



West Broadway Transit Study

Problem Statement

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Prepared by the
SRF Consulting Group Team

for





Table of Contents

Executive Summary	1
<i>Purpose of the West Broadway Transit Project</i>	1
<i>Need for the West Broadway Transit Project</i>	1
<i>Goals of the West Broadway Transit Project</i>	2
2. Origin of the West Broadway Transit Study	3
3. Study Area	4
<i>Location</i>	4
<i>Setting</i>	6
<i>Existing and Planned Transit Connections</i>	10
<i>Precedent Transportation Studies</i>	12
<i>Precedent Land Use and Other Plans</i>	13
4. Purpose and Need	19
<i>Purpose of the Proposed Action</i>	19
<i>Need for the Proposed Action</i>	19
5. Goals and Objectives	34
6. Evaluation Criteria	35

Figures

<i>Figure 1: West Broadway Transit Study Area</i>	5
<i>Figure 2: African-American Population in the West Broadway Corridor</i>	7
<i>Figure 3: Asian Population in the West Broadway Corridor</i>	8
<i>Figure 4: Hispanic Population in the West Broadway Corridor</i>	9
<i>Figure 5: Existing and Planned Transit Service in the West Broadway Corridor</i>	11
<i>Figure 6: Generalized Land Use in the West Broadway Corridor</i>	14
<i>Figure 7: Corridor, Center, and District Designations</i>	15
<i>Figure 8: Poverty Rates in the West Broadway Corridor</i>	21
<i>Figure 9: Zero-Car Households in the West Broadway Corridor</i>	23
<i>Figure 10: Home-Based Work Trips To and From the Station Area by Transit</i>	25
<i>Figure 11: Home-Based Work Trips To and From the Study Area by All Modes of Transportation</i>	27
<i>Figure 12: Boardings, Alightings, and Shelter Locations along the Route 14</i>	29
<i>Figure 13: Sources of Delay on Route 14</i>	30
<i>Figure 14: West Broadway Study Area Growth</i>	31
<i>Figure 15: West Broadway Corridor Growth by Segment</i>	32

Tables

<i>Table 1: West Broadway Corridor Demographics</i>	6
<i>Table 2: Pedestrian, Bicycle, and Automobile Volumes in the Corridor</i>	12
<i>Table 3: Disparities by Race and Ethnicity in the Twin Cities, 2012</i>	19
<i>Table 4: Poverty in the West Broadway Corridor, Minneapolis, and Metropolitan Area</i>	22
<i>Table 5: Zero-Car Households in the West Broadway Corridor, Minneapolis, and Metropolitan Area</i>	24
<i>Table 6: West Broadway Study Area Growth Projections</i>	31
<i>Table 7: Evaluation Criteria</i>	35



1. Executive Summary

The West Broadway Transit Study was conceived of by the City of Minneapolis, Hennepin County, and Metropolitan Council. This study is part of a broader package of transit and economic development investments in north Minneapolis that includes the Penn Avenue Community Works Project, a new Transit-Oriented Development at Penn and West Broadway, and arterial BRT on Penn Avenue and Emerson/Fremont Avenues North.

The West Broadway Transit Study is thus not only a transit initiative, but is considered one important mechanism among several to revitalize West Broadway and grow economic prosperity among north Minneapolis residents and businesses. Accordingly, the study will identify and evaluate transit alternatives with the goal of selecting a locally preferred alternative that best meets both the transportation and economic development needs of the corridor. A critical part of this process is developing a purpose and need statement for the project. The purpose and need statement identified transportation and economic development problems that are the basis for identifying and evaluating alternatives that best suit the corridor.

Core Elements of the Purpose and Need:

- Purpose – Clear and succinct statement of the fundamental reasons the project is being proposed
- Needs – Existing transportation and economic development problems in the corridor that the project is intended to address
- Goals/objectives – Broader vision and desired outcomes for the project
- Evaluation criteria – Qualitative and quantitative information about the alternatives to compare how well each alternative meets the goals of the project

Purpose of the West Broadway Transit Project

The purpose of the West Broadway transit project is to provide transit service that meets current and future travel needs, attracts new riders, connects users with job centers and key destinations, and supports transit-oriented development and economic growth in the corridor.

Need for the West Broadway Transit Project

The West Broadway Corridor is an important part of the regional multimodal transportation network; however there are several unmet transportation and economic development needs that constrain the area's potential development. Several factors contribute to a need for a transit investment in the West Broadway Corridor:

- Need for economic and physical revitalization in the West Broadway Corridor
- Need to serve high proportion of residents who rely on transit as their primary means of transportation
- Need to serve a variety of transportation markets
- Need for transit facilities and amenities commensurate with demand
- Need for predictable transit service
- Need to serve forecast population and employment growth
- Need for Consistency with City and Regional Policy



Goals of the West Broadway Transit Project

1. Catalyze and support housing and economic development along the corridor
 - a. Support a mix of housing choices, including affordable housing
 - b. Provide transit improvements to help realize city and regional development plans
 - c. Attract investment along the length of the corridor, concentrated at key nodes
 - d. Support both small businesses and regional employers by providing better transit options for their customers and employees
 - e. Improve the aesthetics and visual consistency of the corridor
2. Improve local and regional mobility with improved access to jobs and activities
 - a. Enhance physical and visual connections to the Blue Line Extension (Bottineau) LRT, arterial BRT on Penn Avenue, and the Robbinsdale Transit Center
 - b. Provide fast and convenient transfers with transitways and the local bus network
 - c. Locate transit stations to effectively serve transit customers while maintaining the desired speed of service
 - d. Improve access to local and regional destinations, activity centers, business nodes, and employment centers
3. Address equity issues in the West Broadway Corridor to ensure that corridor residents as well as patrons of area businesses and institutions have access to opportunities for success, prosperity, and quality of life
 - a. Use transit and associated economic development investments within the corridor to mitigate place-based disparities by race, ethnicity, income, and ability
 - b. Mitigate areas of concentrated poverty by connecting low-income residents to jobs and educational opportunities
 - c. Ensure provision of accessible transit vehicles and facilities
4. Build upon the vibrancy and diversity of the corridor by supporting healthy, active communities and the environment
 - a. Ensure safe and direct connections between transit and other multimodal transportation choices such as walking and biking
 - b. Maintain parkland, trails and green space in the corridor
 - c. Promote air quality benefits and minimize noise and vibration impacts
 - d. Recognize impacts to cultural and historic resources
 - e. Balance impacts to existing traffic operations and curbside uses
 - f. Enhance safety through increased visibility and activity in the corridor
5. Improve upon existing transit service in the corridor
 - a. Provide transit service that is fast, frequent, and reliable for all users
 - b. Provide stations that have a high level of passenger amenities, are easily accessible to riders with limited mobility, and feel safe for waiting passengers
 - c. Provide a transit investment that considers the needs of residents who rely on transit and contributes to reduced reliance on auto travel



6. Increase transit use among corridor residents, employees, and visitors
 - a. Provide service that is identifiable and easy for visitors and new users to understand
 - b. Provide a transit investment that meets today's needs and has ability to expand for future growth
 - c. Increase the percentage of people using transit as their transportation choice in the corridor
7. Engage in an inclusive public outreach process
 - a. Create exciting opportunities for residents and businesses in the corridor to learn about and provide input to the West Broadway Transit Study
 - b. Seek opportunities to reach non-traditional study stakeholders such as youth, seniors, and people who speak languages other than English

2. Origin of the West Broadway Transit Study

The West Broadway Transit Study was conceived of by the City of Minneapolis, Hennepin County, and Metropolitan Council/Metro Transit as the METRO Blue Line Extension LRT project was going through approval of its locally preferred alternative (LPA). While all three agencies were in agreement that the Blue Line Extension alignment in the Burlington Northern Sante Fe (BNSF) railroad corridor east of Theodore Wirth Park was the optimal alternative for LRT, the agencies also agreed to pursue exploration of further transit and economic development improvements in north Minneapolis, including connections to the Blue Line Extension. To this end, the three agencies took several actions:

- The City of Minneapolis, Hennepin County, and Metro Transit signed an agreement that committed each agency to financial participation in the West Broadway Transit Study;
- Hennepin County created the Penn Avenue Community Works Project, an effort to redesign Penn Avenue North, promote economic opportunity, and stimulate private investment in the immediate area;
- Metropolitan Council/Metro Transit agreed to evaluate arterial bus rapid transit (BRT) improvements on Penn Avenue North and on Emerson/Fremont Avenues North; and
- Metropolitan Council invested \$2 million in Transit Oriented Development funds in a mixed income/mixed use project that includes funding for enhanced transit facilities at Penn and West Broadway Avenues.

The West Broadway Transit Study is thus not only a transit initiative, but is considered one important mechanism among several to revitalize West Broadway and grow economic prosperity among north Minneapolis residents and businesses. Accordingly, the study will identify and evaluate transit alternatives with the goal of selecting an LPA that best meets both the transportation and economic development needs of the corridor.



3. Study Area

Location

The West Broadway Corridor is located in the cities of Minneapolis, Robbinsdale, and Golden Valley in Hennepin County. Though it will be referred to as the West Broadway Corridor throughout this document and the course of the study, the corridor will use other streets in addition to West Broadway Avenue and will pass through distinct areas within each city, as described below. Please see Figure 1 for a map of the study area.

Minneapolis: North Loop/Warehouse District

The North Loop neighborhood is located immediately adjacent to downtown Minneapolis in the Historic Warehouse District, which is listed on the National Register of Historic Places. The neighborhood is bounded on the north by Plymouth Avenue, on the south by Hennepin and Third Avenues, on the west by I-94, and on the east by the Mississippi River. For most of its history, the North Loop was an industrial area home to a large railroad yard and numerous warehouses and factories. The warehouses that characterize the district are mostly six to eight stories high, and many were converted to residential and commercial buildings beginning in the 1980s. Washington Avenue is the commercial spine of the North Loop. The neighborhood is home to several regional destinations including Target Field, the Minneapolis Farmers' Market, and Target Field Station, the hub of rail and bus transit in Minneapolis.

Minneapolis: North Washington Jobs Park

The North Washington Jobs Park is an area designated by the City of Minneapolis as an Industrial Employment District. There are no residents living in this area, as Industrial Employment Districts are meant to protect prime industrial space, provide opportunities for the City to support targeted industries and business clusters, and to redevelop underutilized sites for economic development purposes. These districts have a high level of policy protection and an emphasis on job retention and creation. Industrial uses have primacy over other uses. The North Washington Jobs Park is bound by I-94 on the west, West River Parkway on the east, 10th Avenue and Plymouth Avenue on the south, and 31st Avenue on the north.

Minneapolis: Near-North, Hawthorne, Jordan, and Willard-Hay Neighborhoods

West Broadway Avenue is north Minneapolis' "Main Street" and contains a mix of retail, commercial, cultural, and residential uses. It is the official boundary between the Near-North, Hawthorne, Jordan, and Willard-Hay Neighborhoods. These neighborhoods are primarily residential, with a mix of single-family homes, duplexes, triplexes, and small apartment buildings. Commercial and retail stores are generally clustered along West Broadway, with some neighborhood retail at key intersections.

Robbinsdale

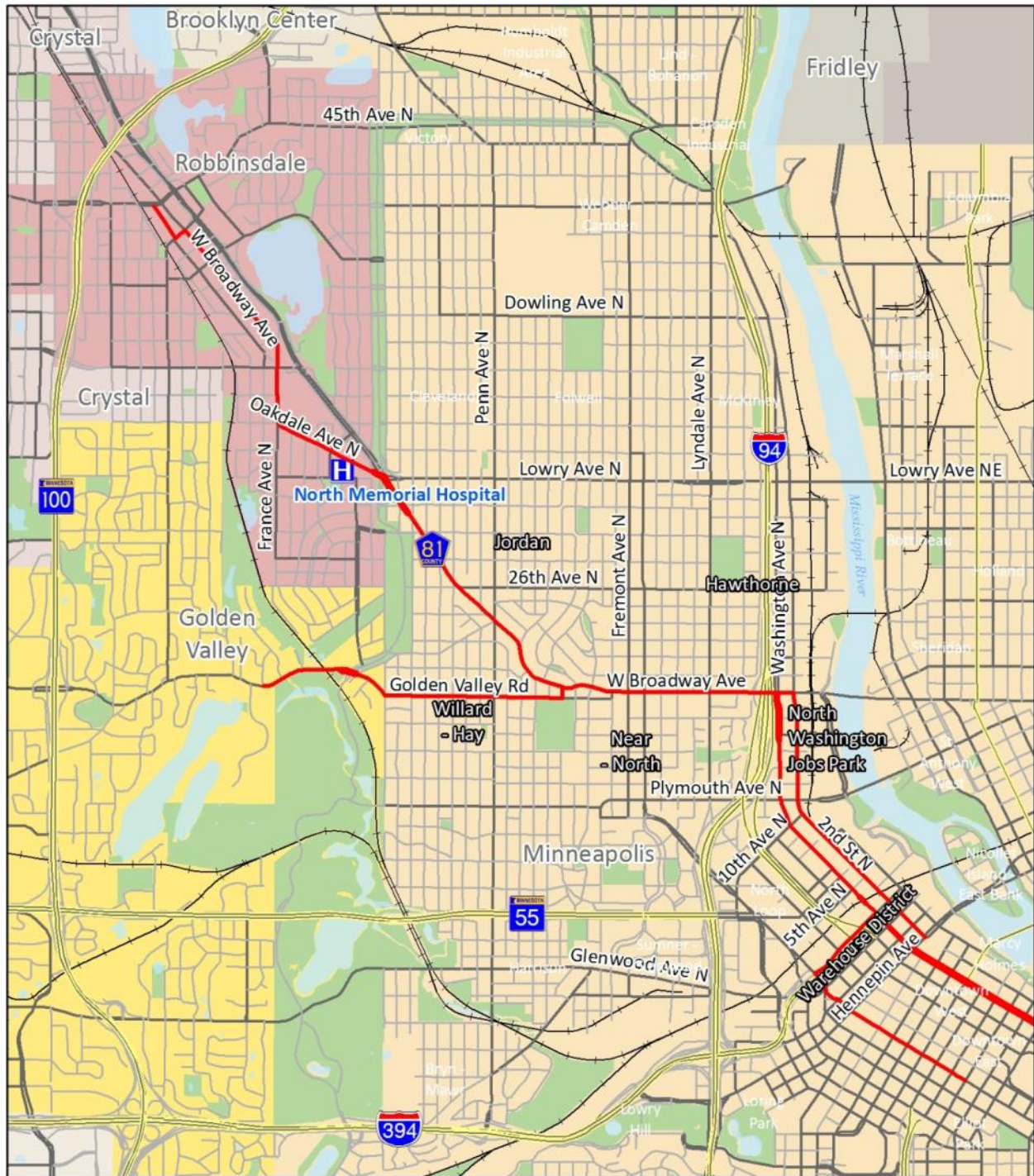
The West Broadway Corridor includes three distinct places in Robbinsdale: North Memorial Medical Center, a medical campus with a Level I Trauma Center and several outpatient buildings; single family residential neighborhoods along France Avenue; and downtown Robbinsdale along West Broadway Avenue, a traditional "Main Street" with a mix of commercial, retail, institutional, and multi-family residential uses.



