

GOLDEN TRIANGLE STATION

CITY OF EDEN PRAIRIE

SOUTHWEST CORRIDOR INVESTMENT FRAMEWORK
TRANSITIONAL STATION AREA ACTION PLAN



Hoisington Koegler Group Inc.



SOUTHWEST LRT
community works
www.swlrtccommunityworks.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 15-2

A brief overview of the station location and its surroundings

WHERE ARE WE TODAY? 15-4

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

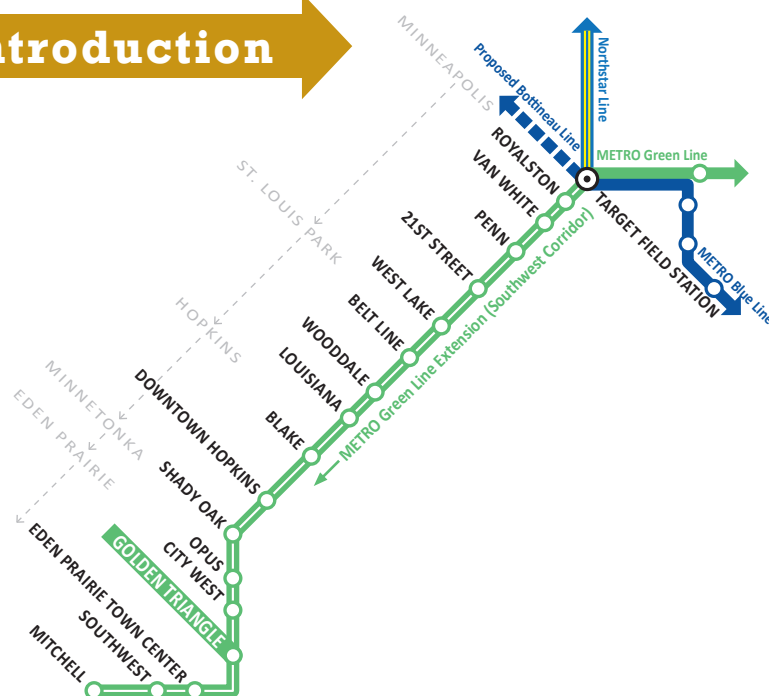
- » Land Use
- » Transit Connections
- » Access + Circulation Issues (Bike, Ped, and Auto)
- » Infrastructure Needs

WHERE ARE WE GOING? 15-8

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



GOLDEN TRIANGLE STATION WITHIN THE CORRIDOR:

An existing employment center with potential for significant redevelopment and the introduction of a mix of new housing structured around a finer grained pattern of street and blocks.

EMPLOYMENT The station is located east of Highway 212 in the western end of the Golden Triangle Area, and is identified as a major employment center (see Place Types discussion beginning on p. 1-19). The Visi Data Center to the east and the corporate headquarters of SuperValu in the southwest are among the many major employers in the Golden Triangle. Much of the property bordering the station is owned by Liberty Property Trust, which has plans to introduce new development in the future. Employees of area businesses will be a significant generator of transit ridership. In addition, park and ride lots to the east and south of the station platform will support transit use.

NEIGHBORHOODS Two residential neighborhoods sit within the station area. Newer high-density multi-family housing is positioned east of Highway 212, and a senior's residence is located on Smetana Lane. The City of Eden Prairie envisions future medium- to high-density housing in the area with space for neighborhood-serving amenities and retail.

INSTITUTIONAL The station will serve as an access point for students of Eagle Ridge Academy Charter School.

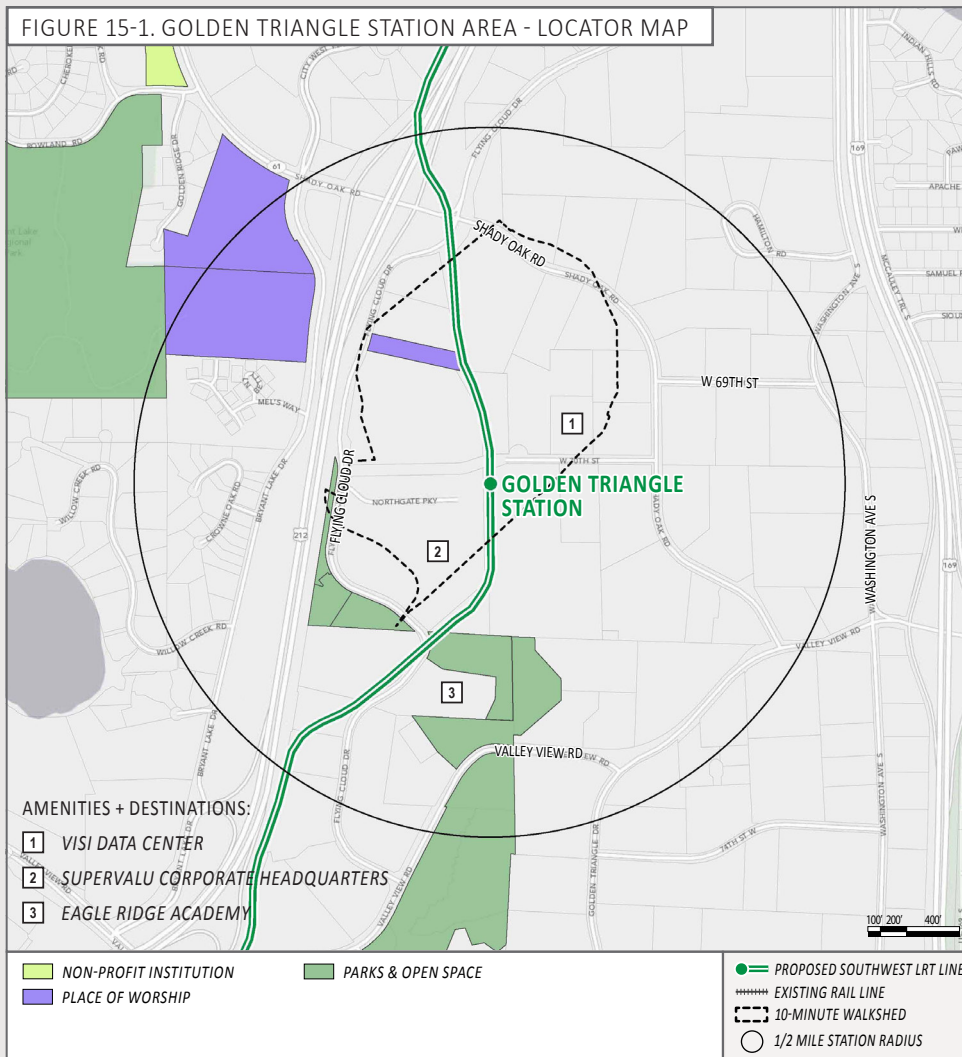
TRAIL CONNECTIONS Wetlands, open space areas, and Nine Mile Creek are located along the perimeter of the station. An opportunity exists here to explore ways of connecting these open space areas to the station via a network of new trails. The existing pedestrian and trail networks in Eden Prairie can also be expanded to create connections into and out of the area.

OTHER DESTINATIONS The Lake Smetana Trail, fishing sites, and a local dog park are also located within the station area.

Station Location

The Golden Triangle station is located in the heart of the Golden Triangle Business Center, which is bounded by Highway 212 on the west, Shady Oak Road on the north and east, and Valley View Road along the south.

The area is a major employment center, employing over 20,000 people. The majority of the business center consists of low-rise office and light industrial buildings. Large block sizes, few roads, and few sidewalks make pedestrian and bicycle circulation challenging. The proposed station platform is located in an area where access and visibility are a challenge, however, the redevelopment potential in this area offers opportunities for enhanced access and greater density.



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.

GOLDEN TRIANGLE STATION AREA TODAY:



SuperValu offices



Typical existing office development



Local wetland



Existing office use and parking



Typical existing office development

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

Primary land uses near the Golden Triangle station are low-rise, low-density office and light industrial. A significant amount of passive open space and wetlands are located to the south of the station, where Nine Mile Creek runs through the business center. About a half-mile to the south of the station there is a small amount of multi-family housing.

