



Saint Paul Highland Park Transit Service Study

September 2019



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EXECUTIVE SUMMARY: Highland Park Transit Study

Background

In anticipation of the Ford Site redevelopment in Highland Park, the City of Saint Paul, Ramsey County Regional Railroad Authority (RCRRA) and Metro Transit are reviewing current transit service in the Highland Park area. The Metro Transit Highland Park Transit Service Study will evaluate the existing transit service in a study area that is bounded by West 7th Street, Randolph Avenue, and the Mississippi River. The study provides an analysis of Highland Park's Transit Market Area, demographics, bus routes, service levels, bus stop level ridership and public facilities.

The Highland Park area is very well served by transit. Located within the Transit Market Area II Highland Park receives a level of transit service that is nearly comparable to Market Area I. Each weekday Highland Park is served by nearly 800 transit trips on ten bus routes including the A Line Arterial BRT (Rapid Bus) route. Bus stop level ridership data indicates that transit service carries 2000 weekday passenger trips in the study area. Some more heavily used bus stops in Highland Park board over 100 passengers each weekday.

A number of earlier studies and service plans have included the Highland Park area during the past 15 years:

- The 2004 Central-South (Sector 5) Transit Plan was implemented in conjunction with the introduction of METRO Blue Line LRT service. Metro Transit made significant bus route structure changes and service improvements including a new Route 46 crosstown route between Highland Park and south Minneapolis and improved Route 54 limited stop service was introduced operating on the entire length of West 7th Street.
- The 2014 Central Corridor Transit Service Plan further improved service in the Highland Park area. This plan primarily focused on improvements to the crosstown route network and connections with the METRO Green Line. The improved crosstown network operates every 20-30 minutes seven days a week and a new crosstown route was be introduced on Lexington Parkway for connections to the new Green Line LRT service.
- In 2016 Metro Transit introduced the region's first Rapid bus line. The new faster service is matched with high amenity stations including off-vehicle fare payment, real-time bus arrival information and traffic signal priority. The new faster A Line has been successful at attracting over 30% more riders in the Ford Parkway and Snelling corridor.

The Highland Park study area lies entirely in Transit Market Area II. This market area contains moderately high population and employment densities and typically has a traditional street grid. Most of Market Area II can support many of the same types of fixed-route transit service as Market Area I, although usually at wider route spacing, lower frequencies and shorter service spans.

Highland Park is served by 8 local bus routes, one commuter express route, and one Arterial Bus Rapid Transit (Rapid Bus) route. Each weekday over 800 bus trips pass through or terminate in Highland Park study area and board over daily 2,000 riders. Many bus stops in the study area board over 50 riders each weekday and some bus stops board over 100 riders each weekday.

Project Goals

The purpose of this report is to review existing transit service performance and to consider service changes in the greater Highland Park neighborhood, and the Ford Site redevelopment specifically. These changes could be included in the Metro Transit Service Improvement Plan that is expected to be updated in 2020. Other transit service changes in the Highland Park area may be part of a connecting bus service plan for the Riverview Corridor Project.

Service Improvement Plan

The 2017 Service Improvement Plan (SIP) identifies regional opportunities to improve transit service through expanded coverage, frequency and span of service of the regular route transit network. The SIP is prioritized to identify projects that have the best likelihood of success in achieving regional goals for transit service.

In 2020, Network Next will supersede the SIP and update evaluation of potential Highland Park service improvements to the Ford Site. As the redevelopment plan for the Ford Site plan is refined and advanced, bus service and facility improvements may be recommended in the updated SIP.

CHAPTER 1: STUDY BACKGROUND AND CONTEXT

The regional public transit system is the backbone of the Metropolitan Council's 2040 Transportation Policy Plan (TPP) to accommodate the population and employment growth forecast for the region. The purpose of the Highland Park Transit Service Study is to evaluate the current transit service.

In anticipation of the Ford Site redevelopment in Highland Park Metro Transit is reviewing current transit service in the Highland Park area. During the past decade, the City of St. Paul developed a plan for the Ford site and the adjacent CP Rail Property. The vision for the site is a connected, livable, mixed-use neighborhood that looks to the future with clean technologies and high quality design for energy, buildings and infrastructure. This site will be woven into the existing community, and support walking, biking and transit, and provide services, jobs and activities that every generation can enjoy.

During the past decade, more emphasis has been placed on creating integrated residential and employment development together in a pedestrian and transit friendly environment. The Ford Site, located in the southwest quadrant of St. Paul, offers a unique urban opportunity for Transit Oriented Development (TOD).

Likewise, future land use in the City of Saint Paul's Comprehensive Plan is intertwined with transit service. The city is intending to focus its growth, including the Ford Site, around transit and would like to see ongoing investment in the high frequency transit, further building off the success of the Green Line and A Line.

Metro Transit has successfully used a sector-based approach to address the emerging transit needs within the region. As shown in **Appendix A**, the region is broken into nine transit planning sectors with this study area part of Sector 5. Sectors 1, 2, 5, 7 and 8 and most recently the Central Corridor have undergone prior sector level planning studies.

The Highland Park study area has undergone many route and schedule improvements as a result of the larger Sector 5 Plan implemented in 2004 and Central Corridor plan implemented in 2014. In 2016 Metro Transit introduced the first Arterial Bus Rapid Transit route (A Line Rapid Bus) on Snelling Avenue and Ford Parkway through Highland Park. Bus service in Highland Park has also routinely been adjusted as part of Metro Transit's routine quarterly route and schedule adjustments. Below are highlights of these planning studies and summary of bus service improvements that have been implemented by Metro Transit from some of these efforts.

Scope

The Highland Park Transit Service Study will examine existing transit service performance. The study area is bordered by West 7th Street on the east, Randolph Avenue on the north, the Mississippi River to the west and Hwy 5/ Shepard Rd. to the South. The routes in the study include all those which operate a portion of their total service in the study area, including 23, 46, 54, 70, 74, 83, 84, 87, 134 and A Line.

A map of the study area is in **Figure 1**.

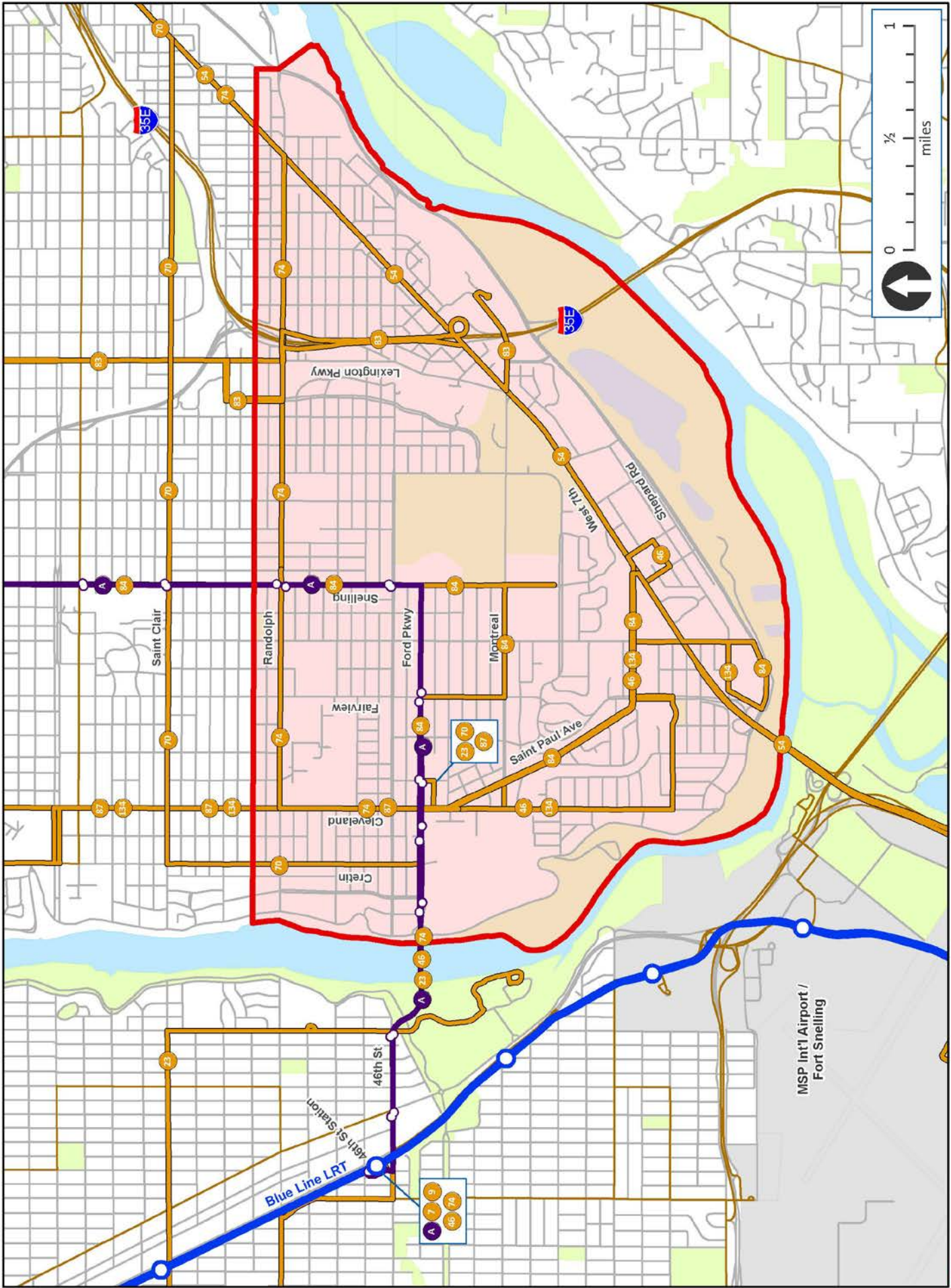


Figure 1: Study Area

Relevant Transit Plans and Projects in the Study Area

Regional and local planning work influence transit service in the study area. Priorities for the regional transportation system are set in the 2040 Transportation Policy Plan (TPP). The plan sets policies for the regional transportation system based on the goals and objectives in Thrive MSP 2040, the region's development guide. Metro Transit's Service Improvement Plan (SIP) builds on the TPP by identifying and prioritizing specific local and express bus improvements.

Metro Transit continually reviews and updates individual bus routes to reflect the changing nature of development and travel in the Twin Cities. In addition, Metro Transit occasionally performs transit sector studies, which review a group of routes at a sub-regional level to comprehensively evaluate transit service and needs, determine market opportunities and restructure service and facilities to better address those needs and opportunities.

There is currently one transitway project underway in the study area. The Ramsey County Regional Rail Authority (RCRRA) Riverview Corridor Locally Preferred Alternative for West 7th Street is a modern streetcar line that would operate between the Mall of America and the downtown St. Paul Union Depot. This corridor is in the process of being adopted into the TPP by Metropolitan Council. Assuming funding availability and no substantial delays, service could begin in the late 2020's. This corridor is in the process of being adopted into the TPP by Metropolitan Council. Assuming funding availability and no substantial delays, service could begin in the late 2020's.

2040 Transportation Policy Plan

The 2040 TPP is the region's long-range transportation policy and investment plan. In addition to transit, it addresses highway, aviation and other forms of surface transportation for at least a 20-year planning horizon. The region's first priority is to preserve, maintain and operate the existing transit network. It also establishes a framework from which to evaluate potential transit changes, improvements and investments.

Objectives and investment factors from the 2040 TPP that influenced the transit planning in Highland Park include:

- Operate the regional transportation system to efficiently and cost-effectively connect people to destinations
- Increase the availability of multimodal travel options
- Increase transit travel time reliability and predictability
- Improve multimodal travel options to jobs and other opportunities
- Provide equitable access to opportunity for people of all ages, abilities, races and socio-economic groups

The TPP identifies the region's transit market areas, which help guide decisions about the types and level of transit service most appropriate for a given area. They are determined by using an index of population density, employment density, and automobile availability. The Highland Park study area is entirely within Market Area II. More information about market areas is available in Chapter 2.

2015-2030 Service Improvement Plan

Metro Transit's Service Improvement Plan (SIP) builds on the TPP by identifying and prioritizing specific local and express bus route improvements if additional operating dollars are available. The SIP identifies opportunities to add new routes and improve the frequency and span of service on the existing route network. It includes a specific and prioritized list of improvements, all requiring additional operating funds. The SIP identifies the evaluation factors and measures used to prioritize these bus service investments, as well as timing and resources needed to make them.

Highland Park Projects in the current SIP include:

- Route 23: Improve frequency to Highland Park on weekdays and weekends to every 20 minutes. (High Priority)
- Route 54: Improve frequency to every 10 minutes during the day and every 15 minutes early morning and late evening; add earlier morning and late-night service for connections to non-traditional work shifts. (High Priority) Note: Earlier morning and late-night service was implemented in 2017, and weekday rush hour service was improved to every 10 minutes effective June 2018 as part of the route extension to the East Side of St. Paul.
- Route 74: Add route to the high frequency network with improved weekday and weekend service every 15 minutes during rush hours and during the midday; add service early in the morning and late at night for improved connections to non-traditional work shifts. (Medium Priority)

Starting in 2019, Metro Transit's SIP will be updated and potential Highland Park service improvements near the Ford Site will be evaluated. This Report will inform that process. As the redevelopment plan for the Ford Site is refined over the coming years the SIP will continue to be updated and bus service and facility improvements at the Ford Site may be recommended.