Golden Valley

The West Broadway Corridor includes a short segment of eastern Golden Valley along Golden Valley Road that is almost entirely comprised of single-family residential neighborhoods and parks and open space. Several institutions are nearby: Courage Kenny Rehabilitation Institute, Minneapolis Clinic of Neurology, Golden Valley Fire Station, Church of St. Margaret Mary, and Christ Unity Church.

Figure 1: West Broadway Transit Study Area





Setting

The West Broadway Corridor is racially and ethnically diverse, with significant African American, Asian, Hispanic, and white populations throughout the corridor. The corridor is also economically diverse, with low-, middle-, and upper-income populations. Demographic patterns loosely follow the segments described above. The North Loop/Warehouse District is an affluent neighborhood with few children, little economic diversity among residents, and some racial and ethnic diversity. There are no residents in the North Washington Jobs Park. The Near-North, Hawthorne, Jordan, and Willard-Hay Neighborhoods in north Minneapolis are racially and ethnically diverse, have a disproportionately high population of young people under age 18, have high rates of poverty and unemployment, and have economic indicators, such as household income and educational attainment levels, that are below the regional average. Both the Robbinsdale and Golden Valley segments fall between the North Loop and north Minneapolis neighborhoods with regard to age distribution and economic status, and have less racial and ethnic diversity than the Minneapolis segments. Table 1 provides several economic indicators by zip code that roughly correlate to the segments of the corridor.

Figure 2, Figure 3, and Figure 4 illustrate racial and ethnic population patterns in the corridor and how they relate to the transit modes and alignments under consideration for the West Broadway Transit Study.

Table 1: West Broadway Corridor Demographics

	55411 North Minneapolis	55401 North Loop	55422 Robbinsdale & Golden Valley	Hennepin County	7 County Metro Area
Foreign Born Population	16.2%	16.8%	6.3%	13.2%	10.8%
Speak a Language other than English	30.0%	18.3%	8.3%	16.9%	5.7%
Under Age 18	36.7%	4.7%	19.9%	22.4%	24.3%
Population with a Disability	15.5%	4.3%	13.4%	9.9%	9.0%
Age 25 and Older with No High School Diploma	23.0%	6.2%	5.8%	7.2%	4.8%
Median Household Income in the Last 12 Months	\$29,355	\$84,297	\$63,525	\$64,379	\$66,900*
Percent Unemployed Age 16 Years and Older	21.9%	3.5%	5.9%	4.3%	4.0%**

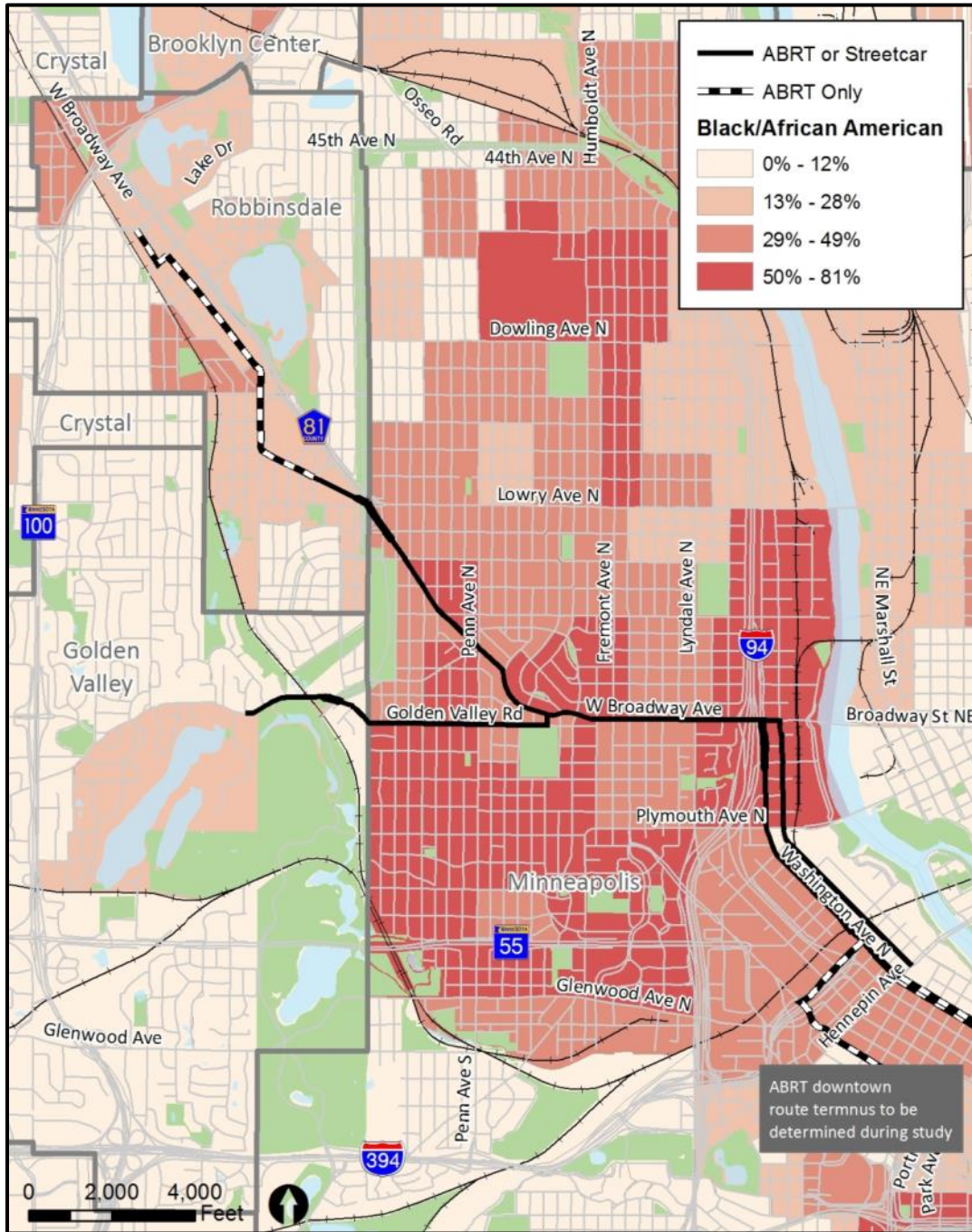
Source: 2009-2013 ACS 5-Year Estimates.

*Source: 2009-2013 ACS 5-Year Estimates. Median Household Income is not available for the 7 County Region. Instead Minneapolis-St. Paul MSA (13 County) data are presented here.

** Source: 2015 Local Area Unemployment Statistics, Minnesota Department of Employment and Economic Development.



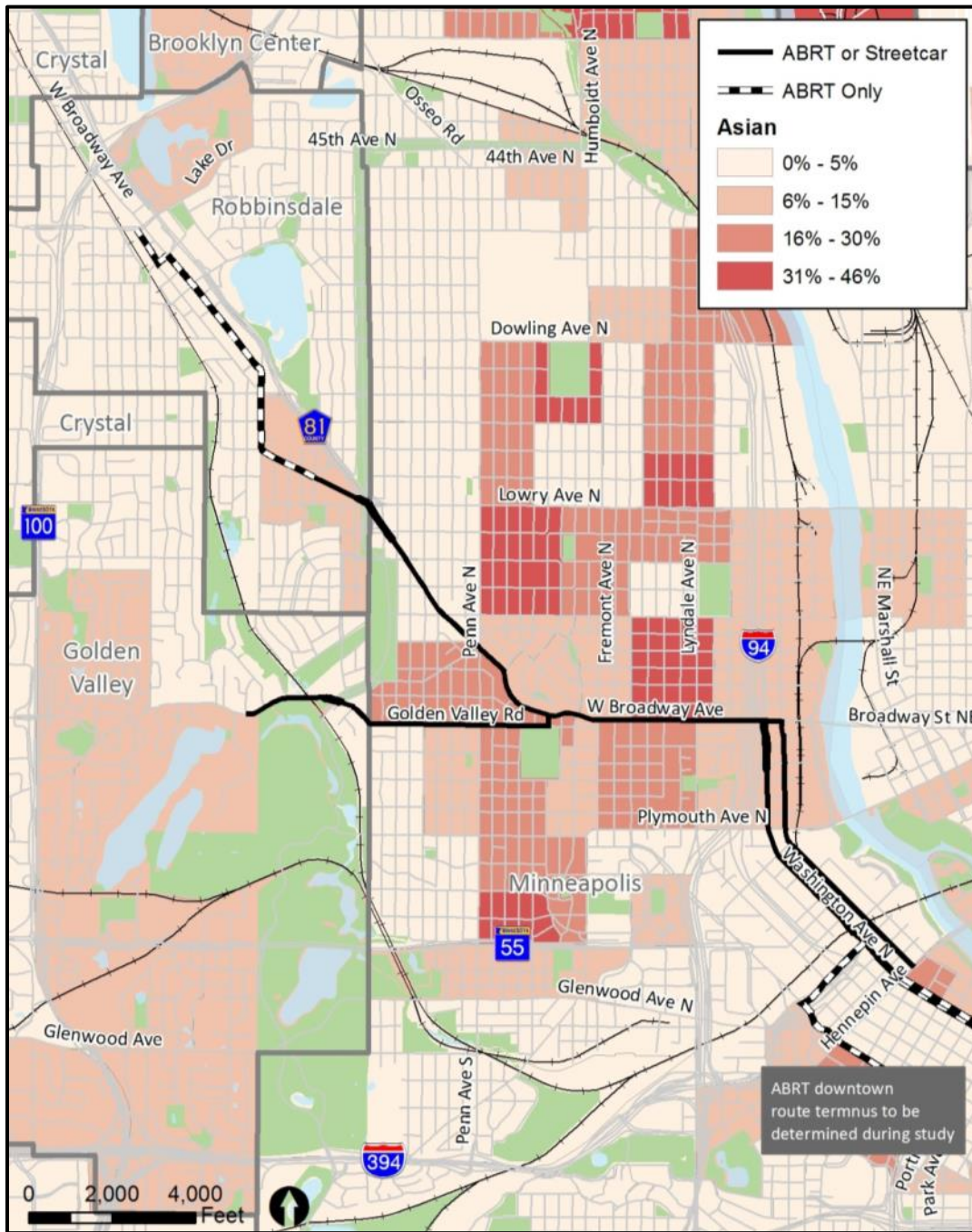
Figure 2: African-American Population in the West Broadway Corridor



