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Walking & Bicycling Access to Stations

Lowcountry Rapid Transit

Berkeley-Charleston-Dorchester Council of Governments

November 10, 2021

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Introduction

Purpose

The Lowcountry Rapid Transit (LCRT) is a modern bus rapid transit (BRT) project that will connect the communities of Charleston, North Charleston, and Ladson. The project represents South Carolina's first high-capacity mass transit project and will create new connections to businesses, healthcare, housing, recreation, and other essential services in the Berkeley-Charleston-Dorchester region. Through a combination of dedicated bus lanes, WiFi-enabled stations and vehicles, and traffic signal priority and synchronization, LCRT will use the latest technology to provide riders with frequent and dependable service.

Although this technology often serves as the focus of many transit projects, the first-and-last mile connections to LCRT's 20 proposed stations will have a major influence on the project's ability to get residents where they need to go. Transit users often start and end their trips with a short walk or bicycle ride. To maximize the use of LCRT service, the network of walkways, bikeways, and crossings around a station are critical to providing transit riders with safer, more direct access. In addition, accommodating bicycles on transit vehicles or at transit stations can help expand the range of transit

riders and make trips quicker and more convenient.

The Berkeley-Charleston-Dorchester Council of Governments (BCDCOG) believes that building strong walking and bicycling connections as an integral part of the LCRT project is essential to the project's success. This LCRT Phase 2 technical report on *Walking and Bicycling Access to Stations* grows out of the LCRT Phase 1 analyses to identify recommendations for improving first-and-last mile connectivity to LCRT stations.

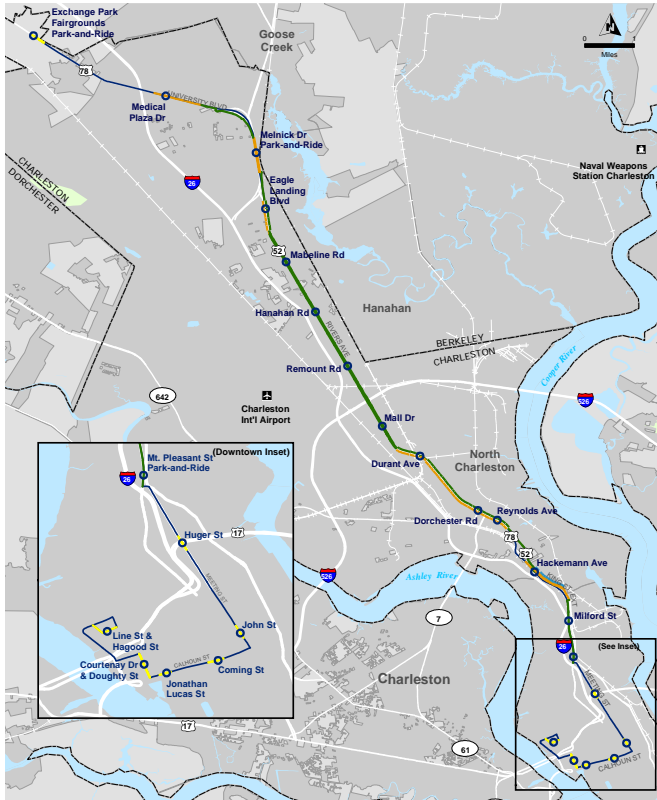


Because this project is seeking Federal Transit Administration (FTA) funding, it must adhere to FTA's process and requirements. The project timeline is estimated under the New Starts Capital Investment Grant (CIG) program guidelines.

Walking & Bicycling Recommendations

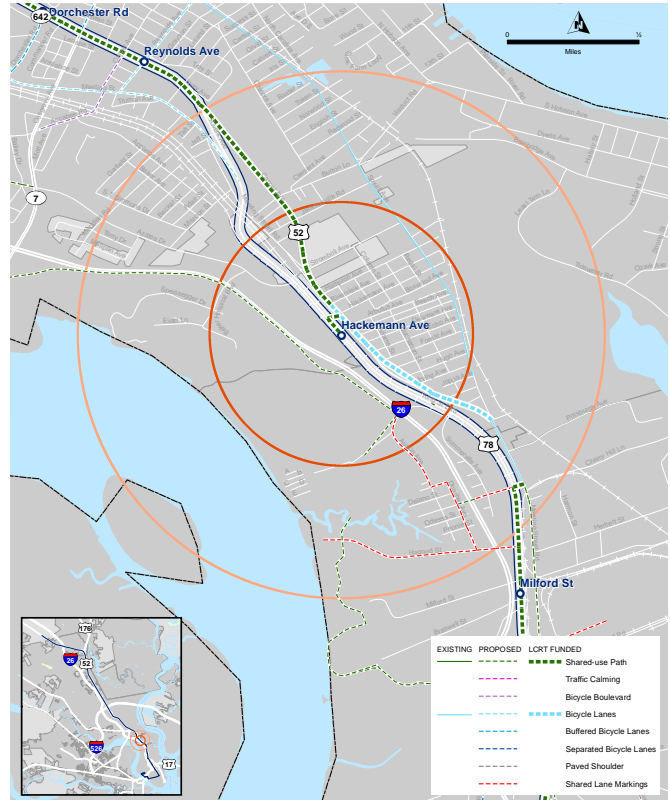
The first-and-last mile projects in this technical report are divided into two parts:

SECTION II: LCRT IMPROVEMENTS



Section II of this document details the LCRT Improvements proposed by this project. The construction of a shared-use path parallel to the LCRT service, along with sidewalks and on-street bicycle lanes where limited right of way exists in the short term, represent the most critical components of the corridor-wide recommendations. These LCRT Improvements will be funded through the LCRT project and will create a central “spine” for connecting to LCRT stations by foot and bicycle.

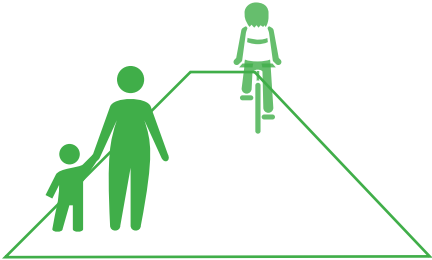
SECTION III: LONG-TERM STATION OPPORTUNITIES



The walking and bicycling network immediately surrounding a transit station presents vital opportunities for connecting housing, employment, and other services. The station area analysis in Section III reviews walking needs within 0.5 miles and bicycling needs within 1.0 miles of each proposed station. It incorporates recommendations from previous plans to identify long-term station opportunities that will complement the central “spine” detailed in Section II. Although the needs identified in Section III will not be funded through the LCRT project, designing the LCRT project with an awareness of these needs will help them to be integrated in the future as funding becomes available.

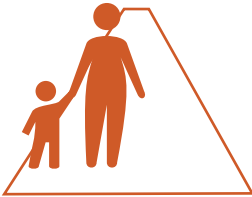
Mileage of short-term, first-and-last mile projects that will be funded by LCRT

(Note: each side of the street is counted independently in these totals):



17.9 MI
of

Shared-use path



8.5 MI
of

New and reconstructed sidewalks



1.3 MI
of

On-street bicycle lanes



38
new

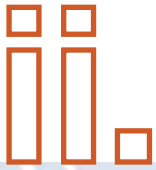
Pedestrian Crossings



1
new

Pedestrian Bridge





LCRT Improvements

What Makes Transit Accessible?

The best transit services in the world all share the same underlying focus on first-and-last mile connectivity, and the Institute for Transportation & Development Policy identifies the following walking- and bicycling-related factors for ensuring that projects like the LCRT serve the greatest number and widest range of riders¹:

Pedestrian Safety – The LCRT project presents an opportunity to improve the pedestrian environment on the paths, streets, and public spaces near stations. Improving crossings, installing pedestrian-scale lighting, and separating people walking from moving vehicles can help people feel safer and can help decrease the potential for pedestrian-vehicle crashes.

Universal Design – By creating a design that all riders can use, regardless of physical, visual, or hearing limitations, helps ensure that the benefits of the LCRT project are equitably distributed.

High Demand Areas – Placing LCRT stations at the highest-

demand locations along the corridor helps ensure that the greatest number of passengers benefit from the project.

Passenger Information – Studies show that rider satisfaction is closely linked to knowing how to most directly access a station, knowing when the next bus will arrive, and knowing which direction to head when leaving a station. Wayfinding and real-time passenger information can help people understand the LCRT system and navigate the areas surrounding LCRT stations.

Bicyclist Safety – Designing a family-friendly bikeway network around the LCRT corridor can improve rider access to many destinations for people of all ages and abilities.

Secure Bicycle Parking – Dedicated bicycle parking at LCRT stations allows riders to use their bicycle as a feeder to the LCRT corridor, helping to increase their total travel range. Formal bicycle parking facilities that are secure (either monitored by an attendant or observed by security cameras) and weather-protected are more likely to be used by bike-to-transit riders.

Bikeshare Integration – Having the option to make short trips to and from an LCRT station by a shared bicycle helps remove bicycle-ownership and parking barriers.

The LCRT Improvements included in this section identify the planning-level pedestrian and bicycle components that will be funded through the LCRT project.

¹ ITDP. The BRT Standard. Accessed February 10, 2021. <<https://www.itdp.org/publication/the-brt-standard/>>



CARTA SuperStop at the intersection of Rivers Ave and Cosgrove Ave

Corridor Overview

The LCRT corridor was split into a series of sub-areas to help with visualizing the short-term recommendations and to coordinate internally. Recommendations in each of the sub-areas are shown in more detail on the following pages. The following describes the LCRT route through each of the sub-areas:

- **Area A: Downtown**—From Line St the LCRT travels in mixed traffic to the east, north on Hagood Ave, west on Fishburne St, south on Lockwood Dr, east on Bee St, south on Courtenay Dr to Calhoun St. The mixed traffic operation continues along Calhoun St and Meeting St out of the downtown area to Mt. Pleasant St. Meeting St becomes US-52 north of Mt. Pleasant St.
- **Area B: The Neck**—The LCRT route continues in mixed traffic on Meeting St as it transitions into US-52 north of Mt. Pleasant St. The route crosses from US-52 to US-78 (King St Ext/Rivers Ave) and continues north until US-78 reconnects with US-52. On US-52, LCRT will use a reversible lane in the median between Success St and Reynolds Ave and parallel guideways in the median between Reynolds Ave and Cosgrove Ave.

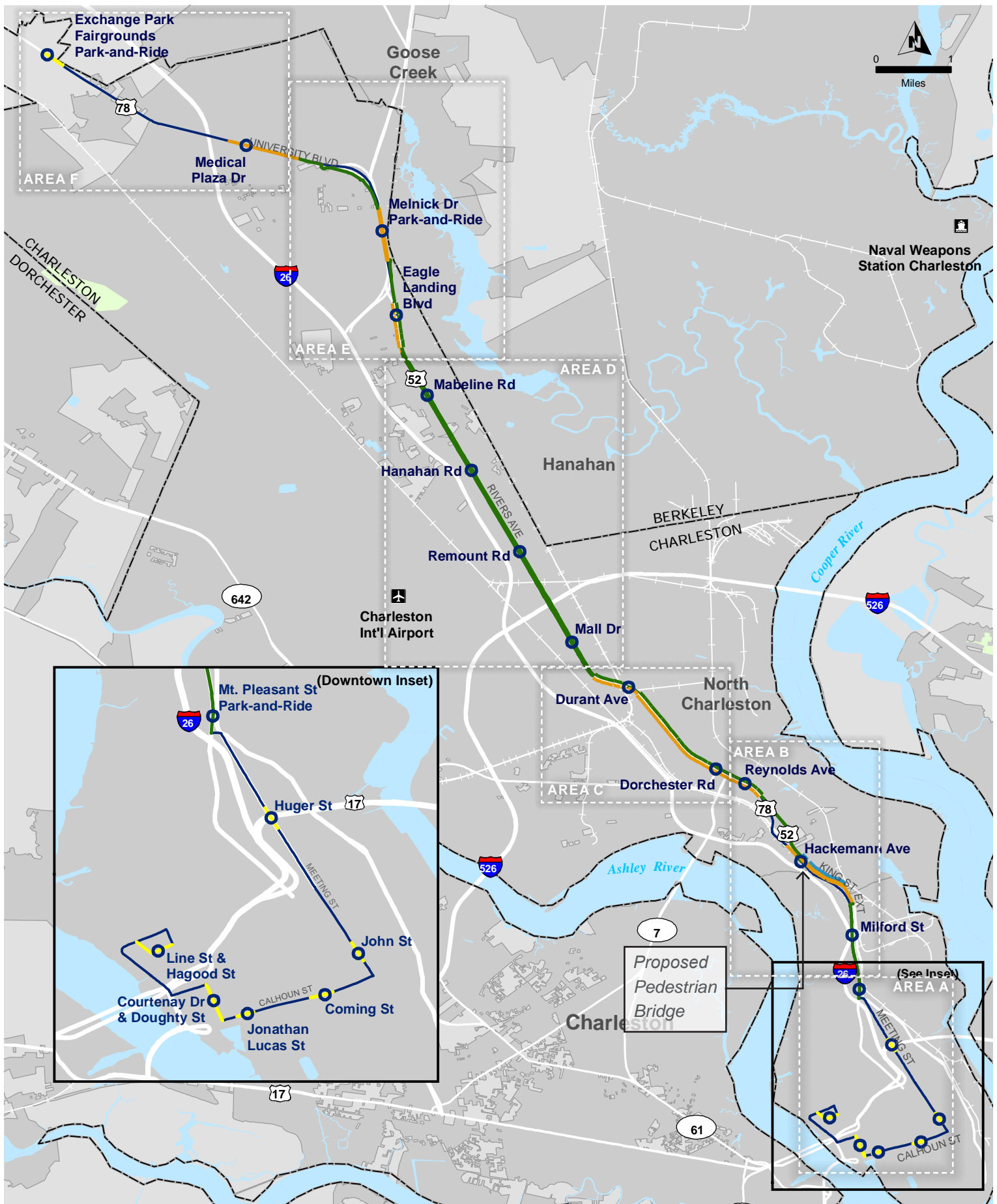
- **Area C: Lower North Charleston**—The parallel guideways continue north along the median of US-52 (Rivers Ave) from Cosgrove Ave to Piggly Wiggly Dr.
- **Area D: Mid North Charleston**—North of Piggly Wiggly Dr, LCRT will operate in two exclusive, center running directional guideways in the currently grassed roadway median, merging through the I-526 interchange. North of the I-526 interchange, LCRT returns to operate in two exclusive directional guideways in the currently grassed roadway median at Target St and continues to Ashley Phosphate Rd.
- **Area E: Upper North Charleston**—From Ashley Phosphate Rd to Otranto Rd, two exclusive directional guideways are to be center running from Ashley Phosphate Rd to Melnick Dr. From Melnick Dr to Otranto Rd the LCRT will be side running. Side running operation continues through the US-52/US-78 interchange.
- **Area F: Ladson**—From Old University Blvd west to Fernwood Dr, two side-running exclusive directional guideways are to be constructed on US-78. From

Fernwood Dr to Medical Plaza Dr./Excellence Way, LCRT will operate in two exclusive, center running directional guideways in the median of US-78. From Medical Plaza Dr./Excellence Way to Ingleside Blvd, LCRT will run in single exclusive guideway with BRT only signals and holding zones to prevent conflicts between buses heading in opposite directions. This includes improvements to the I-26 exit ramp to westbound US-78 and associated signalization. From Ingleside Blvd to the Fairgrounds, LCRT will operate in mixed use travel lanes.

The LCRT Improvements include 17.9 miles of shared-use path, 8.5 miles of sidewalk, and 1.3 miles of bicycle lanes¹. There are a total of 38 new pedestrian crossings, in addition to the 78 existing crossings². A key investment includes a pedestrian and bicyclist bridge connecting Hackemann Ave station to the east side of the rail tracks. All of these facilities will be designed based on the LCRT Design Standards developed in Phase 2 of the planning process.

¹ Note: Each side of the street is counted independently in these totals.

² For more details, see Table 3 on page 30



- LCRT Stations
- LCRT Alignment
- Incorporated Area
- Proposed Bicycle Lanes
- Proposed Shared-use Path
- Proposed Sidewalk
- Proposed Pedestrian Enhancements

Lowcountry Rapid Transit

Figure 1. Proposed LCRT-Funded Recommendations

Data Sources: BCDCOG, SCDOT

Identifying the LCRT improvements

The short-term, LCRT-funded improvements in this section focus on improving walking and bicycling along the LCRT alignment, given the constraints associated with the FTA-funded transit project. This set of projects include the most critical first- and last-mile projects that will support LCRT, and which would best connect to existing infrastructure. The proposed improvements are also focused on the areas that benefit transit-dependent users. FTA guidance indicated that walking and bicycling infrastructure should be limited to the transit corridor itself unless there were significant barriers that could not be overcome. Based on guidance from SCDOT, FTA, and other stakeholders, the following factors aided in determining what could be included in the design of the LCRT transitway:

- Connecting to environmental justice communities
- Lack of parallel/existing facilities
- Budgetary constraints
- Connecting transit-dependent communities to major destinations
- Mitigating risk of crashes involving bicyclists and pedestrians
- Satisfying the demand for walking and bicycling along the corridor
- Connections to existing walking & bicycling network
- Consistency with existing plans/projects
- Contextually-sensitive solutions for land use in the immediate areas around the proposed BRT stations
- Availability of appropriate parallel routes
- Limited right-of-way acquisition
- Limited impacts to the roadway
- Minimizing impact on parking
- LCRT operation in dedicated guideways versus mixed traffic
- Optimizing traffic operations

*Bicyclist crossing Rivers Avenue
near Cosgrove Avenue*



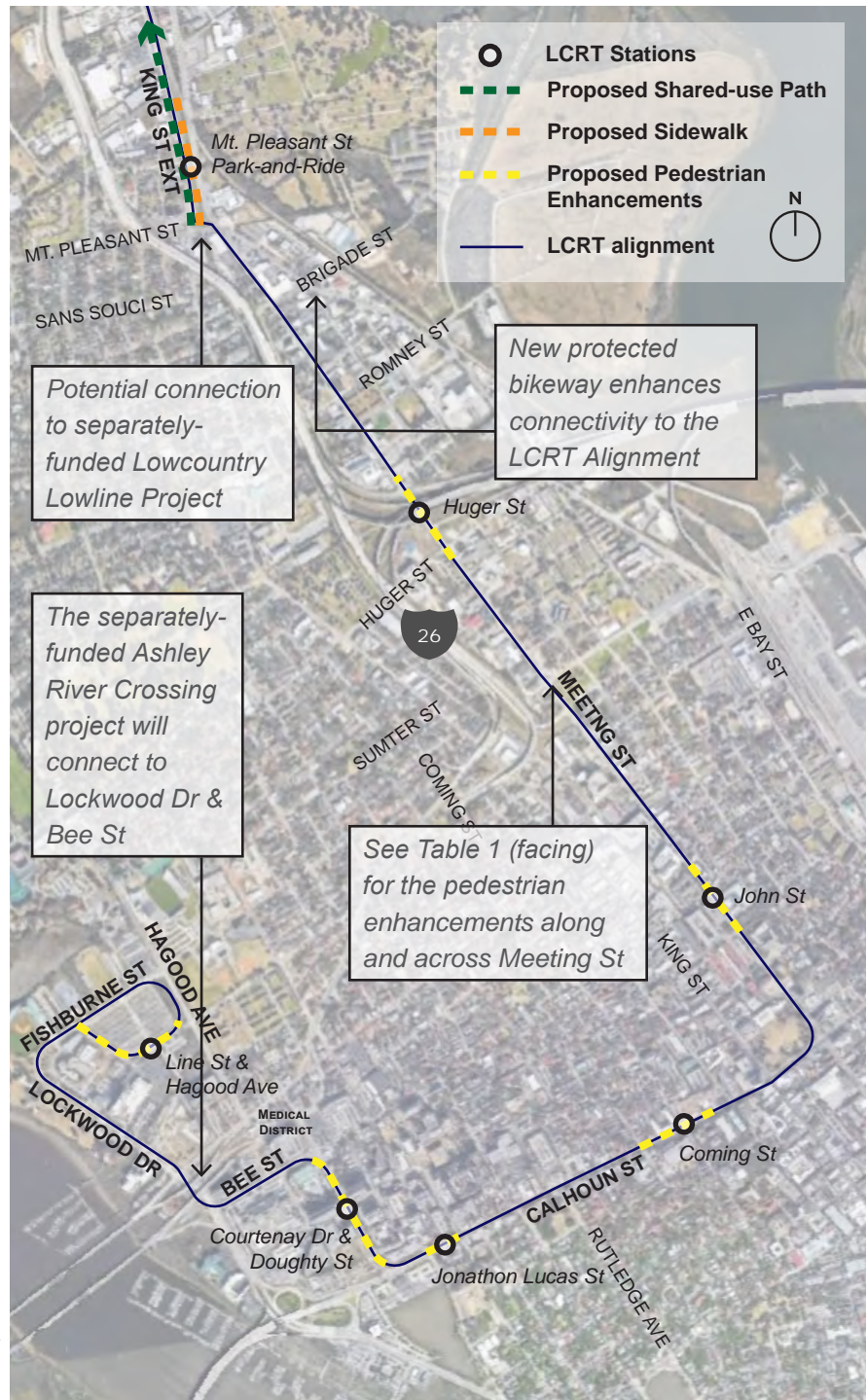
Area A: Downtown

From Line St the LCRT travels in mixed traffic to the east, north on Hagood Ave, west on Fishburne St, south on Lockwood Dr, east on Bee St, south on Courtenay Dr to Calhoun St. The mixed traffic guideway continues along Calhoun St and Meeting St out of the downtown area to Mt. Pleasant St. Meeting St becomes US-52 north of Mt. Pleasant St. Reversible transit lane options were considered for Meeting St and Calhoun St, but were ruled out based on feedback from stakeholders and the impacts on bikability. The LCRT funded improvements focus on nearby connections station areas.

The LCRT project studied the possibility of creating peak direction transit lanes using reversible lanes because this is the only corridor that could accommodate an east-west bus route across the peninsula while serving major destinations. The study evaluated that bus and bicycle only lanes (as identified in the *People Pedal Plan*) would not fit in the available right-of-way. Given that the LCRT is first and foremost a transit project, the decision was made to operate in mixed traffic so that the City could advance their bicycle and pedestrian plans.

Note: For more details on station areas and long-term network recommendations, see Section III, starting on page 28.

Figure 2. Area A Recommendations



As the LCRT project, the Lowcountry Lowline, the Ashley River Bridge, and City of Charleston’s *People Pedal Plan* are implemented, coordination among these projects will continue.

Minor streets running parallel to the LCRT route were also considered for potential bikeway improvements. These options were ruled out for inclusion in LCRT because they would expand the “area of potential effect” considered in the NEPA process. This does not limit the feasibility of those projects to be implemented through different projects or funding sources. The potential parallel routes are shown on the long-term bikeway recommendations on maps for the Area A stations on pages 35, 41, 47, 53, 59, and 65.

The existing sidewalk network in Area A is relatively extensive compared to other parts of the LCRT corridor. Sidewalks along the corridor are continuous and include lighting and shade trees; however, some maintenance and accessibility issues exist. Recommended pedestrian enhancements were originally identified in a series of SCDOT roadway safety audits and then isolated to the enhancements that would most directly impact LCRT users (listed in Table 1).

Table 1. Area A Enhancements identified by SCDOT Roadway Safety Audits

STATION	IMPROVEMENTS
Line St at Hagood Ave	Raised Intersection
	Build Sidewalks
	ADA-compliant curb ramps
	Rapid flashing beacons
Lockwood Dr at Bee St and Ashley River Bicycle & Pedestrian Bridge	Two northbound left-turn lanes
Courtenay Dr at Doughty St	Upgrade ADA ramps
	Sidewalks behind station platforms
Jonathan Lucas St	Sidewalk reconstruction
	ADA-compliant curb ramps
	Tree removal to allow ADA access
	Left-turn lane on westbound from Calhoun St to Ashley Ave
Calhoun St at Coming St	Upgrade ADA ramp
Calhoun St from Coming St to King St	Pedestrian scrambles at King St and St. Phillip St
	ADA-compliant curb ramps
	Left-turn lanes on Calhoun at Coming St and King St
John St	ADA-compliant curb ramps
Huger St	Sidewalks behind station platforms
	ADA-compliant curb ramps
	Southbound left-turn lane on Meeting St
	Eastbound US-17 entrance ramp
	New pedestrian crossings near Cedar St and US-17 entrance ramp

Area B: The Neck

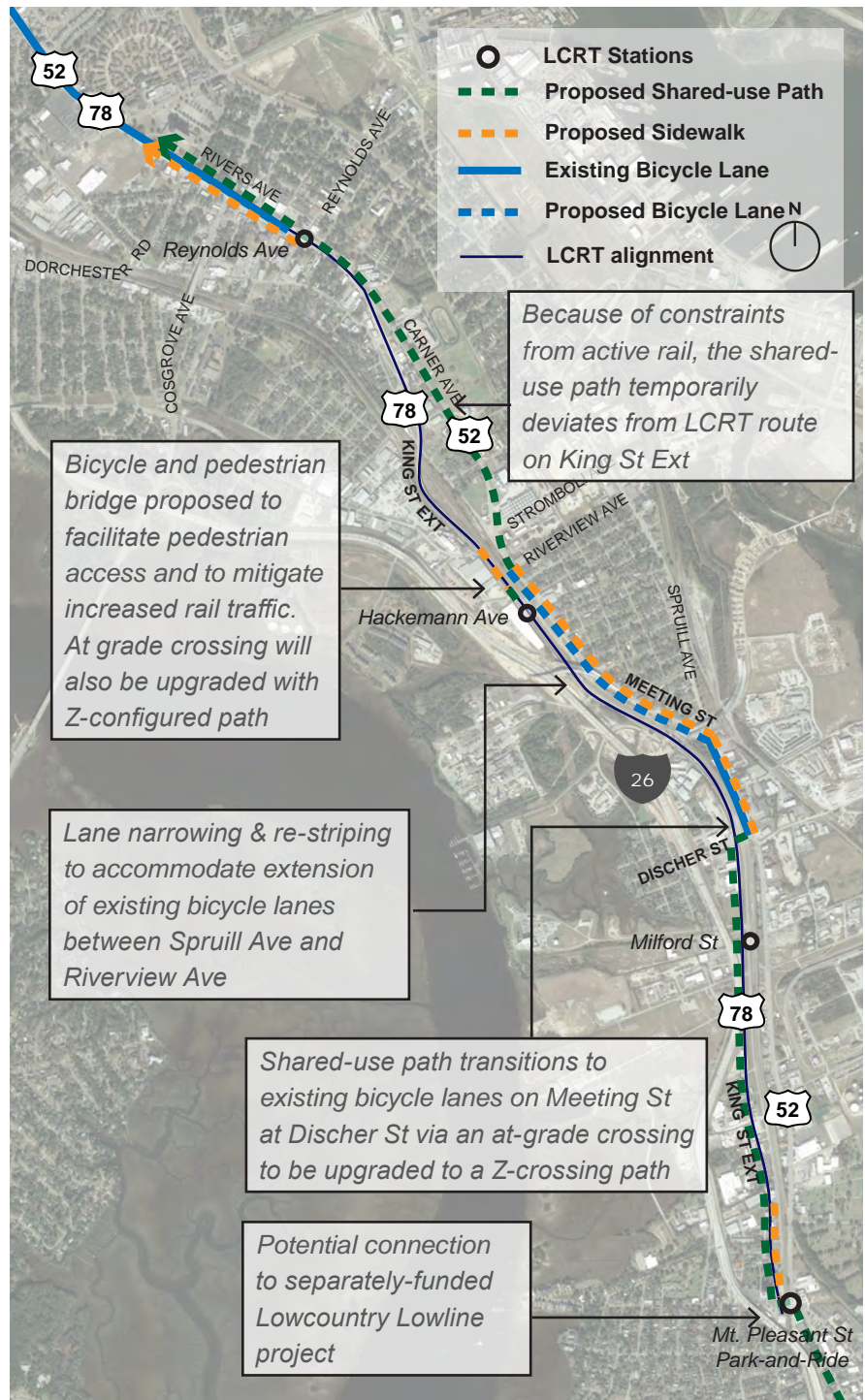
The LCRT route continues in two lanes of mixed traffic on Meeting St as it transitions into US-52 north of Mt. Pleasant St. The route then crosses from US-52 to US-78 (King St Ext/Rivers Ave) and continues north until US-78 reconnects with US-52. On US-52, LCRT will use a reversible lane in the median between Success St and Reynolds Ave and parallel guideways in the median between Reynolds Ave and Cosgrove Ave.

A combination of shared-use paths, sidewalks, and bicycle lanes are proposed along Meeting St and King St Ext through Area B. Sidewalks and bike lanes are proposed on Meeting St, separated from the LCRT alignment, because King St Ext is constrained by active rail and a highway overpass.

There are two existing rail crossings through this section at Discher Ave and Hackemann Ave. At both locations, there are proposed at-grade crossings for the shared-use path. For the Hackemann Ave crossing, there is also a proposed bicycle and pedestrian bridge so people will be able to cross when trains are present.

The proposed shared-use path realigns with the LCRT route at Rivers Ave and continues on the east side of Rivers Ave. New sidewalks are also proposed on the west side of Rivers Ave.

Figure 3. Area B Recommendations



Note: For more details on station areas and long-term network recommendations, see Section III, starting on page 28.

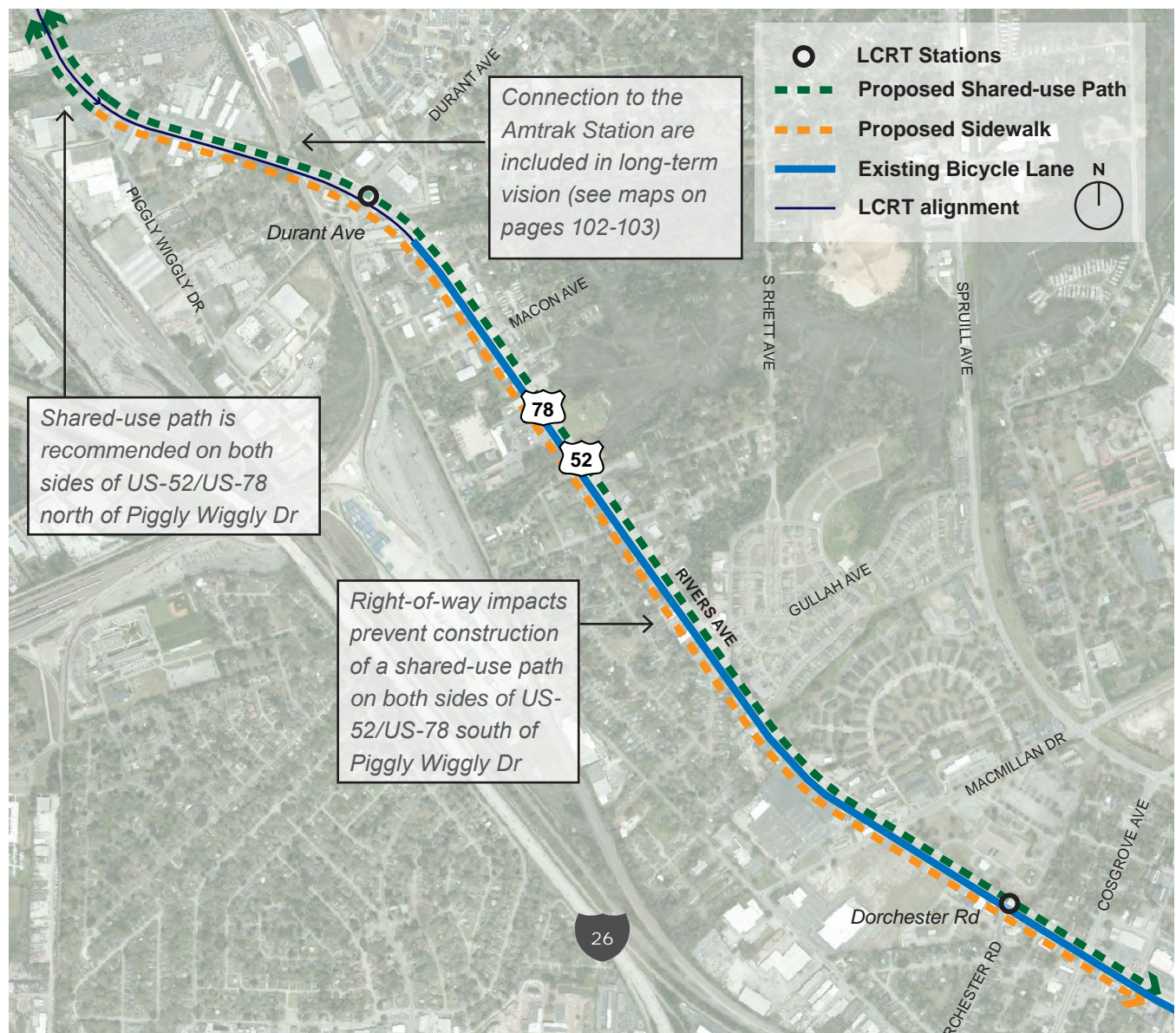
Area C: Lower North Charleston

The parallel guideways continue north along the median of US-52 (Rivers Ave) from Cosgrove Ave to Piggly Wiggly Dr. The existing on-street bicycle lanes in Area C are frequently blocked by parked vehicles, and many bicyclists

along this section of the LCRT corridor use the sidewalk instead of bicycling in the street. A shared-use path is recommended parallel to US-52/US-78 (Rivers Ave) northbound and reconstructed sidewalks are recommended

parallel to US-52/US-78 (Rivers Ave) southbound from Piggly Wiggly Dr to the Reynolds Ave station. North of Piggly Wiggly Dr, a shared-use path is recommended parallel to both the northbound and southbound travel lanes.

Figure 4. Area C Recommendations



Note: For more details on station areas and long-term network recommendations, see Section III, starting on page 28.

Area D: Mid North Charleston

Figure 5. Area D Recommendations

Area D spans from Piggly Wiggly Dr to Ashley Phosphate Rd. This segment has a relatively wide right of way with a large median and buffered sidewalks. The road currently has 3-4 lanes of traffic, plus up to two turn lanes in both directions.

North of Piggly Wiggly Dr, the LCRT will operate in two exclusive, center running directional guideways in the currently grassed roadway median, merging through the I-526 interchange. North of the I-526 interchange, LCRT returns to operation in two exclusive directional guideways in the currently grassed roadway median at Target St and continues to Ashley Phosphate Rd.

There are long distances between pedestrian crossings in Area D. In order to access destinations efficiently, many pedestrians choose to cross mid-block and use the planted median as a refuge. Despite the lack of facilities, many bicyclists use this route, most of them riding on the sidewalk to avoid mixed traffic.

There are existing sidewalks in Area D, but due to their high level of use by both bicyclists and pedestrians, shared-use paths are proposed on both sides of Rivers Ave.



Note: For more details on station areas and long-term network recommendations, see Section III, starting on page 28.