Central-South (Sector 5) Transit Study

In 2004, Metro Transit implemented service changes in the southwestern quadrant of Saint Paul including Highland Park, South Minneapolis, Richfield, Bloomington, and Edina. The goals of the Central-South transit restructuring study were to redesign service to better meet community needs and goals and integrate service with the opening of the new METRO Blue Line. Service improvements in the Highland Park area included the following:

- New Route 46 crosstown service between West 7th and St. Paul Avenue in Highland Park to south Minneapolis and Edina was introduced, with timed connections to the METRO Blue Line 46th Street Station.
- Route 54 limited stop service was introduced on West 7th Street between I-35E and downtown Saint Paul with more frequent service seven days a week. The previous route operated on I-35E from West 7th Street to Kellogg into downtown St. Paul, bypassing much of West 7th Street.
- Route 74 and Route 84 service was extended from Highland Park across the Ford Bridge and 46th Street to the new METRO Blue Line 46th Street Station in Minneapolis, making connections with the METRO Blue Line and five Minneapolis and suburban bus routes.
- Route 87 from Rosedale to Highland Park was restructured via Fairview, Cleveland, Raymond and replaced Route 67 on Cleveland Avenue in St Paul to Highland Park. The restructured route offered a new crosstown route between Highland Park and Roseville.
- Route 134 was realigned in Highland Park, moving from Cretin to Cleveland Avenue for a more balanced geographic coverage through Highland Park.

Central Corridor METRO Green Line

In 2012 Metro Transit began the Central Corridor Transit Service Study. The Central Corridor Transit Service Study area is bounded by the Mississippi River on the south, I-35E on the east, Larpenteur/East Hennepin avenues on the north and by Hiawatha Avenue, East Lake Street and the Mississippi River on the west. The Study Area is almost completely urban, including downtown Minneapolis, downtown Saint Paul and the University of Minnesota and covering many neighborhoods of Minneapolis and St. Paul including Highland Park.

The routes in this study include all those which operate a significant portion of their total service in the study area and which would provide a connection to the new METRO Green Line service. Routes in this study area that also serve Highland Park included routes 84, 87 and 134.

Recommendations from the Central Corridor Transit Service Study Final Plan:

- Strengthen the bus route network grid. Connect bus routes with trains at key METRO Green Line stations.
- Improve service frequency. Given a choice, most people will choose more frequent service within reasonable walk distances.
- Enhance off-peak service. Increasingly, people need to travel outside the traditional rush-hour commute periods.
- Improve bus-to-bus connectivity and connections to other study area bus routes.
- Improve bus service to major destinations. Major destinations were identified by public input forms.

Central Corridor Transit Study service improvements implemented in 2014 that serve Highland Park included the following:

- New Route 83 was added on Lexington Parkway and Hamline Avenue between West 7th Street and Montreal and the Roseville Super Target near Co. Rd. B and Snelling Avenue. The new crosstown service on Lexington Parkway enhances the north-south grid network, filling a two-mile gap between Snelling and Dale.
- Route 84 on Snelling Avenue was improved to operate every 10 minutes on Snelling Avenue and Ford Parkway between Rosedale, Highland Park and the METRO Blue Line 46th Street Station. Some trips also serve St Paul Avenue to the West 7th and Davern neighborhood.
- Frequency was improved on Route 87 operating on Cleveland and Fairview Avenues, which serves Highland Park, the METRO Green Line Raymond Station, and the U of M's St. Paul campus.
- Route 134 route changes as noted above were part of Sector 5. The extension to 7th and Davern occurred after the Central Corridor changes.

[A Line Rapid Bus – Ford Parkway and Snelling Arterial Bus Rapid Transit](#)

In June 2016 Metro Transit introduced the region's first Arterial Bus Rapid Transit route service between the 46th Street METRO Blue Line Station in south Minneapolis and the Rosedale Transit Center in Roseville via 46th Street, Ford Parkway and Snelling Avenue. The new A Line service has essentially the same level of service as Route 84 with improved travel speeds and amenities. Similar to the former Route 84 the A Line makes connections with many Minneapolis and St. Paul bus routes and the METRO Green Line at University Avenue. A Line customers pay fares before boarding so A Line buses spend less dwell time at the station. Customers get on and off the bus through both doors, further speeding boarding. Stations are spaced further apart and the A Line uses Transit Signal Priority to hold traffic lights longer. It all results in a 20% faster trip and an enhanced experience at the station. Service operates every 10 minutes during most times of the day and slightly less frequency early in the morning and late at night. Since implementation combined Route 84 and A Line corridor ridership has increased by about 30% compared to the former Route 84 service alone. Combined Route 84 and A Line total weekday ridership stands at about 5,800 daily rides. A Line on-time performance is generally in the 90%-95% on-time.

Riverview Corridor

The Riverview Corridor Study is currently being led by the Ramsey County Regional Rail Authority (RCRRA). The Locally Preferred Alternative (LPA) recommends a Modern Streetcar service between downtown Saint Paul and the Mall of America. The recommended LPA alignment follows West 7th Street to a junction with the Metro Blue Line at Fort Snelling. As this planning proceeds it will require a bus service planning effort in order to model various bus service route structures to determine the highest ridership and most convenient service for customers. This is a process that has been followed in the previously referenced studies.

The Riverview Corridor project produced a memorandum titled “Focused Evaluation of Rail Alternatives by River Crossing” which documents the travel market for Highland Park. Downtown Minneapolis (27%) is by far the largest travel market for Highland. Due to this finding, the Policy Advisory Committee (as noted, below) recommended a follow-up study in addition to this report to study the “Ford Corridor” which would link the Ford Site to both Blue Line and the Riverview Corridor. This study should evaluate, at minimum, connecting to the 38th and 46th street stations on the Blue Line and to the Randolph, Montreal, and Madison stations on Riverview Corridor.

A Riverview Corridor Policy Advisory Committee Resolution adopted 11/29/17 an amendment stated:

WHEREAS, Metro Transit, working closely with the City of Saint Paul and the Ramsey County Regional Railroad Authority, are committed to studying and implementing feasible, near-term transit improvements to better serve the existing Highland Park area; and

WHEREAS, the City of Saint Paul, Metro Transit and the Ramsey County Regional Railroad Authority are committed to undertaking an evaluation of how best to serve and connect the Ford Corridor, including a future potential redeveloped Ford site, to a future potential Riverview Corridor Modern Streetcar line, the existing Blue and A Lines, and the greater existing transit system with new transit options (such as regular route transit, arterial bus rapid transit, and rail transit) or restructured existing regular route bus service that will include the following benchmarks:

- *Ramsey County Regional Railroad Authority to develop a work plan and management structure by April 30, 2018*
- *Ramsey County Regional Railroad Authority to secure funding for the analysis by April 30, 2018.*
- *Establishment of a Policy Advisory Committee, Technical Advisory Committee and Citizens Advisory Committee by August 30, 2018*
- *Completion of the study prior to seeking municipal consent for the Riverview Corridor.*

Relevant City of Saint Paul Plans

2040 Comprehensive Plan – Saint Paul for All: The draft 2040 Comprehensive Plan calls for the City of Saint Paul to grow around transit and by adding density around “Neighborhood Nodes,” located at transit stops, many of which historically developed around old streetcar stops. The plan also prioritizes pedestrians, bicycles and transit over automobiles in the process of street design.

Highland Park Neighborhood Plan: The Highland Park Neighborhood Plan identifies neighborhood priorities for ongoing development and reinvestment. This plan is adopted as a chapter of the City’s Comprehensive Plan. The plan includes a policy to “maintain transit access to both Downtown St. Paul and Downtown Minneapolis from Highland Village.” This plan is currently in the process of being updated.

Ford Site Zoning and Public Realm Master Plan: This plan guides the development of the 122-acre Ford Site. It lays out the desired street network, public spaces and development blocks. Redevelopment is expected to provide up to 1,500 jobs and 2,400-4,000 residential units, 20% of those affordable.

Safe Routes to School Policy Plan: This plan guides overall decision-making to support walking and biking to school. There are several schools in Highland Park.

Future infrastructure improvements completed as part of transit projects will need to be in conformance with adopted City plans.

CHAPTER 2: EXISTING TRANSIT SERVICE

Transit Market Areas

Transit service demand varies across the region. The Transit Market Index is an indicator of the potential demand for transit service within a specific area and guides the types and level of transit service that are appropriate for each market area. There are five Transit Market Areas in the seven-county region. These are defined using a combination of measures, including population and employment density, urban form, automobile availability, and intersection density (proxy for pedestrian connectivity). The Highland Park study area is entirely in Market Area II, as shown in **Appendix B**.

Transit Market Area I contains the highest density of population and employment and has the fewest vehicles compared to people over the legal driving age of 16 years. This area typically has a grid pattern street network that promotes walking. Market Area I has the potential transit ridership necessary to support the most intensive fixed-route transit service, typically providing higher frequencies, longer hours and more transit options outside of peak periods. None of the study area is located Transit Market Area I. However, many routes that terminate in, or operate through the Highland Park study area, originate from Market Area I and operate at a Market Area I level of service. Because of this geographic relationship, Highland Park benefits from levels of service that are equal or better than its market area would otherwise warrant.

Transit Market Area II contains moderately high population and employment densities and typically has a traditional street grid. Most of Market Area II can support many of the same types of fixed-route transit service as Market Area I, although usually at wider route spacing, lower frequencies and shorter service spans.

Opportunities exist to increase employment and population density at the Ford Site. The *City of Saint Paul adopted the Ford Site Zoning and Public Realm Master Plan* in September of 2017. While the site has historically been an employment center, the plan establishes land use controls that would increase residential density while maintaining a significant employment presence.

Demographics and Land Use

Factors that can influence a person's likelihood to use transit include the availability of transit service to important destinations, whether an auto is available for a trip, the cost and availability of parking, and the pedestrian connectivity of an area. People living and/or working in areas of the highest population and employment densities tend to ride transit more frequently than those in less-dense areas.

Population

The total population in the study area is approximately 31,772. As shown in **Appendix C**, the highest residential density within the study area is concentrated along West 7th Street between St Paul Avenue on the east and Gannon Drive on the west. Additional pockets of higher levels of residential density are found near:

- Cleveland Avenue and St Paul Avenue adjacent to the Ford Site
- Highland Parkway between Cleveland and Fairview
- Randolph Avenue between Cleveland and Snelling

Analysis of trends in demographic data helps Metro Transit adjust service to match areas of growing or declining populations. The study area population is expected to increase by nearly 20 percent between 2010 and 2040.

Specific areas of population growth:

- primarily planned residential and mixed-use redevelopment at the Ford Site
- Shepard Davern area with the expected redevelopment of Sibley Plaza to mixed use and the redevelopment in and around the Shepard Road and Gannon Road sites.

Employment

There are approximately 11,300 jobs in the study area. As shown in **Appendix D** employment opportunities within the study area are currently concentrated adjacent to Ford Parkway between Cretin and Cleveland, most notably office, retail and service industry jobs at the Highland Village shopping area. This retail center and adjacent development is a large trip generator that serves as a focal point for transit service. Employment uses are also planned to create jobs on the Ford Site.

Appendix E describes where job concentrations are located. Specifically, the Highland Village shopping area contains approximately 7,100 jobs paying less than \$40,000 a year. This measure is important because the employees that have these jobs that pay less than \$40,000 a year are more likely to use transit.

Transit-Reliant Groups

Analysis of transit ridership users show that low-income communities, people of color and people with disabilities are more likely to rely on transit for a larger percentage of their overall travel. It is important that these groups share equitably in the service provided. The City's goal is to have 20% affordable housing at the Ford Site.

Low-Income Communities

Across the region, 12 percent of all residents are considered low-income, defined as households earning less than 185 percent of the poverty line.

Appendix F shows the largest percentage of low-income residents in the study area live in the Sibley Manor neighborhood along West 7th Street at Maynard Street. This Area of Concentrated Poverty is defined by the Met Council as an area where at least 50 percent of the population lives in poverty. This group is important to note because the costs of owning an automobile are more challenging for persons with lower income.

Other low-income communities within the study boundaries are observed in several areas:

- Along St Paul Avenue between Montreal Avenue and Davern Street
- Along West 7th Street within the entire study area

People of Color

The Federal Transit Administration defines minority persons referred to as people of color in this section, to include anyone who identifies themselves as American Indian and Alaskan Native, Asian, Black or African American, Hispanic or Latino, or Native Hawaiian or Other Pacific Islander. **Appendix G** shows the persons of color population in the study area using the 2010 Census. In the Twin Cities region, 28.8 percent of the population are people of color.

Concentrations of people of color within the study area:

- The neighborhood bounded by Davern and Homer along West 7th Street has the highest percentage (above 51 percent) of people of color in the study area.
- Other areas that are higher than the regional average include east of Lexington Avenue, south of W. 7th Street, along St. Paul Avenue and on Ford Parkway between Cleveland and Fairview avenues.

People with Disabilities

Appendix H shows people with disabilities, defined as someone who has vision, hearing, cognitive, ambulatory, self-care or independent living disabilities. People with disabilities are more likely to use transit, particularly if the disability limits or prohibits driving. Region-wide, 9.7 percent of the population has a disability.

Concentrations of people with disabilities within the study area:

- The highest percentage (16 to 20 percent) of people with disabilities in the study area is located along West 7th Street between Davern and Randolph
- Near St. Catherine’s University along Fairview and Randolph avenues

It is important to note that some people with disabilities use Metro Mobility paratransit service instead of regular route service.

Cars Available per Person

People are more likely to use transit if an automobile is not always available, regardless if that is by choice or by circumstance. **Appendix I** shows the cars available per person. Zero-car households are one part of this measure, but anytime that vehicles are being shared it is more likely that transit is being used for some trips. For example, an average of less than one car per person over age 16 means that not everyone has access to a vehicle for all trips. The lower the average, the more sharing of cars and using other forms of travel such as biking and transit.

Areas within the project area where many residents do not have reliable access to a vehicle:

- The area bounded by Cleveland, Fairview, Randolph, and Highland Parkway (likely influenced by the St. Catherine’s student population)
- The area along West 7th Street bounded by Davern Street and Highland Parkway

Regional Transit Standards

Design guidelines and service standards are outlined in the 2040 TPP. Route types, along with transit market areas, help guide the appropriate service levels and set minimum ridership and route performance thresholds.

