

# PENN STATION CITY OF MINNEAPOLIS

SOUTHWEST CORRIDOR INVESTMENT FRAMEWORK  
TRANSITIONAL STATION AREA ACTION PLAN



Hoisington Koepler Group Inc.



**SOUTHWEST LRT**  
community works  
[www.swlrcommunityworks.org](http://www.swlrcommunityworks.org)



## ABOUT THIS CHAPTER:

The Transitional Station Area Action Plans are the product of a Hennepin County led effort to help communities along the Southwest LRT corridor prepare for SW LRT's opening day in 2018 and beyond.

An individualized plan has been created for each of the 17 stations in the Southwest corridor, each plan comprising a chapter in the larger Southwest Corridor Investment Framework. The station area action plans suggest ways to build on local assets, enhance mobility, identify infrastructure needs, and capitalize on promising opportunities for development and redevelopment near each station.

Plan Components:

### INTRODUCTION 4-2

A brief overview of the station location and its surroundings

### WHERE ARE WE TODAY? 4-4

A description of existing conditions in the station area, including:

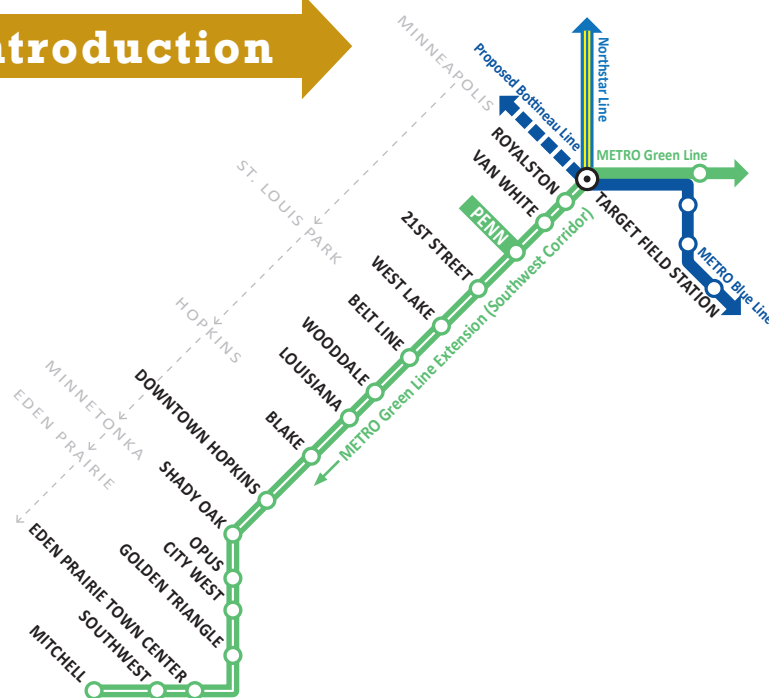
- » Land Use
- » Transit Connections
- » Access + Circulation Issues (Bike, Ped, and Auto)
- » Infrastructure Needs

### WHERE ARE WE GOING? 4-8

This section presents a number of recommendations for the station area in anticipation of opening day needs and the long-term TOD environment. This includes:

- » Access + Circulation Plan
- » Station Area Site Plan
- » Infrastructure Plan
- » Development Potential
- » Summary of Key Initiatives

## Introduction



### PENN STATION WITHIN THE CORRIDOR:

An important recreational and neighborhood destination providing access for residents living along the Penn Avenue corridor.

**URBAN VILLAGE** The Penn Station is an Urban Village (see Place Types discussion beginning on p. 1-19) in Minneapolis and an important gateway to the regional trail network. Situated between I-394 and Kenwood Parkway, the station contains a small number of industrial and office buildings among which is the Joffe MediCentre. While, I-394 enables access to downtown Minneapolis and beyond, it has restricted cycling and pedestrian travel. The introduction of the Penn Station will increase accessibility and desirability of properties surrounding the station and a significant opportunity exists here to redevelop underutilized and vacant lands in the area.

**NEIGHBORHOOD** The station is nestled between the Bryn Mawr neighborhood to the north, and Kenwood and Lowry neighborhoods to the east and south. Access to area trails and the station from these neighborhoods is constrained by I-394 and the bluffs that stretch along the southern border of the Bryn Mawr neighborhood. Transit ridership will largely be derived from area residents traveling to downtown for work and leisure from north along Penn Avenue. Improvements at the Penn Station should be coordinated with the on-going Penn Avenue Community Works projects. Nation Register listed/eligible properties in the area include elements of the Grand Rounds Historic District (Kenwood Parkway, Kenwood Park, and Kenwood Water Tower), a historic railroad (Great Northern), and several historic homes.

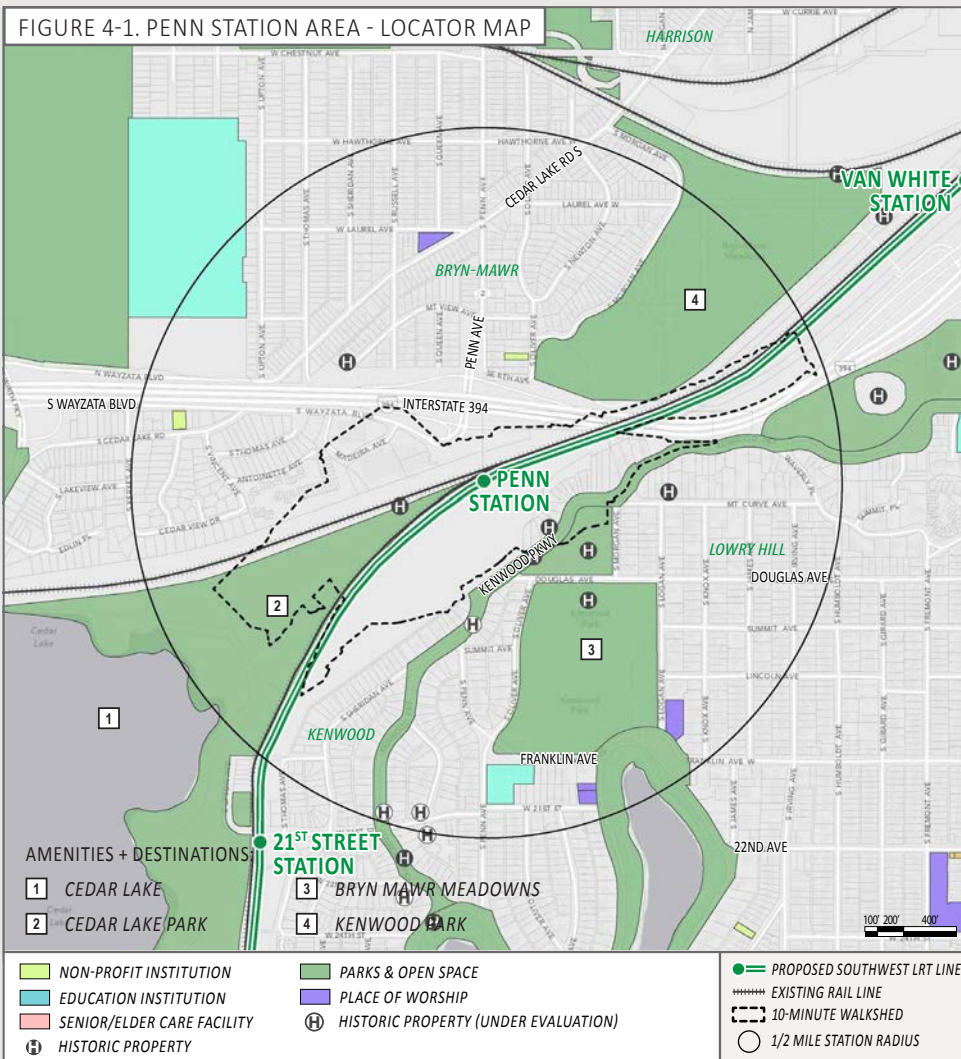
**TRAIL CONNECTIONS** The station is proposed to be located within the valley floor near the intersection of two major trail networks: the Cedar Lake LRT Regional Trail and Kenilworth Trail. The Cedar Lake LRT Regional Trail is a major bicycle commuter trail. To the immediate west of the station, the Kenilworth Trail intersects the Cedar Lake Trail providing an additional southwest/northeast connecting route. Cyclists and pedestrians wishing to access these trails will also support transit ridership at the Penn station.

**OTHER DESTINATIONS** Additional area destinations include Cedar Lake, Cedar Lake Park, Bryn Mawr Meadows Park, and Theodore Wirth Park.

## Station Location

The Penn station is located in a valley just south of I-394 near the Penn Avenue Bridge. The proposed station platform lies in the valley floor near the place where the Cedar Lake LRT Regional Trail and Kenilworth Trail merge.

In this location, the platform sits approximately thirty feet below the nearest road access (S. Wayzata Blvd.) and is separated from that road access by the active freight rail line. This separation will require vertical circulation (elevator and bridge) to provide access to the station platform from the north and west. Access to the station from the south and east will also require vertical circulation (staircase and ramps) to provide connections to the Kenwood and Lowry Hill neighborhoods. The Penn station serves Bryn Mawr, Kenwood, and Lowry Hill neighborhoods. It also provides recreational access to Cedar Lake, the Minneapolis Chain of Lakes, and the Grand Rounds.



NOTE: 10-minute walkshed approximates the area accessible within a 10-minute walk from the station platform using only the existing sidewalk/trail network. See Glossary for walkshed assumptions and methodology.