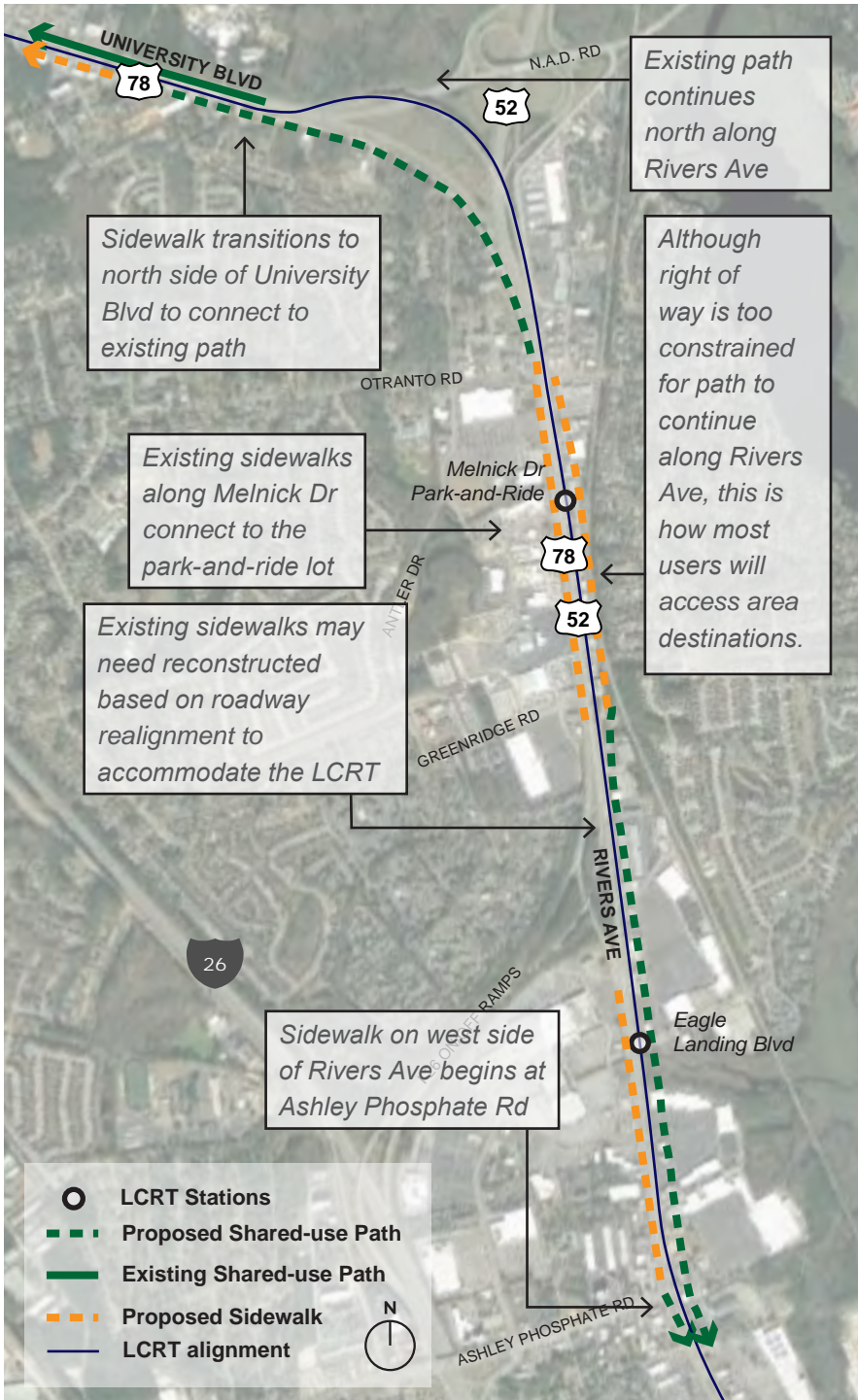
Area E: Upper North Charleston

Figure 6. Area E Recommendations

North of Ashley Phosphate Rd until Greenridge Rd, a shared-use path is recommended on the east side of US-78/US-52. The west side has existing sidewalks or has too constrained of a right of way to accommodate a shared-use path on the west side of the LCRT corridor.

North of Greenridge Rd, because of right of way constraints, the shared-use path transitions to a sidewalk. To overcome the right of way constraints, parallel route options were studied on Antler Dr and along the rail to the east of Rivers Ave; however, due to expected impacts on the area, these options were ruled out for funding with the LCRT.

Continuous sidewalks are recommended along US-78/US-52 between Otranto Rd and Greenridge Rd. This will require bringing existing sidewalks up to standard and filling in gaps in the existing sidewalk network. The proposed shared-use path restarts at Otranto Rd and continues along University Blvd.



Note: For more details on station areas and long-term network recommendations, see Section III, starting on page 28.

Area F: Ladson

From Old University Blvd west to Fernwood Dr, two side-running directional guideways are to be constructed on US-78. From Fernwood Dr to Medical Plaza Dr./Excellence Way, LCRT will operate in two center running median directional guideways on US-78. From Medical Plaza Dr/ Excellence Way to Ingleside Blvd, LCRT will run in single exclusive guideway with bus-only signals and holding zones to prevent conflicts between buses heading in opposite directions. This alignment includes improvements to the I-26 exit ramp to westbound US-78 and

associated signalization. From Ingleside Blvd to the Fairgrounds, LCRT will operate in mixed use travel lanes.

An existing shared-use path is parallel to US-78 (University Blvd) eastbound between Medical Plaza Dr (west) and the US-52 (Rivers Ave). Through the LCRT project, spot improvements on the existing shared-use path, such as adding detectable warning surfaces or addressing grade issues, will be addressed.

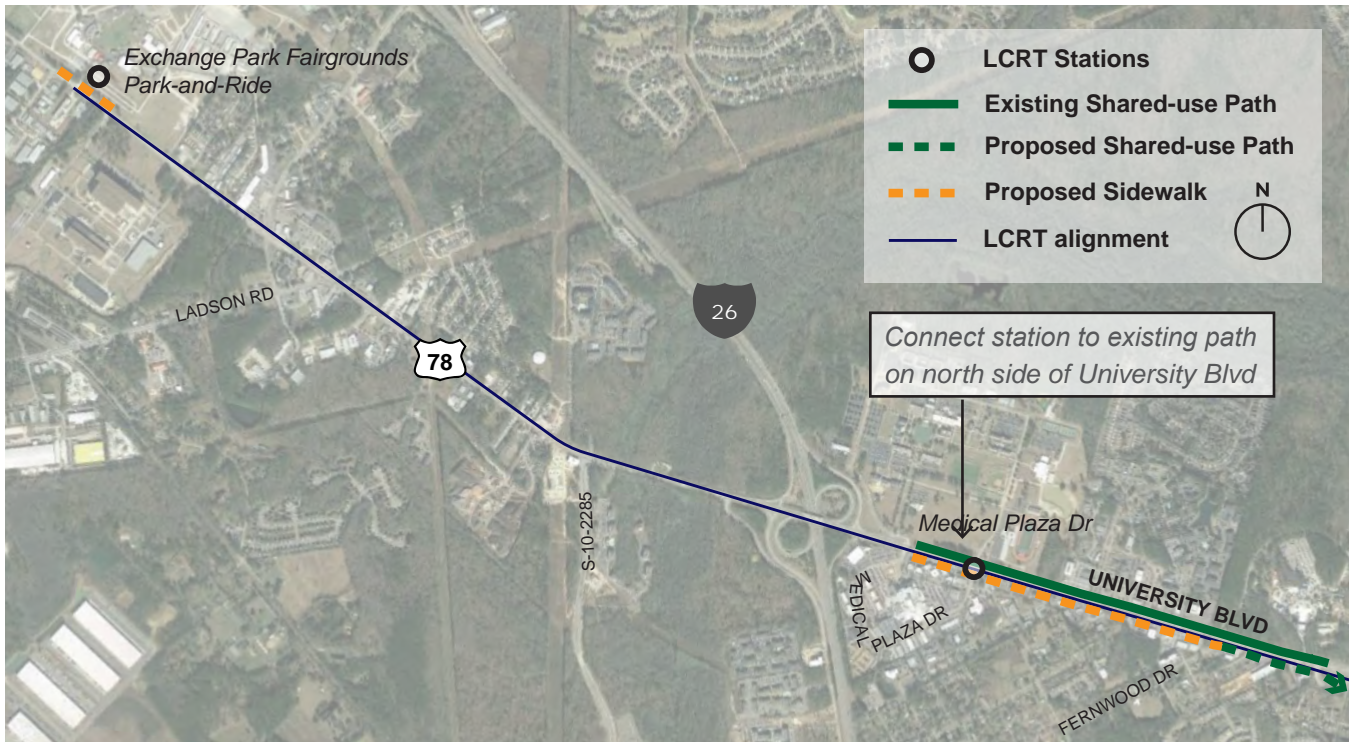
A new sidewalk is recommended along US-78 (University Blvd)

eastbound between Medical Plaza Dr (west) and the recommended shared-use path at Fernwood Dr.

The I-26/US-78 interchange presents a barrier for the continuation of the shared-use path network. As part of the eventual maintenance of the interchange or through the I-26 widening project, non-LCRT-funded opportunities may allow for the existing shared-use path to extend west of Medical Plaza Dr.

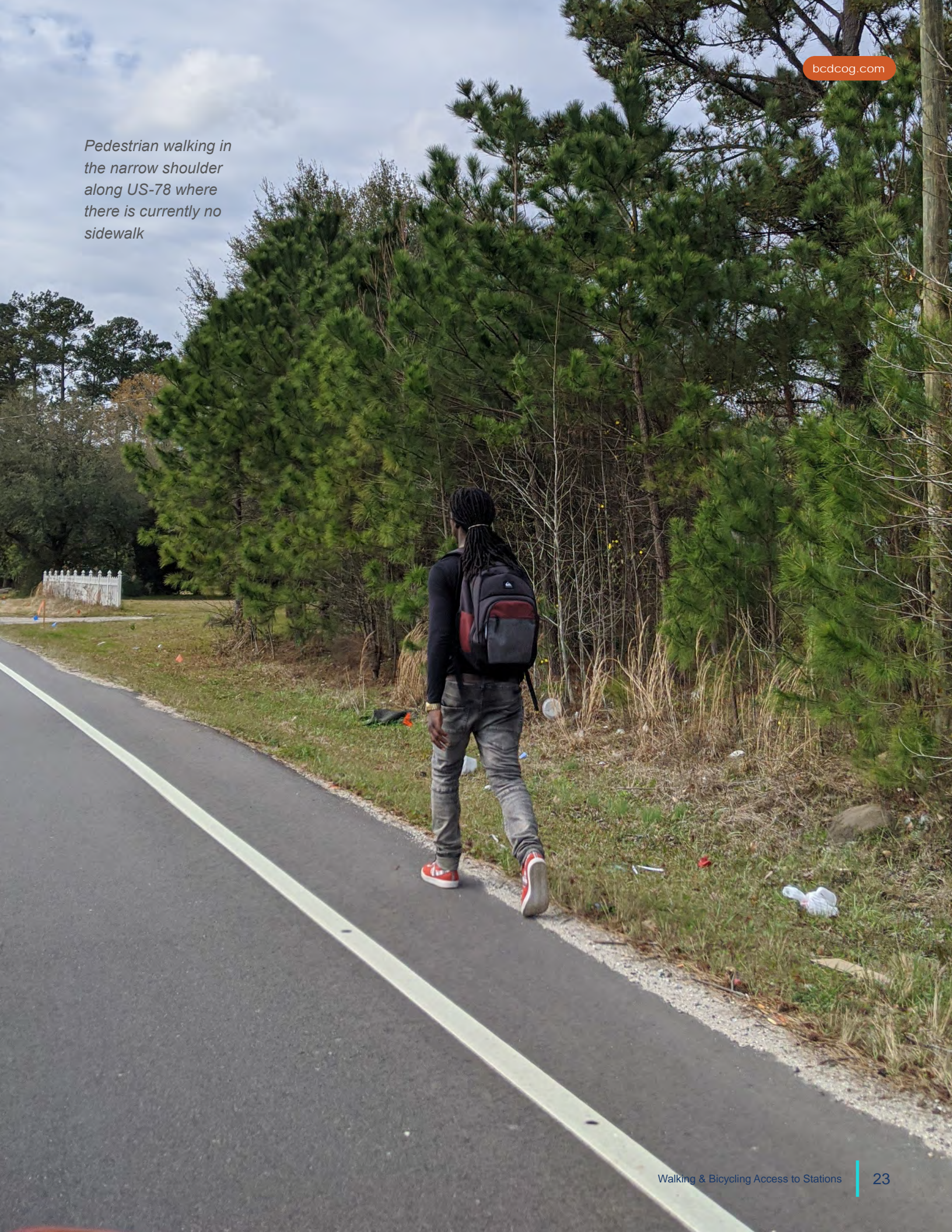
Sidewalk improvements are recommended around the Exchange Park Fairgrounds Park-and-Ride Station.

Figure 7. Area F Recommendations



Note: For more details on station areas and long-term network recommendations, see Section III, starting on page 28.

Pedestrian walking in the narrow shoulder along US-78 where there is currently no sidewalk



Summary of LCRT Improvements

Table 2 lists the linear pedestrian and bicycle facilities that will be implemented along the corridor for areas B-F, and Table 3 lists the number of crossings of the LCRT route.

Table 2. Proposed LCRT Walking & Bicycling Improvements in Areas B-F

LCRT AREA	JURISDICTION	FACILITY	STREET	FROM	TO	SIDE OF STREET	LENGTH*
B	Charleston	Sidewalk	King St Ext	Heriot St	Mt. Pleasant St	East	0.3 mi
B	Charleston	Shared-use Path	King St Ext	Discher St	Mt. Pleasant St	West	1.3 mi
B	Charleston	Shared-use Path	Discher St	Meeting St	King St Ext	South	<0.1 mi
B	Charleston	Bicycle Lane	Meeting St	Forest Ave	Tuxbury Ln	Both	0.4 mi
B	Charleston	Sidewalk	Meeting St	Forest Ave	Discher St	East	0.7 mi
B	North Charleston	Bicycle Lane	Meeting St	Riverview Ave	Forest Ave	Both	0.3 mi
B	North Charleston	Sidewalk	Meeting St	Riverview Ave	Forest Ave	East	0.3 mi
B	North Charleston	Sidewalk	King St Ext	Azalea Dr	Hackemann Ave Station	East	0.2 mi
B	North Charleston	Shared-use Path	Hackemann Ave	King St Ext	Meeting St	North	<0.1 mi
B	North Charleston	Shared-use Path	Rivers Ave	Reynolds Ave	Riverview Ave	East	1.1 mi
B	North Charleston	Shared-use Path	Rivers Ave	Cosgrove Ave	Reynolds Ave	East	0.2 mi
B	North Charleston	Sidewalk	Rivers Ave	Cosgrove Ave	Reynolds Ave	West	0.2 mi
C	North Charleston	Shared-use Path	Rivers Ave	Piggly Wiggly Dr	Cosgrove Ave	East	2.0 mi
C	North Charleston	Sidewalk	Rivers Ave	Piggly Wiggly Dr	Cosgrove Ave	West	2.0 mi

**One-way linear length refers to the length for a single side of the street. Therefore, the total mileage numbers on page 9 and page 12 double-count any facilities that are one both sides of this street in this table.*

LCRT AREA	JURISDICTION	FACILITY	STREET	FROM	TO	SIDE OF STREET	LENGTH*
D	North Charleston	Shared-use Path	Rivers Ave	Ashley Phosphate Rd	Piggly Wiggly Dr	Both	4.8 mi
E	North Charleston	Sidewalk	Rivers Ave	Northwoods Mall northern access point	Ashley Phosphate Rd	West	0.7 mi
E	North Charleston	Shared-use Path	Rivers Ave	Greenridge Dr	Ashley Phosphate Rd	East	1.3 mi
E	North Charleston	Sidewalk	Rivers Ave	Otranto Rd	Greenridge Dr	Both	0.7 mi
E	North Charleston	Shared-use Path	Old University Blvd	US-78	Antler Dr	North	0.9 mi
E	North Charleston	Shared-use Path	Old University Blvd	Antler Dr	Otranto Rd	South/ West	0.4 mi
F	North Charleston	Shared-use Path	US-78	Medical Plaza Dr	Old University Blvd	North	0.5 mi
F	North Charleston	Sidewalk	US-78	Medical Plaza Dr	Old University Blvd	South	1.0 mi
F	Ladson	Sidewalk	US-78	Benchmark Dr	Market Rd	North	0.1 mi

*One-way linear length refers to the length for a single side of the street. Therefore, the total mileage numbers on page 9 and page 12 double-count any facilities that are on both sides of this street in this table.

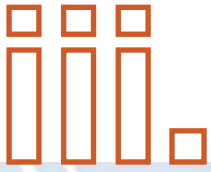
Table 3. Existing & Proposed Crosswalks across the LCRT Route. Counting only the crossings of the LCRT alignment starting at Ingleside and working to Westedge there are 74 existing crossings and 112 total crossings in the proposed design, resulting in a total of 38 new crossing locations.

INTERSECTION	EXISTING	PROPOSED*	SIGNALIZATION
Hagood Ave at Line St	2	2	No
Westedge St at Line St	0	1	No
Lockwood Dr at Spring St	1	1	Yes
Bee St at Lockwood Dr	1	1	Yes
Charleston Center	1	1	No
Courtenay Dr at Bee St	2	2	Yes
Courtenay Dr Mid Block	1	1	No
Doughty St at Courtenay Dr	2	2	No
Calhoun St at Courtenay Dr	2	2	Yes
Jonathan Lucas St at Barre St	2	2	Yes
Calhoun St at Gadsen St	1	1	No
Ashley Ave at Calhoun St	2	2	Yes
Rutledge Ave at Calhoun St	1	1	Yes
Coming St at Calhoun St	2	2	Yes
Calhoun St at St. Phillips St	2	2	Yes
King St at Calhoun St	2	2	Yes
Meeting St at Calhoun St	2	2	Yes
Charlotte St at Meeting St	1	1	No
John St at Meeting St	2	2	Yes
Ann St at Meeting St	1	1	Yes
Wragg Square at Meeting St	1	1	Yes
Mary St at Meeting St	2	2	Yes
Woolfe St at Meeting St	2	2	Yes
Columbus St at Meeting St	2	2	Yes
Line St at Meeting St	2	2	Yes
I-26 at Meeting St	1	1	Yes
Lee St at Meeting St	2	2	Yes
Huger St at Meeting St	2	2	Yes
US-17 at I-26	0	2	Yes
Romney St at Meeting St	2	2	Yes
Brigade St at Meeting St	1	2	No
Morrison Dr at Meeting St	1	1	Yes
Meeting Mid Block at HOP Lot	0	1	No
Heriot St at King St	0	2	No
Braswell St at King St Ext	0	1	Yes

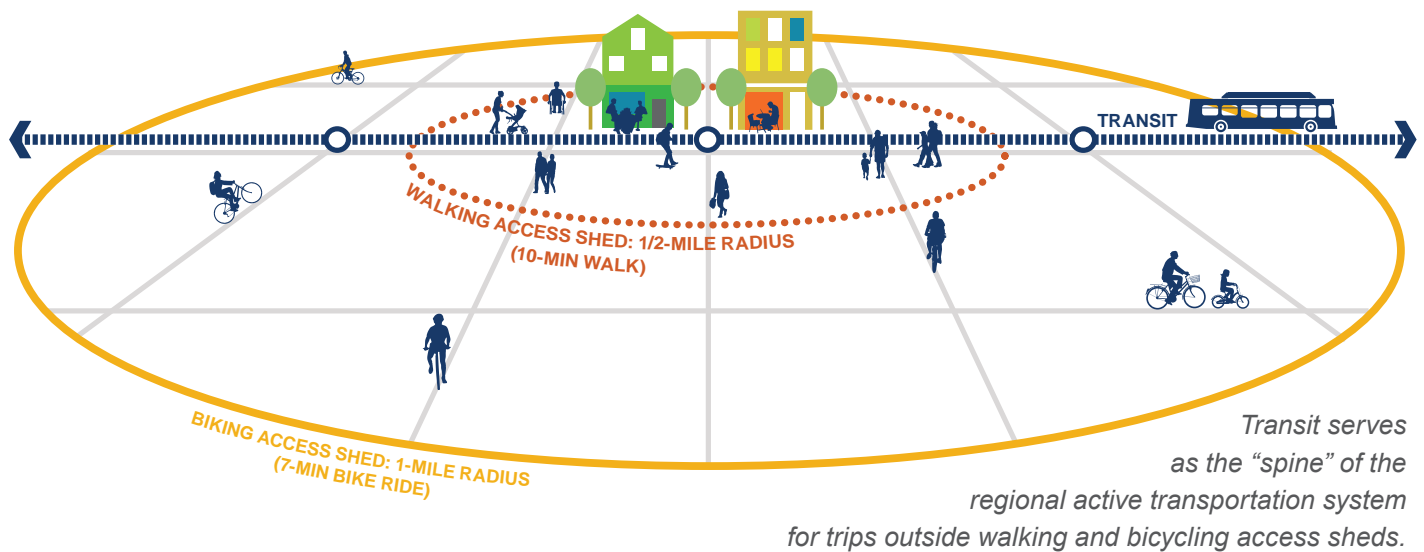
*Proposed includes both replaced and new crosswalks

INTERSECTION	EXISTING	PROPOSED*	SIGNALIZATION
Discher St at King St Ext	0	1	Yes
Meeting Mid Block at Discher St	0	1	No
Spruill Ave at Meeting St	0	1	Yes
Hackemann Ave at Meeting St	0	1	No
Carner Mid Block	0	1	No
Success St at Meeting St	1	1	No
Reynolds Ave at Rivers Ave	2	2	Yes
Cosgrove Ave at Rivers Ave	2	2	Yes
Dorchester Rd at Rivers Ave	2	2	Yes
McMillan Ave at Rivers Ave	1	2	Yes
Helm Ave at Rivers Ave	2	2	Yes
Durant Ave at Rivers Ave	1	2	Yes
Piggly Wiggly Dr at Rivers Ave	0	2	Yes
Morningside Dr at Rivers Ave	0	1	Yes
Mall Dr at Rivers Ave	0	1	Yes
James Bell Dr/Harley St at Rivers Ave	0	1	Yes
Remount Rd at Rivers Ave	0	1	Yes
N. Charleston Shopping Center at Rivers Ave	0	1	Yes
Aviation Ave at Rivers Ave	0	1	Yes
Benderson Dr at Rivers Ave	0	1	Yes
Hanahan Rd at Rivers Ave	0	1	Yes
Eagle Dr at Rivers Ave	0	1	Yes
Midland Park	0	1	Yes
Mabeline St at Rivers Ave	0	1	Yes
Morris Baker Blvd at Rivers Ave	1	1	Yes
Ashley Phosphate Rd at Rivers Ave	1	2	Yes
Northwoods Blvd at Rivers Ave	1	2	Yes
Eagle Landing Blvd at Rivers Ave	1	2	Yes
Northwoods Mall at Rivers Ave	0	2	Yes
Greenridge Rd at Rivers Ave	0	2	Yes
Melnick Dr at Rivers Ave	0	2	Yes
Otranto Rd at Rivers Ave	1	2	Yes
Fernwood Dr at University Blvd	2	2	Yes
Elms Center Rd at University Blvd	2	2	Yes
Medical Plaza Dr/BUC Club Blvd at University Blvd	2	2	Yes
Medical Plaza Dr/Excellence Way at University Blvd	2	2	Yes
Ingleside Blvd at University Blvd	2	2	Yes

Note: Proposed includes both replaced and new crosswalks



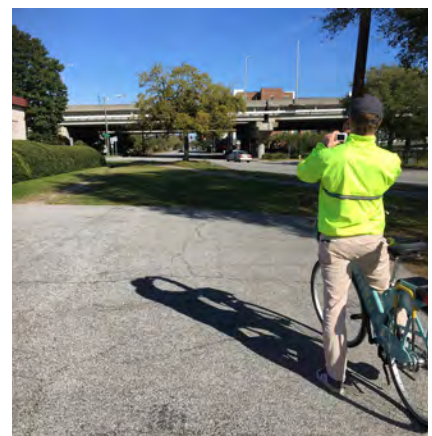
Long-term Station Opportunities



In order to create a true multimodal district around LCRT service, BCDCOG and its partners should work toward building walking and bicycling networks around each station that connect to the short-term recommendations presented in Section II. The networks are based off of a walking access shed of 0.5 miles and a bicycling access shed of 1.0 mile, which represent the probable distance of most LCRT first-and-last mile trips. These distances correspond to roughly a 10 minute walk and 7 minute bicycle ride, assuming relatively direct routes. The walkshed and bikeshed were determined based on how far people are likely willing to travel on foot or bicycle given the existing conditions around proposed LCRT service and where implementation agencies should focus their efforts in order to have the greatest impact.

The long-term vision presented in this section will support LCRT by expanding the access sheds and making the LCRT a more user-friendly and attractive experience on the whole. The following information is organized by station, including an analysis of existing conditions and network recommendations.

The recommendations are informed by the recommendations in *Walk Bike BCD* and the *People Pedal Plan*, with adjustments where appropriate based on new information, station area field work and analysis, and the anticipated impacts of LCRT service. These long-term needs are not intended to be funded by LCRT. Instead, they can be funded through separate sources or through ongoing maintenance, capital funding, and development requirements.



Fieldwork was conducted around the original set of proposed stations in March 2020

Identifying the Long Term Station Opportunities

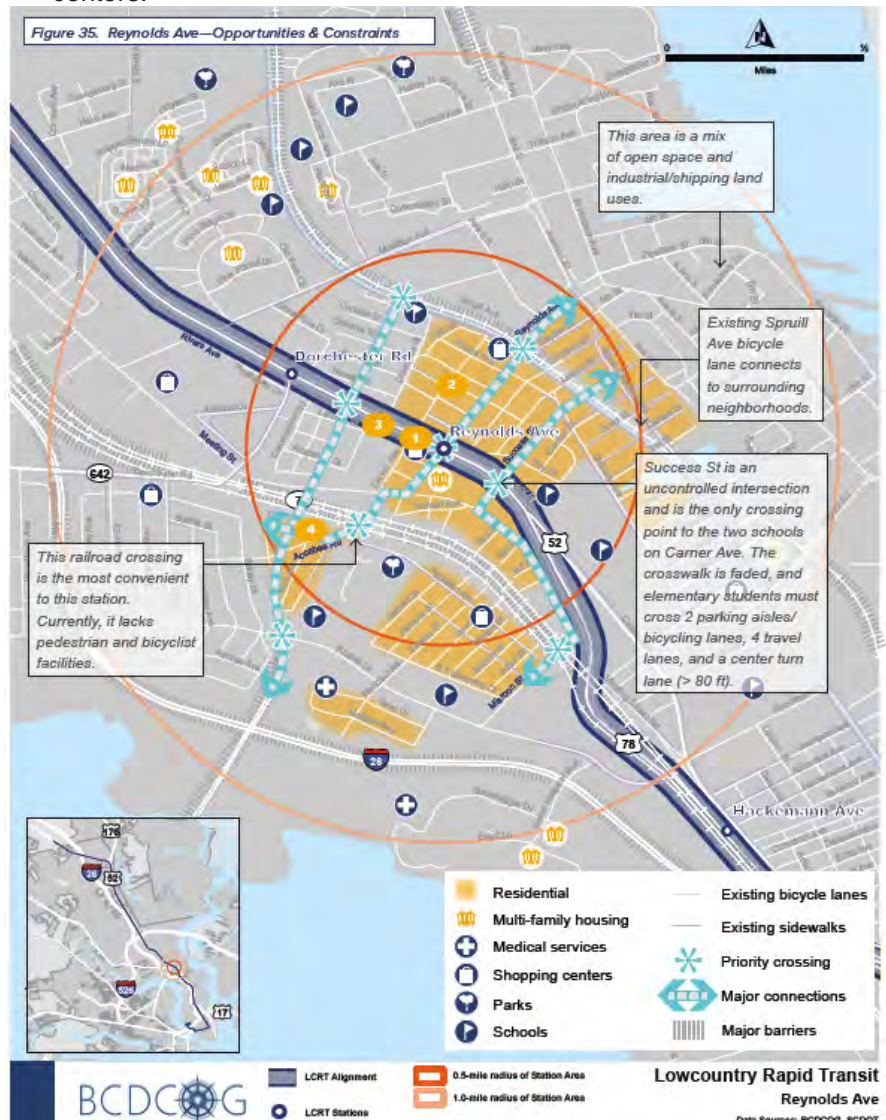
The station area analyses in this section show the major issues and opportunities based on the existing conditions of the street network, point-in-time field observations and point-in-time data analysis. These existing conditions include major connections and priority crossing locations.

Each station's long term opportunities maps are presented through a series of diagrams and maps highlighting the main elements pertaining to station access. Examples of these are shown to the right. The first map highlights the major destinations, land uses, and primary access corridors around the station. The analysis diagrams (facing) display the series of data inputs that contribute to the identified opportunities. Details and methods of the six analyses are described here:

1 Concentrations of Vulnerable Populations. This analysis, also referred to as an equity analysis, relies on data such as vehicle availability and household income to determine where populations are more likely to rely on active transportation and transit.

2 Relative Demand for Walking and Bicycling. The demand analysis shows where land uses encourage walking and biking. These are popular destination for many people and include parks, shopping centers, and employment centers.

3 Destinations Served. Relying on the existing street network, the destinations served map highlights the streets that provide the most direct access to many major destinations in the station's vicinity.



4 **Bicyclist Level of Traffic Stress, or BLTS analysis,** is completed through an assessment of street segments using spatial data and aerial imagery. Data inputs include number of travel lanes, presence of on-street parking, and roadway speeds. A higher level of traffic stress indicates that the roadway would be uncomfortable for most bicyclists, whereas a low level of stress may be comfortable for bicyclists of many ages and abilities. The results of the BLTS analysis are a high-level approach

to quickly discerning where efforts may be needed to decrease roadway stress or design routes on existing low-stress streets. The BLTS is one piece of a larger effort for identifying opportunities for walking and bicycling access. The BLTS methodology is adapted from the 2012 Mineta Transportation Institute Report 11-19: Low-Stress Bicycling and Network Connectivity.

5 **Pedestrian & Bicycle Crash History.** The crash history shows crashes involving pedestrians and bicyclists from 2010-2014 to indicate where safety measures may be needed.

6 **Network Buffer.** The network buffers show the actual trip length from the LCRT station on the existing street grid. This differs from a straight-line distance and represents a more accurate travel distance to and from each station.

Station 10: Reynolds Ave

Station Area Analysis Diagrams

● LCRT Station ▬ LCRT Alignment



Station 1: Line St & Hagood Ave

The area around this proposed end-of-line station supports a variety of land uses. The area is currently home to several sports fields and caters to sporting events with ample parking. Along with the Citadel, there are several schools in close proximity, multi-family housing, various parks, and a grocery store. The Westedge development has brought significant change to this area that will continue as it develops.

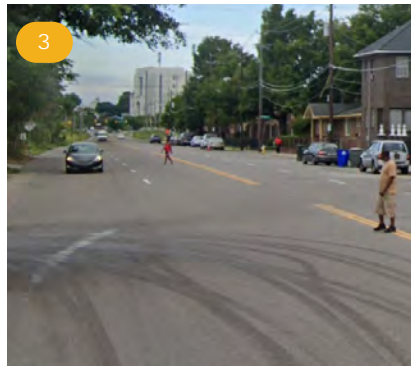
Hagood Ave is 56 feet wide with four lanes and on-street parking. It narrows north of Fishburne St. Fishburne St is also a four-lane street and has intermittent medians. Both streets have excessive distances between pedestrian crossings and have apparent drainage issues at driveways and intersections. There is a sidewalk on the east side of Hagood Ave, but it currently ends at Line St. These two streets will be important connections for LCRT users to make their way from the station to the calmer streets in the vicinity.



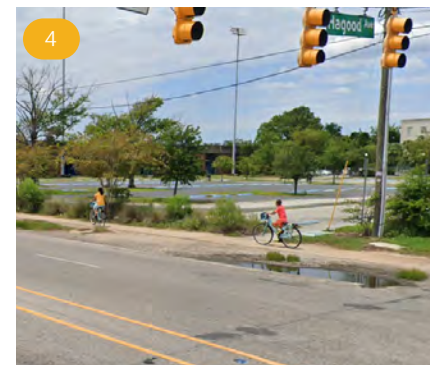
Bicycle share parking adjacent to the proposed station location.



There are currently no pedestrian crossings across Lockwood Dr connecting to the Brittlebank Park entrances.



Pedestrians crossing Hagood Ave at unprotected locations. Depending on daily traffic counts, Hagood Ave may be able to undergo a road diet to better accommodate pedestrians and bicyclists.



Observations of bicyclists riding on the sidewalk suggest that people do not feel comfortable riding on-street.



The corner of Line St and President St, looking on to Harmon Field.

Figure 8. Line St & Hagood Ave—Opportunities & Constraints



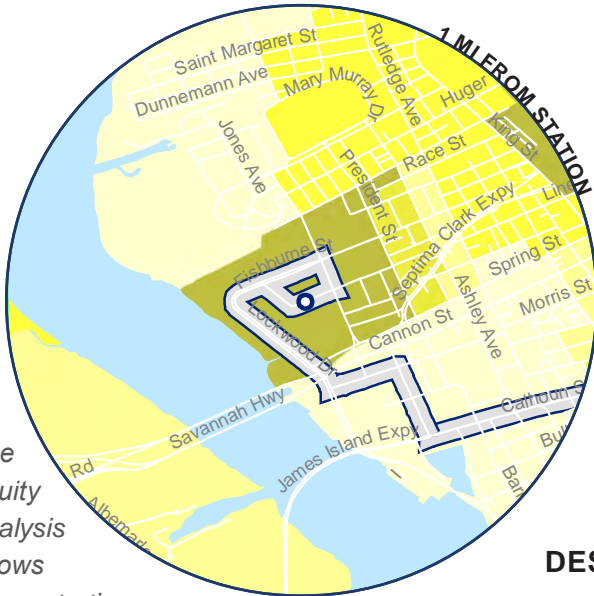
Station 1: Line St & Hagood Ave

Station Area Analysis Diagrams

● LCRT Station — LCRT Alignment

CONCENTRATIONS OF VULNERABLE POPULATIONS¹

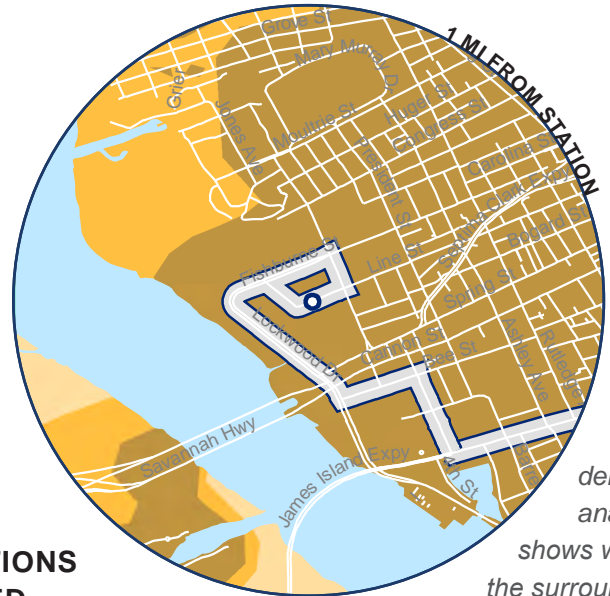
Lower Higher



The equity analysis shows concentrations of vulnerable populations who may rely on active transportation and transit.

RELATIVE DEMAND FOR WALKING AND BIKING¹

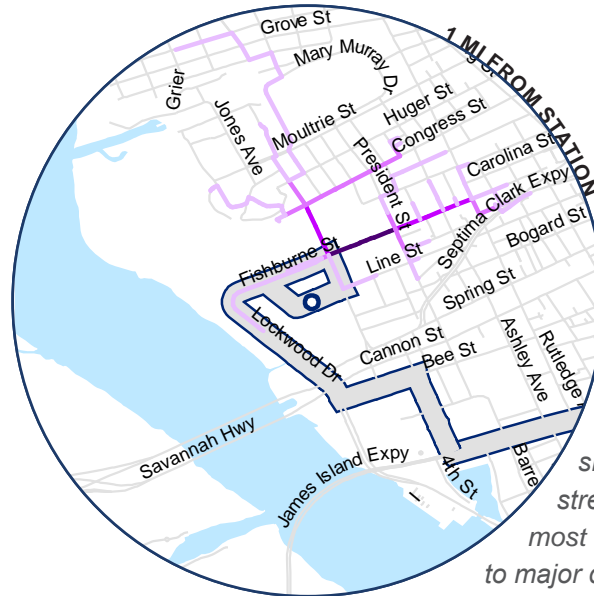
Lower Higher



The demand analysis shows where the surrounding land uses encourage walking and biking.

DESTINATIONS SERVED

Fewer More



The destinations served map shows which streets provide the most direct access to major destinations.

¹ BCDCOG, Walk Bike BCD

BICYCLIST LEVEL OF TRAFFIC STRESS¹

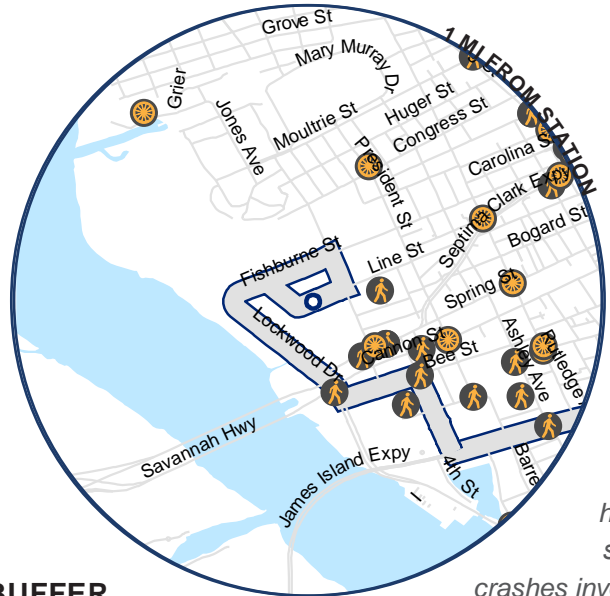
Lower  Higher



The BLTS analysis shows the relative level of stress given existing roadway characteristics.




PEDESTRIAN & BICYCLIST CRASH HISTORY (2010-2014)

 Pedestrian crash  Bicyclist crash



The crash history shows crashes involving pedestrians and bicyclists from 2010-2014.