Route Types

The study area is served by four route types: core local, supporting local, Arterial BRT (Rapid Bus) and commuter/express. The core local radial routes operate to downtown St. Paul, supporting local cross-town routes are oriented north-south. Arterial BRT A line service generally operates as a crosstown route. Route 134 commuter express service operates from Highland Park to downtown Minneapolis during weekday rush hours.

The route structure in the study area is designed to meet a variety of transportation needs. The overall route structure is radially oriented to downtown St. Paul or downtown Minneapolis and a grid of cross-town routes that connect with the radial route service.

A map of the routes under review in this study area are shown in **Figure 1** on page 6.

Core Local

The core local routes in the study include all those which operate a portion of their total service in the study area including routes 70, 74 54, and A Line.

Supporting Local

The supporting local routes in the study include all those which operate a portion of their total service in the study area including routes 23, 46, 83, 84, 87.

Commuter/Express

Route 134 is the only commuter/express route in the study area. During peak hours Route 134 offers service from Highland Park with local pick-up and then operates express to downtown Minneapolis with limited reverse commute service from downtown Minneapolis to Highland Park.

Service Standards

Appendix G of the 2040 TPP describes transit service design guidelines and performance standards by route type and market area. Span of service shown in

Table 1 refers to how early in the morning and late at night service runs.

Table 2 describes how often trips operate and **Table 3** shows PPISH guidelines.

Table 1: Minimum Span of Service Guidelines

Route Type	Weekday				Weekend	
	Peak	Midday	Evening	Owl	Saturday	Sunday
Core Local Bus*	●	●	●	○	●	●
Supporting Local Bus	●	●	◐	○	◐	◐
ABRT	●	●	●	○	●	●
Commuter Express Bus	●	○	○	○	○	○

Service Provided ●; Service Typically Provided ◐; Service As Demand Warrants ○
 Peak - 6:00am to 9:00am and 3:00pm to 6:30pm; Midday - 9:00am to 3:00pm; Evening - 6:30pm to 1:30am; Owl - 1:30am to 5:00am; Saturday - Saturday Service; Sunday - Sunday/Holiday Service

*Local limited stop routes will operate primarily in the peak period.

Table 2: Minimum Service Frequency Guidelines

Route Type	Market Area				
	Area I	Area II	Area III	Area IV	Area V
Core Local Bus	15" Peak 30" Offpeak 30" Weekend	30" Peak 60" Offpeak 60" Weekend	30" Peak 60" Offpeak 60" Weekend	NA	NA
Suburban Local Bus	NA			NA	NA
Commuter Express Bus	30" Peak		3 Trips each peak		NA

Additional service may be added as demand warrants and guidelines apply primarily to the peak direction.

Table 3: Appendix G PPISH Guidelines

Route Type	PPISH Guidelines	
	Route Average	Minimum Per Trip
Core Local Bus*	> 20	>15
Supporting Local Bus	>15	>10
Commuter Express Bus	Peak >20	Peak >15
ABRT	>25	>5

Existing Service Levels, Performance and Facilities

The route structure in the study area is designed to meet a variety of transportation needs. The overall structure is both radial oriented to downtown St. Paul or Minneapolis and a grid of cross-town routes perpendicular to the radial routes.

Radial routes from downtown St Paul operate through Highland Park and extend to Minneapolis, where they terminate at the METRO Blue Line 46th Street Station or they terminate in Highland Park near Cleveland and Ford Parkway.

Crosstown routes are generally located about 1 mile apart. North-south crosstown routes serving Highland Park make connections with the METRO Green Line service at University Avenue and terminate at the Rosedale Transit Center in Roseville. Minneapolis crosstown routes connect Highland Park with METRO Blue Line 46th Street Station and to south Minneapolis radial routes.

The Highland Park and Highland Village shopping district is one of the most well served areas by transit in the region. Today nearly 800 weekday transit trips operate through or terminate in Highland Park. Furthermore, this level of transit service is nearly as good on weekends. Routes included in the study include all those which operate a portion of their total service in the study area.

An analysis uses peer areas mostly taken from urban commercial nodes in Market Area II. These areas share similar demographics including population density, employment density, car availability, and urban form. Population densities of the selected areas are all between 7 and 9 people per acre, similar to the approximate population density of 7.5 people per acre in Highland Park. The Uptown area of south Minneapolis is also included in the analysis and is the exception, with higher levels of population and employment density. Located in Market Area I it is the densest, most transit supportive area outside of the downtown region and is included for comparison purposes only. The peer area analysis shows that Highland Park has more transit trips than comparable areas in the analysis with the exception of Uptown. A map of the peer area comparison is shown in **Figure 2** on page 17.

The level of transit service in Highland Park is more than what is typically available in comparable areas within Transit Market Area 2. Highland Park benefits from its multiple route connections to the Green Line on University Avenue and to the Blue Line at 46th Street Station across the Ford Bridge. **Figure 3** on page 18 shows levels of transit service by market area for the region.

Table 4, comparable Market Area 2 locations (not including Highland Park) have an average of about 450 daily trips, ranging from about 300 to 700 daily trips. Highland Park stands at the upper range with about 800 daily trips. This count is closer to Uptown with its 1,000 daily transit trips.

Table 4: Peer Area Weekday Transit Trip Counts

Uptown		NE Minneapolis		Longfellow		Highland Park	
Route	Trips	Route	Trips	Route	Trips	Route	Trips
4	150	4	103	7	77	23	34
6	228	10	194	9	83	46	62
12	40	17	85	21	184	54	159
17	139	25	38	23	89	70	35
21	259	32	65	53	18	74	114
23	89	59	21	Blue Line	220	84	65
53	18	118	4	TOTAL	671	87	85
113	15	141	11			134	22
114	20	TOTAL	521			A Line	212
115	4					TOTAL	788
612	46						
TOTAL	1008						

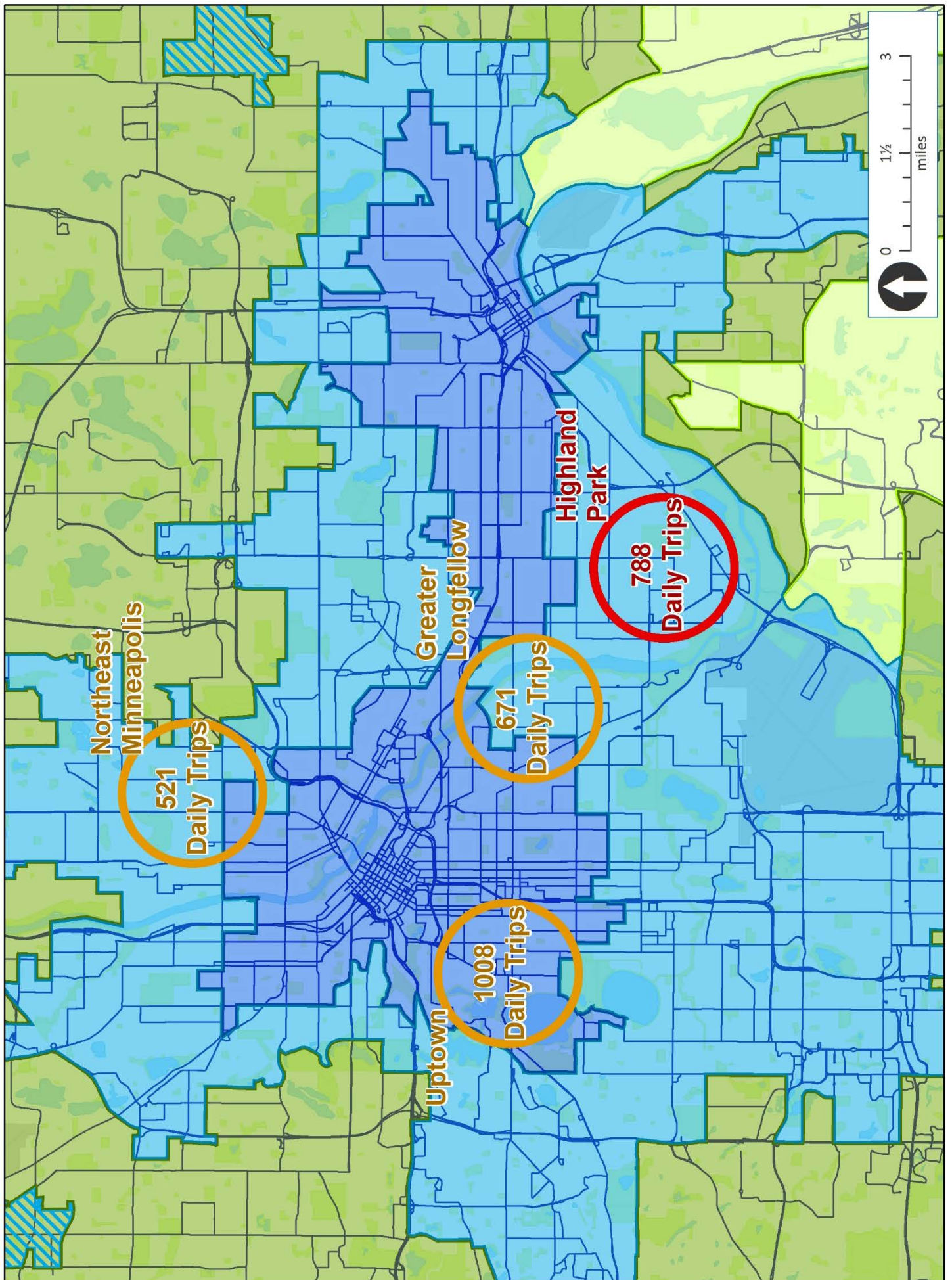


Figure 2: Peer Area Comparison – Weekday Daily Total Trips

Transit Service

- Market Area I Level of Service
- Market Area II Level of Service
- Market Area III Level of Service

Note: TransitLink Service is available in Market Areas IV and V during the normal span of service. TransitLink service extends into Market Areas I, II, and III when regular route service does not meet minimal requirements.

Market Area Definitions

- Market Area I
- Market Area II
- Market Area III
- Market Area IV & V

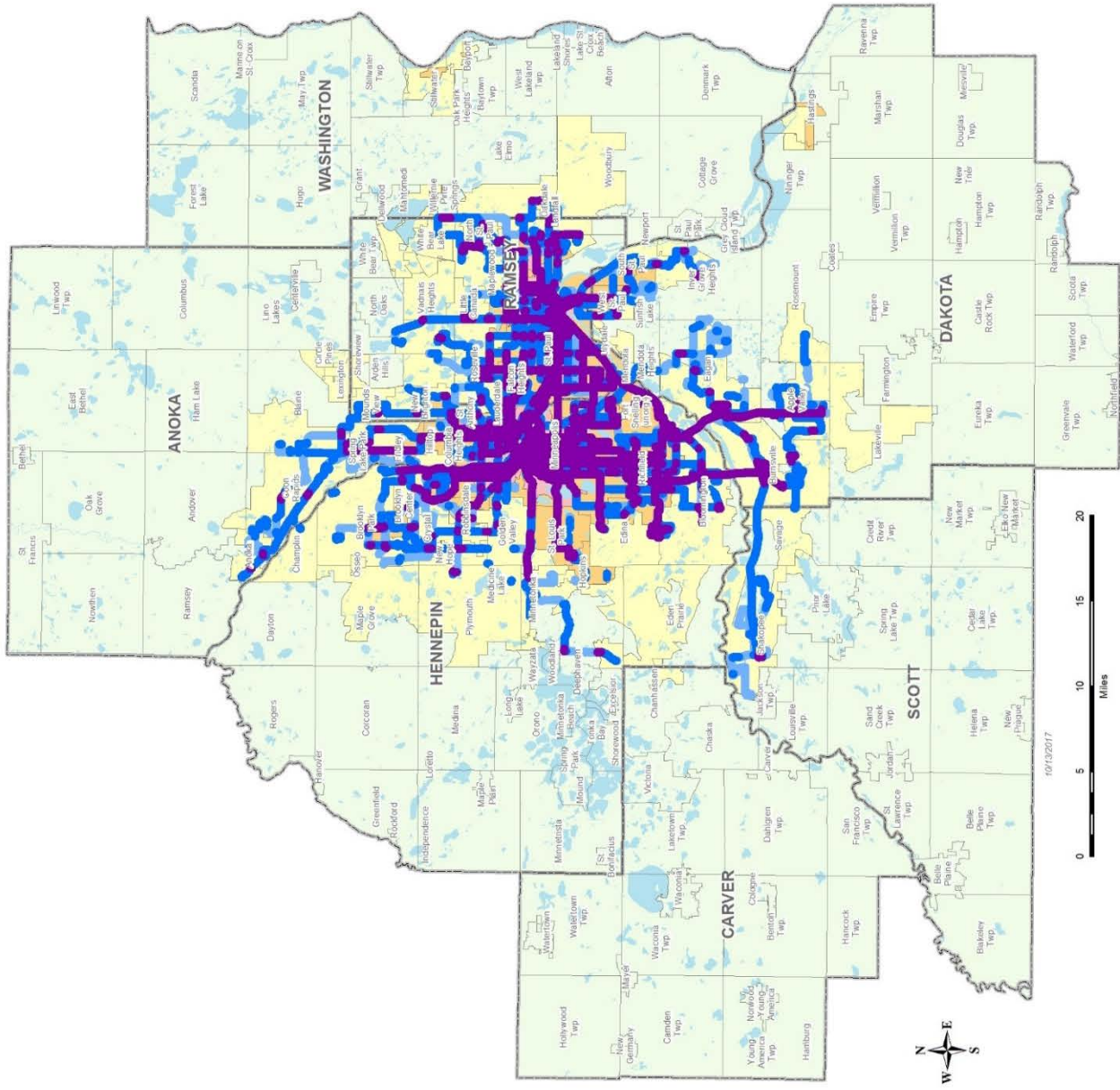


Figure 3: Transit Service Market Area Analysis

Service Descriptions and Frequencies

A description of specific route structures, key destinations served, and the span and frequency of these area routes are outlined below (service frequencies are averages and may apply to only the main portion of the route). Service frequencies for study area routes meet regional standards and are summarized below.