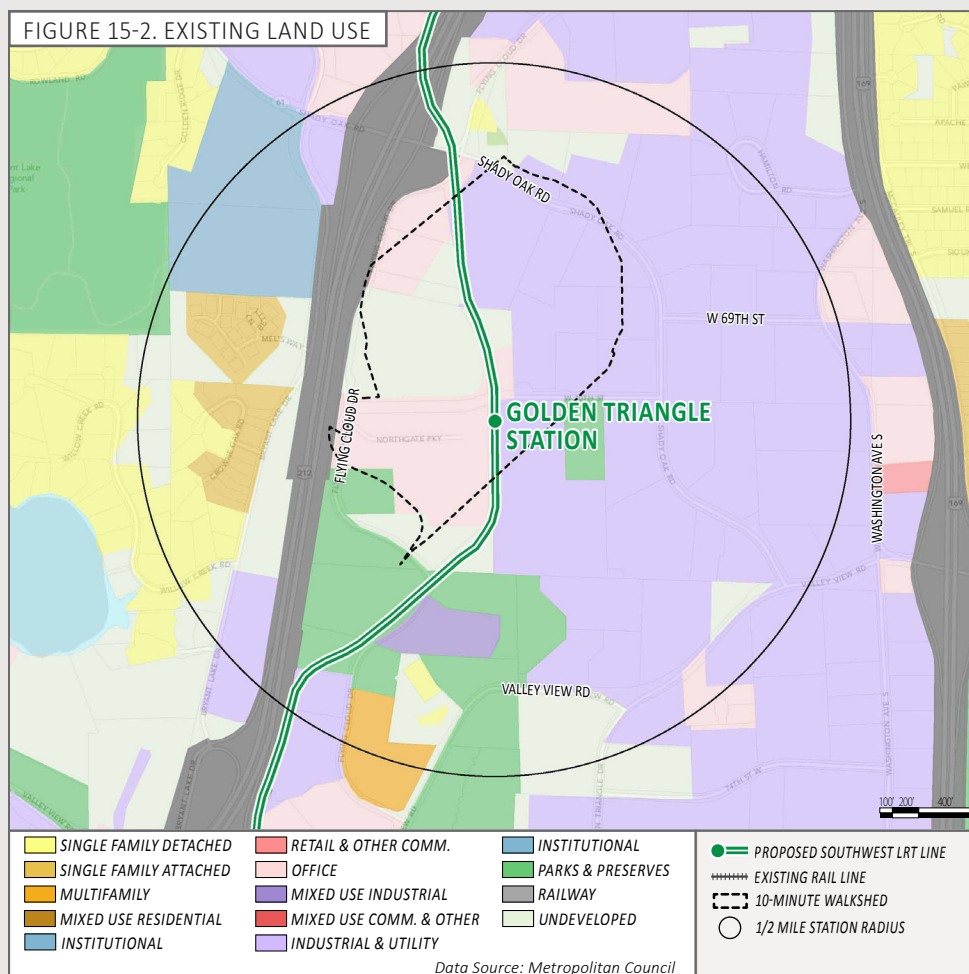
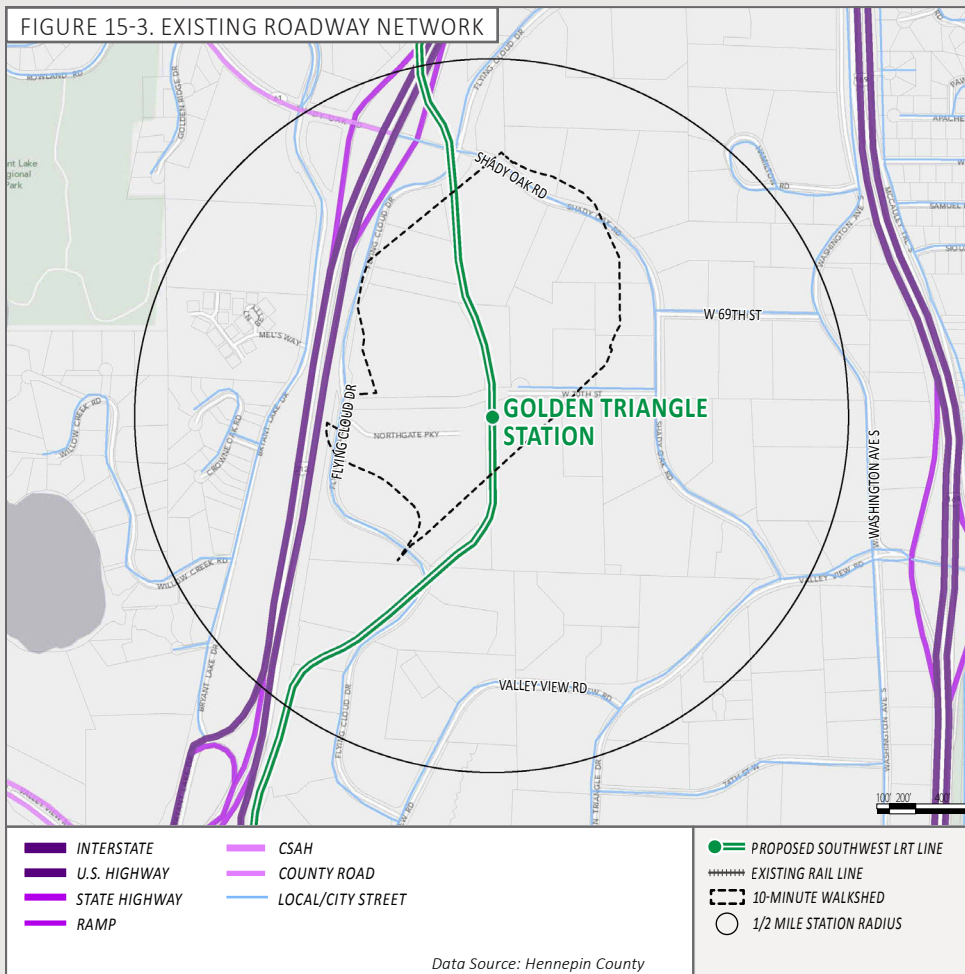


FIGURE 15-3. EXISTING ROADWAY NETWORK

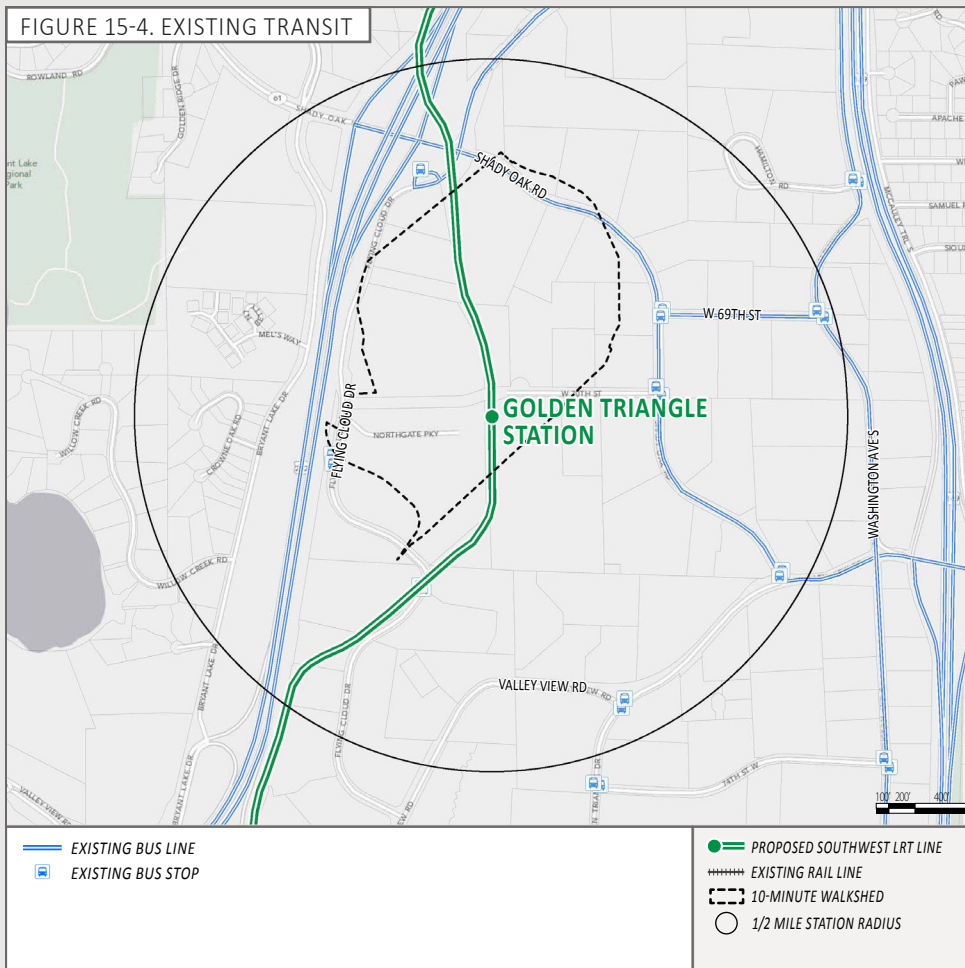


Roadway Network

The existing roadway network near the station platform is very limited. The business center is characterized by extremely large block sizes and few roads. The roads that do exist provide vehicular access to businesses but few include sidewalks. The proposed station platform is located near W. 70th Street, an east-west street that ends in a parking lot today. The City of Eden Prairie has plans to extend W. 70th Street west to Flying Cloud Drive and enhance the streetscape, adding sidewalks, lighting, and street trees.

The Golden Triangle Business Center is bounded by major roadways. Highway 212 runs north-south along the west side of the area. Flying Cloud Drive runs alongside Highway 212, acting like a frontage road and providing access to businesses. Shady Oak Road runs north-south at a diagonal through the business center. The Shady Oak Road and Highway 212 interchange is located approximately a half-mile to the north of the station. Highway 169 runs north-south about a half-mile to the east of the station platform. It can be accessed from Valley View Road about a half-mile southeast of the station.

FIGURE 15-4. EXISTING TRANSIT



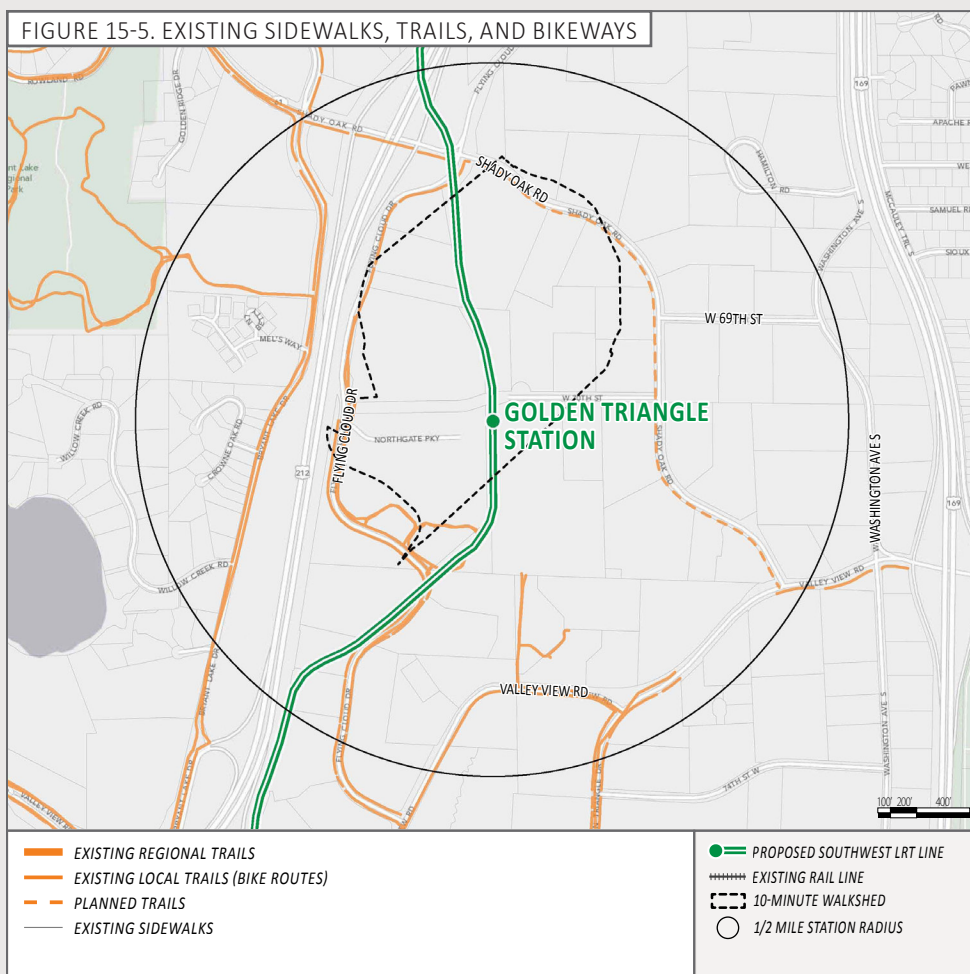
Transit

Existing public transit near the station includes the #680 express bus route along Shady Oak Road, with stops at W. 70th Street and W. 69th Street. Several other express buses run along Highway 212. These routes can be accessed at the park and ride located at Flying Cloud Drive, about a half-mile north of the station location.