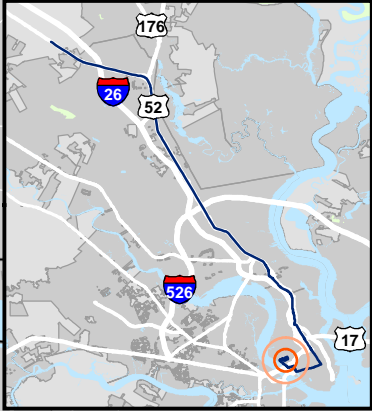
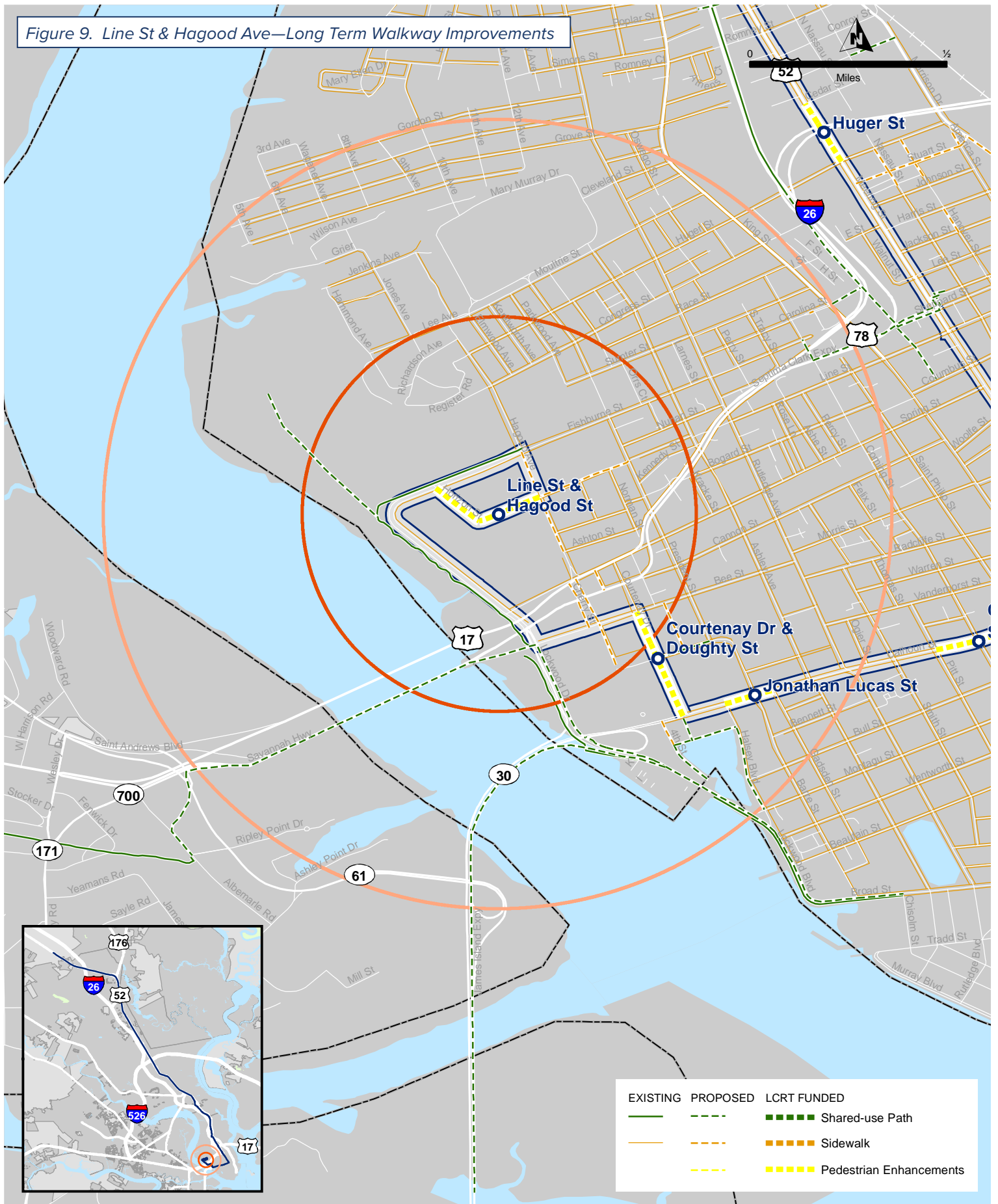
NETWORK BUFFER

 < 1/2 MI  1/2 - 1 MI  1 - 2 MI



The network buffers show the actual trip length from the LCRT station on the existing street grid.

Figure 9. Line St & Hagood Ave—Long Term Walkway Improvements



EXISTING	PROPOSED	LCRT FUNDED

- LCRT Stations
- LCRT Alignment
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area

Lowcountry Rapid Transit
Line St & Hagood Ave

Data Sources: BCDCOG, SCDOT



Station 2: Courtenay Dr & Doughty St

This station is on the west side of the Peninsula in the heart of the medical district, adjacent to neighborhoods along US-17. This area has relatively high pedestrian volumes. Current pedestrian crossings around this proposed station are comfortable and include pedestrian-scale lighting, shade trees, high-visibility crosswalks, and pedestrian-activated countdown signals. Courtenay Dr has sidewalks but lacks designated bicycle facilities.

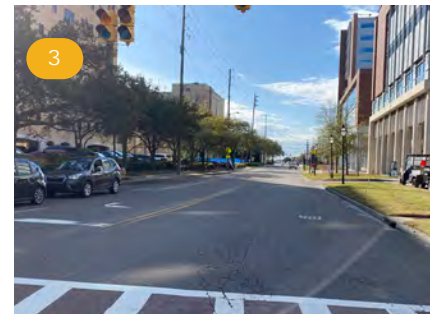
This station is within a half-mile of the future Ashley River Bicycle and Pedestrian Bridge. The bridge project will include crossing improvements and seamless connections to bicycle and pedestrian infrastructure. This bridge will make it possible for people in West Ashley to access the new LCRT service.



Streets around this station lack designated bicycle facilities, forcing bicyclists to share the travel lane with motor vehicles or share narrow sidewalks with pedestrians.



Sheltered bicycle parking located under the MUSC parking garage is highly utilized. Additional racks and design upgrades may be needed to manage increased demand once the frequency of bus service increases.

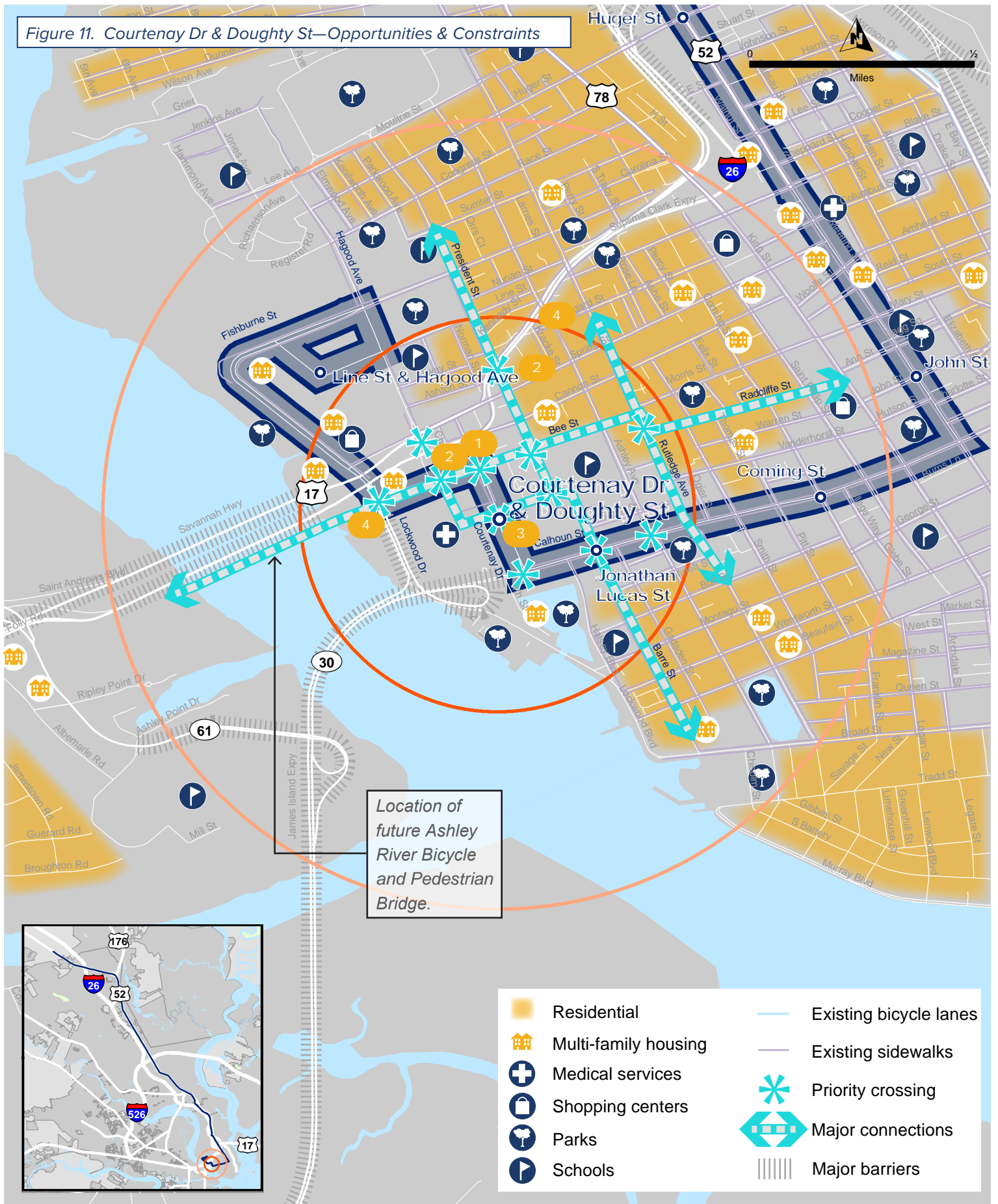


Many pedestrians cross Courtenay Dr at Doughty St to access MUSC. Travel lanes are wide and lack bicycle connections.



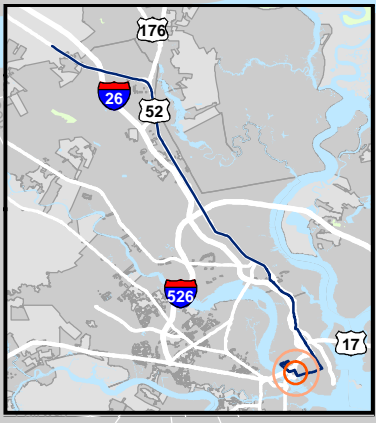
The Brittlebank Path currently ends at the intersection of Lockwood Dr and Bee St. This intersection will eventually be modified so that it is integrated with the Ashley River Bicycle and Pedestrian Bridge project.

Figure 11. Courtenay Dr & Doughty St—Opportunities & Constraints



Location of future Ashley River Bicycle and Pedestrian Bridge.

- Residential
- Multi-family housing
- Medical services
- Shopping centers
- Parks
- Schools
- Existing bicycle lanes
- Existing sidewalks
- Priority crossing
- Major connections
- Major barriers



- LCRT Alignment
- LCRT Stations
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area

Lowcountry Rapid Transit
Courtenay Dr & Doughty St
 Data Sources: BCDCOG, SCDOT

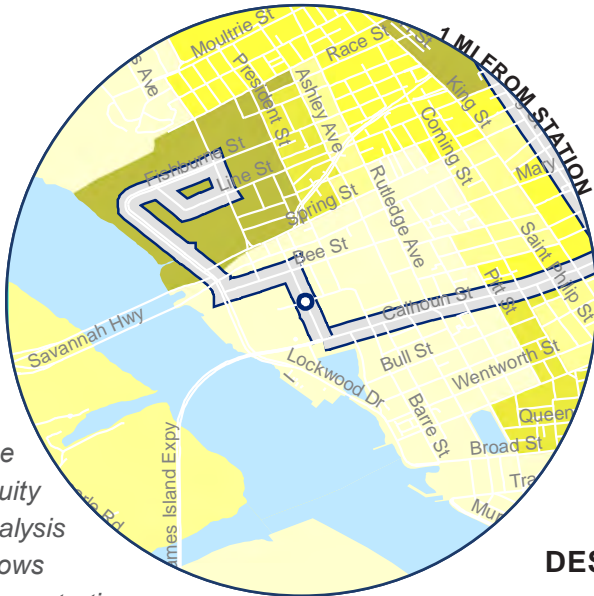
Station 2: Courtenay Dr & Doughty St

Station Area Analysis Diagrams

● LCRT Station — LCRT Alignment

CONCENTRATIONS OF VULNERABLE POPULATIONS¹

Lower Higher



The equity analysis shows concentrations of vulnerable populations who may rely on active transportation and transit.

RELATIVE DEMAND FOR WALKING AND BIKING¹

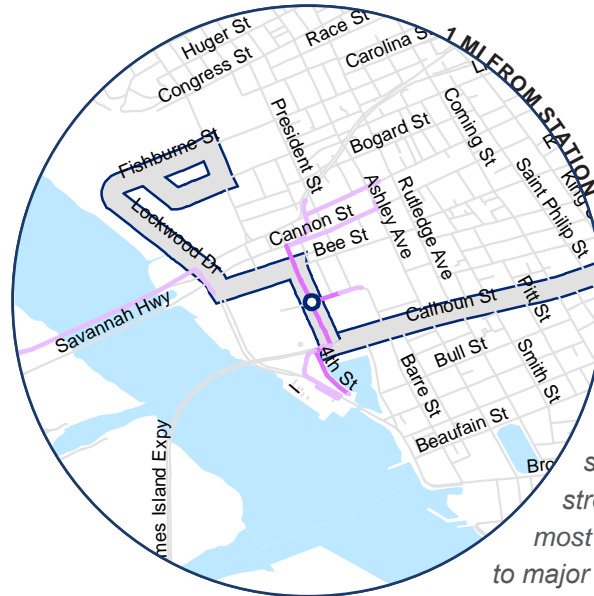
Lower Higher



The demand analysis shows where the surrounding land uses encourage walking and biking.

DESTINATIONS SERVED

Fewer More

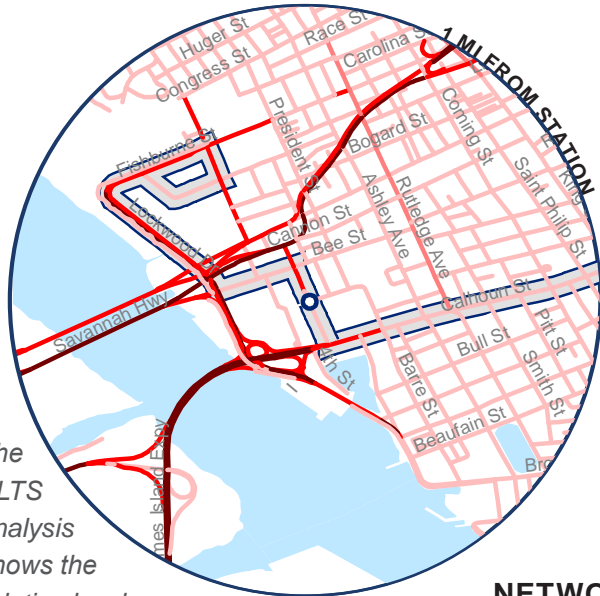


The destinations served map shows which streets provide the most direct access to major destinations.

¹ BCDCOG, Walk Bike BCD

BICYCLIST LEVEL OF TRAFFIC STRESS¹

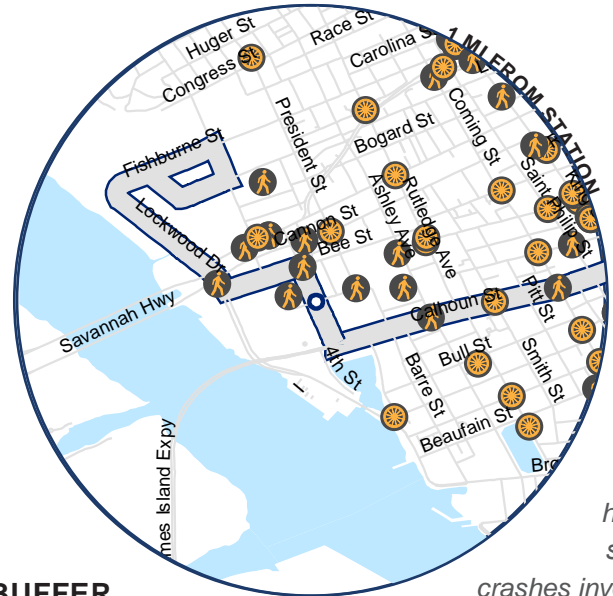
Lower  Higher



The BLTS analysis shows the relative level of stress given existing roadway characteristics.




PEDESTRIAN & BICYCLIST CRASH HISTORY (2010-2014)

 Pedestrian crash  Bicyclist crash



The crash history shows crashes involving pedestrians and bicyclists from 2010-2014.

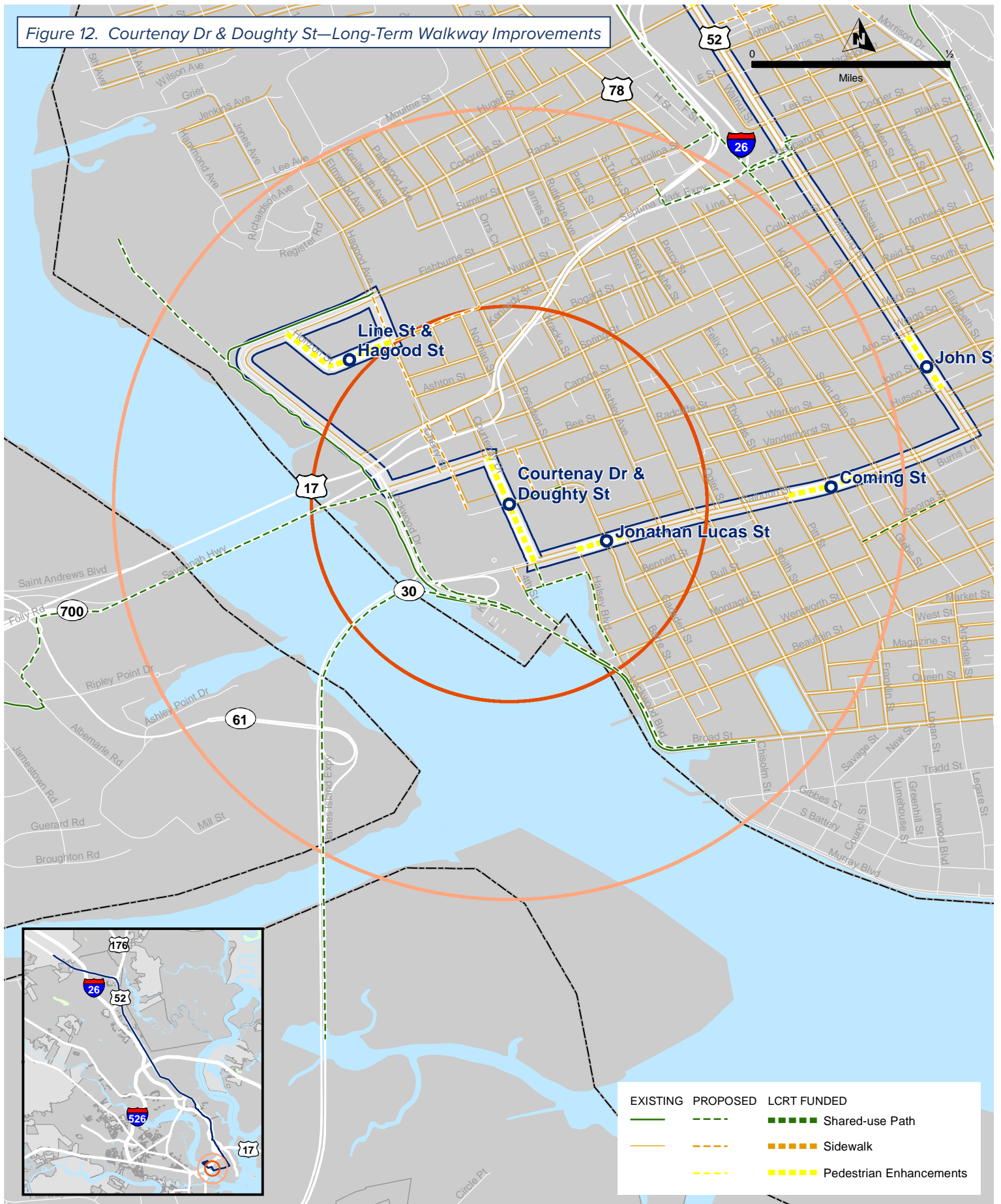
NETWORK BUFFER

 < 1/2 MI  1/2 - 1 MI  1 - 2 MI



The network buffers show the actual trip length from the LCRT station on the existing street grid.

Figure 12. Courtenay Dr & Doughty St—Long-Term Walkway Improvements

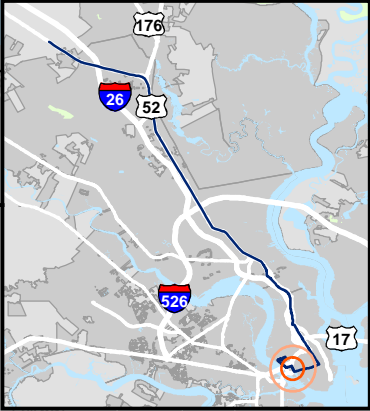
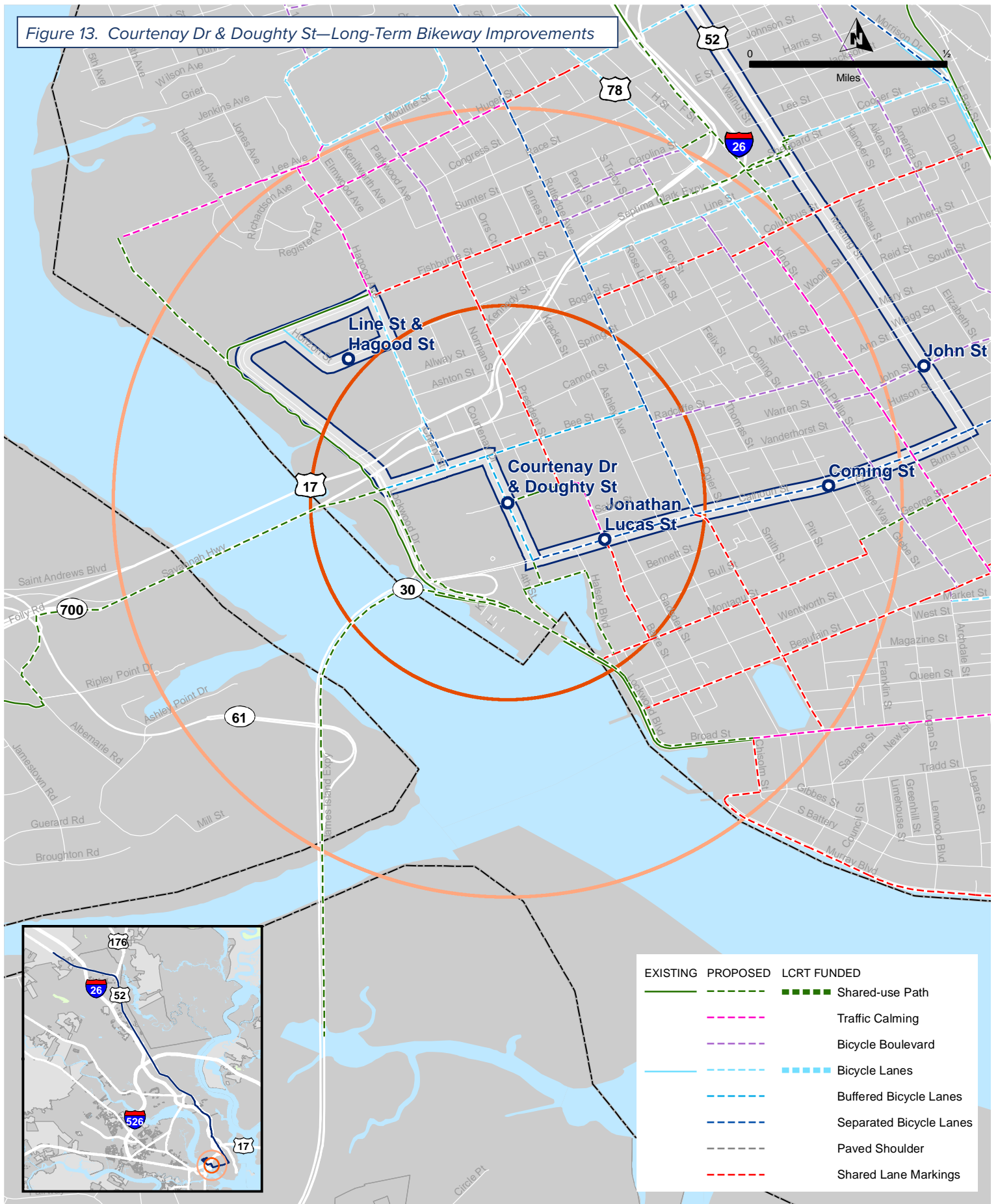


- LCRT Stations
- LCRT Alignment
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area

**Lowcountry Rapid Transit
Courtenay Dr & Doughty St**

Data Sources: BCDCOG, SCDOT

Figure 13. Courtenay Dr & Doughty St—Long-Term Bikeway Improvements



● LCRT Stations
 LCRT Alignment

0.5-mile radius of Station Area
 1.0-mile radius of Station Area

EXISTING	PROPOSED	LCRT FUNDED
		 Shared-use Path
		Traffic Calming
		Bicycle Boulevard
		Bicycle Lanes
		Buffered Bicycle Lanes
		Separated Bicycle Lanes
		Paved Shoulder
		Shared Lane Markings



**Lowcountry Rapid Transit
Courtenay Dr & Doughty St**

Data Sources: BCDCOG, SCDOT

Station 3: Jonathan Lucas St

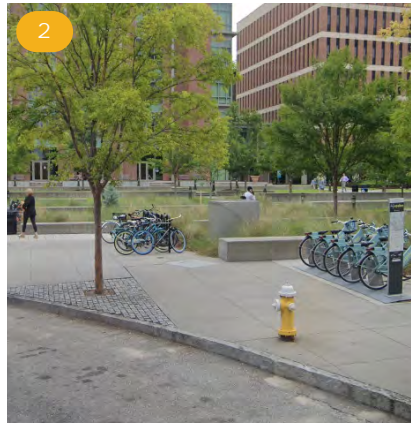
Jonathan Lucas St may only be 1,000 feet in length, but it plays an important role in the mobility network. The street is a hub for walking, biking, shuttle vans, on-street parking, and carpooling. There is a lack of crossing locations for pedestrians and although there is bicycle parking and bikeshare stations located at the MUSC Quad, the street does not have designated space for people bicycling.

South of the intersection of Calhoun St at Jonathan Lucas St/ Barre St, the surrounding land use transitions from medical campus to historic neighborhood. Filling the sidewalk gaps along Barre St would create more seamless connections from the neighborhood to LCRT.

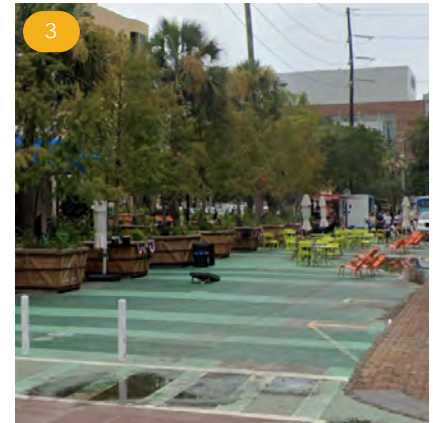
South of Calhoun St there is a network of low-speed and low-volume streets where bicyclists may feel comfortable sharing lanes with motor vehicles.



Jonathan Lucas St provides access to several destinations in the MUSC campus, including a parking garage. Pedestrians tend to cross mid-block outside of a designated crossing so that they can access their destination via the most direct path.



Bicycle parking and bikeshare stations are located where Jonathan Lucas St bends into Doughty St at the MUSC Quad.

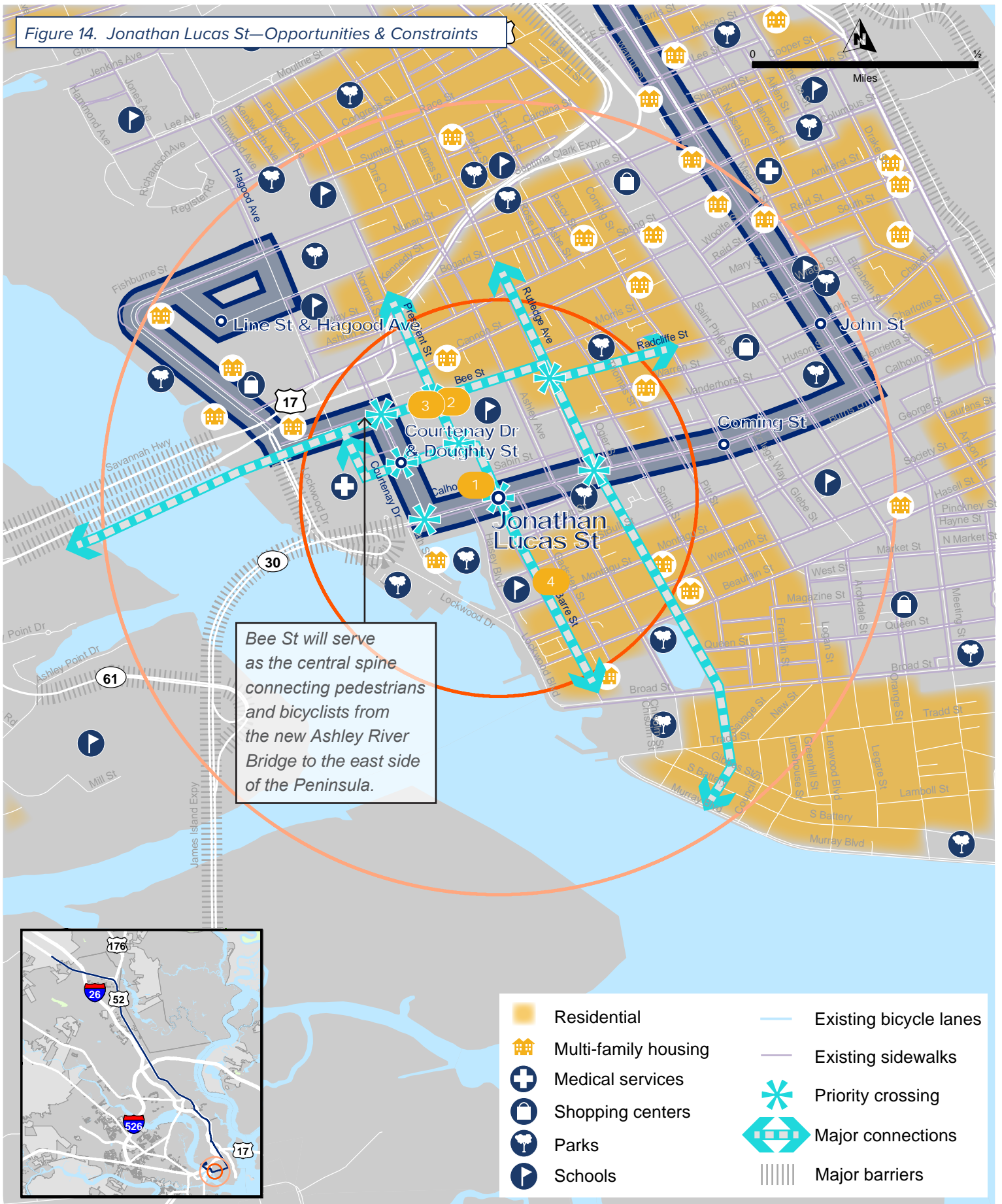


MUSC converted this section of Doughty St into a pedestrian plaza through tactical urbanism strategies.



Sidewalk gaps on Barre St force pedestrians to walk in the street.

Figure 14. Jonathan Lucas St—Opportunities & Constraints



Bee St will serve as the central spine connecting pedestrians and bicyclists from the new Ashley River Bridge to the east side of the Peninsula.

- Residential
- Multi-family housing
- Medical services
- Shopping centers
- Parks
- Schools
- Existing bicycle lanes
- Existing sidewalks
- Priority crossing
- Major connections
- Major barriers

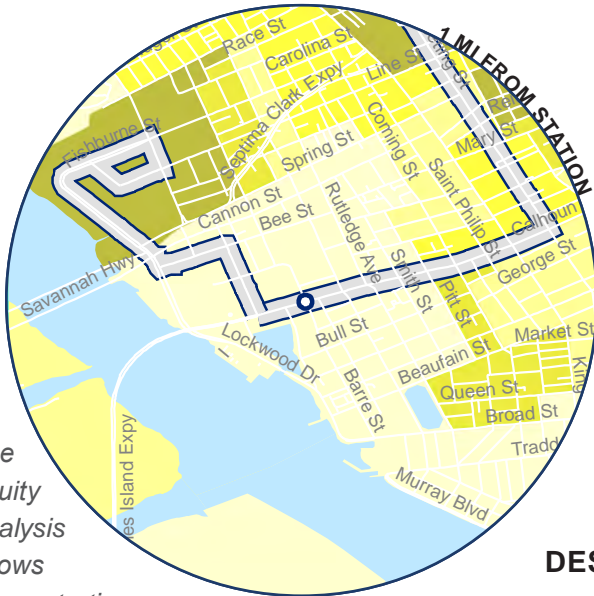
Station 3: Jonathan Lucas St

Station Area Analysis Diagrams

● LCRT Station — LCRT Alignment

CONCENTRATIONS OF VULNERABLE POPULATIONS¹

Lower Higher



The equity analysis shows concentrations of vulnerable populations who may rely on active transportation and transit.

RELATIVE DEMAND FOR WALKING AND BIKING¹

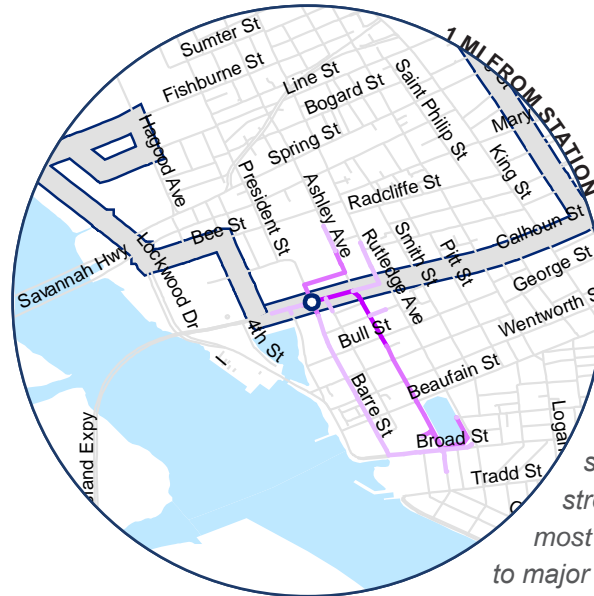
Lower Higher



The demand analysis shows where the surrounding land uses encourage walking and biking.

DESTINATIONS SERVED

Fewer More



The destinations served map shows which streets provide the most direct access to major destinations.

¹ BCDCOG, Walk Bike BCD

BICYCLIST LEVEL OF TRAFFIC STRESS¹

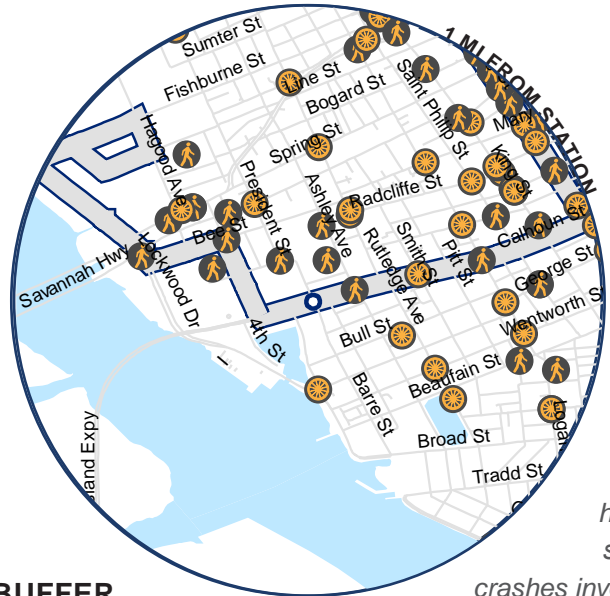
Lower  Higher



The BLTS analysis shows the relative level of stress given existing roadway characteristics.