A Line

A Line Rapid Bus service was introduced in 2016 as the region's first arterial BRT service. Funded by a Federal Congestion Mitigation and Air Quality (CMAQ) grant for a term of three years, this new service offers off-vehicle fare payment, a faster routing provided by limited stop service and high customer amenity stations between the METRO Blue Line 46th Street Station via 46th Street, Ford Parkway, and Snelling Avenue and the Rosedale Transit Center. Service operates every 10 minutes seven days a week during most hours of the day. Since the introduction, A Line and Route 84 ridership has increased in the corridor by 30% and now carries an average of 5,800 weekday rides.

Route 23

Route 23 provides local crosstown service from the Highland Park on Ford Parkway, and the METRO Blue Line 38th Street Station via 38th Street to Uptown. Service frequencies in Highland Park are hourly.

Route 46

Route 46 provides local service from the Highland Park via Ford Parkway, 46th Street, METRO Blue Line 46th Street Station, the 46th Street and I-35W Station and 50th Street in south Minneapolis and Edina. Service frequencies in Highland Park are generally every 30 minutes.

Route 54

Route 54 provides limited stop service between the Mall of America, MSP airport, downtown St. Paul and the Union Depot via Hwy. 5 and West 7th Street. Service frequencies range from every 12 to every 15 minutes. Beginning in June 2018 Route 54 rush hour service frequencies on West 7th Street was improved to every 10 minutes and some trips were extended to the East Side and Maplewood Mall. The service expansion will be funded by a Federal Congestion Mitigation and Air Quality (CMAQ) grant for a term of three years.

Route 70

Route 70 provides local service from Highland Park via Ford Parkway, St. Clair, West 7th, Downtown St. Paul and Sun Ray Transit Center. Service frequencies are every 30 minutes during peak times and every 60 minutes during weekday midday. There is no weekend service west of downtown St. Paul.

Route 74

Route 74 provides local service from the METRO Blue Line 46th Street Station, via 46th Street, Ford Parkway, Randolph, West 7th, downtown St. Paul East 7th and Minnehaha Avenue, to Sun Ray Transit Center. Service frequencies to Highland Park range from every 15 minutes to every 20 minutes on weekdays and Saturdays and every 30 minutes on Sundays.

Route 83

Route 83 provides local crosstown service from West 7th and Montreal via Lexington Parkway to the METRO Green Line Lexington Parkway Station at University Avenue, to Roseville. Service frequencies are every 30 minutes all days of the week during the day and every 60 minutes at night.

Route 84

Route 84 is a local crosstown route that makes local bus stops from the West 7th and Davern Avenue, along West 7th Street, St. Paul Avenue, Ford Parkway, Snelling Avenue, METRO Green Line Snelling Station, to Rosedale Transit Center. Service frequencies were reduced to every 30 minutes all days of the week with the introduction of the new A Line Rapid Bus service in 2016, which mostly replaced Route 84. There is service after 9pm.

Route 87

Route 87 provides local crosstown service from Highland Park via Cleveland Avenue, METRO Green Line Raymond Station, Fairview Avenue to Rosedale Transit Center. Service frequencies are every 20 minutes during weekday peak times and every 30 minutes during non-peak times all days of the week.

Route 134

Route 134 provides limited stop service between Highland Park via Cleveland Avenue and Cretin Avenue to downtown Minneapolis on weekdays during peak hours. Service frequencies are every 15-30 minutes. Limited reverse commute service between downtown Minneapolis and Highland Park is also offered.

Table 5: Existing Service Frequency and Span

Route	Weekday					Saturday			Sunday		
	AM Peak	Midday	PM Peak	Evening	Span	Midday	Evening	Span	Midday	Evening	Span
23	60	60	30-60	60	7a-8p	20-40	60	8a-8p	60	60-90	8a-8p
46	30	30	30	30-60	6a-11p	30	60	7a-p	30	60	8a-8p
54	15	15	13	15-30	3a-1a	15	15-30	3a-1a	20	20-30	3a-1a
70	30	60	30	NA	6a-7p	NA	NA	NA	NA	NA	NA
74	15	15-20	15	30	5a-1a	20	30	5a-1a	30	30	5a-12a
83	30	30	30	30-60	6a-10p	30	30-60	7a-10p	30	30-60	7a-10p
84	30	30	30	30	5a-9p	30	NA	6a-8p	30	NA	9a-8p
87	20	30	20	30-60	4a-12p	30	60	6a-12p	30	60	6a-12p
134	15	NA	15	NA	6a-7p	NA	NA	NA	NA	NA	NA
A Line	10	10	10	15	4a-1a	10	15-30	4a-1a	10	15-30	4a-1a

Existing Ridership and Service Performance

Ridership at the bus-stop level for each of these routes is shown in **Appendix J, K, and L**.

There are two ways to measure how much service is provided on a route. In-service hours are the hours as shown on the public timetable, when buses are in revenue service. Platform hours covers the entire time from when a bus leaves the garage to travel to the start of a route, all the trips, and when it returns to the garage from the end of the route. Platform hours are a more accurate representation of the total cost of providing service, since labor is a significant factor in service costs.

Productivity is a measure of a route's ridership relative to the cost of providing the service. The higher the route productivity, the more effective the service. Service performance and route productivity are measured using Passengers per In-Service Hour (PPISH), which is calculated as the number of passengers divided by the number of hours of in-service service provided on the route. **Figures 4-6** show Regional Bus Route Productivity maps.

**2040 Transportation Policy Plan
Route Performance Standards**

Route Type	Route Average
Core Local Bus	≥ 20
Supporting Local Bus	≥ 15
Suburban Local Bus	≥ 10
Arterial BRT	≥ 25
Highway BRT	≥ 25
Light Rail	≥ 70
Commuter Express Bus	Peak ≥ 20; Off-peak ≥ 10
Commuter Rail	≥ 70
General Public	≥ 2

**Bus Route Productivity
Weekday Service**

April 2018 Passengers per In-Service Hour
Metro Transit / Met Council-provided service



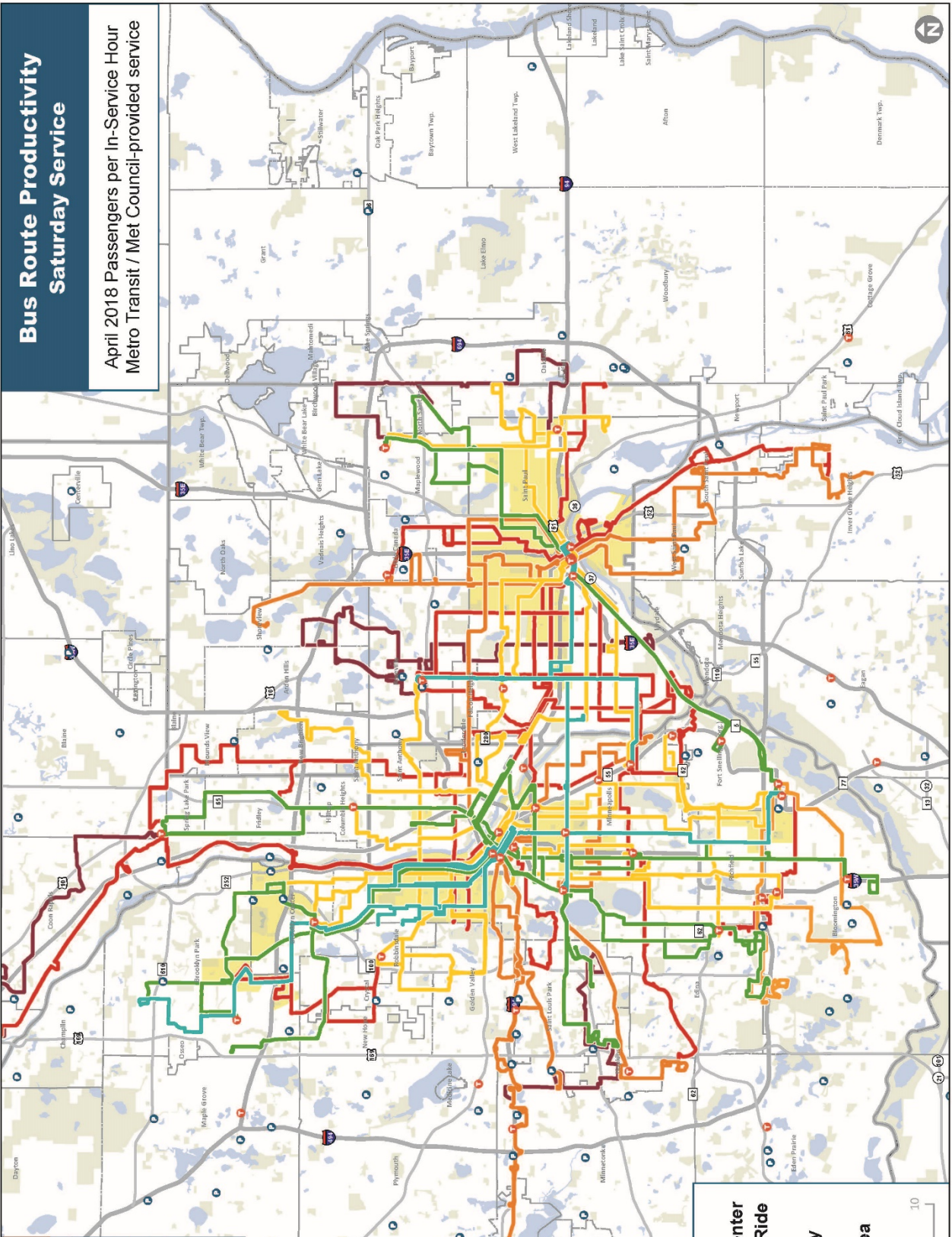
Revised: 8/16/2018
<http://www.metrotransit.org/arcgis/rest/services/BusRoutes/MapServer/info>



Figure 4: Regional Bus Route Productivity – Weekday Service

**2040 Transportation Policy Plan
Route Performance Standards**

Route Type	Route Average
Core Local Bus	≥ 20
Supporting Local Bus	≥ 15
Suburban Local Bus	≥ 10
Arterial BRT	≥ 25
Highway BRT	≥ 25
Light Rail	≥ 70
Commuter Express Bus	Peak ≥ 20; Off-peak ≥ 10
Commuter Rail	≥ 70
General Public	≥ 2



**Bus Route Productivity
Saturday Service**

April 2018 Passengers per In-Service Hour
Metro Transit / Met Council-provided service

Revised: 8/16/2018

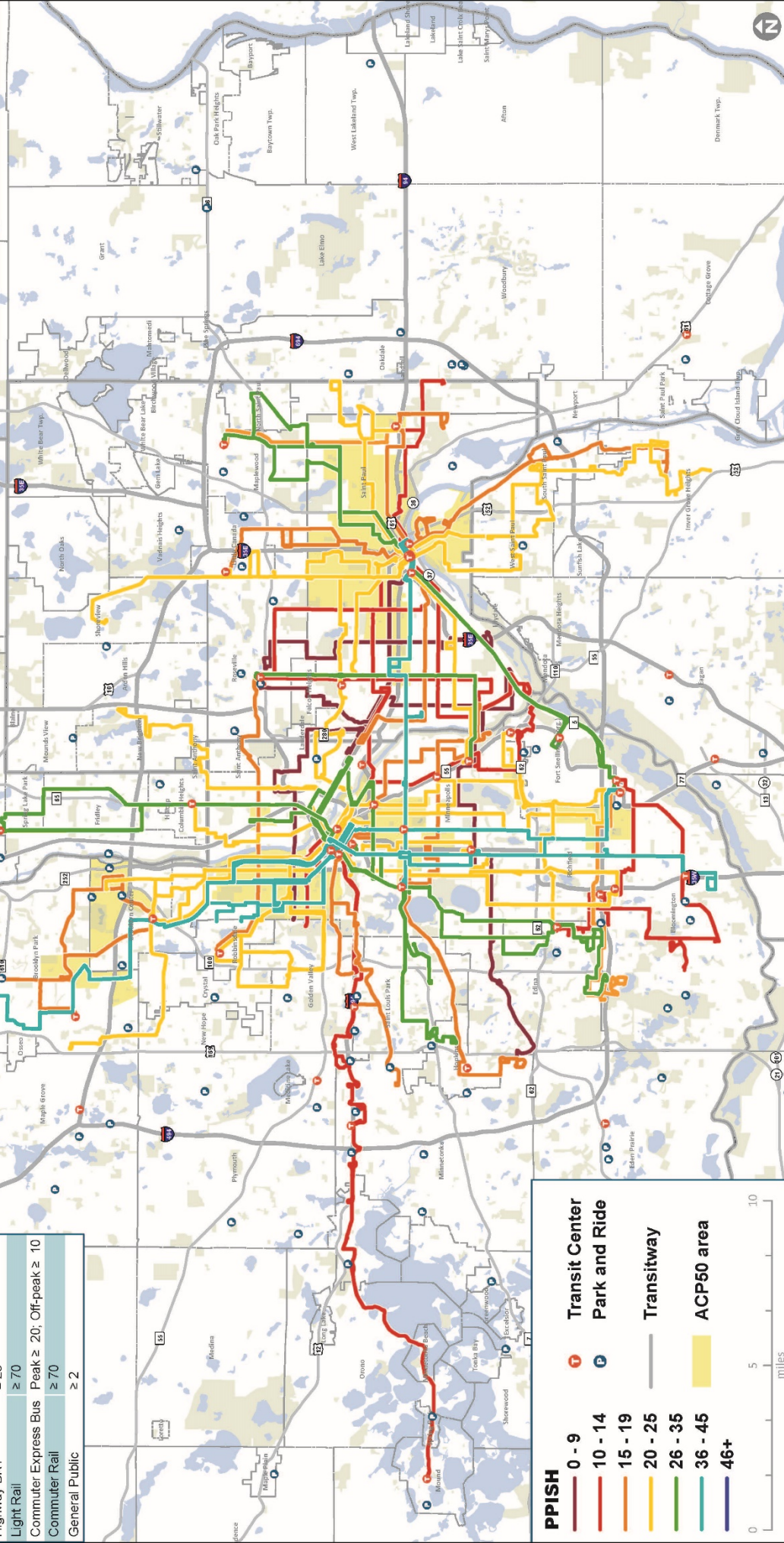
Figure 5: Regional Bus Route Productivity – Saturday Service

**2040 Transportation Policy Plan
Route Performance Standards**

Route Type	Route Average
Core Local Bus	≥ 20
Supporting Local Bus	≥ 15
Suburban Local Bus	≥ 10
Arterial BRT	≥ 25
Highway BRT	≥ 25
Light Rail	≥ 70
Commuter Express Bus	Peak ≥ 20; Off-peak ≥ 10
Commuter Rail	≥ 70
General Public	≥ 2

**Bus Route Productivity
Sunday Service**

April 2018 Passengers per In-Service Hour
Metro Transit / Met Council-provided service



PPISH

- 0 - 9
- 10 - 14
- 15 - 19
- 20 - 25
- 26 - 35
- 36 - 45
- 46+

T Transit Center
P Park and Ride
 — Transitway
 ACP50 area

0 5 10 miles

Figure 6: Regional Bus Route Productivity – Sunday Service

Existing ridership and performance for routes within the study area are summarized in

Table 6. The calculated Passengers Per In-Service Hour (PPISH) is based on service levels and ridership during the fall of 2017.