### PENN STATION AREA TODAY:



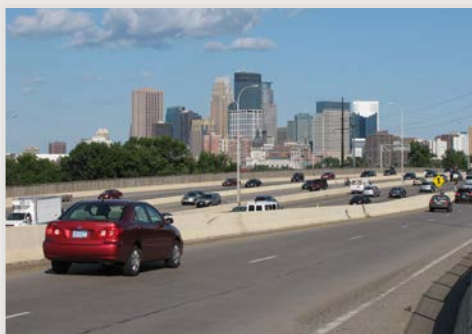
Existing office adjacent to future station



Existing freeway



Bryn-Mawr neighborhood commercial node



Views of downtown Minneapolis



Existing rail corridor



Cedar Lake LRT Regional Trail

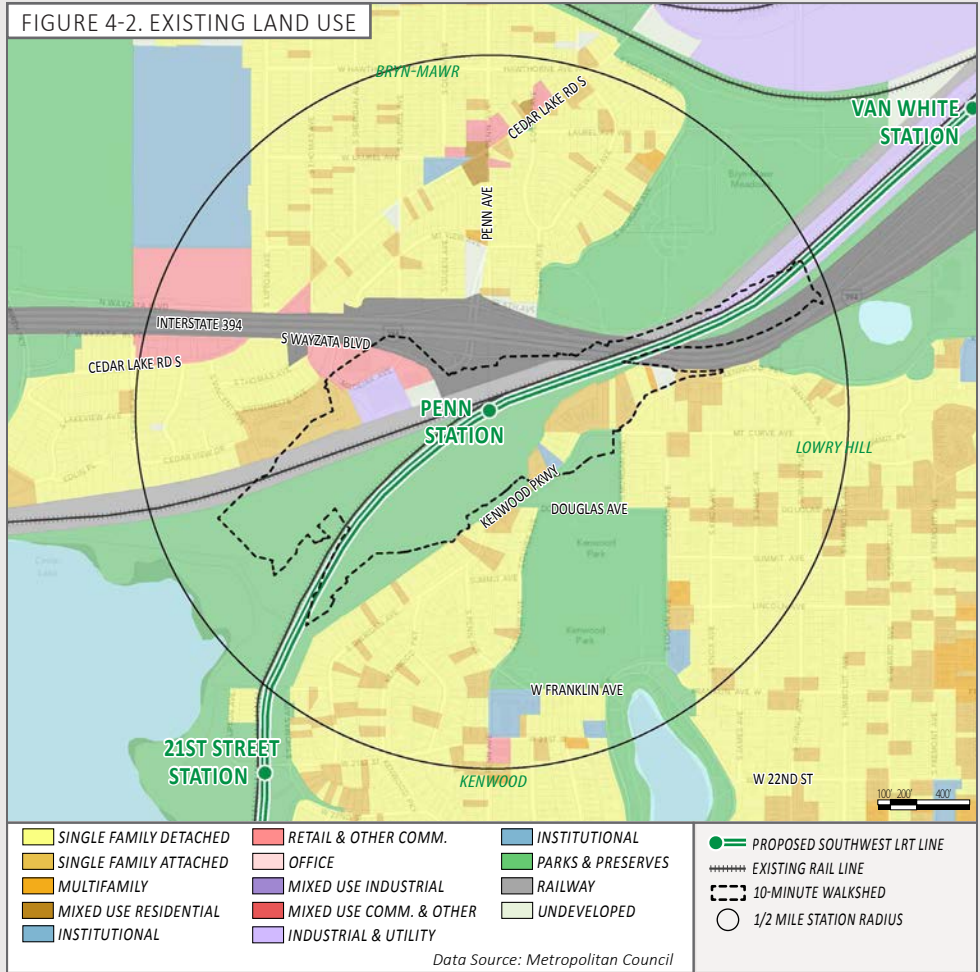
# Where Are We Today?

The following section describes the station area's **EXISTING CONDITIONS**, including the local context, land uses, transit and transportation systems, pedestrian and bicycle facilities, assets, destinations, and barriers to accessing the station. This analysis of current conditions presents key issues and opportunities in the station area and informs the recommendations for future station area improvements.

*NOTE: Existing conditions maps are based on data provided by Hennepin County and local municipalities. The data used to create each map is collected to varying degrees of accuracy and represents infrastructure and conditions at varying points in time. Actual conditions may vary slightly from what is shown.*

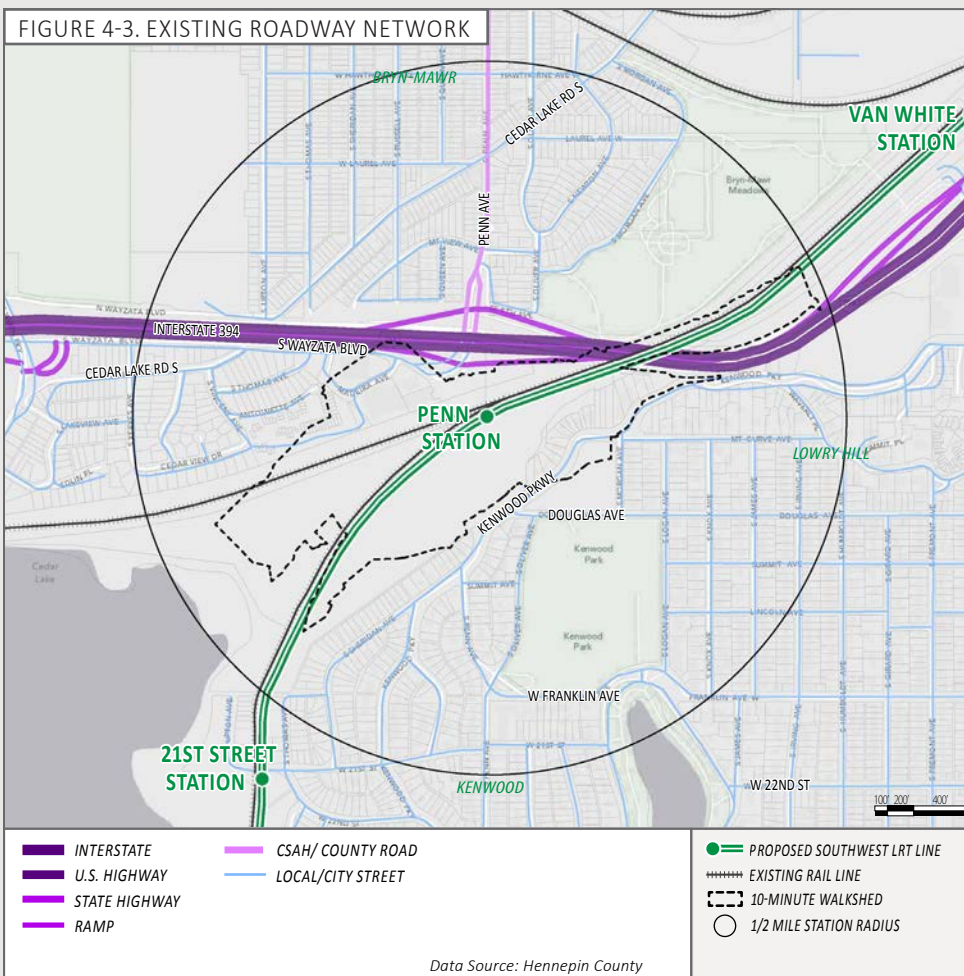
## Land Use

Much of the land use in the Penn station area is single-family residential. The Bryn Mawr neighborhood lies to the north and west of the station. The Kenwood and Lowry Hill neighborhoods lie to the east and south of the station. There is also a great deal of park and open space within the walkshed. Cedar Lake and Cedar Lake Park lie to the southwest of the station and Bryn Mawr Meadows Park is located to the northeast of the station. The station platform is located in the valley floor, sandwiched between these two open space amenities and is surrounded by passive open space and a regional trail network. Along the west side of the station platform is an active freight rail line. To the north of the station is I-394. A small amount of commercial/light industrial use is located just to the west of the station platform, along S. Wayzata Blvd.



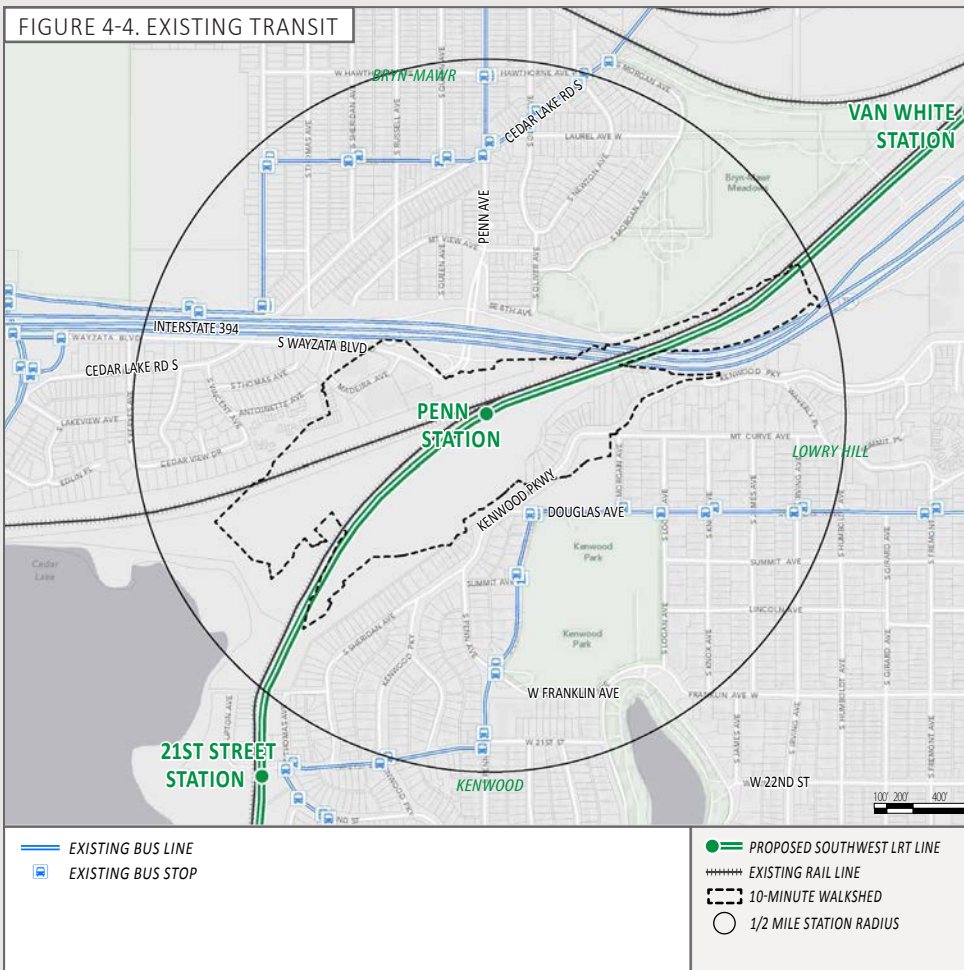
## Roadway Network

There is currently no public roadway access to the Penn station platform. The bluffs and freight rail are barriers to completing a roadway network to the station platform. The proposed station platform is located between I-394 and Kenwood Parkway, with no vehicular access to either. The nearest roadway connection to the station is at the south end of the Penn Avenue Bridge at S. Wayzata Blvd. Accessing the station platform from this roadway will require a pedestrian bridge and elevator to negotiate the bluff grade separation and pass over the freight rail line. This will provide access to areas north of the station. There is no vehicular access from the station to the Kenwood neighborhood.