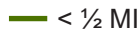


PEDESTRIAN & BICYCLIST CRASH HISTORY (2010-2014)

 Pedestrian crash  Bicyclist crash



The crash history shows crashes involving pedestrians and bicyclists from 2010-2014.

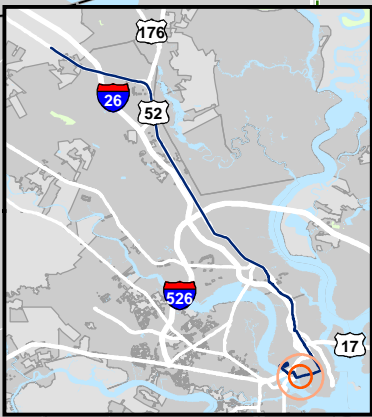
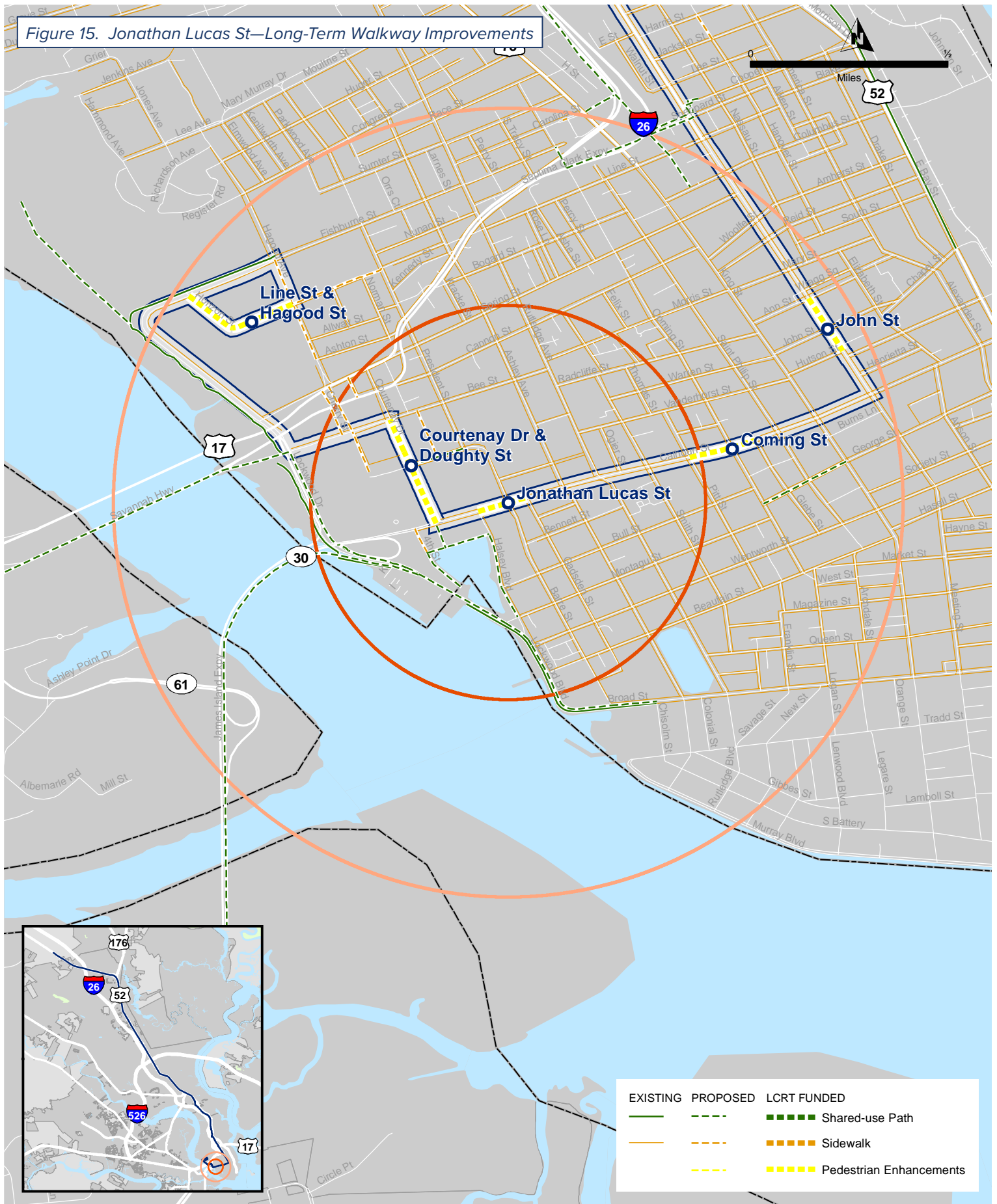
NETWORK BUFFER

 < 1/2 MI  1/2 - 1 MI  1 - 2 MI



The network buffers show the actual trip length from the LCRT station on the existing street grid.

Figure 15. Jonathan Lucas St—Long-Term Walkway Improvements



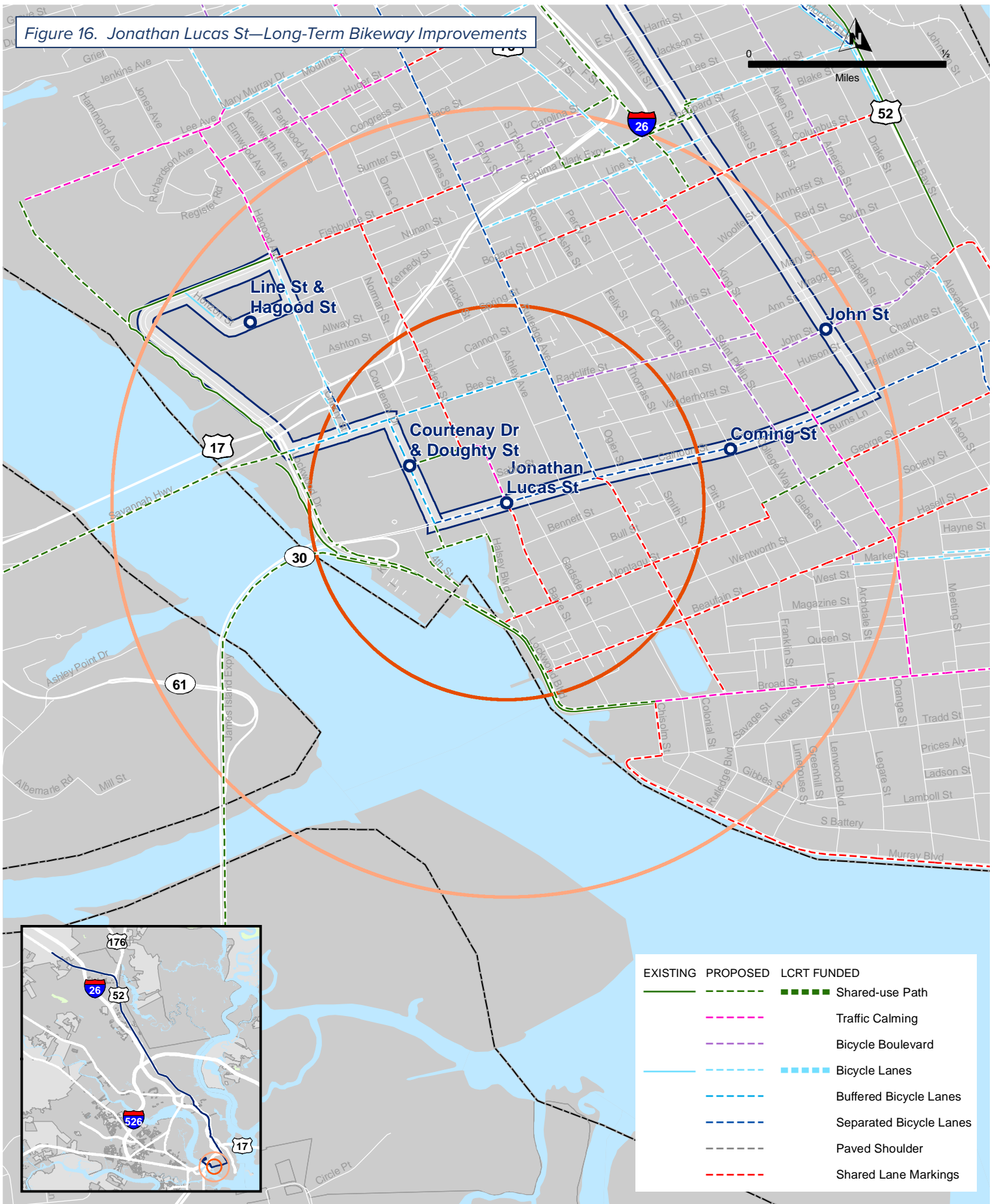
LCRT Stations
 LCRT Alignment

0.5-mile radius of Station Area
 1.0-mile radius of Station Area

Lowcountry Rapid Transit
Jonathan Lucas St

Data Sources: BCDCOG, SCDOT

Figure 16. Jonathan Lucas St—Long-Term Bikeway Improvements



- LCRT Stations
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area
- LCRT Alignment

**Lowcountry Rapid Transit
Jonathan Lucas St**

Data Sources: BCDCOG, SCDOT

Station 4: Coming St

This station provides access to many downtown destinations, including the College of Charleston, King St, and Marion Square. This intersection at Calhoun St is also an important connection for several neighborhoods to the north and south of the LCRT corridor.

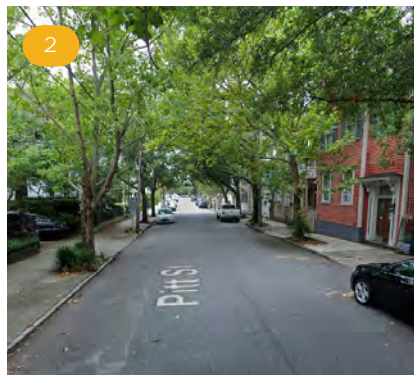
The area currently has a good sidewalk network, with few gaps and minor maintenance issues. Pedestrian crossings along Calhoun St are relatively comfortable, with curb ramps, high-visibility crosswalks, and pedestrian signals.

Dedicated transit lanes are not proposed on Calhoun St at this time, partially because of how it would affect the viability of the City of Charleston's proposed separated bicycle lanes along Calhoun St. Depending on how bikeways on parallel routes are developed and traffic patterns change, there may be an opportunity to reconsider the viability of reversible transit lanes or a separated bicycle lane.

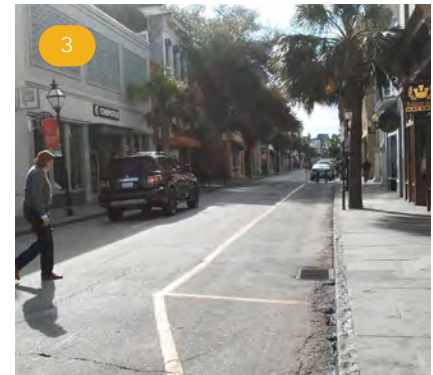
SCDOT recently studied potential bicycle and pedestrian safety improvements for Calhoun St. There are several parallel streets with slower, lower volume traffic that could be used as alternate routes for bicyclists, but bicyclists will still need access to destinations along Calhoun St.



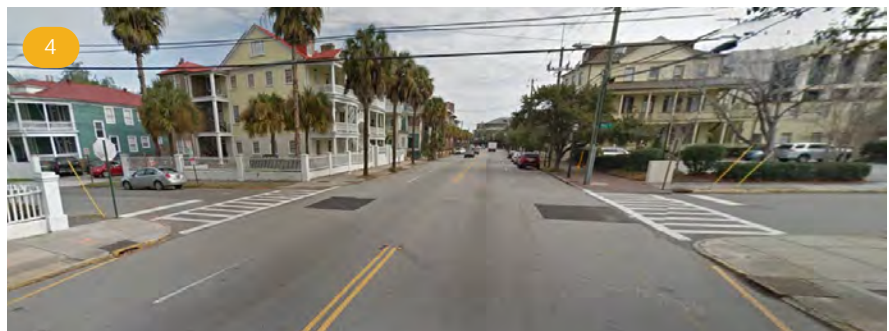
Bicycle racks are available at the proposed station location in front of Addlestone Library.



Neighborhood streets surrounding Calhoun St have lower speeds and traffic volumes and a robust sidewalk network.

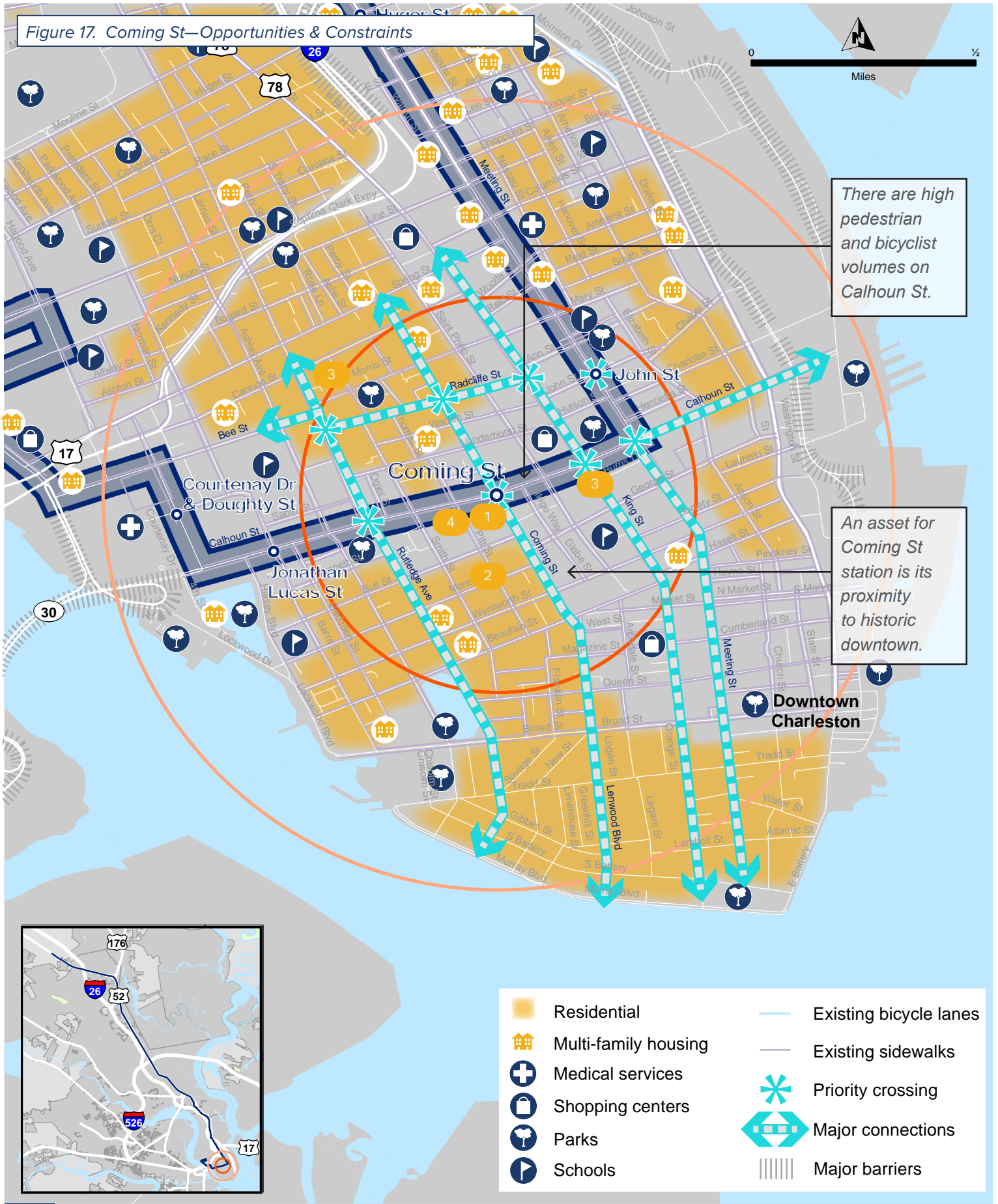


King St narrows south of Calhoun St. Traffic is steady but relatively slow. Many pedestrians choose to cross mid-block away from the marked crosswalks at the intersection of Calhoun St and King St.



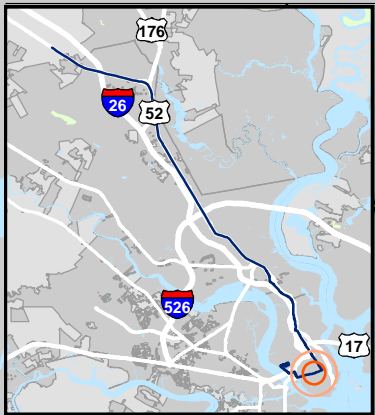
There are several intersections on Calhoun St where crosswalks could be added to improve pedestrian safety.

Figure 17. Coming St—Opportunities & Constraints



There are high pedestrian and bicyclist volumes on Calhoun St.

An asset for Coming St station is its proximity to historic downtown.



- Residential
- Multi-family housing
- Medical services
- Shopping centers
- Parks
- Schools
- Existing bicycle lanes
- Existing sidewalks
- Priority crossing
- Major connections
- Major barriers

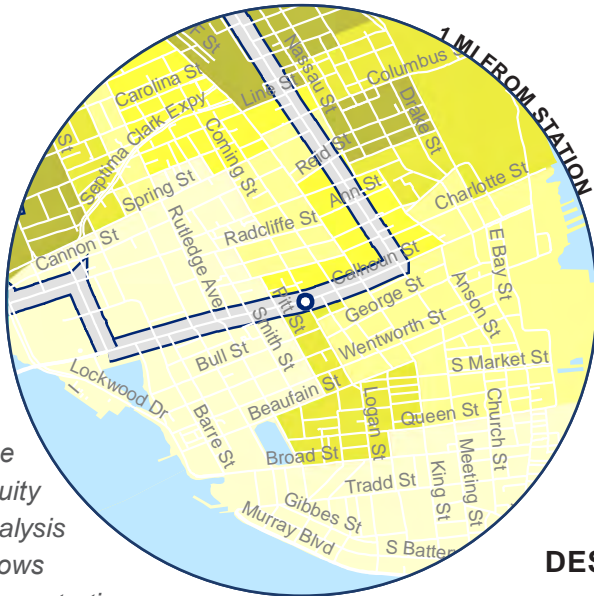
Station 4: Coming St

Station Area Analysis Diagrams

● LCRT Station █ LCRT Alignment

EQUITY ANALYSIS¹

Lower Higher



The equity analysis shows concentrations of vulnerable populations who may rely on active transportation and transit.

DEMAND ANALYSIS¹

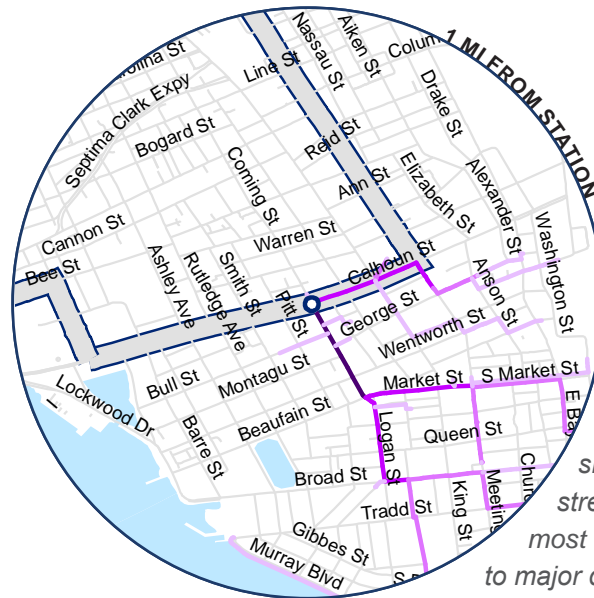
Lower Higher



The demand analysis shows where the surrounding land uses encourage walking and biking.

DESTINATIONS SERVED

Fewer More



The destinations served map shows which streets provide the most direct access to major destinations.

¹ BCDCOG, Walk Bike BCD

BICYCLIST LEVEL OF TRAFFIC STRESS¹

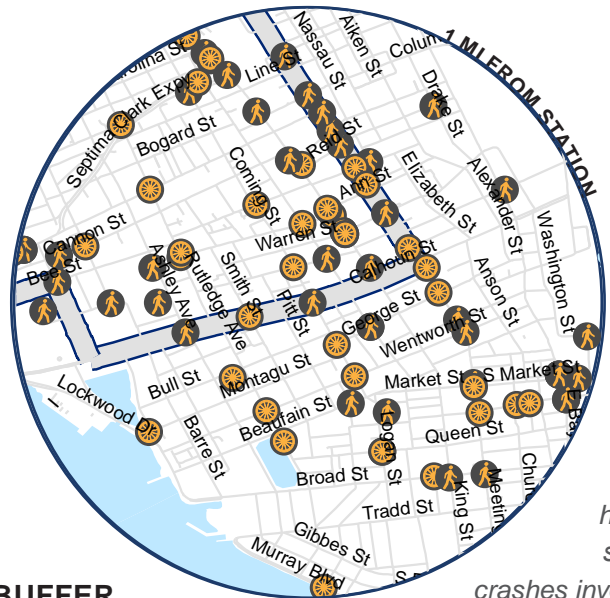
Lower  Higher



The BLTS analysis shows the relative level of stress given existing roadway characteristics.




PEDESTRIAN & BICYCLIST CRASH HISTORY (2010-2014)

 Pedestrian crash  Bicyclist crash



The crash history shows crashes involving pedestrians and bicyclists from 2010-2014.

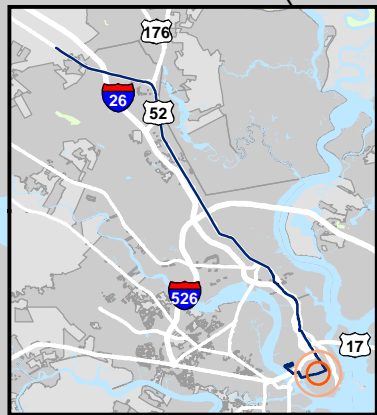
NETWORK BUFFER

 < 1/2 MI  1/2 - 1 MI  1 - 2 MI

The network buffers show the actual trip length from the LCRT station on the existing street grid.



Figure 18. Coming St—Long-Term Walkway Improvements



EXISTING	PROPOSED	LCRT FUNDED

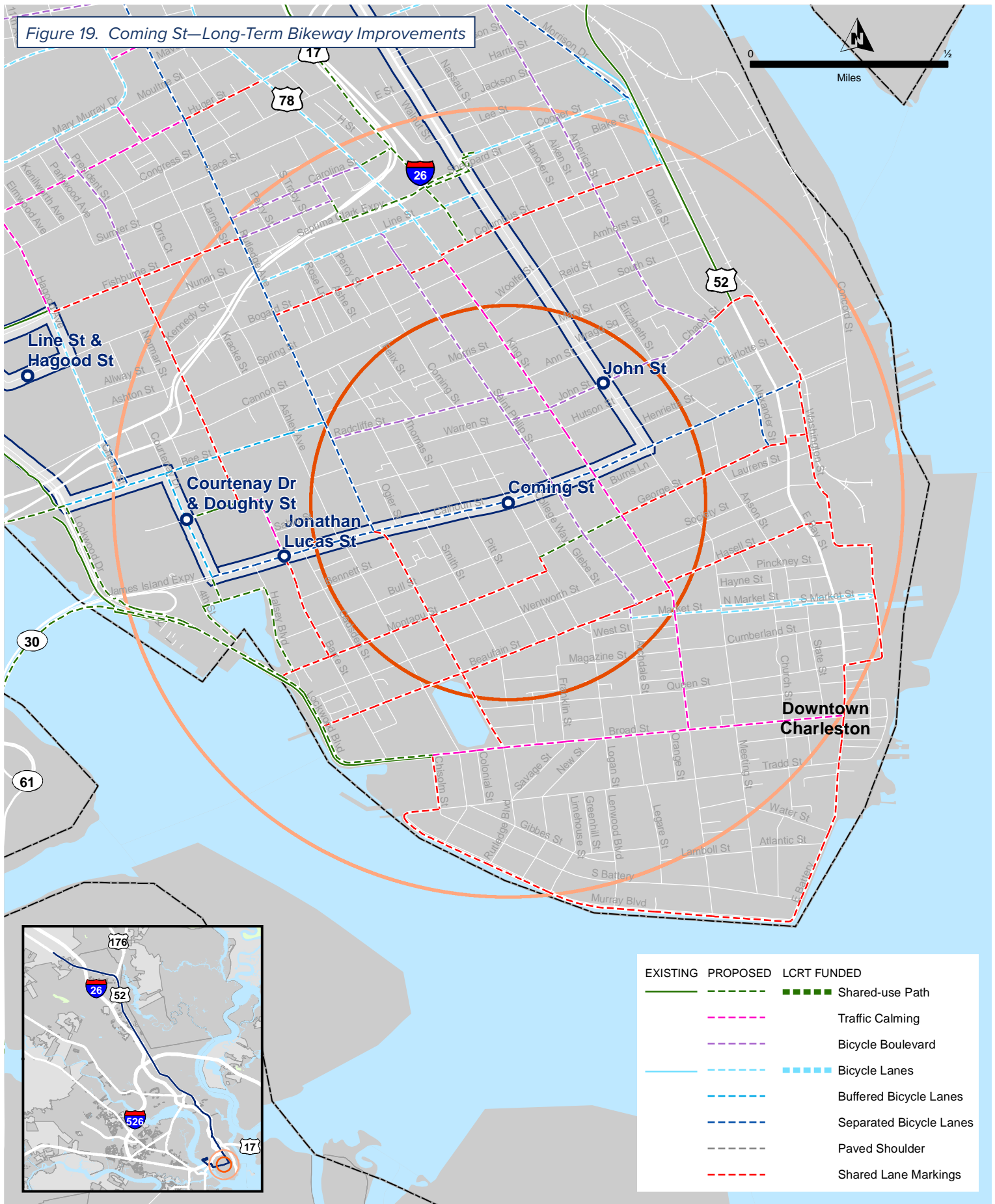
- LCRT Stations
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area
- LCRT Alignment

Lowcountry Rapid Transit
Coming St

Data Sources: BCDCOG, SCDOT



Figure 19. Coming St—Long-Term Bikeway Improvements



EXISTING	PROPOSED	LCRT FUNDED
		Shared-use Path
		Traffic Calming
		Bicycle Boulevard
		Bicycle Lanes
		Buffered Bicycle Lanes
		Separated Bicycle Lanes
		Paved Shoulder
		Shared Lane Markings

- LCRT Stations
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area
- LCRT Alignment

Lowcountry Rapid Transit
Coming St

Data Sources: BCDCOG, SCDOT

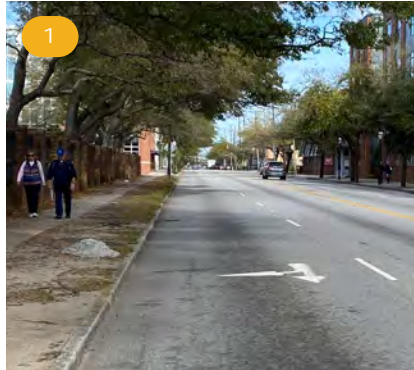


Station 5: John St

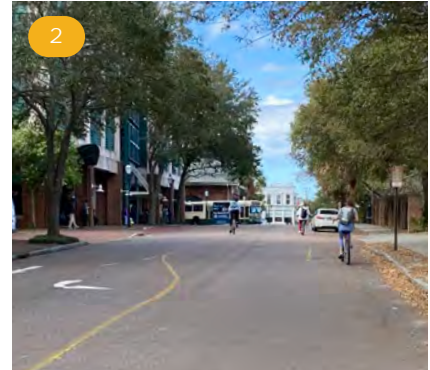
Meeting St is a high-volume four-lane thoroughfare for commercial trucks, buses, and personal vehicles. There are no designated bicycle facilities; some bicyclists choose to ride in the lane, but many choose to ride on the sidewalk despite high pedestrian volumes. Frequent crossing opportunities along Meeting St are important due to the many multi-family housing units that are within 1/2 mile of this station area.

The proposed station location will serve as an important access point for the neighborhoods and multi-family housing in the area, especially those east of Meeting Street. There is a school one block northeast of the station.

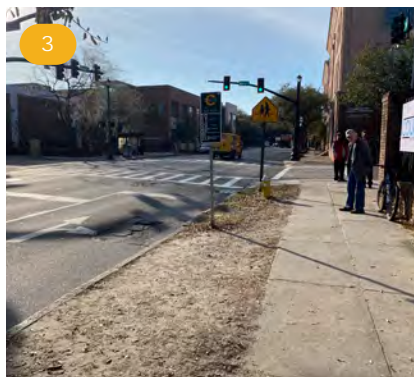
The commercial presence of King St is a major destination and is projected to be for LCRT users as well. Ensuring that high-quality pedestrian connections and crossing will serve the needs of visitors and residents is a focus for this station area.



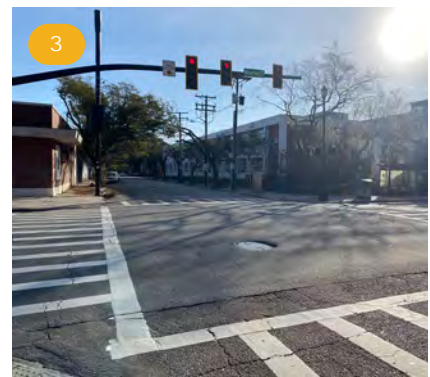
Meeting St is a relatively high-volume roadway where less confident bicyclists tend to ride on the sidewalk.



Mary St is a low-speed, low-volume connection to King St from neighborhoods and businesses to the east and west, and it functions well with shared lanes.

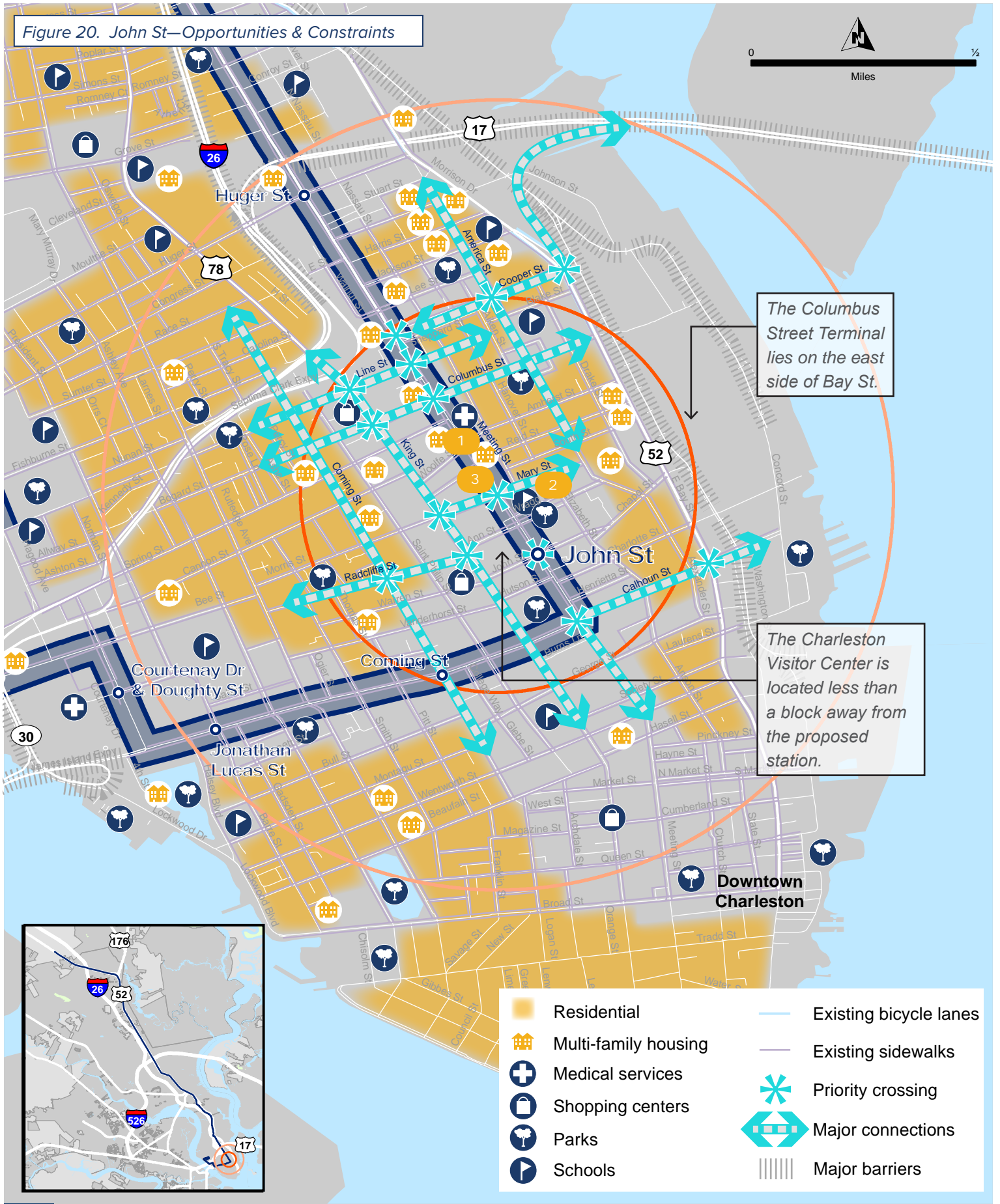


The existing bus stop at Meeting St lacks basic transit amenities and sufficient shade. There is an opportunity to pave a portion of the planting strip to create an ADA-accessible concrete landing pad for people boarding and alighting the bus.



Pedestrian crossings at Meeting St and Mary St include high-visibility crosswalks and pedestrian countdown signals but lack activation buttons.

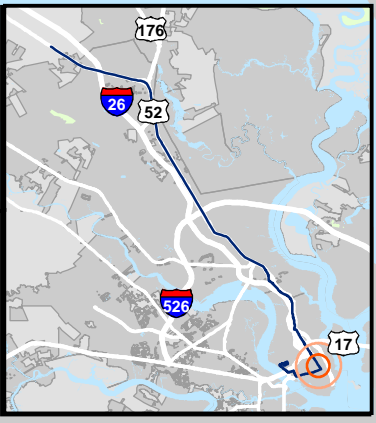
Figure 20. John St—Opportunities & Constraints



The Columbus Street Terminal lies on the east side of Bay St.

The Charleston Visitor Center is located less than a block away from the proposed station.

- Residential
- Existing bicycle lanes
- Multi-family housing
- Existing sidewalks
- Medical services
- Priority crossing
- Shopping centers
- Major connections
- Parks
- Major barriers
- Schools



- LCRT Alignment
- 0.5-mile radius of Station Area
- LCRT Stations
- 1.0-mile radius of Station Area

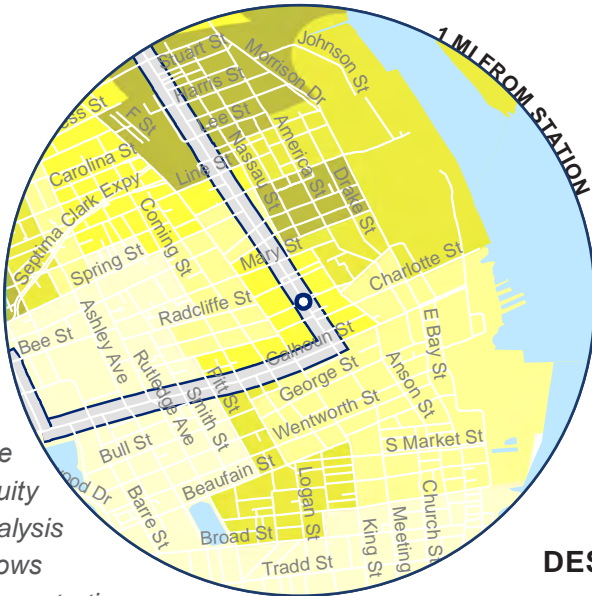
Station 5: John St

Station Area Analysis Diagrams

● LCRT Station █ LCRT Alignment

CONCENTRATIONS OF VULNERABLE POPULATIONS¹

Lower Higher



The equity analysis shows concentrations of vulnerable populations who may rely on active transportation and transit.

RELATIVE DEMAND FOR WALKING AND BIKING¹

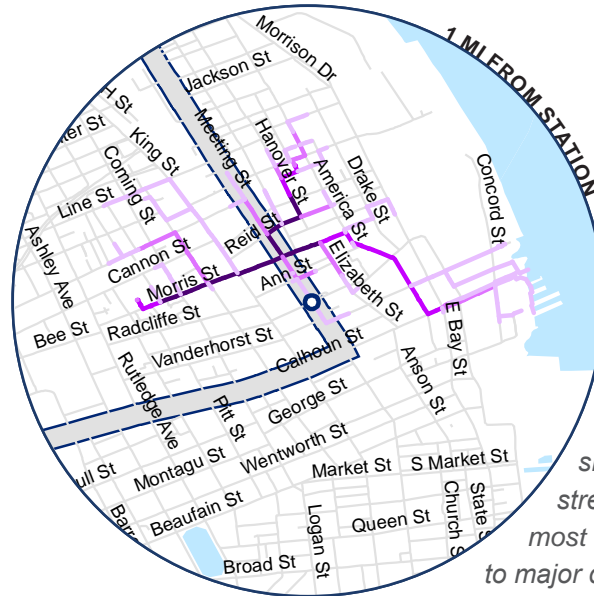
Lower Higher



The demand analysis shows where the surrounding land uses encourage walking and biking.