Source: 2009-2013 ACS 5-Year Estimates by census block group



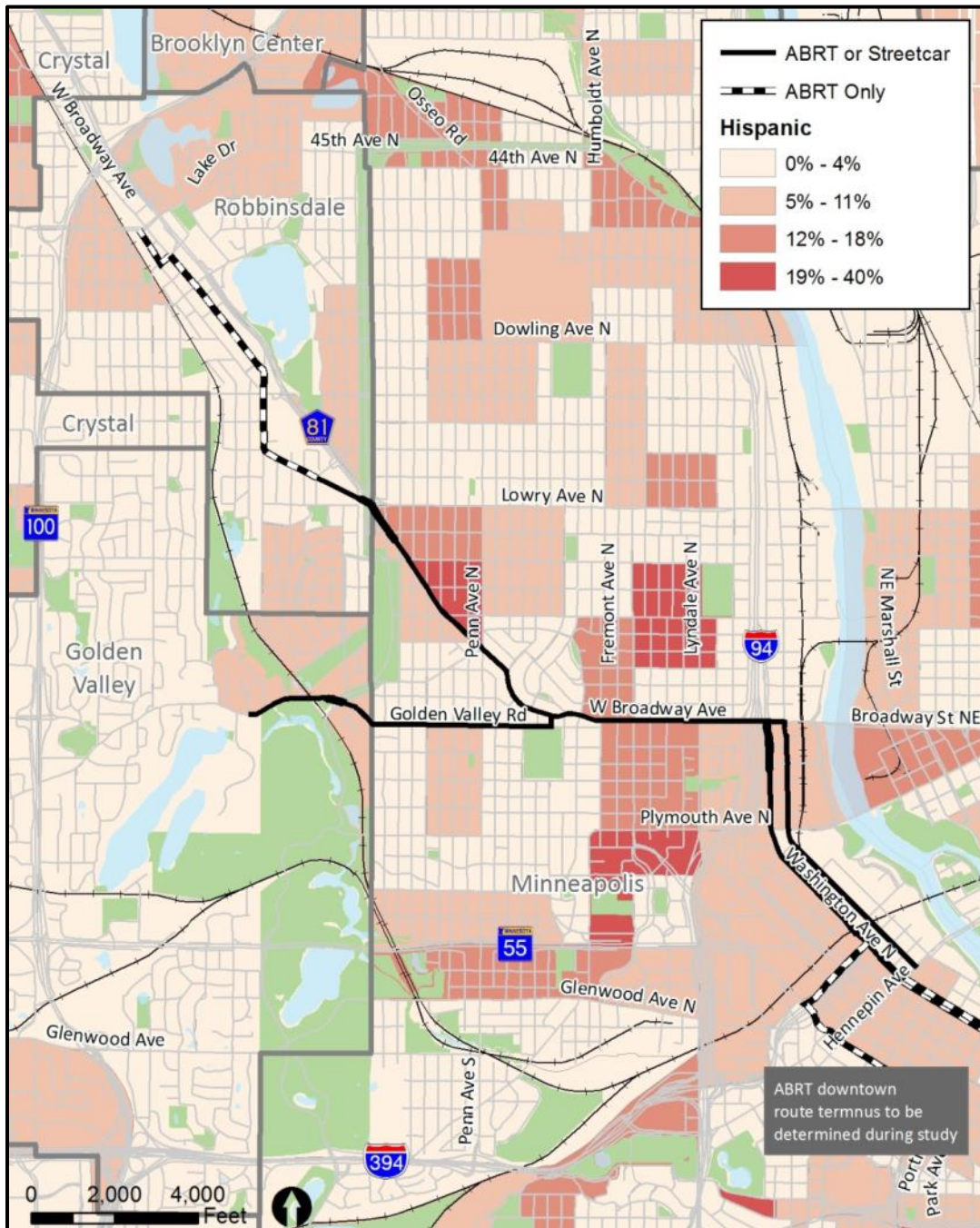
Figure 3: Asian Population in the West Broadway Corridor



Source: 2009-2013 ACS 5-Year Estimates by census block group



Figure 4: Hispanic Population in the West Broadway Corridor



Source: 2009-2013 ACS 5-Year Estimates by census block group



Existing and Planned Transit Connections

Existing transit service on West Broadway and Washington Avenues is primarily provided by local Route 14. Route 14 provides all-day local service on weekdays from approximately 4:30 a.m. to 1:30 a.m. at 10-20 minute frequency, and at a reduced 20-30 minute frequency on Saturday and Sunday. Route 14 begins at the Robbinsdale Transit Center in downtown Robbinsdale and operates in five different patterns through Robbinsdale, Golden Valley, and North Minneapolis on its north end and four patterns on its south end in Minneapolis and Richfield. All patterns of the route operate together on West Broadway between Knox Avenue North and Washington Avenue North. The route operates southbound through downtown Minneapolis on Washington Avenue, 3rd Avenue, 6th Street, and 11th Avenue, and northbound on 11th Avenue, 7th Street, 5th Avenue, 4th Street, Hennepin Avenue, and Washington Avenue.

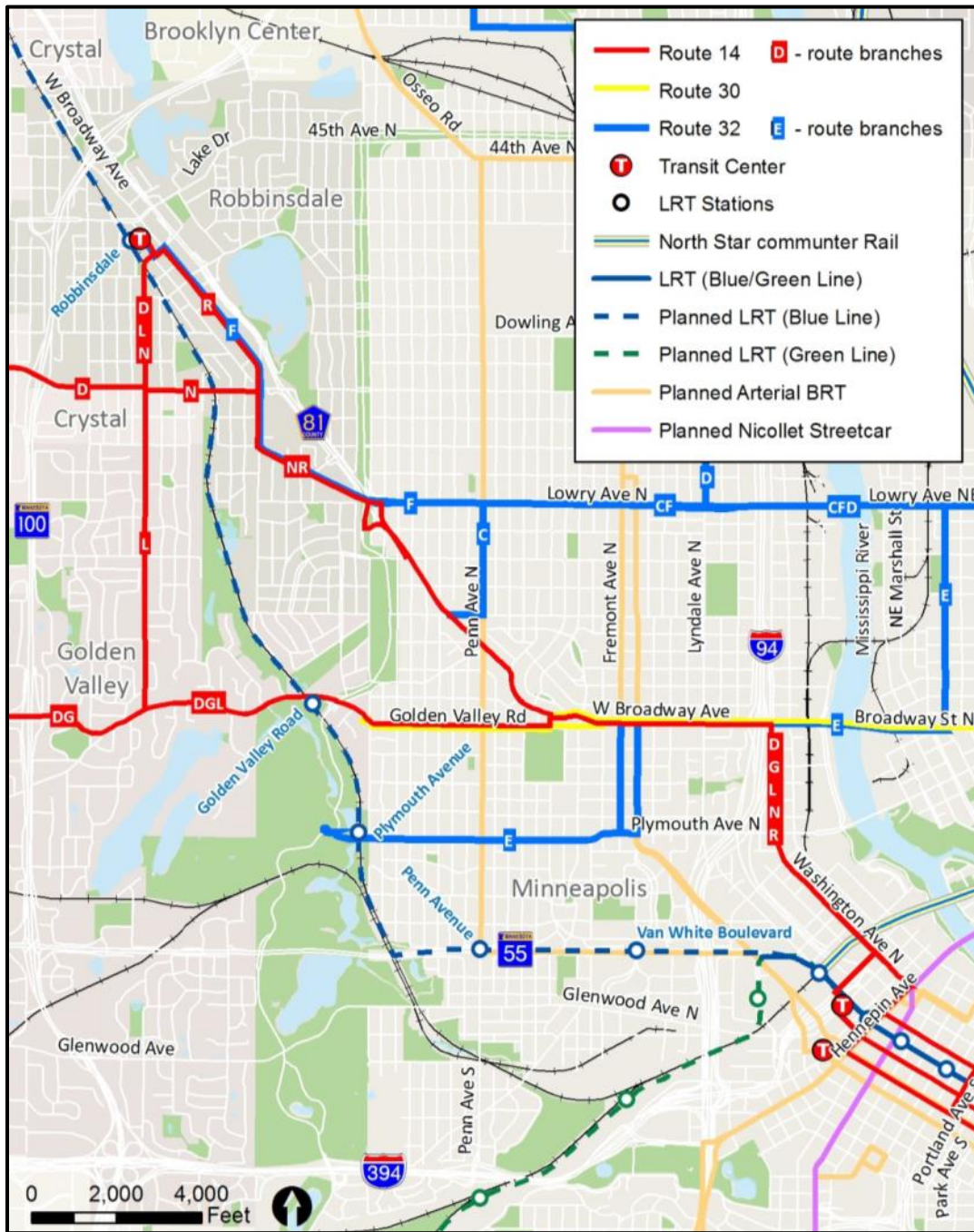
Supplemental service on West Broadway is provided by local Route 30, which provides weekday service from approximately 5:15 a.m. to 11:30 p.m. at 30 minute frequency from the Westgate Station on the Green Line LRT in Saint Paul to Xerxes Avenue in north Minneapolis via West Broadway Avenue and Golden Valley Road. Route 30 began operation in March 2014.

Several transitway projects are planned in the West Broadway area. The West Broadway corridor could connect to planned METRO Blue Line Extension (Bottineau) Light Rail Transit (LRT) stations in Golden Valley or Robbinsdale, and will connect to the planned arterial BRT lines¹ on Penn Avenue (C Line), and Emerson and Fremont Avenues, as well as the planned Nicollet-Central Modern Streetcar line in downtown Minneapolis. See Figure 5 for a map of existing and planned transit service in the corridor.

¹ Arterial Bus Rapid Transit (BRT) is a mode of transit that uses bus vehicles but incorporates characteristics of light rail or commuter rail to improve bus speed, reliability, and identity. These characteristics can include specialized vehicles, unique and improved stations, signal preemption or priority, off-board fare collection, improved signage, and other features that allow vehicles to operate faster and more reliably than local or express buses. Arterial BRT runs in mixed traffic. Typically, service frequencies are every 15 minutes or better on the core portions of the line.



Figure 5: Existing and Planned Transit Service in the West Broadway Corridor



The corridor is heavily used by multiple transportation modes; transit service, other motor-vehicle traffic, bicycles, and pedestrians all compete for the safe and efficient movement of people and goods in the West Broadway Corridor, as shown in Table 2.

**Table 2: Pedestrian, Bicycle, and Automobile Volumes in the Corridor**

	Estimated Daily Traffic	Pedestrians	Bicycles	Vehicles <i>Annual Average Daily Traffic</i>
Washington Avenue	At Hennepin Avenue	2,670	530	22,200
	At 10 th Avenue N.	700	330	12,600
West Broadway Avenue	At Bryant Avenue N.	250	60	20,300
	At Emerson Avenue N.	1,770	220	N/A
	At Penn Avenue N.	830	70	9,300
42nd Avenue N.	At West Broadway Avenue	N/A	N/A	12,400
Golden Valley Road	At Railroad Trench	N/A	N/A	9,050

Bicycle and Pedestrian Count Source: City of Minneapolis, 2014. AADT Source: Hennepin County, 2013

High-pedestrian volume areas along West Broadway and Washington Avenues correspond to locations with heavy transit service: the high-frequency Route 5 operates on Emerson and Fremont Avenues North at West Broadway; the high-frequency Route 19 operates on Penn Avenue North at West Broadway; and high-frequency Route 6, as well as local Routes 4, 7, 12, 61, limited-stop Route 141, and five peak-period express bus routes stop at Hennepin and Washington Avenues. Because of the multimodal nature of the corridor, transit improvements in the West Broadway Corridor will offer a high level of connectivity to transit, bicycle, and pedestrian links to elsewhere in the region, as well to nearby neighborhoods and destinations.

Precedent Transportation Studies

Several transportation studies set the foundation for and parameters of the West Broadway Transit Study. Key points of these studies are summarized in the following sections.

Minneapolis Streetcar Feasibility Study

Completed in 2007, the City of Minneapolis worked with many agencies in the Minneapolis – St. Paul region to evaluate the possibility of modern streetcar on 14 corridors within the city. The purpose of the feasibility study was to determine the physical, operational and financial feasibility of providing streetcar service as a high quality transit and urban circulator option on the most heavily used transit corridors in Minneapolis, to improve the quality of transit service in those corridors, and to support the City’s objectives for strengthening these neighborhoods and directing growth into existing transit corridors.

The feasibility study proposed a long-term network of seven streetcar corridors that constitute a 20-50 year vision for streetcar service in Minneapolis. The long-term network included a Washington Avenue/West Broadway alignment to downtown Robbinsdale. The West Broadway Transit Study will further investigate the viability of streetcar in the corridor.



Arterial Transitway Corridors Study

In 2011, Metro Transit completed the *Arterial Transitway Corridors Study (ATCS)*. The ATCS was a year-long study of some of the most heavily traveled transit corridors in the Twin Cities area as identified in the Metropolitan Council's 2030 Transportation Policy Plan. The study was performed to develop a bus facility and service plan to enhance efficiency, speed, reliability, customer experience, and transit market competitiveness. The ATCS identified West Broadway as a potential corridor for arterial BRT, using West Broadway Avenue, Lyndale Avenue, and 7th Street into downtown Minneapolis. The West Broadway Transit Study will further investigate the viability of arterial BRT in the corridor.

Bottineau Transitway Alternatives Analysis

The *Bottineau Transitway Alternatives Analysis* (2010) considered West Broadway as a potential route option for LRT between downtown Robbinsdale and downtown Minneapolis. Because LRT would have required either the impactful acquisition of buildings along one side of West Broadway Avenue, or the detrimental removal of traffic and parking lanes, LRT on West Broadway was dismissed during the *Alternatives Analysis*. For these reasons LRT will not be considered as a potential mode during the West Broadway Transit Study.

