



April 2019

# GREENWAY AVENUE STATION BRTOD PLAN

City of Landfall . City of Oakdale

**GOLD LINE**  
PARTNERS



# Acknowledgements

## **Gold Line Partners**

Stan Karwoski (Chair), Washington County Regional Railroad Authority  
Rafael Ortega (Vice-Chair), Ramsey County Regional Railroad Authority  
Tami Fahey, City of Lakeland  
Bryan Smith, City of Maplewood  
Paul Reinke, City of Oakdale  
Jane Prince, City of Saint Paul  
Anne Burt, City of Woodbury

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## **City of Oakdale**

Bob Streetar, Community Development Director  
Emily Shively  
Jen Hasebroek  
Linnea Graffunder-Bartels

## **Oakdale City Council**

Paul Reinke, Mayor  
Mark Landis  
Bill Rasmussen  
Lori Pulkrabek  
Kevin Zabel

## **Washington County Regional Railroad Authority**

Jan Lucke, Planning Division Director  
Lyssa Leitner  
Sara Allen

## **City of Landfall**

Edward J. Shukle, Jr., City Administrator

## **Landfall City Council**

Stan Suedkamp, Mayor  
Sally Eral  
Katie McManus  
Lori Lengsfeld  
Joanne Menz

## **Consultants**

Crandall Arambula, Lead Consultant  
Carroll, Franck Associates  
Sambatek  
Maxfield Research & Consulting  
WSB & Associates



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# INTRODUCTION

The Gold Line Partners (the Partners) brings together local elected officials from the five cities and two counties along the corridor, including business and community leaders, to support the METRO Gold Line Bus Rapid Transit (Gold Line BRT) project. As part of the support for the Gold Line, the Partners commissioned the Metro Gold Line BRTOD Plan project (BRTOD Planning Project) on behalf of the Metropolitan Council and is funded by a grant from the Federal Transit Administration's Pilot Program for Transit-Oriented Development Planning with match from Ramsey and Washington Counties. Washington County Regional Railroad Authority (WCRRA) is the fiscal agent and administrative coordinator for BRTOD Planning Project and collaborates directly with the cities along the corridor.

Over the coming years, WCRRA will periodically review the BRTOD plans with each of the cities to evaluate plan effectiveness and coordinate improvements outside each city's jurisdiction and will partner with Washington County and the Metropolitan Council on projects of significant regional benefit. Washington County will administer housing and economic development programs that support affordable housing opportunities and investment in the Greenway Avenue Station area and other Gold Line station areas. The WCRRA will monitor and identify transit ridership increases resulting from project implementation.

Prior to the initiation of the BRTOD Planning Project, the City of Saint Paul completed station area plans for all of the city's stations. The BRTOD Planning Project builds upon these adopted plans. BRTOD Plans for stations in Maplewood, Landfall, and Oakdale include full development and circulation plans, which capitalize on all available opportunities to improve transit access and transit-oriented development while creating conditions that ensure that transit-dependent residents will remain in the area. BRTOD Plans for stations in Woodbury and Tamarack are advisory only. Any additional planning will be developed by City of Woodbury Planning staff.



**The Gold Line will connect people across the region to job centers, neighborhoods, shopping, recreation, and other key destinations in the Interstate 94 corridor.**

**The METRO Gold Line Bus Rapid Transit (Gold Line BRT) project is a separate project dedicated to design and engineering of the Gold Line BRT alignment, guideway, stations, and some access improvements.**

**The Metro Gold Line BRTOD Plan project (BRTOD Planning Project) plans for transit-oriented development around the Gold Line stations.**

**BRTOD combines BRT with traditional TOD strategies to create walkable and bikeable communities with housing, shopping, and employment uses concentrated within a half mile of a BRT station.**

**The Gold Line Corridor includes eleven stations in five cities and two counties.**

## GREENWAY AVENUE STATION BRTOD PLAN

This BRTOD Plan, which will serve as a policy guide for the City of Landfall and the City of Oakdale is based on:

- Consideration of each City’s adopted policies.
- Market studies of the station area and the corridor.
- Gap assessment.
- Best practices and fundamentals for bus rapid transit-oriented development.

The plan identifies projects that will help realize the vision for the station area. Funding sources for projects will need to be determined.

## THE GOLD LINE CORRIDOR

The Gold Line corridor is the mile-wide transit-shed centered along the Gold Line BRT route, generally following Interstate 94 (I-94). The existing potential for creating BRTOD varies in each station area. Planning for a successful Gold Line corridor requires increasing the potential ridership base of the entire corridor while enabling each station area to achieve its transit-oriented, market-driven development potential.

Along the corridor, older areas are concentrated to the west—toward Saint Paul, Maplewood, Landfall and portions of Oakdale—where early 20<sup>th</sup> century development patterns include a fine-grain street grid with predominantly single-family residences mixed with multi-family housing and commercial uses. These areas are largely fully built-out with few opportunities for new development. Residents come from highly diverse ethnicities, are typically less affluent, and are more transit dependent than in other areas of the corridor.

To the east, in Oakdale and Woodbury, the corridor transitions into newer communities characterized by auto-oriented commercial centers and undeveloped land. These areas present both greater opportunity and greater need for transit-oriented development and walking and biking infrastructure improvements. Residents in these areas tend to be less ethnically diverse, more affluent, and less familiar with transit use.

## STATION AREA PLANNING

When planned together, the eleven Gold Line stations assemble into a unified, diverse, and complementary corridor in which transit ridership is maximized, desirable development infrastructure and improvements are built, and vibrant and active station areas are realized.

Together, the BRTOD Plans describe a corridor-wide vision that:

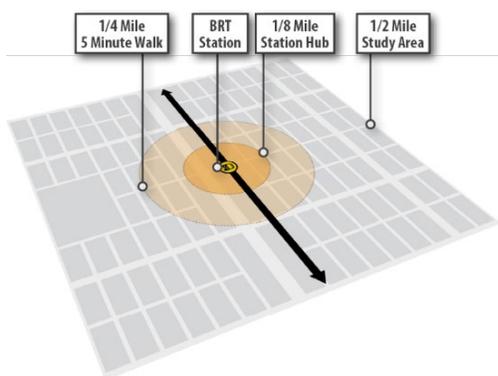
- **Establishes a multi-modal transportation corridor** by linking stations with a continuous biking and walking trail parallel to the BRT guideway.
- **Increases potential ridership** by providing direct access to transit-oriented uses along the corridor with strategic biking and walking improvements along existing, planned, or newly identified routes.
- **Enables station areas to achieve their development potential** by identifying substantial new infill or redevelopment opportunities for people to live and businesses to thrive near transit.

**Each Gold Line station is located within a distinct and unique context that presents both opportunities and constraints for achieving BRTOD.**

Figure 1. Gold Line Corridor Stations



**While no single station will result in complete BRTOD, each of the eleven Gold Line stations plays a role in maximizing transit ridership and achieving the corridor's BRTOD potential.**



**First- and last-mile trip connections are particularly important in the Gold Line Corridor where many jobs and residences are along unsafe routes or are beyond comfortable walking distance from a station.**

## WHY PLAN FOR BRTOD?

BRTOD links trip-generating destinations with multi-modal transportation choices to increase transit ridership, provide economic benefits, support active and healthy lifestyles, and significantly reduce greenhouse gas emissions. A BRTOD plan establishes an ambitious but realistic vision for transforming the area around the station based on the specific existing character and features of each station.

BRTOD locates trip-generating uses at the station allowing surrounding residents, employees, and visitors to shorten or eliminate auto-based trips and providing a platform for local entrepreneurship and small business development. Walkable and bikeable station areas offer residents access to a variety of services and job opportunities and a diversity of housing and transportation choices.

## Circulation Plans

Great station area routes should be designed to create an environment that is interesting, livable, and safe. An interconnected network of walking and biking routes ensures that all trips to or from a transit station are as short as possible.

The area within a quarter-mile of the station is typically accessible with a five-minute walk. A five-minute bike ride can typically access the station from the area within one mile. These five-minute areas are the 'rider-shed', the source of 80% of the station's transit riders. Walking and biking improvements should be focused within the relevant rider-sheds.

'First- and last-mile trips' are the trips that transit users must take between their starting or ending destination and a BRT station. When transit users have difficulty making the first- or last-mile connection due to distance, unsafe conditions, or other barriers, BRT use may be less practical.

## Development Plans

In BRTOD, the area within an eighth-mile of the station is home to the highest intensity of trip-generating retail and employment uses and dense residential types, such as multi-family apartments or condominiums.

Areas within a quarter-mile of the station include the largest concentration of housing and should include a mix of rental and ownership housing to support a mix of income levels.

Existing stable and desirable uses should be preserved and strengthened, with new development and redevelopment targeted to vacant and underutilized sites and to sites with long-term redevelopment potential. Targeted development should include the type of land uses appropriate to addressing market gaps in housing, employment, or commercial uses in order to support an equitable and vital station area.

## Station Environment

Conditions in the area directly adjacent to the station play an essential role in establishing BRTOD. The station environment is an opportunity to define the neighborhood character through the creation of a sense of arrival and departure. A focus on establishing a sense of place means that the station environment is designed for commuters to congregate and linger:

- **Safe** stations are highly visible—‘eyes’ on the station ensure that transit riders are seen from the street and surrounding buildings, reducing the potential for crime.
- **Comfortable** stations are accessible for people young and old, ensuring a pleasant experience at the station.
- **Active** stations are vibrant throughout the day and during all four seasons of the year, creating a special place of arrival and departure for transit users.

BRTOD plans provide implementable design strategies for establishing the street-oriented buildings and station access improvements that will result in safer and more vibrant stations. In turn, this will result in more BRT riders and reduce the potential for crime during all times of day and year.

**Land use patterns and intensities should support the day-to-day needs of BRTOD residents. Intensities and densities are greatest near the station, gradually decreasing away from the station.**

**The Gold Line Corridor BRTOD Plans emphasize the creation of safe, comfortable, and active station environments.**







# GOLD LINE CORRIDOR

To ensure that the BRTOD Plans for each station are integrated and complementary, corridor-wide approaches to development and access have been applied.

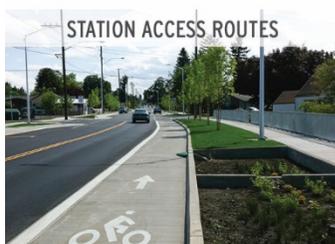
## Station Typologies

Station typologies provide a common vocabulary for describing the development vision for each station area and the relationships between stations along the corridor.



## Station Access Route Hierarchy

A hierarchy of walking and biking routes connect stations along the corridor and provide direct access between the station and destinations within each station area.



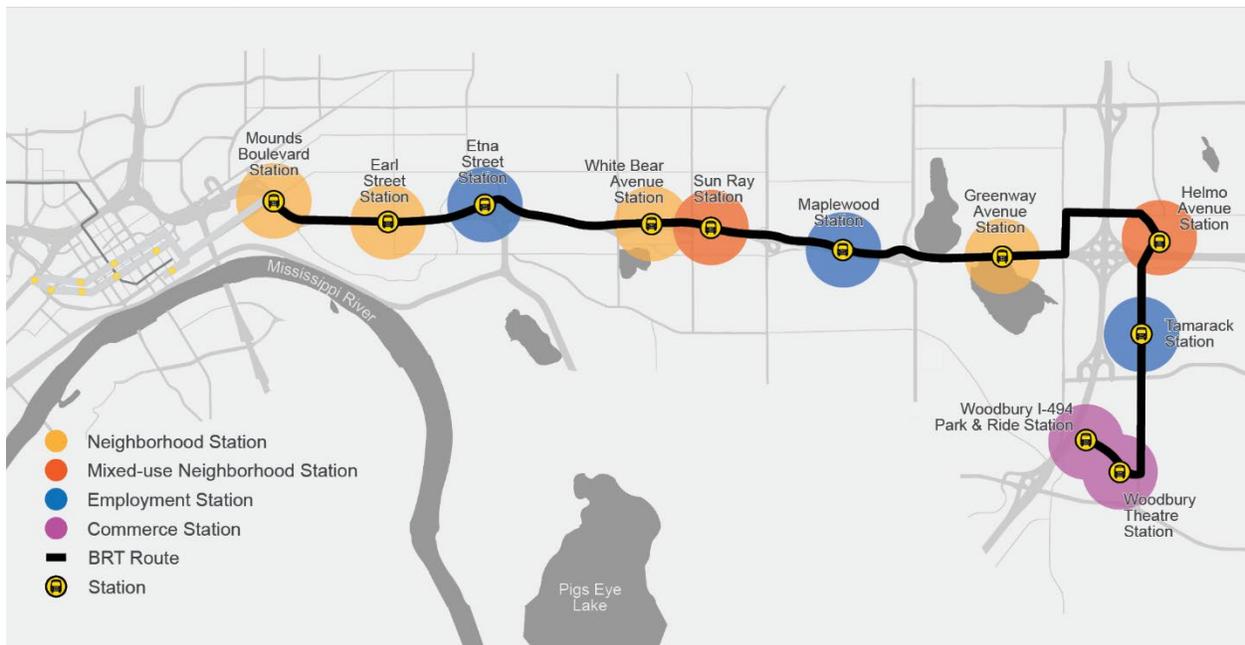
## STATION TYPOLOGIES

Each of the eleven Gold Line stations were assigned a typology: Neighborhood, Mixed-Use Neighborhood, Employment, or Commerce.

Station typologies reflect the complementary roles of the stations along the corridor and inform the type and intensity of transit-oriented development that is emphasized in each station's development plan.

Station typologies respond to station-specific community desires and adopted policies and plans while being consistent with best practices for transit-oriented development. Site conditions, market conditions, and demographics were considered in assigning typologies to each station.

Figure 2. Station Typologies



## NEIGHBORHOOD STATIONS

In Neighborhood Station areas, strategic improvements to key multi-modal transportation routes are emphasized in order to provide safe, direct, and convenient BRT access for current residents. Where development opportunities are present, neighborhood-compatible, moderate-density affordable and market-rate apartment, condominium, and townhome development is appropriate. Policies, programs and strategies that discourage displacement of current residents and businesses ensure that transit-dependent residents receive the benefits of the Gold Line service.

Gold Line's Neighborhood Stations are Mounds Boulevard Station, Earl Street Station, White Bear Avenue Station, and Greenway Avenue Station.

**Neighborhood Stations are predominantly residential areas with few opportunities for transit-oriented infill or redevelopment.**



## MIXED-USE NEIGHBORHOOD STATIONS

Mixed-Use Neighborhood Station areas most closely resemble ideal transit-oriented development. Higher-density affordable and market-rate apartment, condominium, and townhome development is achievable. Street-oriented retail shops, commercial uses, and neighborhood-scaled employment is fostered to create a complete and balanced station area. Neighborhood-scaled employment includes professional offices and services, which may occupy standalone buildings or the floors above ground-floor retail. These station areas should include a rich mix of urban parks, a connected street grid, and safe, direct and convenient walking and biking connections to the station.

Gold Line's Mixed-Use Neighborhood Stations are Helmo Avenue Station and Sun Ray Station.