## Transit

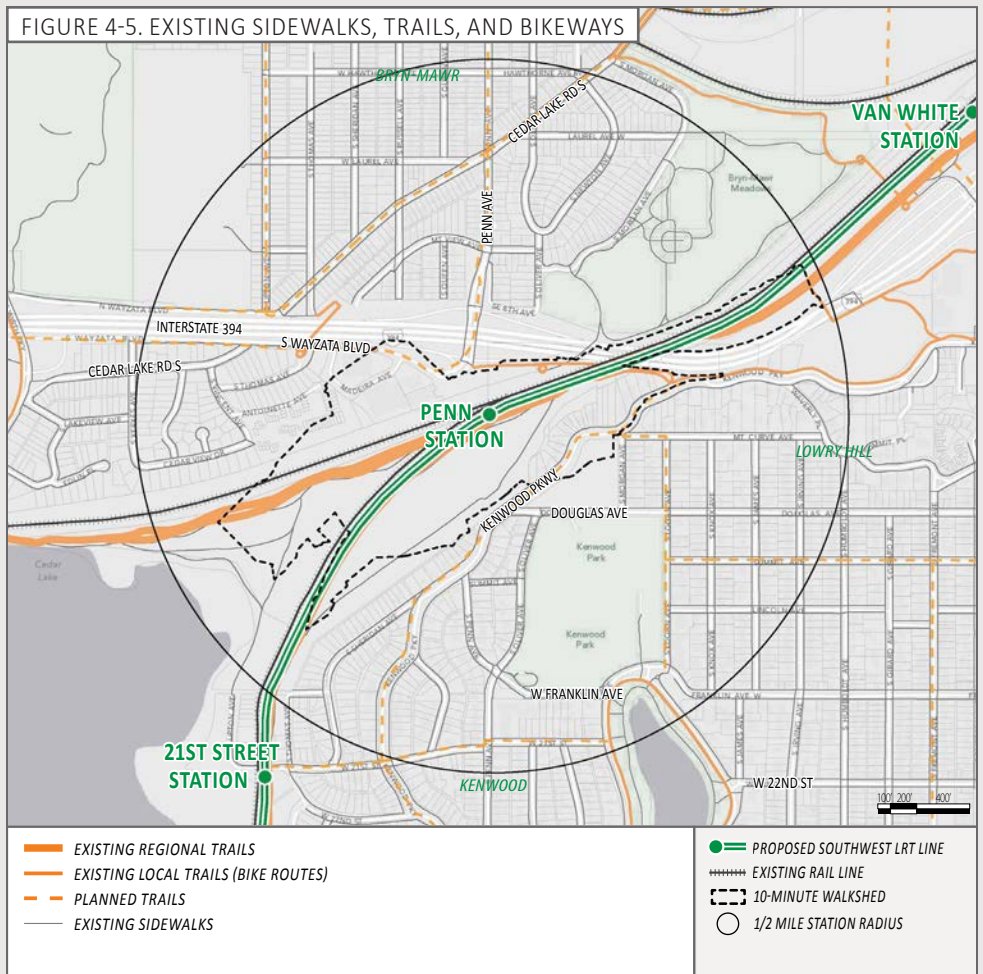
Existing bus transit connections to the Penn station are limited. Bus route #9 runs about a half-mile north of the station and route #25 runs about a half-mile south of the station. Express bus routes on I-394 do not stop near the station. There is an opportunity to increase transit ridership and connect the station with a bus route running north along Penn Avenue, with a bus dropoff and turnaround at S. Wayzata Blvd, just south of the Penn Avenue Bridge.



## Sidewalk, Trails and Bikeways

The street network in Bryn Mawr, Kenwood, and Lowry Hill neighborhoods has adequate sidewalks, however, they are disconnected from the station by the bluffs and the freight rail line. In the valley floor, where the station platform is located, the Kenilworth Trail and Cedar Lake LRT Regional Trails merge and run near the station platform, offering recreational and bicycle commuter users of these trails access to LRT.

There is an existing pedestrian/bicycle overpass on I-394, connecting the Bryn Mawr neighborhood to S. Wayzata Blvd., however, pedestrian and bicycle access to the station platform from the Bryn Mawr neighborhood will require vertical circulation (bridge and elevator) to transcend the bluffs and freight rail line. Pedestrian and bicycle access to the Kenwood and Lowry Hill neighborhoods can be enhanced with a new trail connection, staircase and ramps, offering more direct access to Kenwood Parkway.



## Sanitary Sewer

Sanitary sewer infrastructure consists of a collection of gravity flow sewer mains, lift stations, and pressurized forcemains that transport sewage to a wastewater treatment plant (WWTP). An efficient collection system has the capacity to accommodate all of the existing land uses within its particular sewershed. Beyond capacity, the material and age of pipes within a system can also impact a system's effectiveness.

Sanitary sewer infrastructure within the project area is typically maintained by either the City of Minneapolis or by the Metropolitan Council Environmental Services (MCES) Division. MCES maintains a series of interceptor trunk sewers that collect sewage at key locations and convey sewage across community boundaries to regional WWTPs. Wastewater from the station area is treated by the MCES Metro WWTP located in St. Paul.

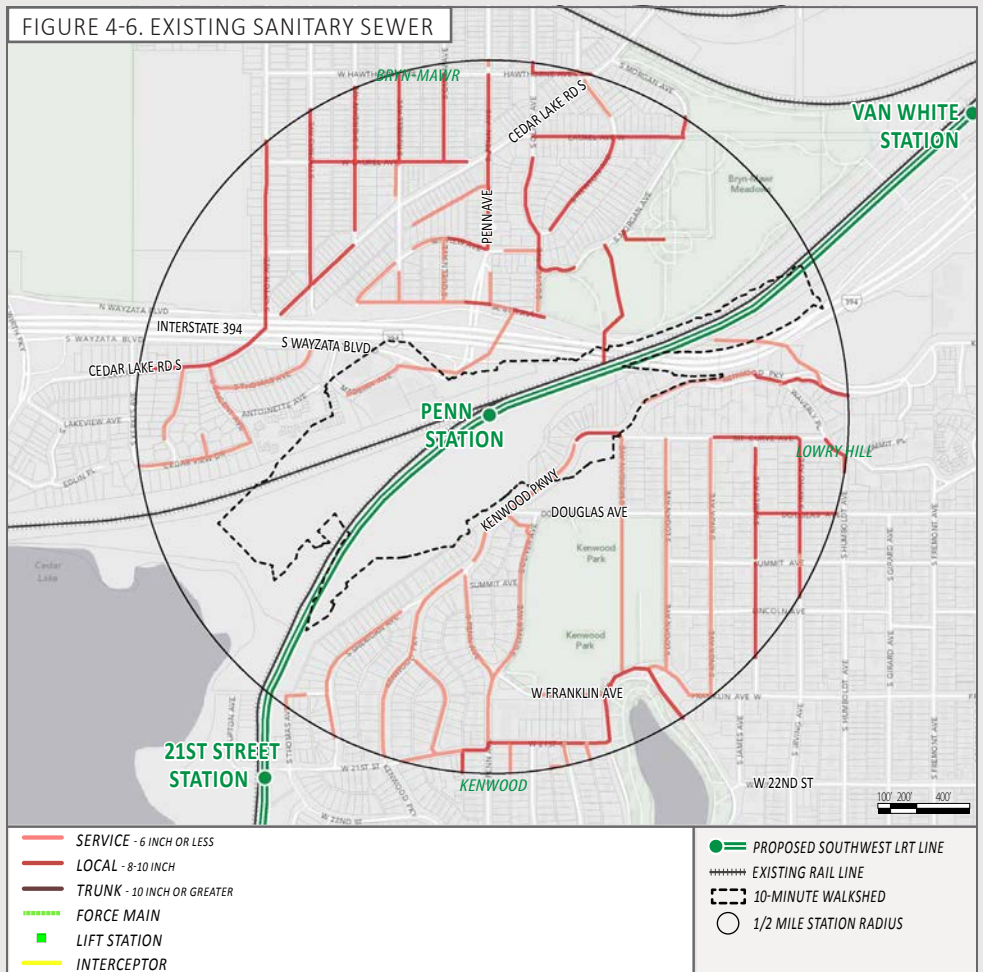
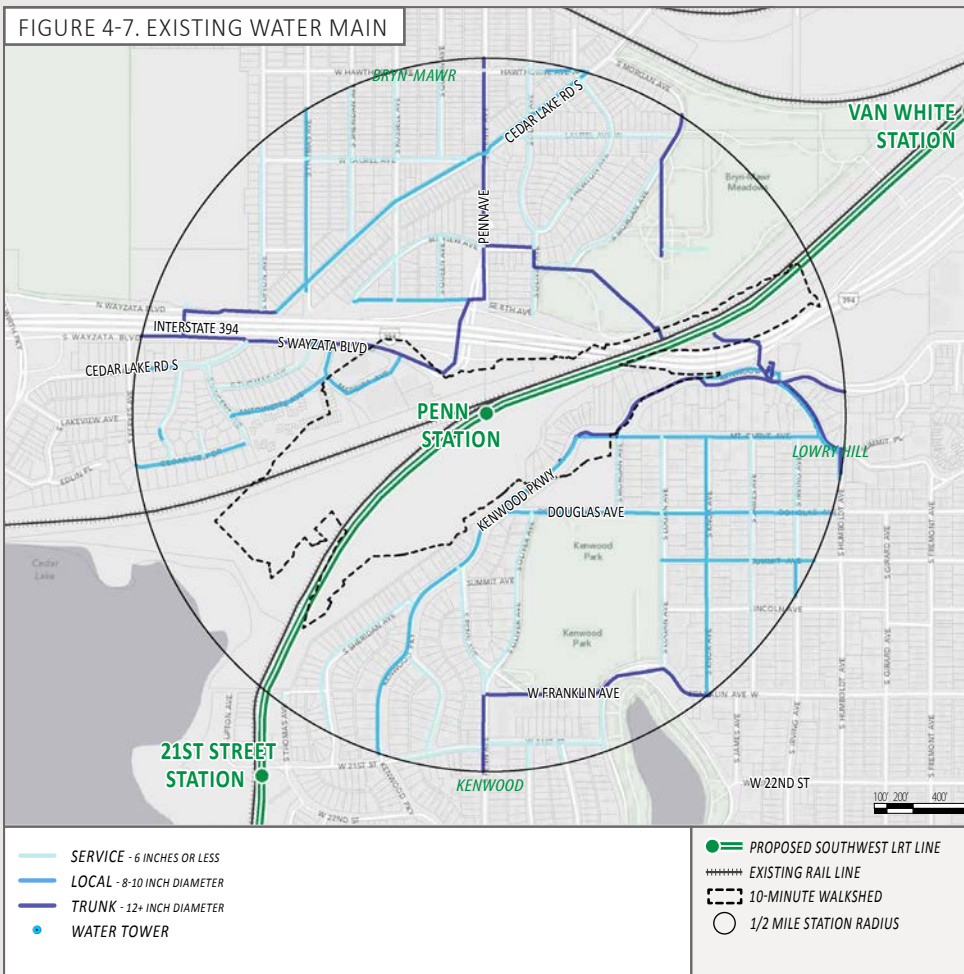