PPISH standards by route type the Metropolitan Council Transportation Policy Plan are shown in Table 3.

Table 6: Ridership and Route Performance

Service Day	Route Type	Route	Route PPISH	Highland PPISH	In-Service Hours	Boardings	Local Rides
Weekday	Supporting Local	23	28.6	29.8	2.7	79	4
Weekday	Supporting Local	46	21.7	21.4	15.6	333	181
Weekday	Core Local	54	38.8	51.9	21.4	1,109	
Weekday	Core Local	70	23	32.5	2.4	78	4
Weekday	Core Local	74	34.3	43.4	43.4	1,885	714
Weekday	Supporting Local	83	11.4	13.4	8.0	107	12
Weekday	Supporting Local	84	18.1	27.0	18.3	495	197
Weekday	Supporting Local	87	18.5	50.4	4.6	232	19
Weekday	Commuter/Express	134	40.1	50.9	3.3	168	18
Weekday	ABRT (Rapid Bus)	A Line	49.6	54.3	38.9	2,112	678
Service Day	Route Type	Route	Route PPISH	Highland PPISH	In-Service Hours	Boardings	Local Rides
Saturday	Supporting Local	23	19.6	24.5	2.9	71	5
Saturday	Supporting Local	46	11.0	15.4	13.3	205	102
Saturday	Core Local	54	34.9	37.2	17.9	666	
Saturday	Core Local	70	NA	NA	NA	NA	NA
Saturday	Core Local	74	22.4	29.8	33.9	1,010	386
Saturday	Supporting Local	83	7.7	4.8	7.3	35	21
Saturday	Supporting Local	84	16.3	19.6	14.5	284	122
Saturday	Supporting Local	87	9.2	44.3	3.5	155	10
Saturday	Commuter/Express	134	NA	NA	NA	NA	NA
Saturday	ABRT (Rapid Bus)	A Line	42.4	48.2	36.0	1,735	467
Service Day	Route Type	Route	Route PPISH	Highland PPISH	In-Service Hours	Boardings	Local Rides
Sunday	Supporting Local	23	20.1	20.9	2.3	48	2
Sunday	Supporting Local	46	9.5	14.7	10.1	148	74
Sunday	Core Local	54	37.1	36.8	13.6	501	
Sunday	Core Local	70	NA	NA	NA	NA	NA
Sunday	Core Local	74	24.6	30.7	24.2	744	288
Sunday	Supporting Local	83	6.1	13.7	7.3	100	3
Sunday	Supporting Local	84	13.8	17.5	10.9	191	85
Sunday	Supporting Local	87	6.7	31.7	3.5	111	11
Sunday	Commuter/Express	134	NA	NA	NA	NA	NA
Sunday	ABRT (Rapid Bus)	A Line	37.3	43.6	33.0	1,439	376
In service time was from the stop crossing times calculated in TransitMaster.							
Local Rides are boardings and alightings within the study area.							

Facilities

Regional facilities include rail stations, transit centers, and bus turnarounds/layovers.

Service from Highland Park extends to connections to METRO Green Line Stations on University Avenue, the METRO Blue Line 46th St Station and transit centers in downtown Saint Paul and Rosedale Mall. These facilities are shown in **Figure 7**.

Passenger Waiting Shelters

A total of 26 passenger waiting shelters are located within the study area, 12 of these sites have A Line Station amenities including ticket vending machines, real-time schedule information, heat and lighting. Two new shelters with lighting sites have been installed in the study area at 7th and Albion, and 7th and St Paul Avenue as part of Metro Transit's Better Bus Stops program.

METRO Blue Line 46th Street Station

This facility is located on the west side of Hiawatha Avenue and 46th Street in Minneapolis. This station connects to routes 7, 9, 46, 74, 436, 446, A Line and Blue Line.

Kenneth and Ford Turnaround/Layover

This on-street turnaround and layover site is located next to the Highland Community Center on Kenneth. Routes 23, 70, and 87 terminate at this site. This location will not be sufficient to accommodate transit expansion as a result of the Ford Site redevelopment, as it is too small and too far away from the redevelopment.

Bus Stop Spacing

The bus stop spacing standard for local routes is six to eight stops per mile. Local routes in Highland Park typically stop every eighth mile (one long block or two short blocks). A Line Rapid Bus service has one stop about every half mile to every mile.

Bus Travel Times and Speeds

Bus service speeds and travel times are affected by a number of factors including traffic, signals, and stop frequency. Bus-only lanes, transit advantages (such as bus-only shoulders, queue jumps, ramp-meter bypasses and traffic signal priority), fewer bus stops and free flow traffic can result in higher average speeds. Local, limited-stop and express buses operate at significantly different speeds and provide different travel times. Examples of these transit advantages include traffic signal priority (TSP) added to Ford Parkway and Snelling Avenue in 2016 with the introduction of the new A Line Rapid Bus service, and ramp meter bypass at Cretin and I-94 for Route 134 Express.

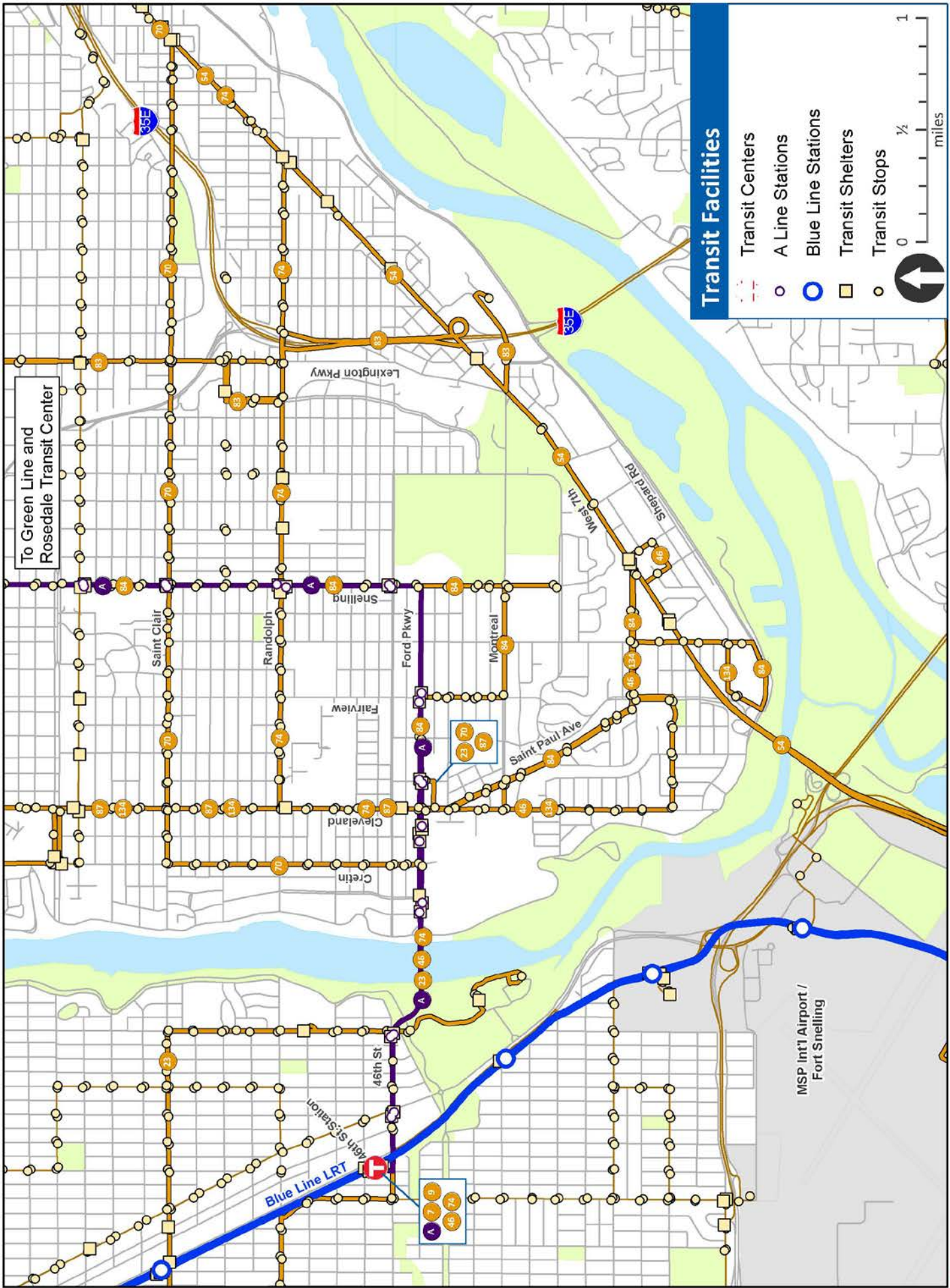


Figure 7: Transit Facilities

CHAPTER 3: FUTURE CONSIDERATIONS

The redevelopment of the Ford Site offers the possibility to redesign the transit service in Highland Park, including the Ford Site. As presented in this study, Highland Park is currently well-served by transit when considering geographic coverage, route spacing, service frequencies and span of service. Highland Park has many local bus routes and the A Line arterial BRT connection to the Blue Line, Green Line, and the future Riverview Corridor.

This chapter describes service concepts and facility improvements that **could** be considered as the Ford Site redevelopment plan becomes more refined and the demand for expanded transit service to the site is established. Network Next bus service improvement planning process would be an appropriate document for the service concepts described below to be evaluated against other system-wide service improvements.

Highland Park Bus Terminal and Layover

In order to maintain or potentially improve transit service in the area in the future, it is critical for Metro Transit to continue to have a place for buses to turnaround, with space for at least three buses to layover and an operator restroom. One strategy to provide more bus service within the new development efficiently is to relocate the bus layover location within the redeveloped area. A commitment between the city and Metro Transit to either maintain the existing location on northbound Kenneth Street near Ford Parkway or secure a new location nearby, such as within the Ford Site, is important for long-term stability. The compatibility of a layover site and adjacent land uses and close proximity to existing terminal is key.

Ford Site Concepts

Preliminary discussions between Metro Transit and the City of Saint Paul Planning and Economic Development staff have identified potential locations, both within the public right-of-way and on private property that will be owned by the future developer. Several concepts identified :

- At the intersection of Cretin and Montreal, a roundabout design could provide a way for buses to turn around and space for a restroom to be built and buses to layover on the south side of the roundabout near the CP Rail property.
- On Montreal between Cretin and Cleveland, buses could layover on either the north or south side of the street in a cut-out, possibly near the ball fields. This concept could also potentially include a partnership with Highland Ball to provide a restroom that could be shared by the general public and bus operators.
- Right-of-way that has been reserved for a possible future transitway along Cretin may offer enough room for a bus layover and restroom. Similar to the alternative above, this option would require either a roundabout or way for buses to go around the block to turn around.
- A transit center and bus layover could potentially be incorporated into the planned parking ramp that is proposed to be located adjacent to Ford Parkway, between Cretin and Cleveland Avenues. Metro Transit has a number of examples where the ground floor of a parking ramp is designed for a bus layover and transit center.

Kenneth and Ford

An alternative to a Ford Site layover facility options described above is to continue using the existing on-street layover area at Kenneth and Ford Parkway. This site has worked well as a bus turnaround and layover site for over 20 years. It is well-located from schedule operating efficiency standpoint, can accommodate three buses and there is a restroom for operators at the nearby Highland Recreation Center. A commitment between the city and Metro Transit to maintain the existing location on northbound Kenneth Street near Ford Parkway is important to preserve long-term stability if other development pressures emerge. An alternative to an on-street layover site would be to incorporate a bus layover into the redeveloped commercial block between Kenneth and Cleveland. Metro Transit has experience working with a number of cities to incorporate transit facilities into

private redeveloped properties throughout the region. Examples include the MOA, Southdale, Rosedale, Sun Ray Center, Star lite Center. This could be part of an MOU with the City of Saint Paul as this site is redeveloped sometime in the future.