Bottineau Transitway Draft Environmental Impact Statement

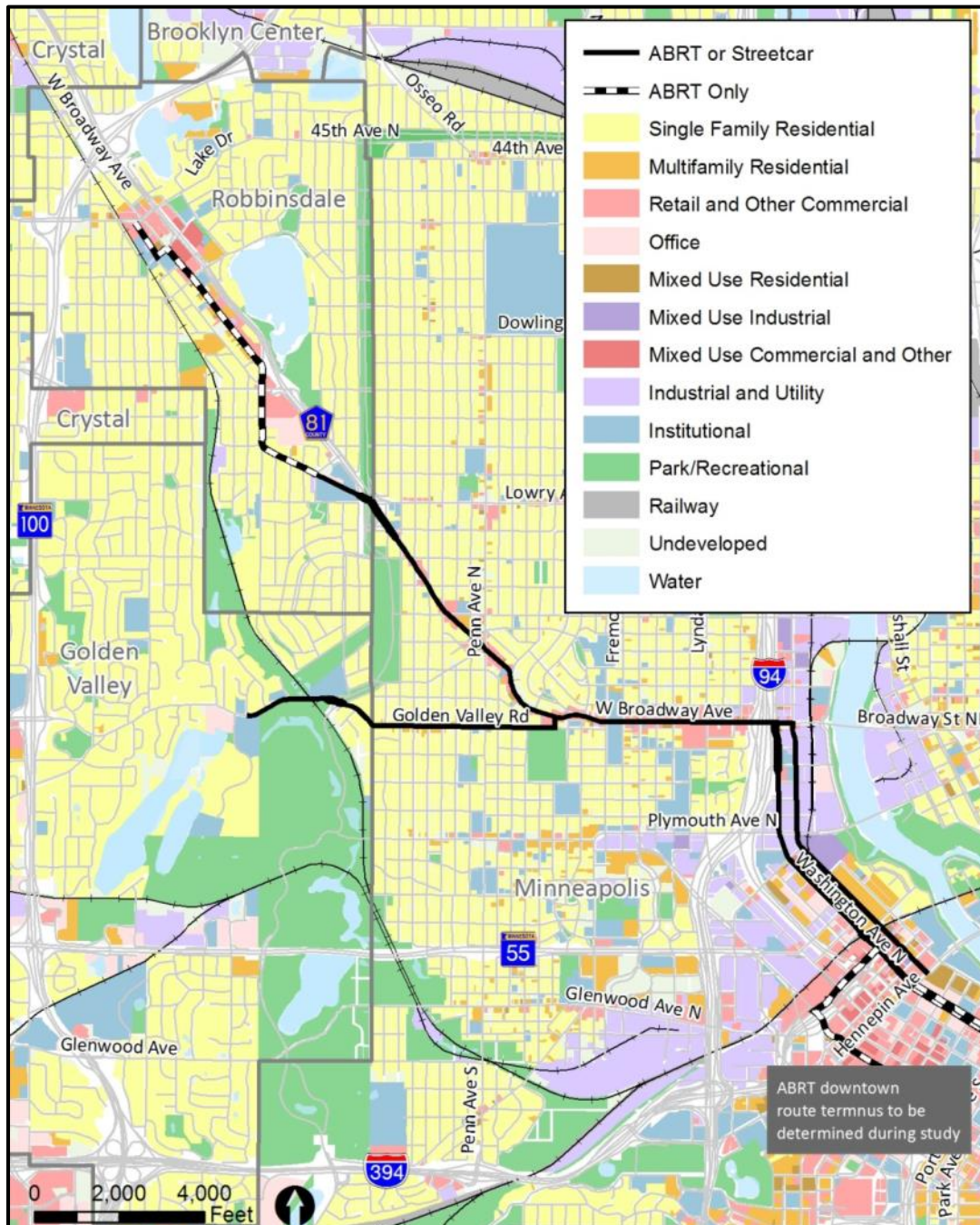
The *Bottineau Transitway Draft Environmental Impact Statement* describes the transportation and environmental impacts associated with the construction and operation of several LRT alternatives in the northwest metro. One alignment option considered used West Broadway and Penn Avenues, but was dismissed due to its major property acquisition impacts and mismatch with the scale of the neighborhood.

Precedent Land Use and Other Plans

In addition to corridor-level plans, several small area plans as well as each city's comprehensive plan set the course for development and land use in the West Broadway Corridor. See Figure 6 for a generalized map of land use in the corridor. Most of these plans and studies were led by city governments and focus on attracting and sustaining businesses, responsibly adding density to nodes and corridors, and establishing a vision for development.



Figure 6: Generalized Land Use in the West Broadway Corridor



Source: Metropolitan Council, 2014

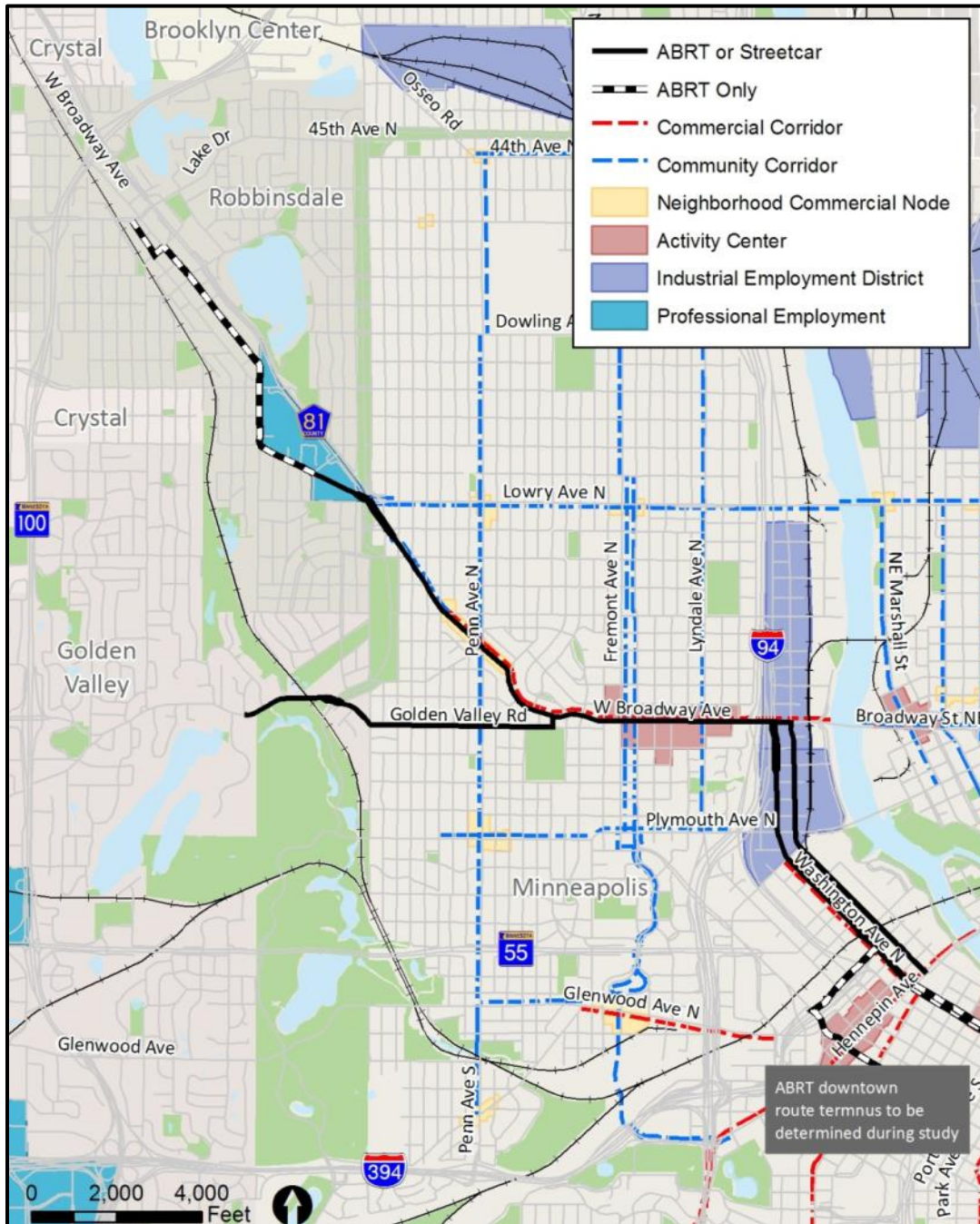
Minneapolis Plan for Sustainable Growth (2009)

In addition to outlining the City's parcel-based land use, the City's comprehensive plan, the *Minneapolis Plan for Sustainable Growth*, also designates corridors, effectively setting the character of certain streets and directing new commercial and mixed-used development to appropriate areas. West Broadway Avenue between 26th Avenue and the Mississippi River, and Washington Avenue south of 10th Avenue are both designated as commercial corridors and can accommodate intensive commercial uses and



high-density residential uses. Washington Avenue between 10th Avenue and West Broadway and 2nd Street North do not have corridor designations. See Figure 7 for a map of the corridor designations.

Figure 7: Corridor, Center, and District Designations



Source: Corridor Designations, City of Minneapolis; All Other Designations, Metropolitan Council

In addition to the broad guidance offered by the comprehensive plan, several small area plans have been prepared for specific areas or neighborhoods in the West Broadway Corridor. These plans are incorporated by reference into the *Minneapolis Plan for Sustainable Growth* and key points of each plan are summarized below.



Minneapolis Warehouse District Design Guidelines (2010)

In addition to its listing on the National Register of Historic Places, the City of Minneapolis has designated the Warehouse District as a local historic district and has developed the *Minneapolis Historic Warehouse District Design Guidelines* to protect the integrity and character of the district and ensure that new development is integrated in a manner that is sensitive to the historic character of the district. The *Design Guidelines* are a regulatory tool for use by city officials to make legal findings regarding alterations within the district. The *Design Guidelines* also list individual structures that are considered contributing to the historic district. Along with dozens of individual buildings, the following transportation structures with direct relationship to the West Broadway Transit Study were identified:

- Washington Avenue North Bridge
- 2nd Street North between 1st and 3rd Avenues North
- Washington Avenue North between 1st and 3rd Avenues North
- Washington Avenue North between 5th and 10th Avenues North

North Loop Plan Update (2010)

The *North Loop Plan Update* provides detailed recommendations to guide infrastructure investment and development in the North Loop neighborhood. The West Broadway Corridor travels through the “Warehouse West” sub area of the North Loop that is bisected by Washington Avenue. The *North Loop Plan Update* calls for adaptive re-use of the warehouse structures that define the neighborhood’s character and directs new development toward existing surface parking lots and other underdeveloped sites, in order to maintain the eclectic mix of commercial, residential, and industrial uses in the neighborhood, and introduce publicly-accessible open space. Washington Avenue is the main commercial street with local retail as well as destination restaurant and entertainment attractions.

Above the Falls Master Plan Update (2013)

The *Above the Falls Master Plan Update* assesses existing conditions and identifies opportunities for development on the Mississippi Riverfront areas in North and Northeast Minneapolis. The West Broadway Corridor overlaps with this project study area on Washington Avenue from West Broadway to Plymouth Ave North. Existing land uses in the area are almost entirely commercial and industrial. Industry clusters include printing and paper goods, business services, metalwork, and other miscellaneous light industrial uses. Closer to the Mississippi River, land use is affected by two prominent features: a freight rail corridor bisecting the area from north to south, and parkland on the riverfront south of 24th Avenue North. Future land use is not planned to deviate from commercial and industrial in this area, however environmental remediation and landscape and design elements that improve the pedestrian realm and sustainability of the area are recommended.

Industrial Land Use and Employment Policy Plan (2006)

The *Industrial Land Use and Employment Policy Plan* researched and designated several industrial employment districts in the city, including the North Washington Jobs Park. These areas have a high degree of policy protection intended to maintain prime industrial space and an emphasis on job retention and creation.



West Broadway Alive! (2008)

West Broadway Alive! documents the importance to the community of attracting new development to West Broadway. As documented in the plan, the community welcomes a range of housing types, densities, and price points in the corridor, as well as additional commercial businesses.

West Broadway Alive! states that while the number of active development projects in the West Broadway Corridor is a source of encouragement, the timeline for these projects is typically very long, as a result of the need to assemble multiple sources of public and philanthropic financial support. The plan notes that major challenges faced by developers include public safety issues and a chaotic and unsightly visual environment in many parts of the corridor. As part of the West Broadway Transit Study, an in-depth market analysis will evaluate current prospects for transit-oriented development in the corridor, identify development site opportunities, and propose policies and tools to aid in implementation. Recognizing the wide variety of environments along West Broadway, the analysis will be segmented by geography and existing development types.

Golden Valley Comprehensive Plan (2010)

Golden Valley may be served by the West Broadway Corridor with a connection to the METRO Blue Line Extension at Golden Valley Road. Along Golden Valley Road, the *Golden Valley Comprehensive Plan* future land use plan calls for retention of established low-density (0.1 to 5 units per acre) mostly single-family residential neighborhoods, with retention of nearby institutional uses and parks and open space. Station area planning for the Golden Valley Road Station on the METRO Blue Line Extension (Bottineau) LRT is currently underway and could possibly result in eventual land use designation changes. Future land use in the Golden Valley Road Station area is further delineated in the *METRO Blue Line Extension Station Area Plans*.