**Mixed-Use Neighborhood Stations provide the most opportunity for transit-oriented development.**



**Employment Stations draw transit riders from within and outside the corridor.**



## EMPLOYMENT STATIONS

In Employment Station areas, land use policies and plans should maintain and promote existing and new uses that provide family-wage job opportunities for Gold Line corridor residents and for commuters from outside of the corridor study area. Businesses with a high number of jobs per acre, such as medical, financial, technology, and corporate headquarters, should be fostered. These types of businesses require high levels of visibility to succeed and are most successful when located on prominent high-traffic streets, adjacent to other employment uses, and where medium to large parcels are available to accommodate buildings with larger floor areas. Development of new low-intensity uses such as manufacturing, warehousing, or other similar industrial uses should be discouraged. While these station areas have an emphasis on employment uses, residential and employee-serving commercial uses are also appropriate.

Gold Line's Employment Stations are Etna Street Station, Maplewood Station, and Tamarack Station.

**Commerce Stations include BRT-trip-generating destinations used on a daily or weekly basis.**



## COMMERCE STATIONS

Commerce Station areas include substantial employment, high-density residential, entertainment, and dining uses. This station type is an opportunity to establish or strengthen an activity center that serves as an alternative to downtown Saint Paul for corridor residents' daily and weekly shopping trips. Amenities may include a plaza or other urban gathering place. Locating park-and-ride ramps in this station area is appropriate, though they should be sited and designed for shared use if possible. While this station type may initially have greater auto orientation, long-term planning should identify a framework for a street grid and biking and walking connections to the station and park-and-ride.

Gold Line's Commerce Stations are Woodbury Theatre Station and Woodbury I-494 Park-and-Ride Station.

# STATION ACCESS HIERARCHY

A hierarchy of complementary access route types address the need for connections between stations and within each station area. This complete and connected network serves walkers and bicyclists, along with other users who arrive on wheels—whether by wheelchair or by an emerging transportation option such as electric scooters.

Walking and biking improvements to existing public rights-of-way close gaps in existing routes and provide new routes to complete networks identified in the pedestrian and bicycle planning documents of local jurisdictions.

The Corridor Trail links the stations along the Gold Line Corridor and is supported by a network of access routes within each station area.

Figure 3. Corridor Trail Concept



**The Corridor Trail is a continuous walking and biking link between the eleven Gold Line stations.**



## CORRIDOR TRAIL

The Corridor Trail serves as the primary station access route within each station area and:

- Links stations via a car-free safe, direct, and convenient walking and biking route.
- Links numerous existing destinations and proposed new transit-oriented development sites.
- Serves as both a transportation facility and a recreation amenity, connecting existing parks and civic uses to the stations.

The Corridor Trail is an asphalt or concrete walking and biking facility. The trail includes both existing and new trails and runs generally parallel to the BRT guideway from the Woodbury Theatre station to Ruth Avenue and then adjacent to existing streets south of I- 94 to the Mounds Boulevard Station.

**Collector Trails provide access into station areas from neighborhoods and destinations outside the mile-wide Gold Line corridor.**



## COLLECTOR TRAILS

Collector Trails include existing and planned local, regional, and Minnesota Department of Transportation (MnDOT) facilities that feed into and through each station area. The Collector Trails:

- Are separated from auto traffic to provide a safe car-free walking and biking pathway.
- Link existing destinations and new transit-oriented development sites.
- Serve as a recreation amenity, connecting existing parks and civic uses to the stations.

Collector Trails are designed to meet regional and local jurisdiction design standards and are typically a 10- to 12-foot wide asphalt surface that is separated from the street. Collector Trails generally run perpendicular to the BRT guideway and Corridor Trail. Existing Collector Trails are located on Swede Hollow, Century Avenue, McKnight Avenue, Hadley Avenue, Hudson Boulevard, Tamarack Road, and Valley Creek Road. Planned Collector Trails include the Johnson Parkway Trail.

## STATION ACCESS ROUTES

Station Access Routes are the primary walking and biking connections between stations and station area neighborhoods. These routes are sidewalk and bike lane improvements that take advantage of limited space. At the Earl Street and White Bear Avenue stations, Station Access Routes:

- Link existing destinations and new transit-oriented development sites.
- Incorporate designated bike lane routes identified in the bicycle plans of local jurisdictions.
- Incorporate existing bike lanes or are upgraded shared-shoulder routes.
- Incorporate existing sidewalks and, in some instances, existing bike lanes.

The design of Station Access Routes is dependent on local right-of-way-conditions. These routes include a combination of both sidewalks and bike lanes and should include, at a minimum:

- Continuous 5-foot-wide sidewalks on both sides of the street.
- 5-foot-wide one-way buffered or protected bike lanes. In some instances, bike lanes are two-way 10-foot-wide buffered facilities. Striped roadway buffer widths should be 18 inches, but with a physical barrier such as a curb can be 12 inches, minimum.

## NEIGHBORHOOD ACCESS ROUTES

Neighborhood Access Routes provide low-stress connections to station area neighborhoods. In many instances, these routes are preferred by inexperienced riders who are not comfortable riding on busy collector or arterial streets.

Neighborhood Access Routes feed into the station area along streets with existing sidewalks and designated bike routes identified in the pedestrian and bicycle plans of local jurisdictions. These routes are typically located on low traffic streets and link existing lower density residential areas to the stations.

Where Neighborhood Access Routes intersect busy streets, diverters, barriers, or other traffic-control devices may be necessary to provide safe crossings or to discourage through auto traffic. Wayfinding signs or other unifying elements, such as ornamental streetlighting, will help walkers and bikers navigate these routes.

**Station Access Routes provide linkages between the Corridor Trail and stations.**



**Neighborhood Access Routes complete the station area network by providing connections between Station Access, Collector Trail, and Corridor Trail routes.**







# GREENWAY AVENUE STATION AREA

The Greenway Avenue Station is located at the intersection of Greenway Avenue and Hudson Boulevard and is surrounded by portions of the cities of Landfall, Oakdale, and Woodbury.

The Greenway Avenue Station includes a BRT guideway and mixed-traffic bus lanes and Corridor Trail enhancements located generally within the existing right-of-way of Hudson Boulevard and Hadley Avenue.

Figure 4. Greenway Avenue Station Area



Figure 5. Weir Drive/Anytime Fitness



Figure 6. Landfall Neighborhood



Figure 7. Oakdale Neighborhood



## CITY OF WOODBURY

Isolated from the station area by I-94, Woodbury was not an active participant in the Greenway Avenue Station BRTOD planning process. The City's Comprehensive Plan identifies a planned trail along Weir Drive that, with a potential future pedestrian and bicycle crossing of I-94, would provide access to transit for the multi-family neighborhood and Anytime Fitness headquarters campus along Ashwood Road.

## CITY OF LANDFALL

Landfall is primarily a low-income, demographically-diverse 300-unit manufactured home community. Two auto-oriented commercial properties fronting Hudson Road provide important tax revenue for the small community.

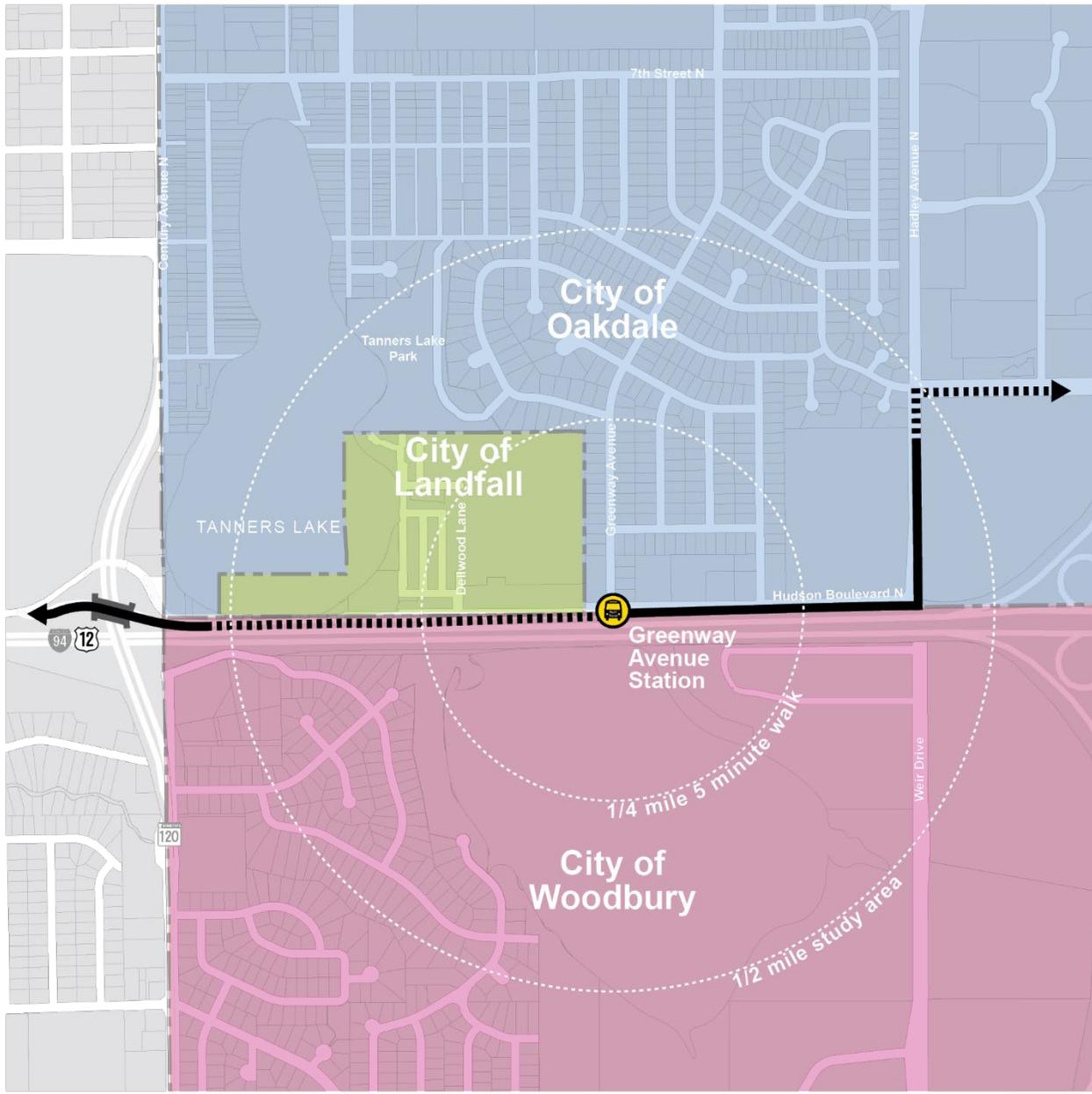
Dellwood Lane provides the neighborhood's primary auto, bicycle, pedestrian, and transit access. Birch Lane provides a secondary community access point and a service drive for the adjacent commercial uses. There are no sidewalks, bicycle lanes, or trails—except for a 10-foot-wide sidewalk located on the west side of Dellwood Lane. A bus stop is located adjacent to this sidewalk.

## CITY OF OAKDALE

The station area includes a southwestern Oakdale neighborhood with a small neighborhood park along Tanners Lake, modest single-family homes, a 57-unit assisted living facility, commercial businesses, and the Apostolic Bible Institute campus. Additional commercial and lodging uses are located west of Tanners Lake along Century Avenue. Tartan High School is just north of 7<sup>th</sup> Street, outside the study area.

Greenway Avenue, Oakdale's primary access to the station, has several bus stops within the station area. Greystone Avenue is a secondary station access route. There are no pedestrian or bicycle improvements in the neighborhood, other than for the trail along Century Avenue and a narrow trail along Hudson Road from Greenway Avenue to Hadley Avenue

Figure 8. Greenway Avenue Station Area



-  Station Location
-  BRT Guideway
-  BRT Mixed-Traffic
-  City of Landfall
-  City of Oakdale
-  City of Woodbury
-  Bridge

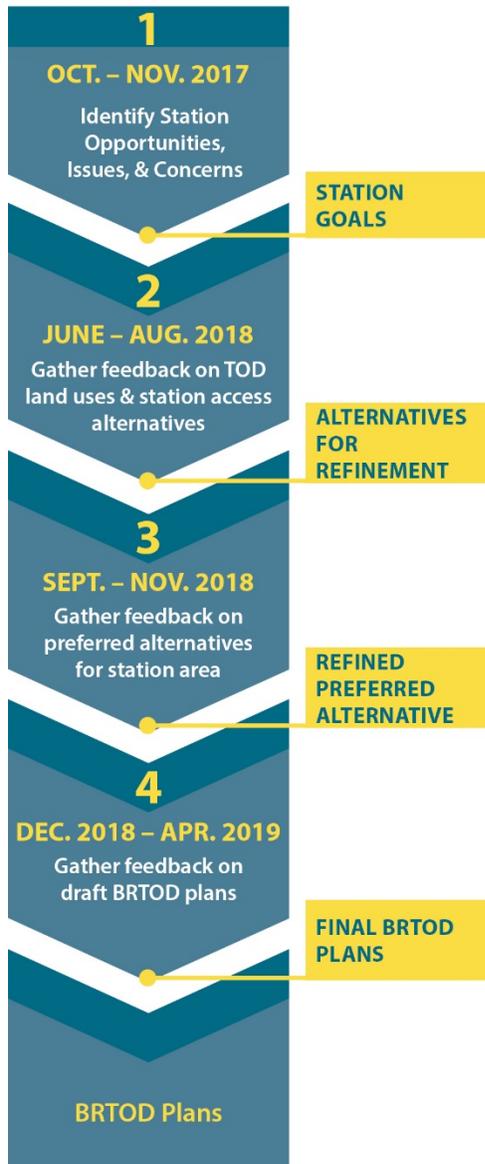
400 ft  
200 ft 800 ft



**GOLD LINE**  
PARTNERS

# BRTOD PLANNING PROCESS

Figure 9. Stakeholder Involvement Process



The planning process for the Greenway Avenue Station BRTOD Plan occurred over nineteen months, beginning in May 2017 and ending in April 2019.

The process occurred concurrently with the BRT Project Engineering process, which advanced the Locally Preferred Alternative (LPA) concept to preliminary design. Location of the Greenway Avenue station and guideway engineering refinement began in January 2018 and included meetings with the BRTOD Planning project team and the Metro Transit Gold Line Project Office to ensure the vision and development and circulation plans created for the Greenway Avenue Station area were considered in the BRT and engineering refinement process.

The Greenway Avenue Station BRTOD planning process consisted of four phases:

1. **Identification of station area opportunities, issues and concerns to establish station area goals.** Stakeholders reviewed project information, provided feedback on station specific issues, and discussed opportunities and constraints.
2. **Development and review of preliminary BRTOD concepts for transit-oriented development and station access.** Stakeholders reviewed and provided feedback on draft alternatives.
3. **Refinement and review of preferred development plan and circulation plan.** Stakeholders provided feedback on refined development scenarios and development and circulation plans.
4. **Review of the BRTOD Plan document.** Stakeholders provided feedback on the draft BRTOD Plan, including implementation strategies.

## STAKEHOLDER INVOLVEMENT

Stakeholder involvement in the Greenway Avenue Station BRTOD Plan built upon extensive engagement conducted prior to the initiation of the BRTOD Planning project and focused on issues related to transit-oriented development. Stakeholder involvement was conducted in close coordination with WCCRA and the staff of the cities of Landfall and Oakdale.

### Stakeholder Involvement Plan

The stakeholder involvement plan established engagement objectives; identified stakeholders, level of engagement, and outreach methods; and ensured that core values, goals, and objectives of the overall Gold Line project were addressed. The plan ensured that those affected by planning decisions had the opportunity to be involved in the decision-making process, that their contributions influenced decisions, and their needs were communicated to decision-makers. At the end of each project phase, the influence of stakeholder input was communicated back to stakeholders.