Sidewalk, Trails and Bikeways

There is no existing sidewalk system in the Golden Triangle Business Center. There are multi-use trails along Flying Cloud Drive, Shady Oak Road, and Valley View Road, however these trails run along the perimeter of the business park and do not provide access to many businesses and destinations. There is a need for a comprehensive system of sidewalks, trails, and bikeways in the area to serve existing businesses and residents and provide enhanced mobility to the station platform.

FIGURE 15-5. EXISTING SIDEWALKS, TRAILS, AND BIKEWAYS



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 Eden Prairie or by the Metropolitan Council Environmental Services (MCES) Division. MCES maintains a series of interceptor trunk sewers which collect sewage at key locations and convey sewage across community boundaries to regional WWTPs. Wastewater from the station area is treated by the MCES Blue Lake WWTP located in Shakopee.

FIGURE 15-6. EXISTING SANITARY SEWER

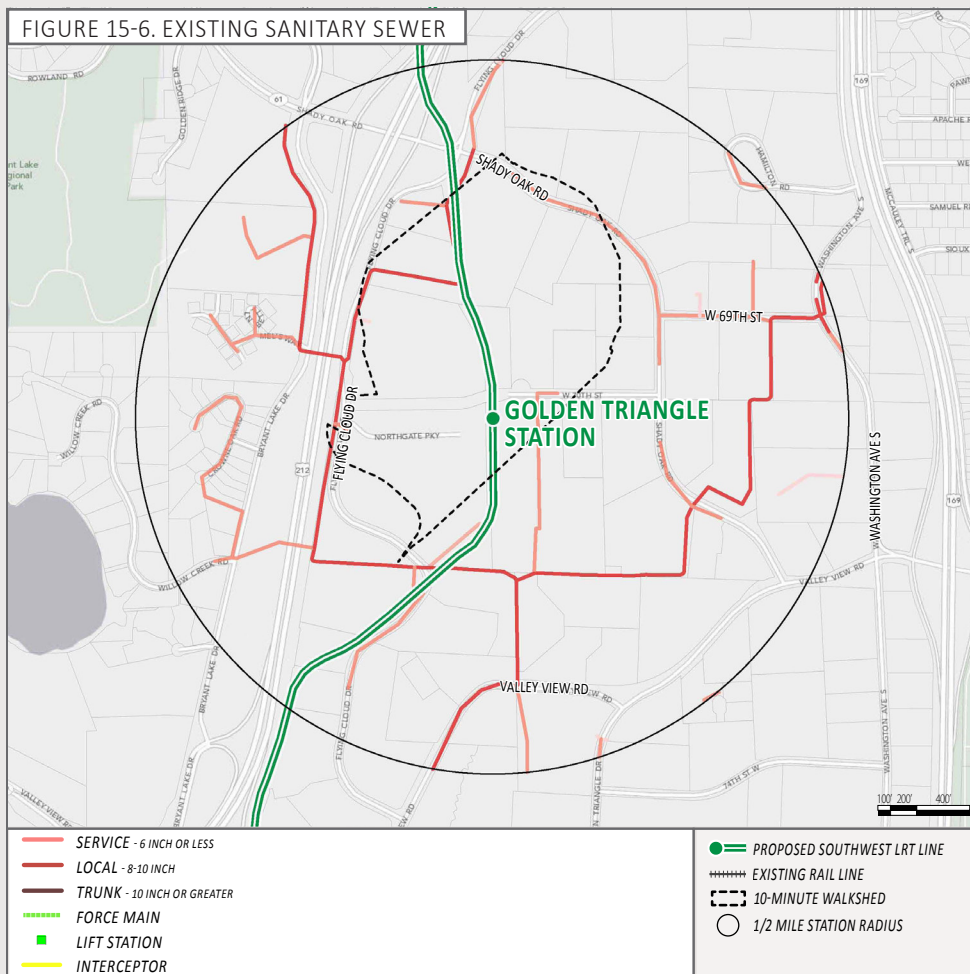
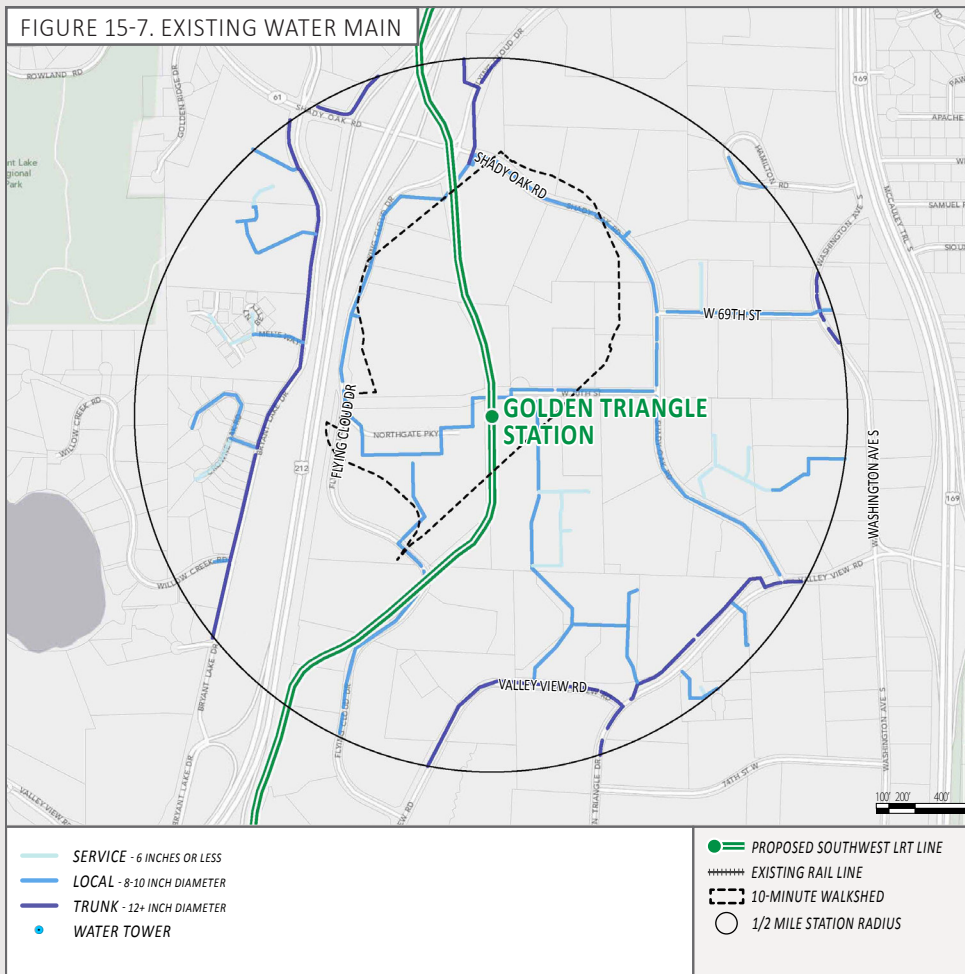


FIGURE 15-7. EXISTING WATER MAIN



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 water main creates a loop, the demand of adjacent land uses, and the condition of the water main.

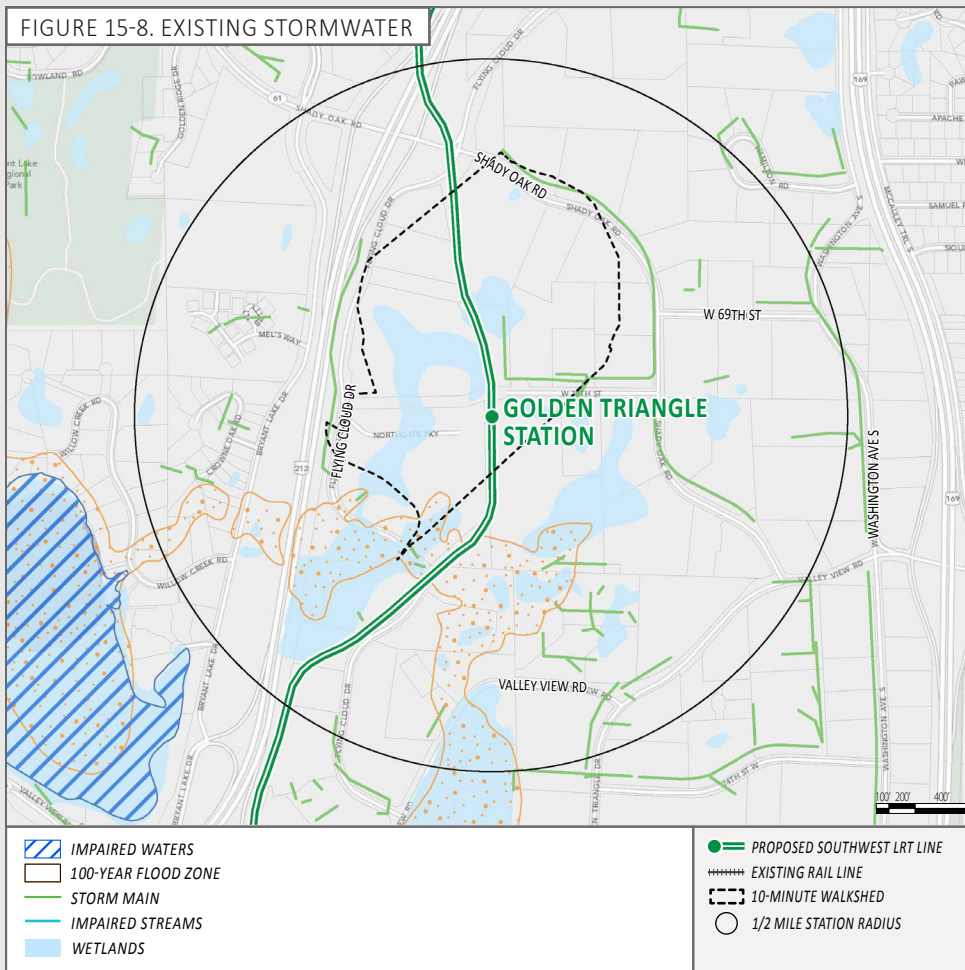
Stormwater

Golden Triangle station is located within Nine Mile Creek Watershed District. The majority of the drainage from the 10-minute walk zone is directed through wetlands to Bryant Lake or Smetana Lake. Bryant Lake is impaired by nutrients and mercury. Smetana Lake is impaired by mercury. There is a significant amount of 100-year floodplain that extends from Bryant Lake and Smetana Lake north into the southern portion of the 10-minute walk zone.