Robbinsdale Comprehensive Plan (2010)

Robbinsdale may be served by the West Broadway Corridor in the northern portion of the study area, including North Memorial Hospital and downtown Robbinsdale. The *Robbinsdale Comprehensive Plan* calls for retention of the pedestrian scale of downtown, and continued downtown growth in a compact pattern. The West Broadway Corridor has some of the most intense land uses in Robbinsdale. Land use in the majority of downtown and Terrace Mall site is mixed use, which allows for both vertical (multiple uses in a building) and horizontal (multiple uses on a site) mixed use and is intended to encourage higher density development (12-60+ units per acre of residential development). Development interest is currently trending toward additional higher-density residential uses.

North Memorial Hospital occupies a large site at the intersection of Oakdale and West Broadway Avenues. The hospital reports that its campus has capacity to accommodate its near-term growth needs. The low-density residential neighborhoods along Oakdale and France Avenues are not planned for change. Robbinsdale's typical lot size and street grid accommodates a higher density for single-family detached housing than is found in most suburban areas, and includes duplexes and twin homes. Average net density in these neighborhoods is about 5.5 dwelling units per acre.



METRO Blue Line Extension Station Area Plans

The METRO Blue Line Extension LRT project is a proposed 13-mile addition to the existing METRO Blue Line and will extend from downtown Minneapolis through north Minneapolis, Golden Valley, Robbinsdale, Crystal, and Brooklyn Park. Station area planning on the METRO Blue Line Extension is proceeding in two phases: Phase One covers the four stations in Minneapolis and Golden Valley; Phase Two covers the balance of the stations in Robbinsdale, Crystal, and Brooklyn Park. Station area planning is a process by which county and city staff work together with community members to establish a plan for the area surrounding a proposed transit station. Station area plans typically cover the area within a ten minute walk of the station, or ½ mile radius around the station. During the station area planning process community members discuss issues, needs, desires, and priorities, and set a vision for the future look and feel of the area that creates a context for the station in the community. Station area planning results in a list of recommended actions for agencies and local communities that contribute toward realization of the vision.

Phase I: Minneapolis and Golden Valley

The *METRO Blue Line Extension Station Area Plans* identify opportunities for redevelopment and transition in the vicinity of Golden Valley Road Station. The plans cite several locations that are targeted for preservation and enhancement, particularly the parks and open space in Theodore Wirth Park, Glenview Terrace Park, Glenwood Parkway, and the Mary Hills Nature Area. Similarly, many of the neighborhoods with low-density residential development are stable and not expected to change. An exception is the neighborhood close to the proposed METRO Blue Line Station at Golden Valley Road. This area is west of Xerxes Avenue, south of Glenview Terrace Park, and west of Bassett Creek. In the future, parcel owners may receive parcel acquisition inquiries from potential developers. If ownership transitions to a developer, high to medium density residential could be considered for these areas. If the tenure of land changes at some of the local institutions (Courage Kenny Rehabilitation Institute, Minneapolis Clinic of Neurology, Golden Valley Fire Station, Christ Unity Church, and Church of St. Margaret Mary), these areas could also be redeveloped into higher density housing or mixed use properties. The Golden Valley City Council would need to approve changes to the City's Comprehensive Plan and zoning designations before these areas could redevelop.

In the City of Minneapolis the plan proposes that Golden Valley Road can be designated as a community corridor per the *Minneapolis Plan for Sustainable Growth*. Community corridors are primarily residential with intermittent commercial uses clustered at intersections in nodes. Commercial uses are generally small-scale retail sales and services, serving the immediate neighborhood. Density is assumed to be 20-50 dwelling units/acre transitioning to low densities outside of the commercial nodes.

Phase II: Robbinsdale

At the time of this study, Phase II of the METRO Blue Line Extension station area planning is still in progress. However, a preliminary assessment of the Robbinsdale Station area's conditions has been completed. Consistent with guidelines presented in the *Robbinsdale Comprehensive Plan*, increased density and activity is recommended for the Robbinsdale Station area. Existing land use near Robbinsdale Station is oriented to commercial and mixed uses on West Broadway and County Road 81, with moderate density and low density residential uses in the adjacent neighborhoods. In anticipation of



LRT development, more intense land uses and mixed-use development are desired near downtown Robbinsdale. Robbinsdale is also planning for the addition of higher density residential and other mixed-use development in the Terrace Mall area near North Memorial Hospital, which will have a direct transit connection to the LRT station. A substantial park-and-ride facility is under consideration for the METRO Blue Line Extension Robbinsdale Station.

4. Purpose and Need

Purpose of the Proposed Action

The purpose of the West Broadway transitway is to provide transit service that meets current and future travel needs, attracts new riders, connects users with job centers and key destinations, and supports transit-oriented development and economic growth in the corridor.

Need for the Proposed Action

The need for the project is described in several distinct categories:

- Need for economic and physical revitalization in the West Broadway Corridor
- Need to serve high proportion of residents who rely on transit as their primary means of transportation
- Need to serve a variety of transportation markets
- Need for transit facilities and amenities commensurate with demand
- Need for predictable transit service
- Need to serve forecast population and employment growth
- Need for Consistency with City and Regional Policy

Each category of need is further described in the following sections.

Need for economic and physical revitalization in the West Broadway Corridor

Racial disparity for unemployment, educational attainment, and income in the Twin Cities region is a reality well documented in scholarly articles, the mainstream media, and in local and regional planning documents. *Thrive MSP 2040*, the region’s development framework, notes that in the Minneapolis-Saint Paul-Bloomington Metropolitan Statistical Area, 25.7 percent of all people of color are poor, compared with 6.4 percent of white non-Latino people. This is the largest such disparity among the 25 largest metropolitan areas in the United States. The disparities are also present in high school graduation rates, employment, and homeownership, as shown below in Table 3.

Table 3: Disparities by Race and Ethnicity in the Twin Cities, 2012

Measure	White, non-Latino	Persons of color	Rank of disparity among 25 largest metro areas
Percentage of population age 25+ with a high school diploma	96.3%	78.3%	3
Percentage of civilian working-age population that is employed	79.4%	64.8%	1



Percentage above the poverty threshold	93.6%	74.3%	1
Per capita income	\$37,943	\$18,078	4
Percentage of householders who own their homes	75.8%	37%	1

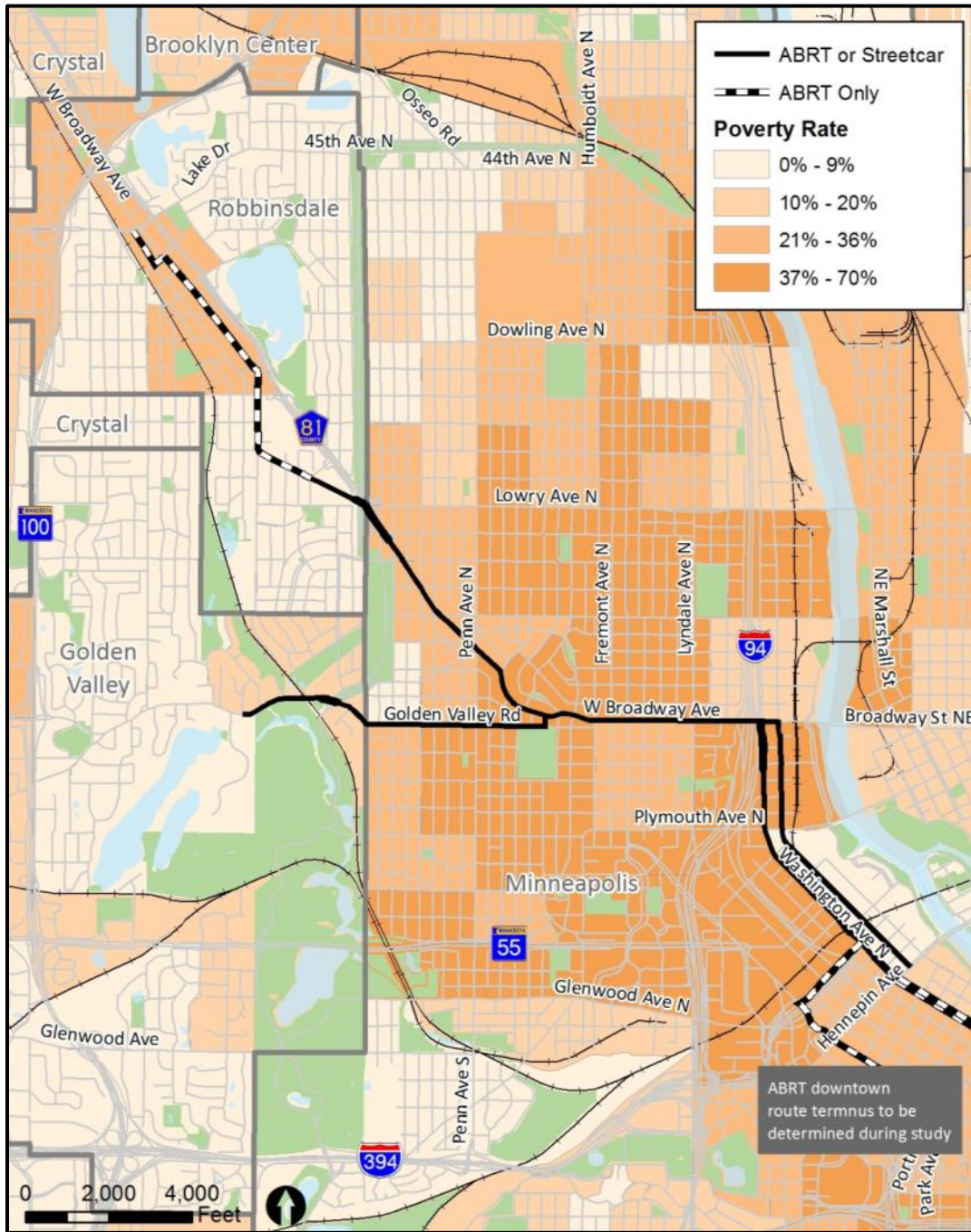
Source: Metropolitan Council, 2014

In *Thrive MSP 2040*, the Metropolitan Council commits to “using equity as a lens to evaluate its operations, planning, and investments, and exploring its authority to use its resources and roles to mitigate the place-based dimension of disparities by race, ethnicity, income, and ability”.

As referenced in prior sections of this document, the segment of the West Broadway Corridor in north Minneapolis is racially and ethnically diverse, has a high population of young people, has high rates of poverty and unemployment, and has economic indicators such as household income and educational attainment levels that are below the regional average. See Figure 8 and Table 4 for the patterns and percentage of people living in poverty in the West Broadway Corridor.



Figure 8: Poverty Rates in the West Broadway Corridor



Source: 2009-2013 ACS 5-Year Estimates by census block group

**Table 4: Poverty in the West Broadway Corridor, Minneapolis, and Metropolitan Area**

	Population	Population in Poverty	Percent of Population in Poverty
West Broadway Corridor	56,087	13,801	24.6%
Minneapolis	389,112	84,076	21.6%
Seven-County Metro	2,889,547	311,935	10.8%

Source: 2009-2013 ACS 5-Year Estimates by census block group. Census block groups within ½ mile of the alignments under consideration for the West Broadway Transit Study were included in the study area.

All of the census tracts surrounding West Broadway Avenue in Minneapolis are Areas of Concentrated Poverty² where at least 40 percent of the residents live below 185 percent of the federal poverty line³ and at least half of the residents are people of color. In their regional planning framework, the Metropolitan Council states, “Living in Areas of Concentrated Poverty hurts people in many ways. Areas of Concentrated Poverty usually suffer from high crime and tend to have schools with lower test scores and graduation rates. Living in Areas of Concentrated Poverty undermines people’s physical and mental health. It reduces the cognitive abilities of children, making them more likely than their parents to have lower incomes as adults. Together these characteristics lower the economic mobility of residents who live in Areas of Concentrated Poverty, making them more likely to stay poor across generations.”

The role of geography and neighborhoods in the perpetuation of generational poverty provides rationale for addressing issues of disadvantage and disparity through geographically-focused interventions, such as transit investments, in addition to broad-based programmatic interventions focused on food or jobs or other categories of need.

Successful geographically-focused interventions focus on meeting human needs for jobs, education, quality childcare, good food, and connectivity in a geographically focused area, and building places of value in the neighborhood that meet community needs and attract an economically mixed set of residents. It is by intervening at the levels of both human and physical development that neighborhoods can be transformed over time, concentrated disadvantage can be reduced, and the prospects of future generations can be lifted. Transit improvements are well suited to supporting both human development and physical development. Community members see a role for transit in connecting residents to jobs and other resources outside of the corridor, refreshing the aesthetic character of the street, showcasing art, and inspiring new development that complements historic buildings in the corridor. *West Broadway Alive!* notes: “Of all the strategies discussed, transit development was seen as the single greatest difference-maker. The proposed streetcar line terminating initially at West Broadway and Emerson could create market interest in the West Broadway/Lyndale and West Broadway/Washington areas that could yield development at a much larger scale than what might result in its absence. The experiences of cities like Portland reinforce the value of streetcars in stimulating new development in challenged communities.”

² Seventy-five percent of the census tracts in the Twin Cities Metropolitan Area identified as Areas of Concentrated Poverty are also census tracts in which 50 percent or more of the residents are people of color.