If it is determined that the current on-street layover site is the best option for current and future bus operations, this decision will impact the Ford Site bus service plan. Most notably, most routes would continue to operate on Ford Parkway and/or Cleveland Ave on the perimeter of the development but still within walking distance to the highest density part of the development.

Ford Site Route Concepts

While the Ford Site is well served by nearly 800 daily bus trips on Ford Parkway, and more than 80 daily bus trips on Cleveland Avenue, several concepts could be considered.

Route 46

The current Route 46, providing more than 60 daily bus trips between the METRO Blue Line 46th Street Station and Highland Park, could be re-routed through the Ford Site via Cretin, Montreal, and Cleveland, continuing to end near West 7th Street and Davern and a potential connection to the planned future Riverview Corridor. This route change would not add operating cost to Route 46. However, as the Ford Site is redeveloped and the expected commercial and residential land use intensifies, Metro Transit will continue to evaluate ridership potential and adjust Route 46 service levels to respond to transit service demand.

Route 23

This route could be modified to serve the center of Ford Site via Cretin and Montreal, and will increase operating cost. Otherwise, it is likely that the route will continue to operate on Ford Parkway and Cleveland Avenue to the existing Kenneth and Ford parkway layover.

New Route 47

A new Route 47 could replace the current Route 46 between the METRO Blue Line 46th Street Station and Highland Park. The new Route 47 could operate through the Ford Site via Cretin, Montreal, and Cleveland, continuing to end near West 7th Street and Davern. One advantage to creating a separate route would be increased flexibility to tailor service levels to Highland Park needs, connecting the W. 7th St and METRO Blue Line corridors.

Route 70

This route could be modified to serve the Ford Site only if a new terminal within new development is available. Otherwise, it is likely that the route will continue to operate on Ford Parkway and Cleveland Avenue to the existing Kenneth and Ford layover.

Route 74

This route will likely continue to operate on Ford Parkway unless additional operating resources are available and there is sufficient demand to justify rerouting via the Montreal and Cretin Avenue extensions.

Route 84

This route will likely remain unchanged on Ford Parkway and Cleveland near the redeveloped Ford Site.

Route 87

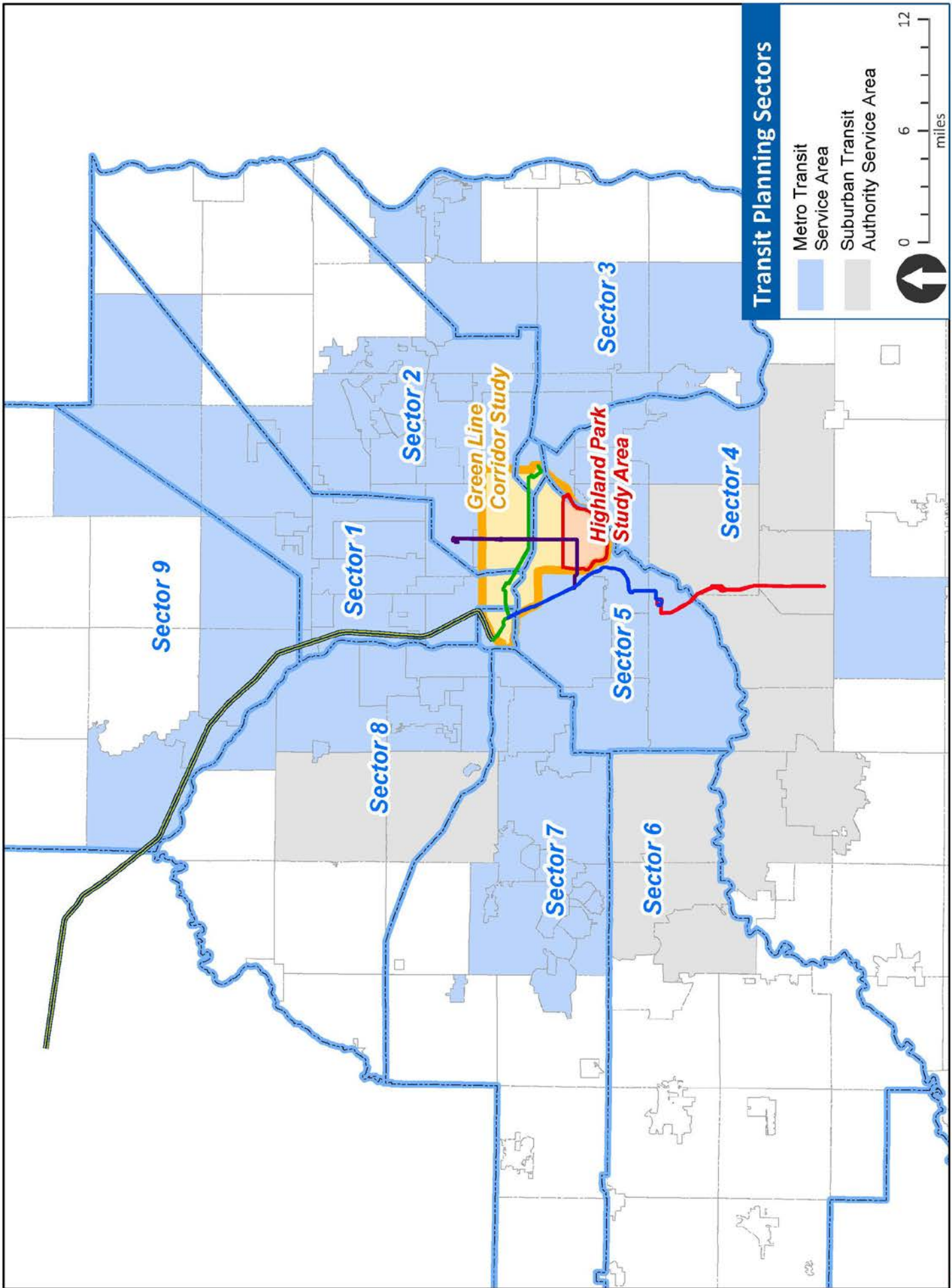
This route could be modified to serve the Ford Site only if a new terminal within new development is available. Otherwise, it is likely that the route will continue to operate on Cleveland Avenue to the existing Kenneth and Ford Parkway layover.

Route 134

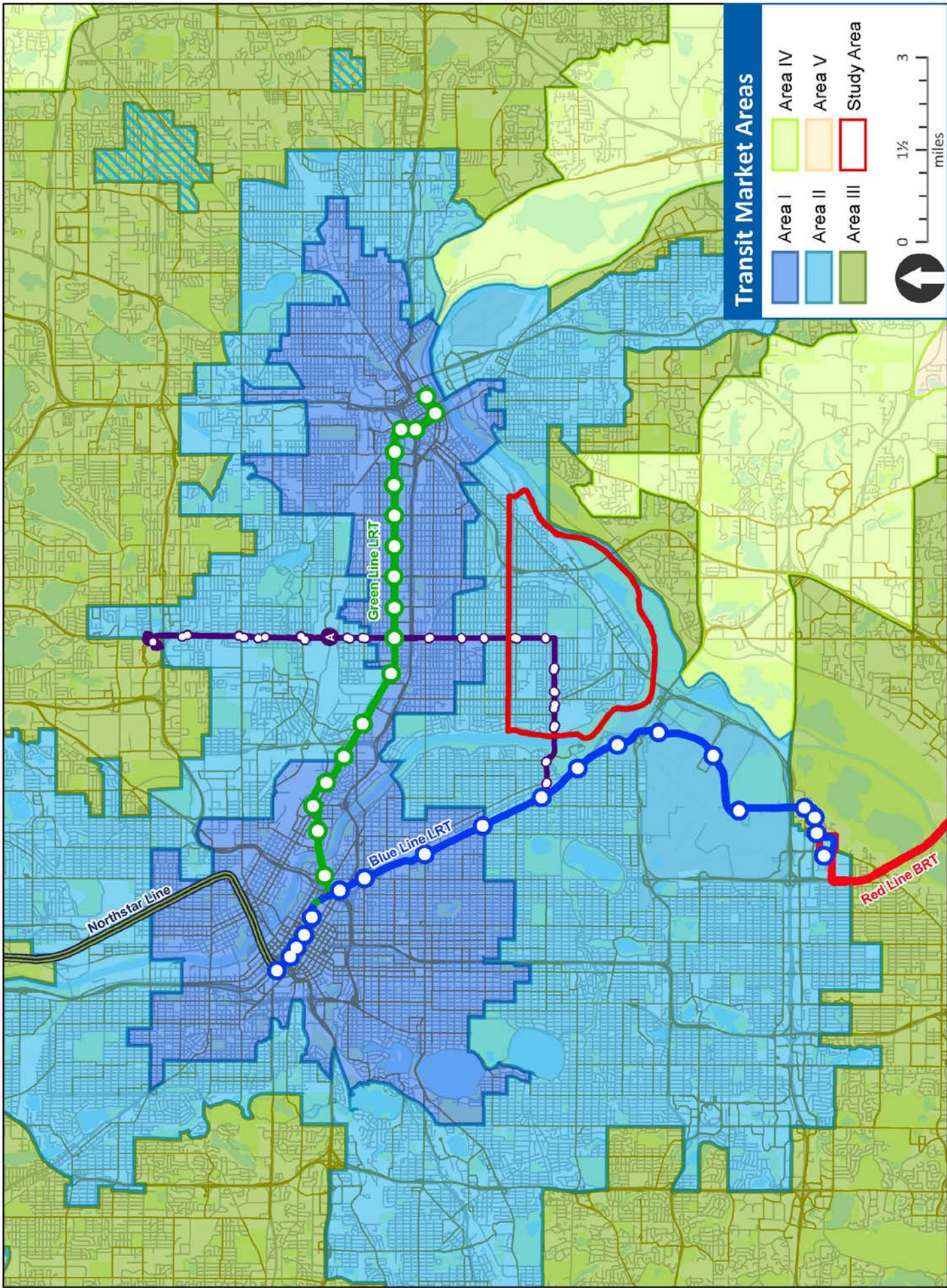
Route 134 provides limited stop service between Highland Park and downtown Minneapolis via Cleveland Avenue and Cretin Avenue on weekdays during peak hours. This route could be rerouted through the Ford Site if there is sufficient demand to justify rerouting via the Montreal and Cleveland Avenue extensions.