Discharging within one mile of an impaired water may trigger additional Minnesota Pollution Control Agency NPDES (National Pollution Discharge Elimination System) requirements which require additional stormwater management. For impaired waters where a TMDL (Total Maximum Daily Load) has been approved, these requirements may increase further. Zoning requirements has a result of being within the 100-year floodplain may limit development/redevelopment potential.

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.

FIGURE 15-8. EXISTING STORMWATER



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 15-9 provides a high level view of how future transit, automobile, bike, and pedestrian systems will connect to the station area and its surroundings.

Figure 15-10 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 15-11 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.

ROADWAYS

Opening Day Improvements:

- » Extend West 70th Street west to connect with Flying Cloud Drive to improve bus and shuttle access to the station. Design West 70th Street to include sidewalk, multi-use trail, street trees, lighting, and wayfinding/signage.

Long-Term Improvements:

- » Develop a new street and block network between Flying Cloud Drive and Shady Oak Road to improve access to the park and ride lot, enhance pedestrian and cycling connections to areas north of the LRT station, and create new address space for intensification around the station.

PEDESTRIAN CONNECTIONS

Opening Day Improvements:

- » Create a multi-use trail from the station north to Shady Oak Road and south to the existing trail near Valley View Road to connect to jobs and housing.
- » Extend the existing path network on either side of the LRT corridor to connect the station platform to destinations east and west of the corridor.
- » Initiate path improvements such as the introduction of pedestrian-oriented lighting, improvements to network connectivity, and street crossing enhancements to support walking/riding to and from the station.
- » Introduce new sidewalks along both sides of West 70th Street between Flying Cloud Drive and Shady Oak Road.
- » Locate wayfinding/signage at the station and key decision

making points along the path network away from the station to direct people to area destinations.

Long-Term Improvements:

- » Long-term, introduce new Complete Streets to create smaller development blocks, a more complete roadway network, and enhance pedestrian movement within the station area.
- » Ensure all new streets contain sidewalks to support pedestrians.

TRANSIT CONNECTIONS

Opening Day Improvements:

- » Develop a combined bus and kiss & ride along the north side of West 70th Street just east of the station.



Complete Street design



Park and ride facility



Bike sharing facility near station platform

- » Connect the bus and kiss & ride to the station through the extension of the path network (see pedestrian connections).

BIKE CONNECTIONS

Opening Day Improvements:

- » Provide bike parking to the southeast of the platform where it is highly visible and accessible to trail users.
- » Explore the potential for bike sharing facilities at the station and key destinations away from the station to support riding to work from the station.

PARK AND RIDE

Opening Day Improvements:

- » Consider leasing existing surface parking spaces near the station platform to meet park and ride goals.

Long-Term Improvements:

- » Consider locating park and ride facilities off of Flying Cloud in a shared parking ramp away from the station to support intensification around the station.

KISS AND RIDE

Opening Day Improvements:

- » Develop a kiss & ride/shuttle loop to the southeast of the platform on either side of West 70th Street.
- » Ensure that the kiss & ride loop is designed to accommodate full-size buses and fire trucks.
- » Provide a dedicated crossing point at West 70th Street to connect the southern kiss & ride stop with the station.

STATION AMENITIES (Beyond SW LRT Base Project Scope)

Opening Day Improvements:

- » Wayfinding – include signage and wayfinding near the station

area platform, the park and ride facilities, and along trails and sidewalks near the station.

- » Seating – provide comfortable and durable seating near the station platform and at the park and ride facility.
- » Lighting – provide adequate lighting for the safety of pedestrians, bicyclists, and motorists near the station platform, at the park and ride facilities, and near the kiss & ride drop-off.
- » Plaza – provide a small public plaza area near the station platform to provide transit users with a paved queue area to wait for LRT trains, gather, and move about the station area.
- » Public Art – provide public art in the station area.
- » Bike Facilities – provide bike parking, lockers, and bike share facilities in a highly visible area near the station platform.

DEVELOPMENT POTENTIAL

Opening Day Improvements:

- » The property located just west of the proposed station platform (currently owned/controlled by Liberty Property Trust), has been planned for office development along with a parking ramp. This property could represent opening day development potential. The parking ramp could potentially be shared to serve park and ride needs for this station.

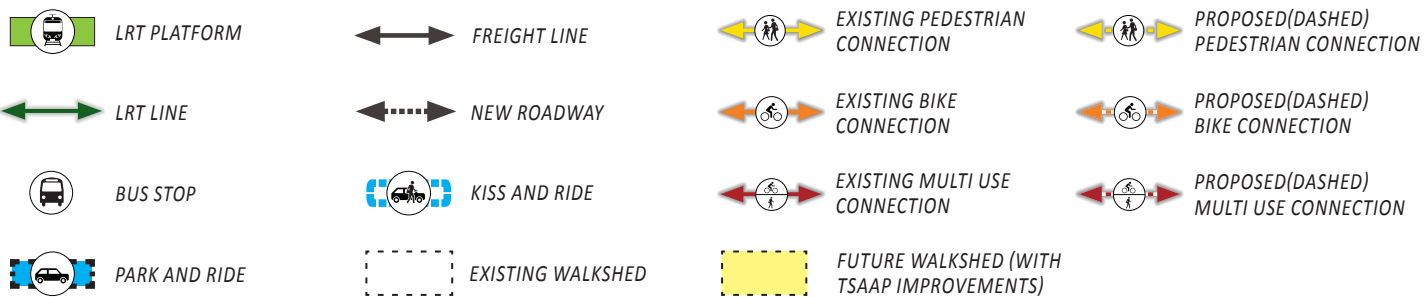
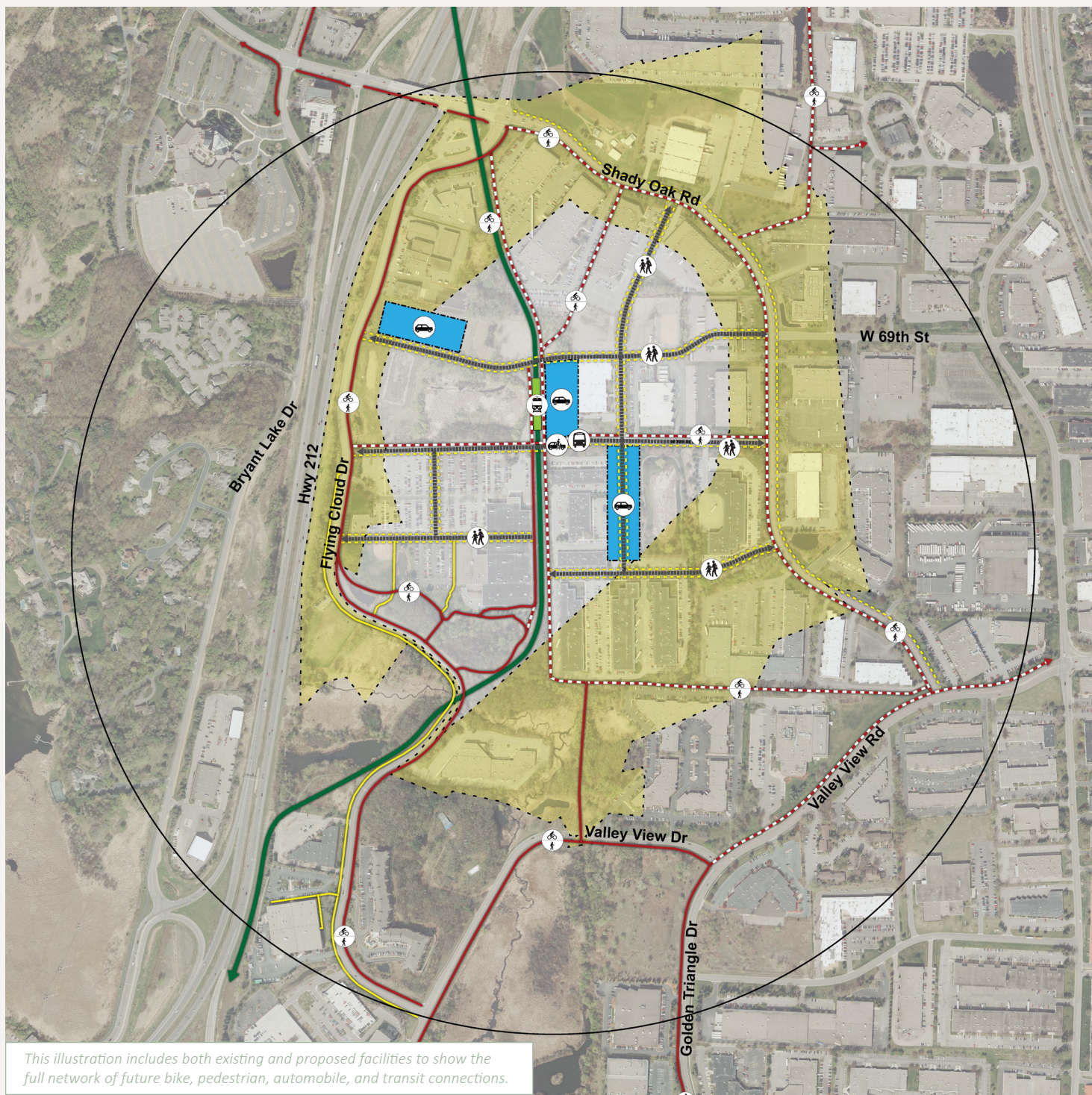
Long-Term Improvements:

- » See the “Development Potential” discussion on page 15-18 for more on long-term development opportunities.