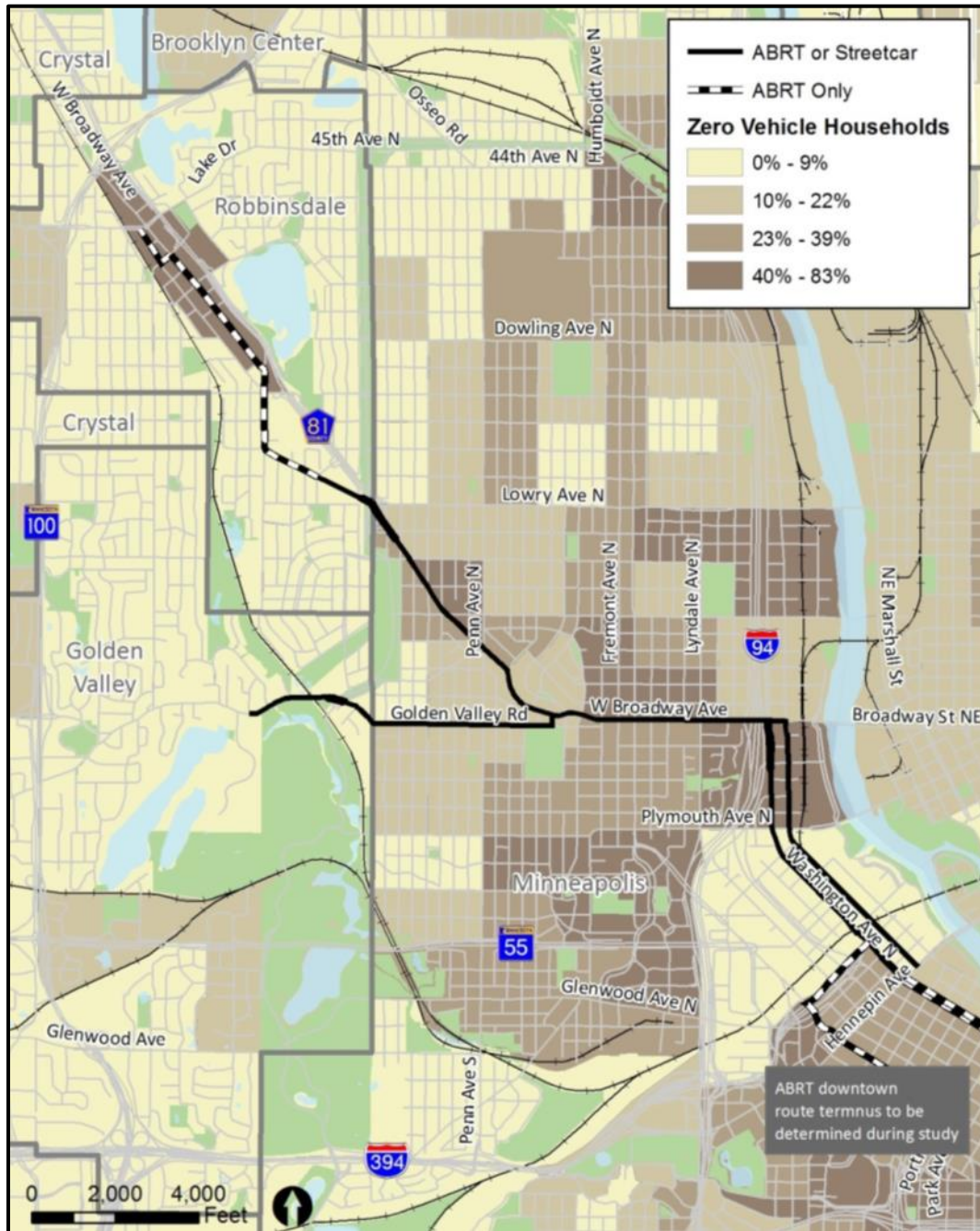
³ \$42,589 in annual income for a four-person household in 2011.



Need to serve high proportion of residents who rely on transit as their primary means of transportation

Consistent with the high levels of poverty in the West Broadway Corridor, the corridor is also home to a disproportionately high number of households for whom a private automobile is not available. Zero-car households are used as a proxy for determining the number of people that rely on transit. The number of zero vehicle households in the West Broadway Corridor is more than twice the rate of the Metro Area as a whole, as shown in Figure 9 and Table 5.

Figure 9: Zero-Car Households in the West Broadway Corridor



Source: 2009-2013 ACS 5-Year Estimates by census block group

**Table 5: Zero-Car Households in the West Broadway Corridor, Minneapolis, and Metropolitan Area**

	Total Households	Average Household Size	Percent of zero-car households	Percent of one-car households
West Broadway Corridor	21,459	2.61	18.5%	39.8%
Minneapolis	165,438	2.25	18.2%	42.5%
Seven-County Metro	1,131,621	2.55	8%	32.5%

Source: 2009-2013 ACS 5-Year Estimates by census block group. Census block groups within ½ mile of the alignments under consideration for the West Broadway Transit Study were included in the study area.

There are high rates of zero car households throughout north Minneapolis and in downtown Robbinsdale, where there is a concentration of senior housing that may contribute to the higher percentages. Outside downtown Robbinsdale and in the North Loop there are few zero car households.

Need to serve a variety of transportation markets

The Route 14 provides all-day service in the West Broadway Corridor. Approximately 49 percent of the route’s ridership occurs during the 6.5 hours of peak service (6:00 to 9:00 a.m. and 3:00-6:30 p.m.), indicating that the route is used more heavily during those periods, though off-peak ridership to mid-day or evening activities is also substantial. Saturday ridership is approximately 57 percent of weekday ridership and Sunday ridership is approximately 41 percent. Relative to weekday ridership on the Route 14, these are strong weekend ridership percentages, indicating that the West Broadway Corridor is not a typical commuter corridor and riders are using the Route 14 to access jobs, shopping, or appointments that are outside of the standard commuting times.

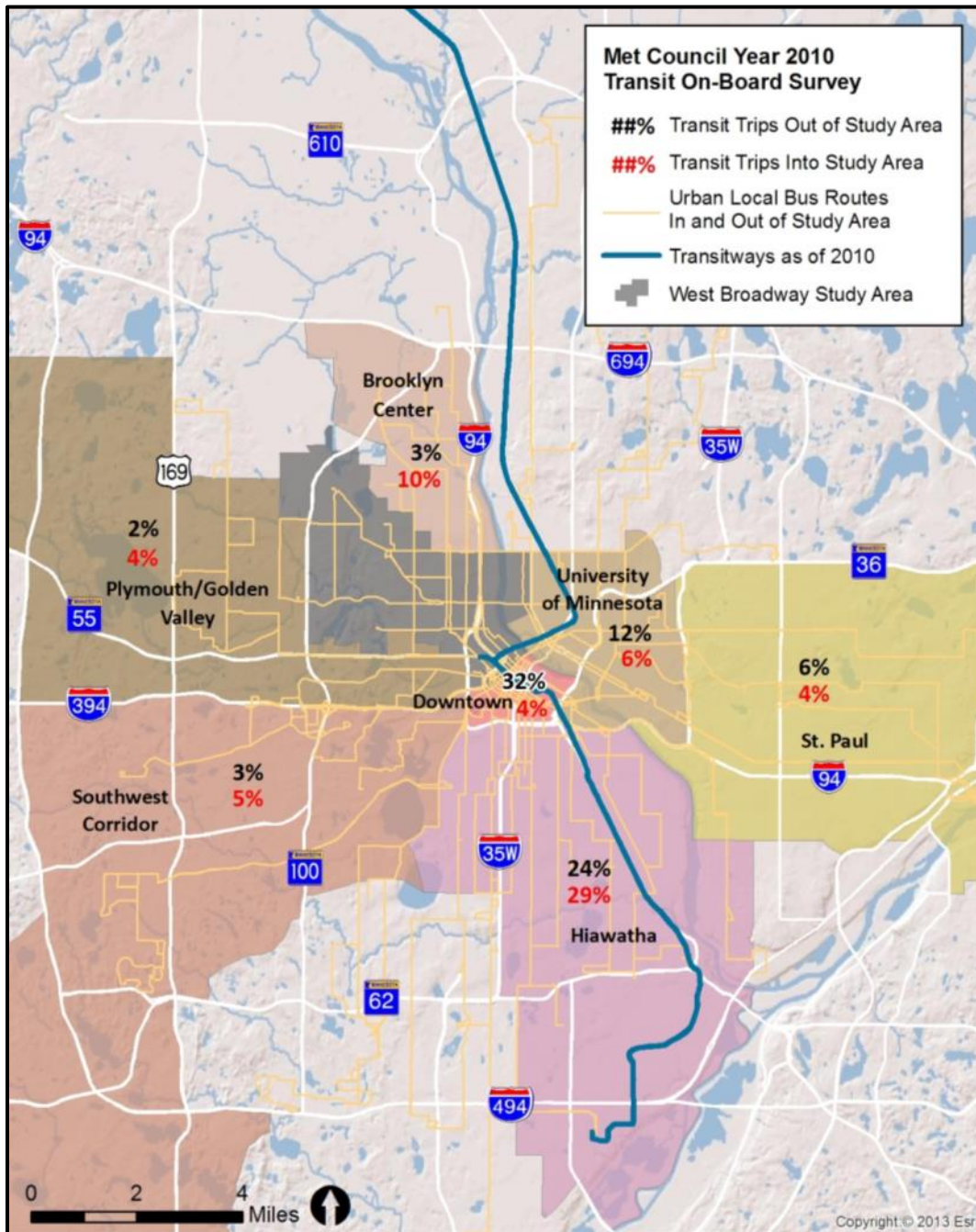
Results of the 2010 Metropolitan Council Transit On-Board Survey conducted by the Metropolitan Council further support this finding. Approximately 8,900 daily trips are taken on transit in the study area⁴. This includes rides on other routes that operate in the study area, in addition to the Route 14. The results of the survey show that 57 percent of home-based work trips on transit in the corridor are during off-peak hours, compared to 37 percent elsewhere in the region. These patterns emphasize the importance of high frequencies throughout a long span of transit service, so that transit is a convenient and reliable choice for people going to work at all times of day.

The Transit On-Board Survey also provides data that describes work trip commuter patterns on transit, as shown in Figure 10 . Most noticeably, a higher proportion of transit trips from the study area were taken to downtown Minneapolis, south Minneapolis, and the University of Minnesota, places that are accessible via a one-seat transit ride from the study area. Similarly, south Minneapolis transit riders were also attracted to the study area for work in a much higher proportion than elsewhere.

⁴ The study area designated for use of Transit On-Board Survey and LEHD data is comprised of the Transportation Analysis Zones adjacent to all alignments under consideration for the West Broadway Corridor.



Figure 10: Home-Based Work Trips To and From the Station Area by Transit



Source: Metropolitan Council Transit On-Board Surveys collected in November 2010; Green Line LRT is not shown on the map because it was not yet operational.

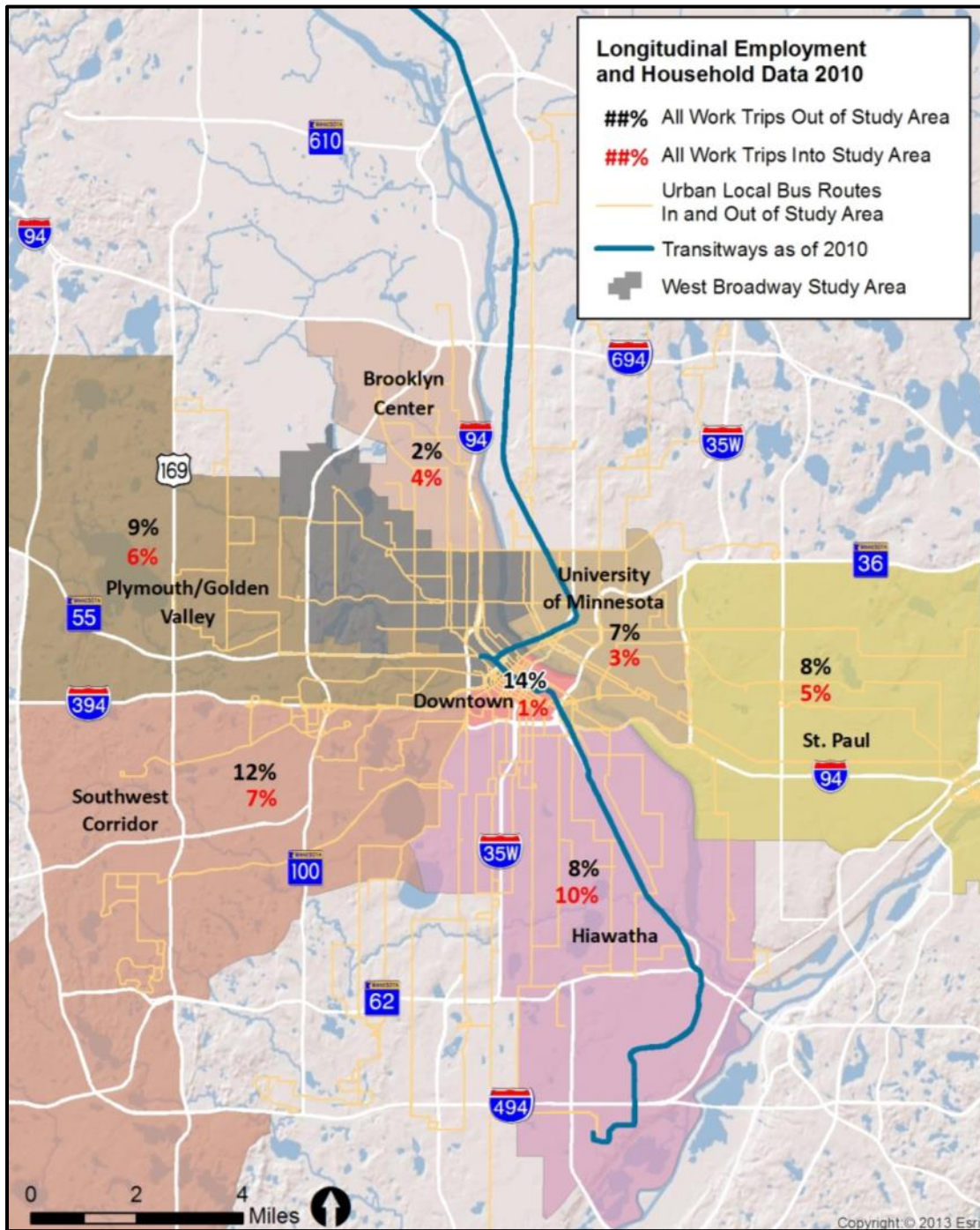
U.S. Census Longitudinal Employer-Household Dynamics (LEHD) data, which describes geographic patterns for home and workplace locations, was used to identify work trip commuter patterns using all modes of transportation to and from the West Broadway Corridor, which create markedly different patterns than trips by transit only. Results are described below and in Figure 11.