Engagement included in-person events and online engagement:

- Four joint Landfall and Oakdale city council work sessions held at the City Hall in Oakdale.
- **Four community meetings with residents and property owners** of both Landfall and Oakdale at the community center building in Landfall. Translation services were provided for all community meetings and meeting materials were prepared in both Spanish and English.
- **A corridor-wide open house** for both the BRTOD Planning project and the BRT Engineering project was held at the Guardian Angels Catholic Church in Oakdale. Greenway Avenue Station circulation concepts were presented.
- **Online engagement through the Gold Line Partners website** included a survey, a summary describing the survey intent, a description of survey elements, and presentation slides, prepared in both Spanish and English. Online surveys were typically collected over a one-month period, beginning on the date of the community meeting, and were summarized in both English and Spanish.

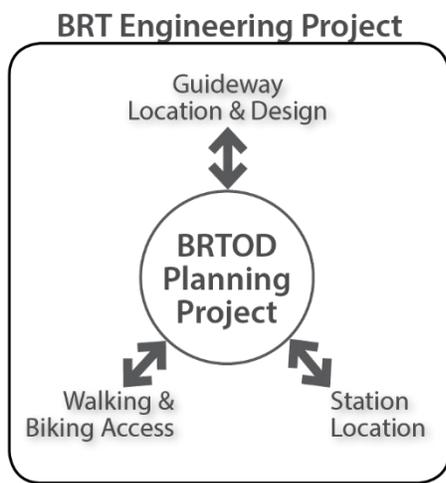
**All key stakeholders were respectfully and inclusively engaged in developing the Greenway Avenue Station BRTOD Plan.**

Figure 10. Community Open House



**Coordination between Metro Transit’s Gold Line Project Office in charge of BRT design engineering and the BRTOD Plans Project consisted of regular coordination meetings held from January 2018 to October 2018.**

Figure 11. Coordinated Engineering and Planning



## GOLD LINE PROJECT COORDINATION

In February 2018, the Gold Line Project Office engineering team met with the BRTOD Planning project consultants and WCRRA to discuss station location, guideway, walking and biking access design issues with the Gateway Corridor Environmental Assessment Concept Plans, and potential design refinements for preliminary development and circulation plans for each of the stations.

Bi-monthly meetings from June through September were attended by the BRTOD Plans project coordinator, deputy project manager for the Gold Line Project office, and Washington County Regional Railroad Authority. Discussions included outstanding issues with the on-going Gold Line BRT design refinements, the extent of station, guideway, and access improvements included in the BRT project cost, and any costs attributed to each city or to partnerships with other entities outside of the BRT project.

In October 2018, the Gold Line Project Office engineering team met with the BRTOD Planning project consultants and WCRRA to discuss refinements to the station location, guideway, and access design and to identify any issues with the preferred development and circulation plans for the station area.

The Gold Line Project Office identified the station location, guideway and access improvements to advance to the environmental assessment phase of the project and the extent of access improvements included in the BRT project cost.

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# STATION AREA ASSESSMENTS

Existing policies, plans, traffic data, and physical conditions relevant to the Greenway Avenue Station area were reviewed. Assessments of the reviewed materials inform the station area vision, development and circulation plans, infrastructure plans, and implementation strategies.

## CIRCULATION AUDIT ASSESSMENT

The pedestrian, bicycle, transit, and street network audit included a field survey and mapping of existing conditions and planned walk, bike, and roadway improvements affecting universal accessibility and safe access to and from the Greenway Avenue Station. The audit also identified bus routes and stops, average daily (auto) traffic counts, high crash areas, roadway segments with traffic speeds greater than 25 miles per hour, and locations of traffic control devices such as traffic signals and stops signs.

### Key Findings

Significant impediments to station access include:

- Major physical barriers between potential transit riders and the station. I-94 bisects the station area and funnels station access to a few key routes—Hudson Boulevard, Greenway Avenue, and Hadley Avenue—effectively cutting potential ridership in half.
- Gaps in, or a complete lack of, sidewalks and bicycle facilities connecting to the station along the key routes of Greenway Avenue, Dellwood Lane, and Hudson Boulevard west of Greenway.
- Existing 8-foot trail on Hudson Boulevards between Greenway and Hadley avenues is narrower than the City's 10-foot trail width standard and AASHTO guidelines.
- Bus service is limited to the local route 219 on Greenway Avenue and Hudson Road, which operates twice hourly during Monday through Friday peak hours and with limited 60-minute Saturday service. No Sunday or holiday service is provided.
- 2014 traffic volumes on Greenway Avenue and Hudson Boulevard are lower—less than 5,000 average daily trips—than typically required to support retail development.

**Circulation conditions limit the development of transit-oriented uses and the ability of existing residents to access the station.**

Figure 12. Missing Walking and Biking Facilities

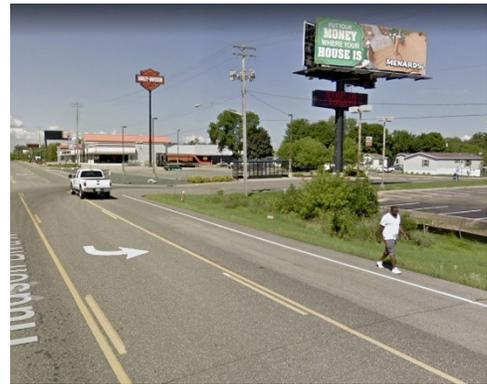


Figure 13. Station Access Barrier



**Both affordable and market rate housing demand exists.**

Figure 14. Potential TOD Sites along Hudson Blvd



Figure 15. Existing Transit-Oriented Uses



Figure 16. Assisted Living Facility



## MARKET AND DEMOGRAPHIC ASSESSMENT

The assessment identified real estate market conditions and demographics affecting development both for the corridor and within a half-mile radius around each station.

### Inventory of Existing Transit-Oriented Uses

- 57-unit assisted living facility on Hudson Boulevard.
- 300-unit mobile home community in the City of Landfall.
- Two apartment communities located across I-94 in the City of Woodbury, include 324 units but are physically isolated from the station.

### Key Findings

- There are few potential redevelopment sites in proximity to the station.
- Existing residential density is low. However, housing stock in residential neighborhoods is aging and over time redevelopment may occur, allowing for future consideration of policies that foster transit-oriented higher-density housing.
- The station could support affordable housing, provided sufficient financing is available.
- The commercial sites lining Hudson Boulevard have the most redevelopment potential in the area. Additional commercial/retail development potential is limited.
- There is demand for both market-rate and affordable housing in the near- to mid-term.

## GAP ASSESSMENT

The Housing, Education, and Employment Gap Assessment addresses the redevelopment potential of the station. It identifies missing housing types, strengths and weakness, and the most advantageous sites for housing and commercial development within one-half-mile of the station.

The gap assessment identified ten-year horizon demand for transit-oriented uses based on station area demographic needs and site strengths and challenges.

### Site Strengths

- Good visibility and traffic volumes for commercial development due to the proximity of I-94.
- Retail destinations are present, including Harley Davidson and Indian motorcycle dealerships.
- Large, long-term redevelopment parcels exist along Hadley on the periphery of the station area.

### Site Challenges

- No direct automobile access to I-94.
- Limited number of suitable development sites.
- Poor pedestrian conditions.

### Demand

- Housing development potential of 360 units.
- Commercial development potential of 20,000 to 45,000 square feet.
- Professional office potential of up to 80,000 square feet.

**Substantial opportunities exist to fill station area land use gaps.**

Figure 17. Affordable and Market-Rate Apartments



Figure 18. Commercial Development



Figure 19. Professional Offices



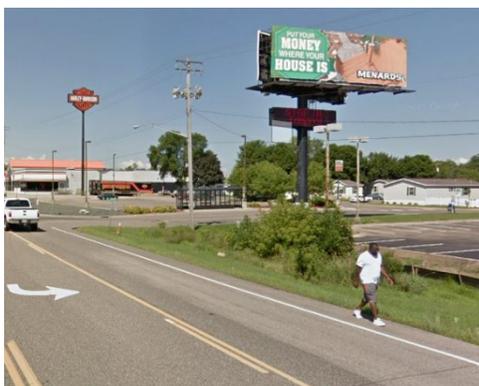
**Existing infrastructure is adequate for existing and new development designated in each city’s plans. More intensive BRTOD development may require upgraded facilities.**

Figure 20. Water Meter Vault



**The overall health of people in the corridor is generally good by comparison with state and national benchmarks.**

Figure 21. Poor Walking and Biking Conditions



## INFRASTRUCTURE AUDIT ASSESSMENT

The infrastructure audit identified the type, location, and condition of utilities serving the station area. It serves as a baseline for an infrastructure strategy that supports the potential transit-oriented development identified in the Development Plan.

The existing potable water distribution system—including the source, location and availability of the water supply; existing stormwater management including above ground swales and subsurface storm sewers; and sanitary sewer service to existing uses—was mapped. No electrical, communication, or other municipal infrastructure was assessed.

### Key Findings

- Current capacity in the existing water main line is adequate to support existing and short-term development as identified in each city’s comprehensive plan land use maps.
- Sanitary sewer main line is adequate to support existing and short-term development as identified in each city’s comprehensive plan land use maps.
- Existing stormwater facilities are adequate to support existing and short-term development as identified in each city’s comprehensive plan land use maps.

## GOLD LINE HEALTH IMPACT ASSESSMENT

The *Gateway Gold Line Bus Rapid Transit: A Closer Look at Health and Land Use Technical Report*, completed in 2016, identified key built-environment factors considered most important to health. Four elements important to health and influenced by land use decisions are connectivity, housing, jobs, and safety.

### Key Findings

- Social and financial stress in households limits individuals’ ability to be healthy.
- A significant transit-dependent population exists that could benefit from additional transit service if pedestrian and bicycle improvements are added to existing trails on Century Avenue and Hadley Avenue.
- The proximity of the 3M campus creates a significant source of employment and an opportunity for pedestrian and bicycle improvements that tie the Greenway Avenue Station to 3M.

## POLICY & REGULATORY PLANS ASSESSMENT

The cities of Landfall and Oakdale updated their comprehensive plans in 2018. The policy and regulatory plan assessment identifies key policies, regulations, and implementation tools from these plans relevant to planning for BRTOD.

### Key Policy Findings

- The City of Landfall provides a significant 300-unit source of affordable housing. The City owns the land and has comprehensive plan policies, goals, and implementation tools to address housing affordability.
- City of Oakdale Comprehensive plan policies and zoning regulations do not permit mixed-use transit-oriented uses within the station area.
- The City of Landfall permits only a narrow range of auto-oriented uses for commercial properties along Dellwood Lane.

### Key Regulation Findings

- Neither city's Capital Facilities Plan includes projects to improve access or to provide infrastructure to support development.

### Key Implementation Tool Findings

- Current Oakdale residential densities are limited to single-family detached housing. Higher-density transit-oriented uses are currently not permitted.

**Landfall and Oakdale policies and goals lack elements necessary to foster BRTOD.**

Figure 22. Storage Yard



Figure 23. Harley Davidson Dealership







# VISION

The Greenway Avenue Station is envisioned as a Neighborhood Station serving the low-income and demographically diverse community of Landfall and the adjacent Oakdale single-family residential neighborhood. The station provides both transit access to the corridor and an opportunity for placemaking in the station area community.

While there are long-term transit-oriented development sites on the periphery of the station area, there are few opportunities for transit-oriented infill or redevelopment within a five-minute walk of the Greenway Avenue Station. Where development opportunities exist, station-activating commercial uses and affordable and market-rate multi-family development are envisioned.

Strategic enhancements and improvements to key multi-modal transportation routes are intended to provide residents with safe, direct, and convenient BRT access and links to future transit-oriented development sites.

Figure 24. Potential Greenway Avenue Station Character-



Figure 25. 18-Hour Uses Adjacent to the Station



Figure 26. Direct and Safe Trail Access



## BRTOD VISION

The Greenway Avenue Station vision is a synthesis of corridor-wide and station-specific objectives.

### Safe and Active Station Environment

A street-oriented commercial development adjacent to the station should provide an active use, with eyes on the station and an opportunity not presently available to meet residents' daily commercial needs within the station area.

### Transit-Oriented Infill

Infill buildings should be oriented to Hudson Boulevard and Dellwood Lane, providing an opportunity for new development that fosters transit use and serves the community. Along Dellwood Avenue, the siting of these buildings can establish a gateway entry and 'front door' to the city of Landfall.

### Long Term Transit-Oriented Opportunity Sites

Underutilized parcels (Apostolic Bible Institute and Regan properties) along Hudson Boulevard and Hadley Avenue provide opportunities for additional multi-family development and employment within a half mile of the station. New housing development should include options for a range of incomes and ages.

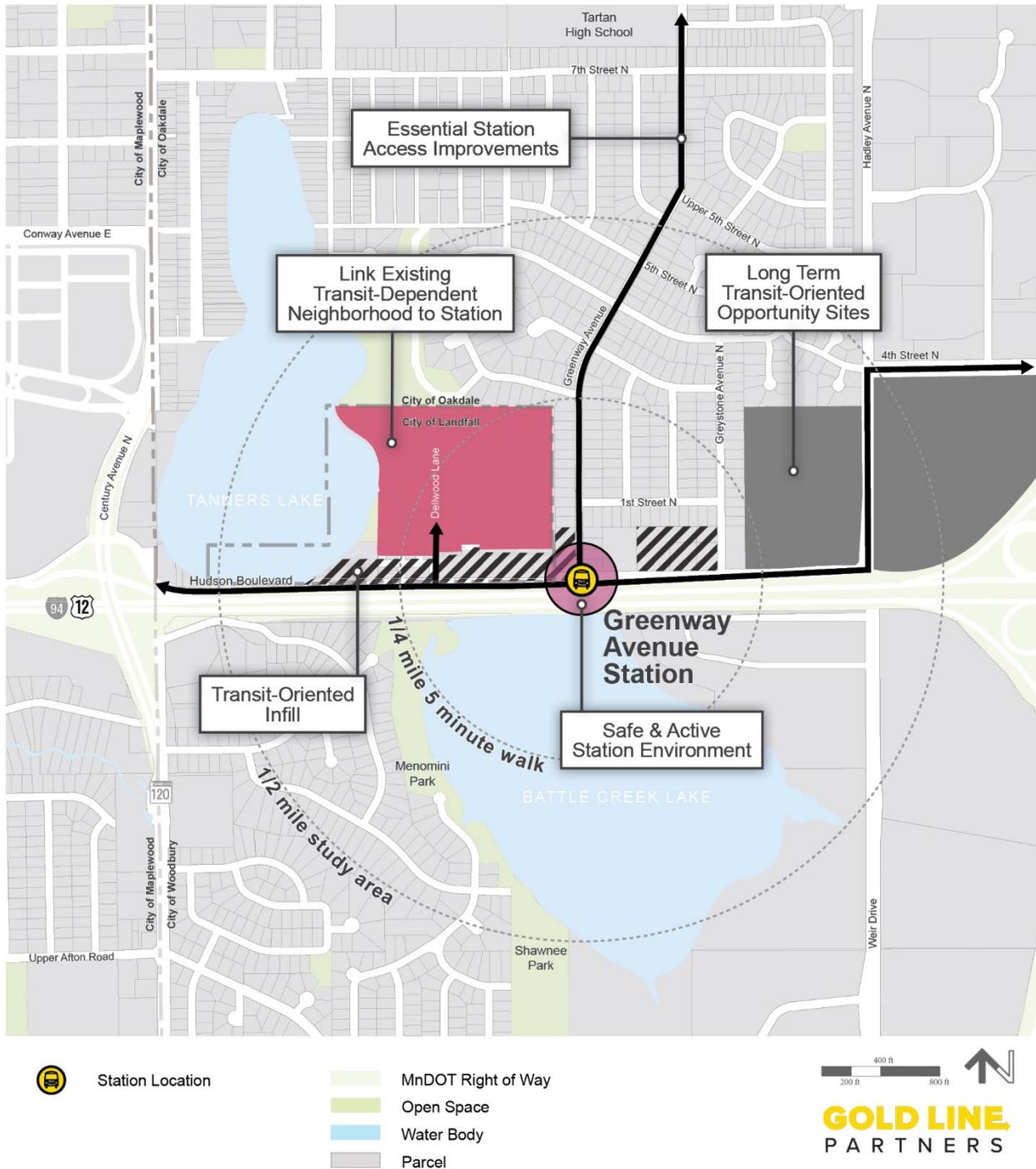
### Link Transit-Dependent Neighborhood to Station

Walking and biking improvements are crucial to improving station access for existing residents. These improvements will ensure that Landfall and Oakdale residents benefit from access to corridor-wide job and educational opportunities, health services, and shopping opportunities provided by the Gold Line BRT.