UTILITIES

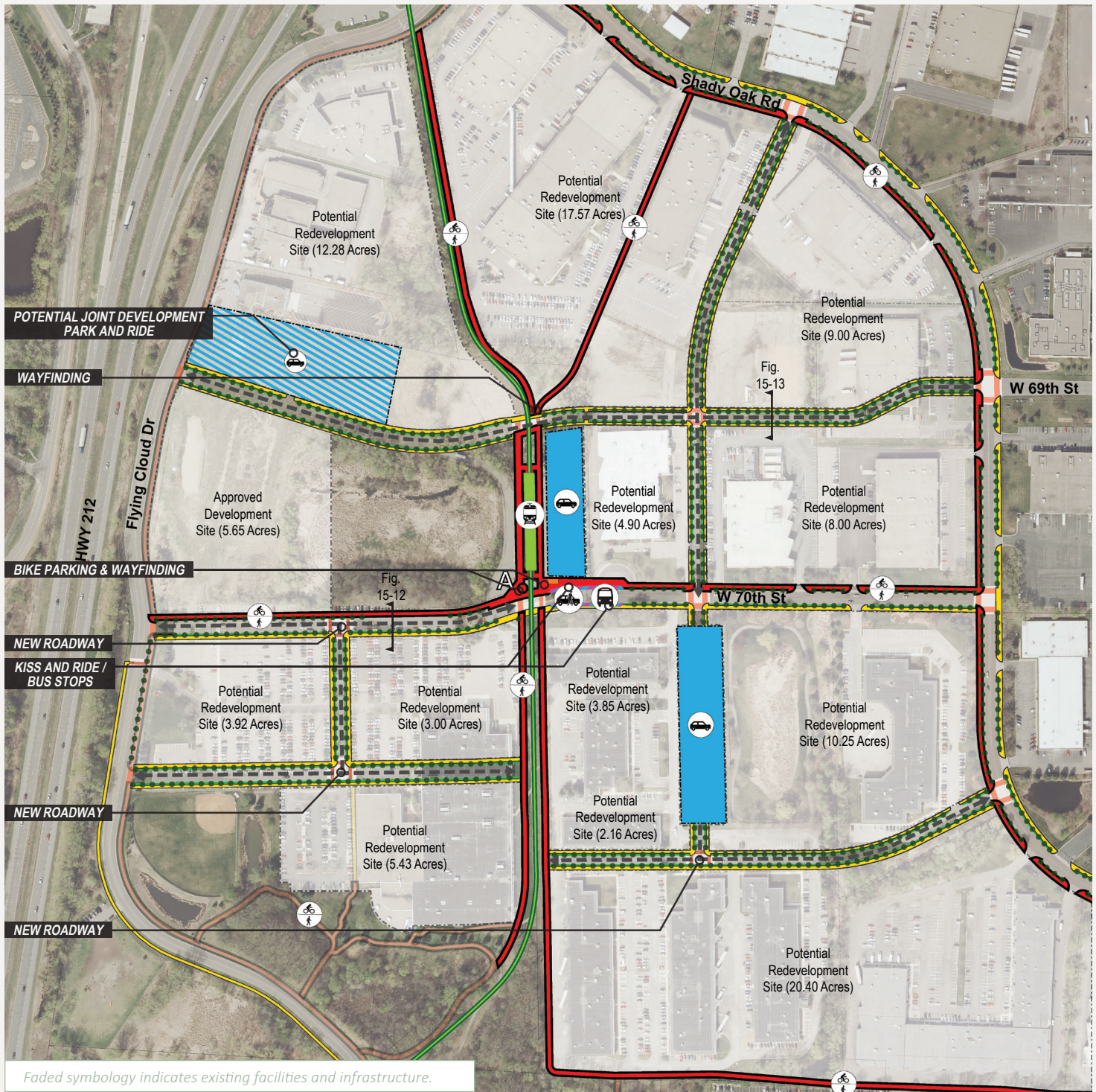
- » See the “Station Area Utility Plan” beginning on page 15-20 for all utility recommendations.

FIGURE 15-9. ACCESS + CIRCULATION PLAN



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 15-10. STATION AREA IMPROVEMENTS



Faded symbology indicates existing facilities and infrastructure.

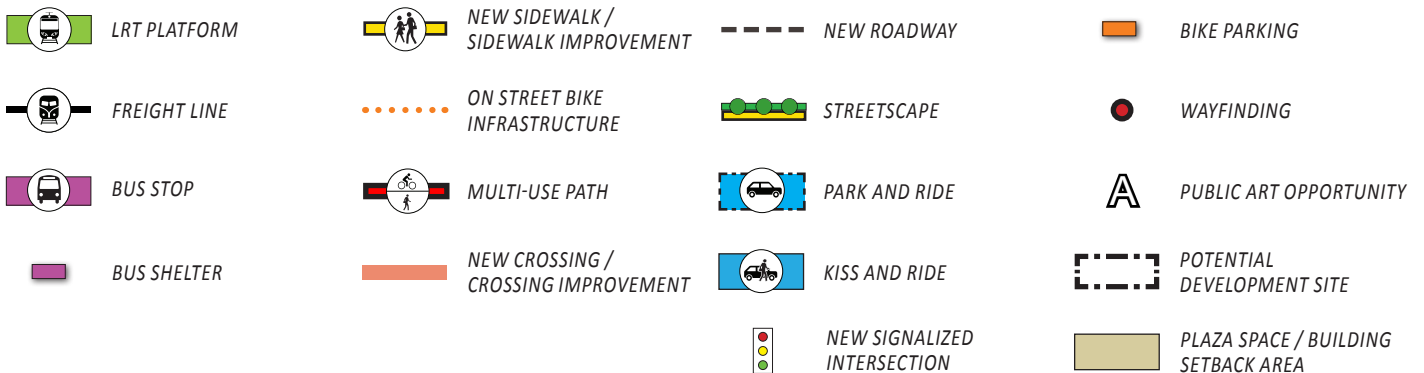
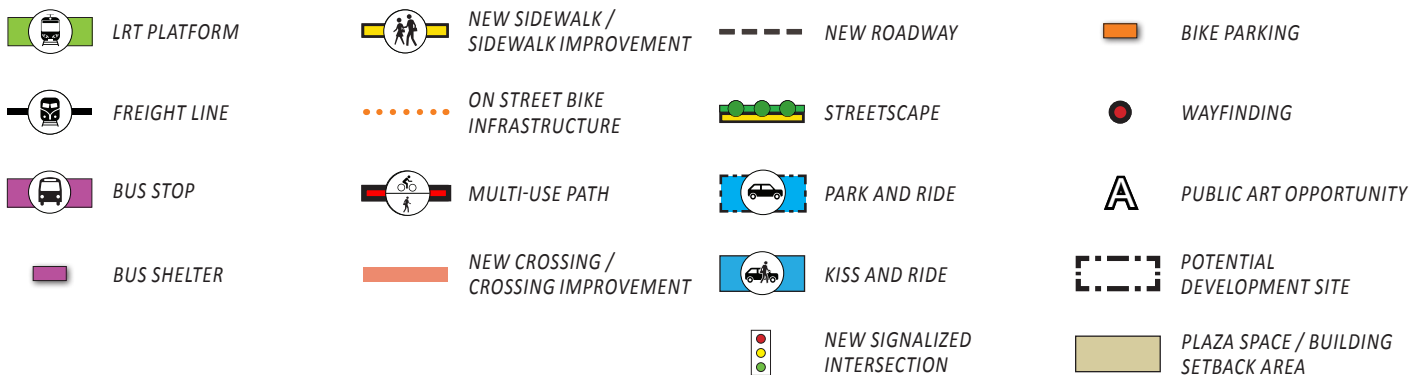


FIGURE 15-11. OPENING DAY STATION AREA IMPROVEMENTS



Conceptual Street Sections

The street cross section illustrated below is conceptual and represents a potential future streetscape condition, addressing facilities for a variety of transportation modes, streetscape amenities, and the relationship between buildings and the street edge. Further design and engineering work will be required to ensure the streetscape is in compliance with City and/or County design standards and needs.

WEST 70TH STREET

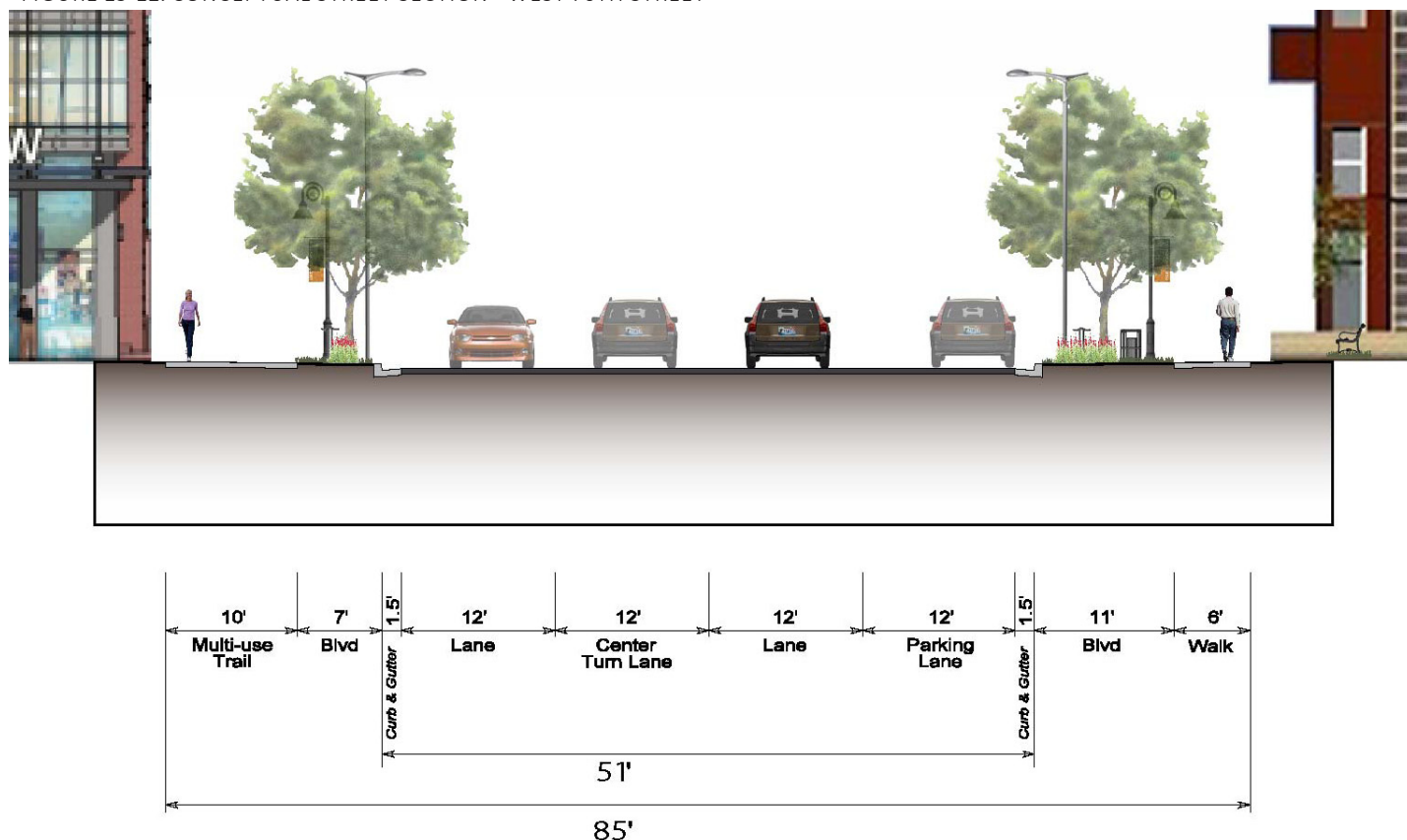
Dimensional Criteria:

- » 85 feet Right-of-Way Width
- » 51 feet Pavement Width (2-way)
- » 20'-30' o/c Street Tree Spacing
- » 6'-0" Sidewalk Width (south side of street)
- » 10'-0" Multi-Use Trail Width (north side of street)

Design Features:

- » Sidewalk (one side)
- » Multi-Use Trail (one side)
- » Street Trees/Plantings/Raingardens
- » Streetscape Furnishings (seating, trash receptacles, bicycle racks)
- » Signage/Wayfinding
- » Transit Facilities (bus stops/layovers, shelters, seating, signage, lighting)
- » Street and Pedestrian Lighting
- » Pedestrian-Friendly Crossings (markings, countdown traffic signals, ADA features)

FIGURE 15-12. CONCEPTUAL STREET SECTION - WEST 70TH STREET



Conceptual Street Sections (Continued)

The street cross section illustrated below is conceptual and represents a potential future streetscape condition, addressing facilities for a variety of transportation modes, streetscape amenities, and the relationship between buildings and the street edge. Further design and engineering work will be required to ensure the streetscape is in compliance with City and/or County design standards and needs.

