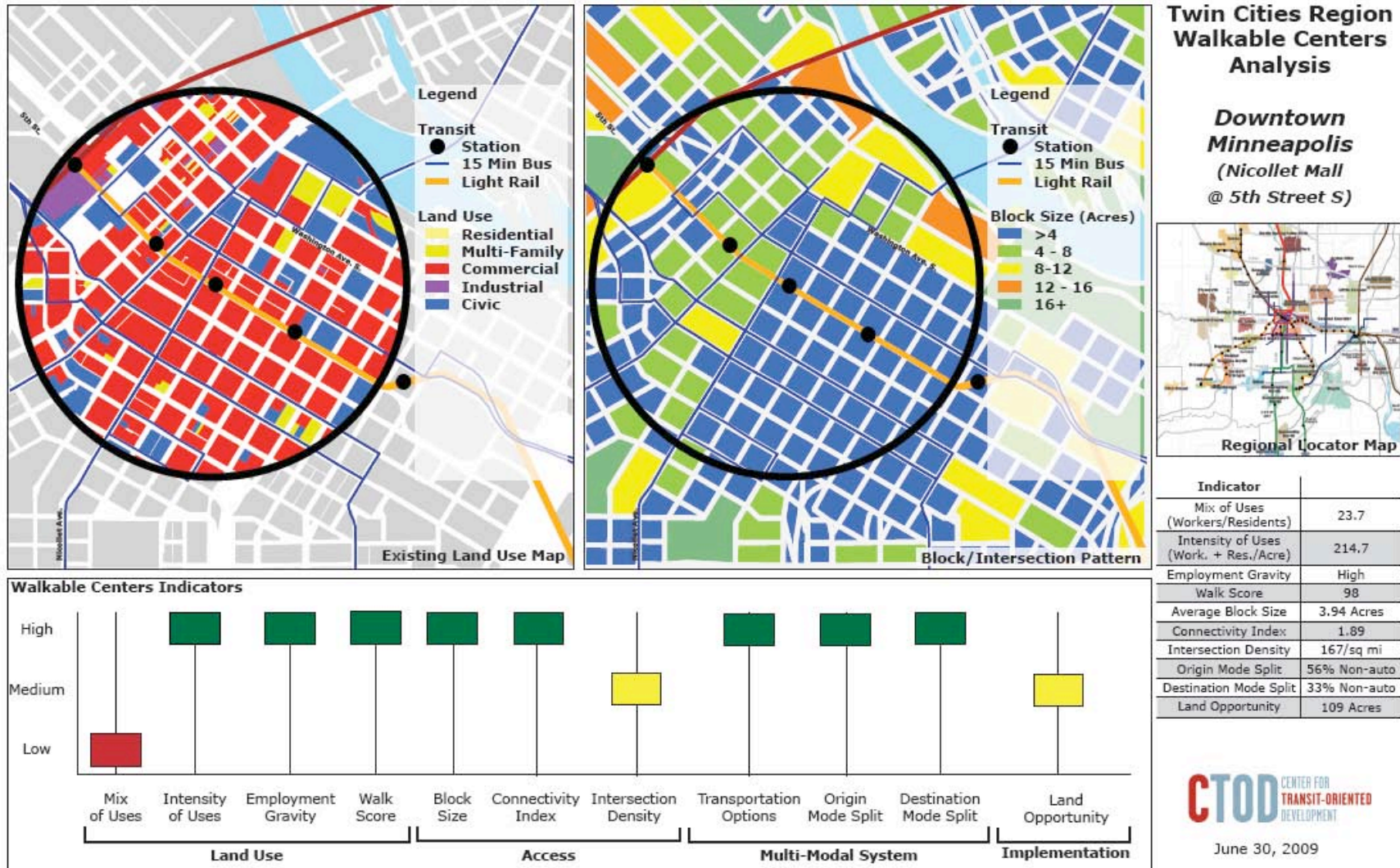


Figure A8: Southdale Walkability Analysis



Figure A9: Bloomington Walkability Analysis

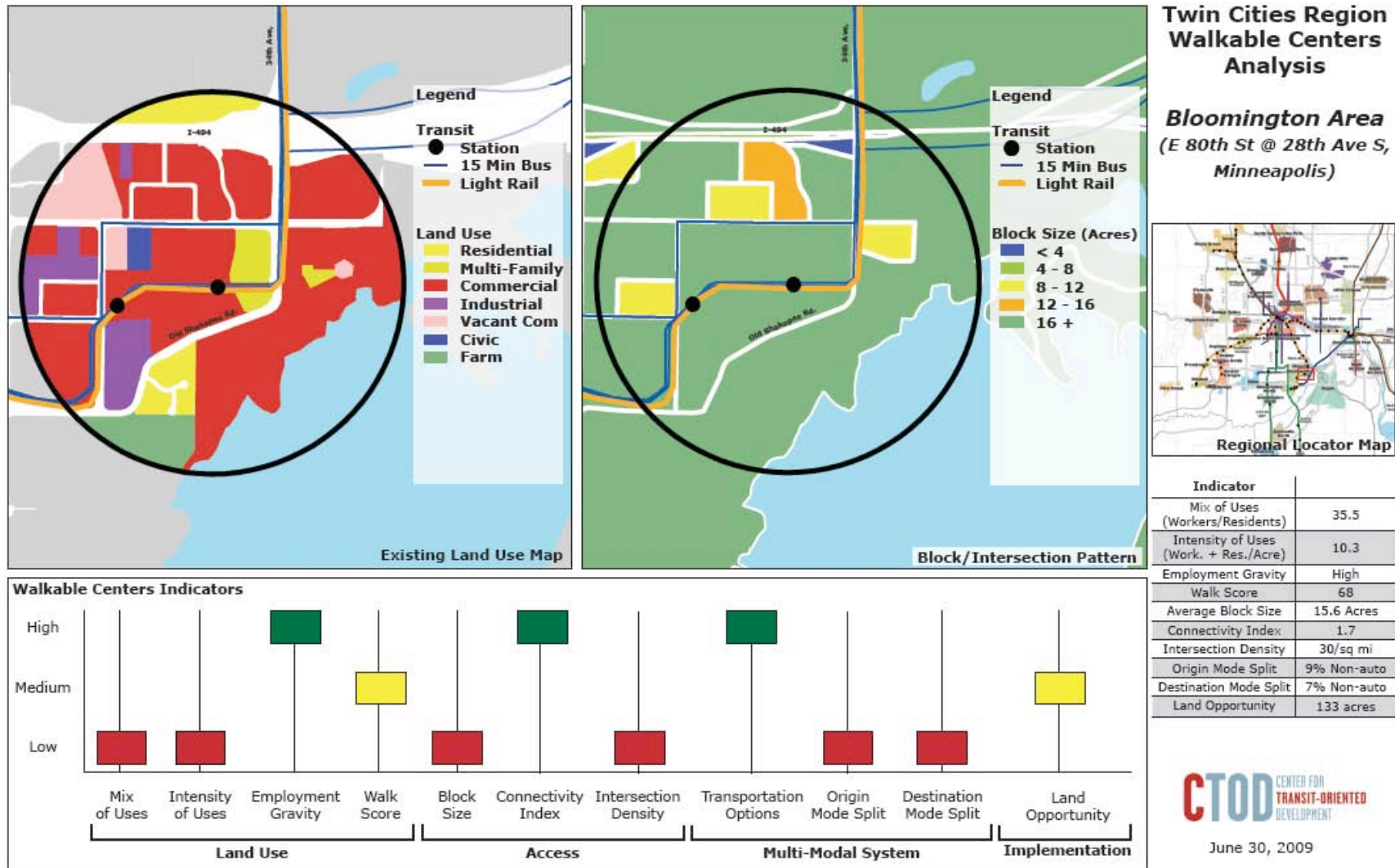


Figure A10: Downtown St. Paul Walkability Analysis

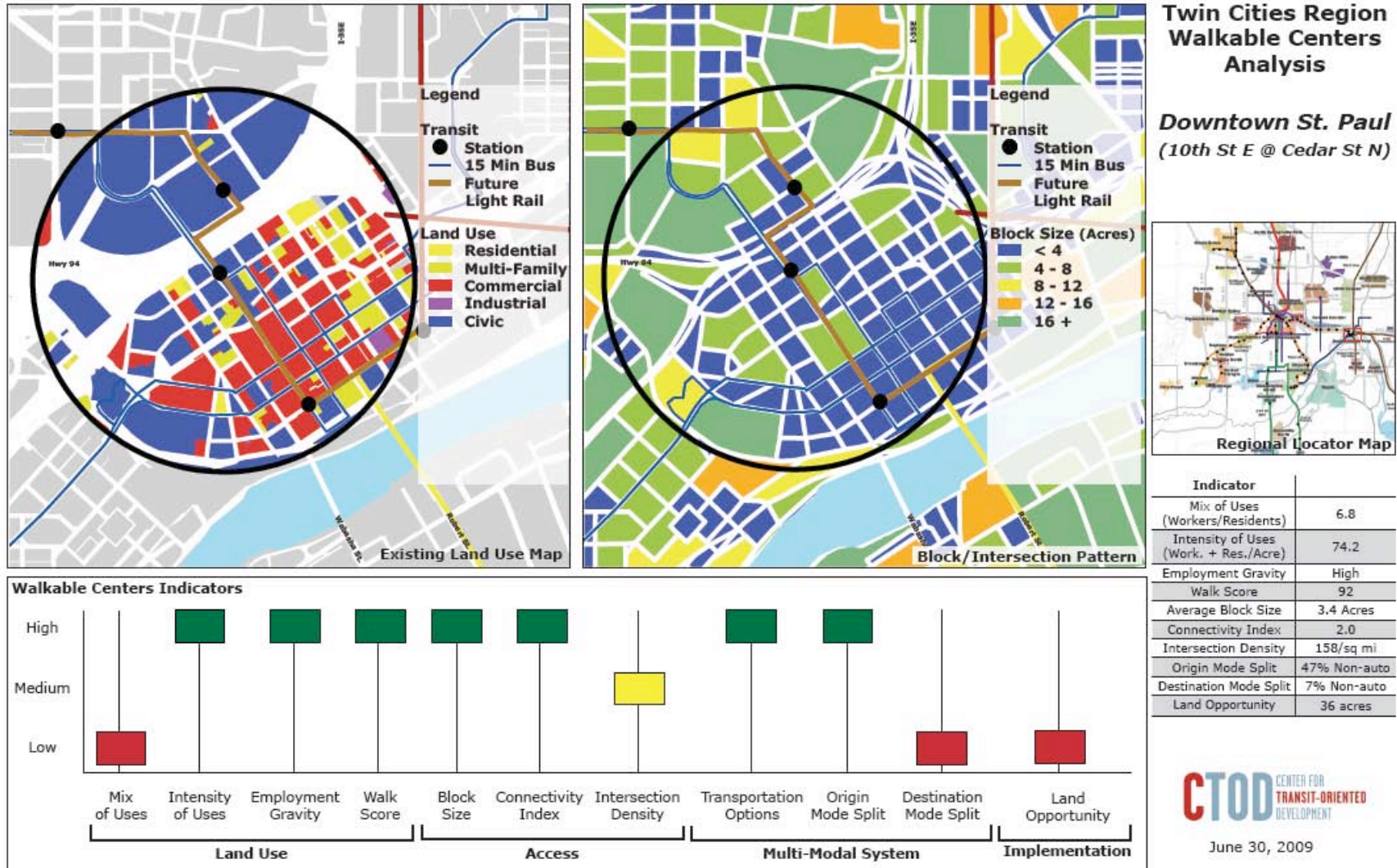


Figure A11: University of Minnesota – East Bank Walkability Analysis



Figure A12: St. Louis Park Walkability Analysis

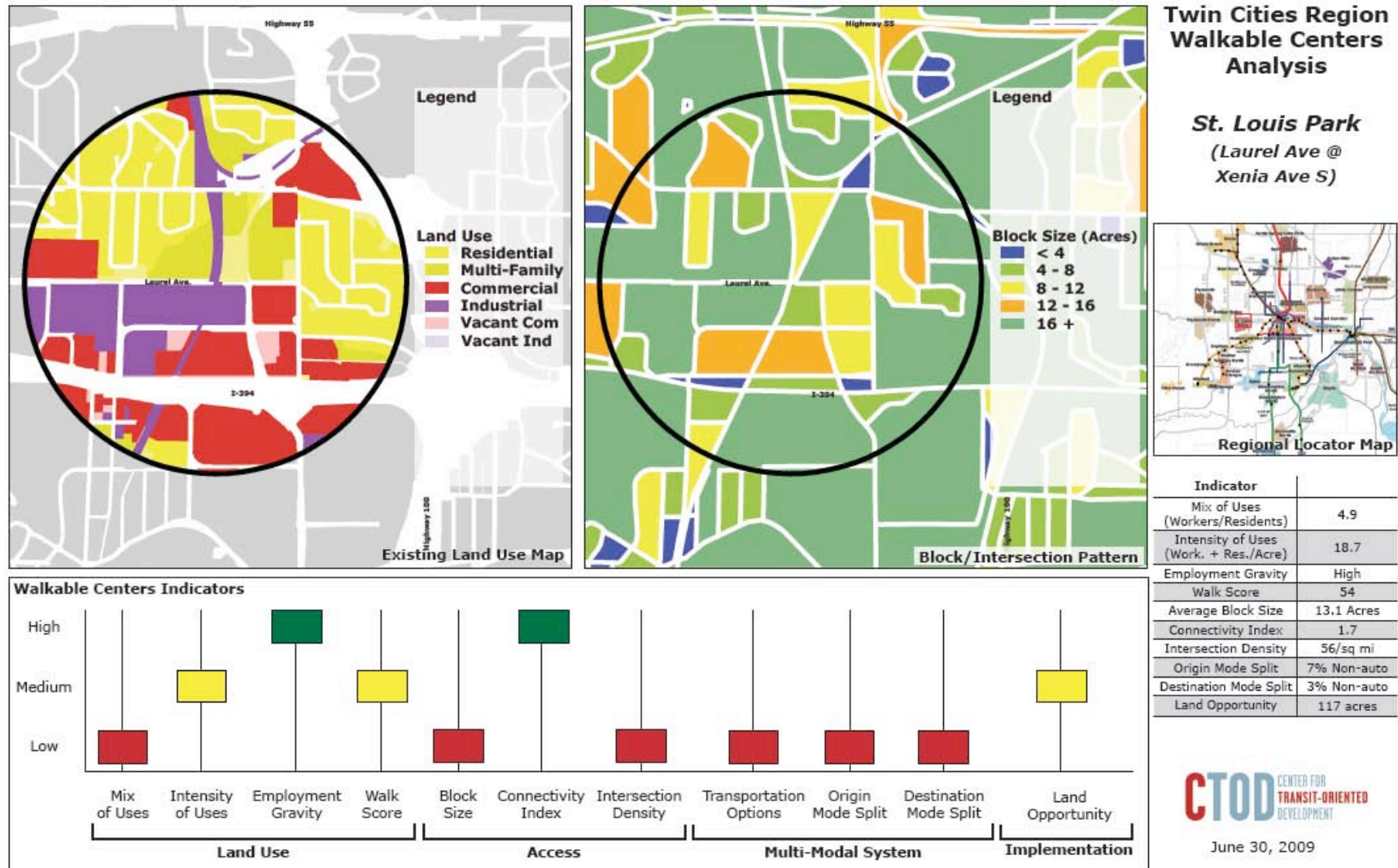


Figure A13: Golden Triangle North (Opus Area) Walkability Analysis

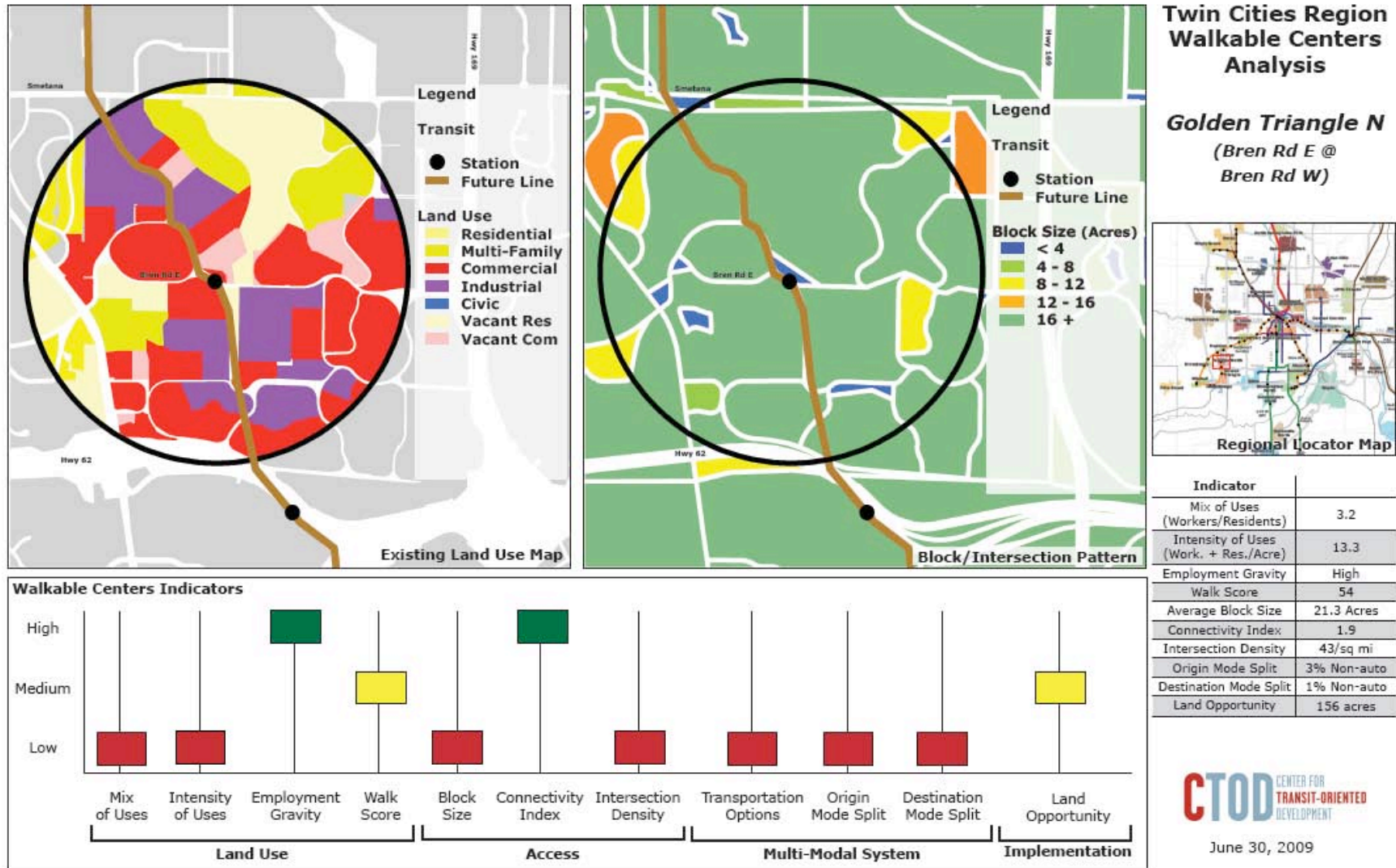