- Approximately 41 percent of the 58,800 people living in the corridor are employed. This percentage is rather low, likely because of the high rate of unemployment, as well as the high number of young people who are not of working age in the corridor. Retirees and people with disabilities that prohibit them from work are also accounted for.
- Of the 24,400 people who report to work each day, approximately 3,400 or 14 percent travel to downtown Minneapolis.
- Another 15 percent of workers travel to the University of Minnesota and other attractions near the Green Line LRT in Saint Paul.
- The southwest metro area, portions of which will be served by the planned Green Line Extension LRT, attracts 12 percent of West Broadway Corridor workers.
- Nine percent or 2,200 workers stay within the corridor for work. North Memorial Hospital is the largest employer in the corridor outside of downtown Minneapolis, with more than 3,500 employees.



Figure 11: Home-Based Work Trips To and From the Study Area by All Modes of Transportation



Source: U.S. Census; jobs reported in 2011. Green Line LRT is not shown because it was not operational in 2011.

In addition to encompassing job centers and key destinations, the West Broadway Corridor is anchored on the west by planned METRO Blue Line Extension stations at Robbinsdale and Golden Valley Road, bisected in the middle by planned arterial BRT on Penn Avenue North (C Line) and Emerson and Fremont Avenues North, and on the east by the planned Nicollet-Central Modern Streetcar line, as well as Blue



and Green Line LRT, Northstar Commuter Rail, and numerous local and express bus routes in downtown Minneapolis, thus further expanding connectivity to regional destinations.

Need for transit facilities and amenities commensurate with demand

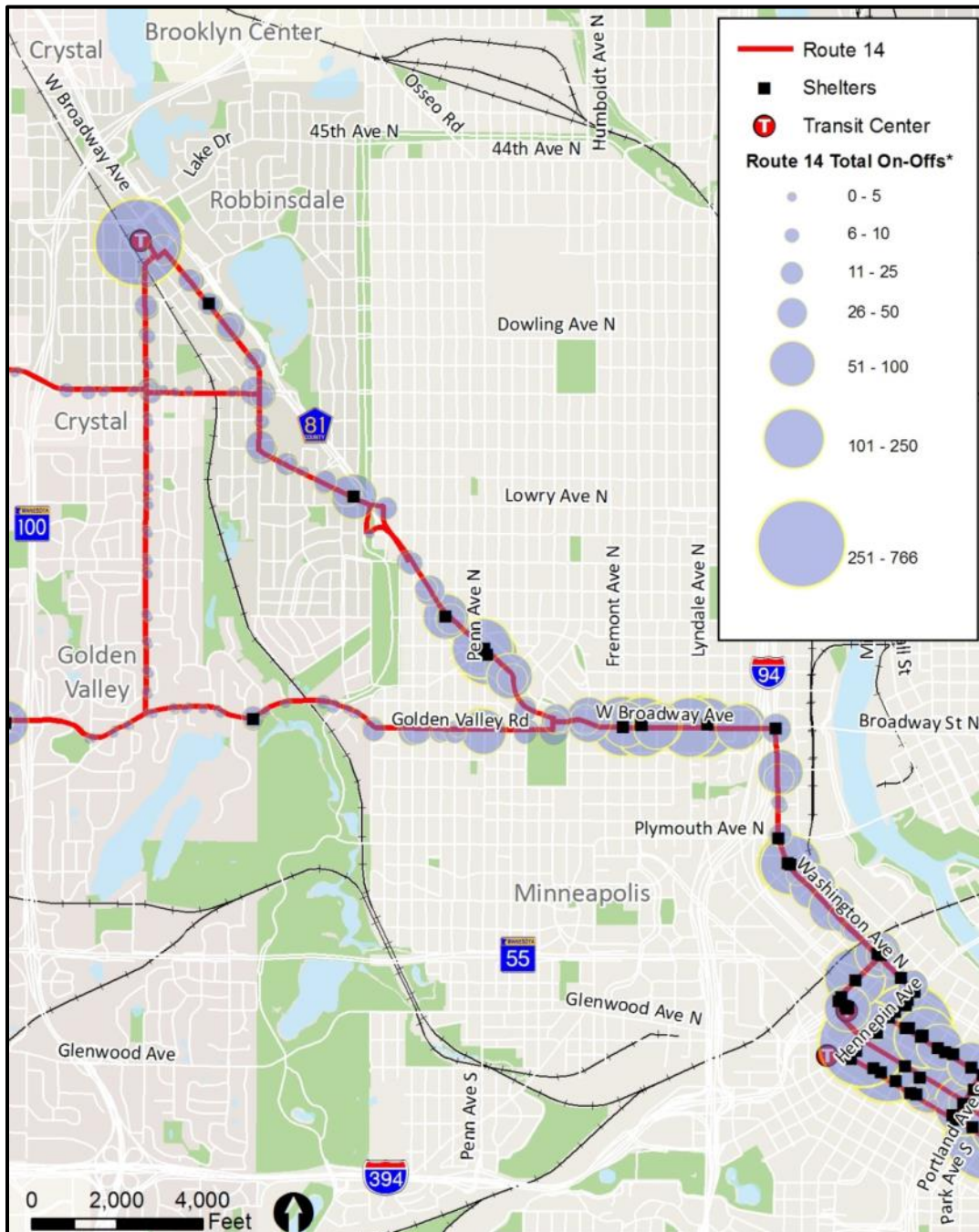
The Route 14 carries more than 6,000⁵ passengers each weekday, approximately 40 passengers per in-service hour.

Passenger facilities at bus stops along the corridor are adequate for a place with low volume local bus service, but do not support the high volumes of service used by Route 14 riders. Currently, the greatest number of boardings and alightings are at major transfer points such as the Robbinsdale Transit Center (future Blue Line Extension Station), and in downtown Minneapolis. Boardings and alightings along West Broadway Avenue in Minneapolis are also high, especially at Penn Avenue, where transfers are available to the Route 19 (planned C-Line arterial BRT), and at Emerson-Fremont, where transfers are available to the Route 5 (proposed arterial BRT line). Community members also identified a need for route identifiers, route maps, and schedule information at stops, as well as basic amenities like trash cans, and stressed that improved transit service needs to be accessible for everyone, including those with disabilities. See Figure 12 for a map of boardings, alightings, and shelters on Route 14.

⁵ Total Route 14 ridership.



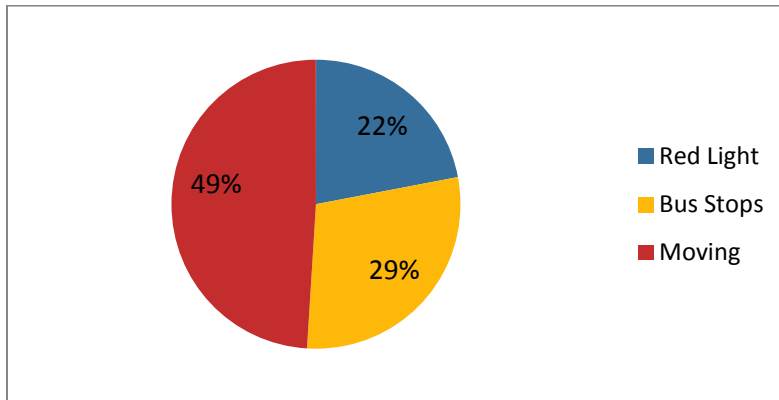
Figure 12: Boardings, Alightings, and Shelter Locations along the Route 14



Source: Metropolitan Council, 2014

Need for predictable transit service

Route 14 has an average speed of 12.8 miles per hour and is on-time approximately 87 percent of the time, metrics that are similar to other urban local routes operating in Minneapolis. As noted in the ATCS and shown below in Figure 13, customer boarding time and fare collection cause significant delay in the corridor and current bus stop facilities do not offer features that make boarding the bus a fast and easy process.

**Figure 13: Sources of Delay on Route 14**

The northbound Route 14 branches five ways, creating a complicated structure for transit riders destined for locations north of West Broadway and Knox Avenues, as shown in Figure 5. Routes 14D, 14G, 14 L, 14N, and 14R from downtown Minneapolis all use Washington Avenue North to West Broadway Avenue. The routes turn west on West Broadway until Knox Avenue where they deviate as follows:

- Route 14D proceeds west on Golden Valley Road and Duluth Street to Douglas Drive in Golden Valley. The Route 14D turns north on Douglas Drive to 36th Avenue where it turns east to Noble Avenue. The route then uses Noble Avenue to go north to the Robbinsdale Transit Center at 41st Avenue North and Hubbard Avenue.
- Route 14G proceeds west on Golden Valley Road and Duluth Street to where it terminates at the Highway 100 and Duluth Park and Ride on Lilac Drive.
- Route 14L proceeds west on Golden Valley Road, then turns north on Noble Avenue to the Robbinsdale Transit Center.
- Route 14N proceeds north and west on West Broadway, turns west onto Oakdale Avenue, turns north onto France Avenue, turns west on 36th Avenue, then turns north on Noble Avenue to the Robbinsdale Transit Center.
- Route 14R proceeds northwest on West Broadway Avenue, turns west onto Oakdale Avenue, turns north onto France Avenue, and transitions onto West Broadway Avenue to the Robbinsdale Transit Center.

This complicated route structure is difficult to administer and for new transit riders to decipher.

Need to serve forecast population and employment growth

The West Broadway Corridor is projected to grow in population by 26 percent and in employment by 45 percent between 2010 and 2040. Much of this growth is focused on the North Loop portion of the corridor which continues to transition from commercial and light industrial uses to mixed-use, office, and residential land uses. The North Loop is also projected to grow as a significant employment center, driving job growth in the West Broadway Corridor study area. Areas outside of the North Loop are projected to have a steady but comparatively slower growth, with many opportunities for housing and economic growth due to vacant and underutilized properties. Growth in the West Broadway Corridor



will increase demand for transit service, and the region will benefit from connectivity to emerging employment centers. Detailed population, household, and employment growth projections are shown in Table 6 and Figure 14.

Table 6: West Broadway Study Area Growth Projections

	Population		Households		Employment	
	2010	2040	2010	2040	2010	2040
North Loop	5,595	21,160	2,934	8,130	16,036	30,310
Minneapolis*	32,710	30,542	10,880	11,658	11,832	12,987
Robbinsdale	14,645	16,130	6,284	7,077	7,222	8,212
Golden Valley	5,857	5,995	2,413	2,461	1,378	1,393
Total	58,807	73,827	22,511	29,326	36,468	52,902
Growth		26%		30%		45%

Source, Metropolitan Council, 2014. Population, household, and employment projections are done at the Transportation Analysis Zone level. Every effort was made to use TAZs that correspond geographically to the census block groups in the study area, however boundaries do not align consistently throughout so there are minor differences in population estimates.