NEW ROAD SEGMENTS

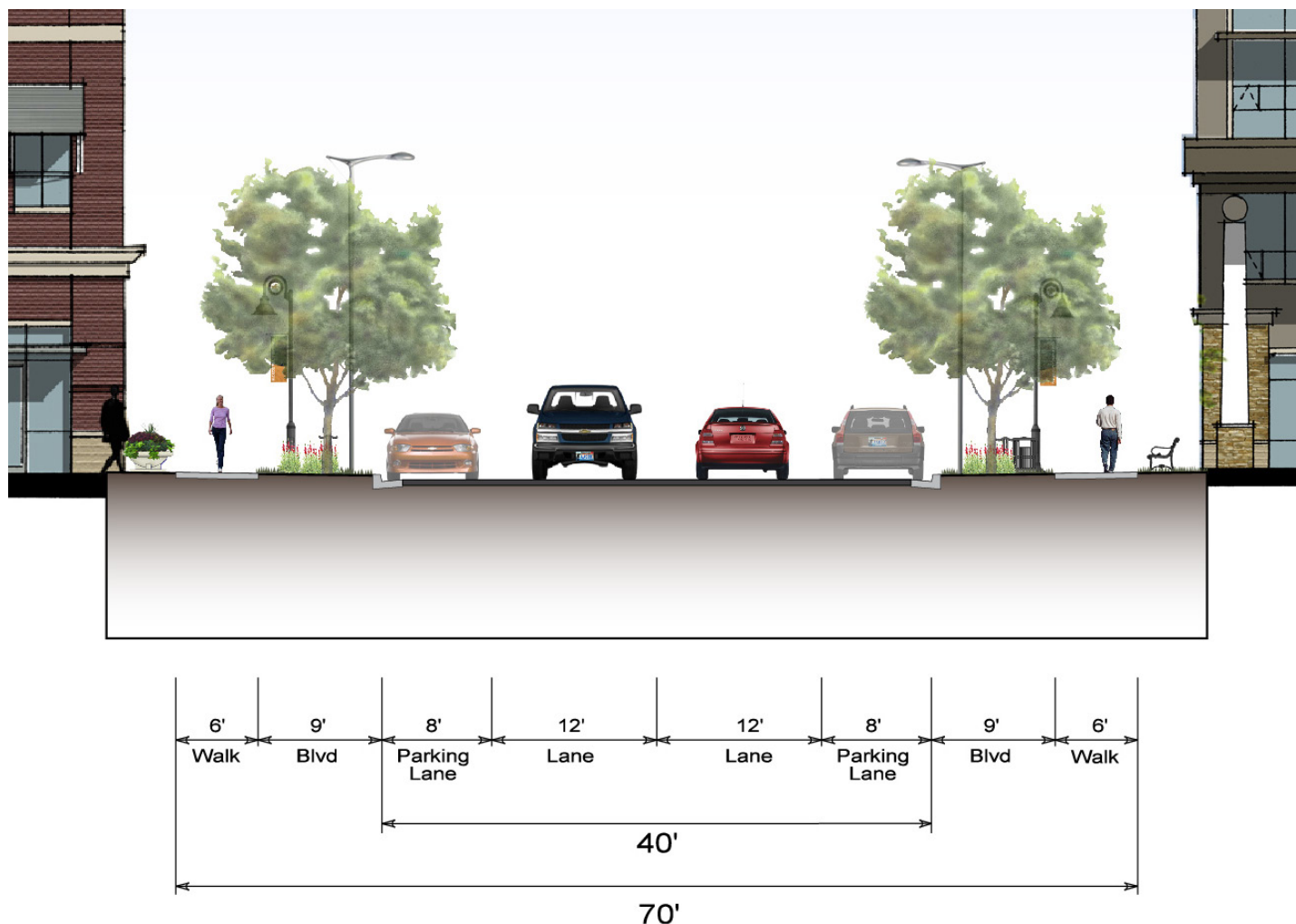
Dimensional Criteria:

- » 70 feet Right-of-Way Width
- » 40 feet Pavement Width (2-way)
- » 20'-30' o/c Street Tree Spacing
- » 6'-0" Sidewalk Width (both sides of street)

Design Features:

- » Sidewalks
- » On-Street Parking
- » Street Trees/Plantings/Raingardens
- » Streetscape Furnishings (seating, trash receptacles, bicycle racks)
- » Signage/Wayfinding
- » Transit Facilities (bus stops/layovers, shelters, seating, signage, lighting)
- » Street and Pedestrian Lighting
- » Pedestrian-Friendly Crossings (markings, countdown traffic signals, ADA features)

FIGURE 15-13. CONCEPTUAL STREET SECTION - NEW ROAD



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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 15-1 and Figure 15-12 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 15-2 and Figure 15-15 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 15-3 (also shown in Figure 15-15) includes locally requested "betterments" - or improvements that cities have requested to be included in the base project scope pending funding availability.

TABLE 15-1. SOUTHWEST LRT ANTICIPATED BASE PROJECT SCOPE - OPENING DAY STATION AREA IMPROVEMENTS

PLAN KEY	IMPROVEMENT	PROJECT LOCATION	PROJECT NOTES
A	LRT Platform	North side of W. 70th Street, midway between Flying Cloud Drive and Shady Oak Road	Includes related LRT infrastructure
B	Park and Ride	Existing surface parking lots near LRT station	2 leased surface lots for a total of 275 stalls of park and ride (includes lighting and ped access to LRT station)
C	Kiss and Ride	On W. 70th Street	Pullout dropoff area on W. 70th Street
D	Bus Facilities	On W. 70th Street	New bus bays that can accommodate 2 bus routes in either direction
E	Sidewalk/Trail	Station area and W. 70th Street	Sidewalks connecting the station platform and the park and ride lots
F	Sidewalk/Trail	Station area south along the west side of the LRT line to existing trail system	Reconstruct existing trail in conjunction with LRT line construction
G	Bike Facilities	Near station platform	Allowance for bike storage
H	Wayfinding	Near station platform	Allowance
I	Landscaping	Near station platform	Allowance
J	Water*	Near station platform	New water service and fire hydrant 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 15-2. SOUTHWEST CORRIDOR INVESTMENT FRAMEWORK (TSAAP) - OPENING DAY STATION AREA IMPROVEMENTS

PLAN KEY	IMPROVEMENT	PROJECT LOCATION	PROJECT NOTES	PROJECT LEAD	PRIORITY
1	Roadways	W. 70th Street, from Shady Oak Road to Flying Cloud Drive	Construct new road, including sidewalks, plantings, lighting and furnishings	City of Eden Prairie	Primary
2	Sidewalk/Trail	Shady Oak Road	Construct sidewalks and multi-use trail along Shady Oak Road - Limited landscaping improvements due to future road reconstruction	City of Eden Prairie	Secondary
3	Intersection enhancements	W. 70th Street, from Shady Oak Road the Flying Cloud Drive	Enhanced pedestrian crossings along W. 70th Street	City of Eden Prairie	Primary
4	Intersection enhancements	Shady Oak Road	Enhanced pedestrian crossings along Shady Oak Road	City of Eden Prairie	Secondary
5	Bike Facilities	Near station platform	Bike parking, lockers and bike share facilities (beyond SPO improvements)	City of Eden Prairie	Primary
6	Wayfinding	Station platform	Signage and wayfinding (beyond SPO improvements)	City of Eden Prairie	Primary
7	Water	Along W. 70th Street	New water line crossing the LRT tracks along West 70th St.	City of Eden Prairie	Primary

TABLE 15-3. SOUTHWEST LRT LOCALLY REQUESTED BETTERMENTS - OPENING DAY STATION AREA IMPROVEMENTS

PLAN KEY	IMPROVEMENT	PROJECT LOCATION	PROJECT NOTES
B1	Sidewalk/Trail	W. 70th Street, from Shady Oak Road to Flying Cloud Drive	Construct sidewalks along new roadway (beyond SPO improvements)
B2	Sidewalk/Trail	From station platform northeast to Shady Oak Road	Multi-use trail connection
B3	Sidewalk/Trail	From station platform south along the east side of the LRT line	Multi-use trail connection
B4	Public Plaza	Adjacent to station platform	Includes paving, plantings, shelter, seating, lighting, and signage (beyond SPO improvements)
B5	Public Art	Public plaza	Public art (beyond SPO improvements)