### Essential Station Access Improvements

The Gold Line BRT project will provide a continuous bike and walk trail connecting the Greenway Avenue Station to the Maplewood and Helmo stations. Sidewalk and bike improvements on Dellwood Lane provide a direct connection from Landfall to the Greenway Avenue Station. A new trail along Greenway Avenue provides Oakdale residents with safe and direct access to the station and Tartan High School.

Figure 27. Greenway Avenue Station BRTOD Vision Concept



The BRTOD Plan for the Greenway Avenue Station should not contribute to the displacement of existing station area residents.



## EQUITABLE GROWTH OBJECTIVES

Implementation of a premium transit service can result in significant displacement of existing residents. To stem the tide of displacement, a key outcome of this planning process is a Development Plan that serves as the driver for proactive and equitable growth policies that direct investments to affordable housing and commercial development sites prior to the construction of the Gold Line.

Equity objectives for the Greenway Avenue Station include:

- **Maintenance of Landfall’s manufactured-homes neighborhood, which provides a significant supply of affordable housing.** The City’s Comprehensive Plan policies aim to preserve housing units affordable to people at 50% of the area median income (AMI) and supports access to transit for all residents.
- **Identification of ways to increase both rental and home ownership opportunities for low-income residents.** Research shows that building premium transit service, like the Gold Line, increases rents and home prices in the proximity of the stations. While some people benefit from the change, increased housing costs lead to the displacement of many who are below the poverty level. This neighborhood change also has the long-term consequence of reducing transit ridership as new higher-income households opt out of the transit system.
- **Identification of opportunities for family-wage jobs.** There is a symbiotic relationship between diverse neighborhoods and a successful Gold Line; the system will benefit from, and depend on, racial and economic diversity in the neighborhoods it serves, just as low-income households and people of color depend on and benefit from living in neighborhoods served by BRT.

Figure 28. Greenway Avenue Station Existing Condition



Figure 29. Greenway Avenue Station Planned Condition-







# CIRCULATION PLAN

The Circulation Plan focuses on walking and biking access to the station along existing roadways. The Circulation Plan builds upon the basic walking and biking improvements that will be provided by the BRT Engineering project, in some instances identifying minimal enhancements. For other routes, more substantial improvements are proposed to ensure that direct, convenient, and safe station access is provided for walkers and bicyclists.

**Circulation plan improvements provide universal access for all, regardless of age and physical ability.**



## KEY CIRCULATION PLAN ELEMENTS

### **Corridor Trail**

The Corridor Trail links the Greenway Avenue Station west to the Maplewood Station and the 3M Headquarters Building and east of I-694 to the Helmo Station. The Corridor Trail is parallel to the BRT route along Hudson Boulevard, Hadley Avenue, and 4th Street.

Special enhancements are addressed for trail segments on Hudson Boulevard adjacent to Tanner's Lake and along the existing Harley Davidson dealership frontage.

### **Collector Trails**

Collector Trails provide important routes for bicyclists and walkers between the Corridor Trail, neighborhood destinations, and the regional bicycle transportation network. Collector Trails are located along Century Avenue, and Hadley Avenue. Not a part of the BRT project, a future walk and bike bridge between Hadley Avenue and Weir Drive would be desirable for improving station access from south of I-94 and connecting walk and bike facilities between Oakdale and Woodbury.

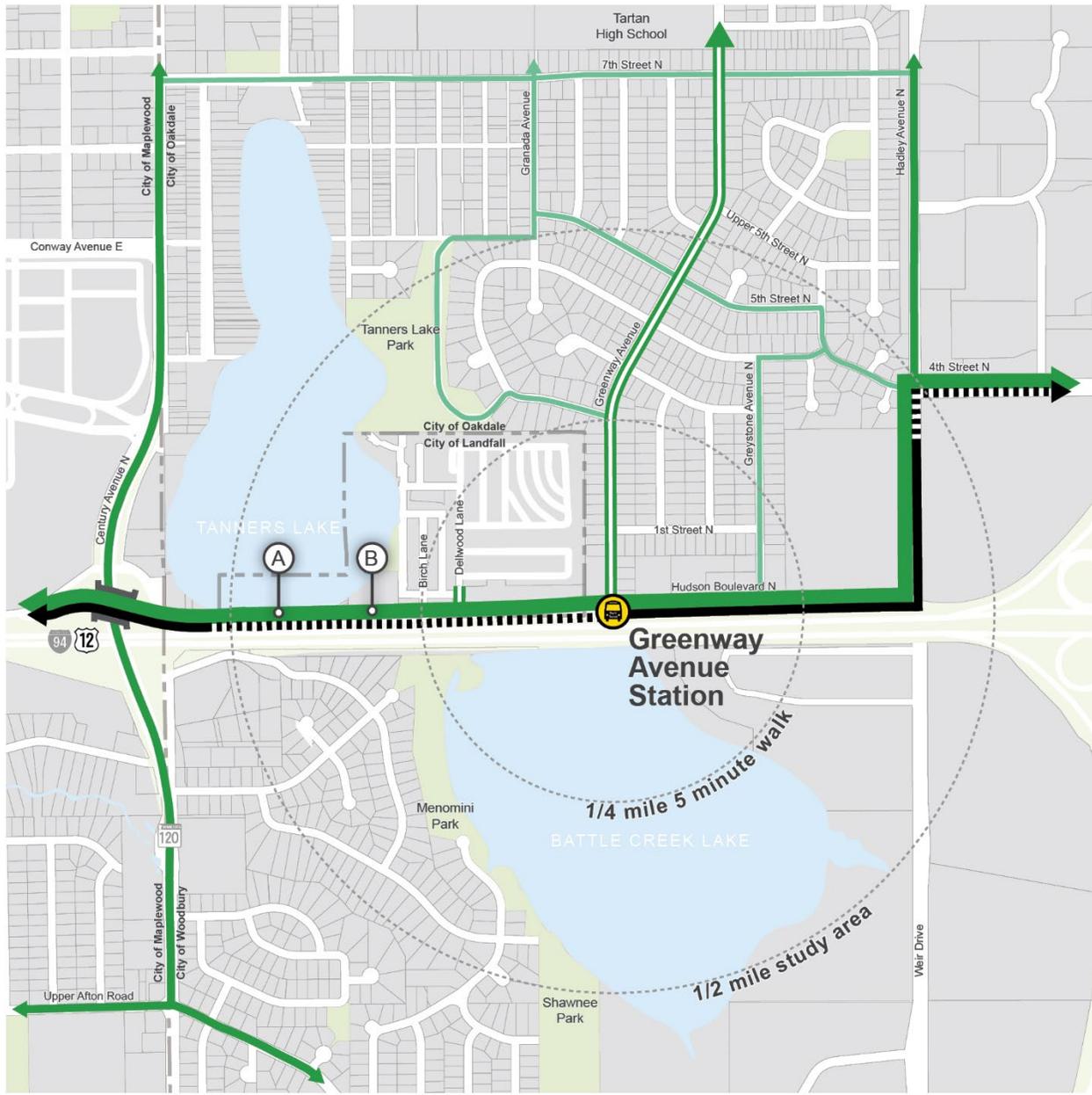
### **Station Access Routes**

Safe and direct pedestrian and bicycle routes along Dellwood Lane and Greenway Avenue provide a 'front door' for Landfall and access from Oakdale neighborhoods and Tartan High School to the station.

### **Neighborhood Access Routes**

Neighborhood Access Routes are low-stress routes linking existing and planned trails.

Figure 30. Greenway Avenue Station Circulation Plan



- Station Location
- BRT Guideway
- BRT Mixed-Traffic
- Corridor Trail
- Station Access Route
- Collector Trail
- Neighborhood Access Route
- Bridge
- Special Enhancement Indication

- MnDOT Right of Way
- Open Space
- Water Body
- Parcel

400 ft  
200 ft 800 ft

**GOLD LINE**  
PARTNERS

**The Corridor Trail links the ten stations along the Gold Line corridor.**

Figure 31. Existing Hudson Boulevard Trail



## CORRIDOR TRAIL

The Corridor Trail links the Greenway Avenue Station west to the Maplewood Station and the 3M Headquarters Building and east of I-694 to the Helmo Station Corridor Trail Enhancements

The BRT Engineering project will construct the Corridor Trail between Greenway Avenue and Hadley Avenue.

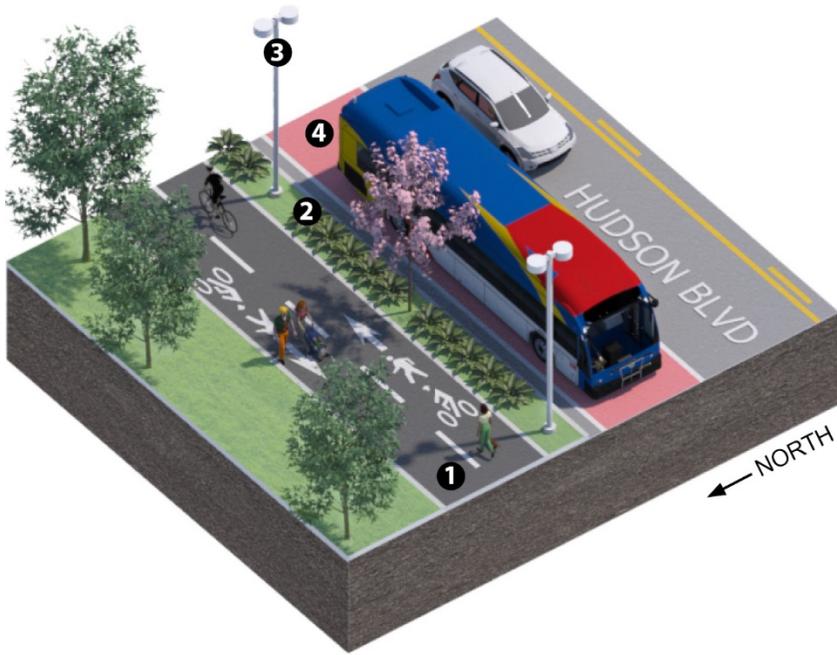
A complete trail design will have the following characteristics:

- Lighting for both the roadway and trail.
- Street trees, shrubs, and groundcover to create a more robust and attractive buffer between vehicles, pedestrians, and bicyclists.
- Relocation of overhead utilities along Hudson Boulevard away from the trail or underground to improve the visual quality of the trail and allow for planting of canopy and ornamental trees along the trail.
- Wayfinding signs at intersections with existing trails.

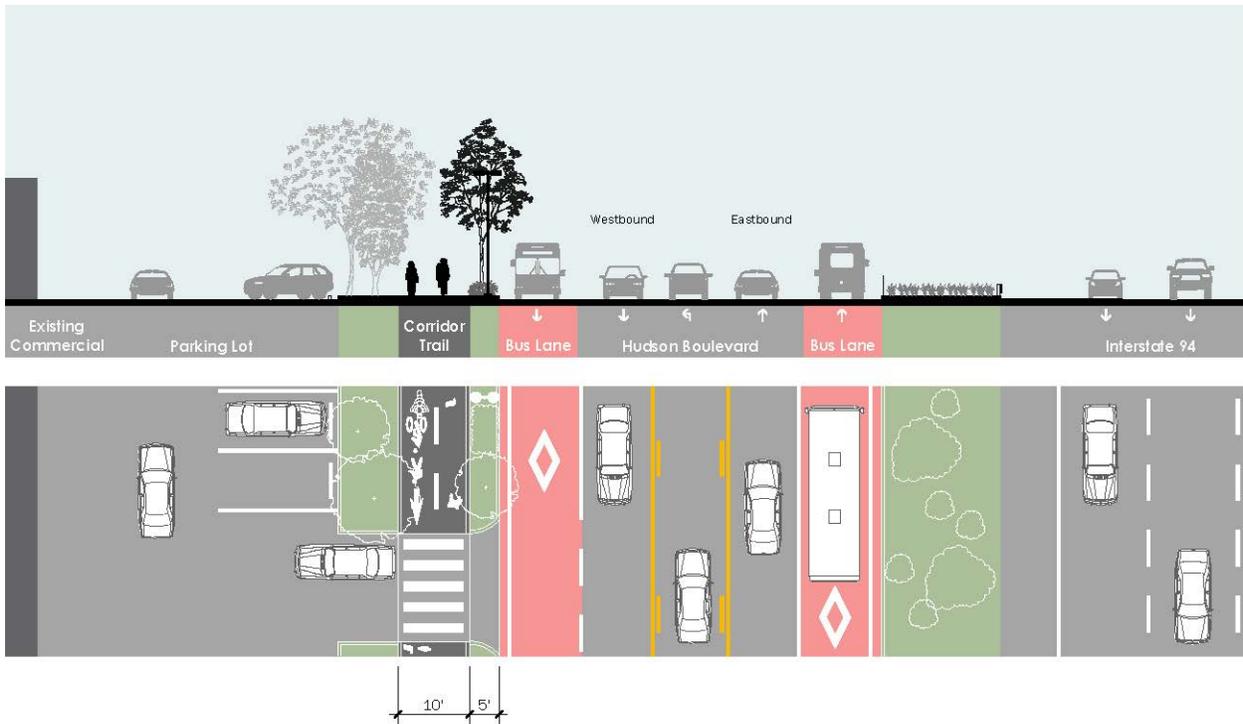
Special trail conditions are located along:

- Ⓐ Hudson Boulevard at Tanners Lake
- Ⓑ Hudson Boulevard at the existing Harley Davidson dealership

Figure 32. Corridor Trail Enhancement



- 1 CORRIDOR TRAIL**  
Typical multi-use trail serving pedestrians and bicycles; two-lane 10-foot-wide trail
- 2 LANDSCAPED BOULEVARD**  
Minimum 5-foot-wide landscaped boulevard providing visual interest, a traffic buffer for trail users, and snow storage area.
- 3 STREET LIGHTING**  
Pedestrian-scaled lighting for multi-use trail users and automobile traffic.
- 4 BUS ONLY LANE**  
Typical 14-foot-wide dedicated bus guideway for Gold Line BRT.