Table A1:Employment Clusters' Walkability Indicator Scores

Employment Cluster		Land Uses				Access			Multi Modal System Performance		
		Employment Gravity	Mix of Uses	Intensity of Uses	Walkscore	Connectivity Index	Intersection Density	Block Size	Transportation Options	Origin Mode Split	Destination Mode Split
Downtown Minneapolis	Score		23.65	214.71	98	1.89	3.94	167.00		56.0%	32.7%
	Ranking	High	Low	High	High	High	High	Moderate	High	High	High
Southdale	Score		6.02	46.39	92	1.84	10.02 Acres	40.04		9.4%	4.5%
	Ranking	High	Low	High	High	High	Low	Low	Moderate	Low	Low
St. Louis Park	Score		4.95	18.70	54	1.72	13.11	55.84		7.3%	2.9%
	Ranking	High	Low	Moderate	Moderate	High	Low	Low	Low	Low	Low
Golden Triangle N	Score		3.16	13.31	54	1.85	21.29	42.86		2.9%	1.1%
	Ranking	High	Low	Low	Moderate	High	Low	Low	Low	Low	Low
Uminn East Bank	Score		6.28	68.98	88	1.60	6.71	107.79		59.0%	54.5%
	Ranking	High	Low	High	High	High	Moderate	Low	High	High	High
Downtown St. Paul	Score		6.83	74.25	92	1.98	3.41	158.44		47.5%	14.3%
	Ranking	High	Low	High	High	High	High	Moderate	High	High	Low