FIGURE 4-7. EXISTING WATER MAIN

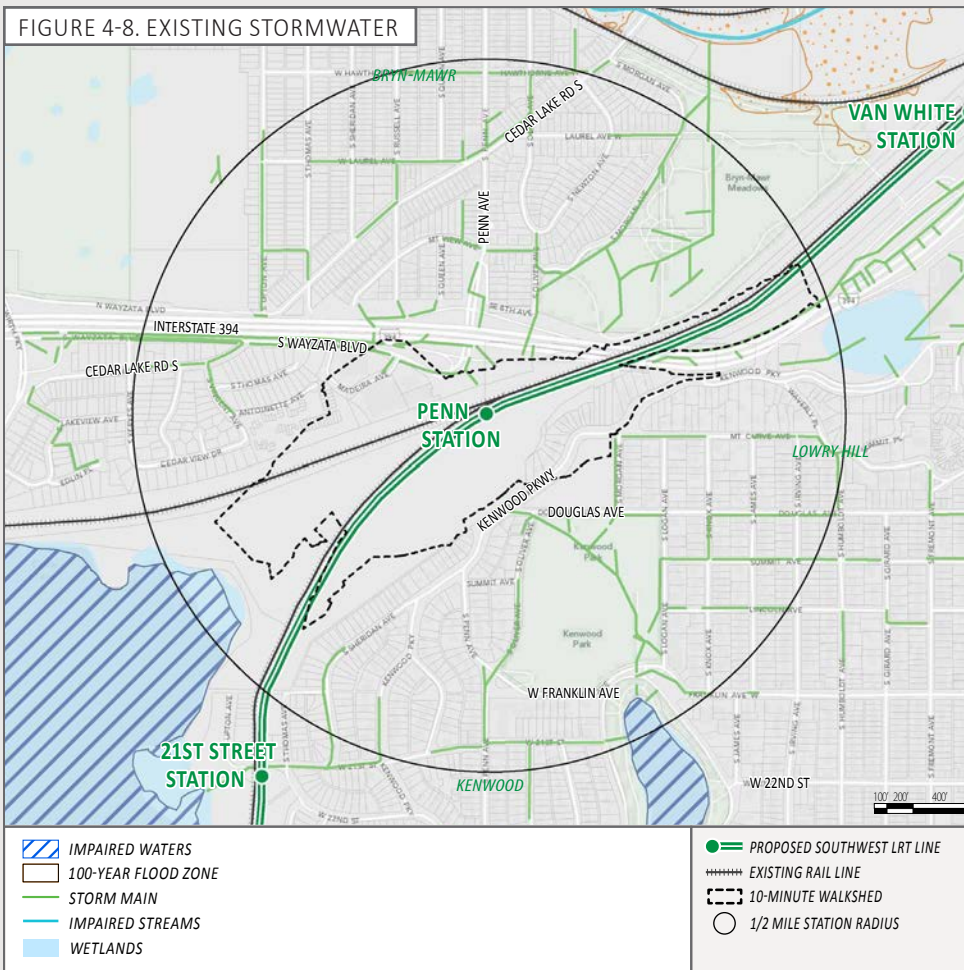


## Water Main

Water main distribution systems serve to supply potable water to individual properties and to support fire suppression throughout the community. A well-designed system can maintain adequate pressure to support demand of individual properties and provide high flow rates to fire hydrants/fire suppression systems in emergency situations. Because of the complexity of water distribution networks and the importance of pressure, flow, and water quality, City water system models are used to evaluate a system's adequacy. The material and age of the system's water mains can also be factors in system breaks, leaks, and pressure and flow degradations.

Water pressure and flow rates can be influenced by: the size of water main serving an area, proximity and elevation relative to a water tower, proximity to a trunk water main with high flow capacity, if the main creates a loop, the demand of adjacent land uses, and the condition of the main.

FIGURE 4-8. EXISTING STORMWATER



## Stormwater

Penn station is located within the Minnehaha Creek Watershed District (MCWD), while the north half of the 10-minute walk zone is within the Bassett Creek Watershed Management Commission (BCWMC). The north half of the 10-minute walk zone drains to Bassett Creek which is impaired by chloride (TMDL approved), fecal coliform, and fish biology. The south half of the 10-minute walk zone drains to Lake of the Isles or Cedar Lake, both of which are impaired by PFOS (Fluorinated chemical used in coatings) and mercury.

Discharging within one mile of an impaired water may trigger additional MN Pollution Control Agency NPDES (National Pollution Discharge Elimination System) requirements for additional stormwater management. For impaired waters where a TMDL (Total Maximum Daily Load) has been approved, these requirements may increase further.

Any development/redevelopment that occurs as a result of constructing this station is anticipated to improve the existing drainage conditions as a result of enforcing the City and the watershed requirements.

## Where Are We Going?

The plans and diagrams on the following pages illustrate a range of recommendations for infrastructure improvements, station amenities, and potential redevelopment opportunities within the station area.

*The ACCESS AND CIRCULATION PLAN shown in Figure 4-9 provides a high level view of how future transit, automobile, bike, and pedestrian systems will connect to the station area and its surroundings.*

*Figure 4-10 illustrates the STATION AREA IMPROVEMENTS that will facilitate access to and from the station and catalyze redevelopment in the station area. This includes opening day and long-term station area improvements*

*Figure 4-11 focuses on OPENING DAY STATION AREA IMPROVEMENTS only. These recommendations represent the improvements necessary to enhance the efficient function of the transit station, roadways, pedestrian and bicycle connections, and transit connections on opening day in 2018.*

## Station Area Improvements

The discussion below outlines a range of future station area improvements. While some of the identified improvements may be constructed as part of the LRT project itself, other improvements must be funded, designed and constructed by other entities and will require coordination between the City, County, and Metro Transit as well as local stakeholder and community groups.

Since the Penn Avenue LRT station will be located down in the Cedar Lake Park valley at a lower grade than surrounding neighborhoods, destinations and streets, access and circulation will need to be expanded and improved to navigate this grade change. The I-394 freeway corridor and freight rail lines will also need to be navigated with streets, pedestrianways, and bikeways. Specific actions that could enhance the station area include the following:

### PEDESTRIAN CONNECTIONS

#### Opening Day Improvements:

- » Penn Avenue is a key spine to neighborhoods and businesses north of the station. Improve the pedestrian environment (sidewalks, pedestrian crossings, street trees, etc.) along Penn Avenue to provide better connections to the station.
- » Improve pedestrian connections to surrounding neighborhoods (Bryn Mawr, Kenwood, Lowry Hill, Harrison) with enhanced streetscapes, trails and pedestrian crossings.
- » Enhance the pedestrian connections on the Penn Avenue Bridge crossing over I-394. Consider aesthetic improvements to the bridge – create a landmark bridge/gateway feature into downtown Minneapolis.
- » Create a new bridge at the south end of Penn Avenue crossing the freight and LRT lines down to the LRT station platform. Design an attractive, identifiable bridge structure that provides access to the station platform for all users.
- » Provide vertical circulation (elevator) to the LRT station platform from the proposed pedestrian/bike bridge.
- » Provide connections to the existing trail system (Cedar Lake LRT Regional Trail and Kenilworth Trail) from the LRT station.

- » Provide a new direct trail connection to Kenwood Parkway/ Douglas Avenue.
- » Construct new sidewalks along S. Wayzata Boulevard and Madeira Avenue.

### BIKE CONNECTIONS

#### Opening Day Improvements:

- » Provide bike parking, lockers, and bike pumping facilities in a highly visible area near the LRT station and near the bus stop area at the north end of the pedestrian/bike bridge above the bluff.
- » Provide vertical circulation to the station platform from the proposed pedestrian bridge.
- » Provide connections to the existing trail system (Cedar Lake LRT Regional Trail and Kenilworth Trail) from the station.