FIGURE 15-14. SOUTHWEST LRT ANTICIPATED BASE PROJECT SCOPE - OPENING DAY STATION AREA IMPROVEMENTS

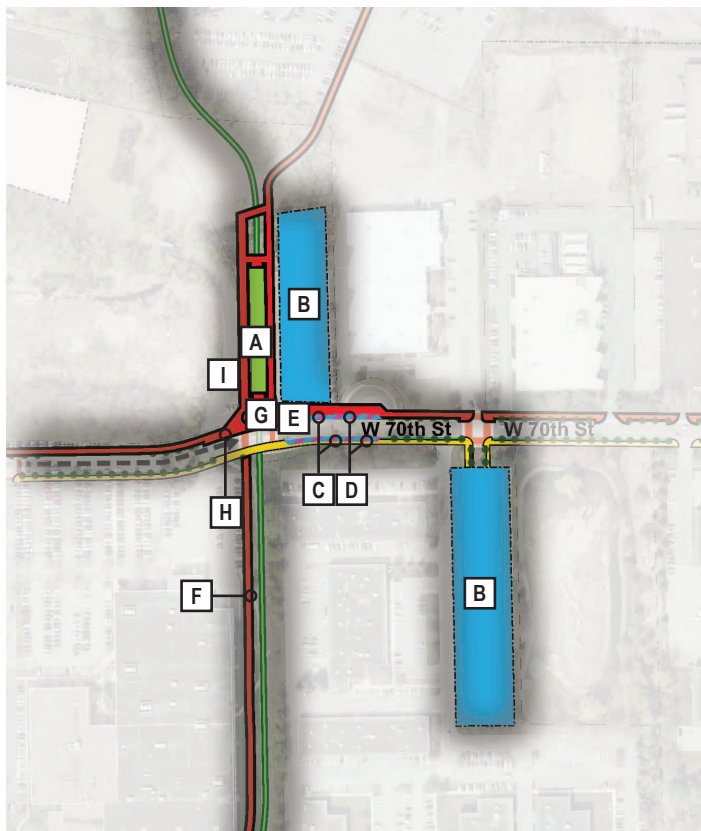
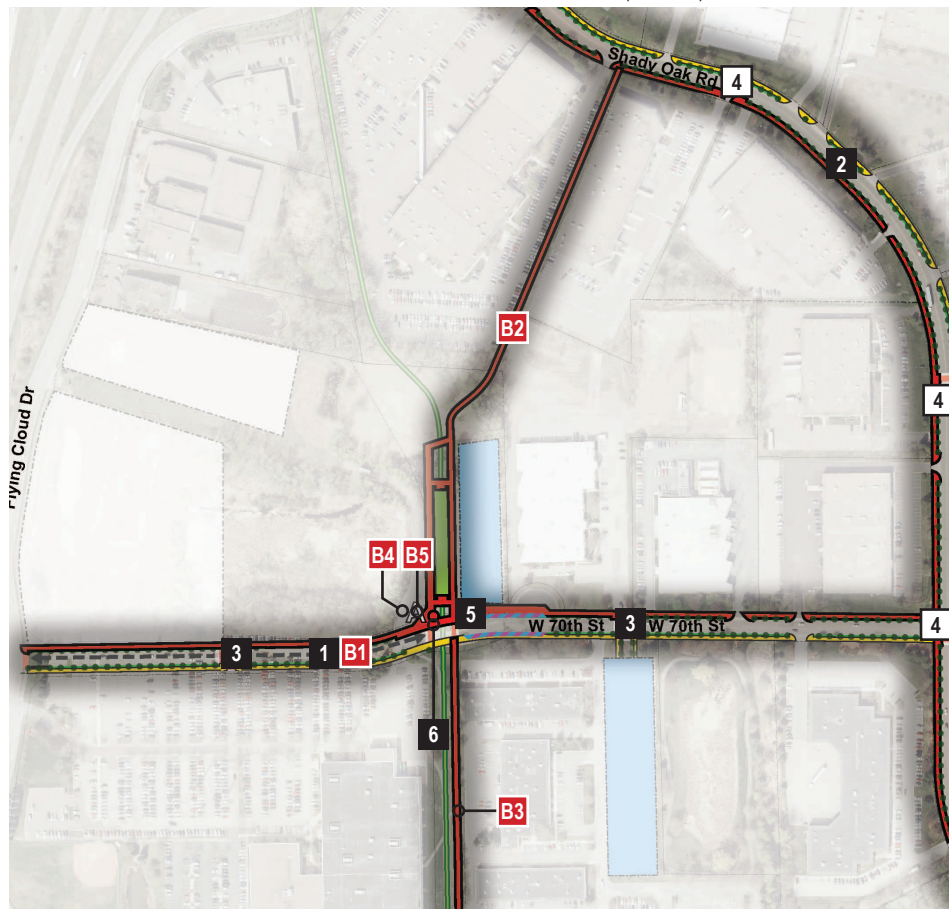


FIGURE 15-15. SW CORRIDOR INVESTMENT FRAMEWORK (TSAAP) - OPENING DAY STATION AREA IMPROVEMENTS + BETTERMENTS



Development Potential

OVERVIEW

Key factors at the Golden Triangle station that present opportunities for future redevelopment include the presence of older, low-rise, light industrial buildings near the proposed station platform that may be ready for redevelopment into more intense, mixed- uses as new transit investments are brought to the area.

Existing land uses in the Golden Triangle station area include a mix of office, light industrial, commercial, residential, and park/ open space uses. Several underutilized industrial sites present opportunities for future redevelopment in the area.

Park and ride needs at this station may be met with short-term strategies for leasing parking from existing surface lots near the station platform, however, consideration should be given to long-term joint development opportunities with a shared parking ramp associated with future development near the station.

Key challenges that should be addressed to facilitate development potential include land uses, additional roadways and existing roadway improvements, smaller block sizes near the station, trail connectivity, and enhanced wayfinding.

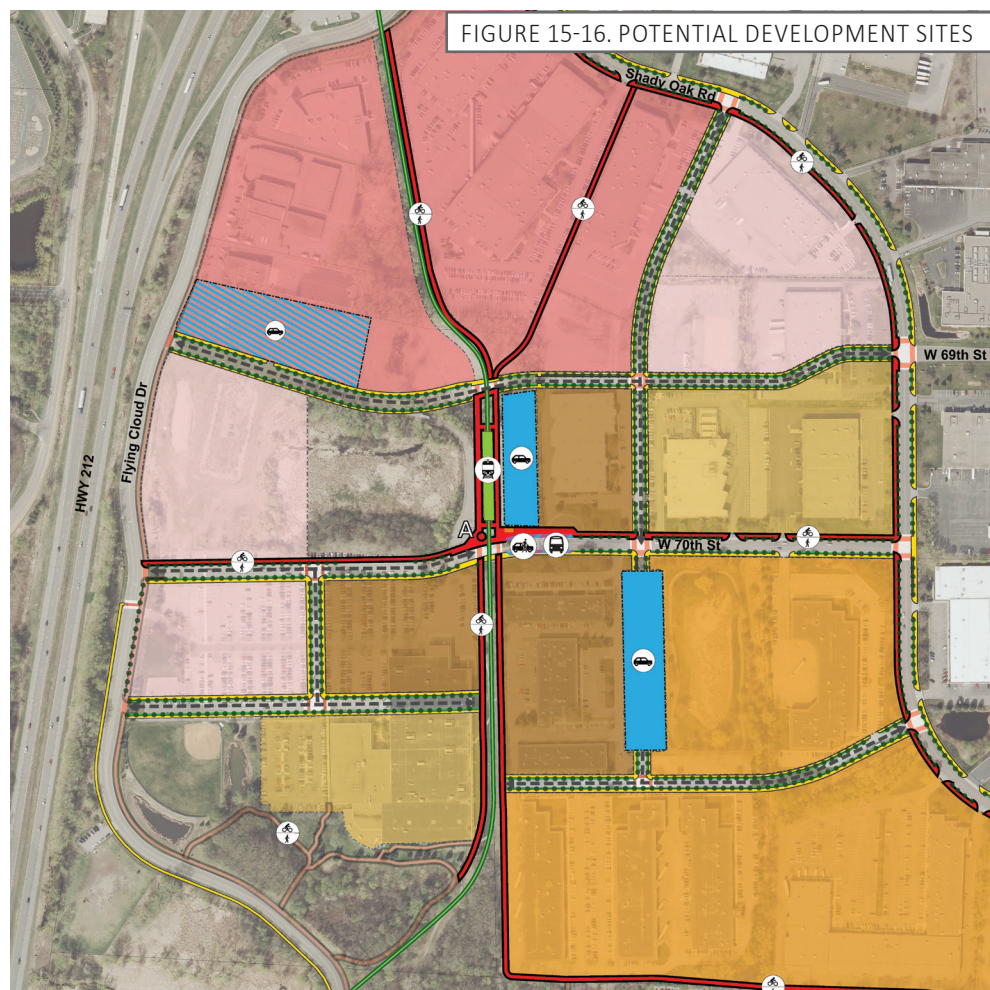
LAND USES

Development potential for the Golden Triangle station area may include a mix of office, light industrial, residential, hotel, and retail uses. The Golden Triangle Land use and Transportation Study identifies a mix of new uses near the station area.

PLANNING STRATEGIES

Strategies that should be considered to facilitate future development in the station area include the introduction of a finer grain of streets and block sizes to enhance station mobility and set up a framework for higher density development near the station. Streetscape and trail improvements connecting the station area with potential development sites, local destinations, neighborhoods, and bus transit facilities will enhance development potential in the area. West 70th Street improvements should be made on opening day to enhance access and visibility of the station area.

FIGURE 15-16. POTENTIAL DEVELOPMENT SITES



FUTURE LAND USE:

- SINGLE-FAMILY ATTACHED RESIDENTIAL
- MULTI-FAMILY RESIDENTIAL
- RETAIL & OTHER COMMERCIAL
- OFFICE
- MIXED-USE RESIDENTIAL

Key Considerations for Change and Development Over Time

The evolution of station area over time should focus on the establishment of a more walkable street and block pattern and the provision of new uses that can help to diversify and animate the station area. Key considerations should include:

BUILT FORM AND LAND USE

- » Introduce a greater mix of uses, encourage higher densities and provide active street level uses adjacent to the station and along West 70th Street in order to increase activity at the station and make it easier to access food and other services without having to drive.
- » Avoid piecemeal residential development. Segmenting new housing from industrial/employment uses so that it does not lead to an erosion of employment space and can create a distinct residential identity with related amenities.
- » Design new buildings to enhance pedestrian access by orienting them towards the street and locating them as close to the street line as possible.
- » Design and size park and ride facilities so that they have the potential to be redeveloped with higher density uses over time.

PUBLIC REALM

- » Introduce a public plaza off of West 70th Street adjacent to the station to act as a receiving point for passengers walking to the station or transferring to the LRT by bus, bike or car.
- » Restrict outdoor storage within the station area so that it does not detract from the image of the area or discourage new higher density employment uses.
- » Initiate a series of streetscape and public realm improvements along Shady Oak Road and West 70th Street to improve the image of the station area and enhance accessibility. Improvements should include the introduction of sidewalks, new multi-use pathways for cyclists, and clearly delineated pedestrian crossings at all intersections.
- » Should parts of the station area be redeveloped for residential uses, establish a new public open space that can act as a central organizing element and gathering place for the neighborhood.

MOBILITY

- » Support pedestrians through the introduction of sidewalks on all streets within the station area, new crossings, and curb cuts for people in wheel chairs or other mobility devices.
- » Develop a network of trails on either side of the LRT corridor to create a connection for pedestrians and cyclists between the station and businesses throughout the station area and fill gaps in the existing trail network.
- » Locate park and ride facilities so that they are within a convenient walk but not immediately adjacent to the station so that there is the potential for a higher density mix of uses next to the station.