### DESIGN ELEMENTS KEY

- 1 CORRIDOR TRAIL
- 2 FENCE
- 3 STREET LIGHTING
- 4 MIXED-USE TRAFFIC LANE
- 5 HUDSON BOULEVARD
- 6 OVERHEAD UTILITIES
- 7 CURB

## Ⓐ TANNERS LAKE SPECIAL CONDITION

The Corridor Trail along Tanners Lake between Century Avenue and the Harley Davidson dealership provides a key linkage between Landfall and commercial and lodging development along Century Avenue. To provide adequate trail width and ensure a safe environment separated from high speed traffic, this trail segment is raised above the current roadway elevation with a curb. Additional City enhancements such as overlooks, piers, or other elements that create a recreation amenity along the lake should be considered.

Figure 33. Tanners Lake Existing Condition (Looking East)



Figure 34. Tanners Lake Enhanced Condition (Looking East)

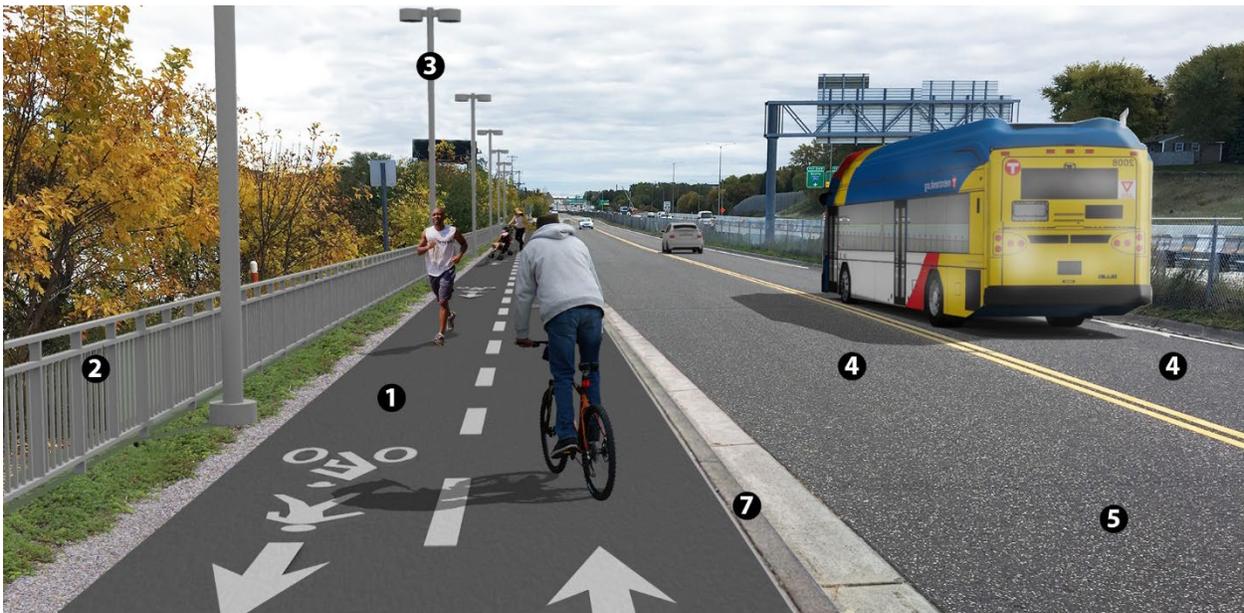
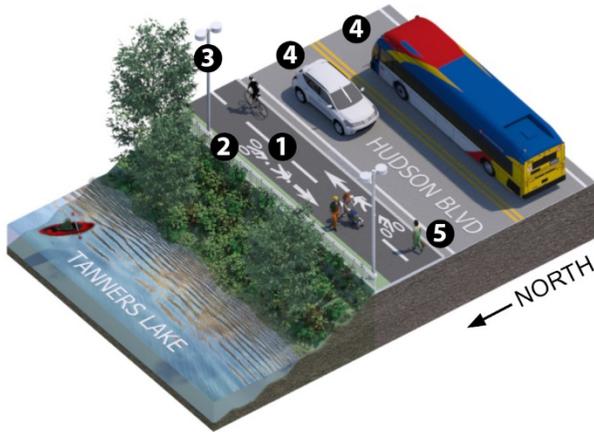


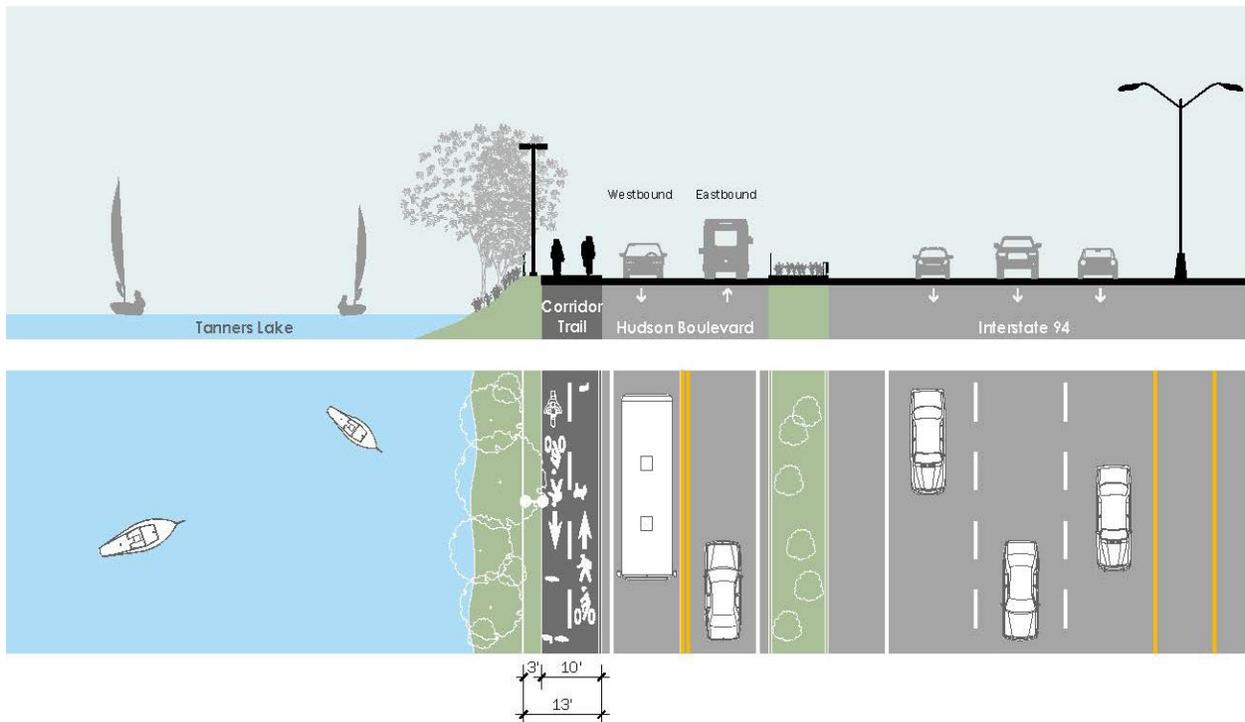
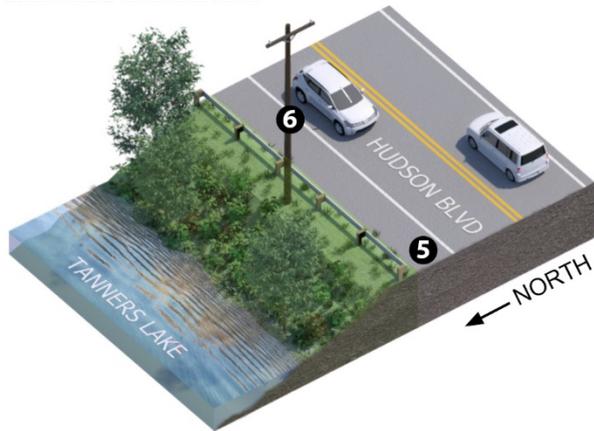
Figure 35. Corridor Trail Enhancement at Tanners Lake

**(A) ENHANCED CONDITION**



- 1 CORRIDOR TRAIL**  
Unobstructed, curb-separated 10-foot-wide trail serving both pedestrians and bicyclists.
- 2 FENCE**  
42-inch-tall fence separating the Corridor Trail from Tanners Lake.
- 3 STREET LIGHTING**  
Pedestrian-scaled lighting for Corridor Trail users and automobile traffic.
- 4 MIXED-USE TRAFFIC LANE**  
Lane serving Gold Line BRT and automobile traffic.
- 5 ROADWAY**  
Existing shoulder and some landscaping to be removed to make room for Corridor Trail and curb.
- 6 OVERHEAD UTILITY LINES**  
Existing utility lines to be moved underground to improve visual quality along the lake.

**EXISTING CONDITION**



## DESIGN ELEMENTS KEY

- 1 CORRIDOR TRAIL
- 2 LANDSCAPED BOULEVARD
- 3 TRAIL LIGHTING
- 4 MIXED-USE TRAFFIC LANE
- 5 HARLEY DAVIDSON DEALERSHIP
- 6 EXISTING LANDSCAPING
- 7 HUDSON BOULEVARD

## Ⓑ HARLEY DAVIDSON SPECIAL CONDITION

To provide adequate trail width and a safe and pleasant environment consistent with the overall character of the Corridor Trail through the Greenway Avenue Station area, enhancements to the BRT Engineering project concept are proposed for the Corridor Trail along the Harley Davidson dealership frontage. Potential City elements include landscaping and lighting.

Figure 36. Harley Davidson Dealership Existing Condition (Looking East)

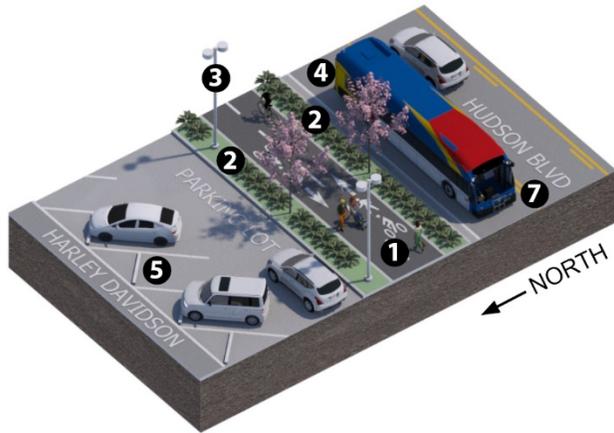


Figure 37. Harley Davidson Dealership Enhanced Condition (Looking East)

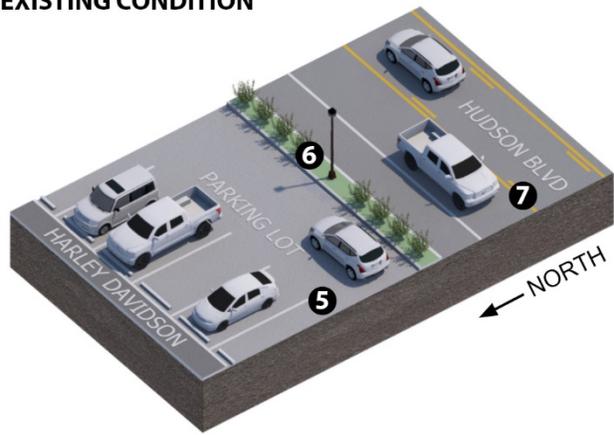


Figure 38. Corridor Trail Special Condition at Harley Davidson Dealership

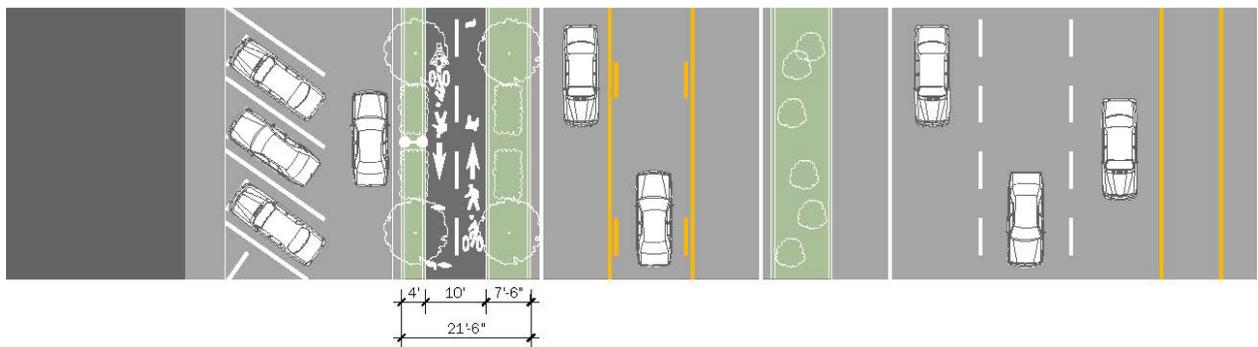
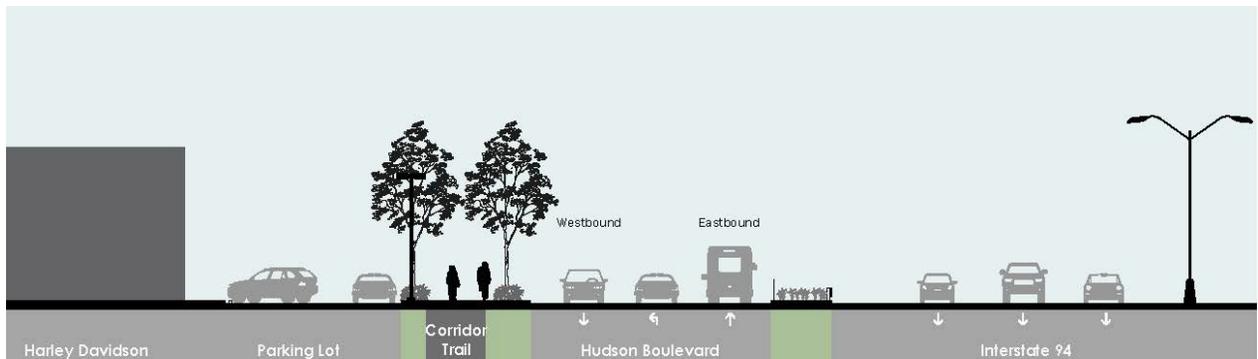
**(B) ENHANCED CONDITION**



**EXISTING CONDITION**



- 1 CORRIDOR TRAIL**  
10-foot-wide multi-use trail serving both pedestrians and bicycles.
- 2 LANDSCAPED BOULEVARD**  
Two landscaped boulevards provide visual interest, a traffic buffer for trail users, and snow storage area.
- 3 TRAIL LIGHTING**  
Pedestrian-scaled lighting for Corridor Trail users and automobile traffic.
- 4 MIXED USE TRAFFIC LANE**  
Lane serving Gold Line BRT and automobile traffic.
- 5 HARLEY DAVIDSON**  
Parking lot narrowed and restriped for one-way car traffic and angled parking.
- 6 EXISTING LANDSCAPING**  
Existing landscaped boulevard to be removed to make room for enhanced Corridor Trail.
- 7 ROADWAY**  
Existing shoulder to be removed to make room for enhanced Corridor Trail.