Multi-use path





Multi-modal transit hub



Public art integration in station platform design

### Long-Term Improvements:

- » Penn Avenue is a key spine to the north. Improve the bicycle environment (lanes or multi-use path) along Penn Avenue to provide better connections to the LRT station from the north.
- » Provide on-street bike facilities (lanes, routes, signage, etc.) or multi-use paths along local streets to better connect the LRT station to nearby neighborhoods, businesses, amenities, and destinations.

### TRANSIT CONNECTIONS

#### Opening Day Improvements:

- » Improve transit connections between north and south Minneapolis neighborhoods by extending bus service to the south end of Penn Avenue and the LRT station.
- » Accommodate future bus route facilities at the Penn Avenue and S. Wayzata Boulevard intersection.

### KISS AND RIDE

#### Opening Day Improvements:

- » Provide space for kiss and ride activities near the south end of Penn Avenue.

### STATION AMENITIES (Beyond SW LRT Base Project Scope)

#### Opening Day Improvements:

- » Wayfinding- define and install a cohesive and contextual wayfinding system near the LRT station platform and major gateways, such as Penn Ave/Wayzata Blvd, Cedar Lake LRT Regional Trail, Kenilworth Trail, Kenwood Pkwy/Douglas Ave.
- » Shelter- provide shelter from weather, seating, lighting, and transit information at the bus dropoff area to make use of the transit system a convenient, safe and comfortable experience. Since the station has a somewhat isolated location down in the valley, the station should be designed to ensure actual and perceived safety for transit riders.
- » Seating – provide comfortable and durable seating near the

station platform and at the bridge/bus dropoff area above the station platform.

- » Lighting – provide adequate lighting for the safety of pedestrians, bicyclists and transit users near the station platform, particularly at the bus dropoff area, bridge and elevator.
- » Pedestrian Facilities – provide pedestrian connections from the station platform to the Cedar Lake LRT Regional Trail and Kenilworth Trail. Provide a pedestrian/bike bridge for the Cedar Lake LRT Regional Trail from the west over the freight and LRT line. Provide a pedestrian/bike bridge from the south end of Penn Ave over the freight and LRT lines and vertical circulation down to the LRT station platform.
- » Bike Facilities – provide bicycle parking, lockers, and bike sharing facilities in a highly visible area near the station platform and bus dropoff area.
- » Plaza – provide a small public plaza area near the bus dropoff area. The plaza will fulfill the role of a transit hub on top of the bluff that accommodates a bus stop, bike facilities, pedestrian facilities, and a kiss & ride.
- » Public Art- incorporate public art in the station area to create an attractive and identifiable place.

### DEVELOPMENT POTENTIAL

#### Opening Day Improvements:

- » The property between Madeira Ave and the LRT line could be developed by opening day.

#### Long-Term Improvements:

- » See the “Development Potential” discussion on page 4-16 for more on long-term development opportunities.

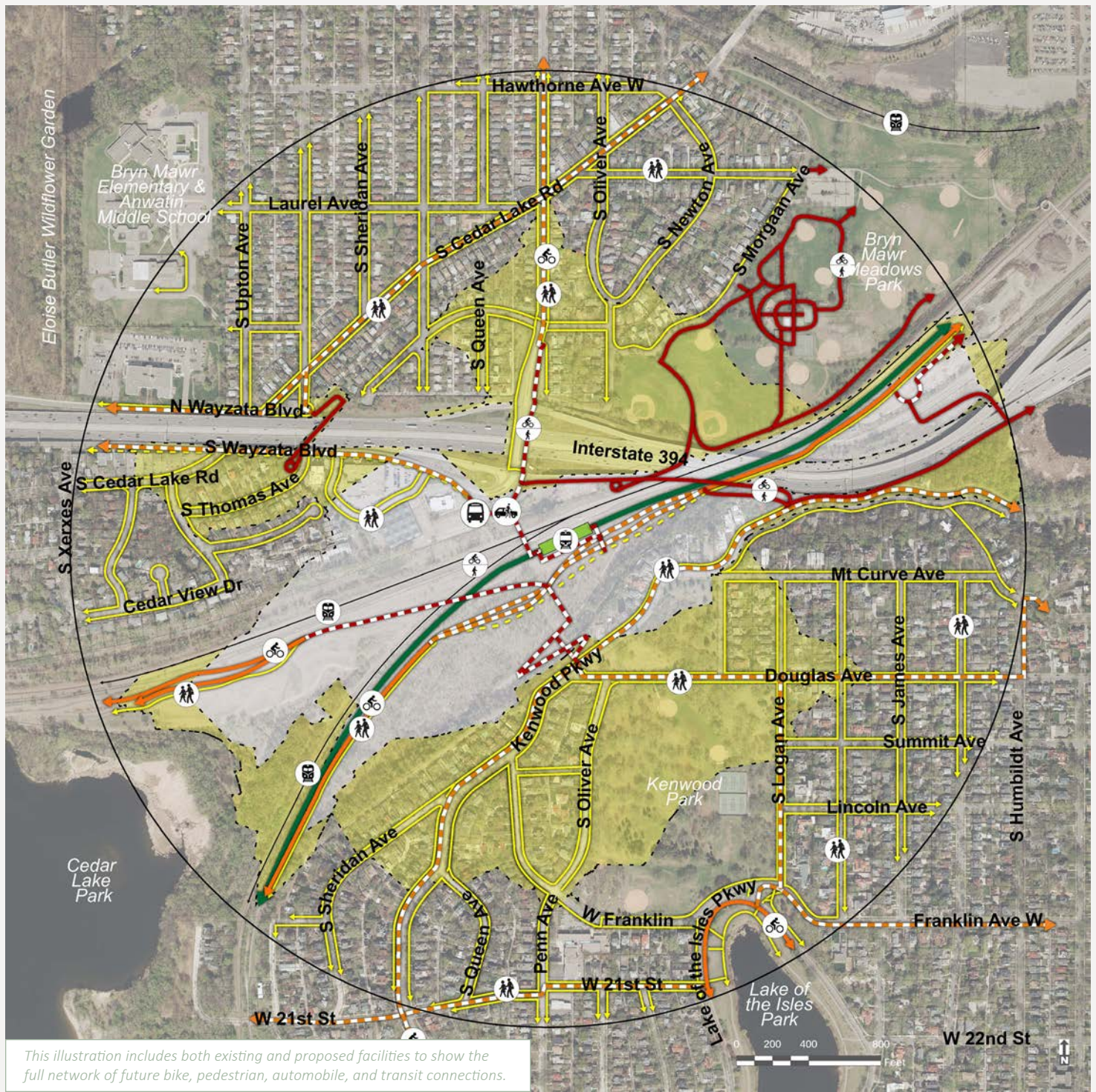
### UTILITIES

- » See the “Station Area Utility Plan” beginning on page 4-18 for all utility recommendations.

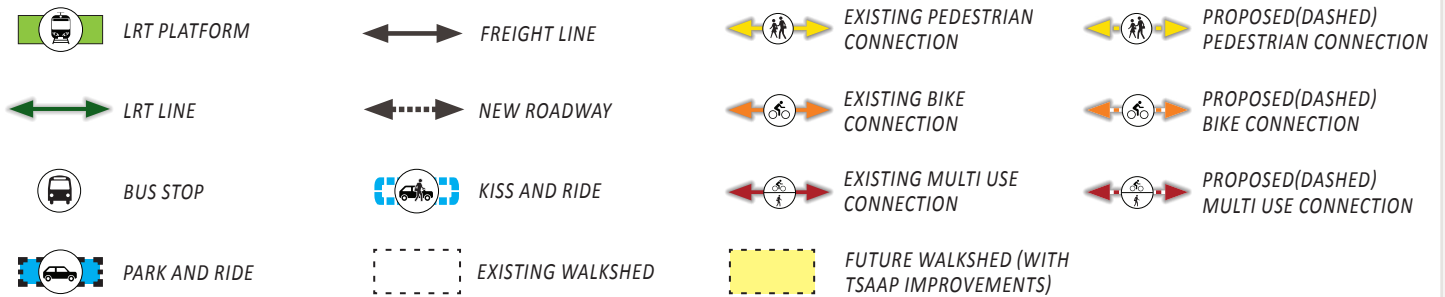
FIGURE 4-9. ACCESS + CIRCULATION PLAN

WHERE ARE WE GOING?