APPENDICES

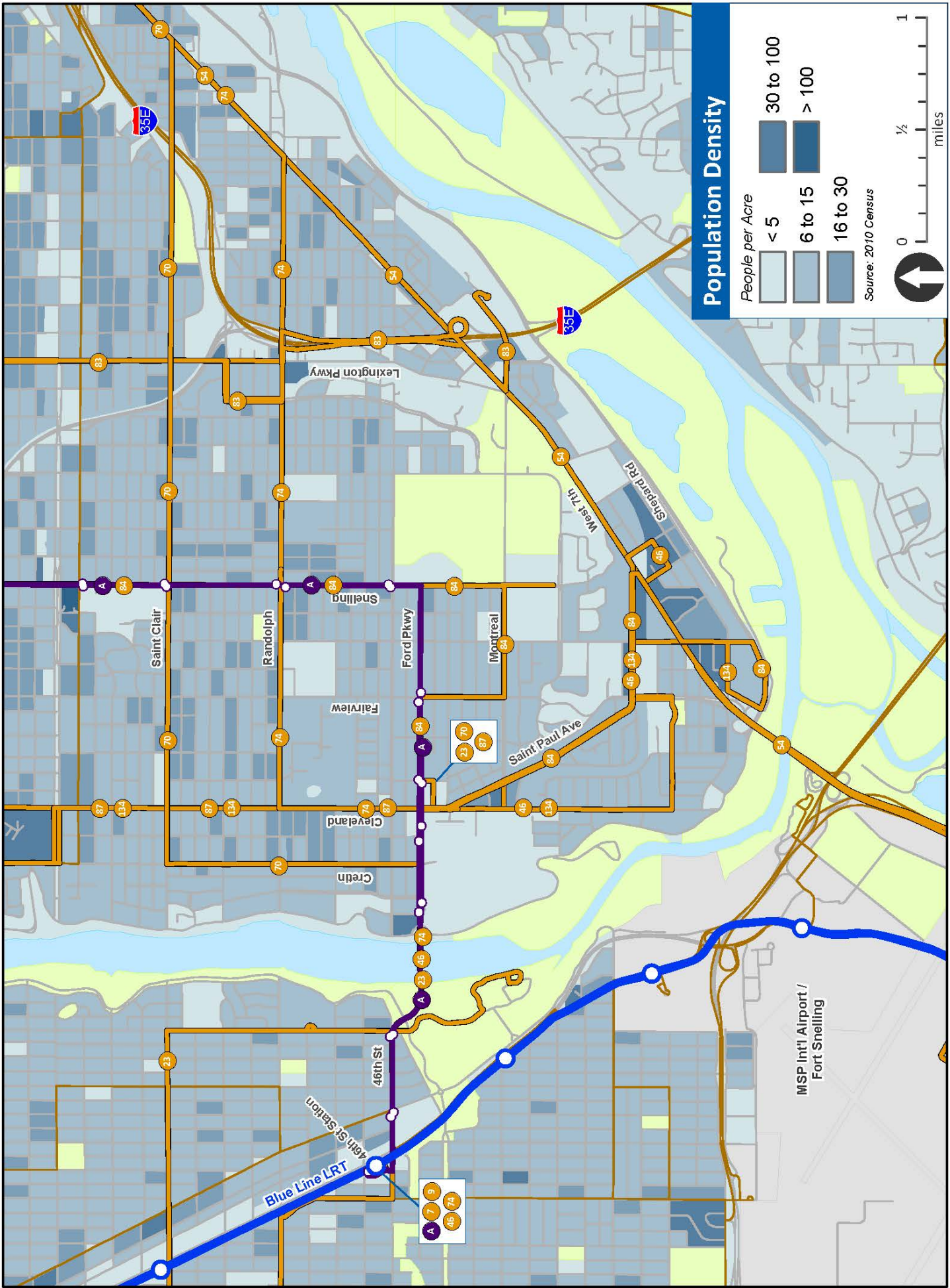
Appendix A: Transit Planning Sectors	- 32 -
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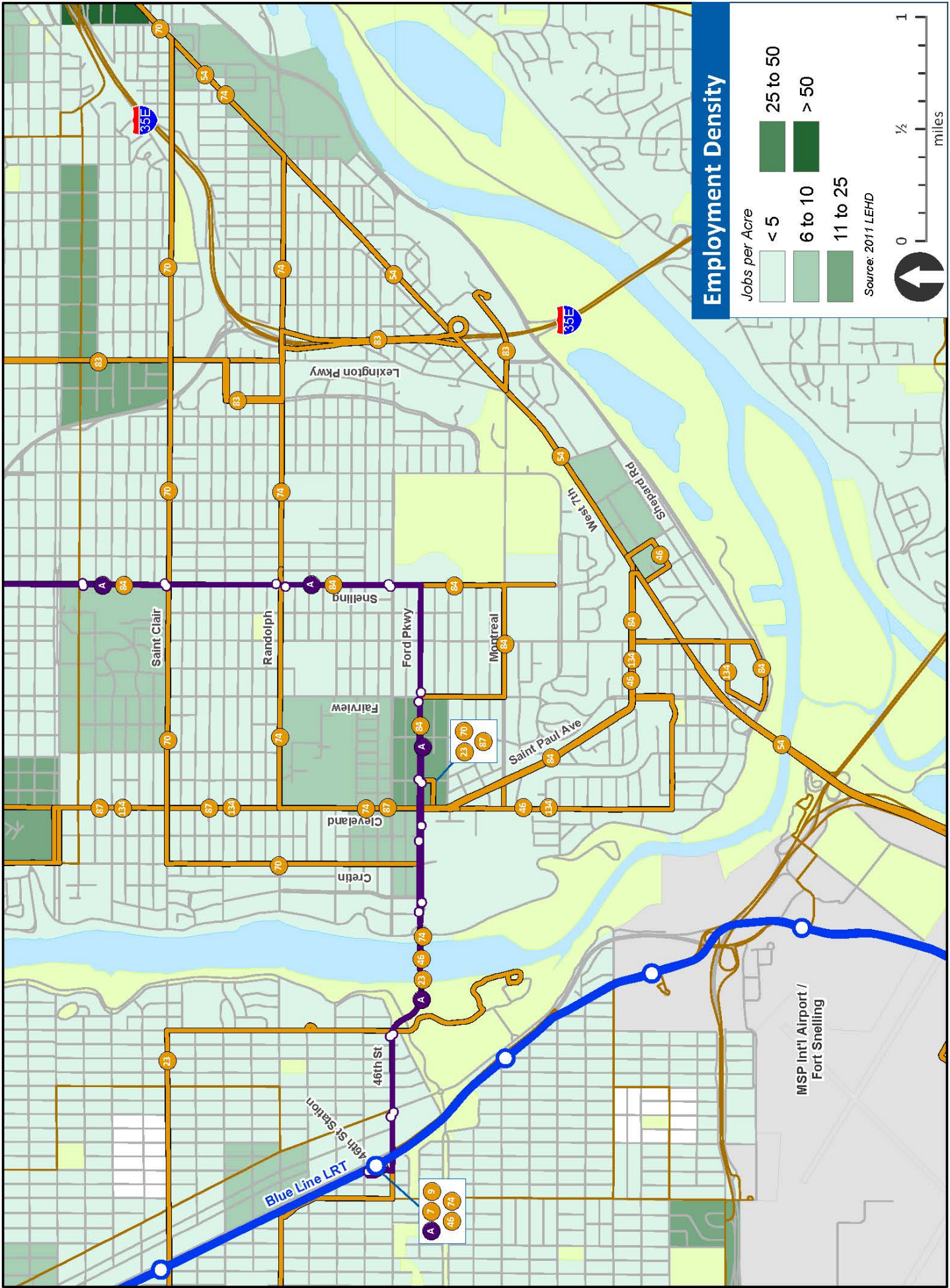
Appendix A: Transit Planning Sectors



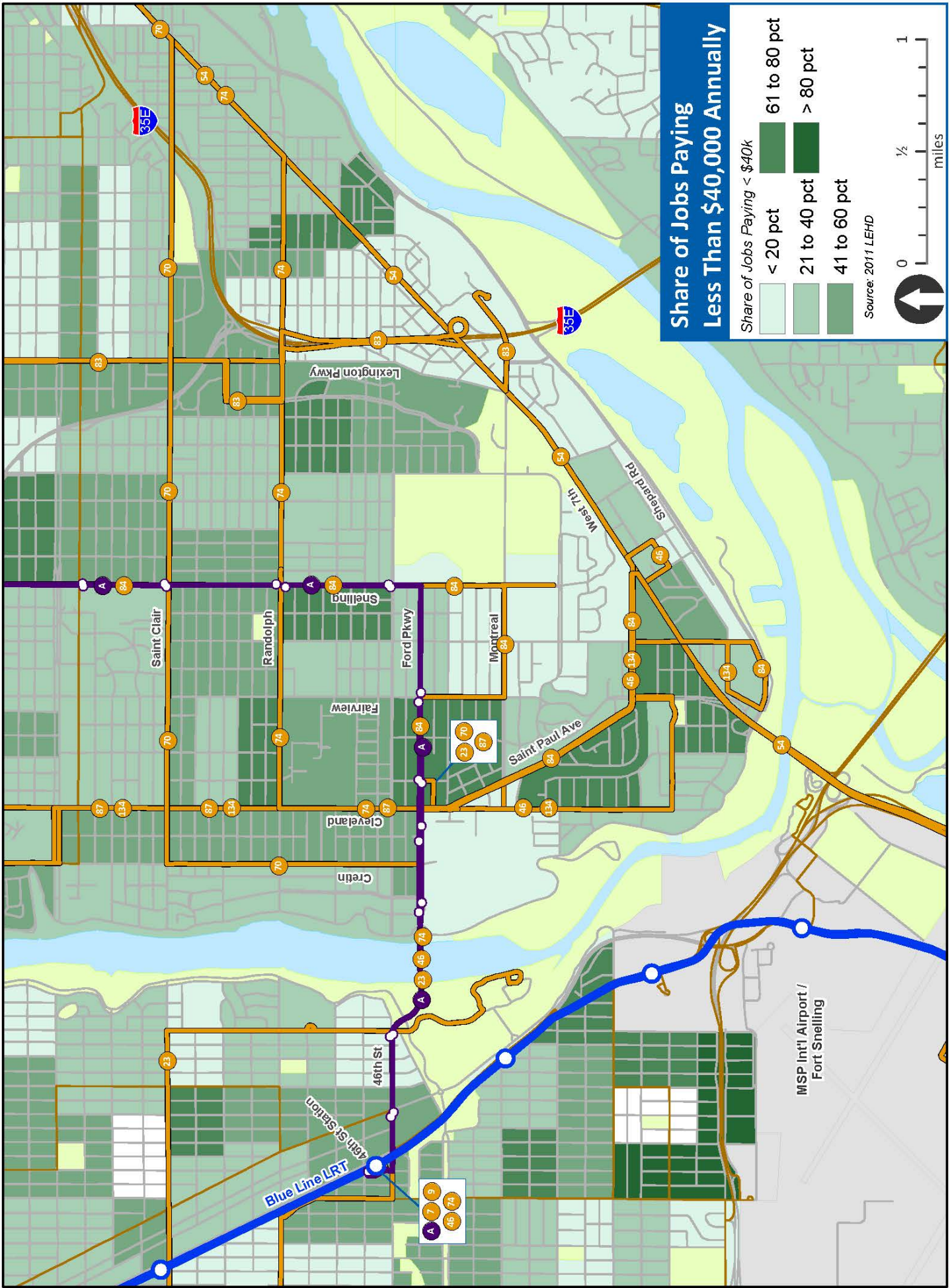
Appendix B: Transit Market Areas Expanded