**Collector Trails are existing and enhanced trails along the periphery of the station area that link the Corridor Trail, neighborhood destinations, and the regional bike network.**

Figure 39. Existing Hadley Avenue Trail



Figure 40. New Century Boulevard Trail



Figure 41. Century Avenue and I-94 Intersection



## COLLECTOR TRAILS

Located outside the five-minute walking radius, Collector Trails provide important routes for bicyclists and walkers between the Corridor Trail, neighborhood destinations, and the regional bicycle transportation network.

### Century Avenue Trail

An existing 10-foot-wide asphalt trail on the east side of Century Avenue between 4th Street and Ridge Drive provides station access south of I-94. The signalized intersection of Hudson Boulevard and Century Avenue currently lacks an east/west crosswalk across Century Avenue

To improve walk and bike access, the BRT Project will:

- Add a pedestrian crossing signal and east/west crosswalk at the intersection of Hudson Boulevard and Century Avenue.
- Construct a new 10-foot-wide trail segment on the west side of Century Avenue from the Hudson Boulevard and Century Avenue intersection south to Brookview Drive in Maplewood. This trail will also connect to the Corridor Trail and the 3M campus.
- Future extensions of the Century Avenue trail should continue to 10<sup>th</sup> Street North

### Hadley Avenue

An existing 8-foot-wide asphalt trail links 4th Street north to the regional bicycle transportation network at 10th Street (CSAH 10). The BRT Engineering project will add a 10-foot trail from 4<sup>th</sup> Street to Hudson Boulevard.

### Future I-94 Pedestrian Bridge

A future pedestrian and bicycle bridge over I-94 between Hadley Avenue in Oakdale and Weir Drive in Woodbury would benefit transit riders with improved station access and trail users by connecting trail facilities between the cities.

All of these trails should include:

- Wayfinding signs at intersections with existing trails, BRT station and area destinations.

## STATION ACCESS ROUTES

Two Station Access Routes have been identified—Dellwood Lane in Landfall and Greenway Avenue in Oakdale. These routes provide each community with their ‘gateway’ to transit, without these routes there is no access from Landfall and Oakdale to the BRT station. These routes are identified as important transit connections in each city’s Comprehensive Plan.

Since neither Landfall nor Oakdale has a viable alternative for safe, direct, and comfortable walking and biking routes to the station, it is especially important to ensure that routes are well designed. In addition to providing access, both streets are opportunities for ‘placemaking’ elements that signal the importance of the street, the character of the neighborhood, and the function of adjacent land uses.

### Greenway Avenue

Greenway Avenue provides a key linkage between the station, Oakdale neighborhoods and Tartan High School, an important destination just outside the project study area.

### Dellwood Lane

As the sole access route between the City of Landfall and the Greenway Avenue Station, Dellwood Lane is a key walking and biking connection to the station. Improvements to Dellwood Lane are the responsibility of the City of Landfall and are identified here for reference.

All of these station access routes should include:

- Wayfinding signs at intersections with existing trails, BRT station and area destinations.

**Station Access Routes provide access to transit from destinations outside the Gold Line corridor.**

Figure 42. Tartan High School



**DESIGN ELEMENTS KEY**

- 1** SIDEWALKS
- 2** EXISTING BUS STOP
- 3** STREET LIGHTING
- 4** PLACEMAKING
- 5** COMMERCIAL/EMPLOYMENT DEVELOPMENT
- 6** DELLWOOD LANE
- 7** MIXED TRAFFIC LANES
- 8** BILLBOARD SIGN
- 9** MANUFACTURED HOME STAGING LANE

**DELLWOOD LANE**

Dellwood Lane improvements between 1<sup>st</sup> Avenue and Hudson Boulevard maintain and enhance the functional elements of the street while providing ‘placemaking’ elements that create an inviting sense of arrival to the community and an attractive setting for potential infill transit-oriented development.

Short-term manufactured home staging could remain on Dellwood Lane, though alternative locations for staging should be first explored on Birch Lane and 1<sup>st</sup> Avenue.

Figure 43. Dellwood Lane Existing Condition (Looking North)

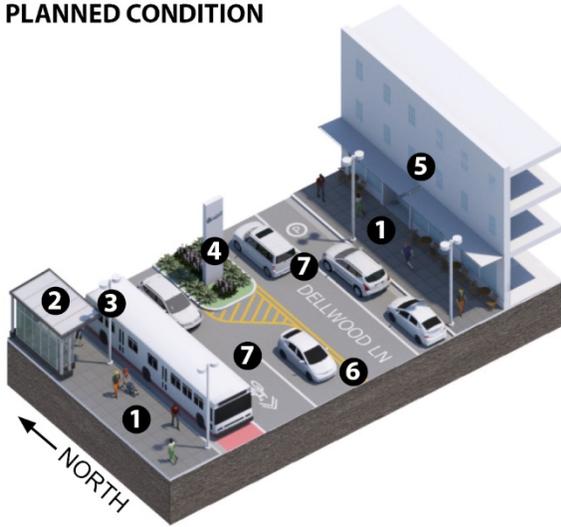


Figure 44. Dellwood Lane Planned Condition (Looking North)

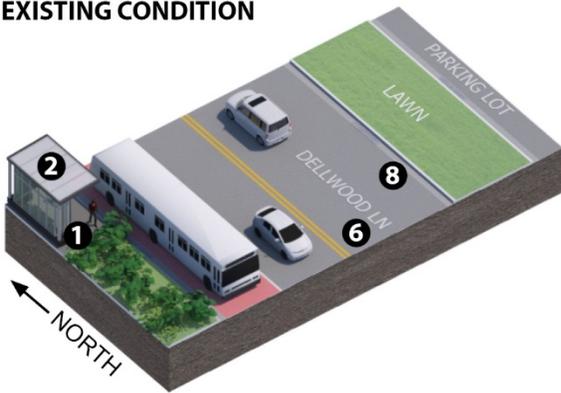


Figure 45. Dellwood Lane Station Access Route

**PLANNED CONDITION**



**EXISTING CONDITION**



- 1 SIDEWALKS**  
Sidewalks on both sides of Dellwood Lane. Sidewalks include street lighting, street furniture, and the existing bus stop.
- 2 EXISTING BUS STOP**  
Existing bus stop location is maintained. An improved shelter may include amenities such as electronic information boards.
- 3 LIGHTING**  
Pedestrian-scaled lighting for both walkways and roadway lanes.
- 4 PLACEMAKING**  
Landfall monument sign and landscaped median to provide a 'front door' sense of arrival and wayfinding for the City of Landfall.
- 5 COMMERCIAL/EMPLOYMENT DEVELOPMENT**  
Potential commercial/employment development fronting both sides of Dellwood Avenue frames the street.
- 6 ROADWAY**  
Existing curb-to-curb dimensions remain unchanged. By narrowing existing wide lanes, Dellwood Lane can accommodate a bus lane, two travel lanes, a turn lane, and parking lane.
- 7 MIXED TRAFFIC LANES**  
Both southbound and northbound car lanes include bicycle "sharrows", indicating low speed and safe Landfall access for both cars and bicycles.
- 8 MANUFACTURED HOME STAGING LANE**

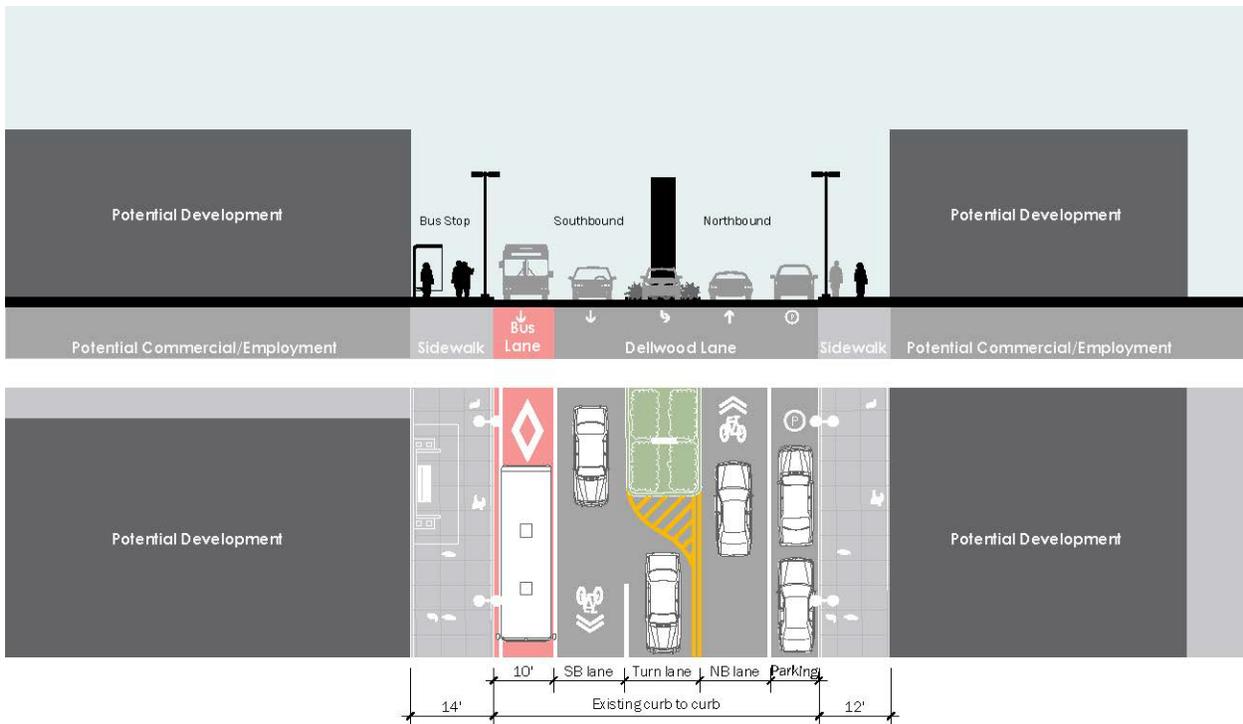


Figure 46. Semi-Truck with Manufactured Home



## Manufactured Home Staging

Dellwood Lane serves large commercial vehicles, Metro transit buses, school buses, and semi-tractor trailer trucks delivering and removing manufactured homes. The street currently provides temporary parking for these trucks for periods up to 24-hours.

Figure 47. Options for Temporary Semi-Truck Parking



## GREENWAY AVENUE

### DESIGN ELEMENTS KEY

- ❶ MULTI-USE TRAIL
- ❷ LANDSCAPED BOULEVARD
- ❸ STREET LIGHTING
- ❹ GREENWAY AVENUE
- ❺ RESIDENTIAL DRIVEWAY ACCESS
- ❻ BUS STOP ENHANCEMENTS

Greenway Avenue improvements provide direct, safe, and convenient access within the existing right-of-way from the existing neighborhood north of Hudson Boulevard to the station. A new trail and landscaped boulevard are added along the west side of Greenway Avenue from the station at Hudson Boulevard to 10<sup>th</sup> Street. On both sides of the street, wide paved areas should be provided at existing Route 219 bus stops to accommodate shelters, benches, signs, and sidewalk ramps.

Figure 48. Greenway Avenue Existing Condition (Looking South)

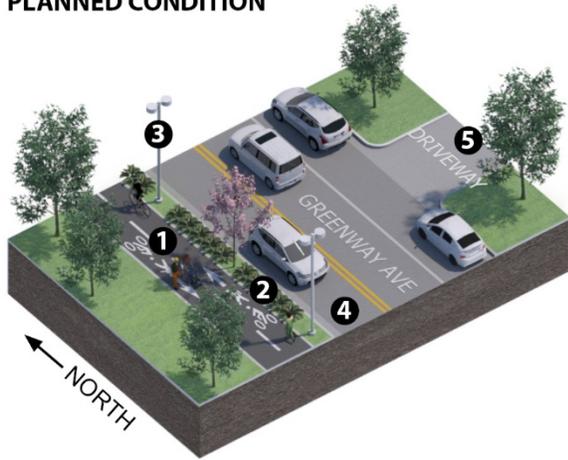


Figure 49. Greenway Avenue Planned Condition (Looking South)

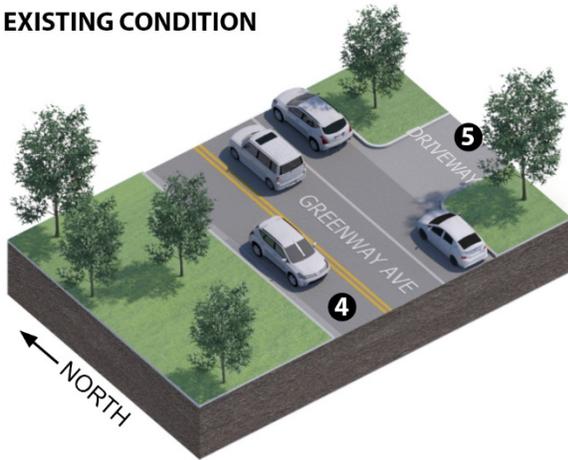


Figure 50. Greenway Avenue

**PLANNED CONDITION**



**EXISTING CONDITION**



**1 MULTI-USE TRAIL**

10-foot-wide walking and biking trail. The location of the trail may vary to avoid significant existing trees or minimize grading impacts to adjacent parcels.

**2 LANDSCAPED BOULEVARD**

4-foot-wide landscaped boulevard provides a traffic buffer between roadway travel lanes and trail users. During winter months, this area can accommodate snow storage.

**3 STREET LIGHTING**

Additional pedestrian-scale lighting for both the trail and traffic lanes. Match or maintain existing light poles and fixtures.

**4 ROADWAY**

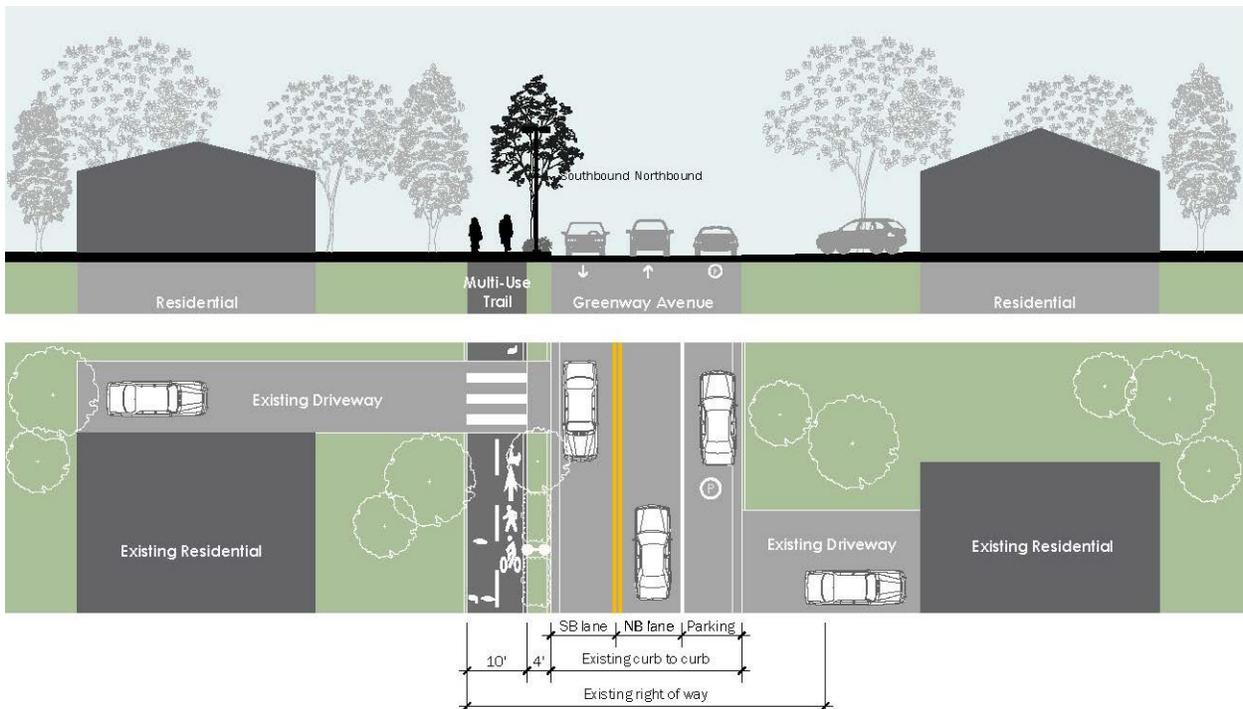
Existing travel lanes and parking are unchanged.