PENN

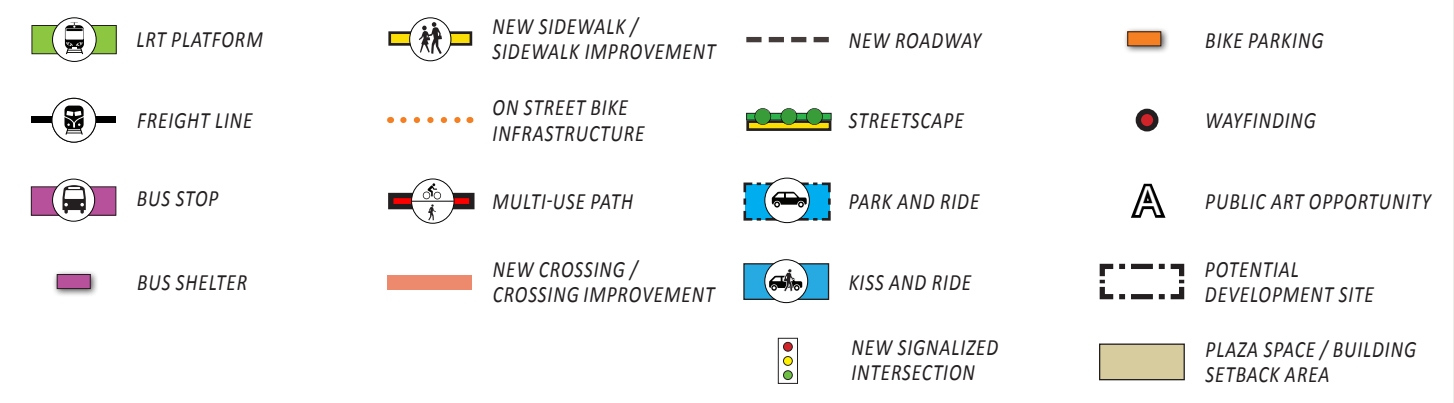
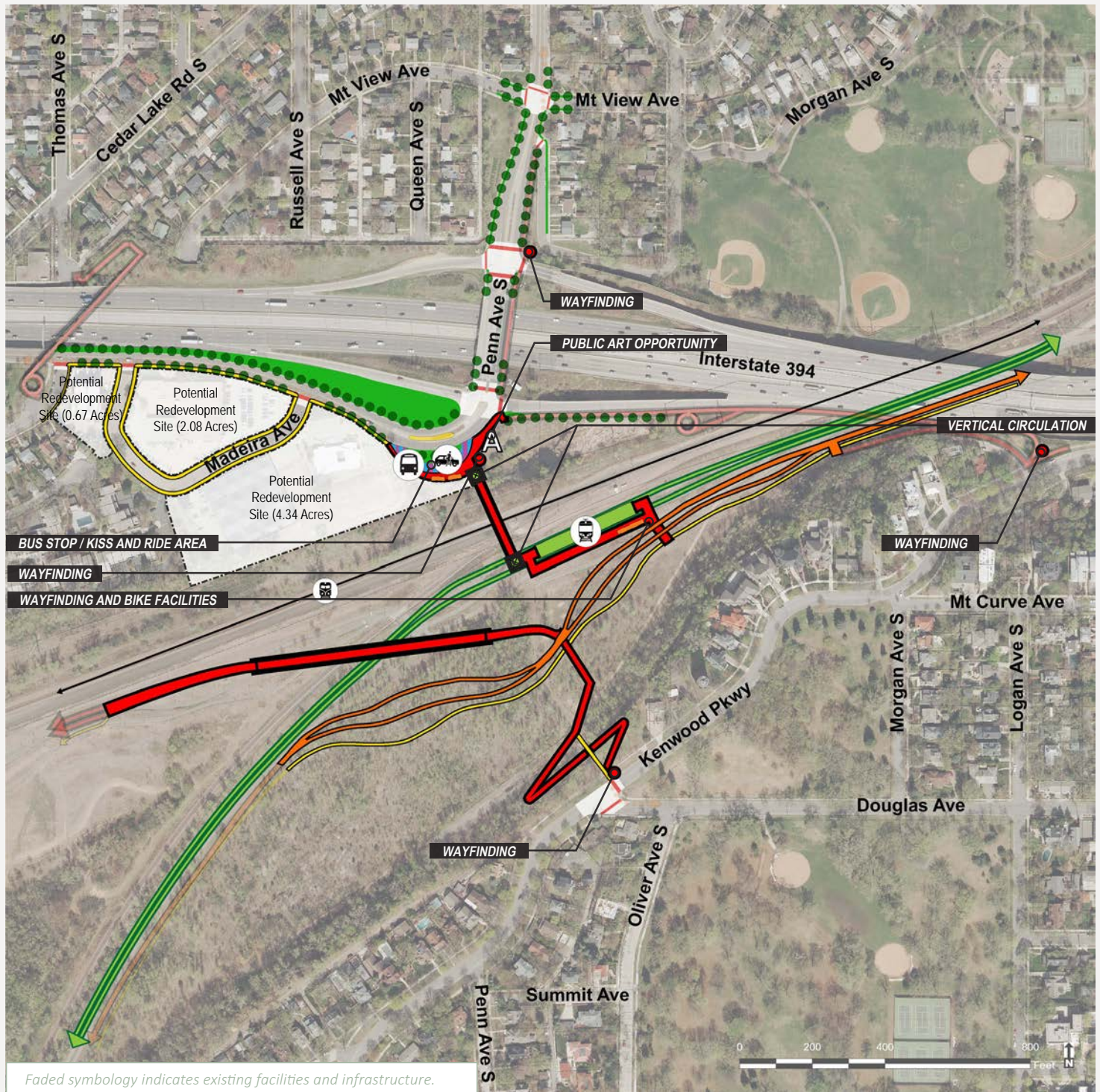


This illustration includes both existing and proposed facilities to show the full network of future bike, pedestrian, automobile, and transit connections.



NOTE: Existing walkshed approximates the area accessible within a 10-minute walk from the station platform using only the existing sidewalk/trail network. Future walkshed incorporates all proposed improvements to the sidewalk/trail network. Walksheds are based on GIS modeling and available sidewalk/trail information- and may not reflect exact on-the-ground conditions. See Glossary for detailed explanation of walkshed assumptions and methodology.

FIGURE 4-10. STATION AREA IMPROVEMENTS



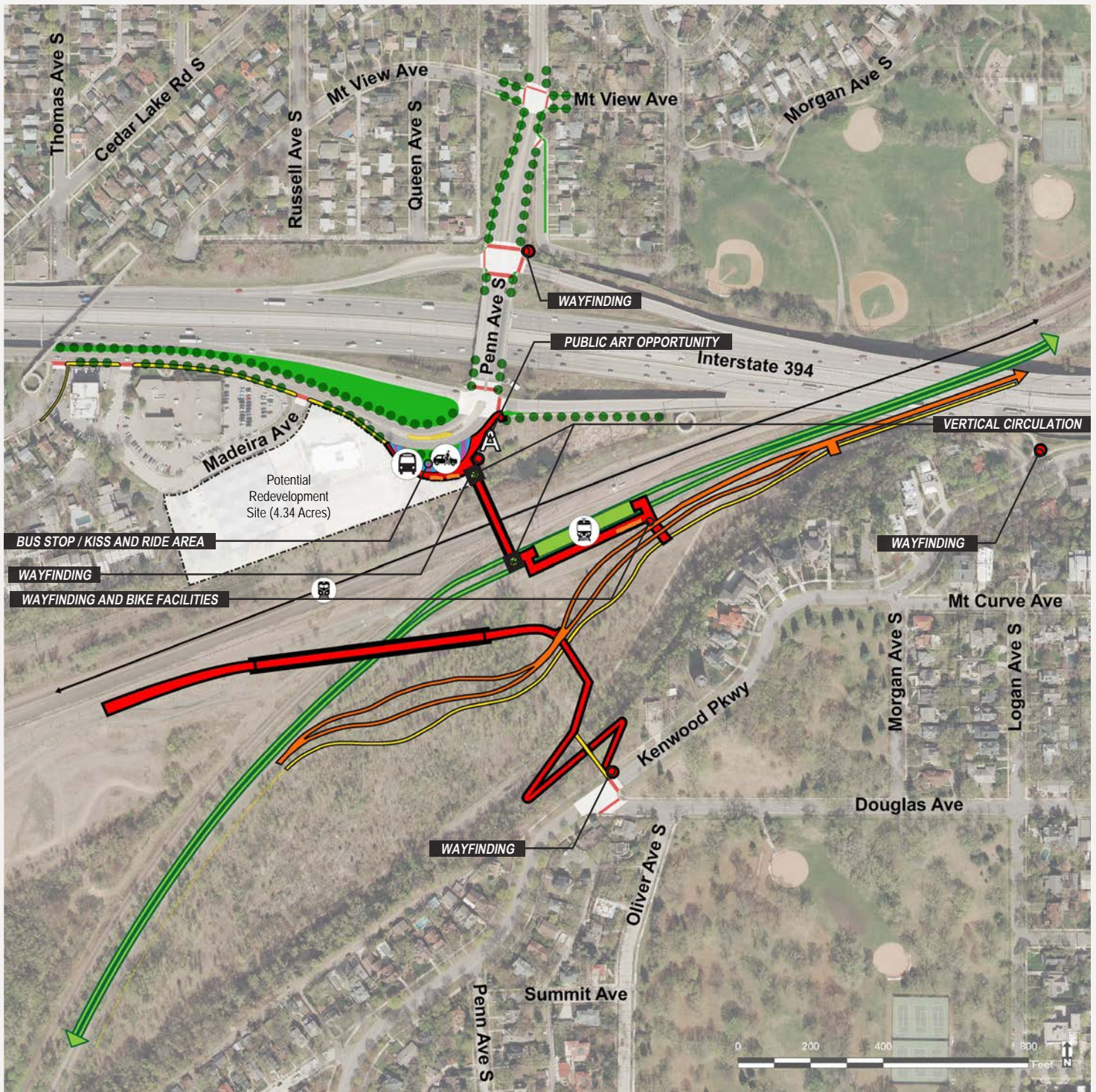
WHERE ARE WE GOING?

PENN

FIGURE 4-11. OPENING DAY STATION AREA IMPROVEMENTS

WHERE ARE WE GOING?

PENN



- |  |              |  |                                     |  |                                     |  |                            |
|--|--------------|--|-------------------------------------|--|-------------------------------------|--|----------------------------|
|  | LRT PLATFORM |  | NEW SIDEWALK / SIDEWALK IMPROVEMENT |  | NEW ROADWAY                         |  | BIKE PARKING               |
|  | FREIGHT LINE |  | ON STREET BIKE INFRASTRUCTURE       |  | STREETSCAPE                         |  | WAYFINDING                 |
|  | BUS STOP     |  | MULTI-USE PATH                      |  | PARK AND RIDE                       |  | PUBLIC ART OPPORTUNITY     |
|  | BUS SHELTER  |  | NEW CROSSING / CROSSING IMPROVEMENT |  | KISS AND RIDE                       |  | POTENTIAL DEVELOPMENT SITE |
|  |              |  | NEW SIGNALIZED INTERSECTION         |  | PLAZA SPACE / BUILDING SETBACK AREA |  |                            |

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## Opening Day Improvements

The following tables and diagrams outline the proposed improvements to be implemented in advance of SW LRT's opening day in 2018. Table 4-1 and Figure 4-12 show opening day improvements that are part of the SW LRT anticipated base project scope; these improvements will be part of the overall project cost for construction of the LRT line. Table 4-2 and Figure 4-13 include opening day improvements that are recommended as part of the Southwest Corridor Investment Framework and are beyond the SW LRT anticipated base project scope.