DESTINATIONS SERVED

Fewer More



The destinations served map shows which streets provide the most direct access to major destinations.

¹ BCDCOG, Walk Bike BCD

BICYCLIST LEVEL OF TRAFFIC STRESS¹

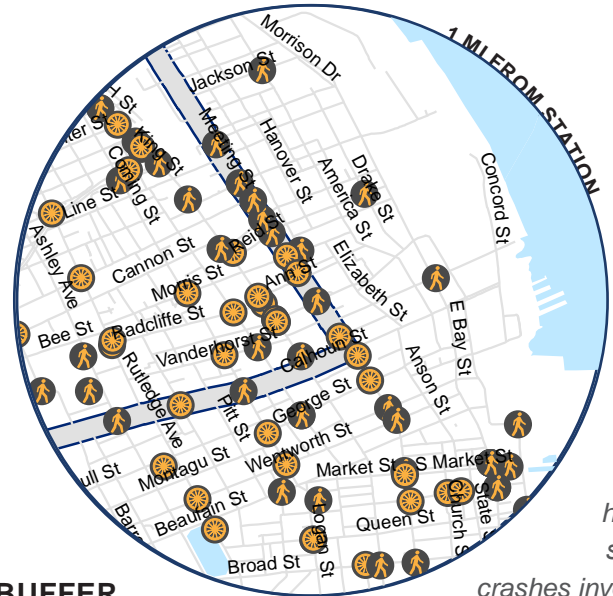
Lower  Higher



The BLTS analysis shows the relative level of stress given existing roadway characteristics.

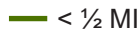
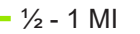
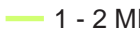
PEDESTRIAN & BICYCLIST CRASH HISTORY (2010-2014)

 Pedestrian crash  Bicyclist crash



The crash history shows crashes involving pedestrians and bicyclists from 2010-2014.

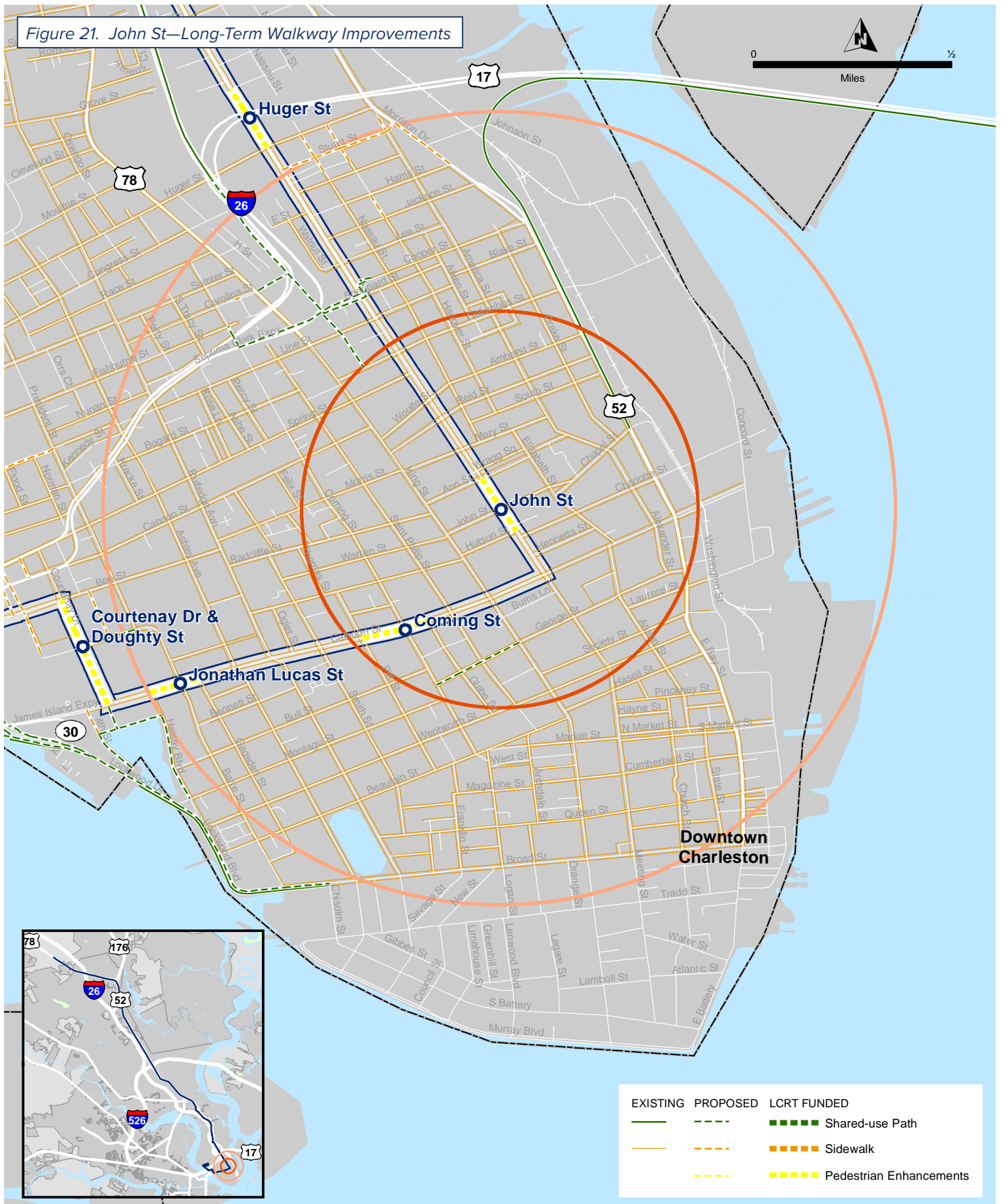
NETWORK BUFFER

 < 1/2 MI  1/2 - 1 MI  1 - 2 MI



The network buffers show the actual trip length from the LCRT station on the existing street grid.

Figure 21. John St—Long-Term Walkway Improvements



EXISTING	PROPOSED	LCRT FUNDED
		Shared-use Path
		Sidewalk
		Pedestrian Enhancements

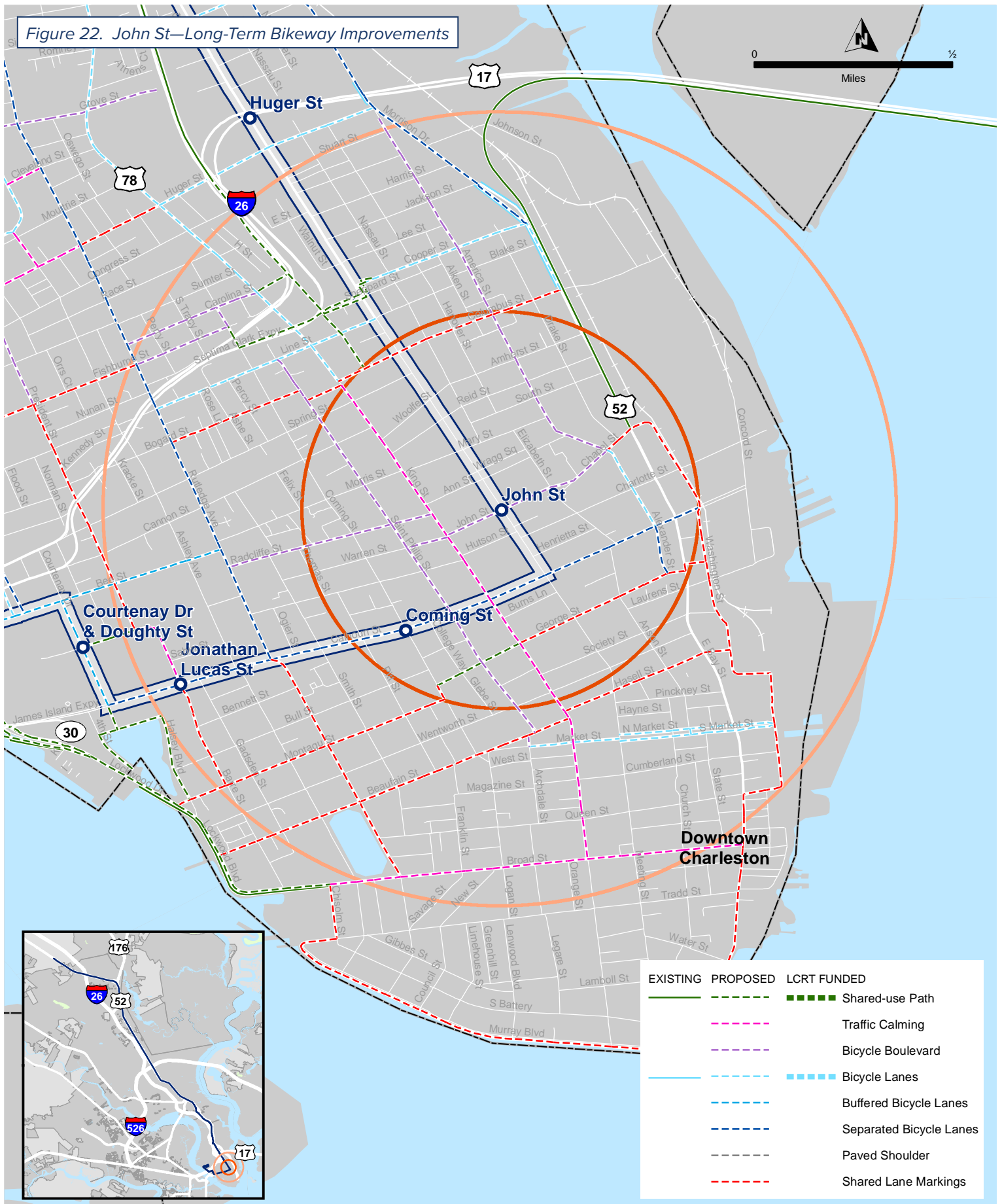
- LCRT Stations
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area
- LCRT Alignment

Lowcountry Rapid Transit
John St

Data Sources: BCDCOG, SCDOT



Figure 22. John St—Long-Term Bikeway Improvements



EXISTING	PROPOSED	LCRT FUNDED
		Shared-use Path
		Traffic Calming
		Bicycle Boulevard
		Bicycle Lanes
		Buffered Bicycle Lanes
		Separated Bicycle Lanes
		Paved Shoulder
		Shared Lane Markings

- LCRT Stations
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area
- LCRT Alignment

Lowcountry Rapid Transit
John St

Data Sources: BCDCOG, SCDOT



Station 6: Huger St

This residential area has existing and planned multi-family housing, and pedestrian connections within the neighborhoods surrounding Meeting St are plentiful. Bicycling within the neighborhoods is low-stress and useful for avoiding the major corridors.

The King St corridor holds many of the station area's destinations including options for dining, shopping, and recreation. Huger St, as a major east-west connecting street, needs enhancements to make it easier for LCRT transit users to access these destinations.

Line St and Huger St are the primary east-west connections under I-26 and US-17. Plans are underway for the City of Charleston to further enhance these connections with dedicated bicycle infrastructure. Additionally, the proposed Lowcountry Lowline's shared-use path will be an important asset to facilitate north-south connections.

The shared-use path along Bay St to the Ravenel Bridge provides a bicycle connection from this station to the Town of Mt. Pleasant.



The HAWK at Meeting St & Jackson St facilitates pedestrian crossings across Meeting St.



Many of the neighborhood streets east of Meeting St are low-volume and comfortable for walking and bicycling. This neighborhood has a series of one-way streets and some bicyclists were observed using them for two-way travel.

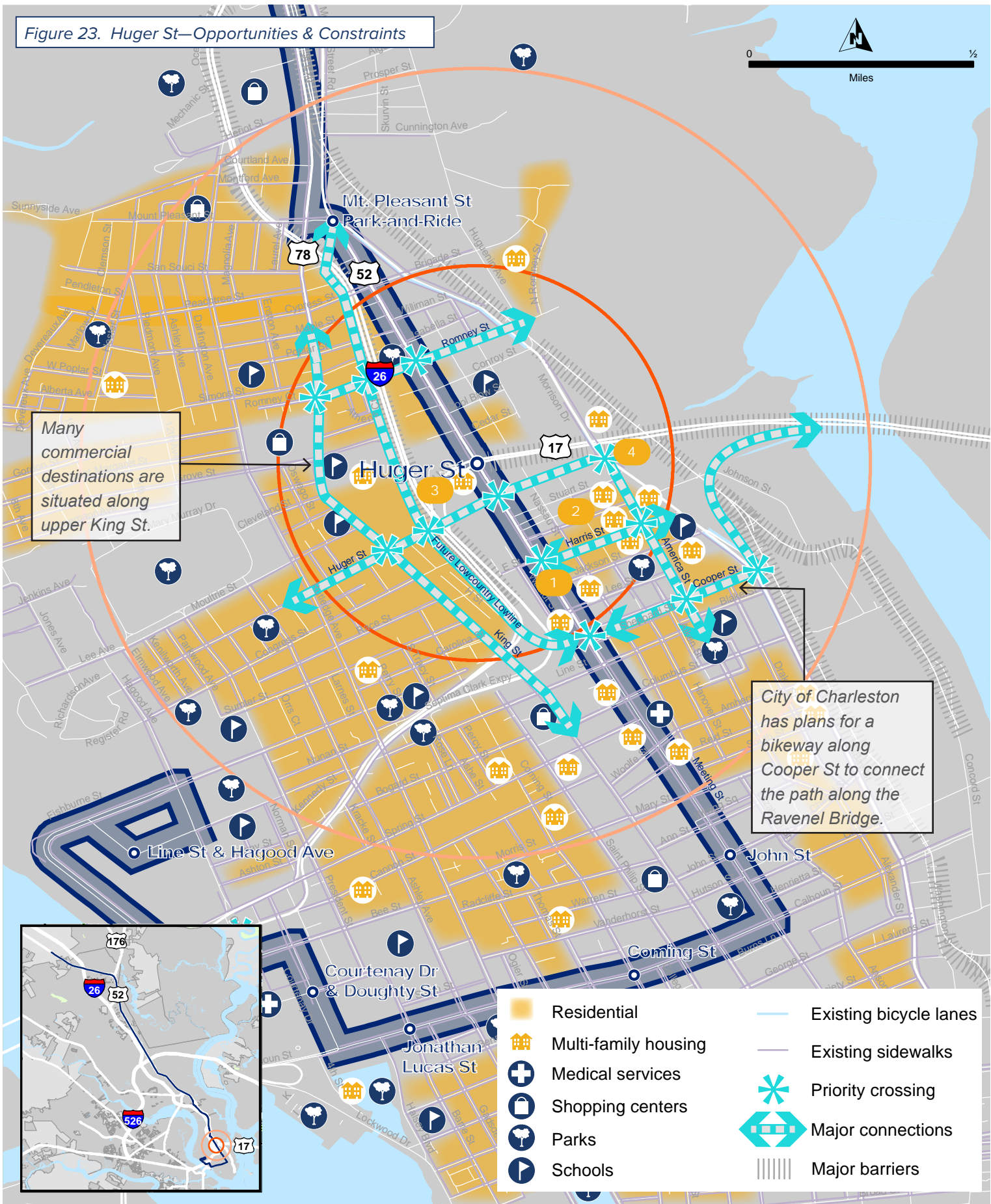


An existing informal trail runs along the future alignment of the Lowcountry Lowline. It serves as an important bicycle and pedestrian connection in this area. The implementation of the Lowline will enhance the multimodal connectivity in this station area.



Morrison St/Bay St have intermittent bicycle lanes and sidewalks, but it is a wide street with few crossing opportunities and high vehicle speeds. Improving the pedestrian and bicyclist amenities along this corridor will provide more comfortable movement in the north-south direction.

Figure 23. Huger St—Opportunities & Constraints



Many commercial destinations are situated along upper King St.

City of Charleston has plans for a bikeway along Cooper St to connect the path along the Ravenel Bridge.

- Residential
- Multi-family housing
- Medical services
- Shopping centers
- Parks
- Schools
- Existing bicycle lanes
- Existing sidewalks
- Priority crossing
- Major connections
- Major barriers

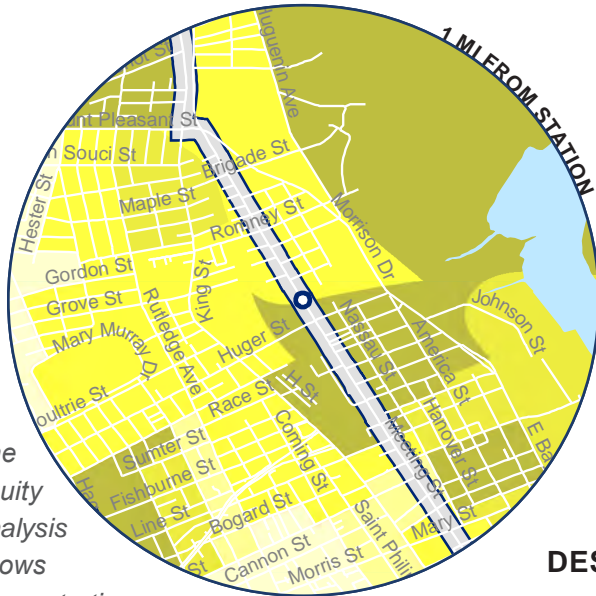
Station 6: Huger St

Station Area Analysis Diagrams

● LCRT Station — LCRT Alignment

CONCENTRATIONS OF VULNERABLE POPULATIONS¹

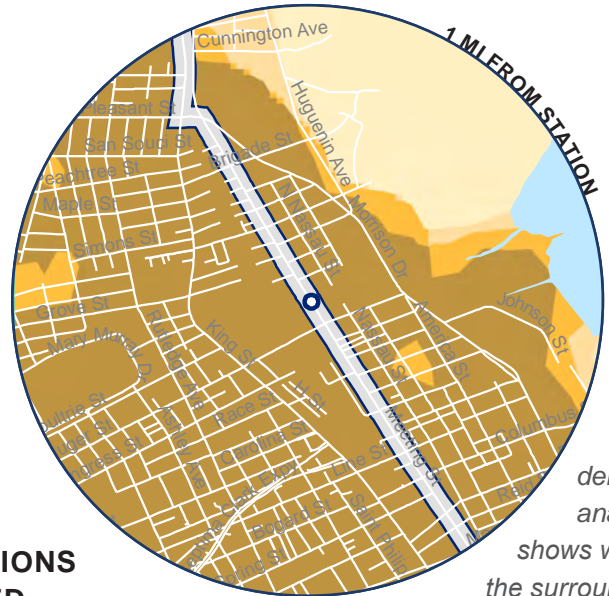
Lower Higher



The equity analysis shows concentrations of vulnerable populations who may rely on active transportation and transit.

RELATIVE DEMAND FOR WALKING AND BIKING¹

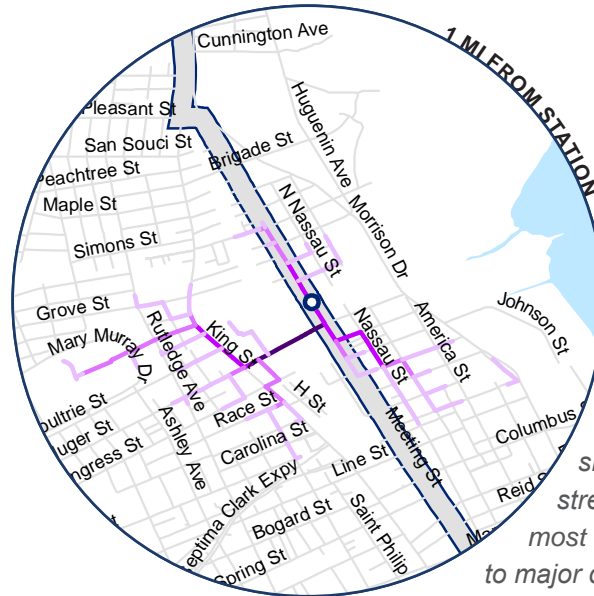
Lower Higher



The demand analysis shows where the surrounding land uses encourage walking and biking.

DESTINATIONS SERVED

Fewer More



The destinations served map shows which streets provide the most direct access to major destinations.

¹ BCDCOG, Walk Bike BCD

BICYCLIST LEVEL OF TRAFFIC STRESS¹

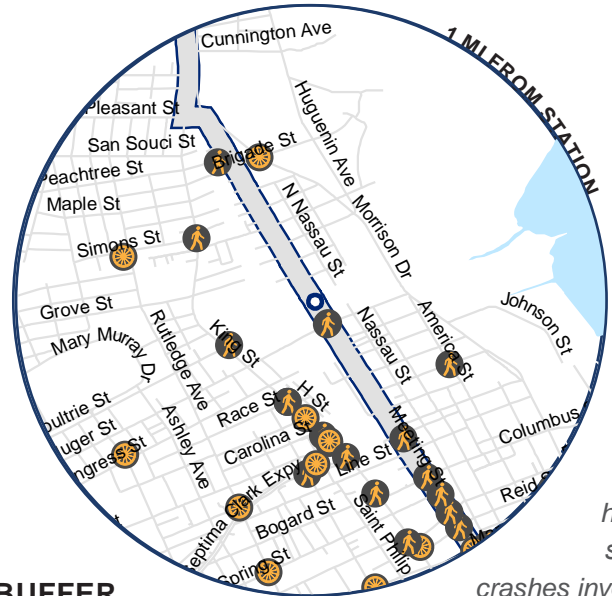
Lower  Higher



The BLTS analysis shows the relative level of stress given existing roadway characteristics.




PEDESTRIAN & BICYCLIST CRASH HISTORY (2010-2014)

 Pedestrian crash  Bicyclist crash



The crash history shows crashes involving pedestrians and bicyclists from 2010-2014.

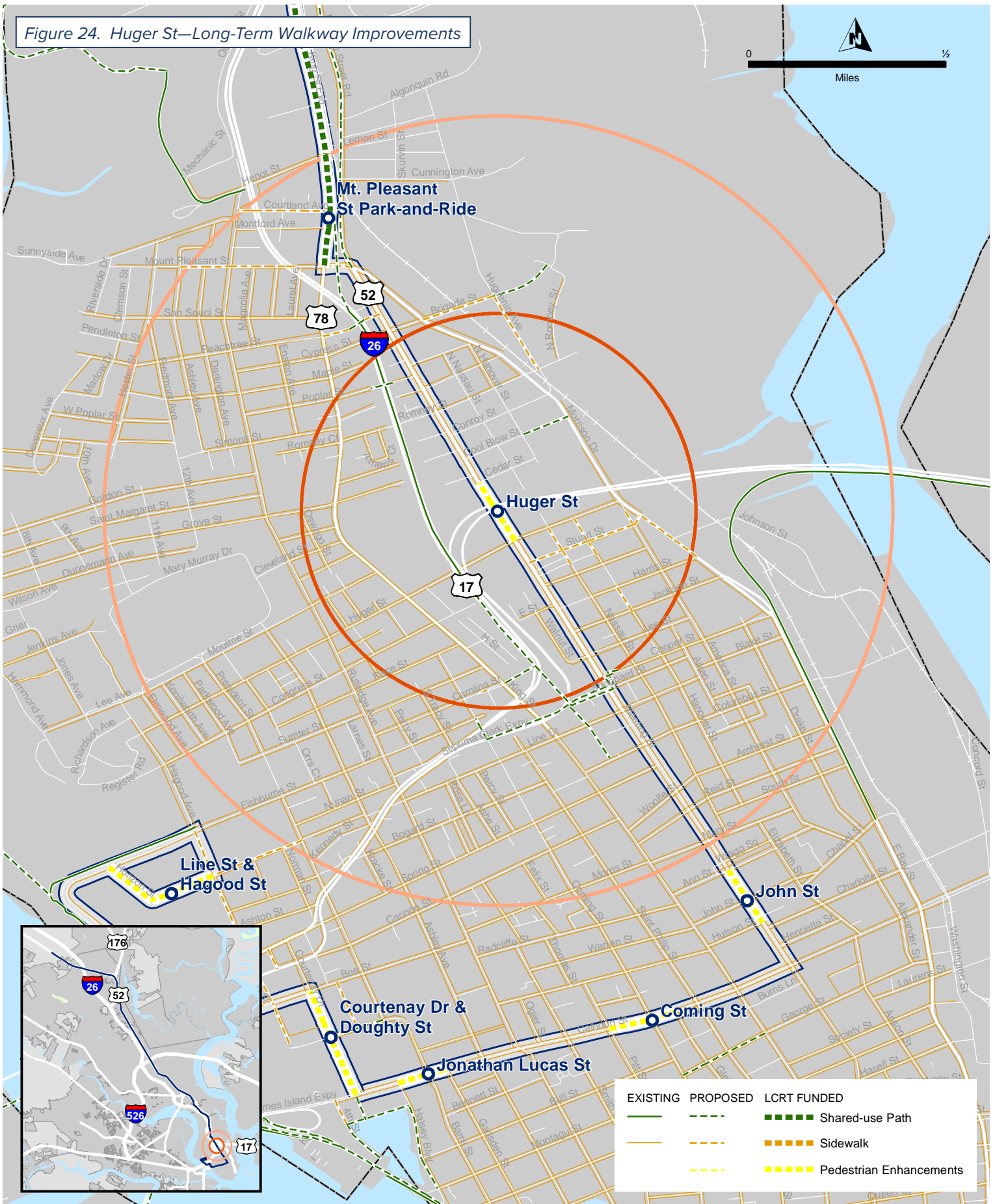
NETWORK BUFFER

 < 1/2 MI  1/2 - 1 MI  1 - 2 MI

The network buffers show the actual trip length from the LCRT station on the existing street grid.



Figure 24. Huger St—Long-Term Walkway Improvements



EXISTING	PROPOSED	LCRT FUNDED

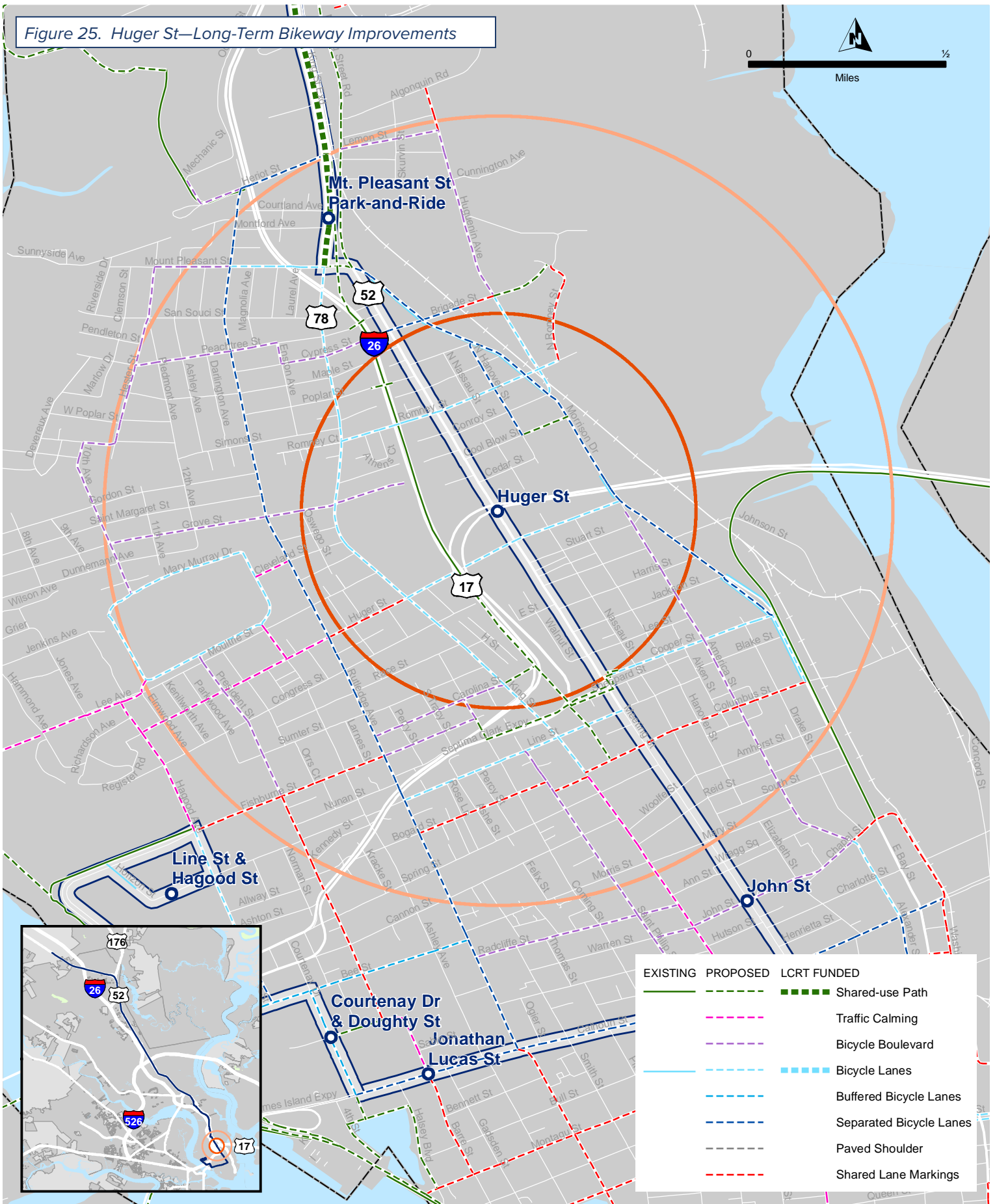
- LCRT Stations
- LCRT Alignment
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area

Lowcountry Rapid Transit
Huger St

Data Sources: BCDCOG, SCDOT



Figure 25. Huger St—Long-Term Bikeway Improvements



● LCRT Stations
 — LCRT Alignment

○ 0.5-mile radius of Station Area
 ○ 1.0-mile radius of Station Area

Lowcountry Rapid Transit
Huger St

Data Sources: BCDCOG, SCDOT

Station 7: Mt. Pleasant St Park-and-Ride

At the upper end of the peninsula, comfortable pedestrian and bicyclist facilities are less prevalent than they are in Downtown Charleston. At the busy intersections of Mt. Pleasant St, Meeting St, and King St, this proposed station will benefit from pedestrian and bicyclist enhancements to improve access to the station. This area is a high priority for transit-oriented development.

Land use to the west of I-26 is primarily single-family residential. East of I-26 is multi-family residential, commercial, and industrial land uses. Improved pedestrian and bicyclist infrastructure would facilitate connections to the neighborhoods along Rutledge Ave.

The apartment complex developments along Brigade St, east of Morrison Dr, are expected to increase walking and bicycling activity in this area. Planned enhancements along Brigade St/ Cypress St will improve safety and access for existing residents and support increasing demand.



The large intersection of Meeting St /Morrison Dr /Mt. Pleasant St is challenging to navigate for active transportation users.



North of Morrison Dr, there is no sidewalk on the west side of Meeting St, and sidewalks on the east side have significant maintenance issues.

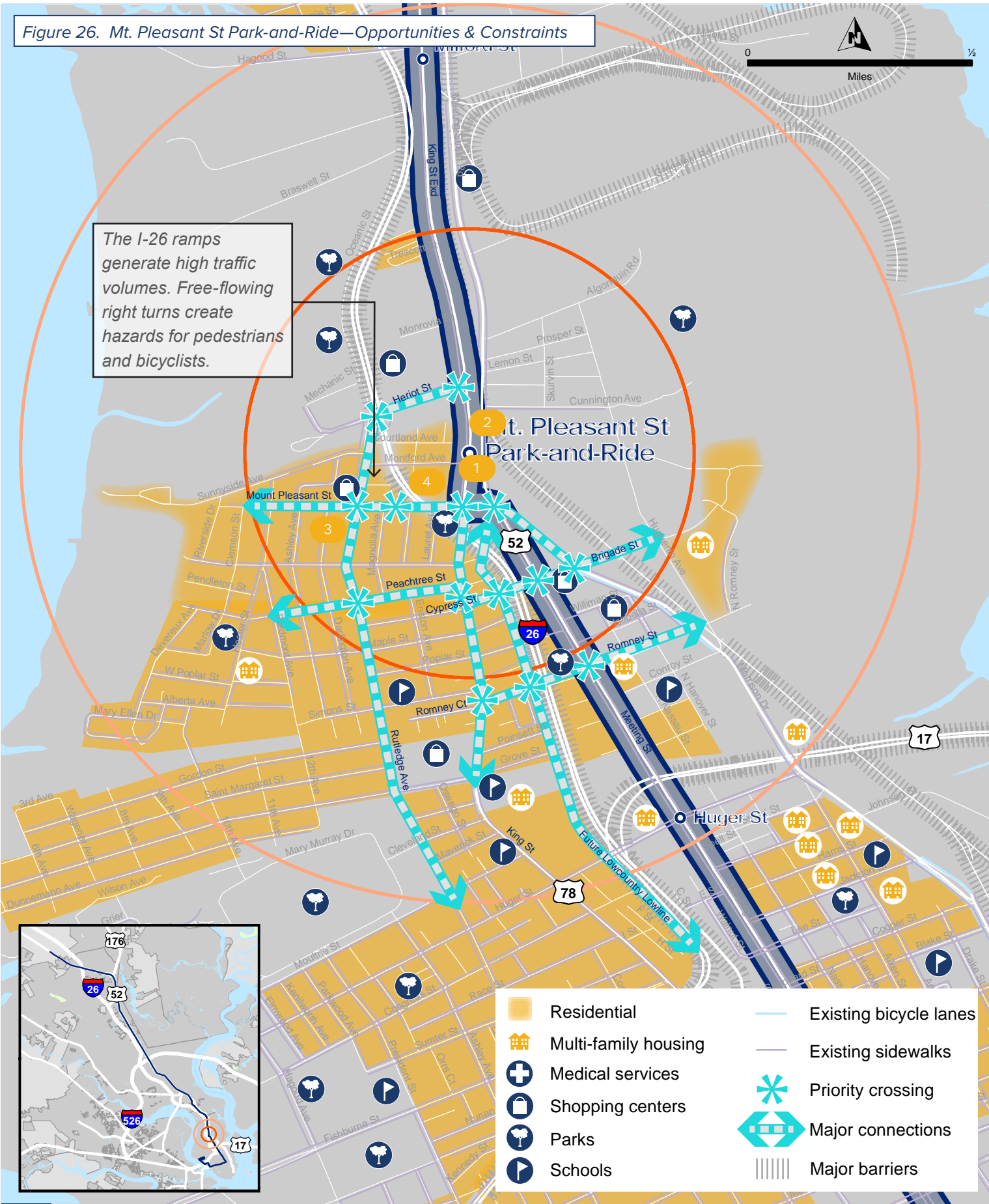


The low-speed, low-volume neighborhood streets immediately west of I-26 are relatively comfortable for walking and biking.



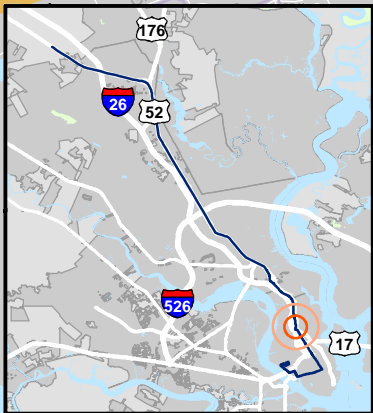
The I-26 on/off ramps near King St & Mt. Pleasant St bring high volumes of motor vehicles, including heavy truck traffic. Pedestrian facilities lack adequate width and buffers from vehicles. These streets lack dedicated bikeways.

Figure 26. Mt. Pleasant St Park-and-Ride—Opportunities & Constraints



The I-26 ramps generate high traffic volumes. Free-flowing right turns create hazards for pedestrians and bicyclists.