**5 RESIDENTIAL DRIVEWAY ACCESS**

Existing driveways are maintained along the trail.

**6 BUS STOP ENHANCEMENTS**

Enhance Route 210 bus stops. Provide handicap ramps, wide paved waiting area, and bench or shelter.



**Streets with low traffic volume provide low-stress walking and biking routes that connect Station Access Routes and the Corridor Trail.**

Figure 51. Existing 7th Street



Figure 52. Existing Granada Avenue



## NEIGHBORHOOD ACCESS ROUTES

Neighborhood Access Routes are consistent with routes designated in Oakdale’s Comprehensive Plan. Walking and biking improvements needed on these streets include:

- **7th Street.** Located outside the half-mile study area, this route provides an important link between existing and planned trails on Century, Hadley and Greenway avenues. A sidewalk exists on the north side of the street; a trail should be studied for the south side of the street.
- **Granada Avenue and Upper 5th Street.** A walking and biking route through the neighborhood may be provided via Granada Avenue N. and 5th Street N. connecting to Hadley Avenue N. via Grovner Avenue N. and 4th Street N. This connection should be studied further for a south/west side off-street trail.
- **Greystone Avenue and 4th Street.** A walking and biking route through the neighborhood may be provided via Greystone Avenue N. and 4th Street N. connecting to Hadley Avenue N.
- **Tanners Lake Park Loop.** . Additional walking and biking connections may be provided from the station and neighborhood to the Tanners Lake Park along 2nd Street N. and 5th Street N. An off-street trail should be studied on the south side of 2nd Street N. and either the north or south side of 5th Street N.

All of these trails should include:

- Wayfinding signs at intersections with existing trails, BRT station and area destinations.
- Crosswalks and traffic control devices at busy intersections where warranted

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# DEVELOPMENT PLAN

The Development Plan identifies the type, location, intensity, and character of land uses. The Development Plan should serve as the template to guide new BRTOD policies and regulations.

## CITY OF LANDFALL

Landfall’s auto-oriented commercial properties provide an opportunity for infill development on large underutilized parking lots. Transit-oriented development on these lots could include commercial infill along Dellwood Lane that preserves and maintains the function of existing uses while creating opportunities for BRTOD.

In Landfall, current zoning restricts commercial uses that might otherwise be attracted to the city and provide goods and services for Landfall residents.

## CITY OF OAKDALE

Oakdale’s commercial properties at the Greenway Avenue Station and along Hudson Boulevard provide opportunities for bus rapid transit-oriented development in the station area. Further east of the station, approximately 60 acres of underutilized and vacant properties along both sides of Hadley Avenue offer longer-term transit-oriented development opportunities. In Oakdale, transit-oriented development infill opportunities for multi-family housing and commercial uses (retail, services and office) take advantage of existing roadway access, the BRT station, and visibility from I-94.

**The Greenway Avenue Station has been identified as a Neighborhood Station.**

Figure 53. Dellwood Lane Parking Lots



Figure 54. Greenway Avenue Underutilized Parcel



Figure 55. Hudson Boulevard Vacant Parcel



The market analysis identified near term demand (within 7 years) within a ½ mile of the station for 200 market rate apartments, 160 workforce rental apartments, 45,000 square feet of retail and services, and 80,000 square feet of professional office.

The Development Plan locates transit-oriented commercial, multi-family, and employment uses. The densities and amounts of development identified support transit use.

## COMMERCIAL

New Dellwood Lane commercial uses provide daily-needs goods and services conveniently accessible for Landfall residents. At the station, convenient commercial uses, such as a café, support an active station environment.

## MULTI-FAMILY

Market-rate and workforce rental apartments within walking distance of the station expand housing opportunities in the station area.

## EMPLOYMENT

Employment uses provide professional office and flex/office such as research and development and light manufacturing, on sites visible from I-94/I-694 with direct access from 4<sup>th</sup> Street and Hadley Avenue.

Table 1. Greenway Avenue Station Area Development Plan Summary

LAND USE	SITE AREA	DENSITY	COMMERCIAL BLDG. AREA <sup>3</sup>		MULTI-FAMILY <sup>4</sup>		PARKING	
			EMPLOYMENT	RETAIL/SERVICES	BLDG. AREA	DWELLING UNITS <sup>5</sup>	REQUIRED <sup>6</sup>	PROVIDED
Landfall Commercial	36,700 sf	0.4 FAR (min.)	--	16,000 sf <sup>1</sup>	--	--	40 spaces	40 spaces
Commercial (Hudson Blvd.)	48,000 sf	0.20 FAR (min.)	--	10,000 sf <sup>2</sup>	--	--	25 spaces	25 spaces
Multi-Family (Hudson Blvd. & Greystone Ave.)	185,000 sf	20-50 du/ac	--	--	85,000 to 210,000 sf	85 to 210 du <sup>2</sup>	85 to 210 spaces	85 to 210 spaces
Multi-Family (ABI Property)	1,070,000 sf	20-50 du/ac	--	--	343,000 to 850,000 sf	343 to 850 du <sup>2</sup>	343 to 850 spaces	343 to 850 spaces
Employment (Regan Property)	1,555,000 sf	0.50 FAR (min.)	600,000 sf <sup>2</sup>	--	--	--	1,500 spaces	1,500 spaces
<b>TOTAL</b>	<b>3,128,000 sf (72 ac)</b>	--	<b>600,000 sf</b>	<b>26,000 sf</b>	<b>428,000 to 1,060,000 sf</b>	<b>428 to 1,060 du</b>	<b>Up to 2,625 spaces</b>	<b>Up to 2,625 spaces</b>

<sup>1</sup> City of Landfall development potential and yield based on development concepts.

<sup>2</sup> Yield based on development concepts and City of Oakdale estimates.

<sup>3</sup> Commercial: Employment consists of uses such as professional office, education, job training, and medical offices and clinics. Retail and Services consists of uses that engage in the sale of goods and merchandise, dining, entertainment, and services such as daycare, financial, and real estate.

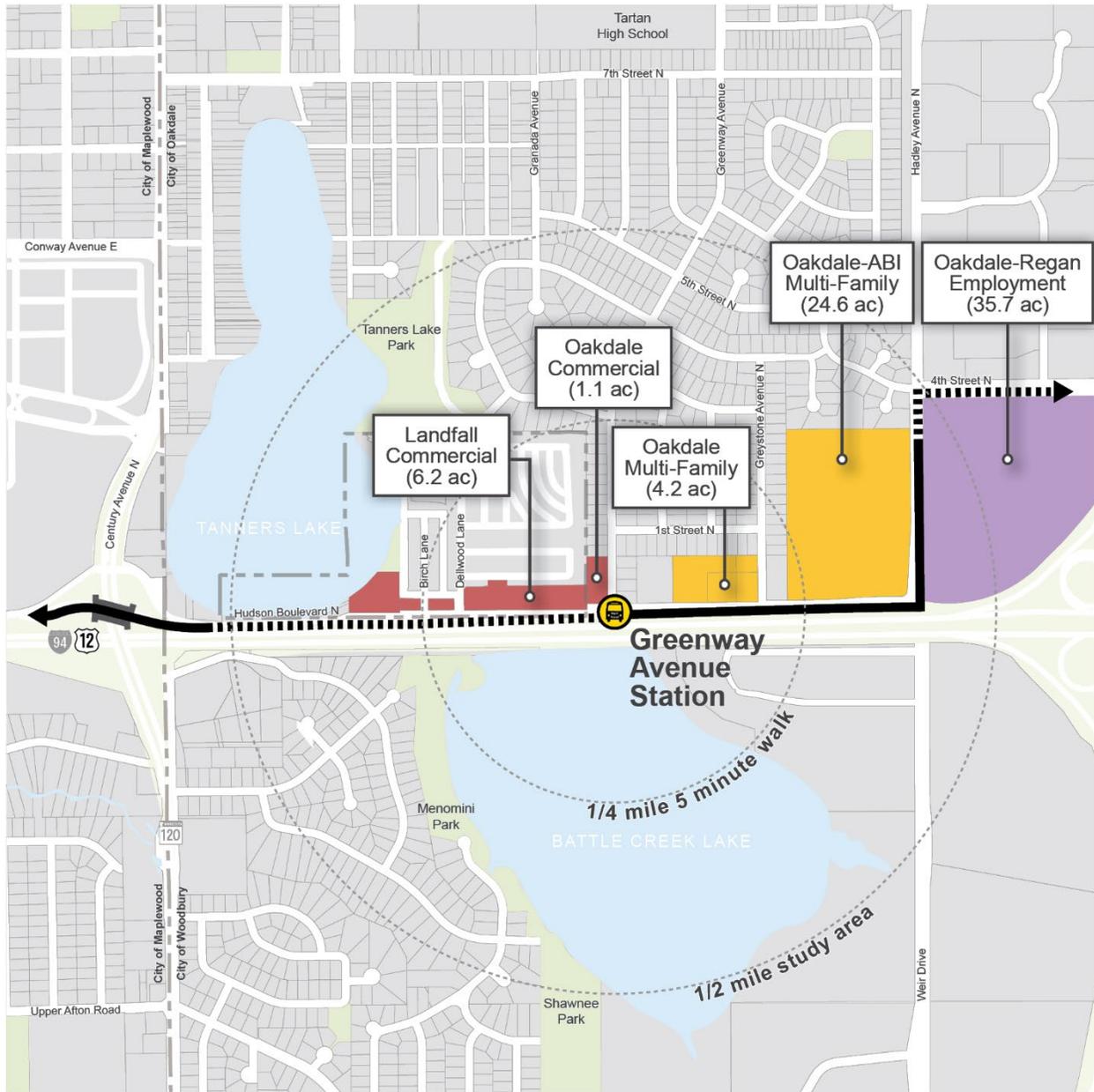
<sup>4</sup> Multi-Family building heights are limited to a maximum of four stories

<sup>5</sup> Multi-Family Assumptions: 1-bedroom units; 1000 sf per unit

<sup>6</sup> Parking Assumptions: 2.5 spaces per 1000 sf commercial; 1 space per dwelling unit multi-family

Units of Measure: Acres (ac); Square Feet (sf); Floor Area Ratio (FAR); FAR calculated as building area divided by site area; Dwelling Units (du)

Figure 56. Greenway Avenue Station Area Development Plan



- |  |                   |  |                    |
|--|-------------------|--|--------------------|
|  | Station Location  |  | MnDOT Right of Way |
|  | BRT Guideway      |  | Open Space         |
|  | BRT Mixed-Traffic |  | Water Body         |
|  | Commercial        |  | Parcel             |
|  | Employment        |  |                    |
|  | Multi-Family      |  |                    |
|  | Bridge            |  |                    |

400 ft  
200 ft 800 ft

**GOLD LINE**  
PARTNERS

Figure 57. Dellwood Lane Development Character



## CITY OF LANDFALL DEVELOPMENT CHARACTER

The Landfall Development Plan concept supports the fundamentals of transit-oriented development and where redevelopment or infill occur, the following characteristics should be fostered:

- Development that is compatible with Landfall’s commercial buildings and current height standards.
- Maintaining transit passenger access to and from the existing Metro transit bus stop.
- Preservation of school bus, transit bus and semi-tractor trailer access and ability to stage manufactured home installation or removal.
- Commercial buildings front Dellwood Lane, are built to the sidewalk, and are directly accessible from the sidewalk and corridor trail.
- Convenient curbside parking is located on the east side of Dellwood Lane.
- Building windows and doors are oriented to Dellwood Lane and Hudson Boulevard to create an urban street edge and support a pedestrian and bike-friendly public realm.
- Off-street parking located behind, to the side of, or within buildings and properly screened from sidewalks.
- Off-street parking should be located behind, to the side of, or within buildings and properly screened from sidewalks.

Figure 58. City of Landfall Development Concept



Figure 59. Development Character at the Station



Figure 60. Multi-Family Development Character

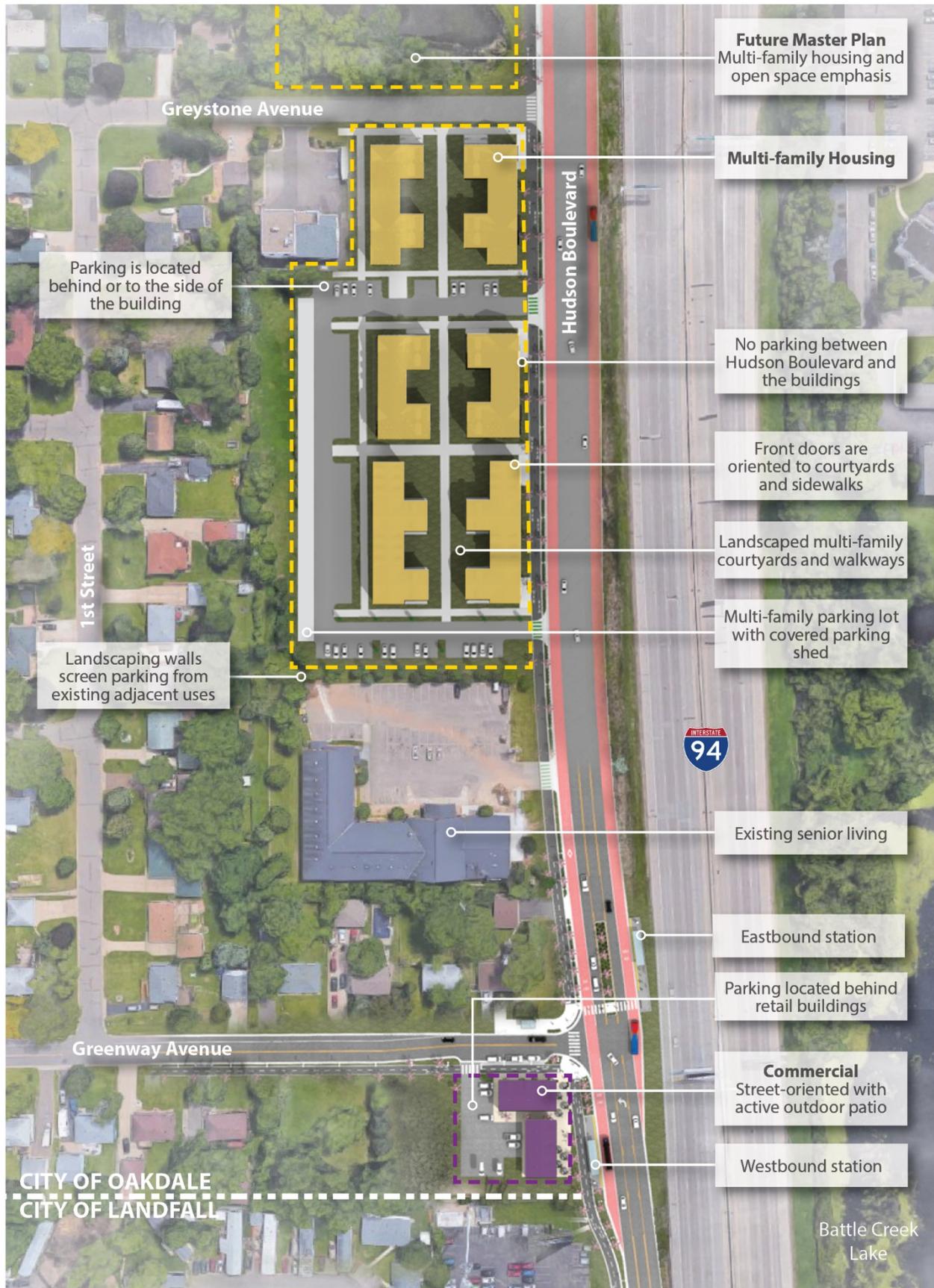


## CITY OF OAKDALE DEVELOPMENT CHARACTER

The Oakdale Development Plan concept supports the fundamentals of transit-oriented development and where redevelopment or infill occur, the following characteristics should be fostered:

- Commercial buildings should front Greenway Avenue, be built to the sidewalk, and directly accessible from the Corridor and Greenway Avenue trails.
- Convenient curbside parking located on Greenway Avenue that can also serve as pick-up and drop-off for transit.
- Multi-family buildings should be set back from the street to provide a buffer from Hudson Boulevard and I-94.
- Commercial or multi-family building windows and doors should be oriented to Hudson Boulevard and the Greenway Avenue Station to create an urban street edge and support a pedestrian- and bike-friendly public realm.
- Off-street parking should be located behind, to the side of, or within buildings and properly screened from sidewalks.