- » Consolidate access and servicing between adjacent developments and minimize vehicular access points.
- » Align new roads where they can help to support the creation of a walkable street and block pattern over time including an extension of West 70th Street to Flying Cloud Drive, the extension of West 69th Street over time to Flying Cloud Drive and the introduction of a new north-south street.
- » Accommodate retail and short-term parking on-street and encourage shared parking facilities to minimize the construction of single use parking areas.
- » Minimize the impact of parking and circulation on pedestrians by locating parking below grade or to the rear of new buildings.



Green industrial building



High-density residential



New office development

Station Area Utility Plan

OVERVIEW

The station area utility plan and strategies recommended below were developed by considering future transit-oriented development within the station area, as depicted by the Station Area Site Plan (Figure 15-10). Eden Prairie will need to apply these localized recommendations to the city wide system to ensure that the potential development/redevelopment will not be limited by larger system constraints. Existing models or other methods can be used to check for system constraints in the station areas.

Eden Prairie should also consider reviewing the condition of the existing utilities in the station development area. The station construction would provide Eden Prairie an opportunity to address any utilities needing repairs. Once the larger system has been reviewed for system constraints, Eden Prairie will be able to accurately plan for necessary utility improvements in their city Capital Improvement Program (CIP). All utilities located beneath the proposed LRT rail or station platform should be encased prior to the construction of these facilities. The cost associated with encasing these facilities is assumed to be a project cost and is not included in potential improvements identified for the City of Eden Prairie CIP.

APPROACH

Utility improvement strategies are outlined in this report for the ultimate station area development (2030), as well as improvements which should be considered prior to opening day anticipated in 2018. Although recommendations are categorized in one of these two timeframes, Eden Prairie should weigh the benefits of completing more or less of these improvements as land becomes available for future development. Eden Prairie should take the utility analysis a level further and model future utilities in their city utility system models.

The proposed development and redevelopment areas were evaluated based on Metropolitan Commission Sewer Availability Charge (SAC) usage rates and estimated flows. Estimated flows for one possible development scenario in this area indicate that internal to the station area, no more than eight inch pipe are necessary to serve the mix of proposed and existing development. Each utility system should still be reviewed to identify capacity and demand constraints to the larger system associated with increase in flows from the proposed developments and existing developments in the area. Eden Prairie should anticipate the construction of new municipal utilities in conjunction with new or realigned roadways.

GENERAL RECOMMENDATIONS - SANITARY SEWER

Sanitary sewer recommendations for station area improvements include opportunities for Eden Prairie to improve the existing sanitary sewer network, without necessarily replacing existing sanitary sewers. When recommendations for “improving” existing sanitary sewer are noted, Eden Prairie should consider the level to which each specific sewer should be improved. Methods of improvement could include: lining the existing sewer, pipe joint repair, sewer manhole repair, relocation, and complete replacement.

The following items should be evaluated prior to opening day of the station, although action may not be required until necessary for development:

- » Televising existing sewer mains in the station area and proposed development area to determine the condition of the sewer mains, susceptibility for backups or other issues and evaluate for Infiltration and Inflow (I&I).
- » Locations of known I&I. If previous sewer televising records, city maintenance records, or an I&I study have shown problems, the city should consider taking measures to address the problem.
- » The age and material of existing gravity and/or forcemain sanitary sewer in the identified station area. If the lines are older than the material’s typical design life or materials which are susceptible to corrosion relative to soils in the area, the city should consider repairing, lining or replacing the mains.
- » Locations of known capacity constraints or areas where city sewer models indicate capacity issues. If there are known limitations, the city should further evaluate the benefit of increasing pipe sizes.
- » City sewer system models (existing and future). A review of these models with future development would assist Eden Prairie in determining if sewers in the project area should be increased to meet existing or future city system needs.
- » Existing sewer pipes should be relocated or encased in areas where they cross or are immediately adjacent to the LRT line/station.

GENERAL RECOMMENDATIONS - WATER MAIN

Water main recommendations for station area improvements also include opportunities for Eden Prairie to improve the existing water system network. Creating loops in the network can help prevent stagnant water from accumulating along water main stubs, and creating loops of similar sized water main provides the city a level of redundancy in their water network. Redundancy helps reduce the impacts to the community during system repairs, and also helps stabilize the pressure in the network.

The following items should be evaluated prior to opening day of the station, although action may not be required until necessary for development:

- » The age and material of the existing mains in the identified station area. If the mains are older than the materials typical design life or materials which are susceptible to corrosion relative to soils in the area, the city should consider replacing the main.
- » Locations of previous water main breaks. If water main breaks repeatedly occur in specific areas, the city should consider replacing or repairing the main.
- » Locations with known water pressure issues or areas where city models indicate low pressure. If there are known limitations (for either fire suppression or domestic uses), the city should further evaluate the benefit of increasing main sizes.
- » Locations with known or potential water quality issues. If there are mains known to be affecting the water quality (color, taste, odor, etc.) of their system, Eden Prairie should consider taking measures to address the problem affecting water quality.
- » City water system models (existing and future). A review of these models with future development would assist Eden Prairie in determining if mains in the project area should be improved to meet existing or future city system needs based on demand constraints.
- » Existing water main pipes should be relocated or encased in areas where they cross or are immediately adjacent to the LRT line/station.

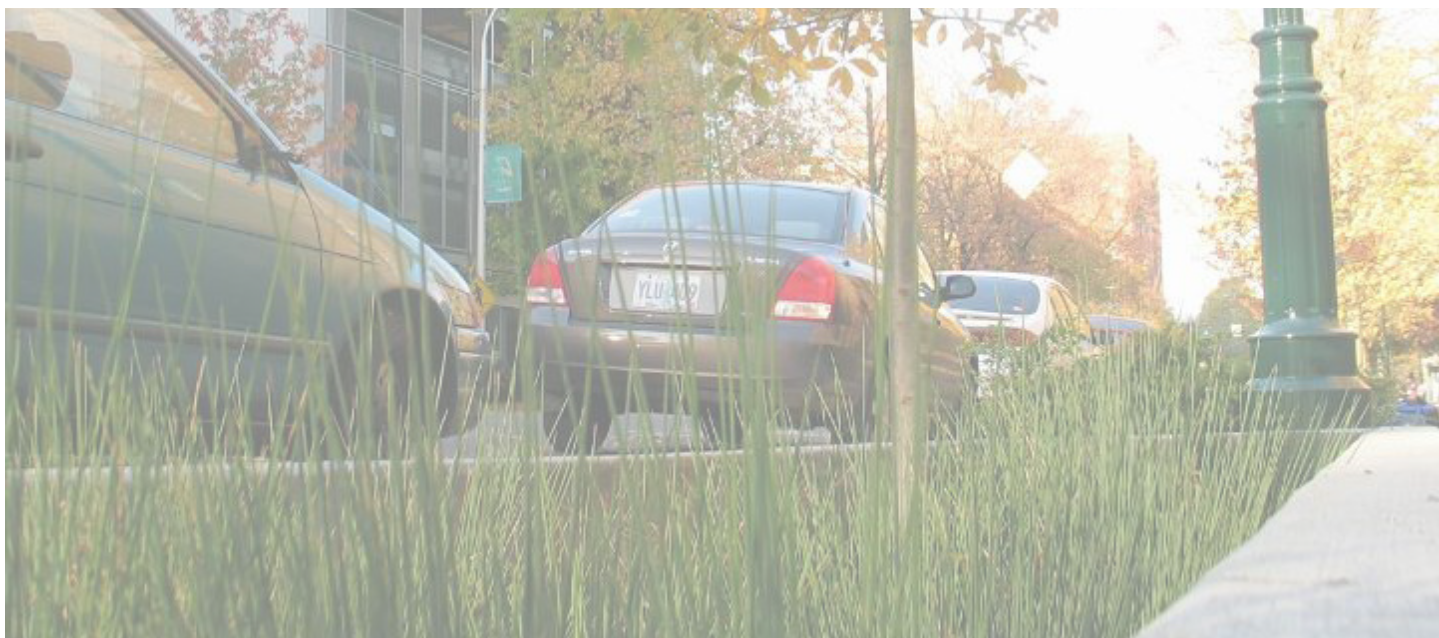
GENERAL RECOMMENDATIONS – STORM SEWER

Local storm sewer improvements are recommended to be completed in conjunction with other improvements in the station area. Improvements which will likely 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. Eden Prairie should also consider coordinating with the local watershed district and other agencies to review the condition of and capacity of existing trunk storm sewer systems serving more regional surface water needs.

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 Shady Oak station (see p. 12-28). Eden Prairie should consider implementing applicable best management practices similar to those in the Shady Oak station BMP guide. Stormwater management recommendations should be constructed in conjunction with public and private improvements and future development/redevelopment in the station area.



Station Area Utility Plan (Continued)

STATION AREA UTILITY RECOMMENDATIONS

Utility recommendations (illustrated in Figure 15-17) are based on a localized analysis of proposed development. It is recommended that the City of Eden Prairie take this analysis a step further and review system constraints to the existing and future sanitary sewer and water main systems using existing sewer CAD or water CAD models, or other methods of modeling these systems.

Opening Day Recommendations:

1. Encase existing water main crossing LRT rail construction
2. Extend 8-inch minimum water main in conjunction with extension of W. 70th Street roadway construction.

Long Term Recommendations:

1. Relocate existing 15-inch sanitary sewer to promote TOD in conjunction with extension of W. 69th Street.
2. Construct 8-inch minimum water main in conjunction with construction of new roadway connecting W. 70th Street extension to new street paralleling W. 70th Street west of proposed LRT.
3. Relocate existing 8-inch water main to west of redevelopment area in conjunction with future redevelopment.
4. Construct 8-inch minimum water main in conjunction with construction of new roadway paralleling W. 70th east of proposed LRT.

FIGURE 15-17. STATION AREA UTILITY PLAN



OPENING DAY RECOMMENDATION

LONG-TERM RECOMMENDATION

— EXISTING UTILITIES

- - - PROPOSED UTILITIES

— SERVICE SANITARY

— LOCAL SANITARY

— TRUNK SANITARY

— MCES SANITARY INTERCEPTOR

— SANITARY SEWER FORCEMAIN

■ LIFT STATION

— SERVICE WATER MAIN

— LOCAL WATER MAIN

— TRUNK WATER MAIN

● WATER TOWER

WHERE ARE WE GOING?

GOLDEN TRIANGLE

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