- Residential
- Multi-family housing
- Medical services
- Shopping centers
- Parks
- Schools
- Existing bicycle lanes
- Existing sidewalks
- Priority crossing
- Major connections
- Major barriers



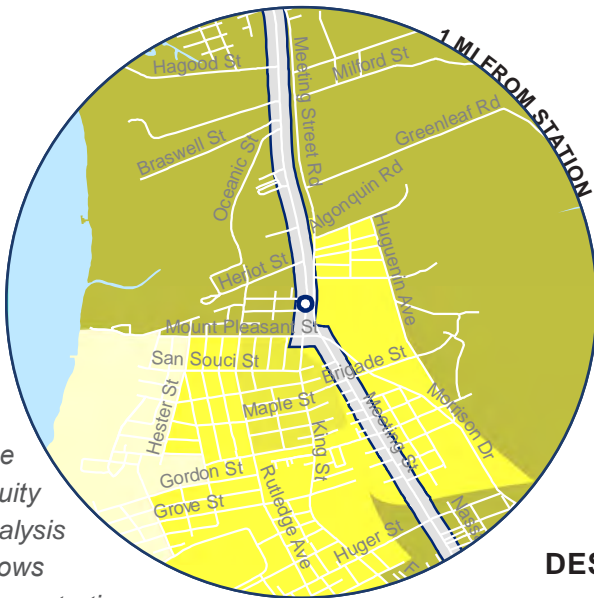
Station 7: Mt. Pleasant St Park-and-Ride

Station Area Analysis Diagrams

● LCRT Station — LCRT Alignment

CONCENTRATIONS OF VULNERABLE POPULATIONS¹

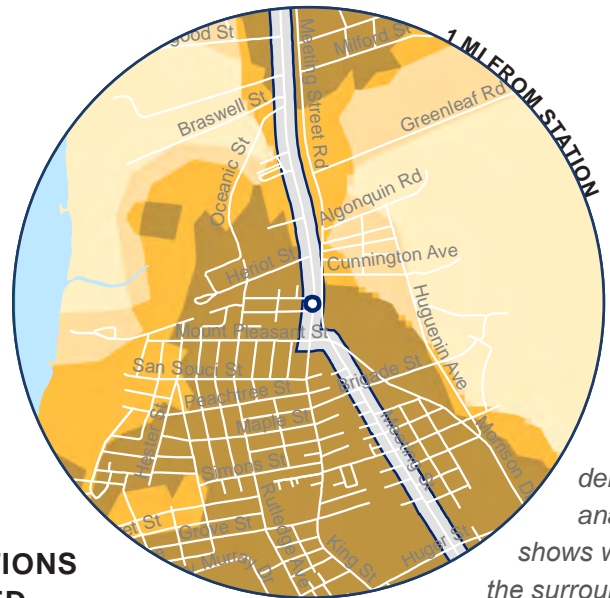
Lower Higher



The equity analysis shows concentrations of vulnerable populations who may rely on active transportation and transit.

RELATIVE DEMAND FOR WALKING AND BIKING¹

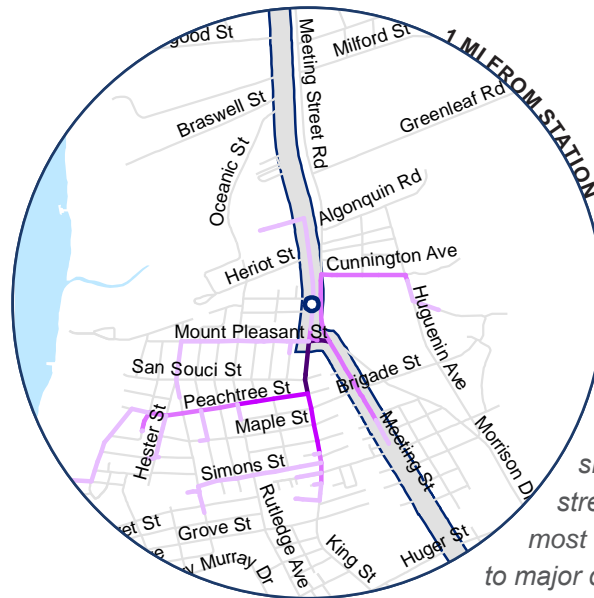
Lower Higher



The demand analysis shows where the surrounding land uses encourage walking and biking.

DESTINATIONS SERVED

Fewer More

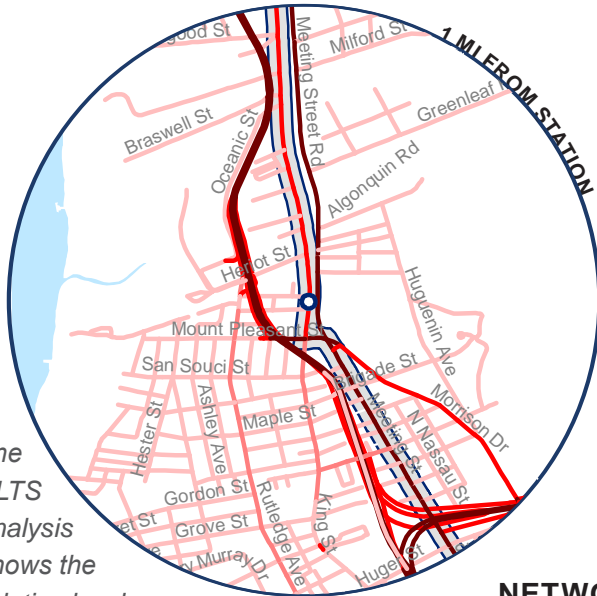


The destinations served map shows which streets provide the most direct access to major destinations.

¹ BCDCOG, Walk Bike BCD

BICYCLIST LEVEL OF TRAFFIC STRESS¹

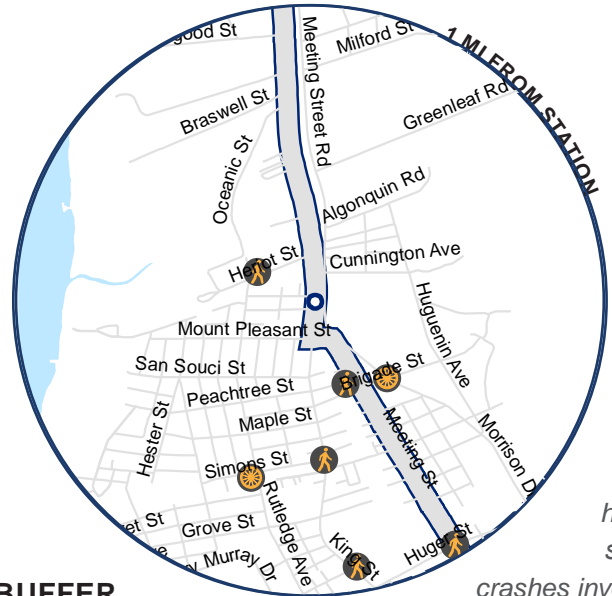
Lower  Higher



The BLTS analysis shows the relative level of stress given existing roadway characteristics.




PEDESTRIAN & BICYCLIST CRASH HISTORY (2010-2014)

 Pedestrian crash  Bicyclist crash



The crash history shows crashes involving pedestrians and bicyclists from 2010-2014.

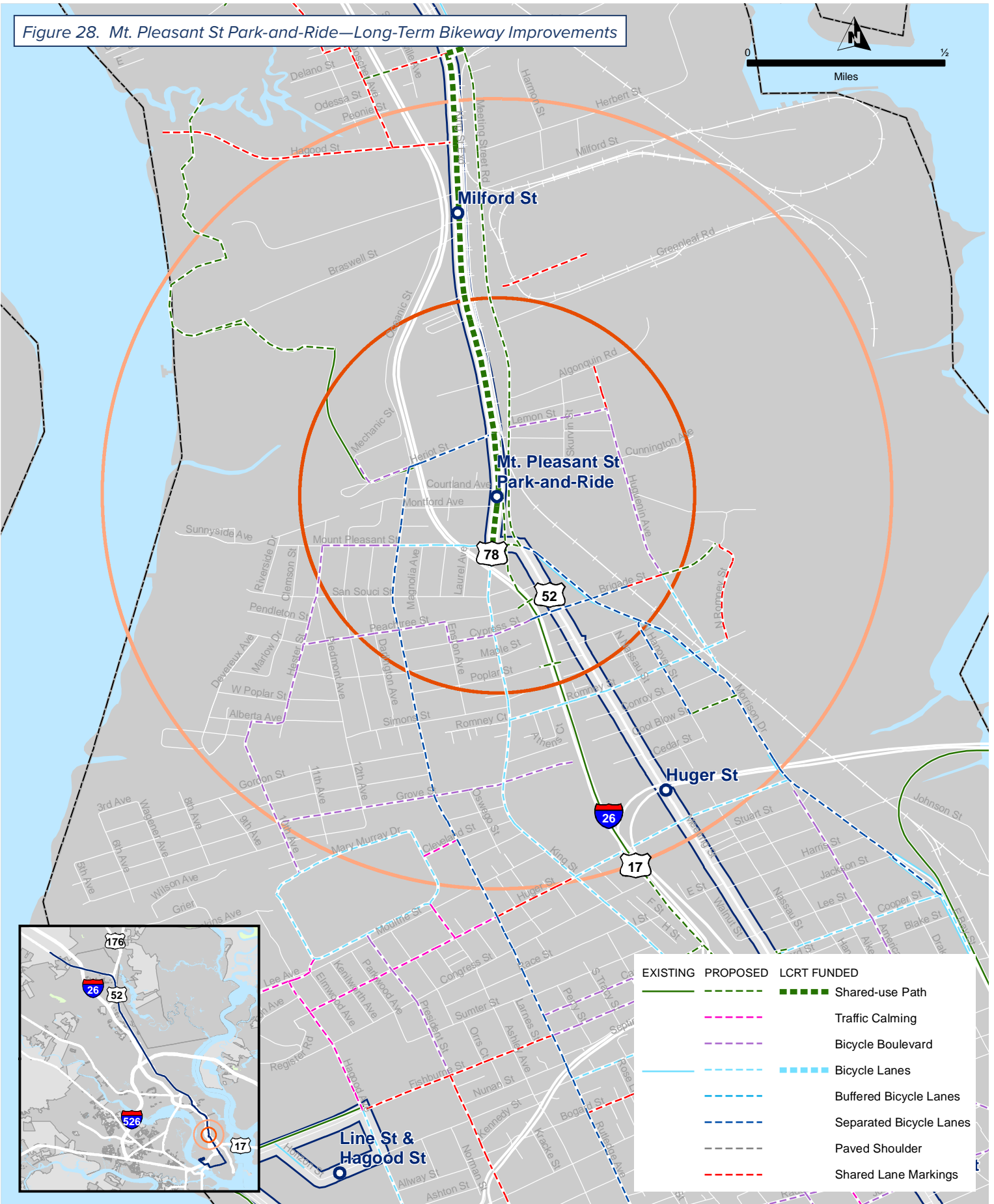
NETWORK BUFFER

 < 1/2 MI  1/2 - 1 MI  1 - 2 MI



The network buffers show the actual trip length from the LCRT station on the existing street grid.

Figure 28. Mt. Pleasant St Park-and-Ride—Long-Term Bikeway Improvements



EXISTING	PROPOSED	LCRT FUNDED

- Shared-use Path
- Traffic Calming
- Bicycle Boulevard
- Bicycle Lanes
- Buffered Bicycle Lanes
- Separated Bicycle Lanes
- Paved Shoulder
- Shared Lane Markings

- LCRT Stations
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area
- LCRT Alignment

Lowcountry Rapid Transit
Mt. Pleasant St Park-and-Ride

Data Sources: BCDCOG, SCDOT



Station 8: Milford St

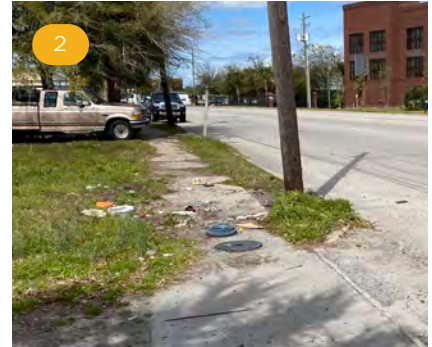
The vicinity around this proposed Milford St station consists primarily of industrial land use, with adjacent housing and parks to the west. Railroads present a barrier for people who wish to access LCRT service from the east side of King St Ext and Meeting St. The nearest crossing is a 1/4 mile north on Discher St, adding up to a half-mile to the trip to or from the Milford St Station. Pedestrians and bicyclists tend to avoid any out-of-direction travel and may be tempted to cross the rail tracks at uncontrolled locations.

King St Ext is only a two-lane road, but its high vehicle speeds make it uncomfortable for people walking and biking. While the sidewalks along King St Ext are generally continuous and ADA accessible, there is no buffer between the high-speed road and the sidewalk. Bus stops along King St Ext lack shade and basic transit amenities. North of Mt. Pleasant St / Morrison Dr, there are no marked pedestrian crossings, forcing pedestrians to use their judgment and navigate mid-block.

North of the station, existing bicycle lanes on Spruill Ave deposit bicyclists onto shared lanes of Meeting St. The very wide (21 feet) outside travel lane on Meeting St has the potential be narrowed to create space for dedicated bikeways.



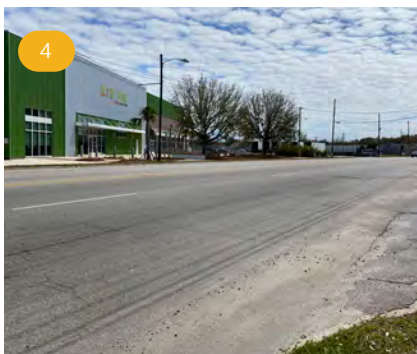
King St Ext has a continuous sidewalk on its western side, but it lacks detectable warning strips, high-visibility crosswalks, and buffers.



Existing sidewalks along Meeting St are narrow and encroached upon by vegetation and litter.



The intersection at Hagood St is very wide and lacks crosswalk markings.

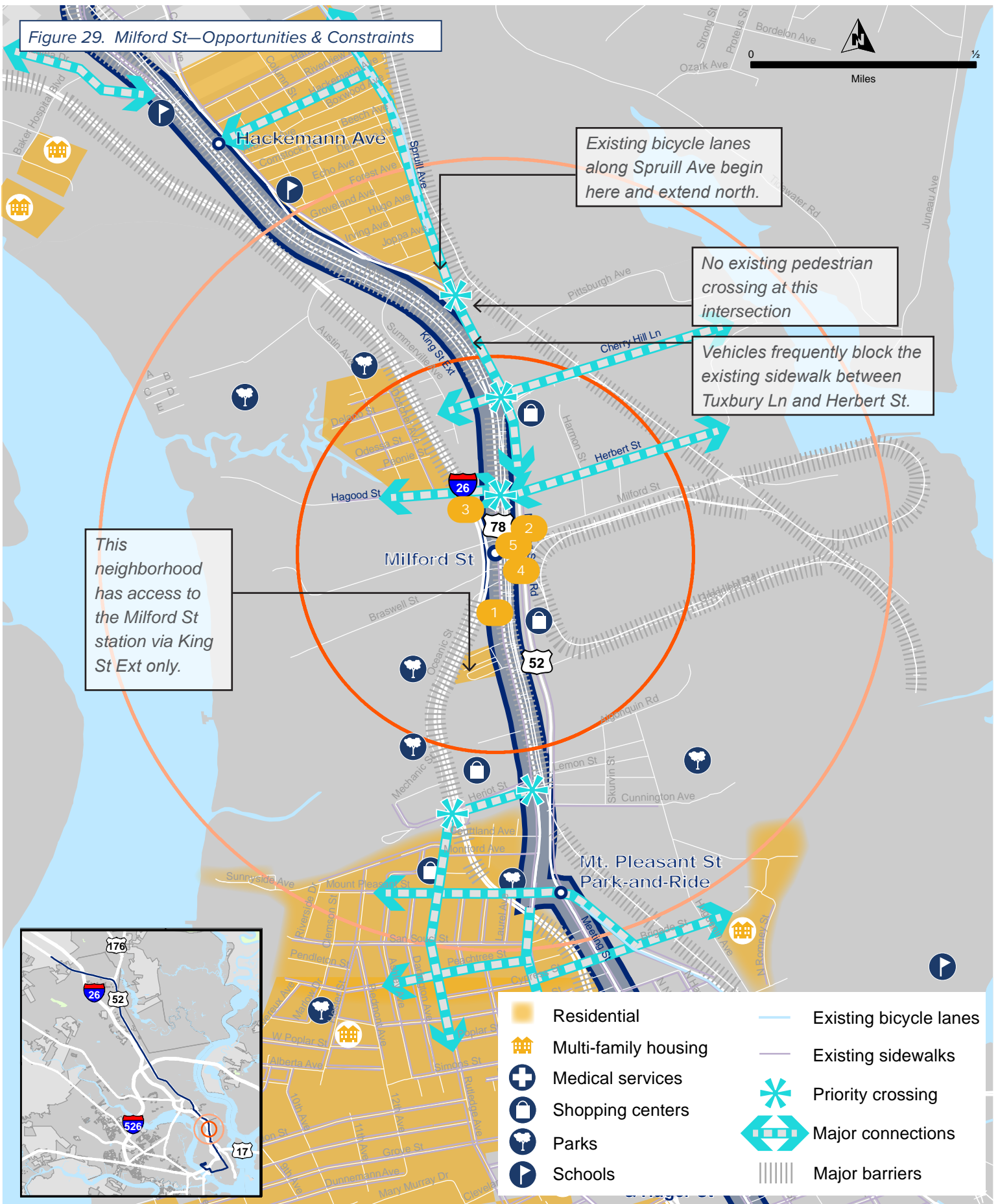


The outer travel lane of Meeting St is extremely wide and vehicles travel at high speeds.



An at-grade rail crossing at the intersection of Meeting St at Milford St presents a hazard for people bicycling.

Figure 29. Milford St—Opportunities & Constraints



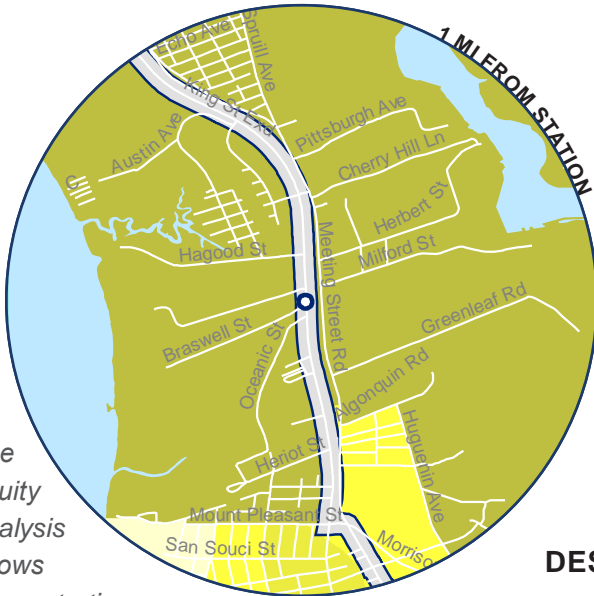
Station 8: Milford St

Station Area Analysis Diagrams

● LCRT Station — LCRT Alignment

CONCENTRATIONS OF VULNERABLE POPULATIONS¹

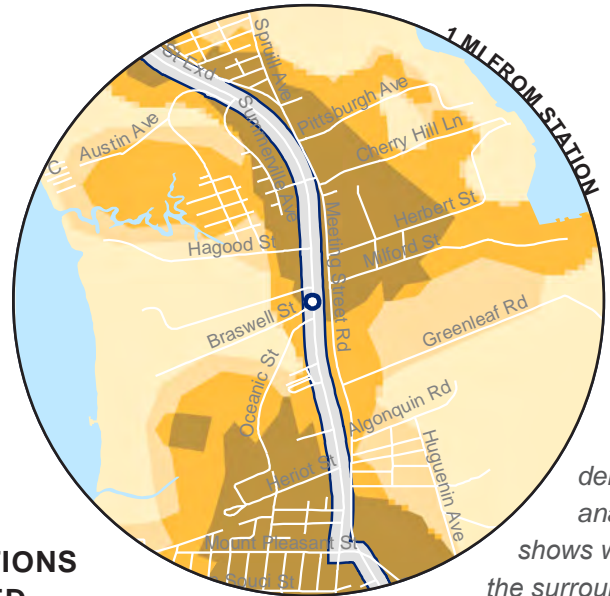
Lower Higher



The equity analysis shows concentrations of vulnerable populations who may rely on active transportation and transit.

RELATIVE DEMAND FOR WALKING AND BIKING¹

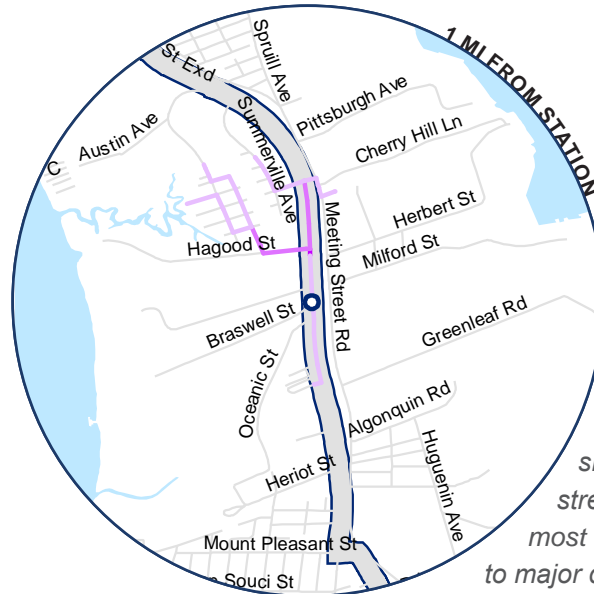
Lower Higher



The demand analysis shows where the surrounding land uses encourage walking and biking.

DESTINATIONS SERVED

Fewer More

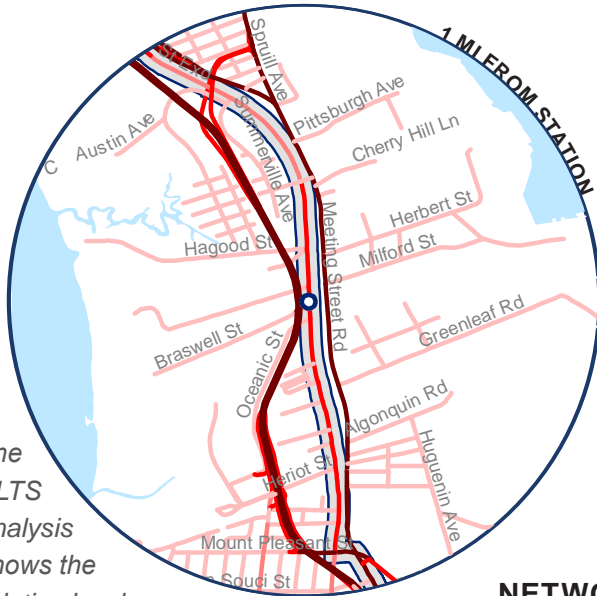


The destinations served map shows which streets provide the most direct access to major destinations.

¹ BCDCOG, Walk Bike BCD

BICYCLIST LEVEL OF TRAFFIC STRESS¹

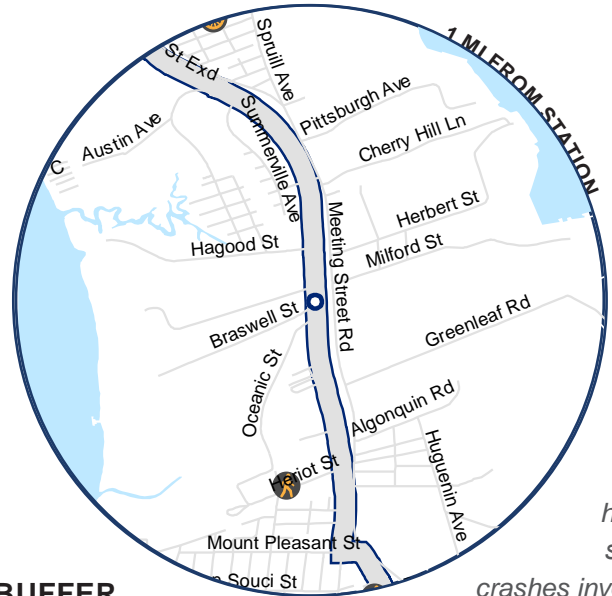
Lower  Higher



The BLTS analysis shows the relative level of stress given existing roadway characteristics.

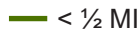
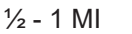

PEDESTRIAN & BICYCLIST CRASH HISTORY (2010-2014)

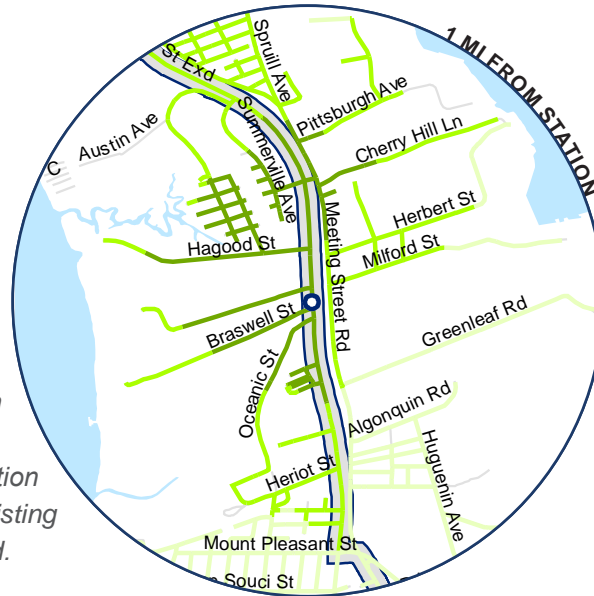
 Pedestrian crash  Bicyclist crash



The crash history shows crashes involving pedestrians and bicyclists from 2010-2014.

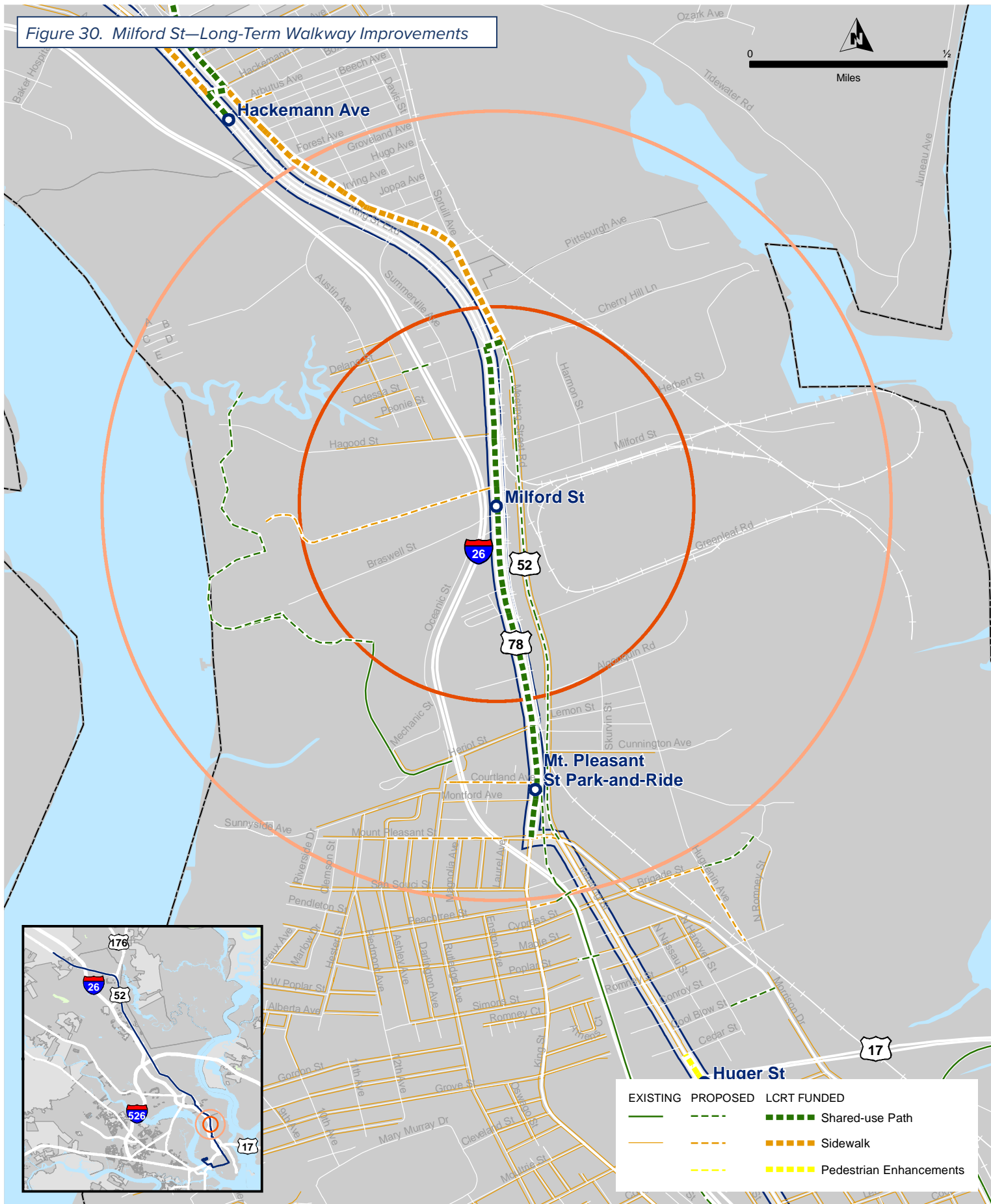
NETWORK BUFFER

 < 1/2 MI  1/2 - 1 MI  1 - 2 MI



The network buffers show the actual trip length from the LCRT station on the existing street grid.

Figure 30. Milford St—Long-Term Walkway Improvements



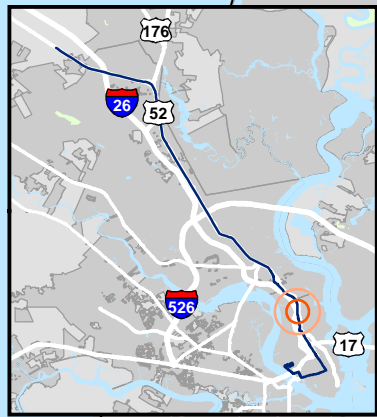
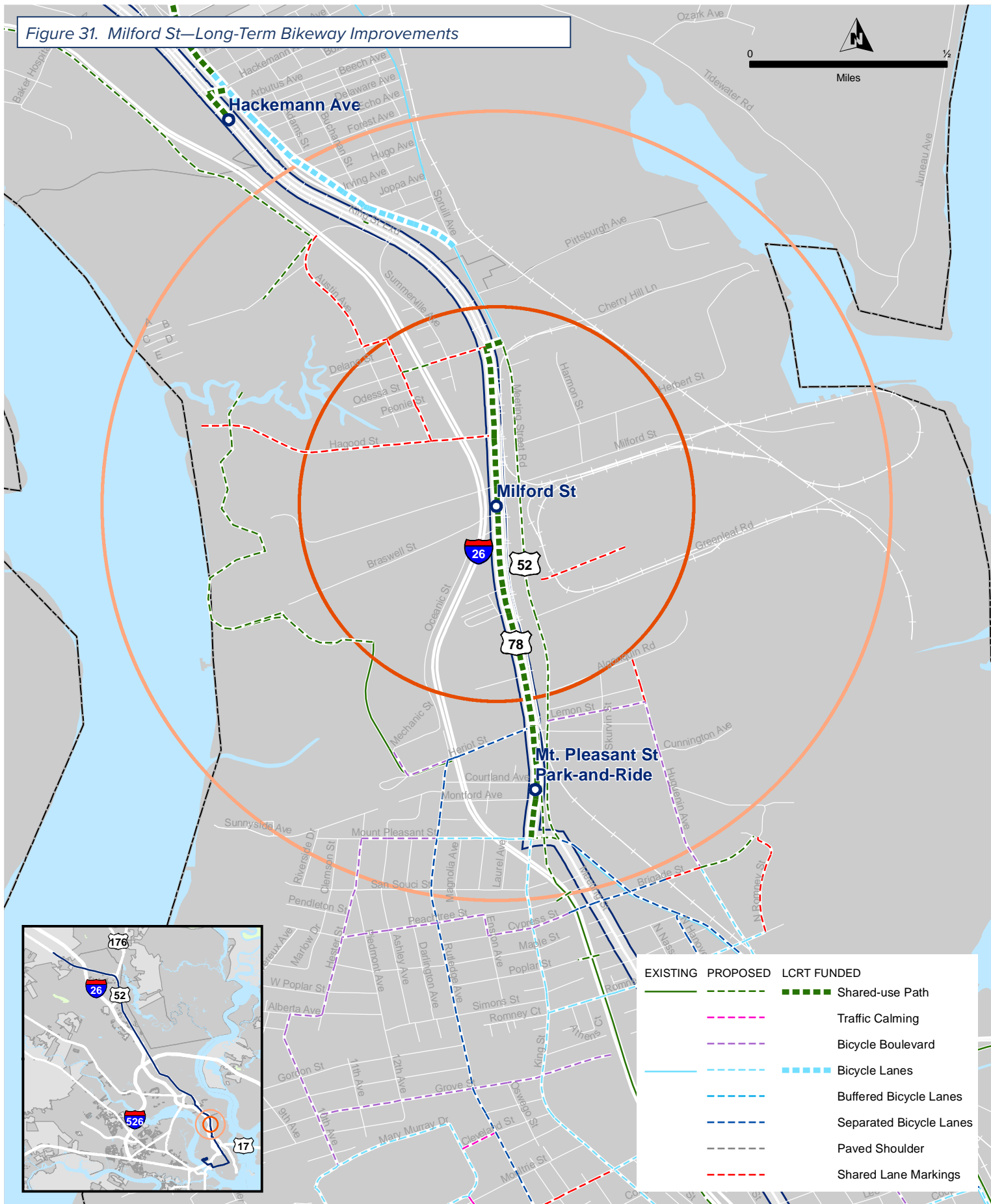
● LCRT Stations
— LCRT Alignment

○ 0.5-mile radius of Station Area
○ 1.0-mile radius of Station Area

Lowcountry Rapid Transit
Milford St

Data Sources: BCDCOG, SCDOT

Figure 31. Milford St—Long-Term Bikeway Improvements



EXISTING	PROPOSED	LCRT FUNDED

- LCRT Stations
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area
- LCRT Alignment

**Lowcountry Rapid Transit
Milford St**

Data Sources: BCDCOG, SCDOT



Station 9: Hackemann Ave

At the railroad crossing and proposed station location on Hackemann Ave, there is no designated pedestrian crossing. A bus stop with a bus shelter and signage sit nearby on Meeting St, but there are no sidewalks connecting to the shelter.

The land use west of the railroad is mostly industrial and single-family residential to the east. This is an environmental justice target area, with high concentrations of people who rely on transit and active transportation.

Meeting St and King St Ext have unique environments. Sidewalks on the eastern side of Meeting St are narrow (three feet) and in disrepair. In addition, Meeting St has two 12-foot-wide travel lanes without any designated space for bicyclists. King St Ext has a bridge over the railroad with 4-foot wide sidewalks and 4-foot wide shoulders.



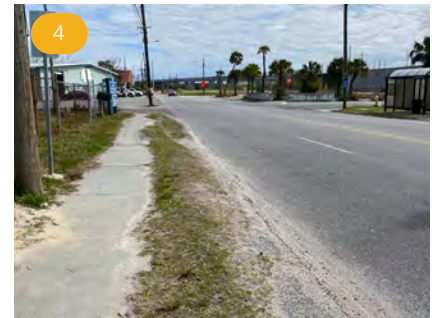
King St Ext is elevated over the railroad. Although there are sidewalks on either side, the elevation change limits the accessibility of the road to surrounding businesses and neighborhoods.



In the neighborhood to the east, roads are low-speed and low-volume. Where there are sidewalk gaps, pedestrians share a gravel shoulder with intermittent parked cars.



The existing rail crossing near the proposed station lacks pedestrian accommodations.