Figure 61. City of Oakdale Development Concept







# INFRASTRUCTURE PLAN

The Infrastructure Plan summarizes improvements to water, sanitary, and stormwater utilities in the City of Oakdale and in the City of Landfall that are necessary to serve new development parcels identified in the Development Plan.

Infrastructure improvements are calculated based on the density and intensity of anticipated BRTOD commercial and housing uses. The Plan identifies the size and location of supply lines and any potential main line capacity improvements.

**The existing water main line has adequate capacity to support existing and future development.**



**The capacity of existing sanitary service to adequately support new future development is uncertain.**



## WATER

The City of Oakdale's South Water Zone provides the water distribution system for Oakdale and Landfall within the station area. The water distribution network consists of main line pipes and service line pipes ranging in size from 6 inches to 8 inches in diameter.

Existing water main lines provide adequate service and pressure to meet the both existing peak daily demand and to serve the type and density of future development without impacting the overall existing neighborhood. For all proposed redevelopment sites, new connecting 6-inch water supply lines will be required. To confirm these calculations, updated flow tests will need to be completed prior to development to verify system capacity.

## SANITARY

Sanitary sewer service is provided by the Metropolitan Council Environmental Services (MCES) regional sewer system. Service is provided through a network of existing sanitary sewer pipes that drain to a 15-inch diameter pipe along Hudson Road, to a wastewater metering station, and then to a 36-inch diameter pipe. The 36-inch sewer conveys all wastewater to the southwest where it joins the MCES WONE (Woodbury, Oakdale, Northdale, and East Oakdale) east interceptor and discharges to the Metropolitan Wastewater Treatment Facility located in the City of Saint Paul.

Based on the MCES metering station results, meeting the needs of additional development does not exceed the assumed capacity of the 36-inch diameter pipe. However, the City of Oakdale has estimated that future flows exceed the capacity of the 36-inch diameter pipe.

## STORMWATER

Due to poor quality soils and high groundwater levels, below-ground vault or filter filtration systems rather than above-ground ponds or swale infiltration systems are recommended for development of parcels along Hudson Boulevard.

A conceptual treatment system for new development includes constructing an underground detention system within each of the development sites. The subsurface filtration system would need to support a 43,000 square feet stormwater treatment area to accommodate the Greenway BRTOD Development Plan for parcels located along Hudson Road and excluding any public improvements within Hudson Boulevard or other public right-of-way. The system would provide capacity for retention of the required filtration volume, as well as larger rainfall events. Depending on the final design, there may be an opportunity to reduce the area dedicated to the regional underground stormwater treatment system by including available pond storage areas adjacent to the development.

Further analysis will be needed for any development plan and consequently could influence the amount of actual development.

**A below-ground stormwater filtration system is proposed for each BRTOD development site.**







# IMPLEMENTATION PLAN

The Implementation Plan identifies the strategies needed to realize the Greenway Avenue Station Circulation and Development Plans. These strategies are identified separately the City of Landfall and the City of Oakdale, allowing each to move forward independently.

## Projects

Implementation projects are organized into two categories:

- **Circulation projects** provide safe and direct neighborhood access to the station and improve the comfort and character of access routes.
- **Development projects** are regulatory recommendations for the policy updates and additional planning or technical studies that are necessary to construct the circulation projects and build transit-oriented development.

## Dellwood Lane Enhancements

# CITY OF LANDFALL

## CIRCULATION PROJECTS

### Project Actions

1. Identify funding for streetscape design and engineering.
2. Prepare work scope, issue RFP, and select consultant.
3. Prepare and review 30% streetscape design and preliminary cost estimate.
4. Identify streetscape funding.
5. Prepare contract documents, approvals, and final cost estimates.
6. Issue RFP and select contractor.
7. Build streetscape.

### Schedule

Initiate streetscape design within five years and complete construction within ten years.

## 2040 Comprehensive Plan Policy and Zoning Ordinance Amendments

## DEVELOPMENT PROJECTS

### Project Actions

1. Identify funding for preparation of Comprehensive Plan policy and Zoning amendments.
2. Prepare work scope, issue RFP, and select consultant.
3. Prepare draft amendments.
4. Planning Commission and Public review draft amendments and provide recommendation to City Council.
5. Metropolitan Council provides administrative review.
6. Council approves Comprehensive Plan and Zoning Ordinance amendments.

### Schedule

Initiate within five years and complete within seven years.

Figure 62. City of Landfall Projects



- |   |  |   |                    |
|---|--|---|--------------------|
|  | Station Location   |  | MnDOT Right of Way |
|  | Dellwood Lane Enhancements                                     |  | Open Space         |
|  | 2040 Comprehensive Plan Policy and Zoning Ordinance Amendments |  | Water Body         |
|   |  |  | Parcel             |

400 ft  
200 ft 800 ft



**GOLD LINE**  
PARTNERS

## Corridor Trail Enhancements

# CITY OF OAKDALE

## CIRCULATION PROJECTS

### Corridor Trail Elements

The City of Oakdale should prepare a Corridor Trail streetscape plan to include design, construction and funding for trail elements that are outside of the BRT project or that ensure a higher standard and quality than is indicated in the BRT preliminary engineering drawings. The streetscape plan would incorporate elements for trail segments on:

- Hudson Boulevard from Century Avenue to Hadley Avenue
- Hadley Avenue (west side of street) from Hudson Boulevard to 4th Street N
- 4th Street N (north side of street) from Hadley Avenue to the 4th Street Bridge.

Design elements for all segments should include consistent trail-wide standards for:

- Roadway and trail lighting
- Shrubs, groundcover, and street tree plantings within landscaped boulevards
- A 10-foot trail
- Center of trail striping with bike and walk markings on the pavement
- Corridor trail signage and wayfinding

### Corridor Trail Hudson Boulevard-Tanner's Lake Segment

Additional elements beyond the BRT Project improvements for this segment should provide for:

- An overlook between the trail and the lake to include benches, ornamental fence and railing and wayfinding.
- Further study for a Tanner's Lake perimeter trail, and other opportunities for interpretive signing, overlooks or shoreline access should be prepared.
- Ornamental fence and railing standards

## Greenway Avenue Trail

### Greenway Avenue Trail

The City of Oakdale should prepare a Greenway Avenue streetscape plan to include design, construction and funding for trail enhancements on the west side of the street. Trail design elements would extend from Hudson Boulevard to 10th Street and should include

- Consistent standards for roadway and trail lighting
- Shrubs, groundcover, and street tree plantings within a 4-foot landscaped boulevard
- A 10-foot asphalt trail
- Center of trail striping with bike and walk markings for each direction on the pavement
- Trail crossing at driveways should be level
- Concrete curb ramps at intersections with depressed corners and detectable warning to mark the transition between the sidewalk and street
- Corridor trail signage and wayfinding
- Enhanced bus stops

## Neighborhood Access Routes

### Neighborhood Access Routes

The City of Oakdale should prepare streetscape plans to include further study, design, construction and funding for neighborhood access route improvements as follows:

- **7th Street.** a trail should be studied for the south side of the street.
- **Granada Avenue and Upper 5th Street.** A walking and biking route via Granada Avenue N. and 5th Street N. connecting to Hadley Avenue N. via Grovner Avenue N. and 4th Street N. This connection should be studied further for a south/west side off-street trail.
- **Greystone Avenue and 4<sup>th</sup> Street.** A walking and biking route through the neighborhood may be provided via Greystone Avenue N. and 4th Street N. connecting to Hadley Avenue N.
- **Tanners Lake Park Loop.** An off-street trail should be studied on the south side of 2nd Street N. and either the north or south side of 5th Street N.

ABI & Regan Properties  
Small Area Plan

## DEVELOPMENT PROJECTS

### Future Small Area Plan (ABI and Regan Properties)

More detailed planning is needed to determine the longer-term redevelopment and development potential on the Apostolic Bible Institute (ABI) and Regan properties located between the Greenway Avenue and Helmo Avenue stations.

The properties include a combined sixty acres of under-utilized and vacant parcels along Hadley Avenue and 4th Street. The city's comprehensive plan designates these properties for institutional and office/limited business and are zoned as a Gateway District, intended to support landmark office, conference, medical, or hotel uses that take advantage of high visibility from I-94 and 494. The Gold Line BRT route passes between the properties but without a station.

The small area plan for the Apostolic Bible Institute and Regan properties should precede any development/redevelopment proposals and ought to consider how the uses may be transit supportive. The small area plan should also consider the potential location of an additional BRT station should development intensities and the BRT project office warrant it.

2040 Comprehensive Plan Policy and  
Zoning Ordinance Amendments

### 2040 Comprehensive Plan Amendment

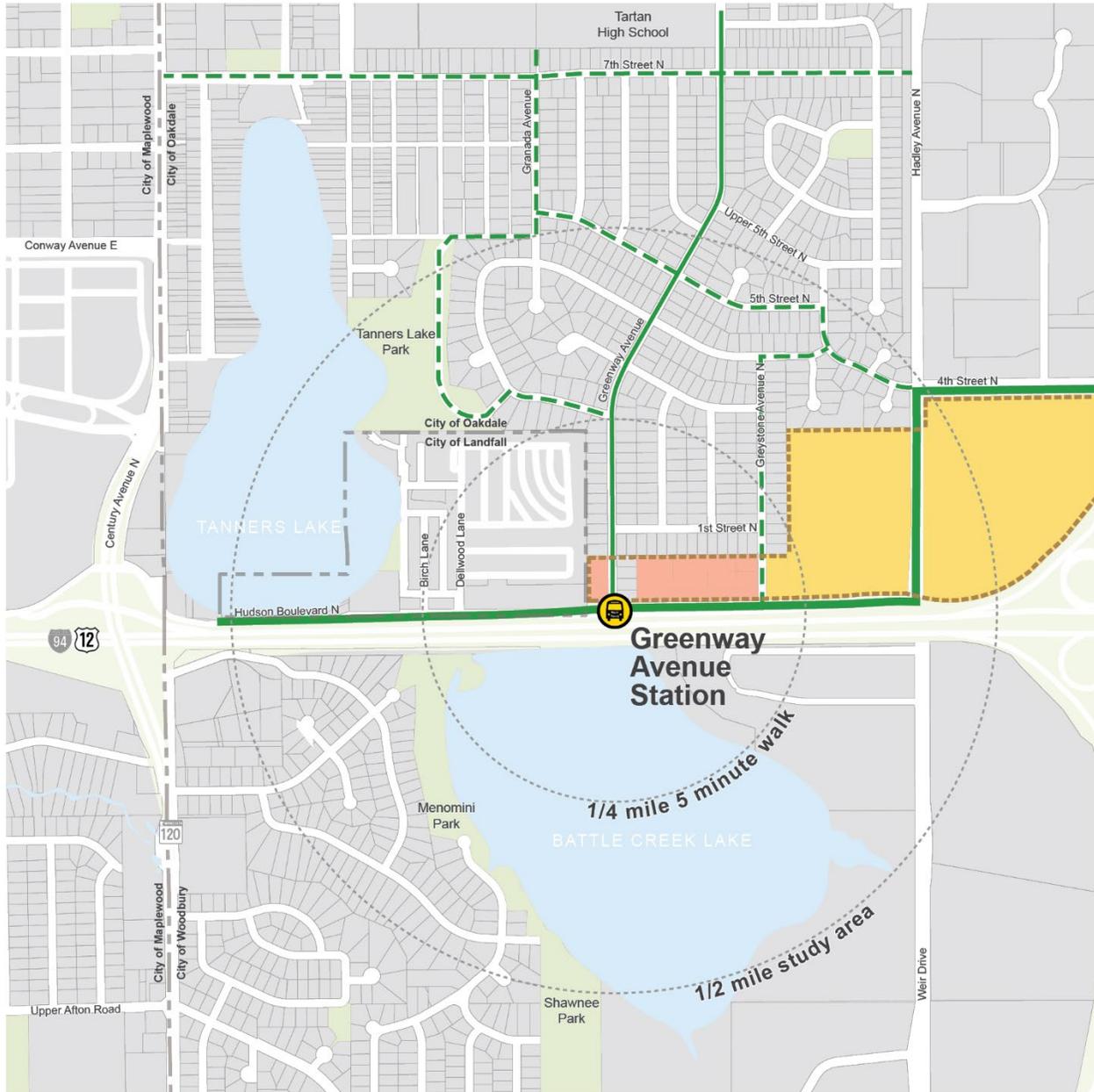
Amend the Commercial designation for Oakdale properties identified in the Development Plan to allow for a mix of commercial, multi-family and office uses in proximity to the Greenway Avenue station.

Oakdale 2040 Comprehensive Plan amendments should transition the existing single-use commercial designation for properties along Hudson Boulevard and Greenway Avenue to a mix of transit-supportive development (high density residential, office and commercial/retail uses).

### Zoning Ordinance Amendment

The subject properties along Hudson Boulevard are within the Zoning Code's Community Commercial District and allow retail and office uses but not multi-family residential. In order to implement the Development Plan the parcels would need to be rezoned to allow for retail, office and residential uses as either a single use or mixed-use development.

Figure 63. City of Oakdale Projects



-  Station Location
-  Corridor Trail Enhancements
-  Greenway Avenue Trail
-  Neighborhood Access Route
-  Small Area Plan
-  Zoning Ordinance Amendments
-  2040 Comprehensive Plan Policy Updates
-  MnDOT Right of Way
-  Open Space
-  Water Body
-  Parcel

400 ft  
200 ft 300 ft



**GOLD LINE**  
PARTNERS