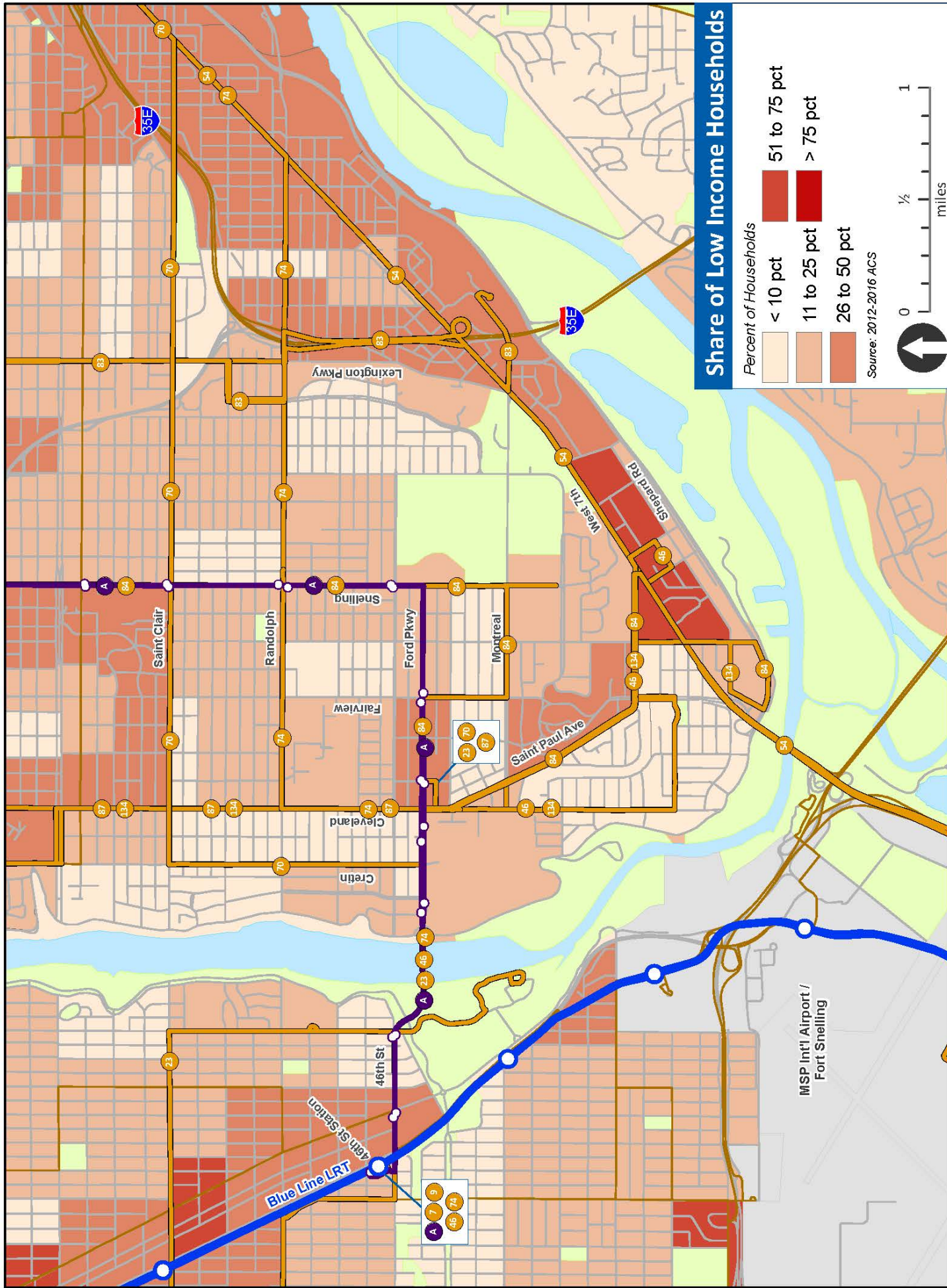
Appendix C: Population Density



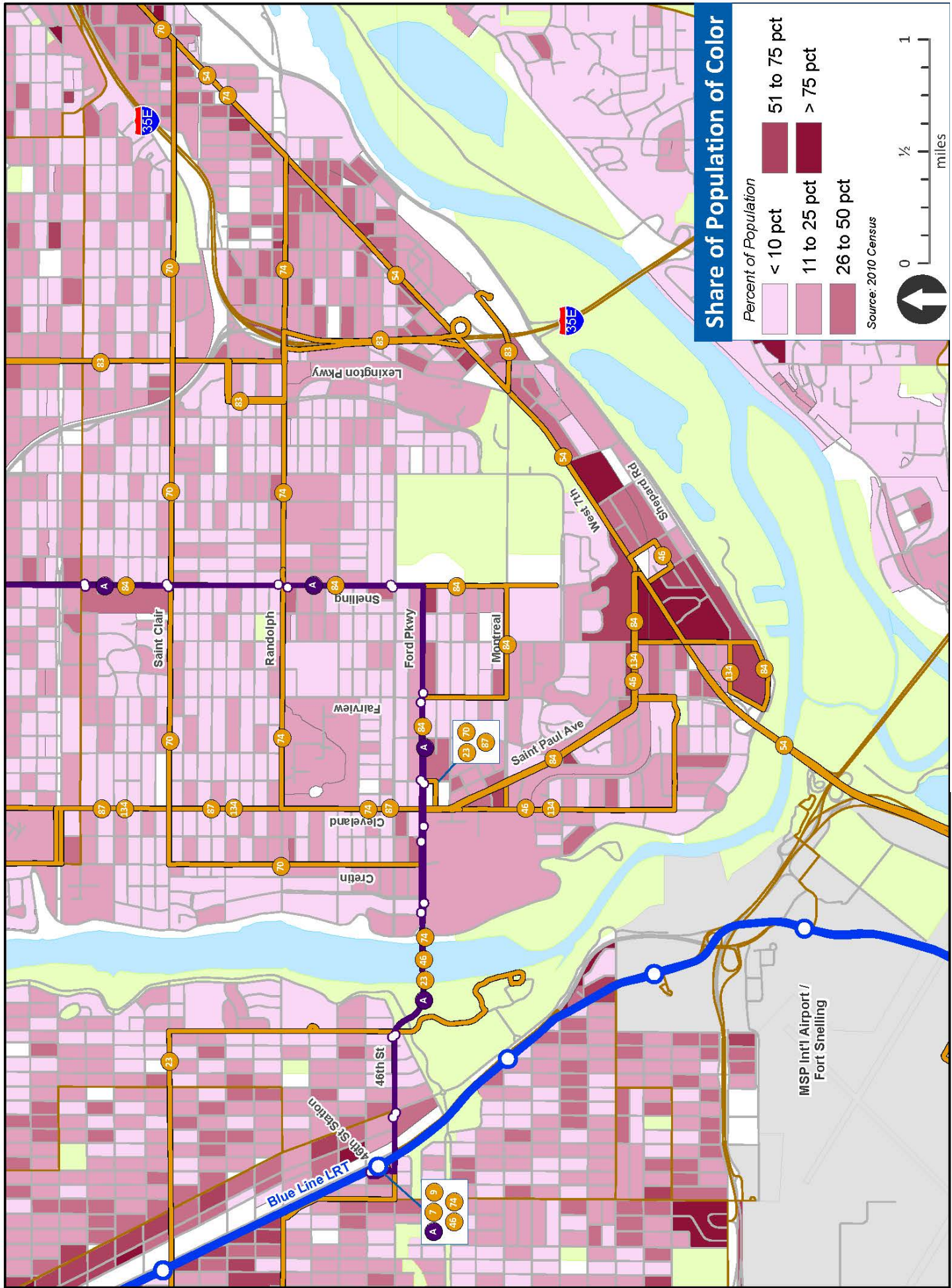
Appendix D: Employment Density



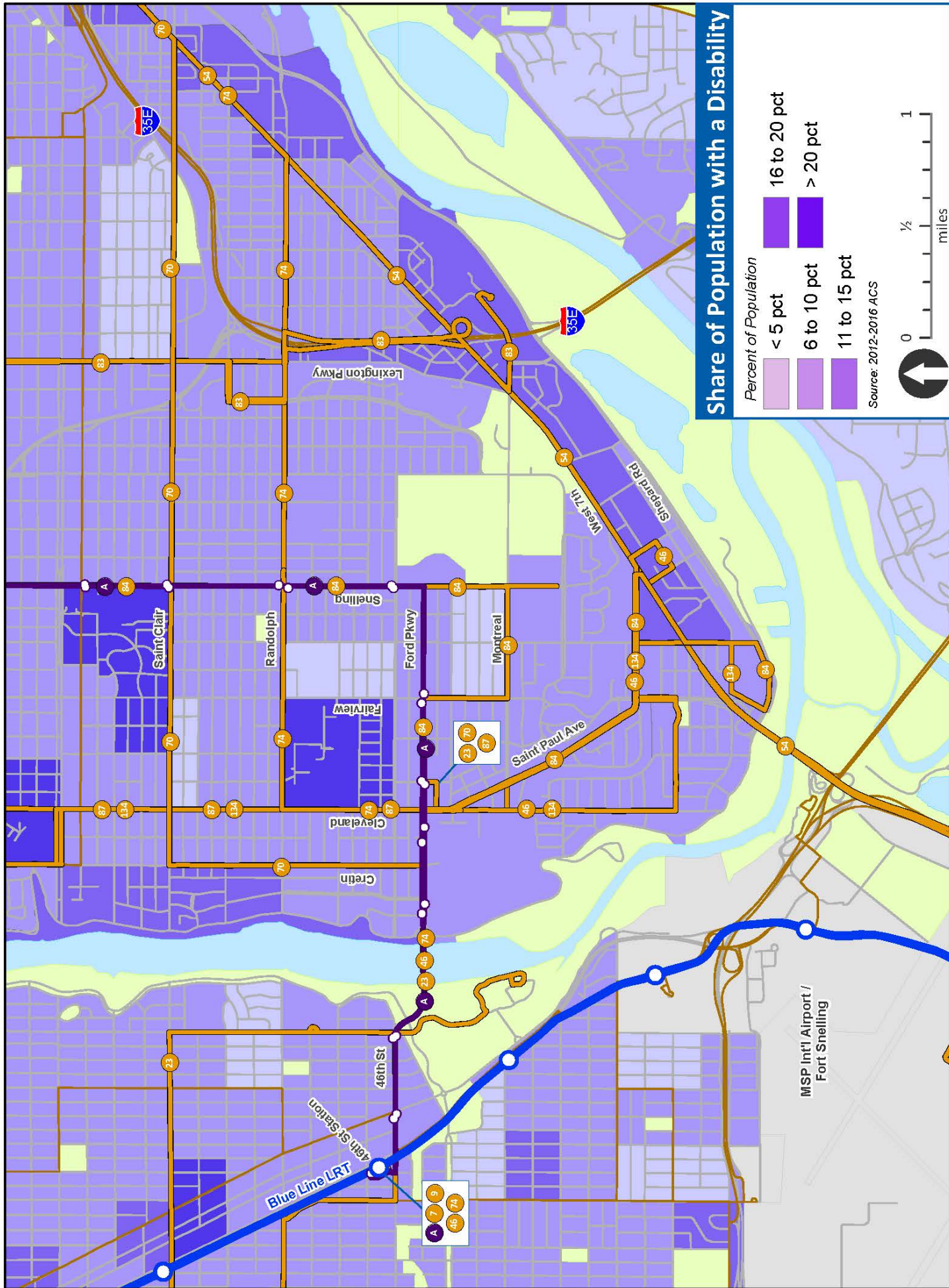
Appendix E: Share of Jobs Paying Less than \$40,000 Annually



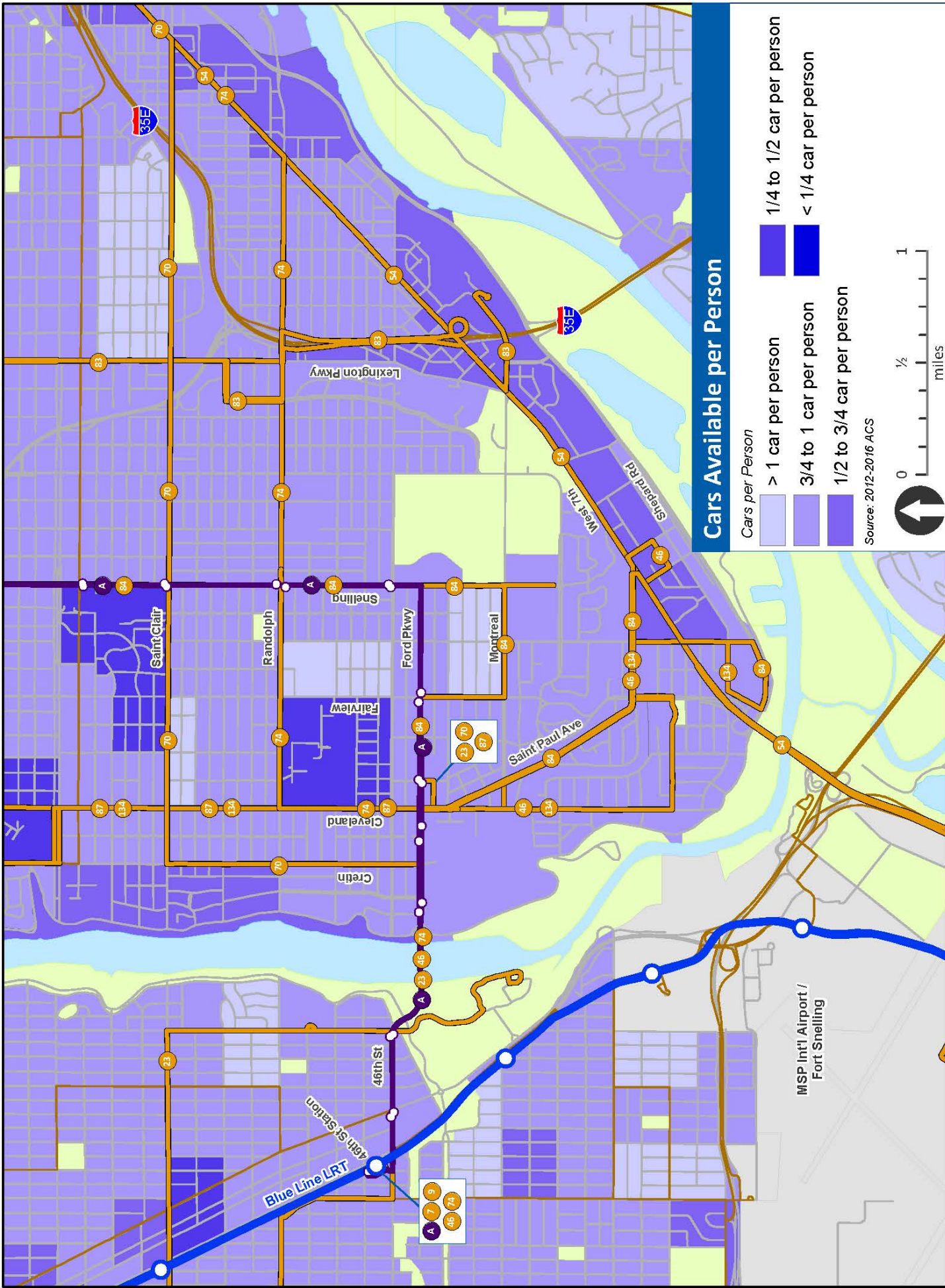
Appendix F: Share of Low Income Households



Appendix G: Share of Population of Color



Appendix H: Share of Population with a Disability

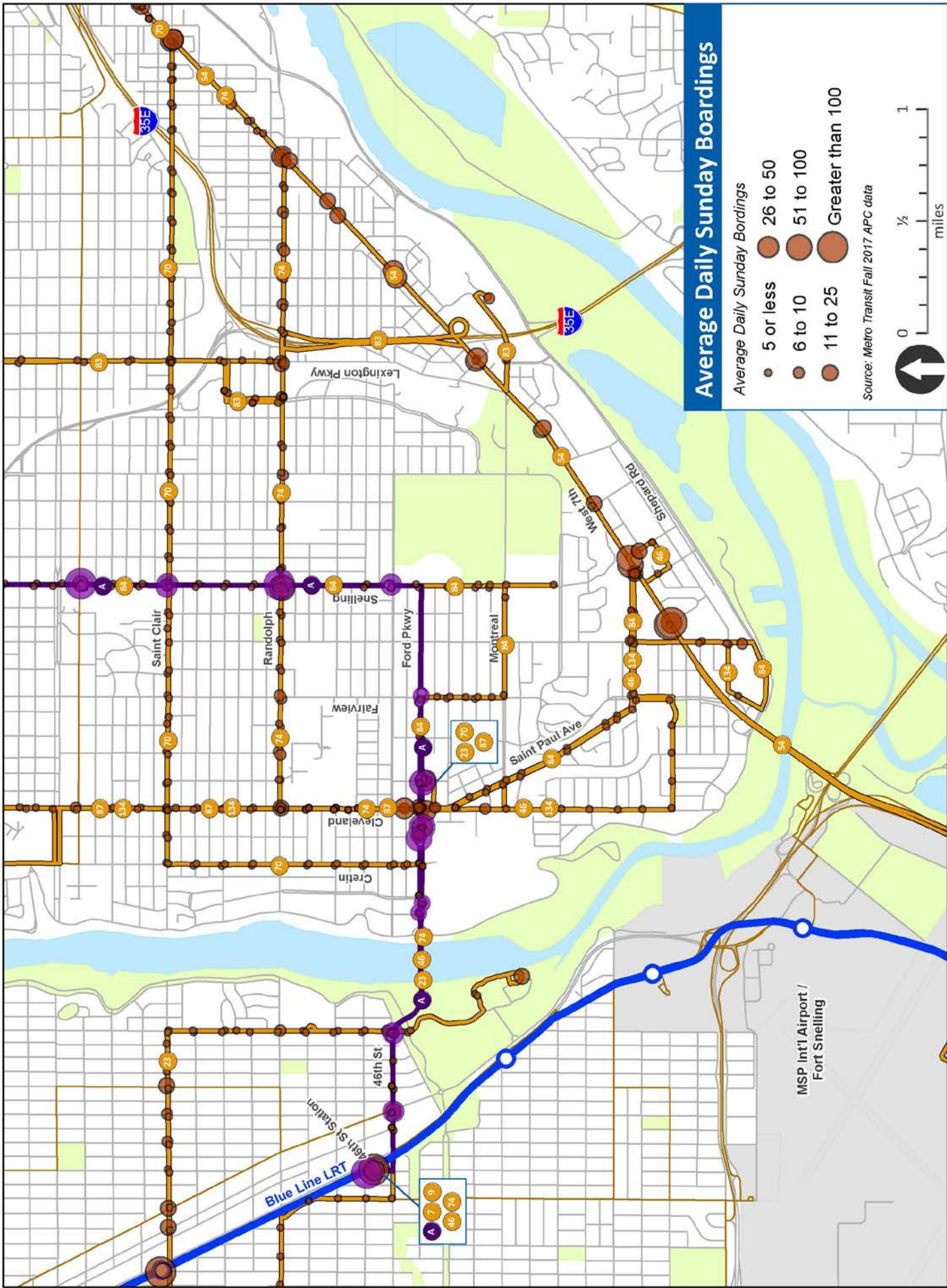


Appendix I: Cars Available per Person





Appendix K: Saturday Boardings



Appendix L: Sunday Boardings

Ford Site Highland Park, St. Paul



Source: Met Council Digital Orthoimagery, Spring 2016

Appendix N: Existing Transit Service at Ford Site