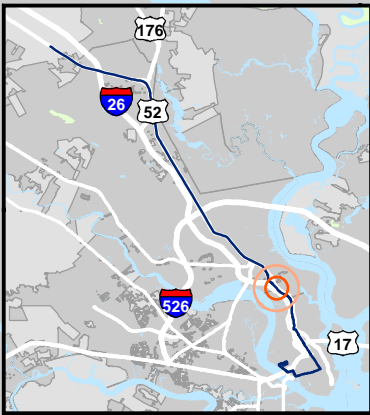
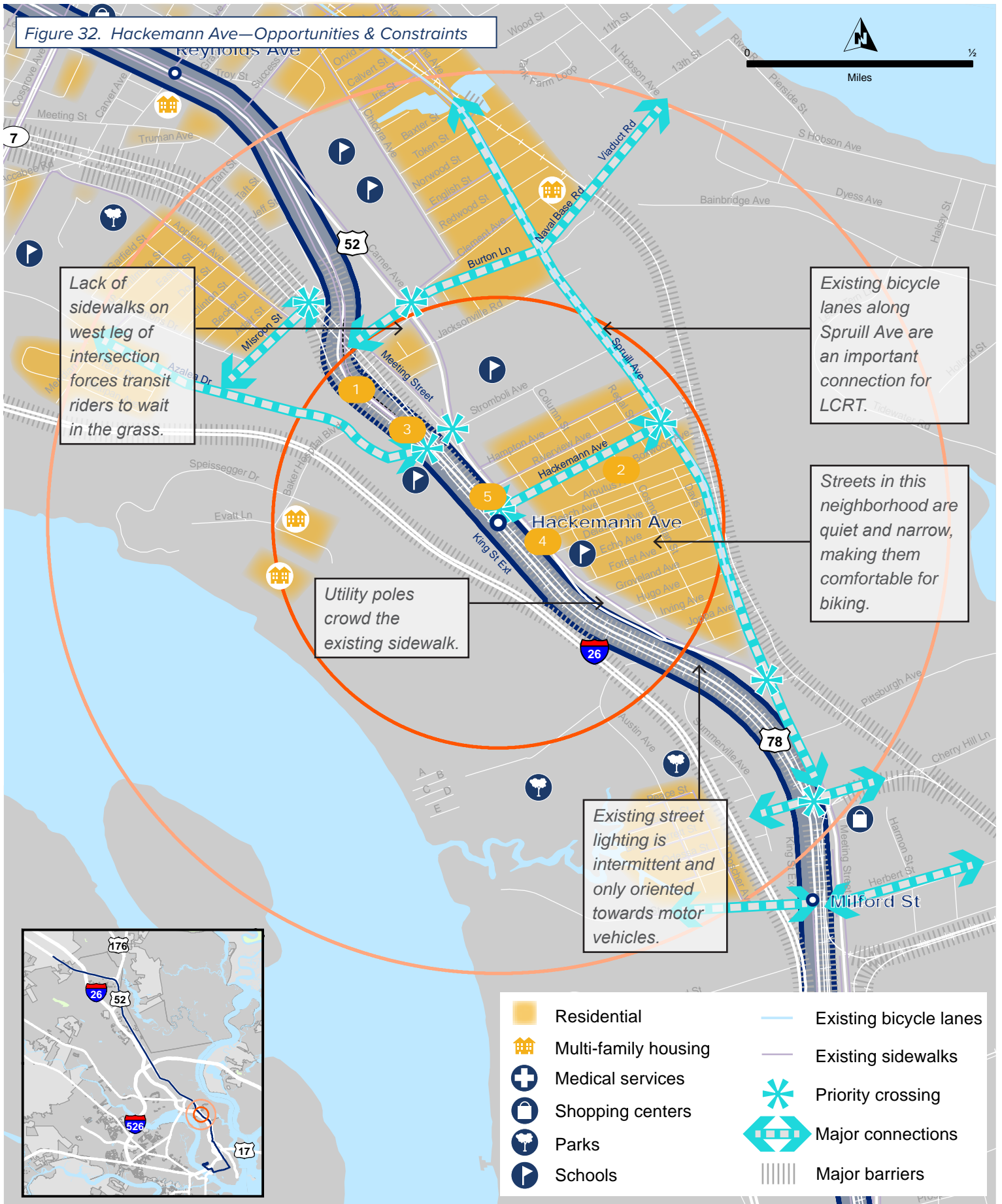




Existing sidewalks along Meeting St are fragmented and narrow with vegetation encroachment.





A bus stop with a bus shelter and signage sit on Meeting St, but there are no sidewalks connecting to the shelter.

Figure 32. Hackemmann Ave—Opportunities & Constraints



 LCRT Alignment
 LCRT Stations

 0.5-mile radius of Station Area
 1.0-mile radius of Station Area

Lowcountry Rapid Transit
Hackemmann Ave

Data Sources: BCDCOG, SCDOT

Station 9: Hackemann Ave

Station Area Analysis Diagrams

● LCRT Station — LCRT Alignment

CONCENTRATIONS OF VULNERABLE POPULATIONS¹

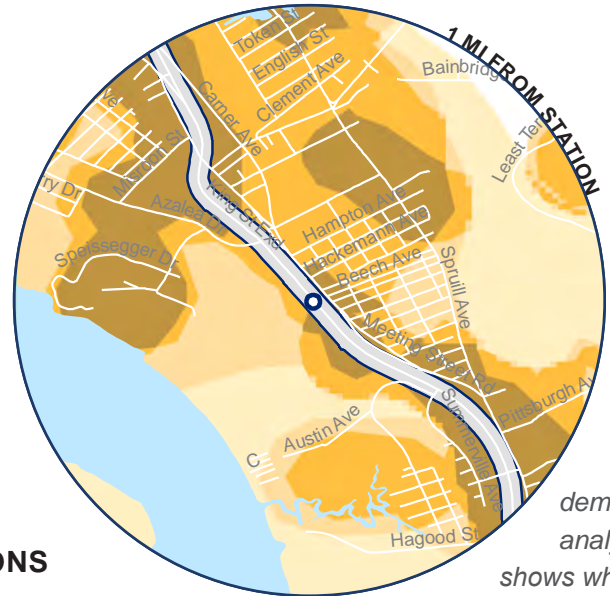
Lower Higher



The equity analysis shows concentrations of vulnerable populations who may rely on active transportation and transit.

RELATIVE DEMAND FOR WALKING AND BIKING¹

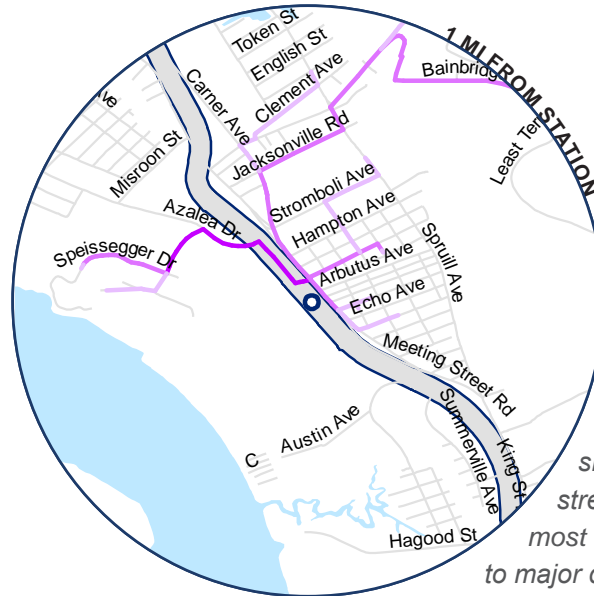
Lower Higher



The demand analysis shows where the surrounding land uses encourage walking and biking.

DESTINATIONS SERVED

Fewer More

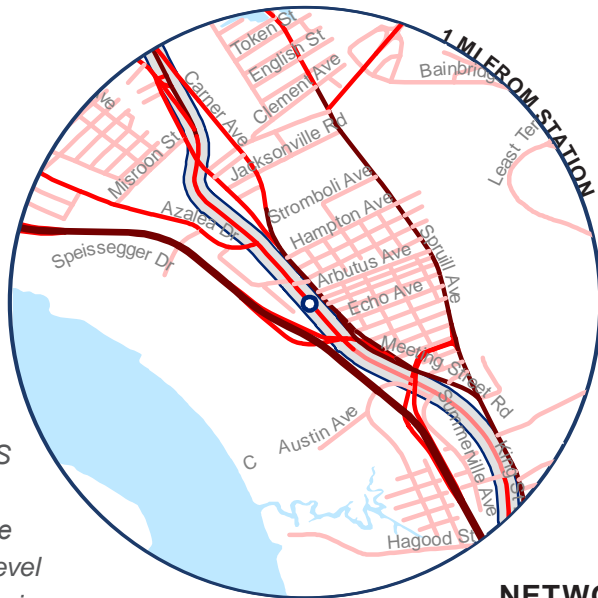


The destinations served map shows which streets provide the most direct access to major destinations.

¹ BCDCOG, Walk Bike BCD

BICYCLIST LEVEL OF TRAFFIC STRESS¹

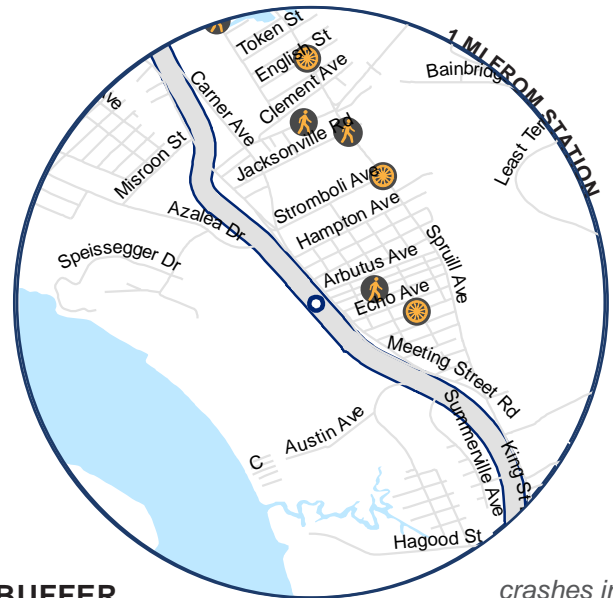
Lower  Higher



The BLTS analysis shows the relative level of stress given existing roadway characteristics.




PEDESTRIAN & BICYCLIST CRASH HISTORY (2010-2014)

 Pedestrian crash  Bicyclist crash



The crash history shows crashes involving pedestrians and bicyclists from 2010-2014.

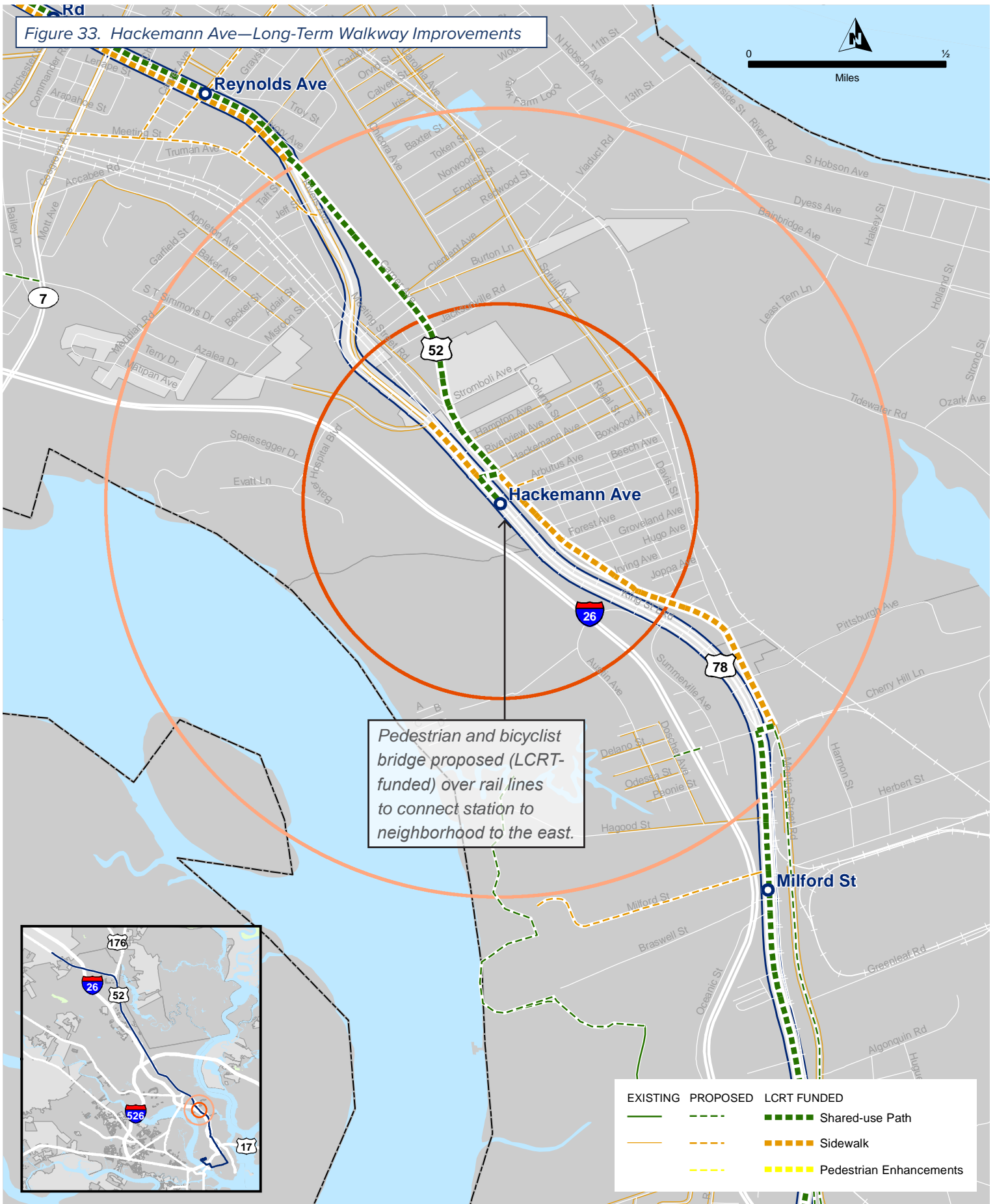
NETWORK BUFFER

 < 1/2 MI  1/2 - 1 MI  1 - 2 MI

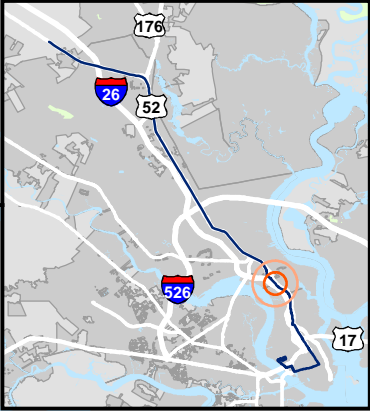


The network buffers show the actual trip length from the LCRT station on the existing street grid.

Figure 33. Hackemann Ave—Long-Term Walkway Improvements



Pedestrian and bicyclist bridge proposed (LCRT-funded) over rail lines to connect station to neighborhood to the east.



EXISTING	PROPOSED	LCRT FUNDED
		Shared-use Path
		Sidewalk
		Pedestrian Enhancements

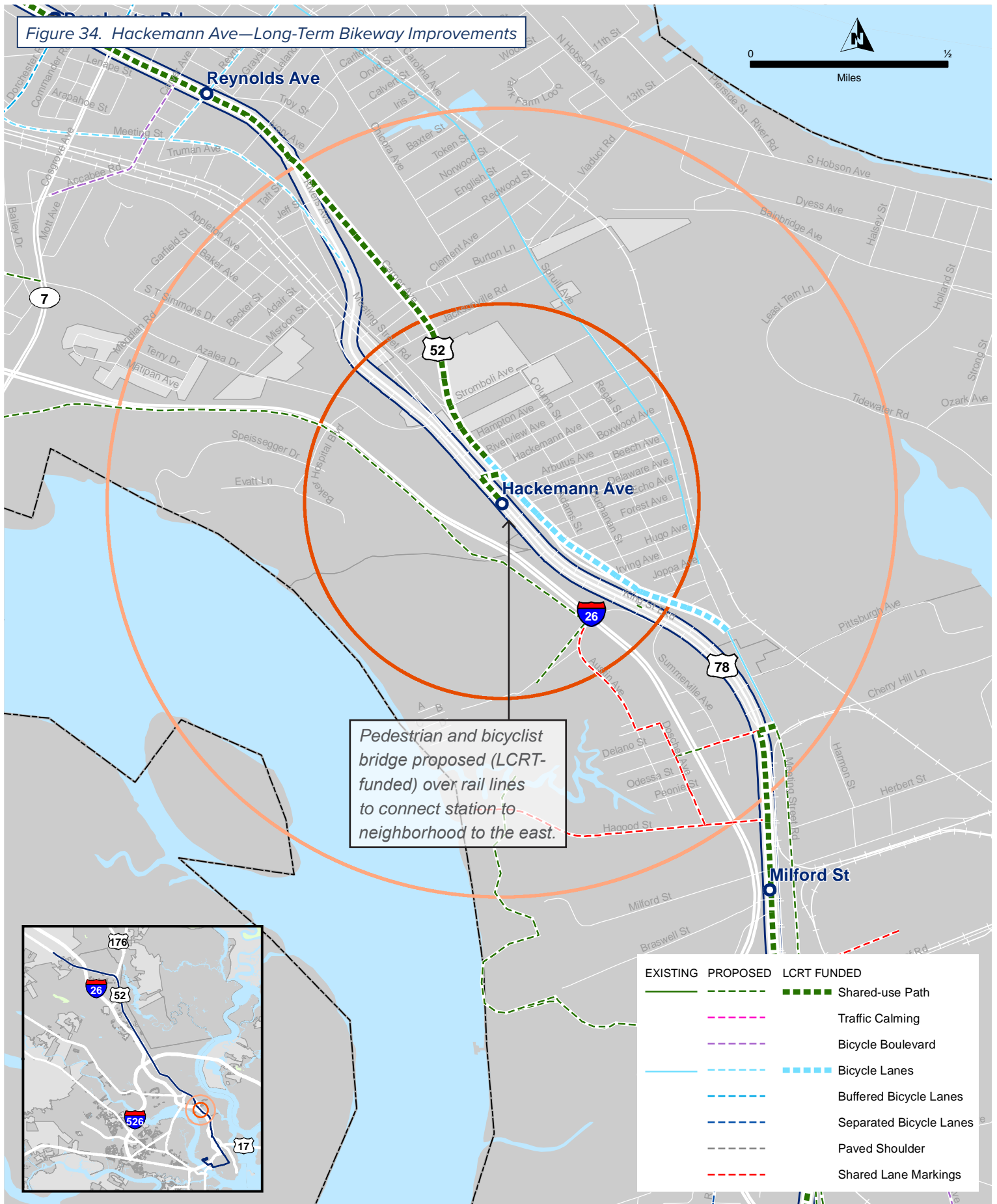
- LCRT Stations
- LCRT Alignment
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area



**Lowcountry Rapid Transit
Hackemann Ave**

Data Sources: BCDCOG, SCDOT

Figure 34. Hackemann Ave—Long-Term Bikeway Improvements



Pedestrian and bicyclist bridge proposed (LCRT-funded) over rail lines to connect station to neighborhood to the east.

EXISTING	PROPOSED	LCRT FUNDED

- LCRT Stations
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area
- LCRT Alignment

**Lowcountry Rapid Transit
Hackemann Ave**

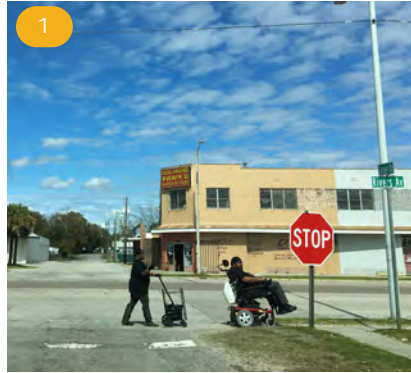
Data Sources: BCDCOG, SCDOT



Station 10: Reynolds Ave

This proposed station location in North Charleston is along a section of Rivers Ave with a clear demand for more and enhanced walking and bicycling facilities. Sidewalks are present on Rivers Ave, but crossing opportunities are limited. Sidewalks are less prevalent on the surrounding neighborhood streets and collector streets.

The railroad to the south of Rivers Ave creates barriers for access. The existing railroad crossings lack pedestrian and bicycle facilities. These network barriers reduce the transit access shed by forcing out-of-direction travel for first-and-last mile trips.



There is a high demand for utilitarian walking trips in this section of the corridor.



This cut-through trail at one end of Carver Ave enhances connectivity for people walking and biking within the neighborhoods adjacent to the station.

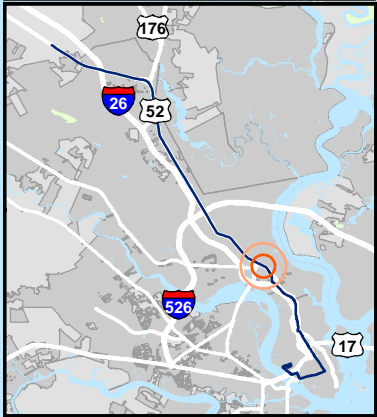
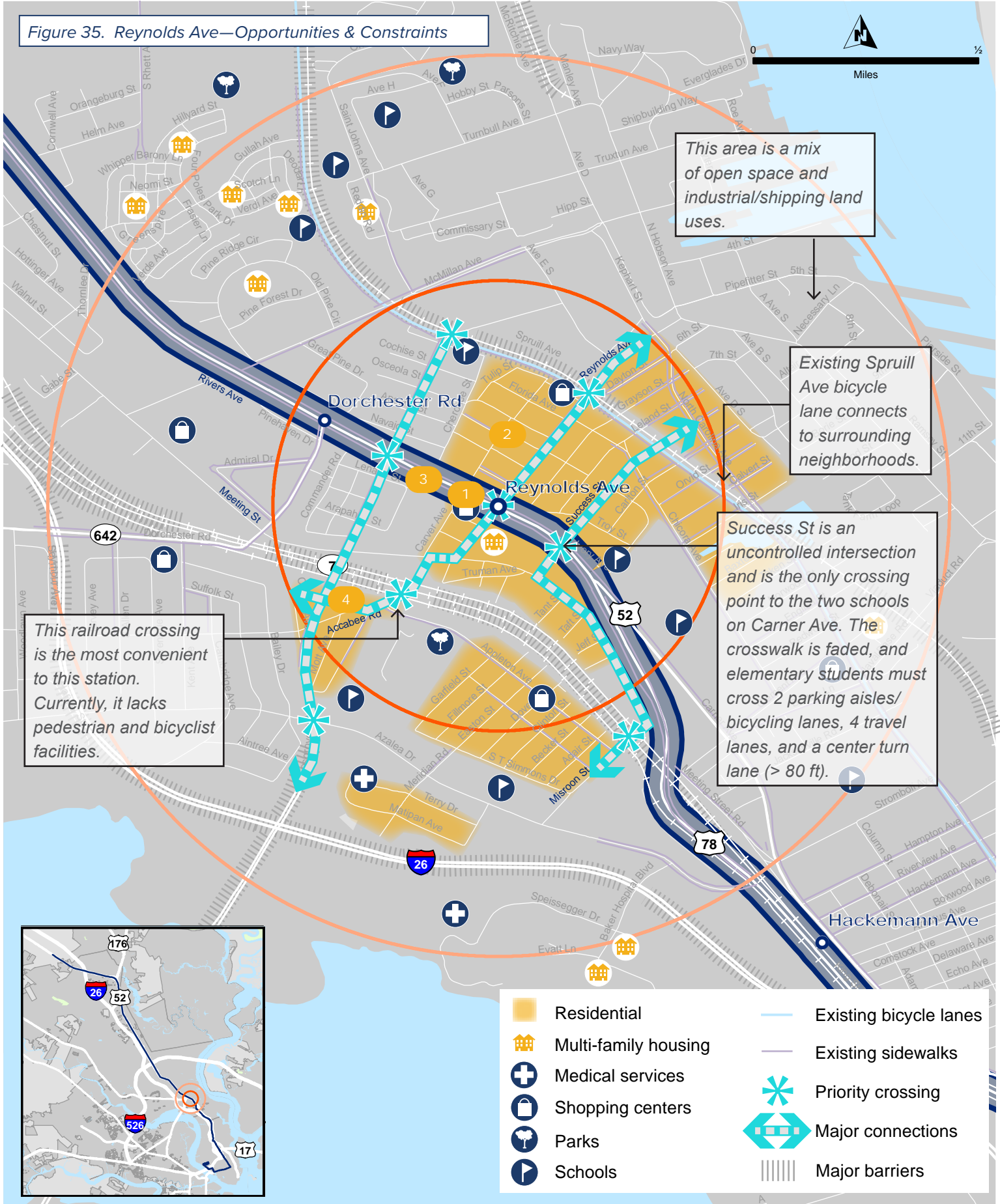


Rivers Ave is a 5-lane road with striped bicycle lanes that are used as curbside on-street parking and bus pullout space. Several bicyclists were observed biking on the sidewalk instead of in the bicycle lanes, indicating that the existing bicycle lanes do not provide a sufficient level of comfort for current users.



Several surrounding streets lack sidewalks, including Accabee Road.

Figure 35. Reynolds Ave—Opportunities & Constraints



- Residential
- Multi-family housing
- Medical services
- Shopping centers
- Parks
- Schools
- Existing bicycle lanes
- Existing sidewalks
- Priority crossing
- Major connections
- Major barriers



- LCRT Alignment
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area
- LCRT Stations

**Lowcountry Rapid Transit
Reynolds Ave**

Data Sources: BCDCOG, SCDOT

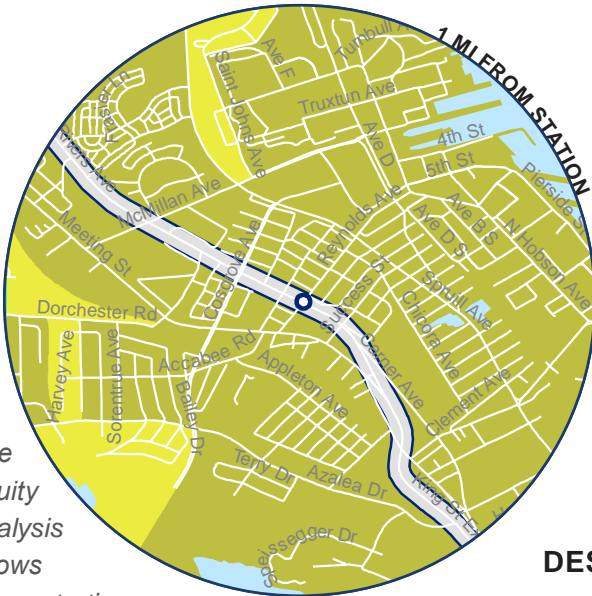
Station 10: Reynolds Ave

Station Area Analysis Diagrams

● LCRT Station — LCRT Alignment

CONCENTRATIONS OF VULNERABLE POPULATIONS¹

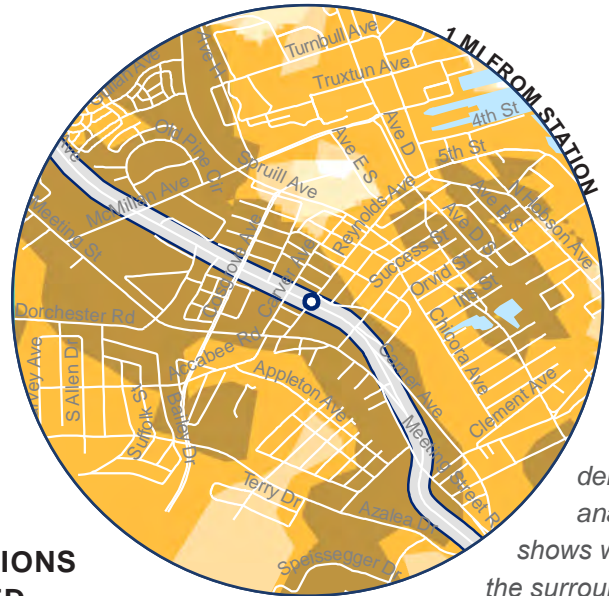
Lower Higher



The equity analysis shows concentrations of vulnerable populations who may rely on active transportation and transit.

RELATIVE DEMAND FOR WALKING AND BIKING¹

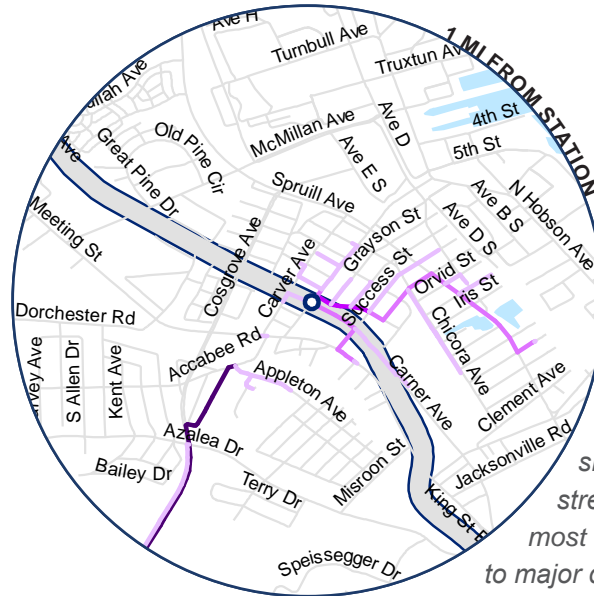
Lower Higher



The demand analysis shows where the surrounding land uses encourage walking and biking.

DESTINATIONS SERVED

Fewer More

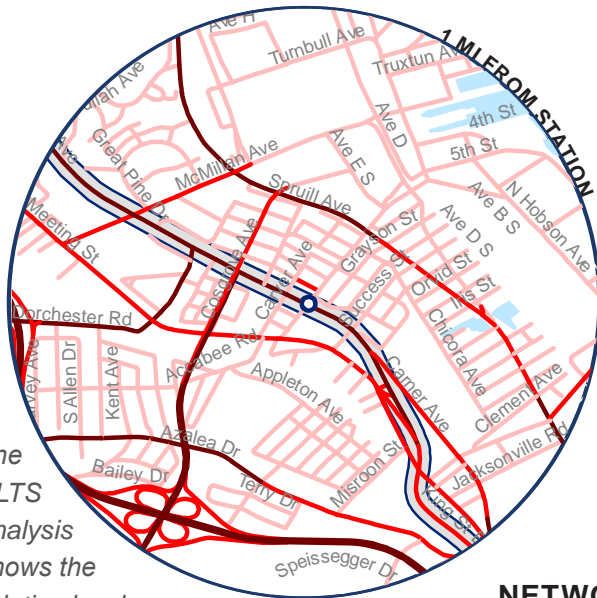


The destinations served map shows which streets provide the most direct access to major destinations.

¹ BCDCOG, Walk Bike BCD

BICYCLIST LEVEL OF TRAFFIC STRESS¹

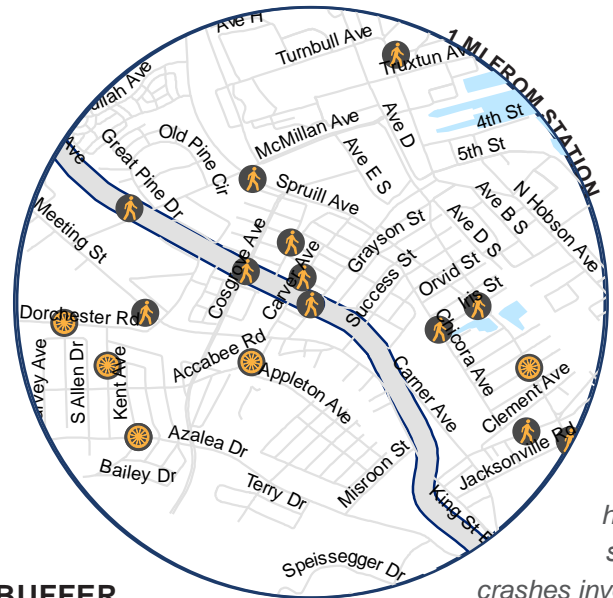
Lower  Higher



The BLTS analysis shows the relative level of stress given existing roadway characteristics.




PEDESTRIAN & BICYCLIST CRASH HISTORY (2010-2014)

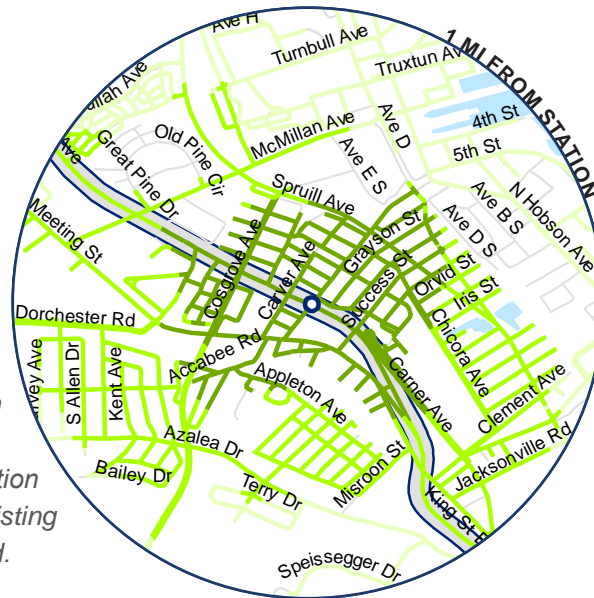
 Pedestrian crash  Bicyclist crash



The crash history shows crashes involving pedestrians and bicyclists from 2010-2014.

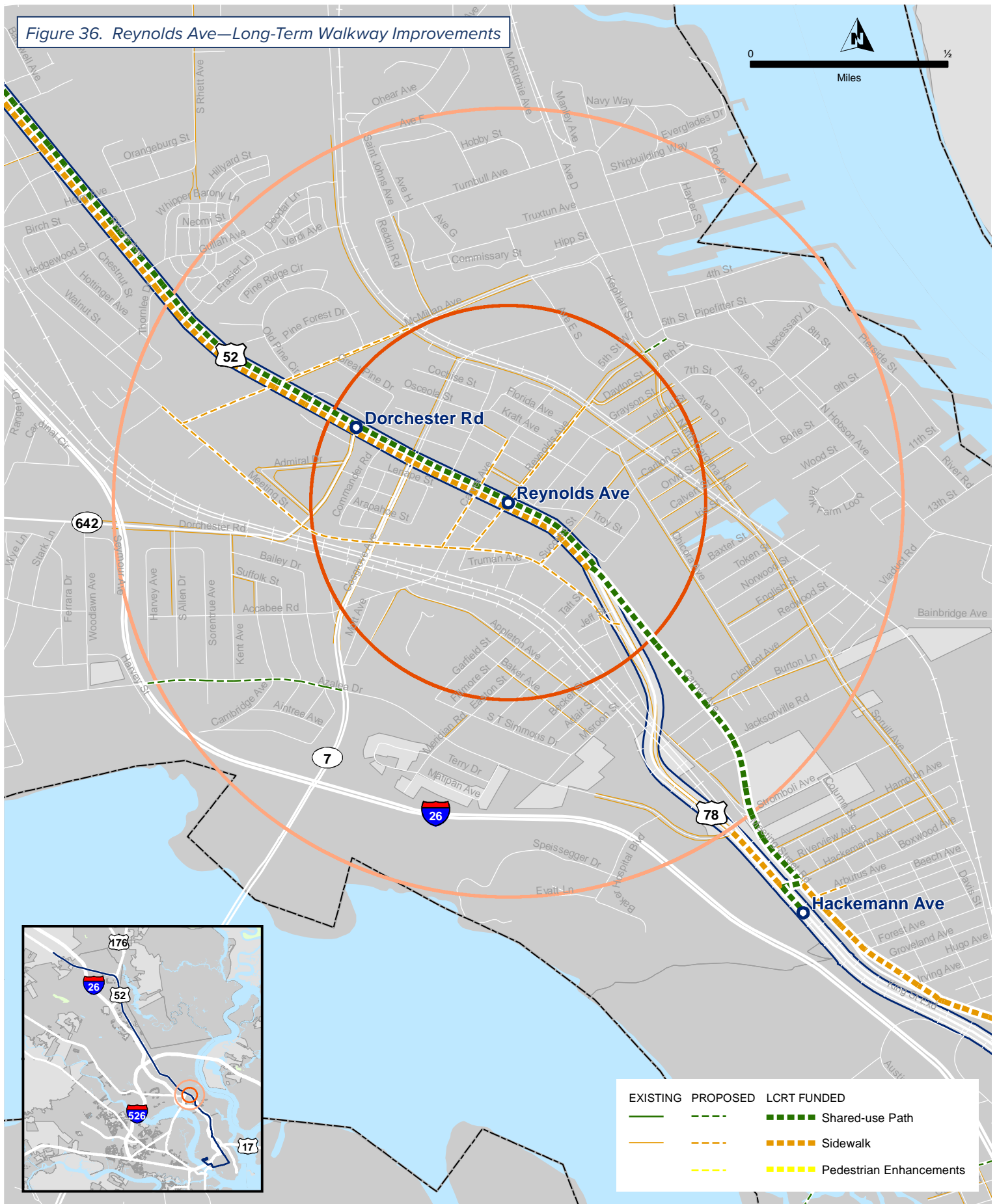
NETWORK BUFFER

 < 1/2 MI  1/2 - 1 MI  1 - 2 MI



The network buffers show the actual trip length from the LCRT station on the existing street grid.