*West Broadway Study Area in Minneapolis outside of the North Loop

Figure 14: West Broadway Study Area Growth

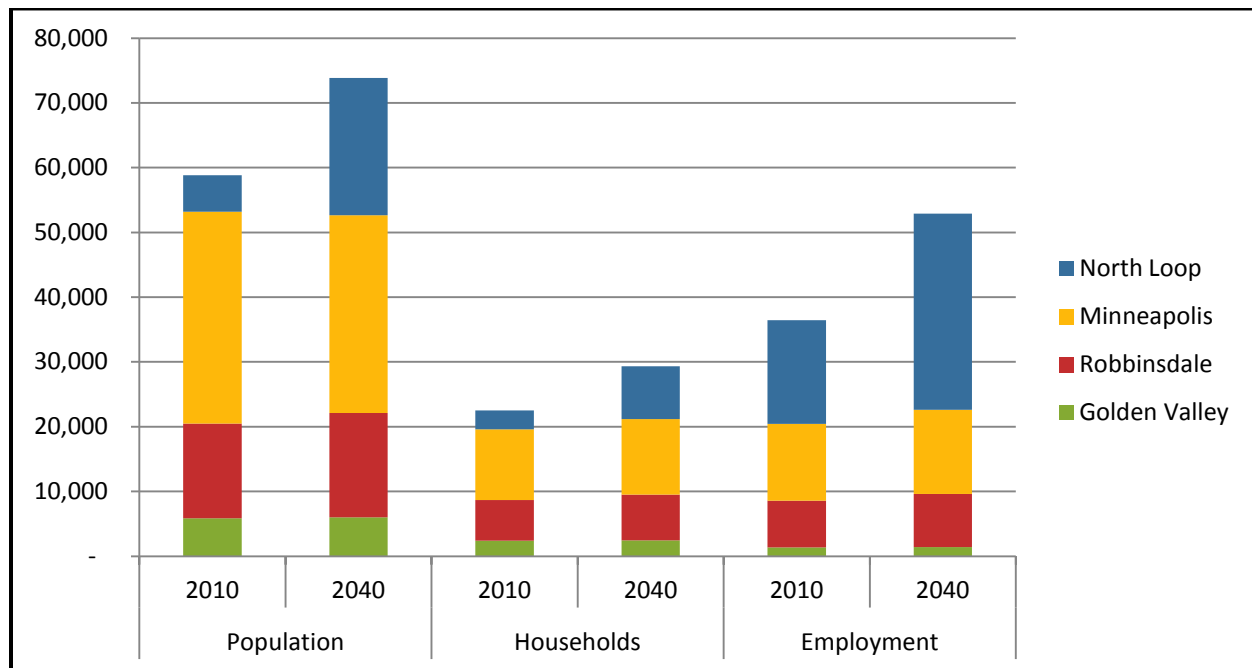
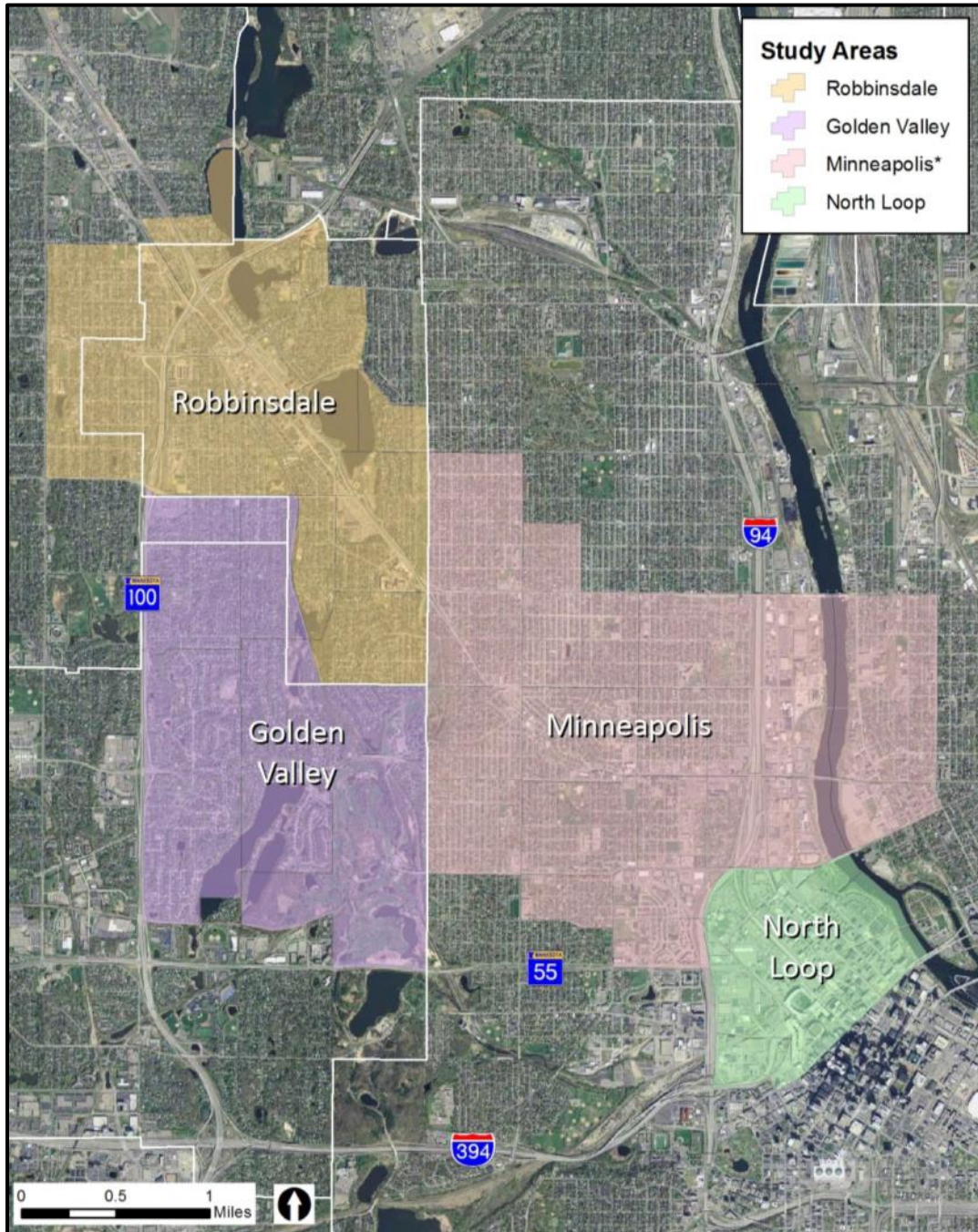




Figure 15: West Broadway Corridor Growth by Segment



Source, Metropolitan Council, 2014. Population, household, and employment projections are done at the Transportation Analysis Zone level. Every effort was made to use TAZs that correspond geographically to the census block groups in the study area, however boundaries do not align consistently throughout so there are minor differences in population estimates from the two sources.

*West Broadway Study Area in Minneapolis outside of the North Loop

Need for Consistency with City and Regional Policy

A transit investment in the West Broadway Corridor is consistent with the corridor communities' policies for accommodating growth through increased density and improved transit service, as well as regional



goals of leveraging transportation investments to guide land use and development patterns that advance the regional vision of stewardship, prosperity, liability, equity and sustainability.

Thrive MSP 2040

Thrive MSP 2040 presents several policies for land use practices that will guide development. The first policy is “orderly and efficient land use.” Land use patterns should be aligned with infrastructure to make the best use of public and private investment. To be fiscally responsible, the Metropolitan Council guides land uses and development patterns that leverage the region’s infrastructure investments and private development to the benefit of both. Directing growth where infrastructure already exists also reduces the need to add roads and expand the regional wastewater system to support the same growth elsewhere. Transit improvements serving existing activity centers and established and redeveloping neighborhoods such as those in the West Broadway corridor are consistent with and supportive of the policies in *Thrive MSP 2040*.

2040 Transportation Policy Plan

The 2040 Transportation Policy Plan (TPP) presents several guidelines for land use and development along major transportation corridors, transitways, and local activity centers. The TPP encourages population and activity density, mixed use development, and a well-connected pedestrian network along transit corridors. The West Broadway Corridor has many of these characteristics, and the capacity and support for high-density mixed-use development.

Minneapolis Plan for Sustainable Growth

The *Minneapolis Plan for Sustainable Growth* promotes development of a balanced multimodal transportation system, including automobile, transit, bicycle, and pedestrian modes. The plan identifies transit as the principal means to efficiently meet the needs of the traveling public and emphasizes new housing and employment development adjacent to major transit investments.

Many locations within the West Broadway Corridor are identified for redevelopment, and the corridor has been the focus of numerous local plans. The City of Minneapolis has completed several land use plans along the corridor, including *Minneapolis Warehouse District Design Guidelines*, *North Loop Plan Update*, *Above the Falls Master Plan Update*, *Industrial Land Use and Employment Policy Plan*, and *West Broadway Alive!*. These plans encourage intensifying land use in transit corridors and creating a more walkable, pedestrian-friendly environment.

Robbinsdale and Golden Valley Comprehensive Plans

The Cities of Robbinsdale and Golden Valley each identify specific plans for growth around the station areas. The Robbinsdale portion of the corridor is a link to the community’s downtown, and planned development is set to preserve the vibrant character of the “main street” and offer opportunities for more intense, mixed use development. Near Golden Valley Station there are several semi-public and institutional sites that may serve as opportunities for redevelopment at higher residential densities. Additionally, the Golden Valley station area provides a transit connection to open space and park land that is to be preserved and is of regional significance.



5. Goals and Objectives

1. Catalyze and support housing and economic development along the corridor
 - c. Support a mix of housing choices, including affordable housing
 - d. Provide transit improvements to help realize city and regional development plans
 - e. Attract investment along the length of the corridor, concentrated at key nodes
 - f. Support both small businesses and regional employers by providing better transit options for their customers and employees
 - g. Improve the aesthetics and visual consistency of the corridor
2. Improve local and regional mobility with improved access to jobs and activities
 - a. Enhance physical and visual connections to the Blue Line Extension (Bottineau) LRT, arterial BRT on Penn Avenue, and the Robbinsdale Transit Center
 - b. Provide fast and convenient transfers with transitways and the local bus network
 - c. Locate transit stations to effectively serve transit customers while maintaining the desired speed of service
 - d. Improve access to local and regional destinations, activity centers, business nodes, and employment centers
3. Address equity issues in the West Broadway Corridor to ensure that corridor residents as well as patrons of area businesses and institutions have access to opportunities for success, prosperity, and quality of life
 - a. Use transit and associated economic development investments within the corridor to mitigate place-based disparities by race, ethnicity, income, and ability
 - b. Mitigate areas of concentrated poverty by connecting low-income residents to jobs and educational opportunities
 - c. Ensure provision of accessible transit vehicles and facilities
4. Build upon the vibrancy and diversity of the corridor by supporting healthy, active communities and the environment
 - a. Ensure safe and direct connections between transit and other multimodal transportation choices such as walking and biking
 - b. Maintain parkland, trails and green space in the corridor
 - c. Promote air quality benefits and minimize noise and vibration impacts
 - d. Recognize impacts to cultural and historic resources
 - e. Balance impacts to existing traffic operations and curbside uses
 - f. Enhance safety through increased visibility and activity in the corridor
5. Improve upon existing transit service in the corridor
 - a. Provide transit service that is fast, frequent, and reliable for all users
 - b. Provide stations that have a high level of passenger amenities, are easily accessible to riders with limited mobility, and feel safe for waiting passengers
 - c. Provide a transit investment that considers the needs of residents who rely on transit and contributes to reduced reliance on auto travel



6. Increase transit use among corridor residents, employees, and visitors
 - a. Provide service that is identifiable and easy for visitors and new users to understand
 - b. Provide a transit investment that meets today’s needs and has ability to expand for future growth
 - c. Increase the percentage of people using transit as their transportation choice in the corridor
7. Engage in an inclusive public outreach process
 - a. Create exciting opportunities for residents and businesses in the corridor to learn about and provide input to the West Broadway Transit Study
 - b. Seek opportunities to reach non-traditional study stakeholders such as youth, seniors, and people who speak languages other than English

6. Evaluation Criteria

Table 7: Evaluation Criteria

	Goal	Evaluation Measures
1	Catalyze and support housing and economic development along the corridor	<ul style="list-style-type: none"> • Economic development potential (source: economic development analysis) <ul style="list-style-type: none"> ○ Access to employment opportunities ○ Opportunities for new commercial development/job creation ○ Underused land available for TOD • Consistency with land use plans • Forecasted change in population and employment • Access to affordable housing
2	Improve local and regional mobility with improved access to jobs and activities	<ul style="list-style-type: none"> • Connections to existing and planned transitways • Connections to destinations as defined by community asset mapping • Ridership changes on connecting transit routes
3	Address equity issues in the West Broadway Corridor to ensure that corridor residents as well as patrons of area businesses and institutions have access to opportunities for success, prosperity, and quality of life	<ul style="list-style-type: none"> • Results of Title VI Analysis (quantitative) • Results of equity worksheets (qualitative) • Number of transit-reliant riders/zero-car households served • Employment and population densities
4	Build upon the vibrancy and diversity of the corridor by supporting healthy, active communities and the environment	<ul style="list-style-type: none"> • Environmental impacts including: historic and cultural resources; parklands; noise and vibration; air quality; traffic; right-of-way; on-street parking • Quality of connections to existing and planned bicycle and pedestrian networks • Short-term construction impacts
5	Improve existing transit service in the corridor	<ul style="list-style-type: none"> • Average transit speed • Frequency



		<ul style="list-style-type: none">• Span of service• Travel time improvements• Cost effectiveness<ul style="list-style-type: none">○ Annualized capital and operating cost per trip○ Passengers per revenue hour○ Subsidy per passenger
6	Increase transit use among corridor residents, employees, and visitors	<ul style="list-style-type: none">• Total ridership
7	Engage in an inclusive public outreach process	<ul style="list-style-type: none">• This is a goal of the study and process, not of the transit project itself, so will be evaluated separately throughout the study