Bloomington	Score		35.51	10.26	68	1.70	15.62	29.87		9.5%	6.9%
	Ranking	High	Low	Low	Moderate	High	Low	Low	High	Low	Low

Table A2: Employment Clusters' Implementation Potential

Employment Cluster		Implementation Land Opportunity
Downtown Minneapolis	Score	109 Acres
	Ranking	Moderate
Southdale	Score	116 Acres
	Ranking	Moderate
St. Louis Park	Score	117 Acres
	Ranking	Moderate
Golden Triangle N	Score	156 Acres
	Ranking	Moderate
Uminn East Bank	Score	73 Acres
	Ranking	Low
Downtown St. Paul	Score	36 Acres
	Ranking	Low
Bloomington	Score	133 Acres
	Ranking	Moderate

Table A3: Employment Clusters

Cluster	Jobs	Jobs /Acre
DT Minneapolis	146,129	55.33
DT St. Paul	74,895	23.77
Edina	72,830	27.22
Bloomington Airport*	46,312	22.43
Eagan	40,442	4.72
St. Louis Park	37,013	19.24
U of M	35,478	21.08
Roseville	29,220	7.55
Central Corridor	28,084	10.58
S Minneapolis	26,935	10.41
NE Minneapolis	25,651	11.40
Osseo	24,239	4.17
Plymouth	20,532	8.25
Bloomington South	19,365	12.98
Medical District	18,179	10.98
N Golden Triangle	17,824	20.79
Spring Lake Park	17,519	7.09
78th Street	16,923	15.66
Arden Hills	16,884	7.34
Plymouth South	16,255	5.26
Little Canada	15,859	5.18
Bloomington North	15,732	14.51
Golden V/ Plymouth	15,702	11.15
N St. Paul	14,982	5.21
Golden Triangle	13,521	11.17
3M	13,230	30.32
Interchange	11,916	11.03

New Hope	11,890	8.51
Burnsville	10,691	4.92
Brooklyn Center	9,567	8.41
North Burnsville	9,191	4.92
N Spring Lake Park	9,046	6.82
W St. Paul	8,943	8.31
Mitchell	8,590	10.17
Fridley	8,216	13.72
S St. Paul	6,919	6.43
Hopkins	6,457	12.74
Apply Valley	6,133	8.12
Minnetonka	5,733	16.15
Maple Grove	3,892	5.77