TABLE 4-1. SOUTHWEST LRT ANTICIPATED BASE PROJECT SCOPE - OPENING DAY STATION AREA IMPROVEMENTS

PLAN KEY	IMPROVEMENT	PROJECT LOCATION	PROJECT NOTES
A	LRT Platform	In regional trail valley, south of I-394, near Penn Ave and Wayzata Blvd	Includes related LRT infrastructure
B	Kiss and Ride	At Penn Ave and Wayzata Blvd intersection	Pullout dropoff area and turnaround; this area can also accommodate future bus routes
C	Roadways	At Penn Ave and Wayzata Blvd intersection	Roadway and median modifications to accommodate Kiss and Ride facility
D	Sidewalk/Trail	Station platform area vertically up to Penn Ave and Wayzata Blvd intersection	New ped bridge and vertical circulation (elevator)
E	Sidewalk/Trail	Station platform area	New grade separated trail crossing of freight rail and LRT lines
F	Bike Facilities	Near station platform	Allowance for bike storage
G	Wayfinding	Near station platform	Allowance
H	Landscaping	Near station platform	Allowance
I	Water*	Near station platform	New water service and fire hydrant to station
J	Sanitary Sewer*	Near station platform	New sanitary sewer to station
K	Utilities*	Project limit area	Adjustment of existing utilities
L	Stormwater management*	Near station platform	Allowance

Note: Anticipated Southwest LRT Base Project Scope as of December 2013 (subject to change)

\* Improvement not symbolized on opening day figures (exact location to be determined as part of the base project scope)

TABLE 4-2. SOUTHWEST CORRIDOR INVESTMENT FRAMEWORK (TSAAP) - OPENING DAY STATION AREA IMPROVEMENTS

PLAN KEY	IMPROVEMENT	PROJECT LOCATION	PROJECT NOTES	PRIORITY
1	Streetscape	Wayzata Blvd, Penn Ave west to I-394 ped/bike bridge	Includes streetscape plantings, furnishings, lighting, bike facilities and signage	Secondary
2	Streetscape	Penn Ave, Mt View Ave to Wayzata Blvd	Includes streetscape plantings, furnishings, lighting and signage	Secondary
3	Sidewalk/Trail	Wayzata Blvd, Penn Ave west to I-394 ped/bike bridge	Sidewalk along south side of road	Primary
4	Sidewalk/Trail	I-394, Penn Ave east to Kenwood Pkwy	Lighting, safety and wayfinding elements along existing ground-level trail on south side of I-394	Primary
5	Sidewalk/Trail	LRT station to Kenwood Pkwy	New trail connection from station platform to Kenwood Pkwy (includes stairs and ramps)	Primary
6	Intersection Enhancements	Varies- along Penn Ave, Wayzata Blvd and Kenwood Pkwy	Enhanced crosswalk markings	Primary and secondary
7	Bike Facilities	Near station platform	Bike parking, lockers, pump station and bike share facilities (beyond SPO improvements)	Primary
8	Wayfinding	Near station platform	Signage and wayfinding (beyond SPO improvements)	Primary
9	Public Art	Near station platform	Public art (beyond SPO improvements)	Secondary
10	Public Plaza	South end of Penn Avenue	Plaza includes paving, plantings, seating, lighting, and signage (beyond SPO improvements)	Primary

FIGURE 4-12. SOUTHWEST LRT ANTICIPATED BASE PROJECT SCOPE - OPENING DAY STATION AREA IMPROVEMENTS

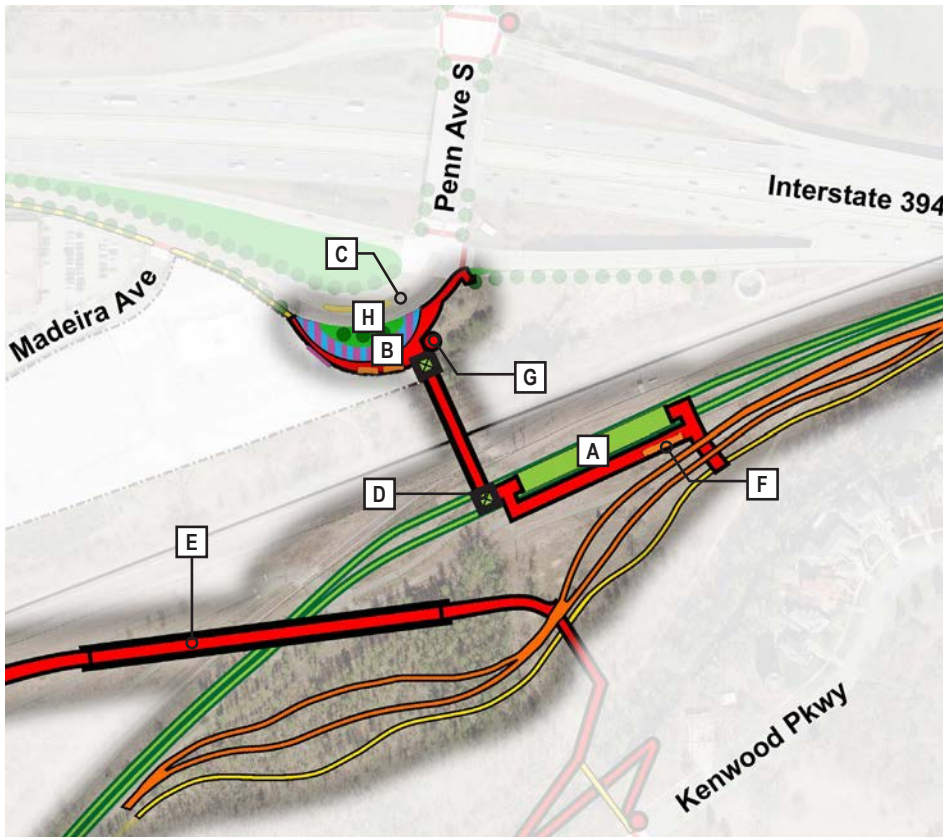
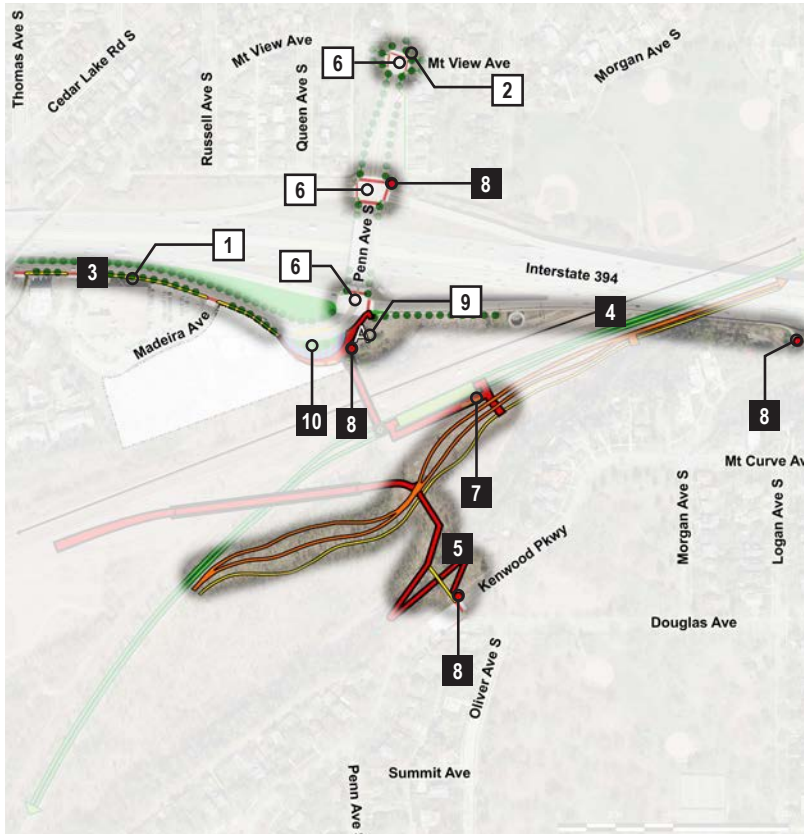


FIGURE 4-13. SOUTHWEST CORRIDOR INVESTMENT FRAMEWORK (TSAAP) - OPENING DAY STATION AREA IMPROVEMENTS



**#** PRIMARY PRIORITY      **#** SECONDARY PRIORITY

# Development Potential

## OVERVIEW

Visibility and vehicular access from I-394 could spur development near the Penn station, however, the lack of available sites beyond the parcels immediately adjacent to the station and poor connections to the neighborhoods to the north and south may limit potential future development at the Penn station.

Convenient access from I-394, proximity to the Cedar Lake LRT Regional Trail/Kenilworth Trail system and views of the downtown Minneapolis skyline are site factors that are likely to drive development interest near Penn station. Development potential near the Penn station is likely to be high-density residential and/or office, capitalizing on these station assets.

Key challenges that should be addressed to facilitate development potential include access and connections to surrounding destinations and neighborhoods from the station.

## LAND USES

The Bryn Mawr Neighborhood Land Use Plan calls for transit-oriented development in the Penn station area. There is potential for high-density residential and/or office development near the Penn station.

## PLANNING STRATEGIES

Several strategies should be addressed to facilitate future development in the station area. Poor north-south connectivity creates challenges to accessing the station. Redevelopment should seek opportunities to enhance access and circulation to the station from surrounding neighborhoods and amenities.

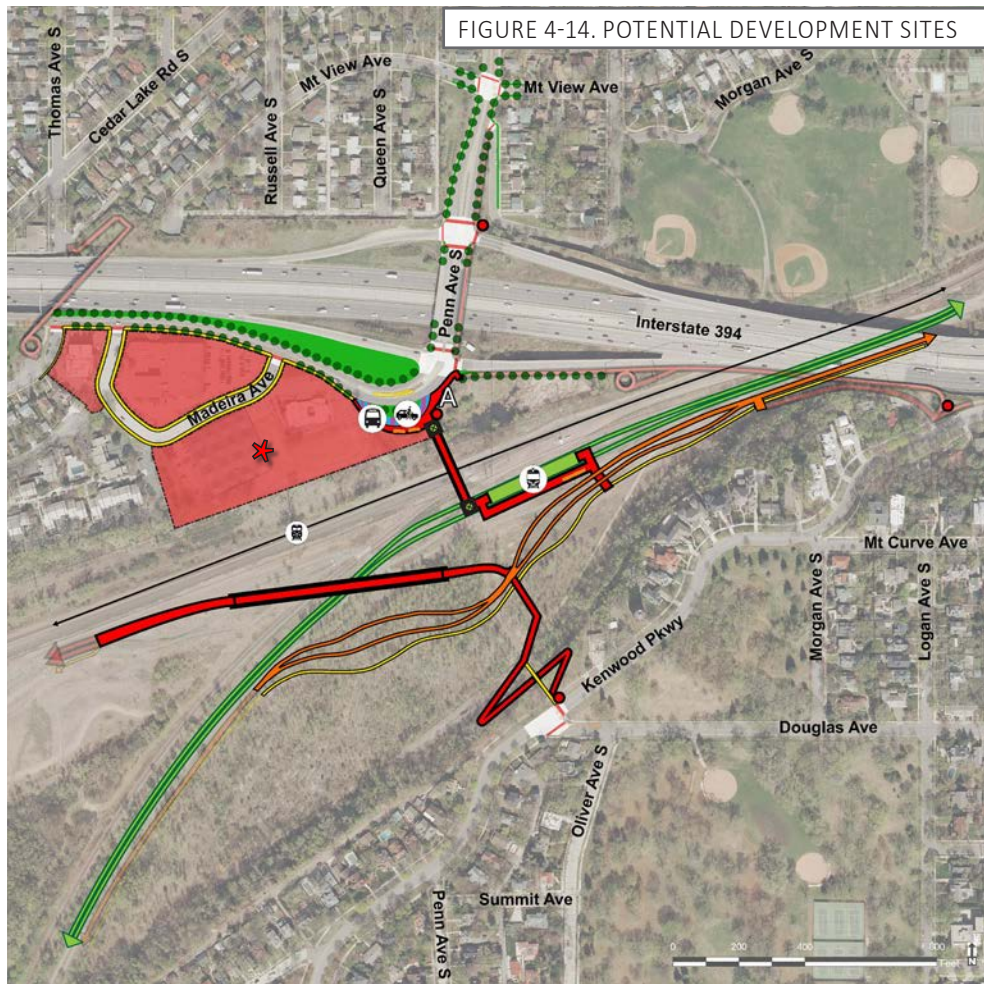


FIGURE 4-14. POTENTIAL DEVELOPMENT SITES

**FUTURE LAND USE:**

- MIXED-USE, COMMERCIAL & OTHER
- OPENING DAY DEVELOPMENT POTENTIAL



# Key Considerations for Change and Development Over Time

Redevelopment of the station area should focus on providing higher density residential or commercial uses along Madiera Avenue and improving pedestrian connections along Penn Avenue and west towards the pedestrian and cycling bridge. Key considerations should include:

## BUILT FORM AND LAND USE

- » Introduce higher density residential or office development to support transit ridership and increase levels of activity at the station.
- » Explore opportunities for a moderate amount of retail or service related uses at street level immediately adjacent to the station to serve passengers transferring between bus and LRT services or being dropped off by car.
- » Design new buildings to enhance pedestrian access by orienting them towards the street and locating them as close to the street line as possible.
- » Organize new development so that it addresses Madiera Avenue in order to create a comfortable walking street between the station and pedestrian bridge at the foot of Thomas Avenue.
- » Organize development adjacent to the pedestrian bridge to preserve a clear and direct pedestrian connection between the foot of the bridge at Thomas Avenue and Madiera Avenue.
- » Organize new buildings adjacent to the valley to preserve views from Madeira Avenue south.
- » Design and orient the pedestrian and cycling bridge to the station so that it anchors the vista along Penn Avenue and creates a highly visible landmark for the station.

## PUBLIC REALM

- » Initiate intersection improvements at Penn Avenue and the highway off-ramps to improve safety and enhance access between the Bryn Mawr neighborhood and the station.
- » Initiate bridge enhancements including the widening of sidewalk widths, introduction of railings and provision of pedestrian-oriented lighting in order to improve the walk between the Bryn Mawr neighborhood and the station.
- » Provide a higher level of illumination in and around the station platform including the provision of a designated waiting area with two-way intercom system and video surveillance.

## MOBILITY

- » Develop an accessible pedestrian and cycling bridge from the foot of Penn Avenue to the end of the station platform.
- » Provide a direct, public access route between the pedestrian and cycling bridge and the Kenilworth Trail and Cedar Lake LRT Regional Trail.

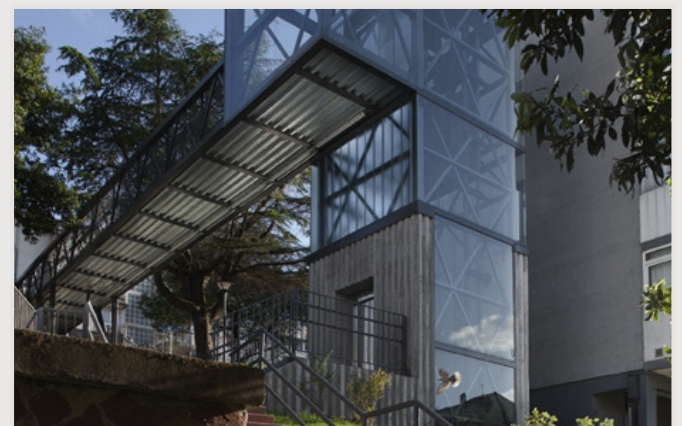
- » Develop a trail and accessible connection between the pedestrian and cycling bridge and Kenwood Parkway to the south.
- » Support pedestrians through the introduction of sidewalks on all streets within the station area.
- » Accommodate short-term parking on Madeira Avenue.
- » Minimize the impact of parking and circulation on pedestrians by locating parking below grade or to the rear of new development where it can be shielded from streets and open spaces.
- » Limit vehicular access points along S. Wayzata Boulevard.



Bridge from station to Penn Avenue and development sites



High density residential



Pedestrian and bike bridge

## Station Area Utility Plan

### OVERVIEW + APPROACH

The station area utility plan and strategies recommended below were developed by considering impacts on existing utilities by the construction of the LRT line, and potential future transit-oriented development within the station area, as depicted by the Station Area Improvements Plan (Figure 4-10). Opening day improvements identified in this plan should be considered prior to 2018 due to their proximity to or impact from the proposed LRT line. More improvements may be necessary by 2018, but should be reviewed with any redevelopment in the area. The City of Minneapolis should continue to follow their standard review procedures as it relates to utilities within project areas.

For any publicly initiated projects in the ROW, the City should follow current utility review procedures. This may include identifying needs and opportunities that may be coordinated with proposed improvements to the roadway or other elements in City ROW.

For any privately initiated projects in the area, the City should follow current development/redevelopment procedures which will likely require developers to show anticipated utility system demand. Developers will need to coordinate with the City to ensure utilities are sized and located properly prior to construction. The City of Minneapolis Community Planning and Economic Development website can be found here: <http://www.ci.minneapolis.mn.us/cped/>. This study recognizes that the ultimate station area development/redevelopment (in 2030) will be driven by market conditions.

### GENERAL RECOMMENDATIONS - SANITARY SEWER & WATER MAIN

Utility recommendations for station area improvements include opportunities for Minneapolis to improve the existing sanitary sewer and water main networks without necessarily replacing existing sanitary sewer. As part of the City's standard practice, utilities will be reviewed in conjunction with proposed station area improvements within the ROW; Any necessary utility improvements will be determined at the time of said review. As redevelopment occurs, developers will be required to provide documentation to verify that existing utilities meet the needs of the proposed development. Developers will coordinate with the City prior to project approvals.

### GENERAL RECOMMENDATIONS – STORM SEWER

Local storm sewer improvements are recommended to be completed in conjunction with other improvements in the station area. Improvements which may require storm sewer modifications include: roadway realignments, roadway extensions, and pedestrian sidewalk/street scape improvements. Storm sewer improvements may consist of: storm sewer construction, manhole reconstruction, drain tile extensions, storm sewer relocation, and complete replacement. These local storm sewer improvements are included as part of the overall cost of roadway and streetscape improvements recommended in this plan. Where roadway/streetscape improvements are part of the SW LRT anticipated base project scope, associated storm sewer improvements are assumed to be a project cost. Coordination with the local watershed district and other agencies may be needed to review the condition of and capacity of existing trunk storm sewer systems serving more regional surface water needs.

**NOTE: No site specific utility needs have been identified for this station beyond these general utility recommendations and utility improvements identified as part of the SW LRT Anticipated Base Project Scope (see Table 4-1). As such, no diagram is provided for the station area utility plan. General utility recommendations should be reviewed prior to site construction.**

## STORMWATER BEST MANAGEMENT PRACTICES

There are numerous stormwater best management practices (BMPs) that can be used to address stormwater quality and quantity. As part of this project, BMP guides were developed for four stations (Royalston, Blake, Shady Oak, and Mitchell) which exemplify the range of development intensity and character in the urbanized environment along the Southwest LRT Corridor. The recommendations and practices identified in each of the four BMP guides are applicable to various stations along the corridor.

Potential stormwater management strategies for this station area may be similar to those shown in the BMP guide for the Royalston Station (see p. 2-26). Minneapolis should consider implementing applicable best management practices similar to those in the Royalston Station BMP guide. Stormwater management recommendations should be constructed in conjunction with public and private improvements and future development/redevelopment in the station area.

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