Figure 36. Reynolds Ave—Long-Term Walkway Improvements



EXISTING	PROPOSED	LCRT FUNDED

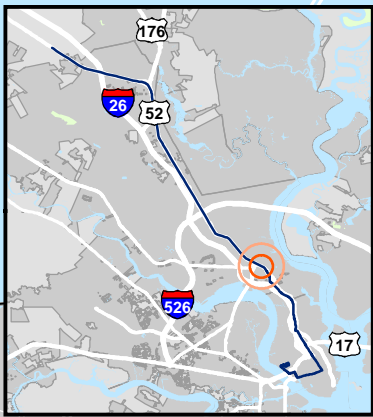
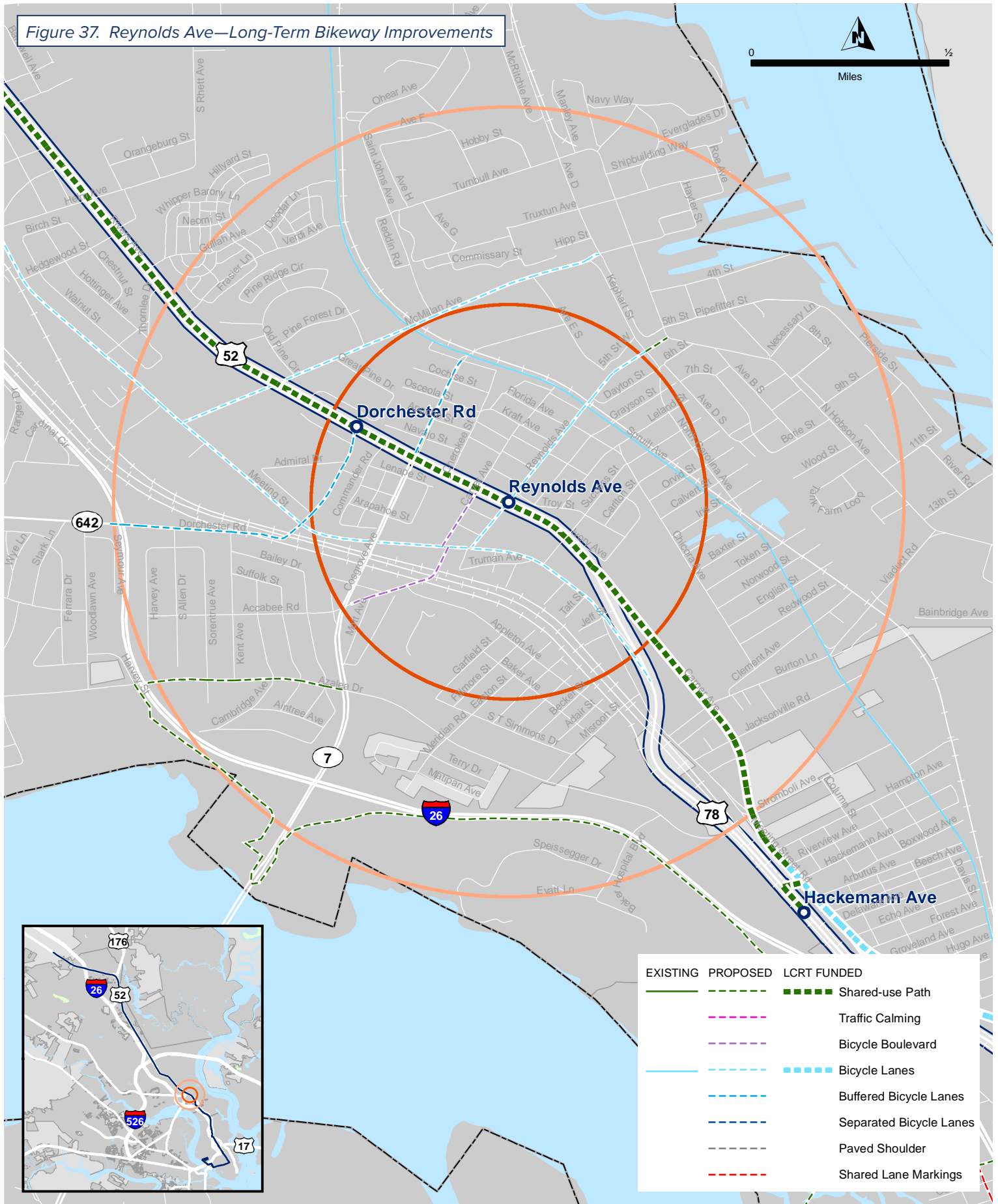
- LCRT Stations
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area
- LCRT Alignment

Lowcountry Rapid Transit Reynolds Ave

Data Sources: BCDCOG, SCDOT



Figure 37. Reynolds Ave—Long-Term Bikeway Improvements



EXISTING	PROPOSED	LCRT FUNDED	
			Shared-use Path
			Traffic Calming
			Bicycle Boulevard
			Bicycle Lanes
			Buffered Bicycle Lanes
			Separated Bicycle Lanes
			Paved Shoulder
			Shared Lane Markings

- LCRT Stations
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area
- LCRT Alignment

Lowcountry Rapid Transit Reynolds Ave

Data Sources: BCDCOG, SCDOT



Station 11: Dorchester Rd

This proposed station location in North Charleston is at the intersection of Dorchester Road and Rivers Ave (US-78). It is immediately adjacent to a few small single-family housing neighborhoods. Rivers Ave and Dorchester Road connect this station to additional neighborhoods including multi-family housing neighborhoods to the northwest. Restaurants, shopping, government services, and a public library are situated along Rivers Ave within 1/4-mile of this station.

The sidewalk network is disconnected in this area, with gaps along Dorchester Road, McMillan Ave, Spruill Ave, Meeting St, and most of the neighborhood streets. Further away from the station, there are sidewalk gaps on Cosgrove Ave and Azalea Dr.

Spruill Ave, running somewhat parallel to the northeast, has existing bicycle lanes. Quiet neighborhood streets may serve as low-stress connections, but they are segmented into islands by the rail corridors and the I-26 corridor. This limits their usefulness for active transportation connectivity and access. Most of the destinations in the area are situated along Rivers Ave, so many people are forced to walk and bike there despite its high stress conditions.



The skewed railroad crossings on Dorchester Road have high pedestrian and bicycle use. South of the rail crossing, there is a significant sidewalk gap on one side with evidence of people walking in the grass.



While space exists for bicyclists and pedestrians at the Dorchester Road railroad crossings, work could be done to further improve the comfort of this crossing.

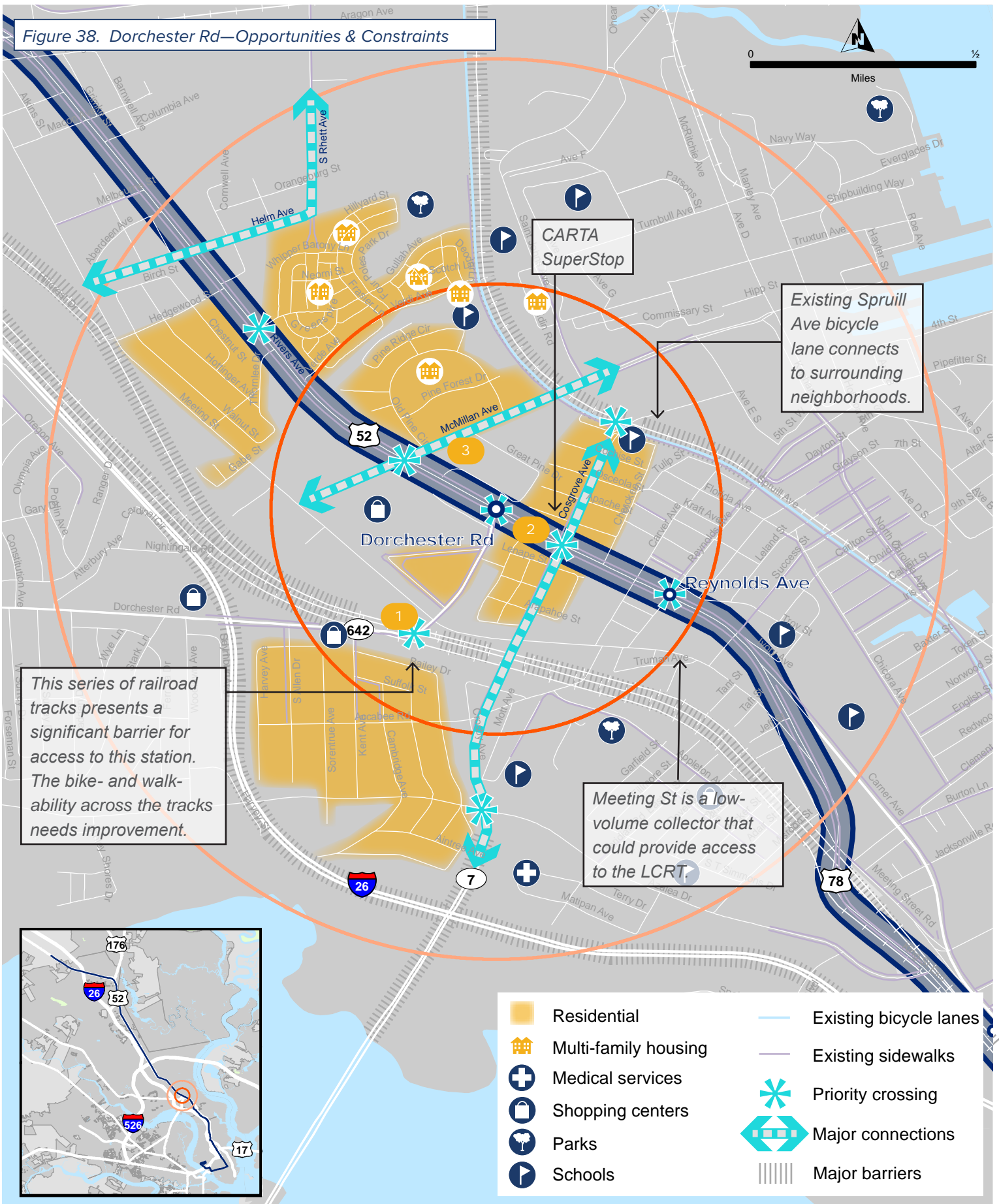


In the vicinity of this station, Rivers Ave is a 5-lane road with a center turning lane and on-street parking lanes along both curbs. Long distances between crossings encourage pedestrians and bicyclists to navigate mid-block crossings. Extra pavement could be reconfigured for protected bicycle facilities and pedestrian refuge islands.



McMillan Ave is a four-lane collector with sidewalk gaps.

Figure 38. Dorchester Rd—Opportunities & Constraints



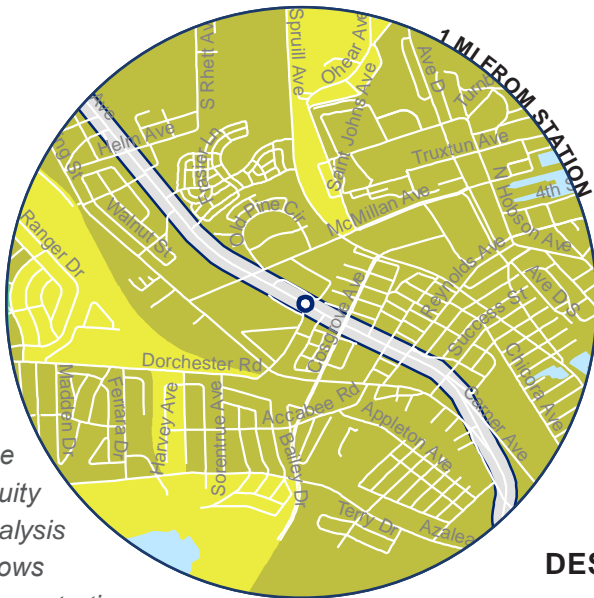
Station 11: Dorchester Rd

Station Area Analysis Diagrams

● LCRT Station — LCRT Alignment

CONCENTRATIONS OF VULNERABLE POPULATIONS¹

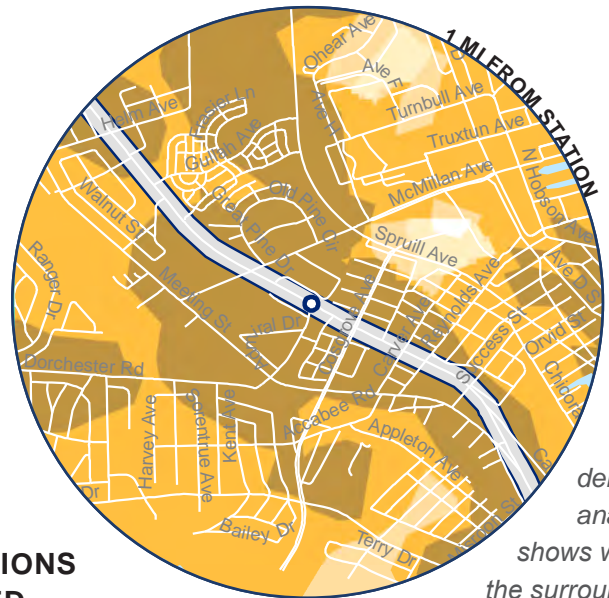
Lower Higher



The equity analysis shows concentrations of vulnerable populations who may rely on active transportation and transit.

RELATIVE DEMAND FOR WALKING AND BIKING¹

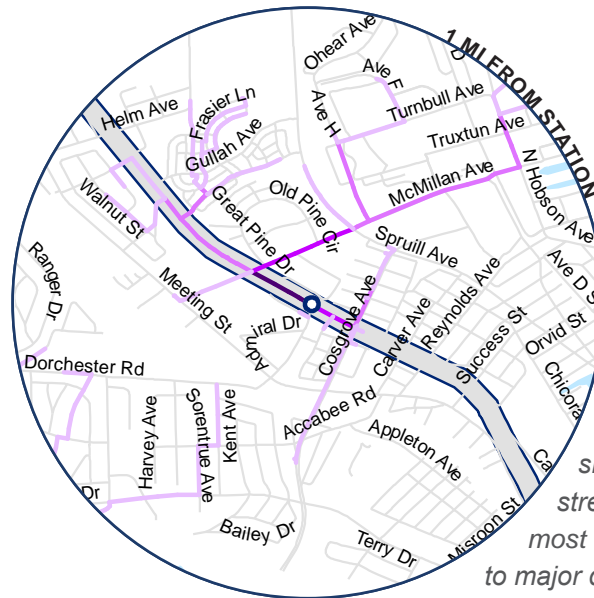
Lower Higher



The demand analysis shows where the surrounding land uses encourage walking and biking.

DESTINATIONS SERVED

Fewer More

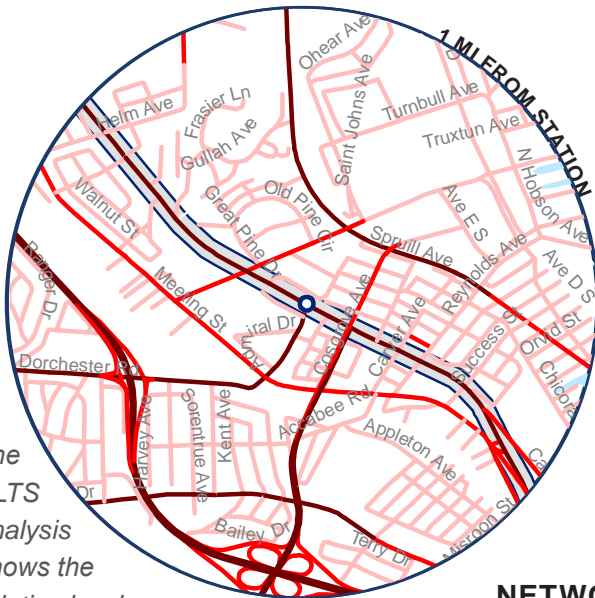


The destinations served map shows which streets provide the most direct access to major destinations.

¹ BCDCOG, Walk Bike BCD

BICYCLIST LEVEL OF TRAFFIC STRESS¹

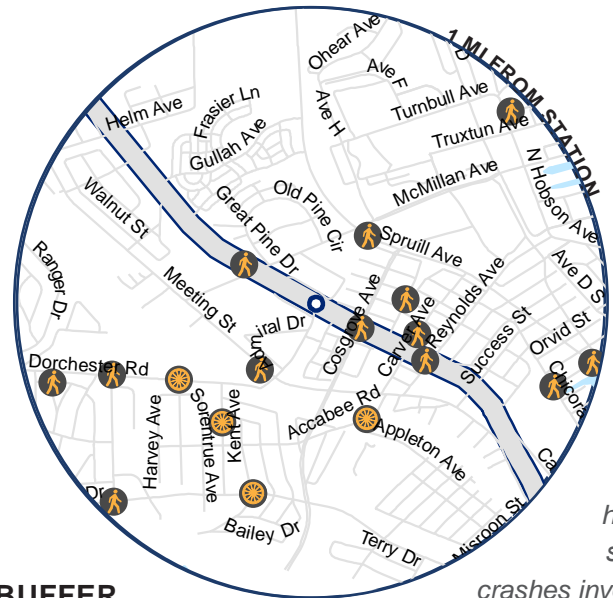
Lower  Higher



The BLTS analysis shows the relative level of stress given existing roadway characteristics.




PEDESTRIAN & BICYCLIST CRASH HISTORY (2010-2014)

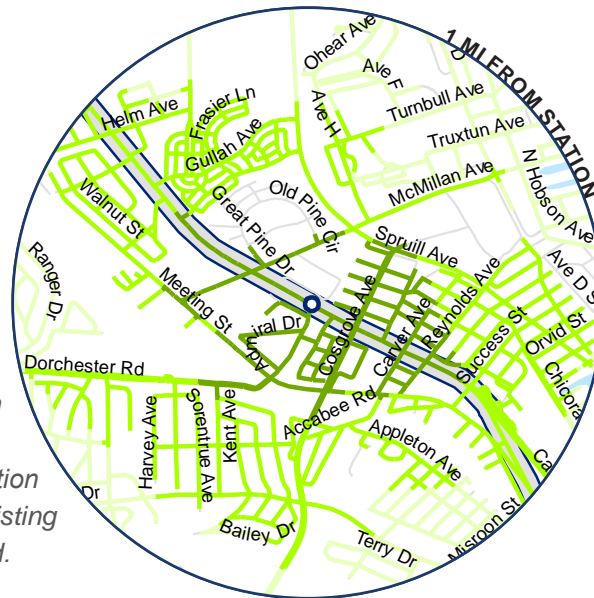
 Pedestrian crash  Bicyclist crash



The crash history shows crashes involving pedestrians and bicyclists from 2010-2014.

NETWORK BUFFER

 < 1/2 MI  1/2 - 1 MI  1 - 2 MI



The network buffers show the actual trip length from the LCRT station on the existing street grid.

Figure 39. Dorchester Rd—Long-Term Walkway Improvements



EXISTING	PROPOSED	LCRT FUNDED
		Shared-use Path
		Sidewalk
		Pedestrian Enhancements

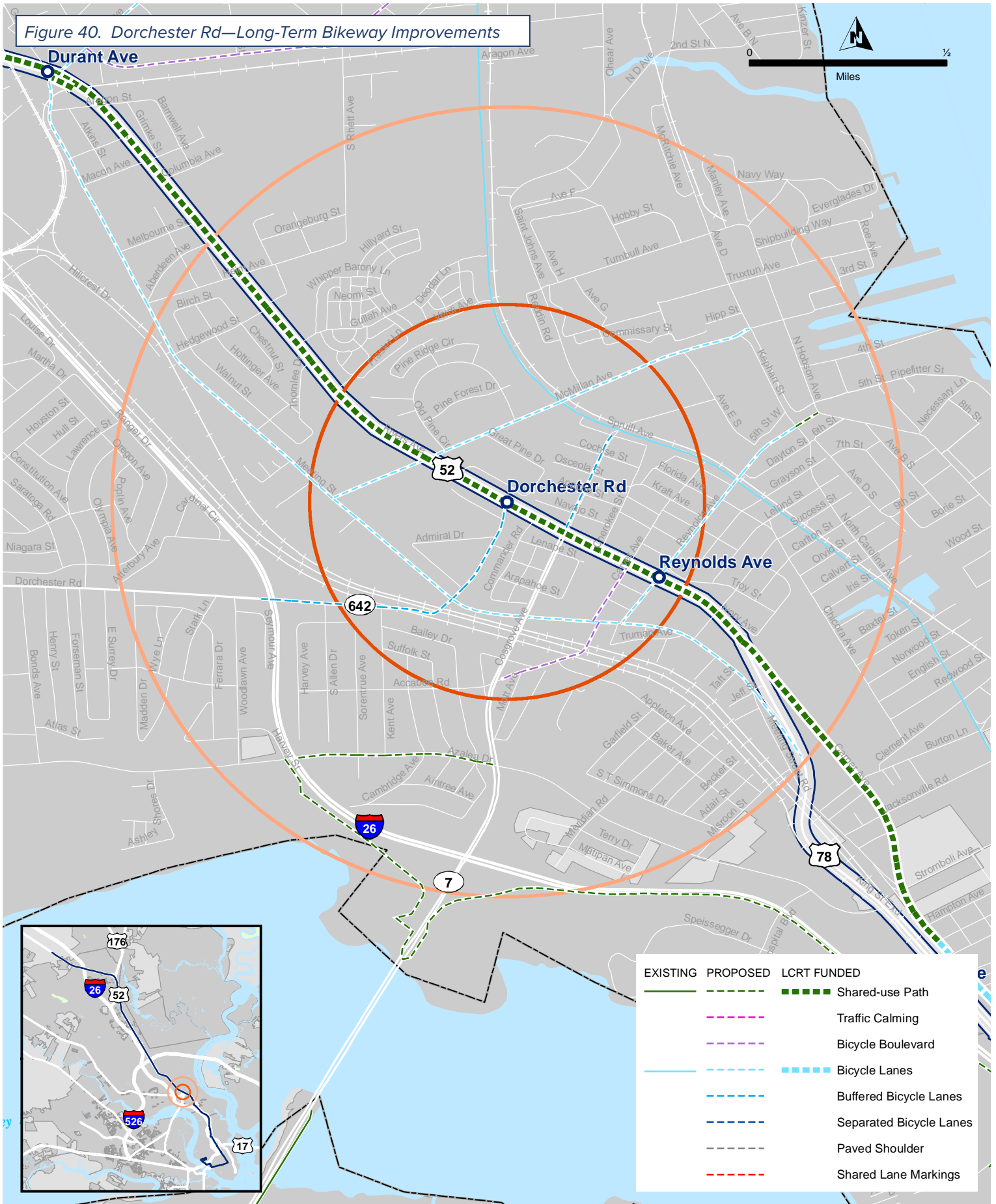
- LCRT Stations
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area
- LCRT Alignment

**Lowcountry Rapid Transit
Dorchester Rd**

Data Sources: BCDCOG, SCDOT



Figure 40. Dorchester Rd—Long-Term Bikeway Improvements



EXISTING	PROPOSED	LCRT FUNDED	
			Shared-use Path
			Traffic Calming
			Bicycle Boulevard
			Bicycle Lanes
			Buffered Bicycle Lanes
			Separated Bicycle Lanes
			Paved Shoulder
			Shared Lane Markings

- LCRT Stations
- 0.5-mile radius of Station Area
- LCRT Alignment
- 1.0-mile radius of Station Area

**Lowcountry Rapid Transit
Dorchester Rd**

Data Sources: BCDCOG, SCDOT

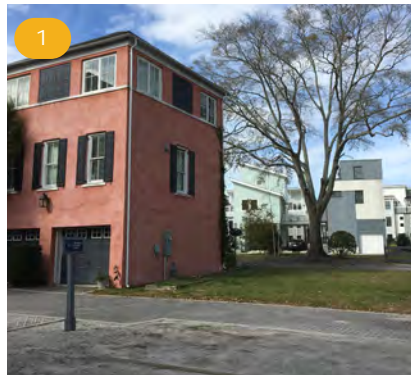


Station 12: Durant Ave

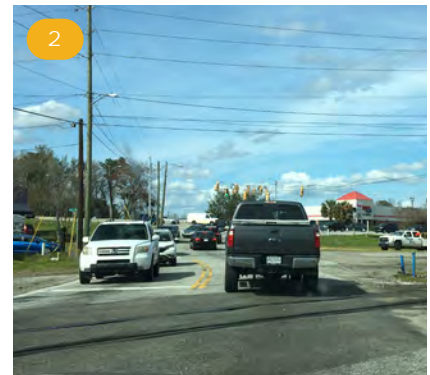
This proposed station location is adjacent to shopping destinations and the North Charleston Transit Center. To the south and west of this station is industrial land use. Neighborhoods to the north and east are mixed-density residential.

Rivers Ave is a major corridor that serves many of this area's destinations, however it is a challenging corridor to cross as a pedestrian and uncomfortable to walk along. The residential neighborhoods south of the station, while close in proximity, would be unlikely to be able to walk or bicycle to this station, as the I-26 and rail corridors limit this connection.

Due to the numerous barriers for access to this station, most of the trips would be generated from the wedge to the north of the station including the North Charleston Transit Center.



The mixed-use and multi-family Mixson neighborhood is located adjacent to the proposed station location.

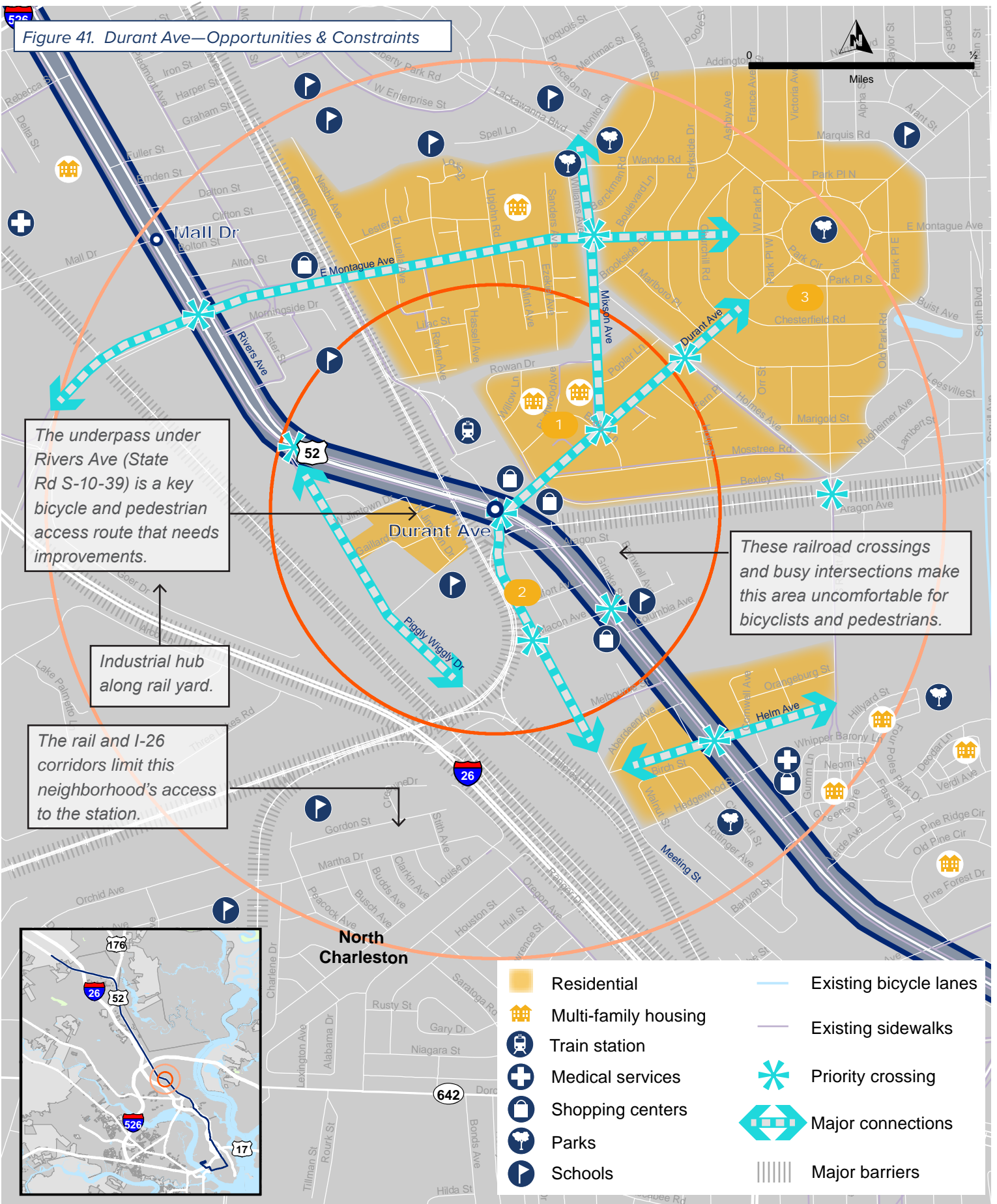


The industrial area south of the intersection of Meeting St and Rivers Ave has a need for sidewalks.



The Park Circle neighborhood has quiet streets suitable for walking and biking. The neighborhood streets feed into busy collectors, such as E. Montague Ave and N. Rhett Ave that have limited pedestrian and bicycle facilities.

Figure 41. Durant Ave—Opportunities & Constraints

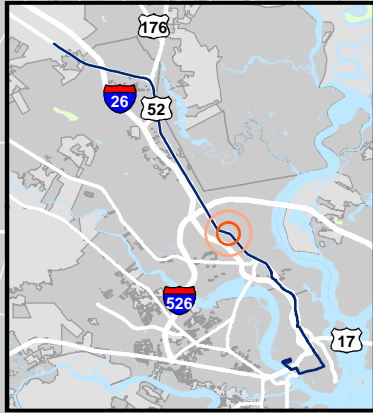


The underpass under Rivers Ave (State Rd S-10-39) is a key bicycle and pedestrian access route that needs improvements.

Industrial hub along rail yard.

The rail and I-26 corridors limit this neighborhood's access to the station.

These railroad crossings and busy intersections make this area uncomfortable for bicyclists and pedestrians.



- Residential
- Multi-family housing
- Train station
- Medical services
- Shopping centers
- Parks
- Schools
- Existing bicycle lanes
- Existing sidewalks
- Priority crossing
- Major connections
- Major barriers



LCRT Alignment

LCRT Stations

0.5-mile radius of Station Area

1.0-mile radius of Station Area

Lowcountry Rapid Transit
Durant Ave
 Data Sources: BCDCOG, SCDOT

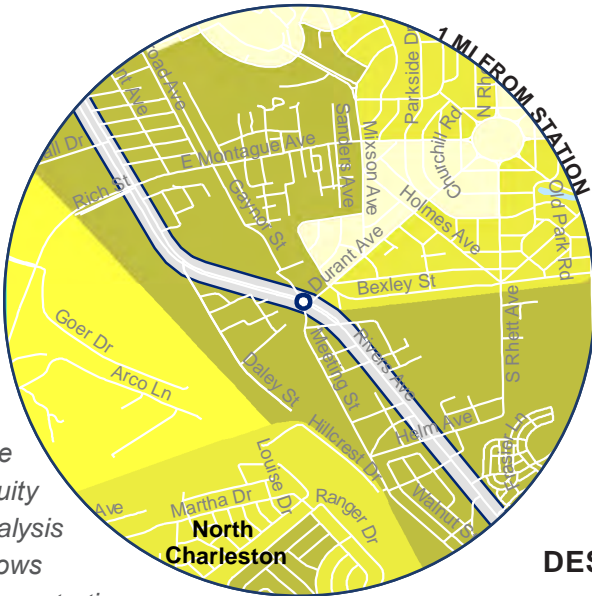
Station 12: Durant Ave

Station Area Analysis Diagrams

● LCRT Station — LCRT Alignment

CONCENTRATIONS OF VULNERABLE POPULATIONS¹

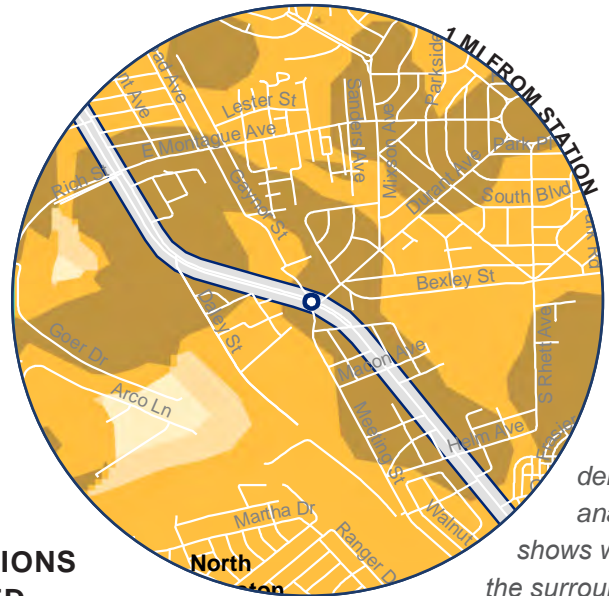
Lower Higher



The equity analysis shows concentrations of vulnerable populations who may rely on active transportation and transit.

RELATIVE DEMAND FOR WALKING AND BIKING¹

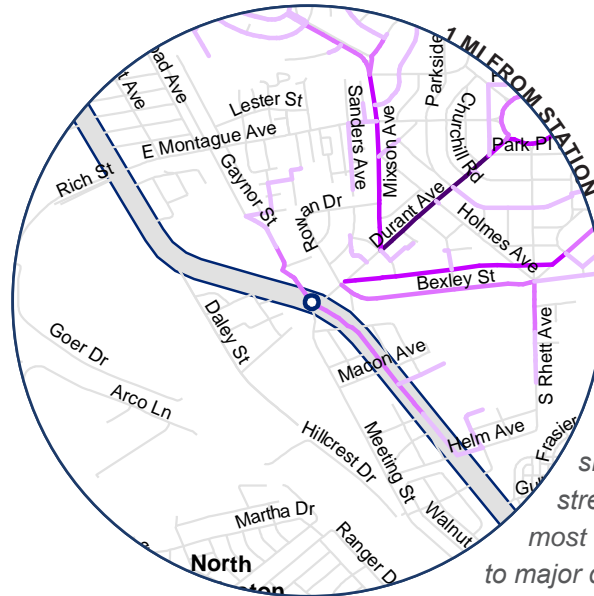
Lower Higher



The demand analysis shows where the surrounding land uses encourage walking and biking.

DESTINATIONS SERVED

Fewer More

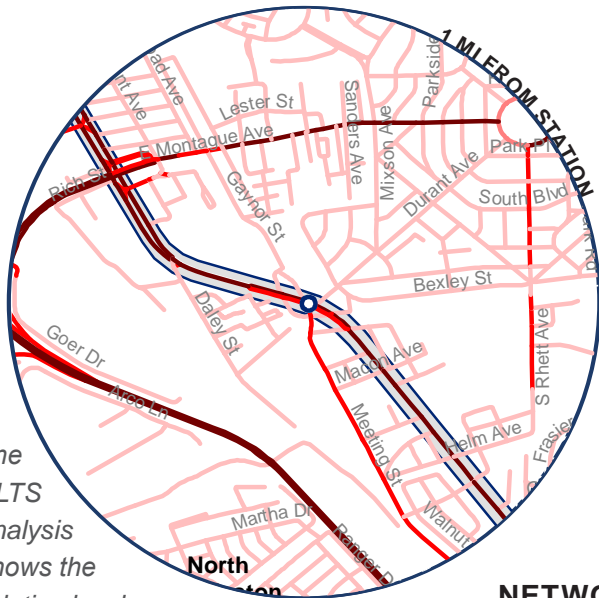


The destinations served map shows which streets provide the most direct access to major destinations.

¹ BCDCOG, Walk Bike BCD

BICYCLIST LEVEL OF TRAFFIC STRESS¹

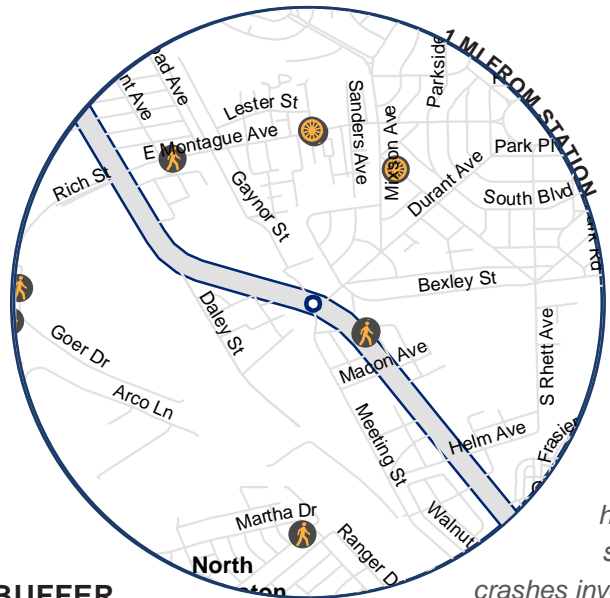
Lower  Higher



The BLTS analysis shows the relative level of stress given existing roadway characteristics.

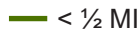
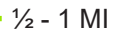
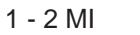
PEDESTRIAN & BICYCLIST CRASH HISTORY (2010-2014)

 Pedestrian crash  Bicyclist crash



The crash history shows crashes involving pedestrians and bicyclists from 2010-2014.

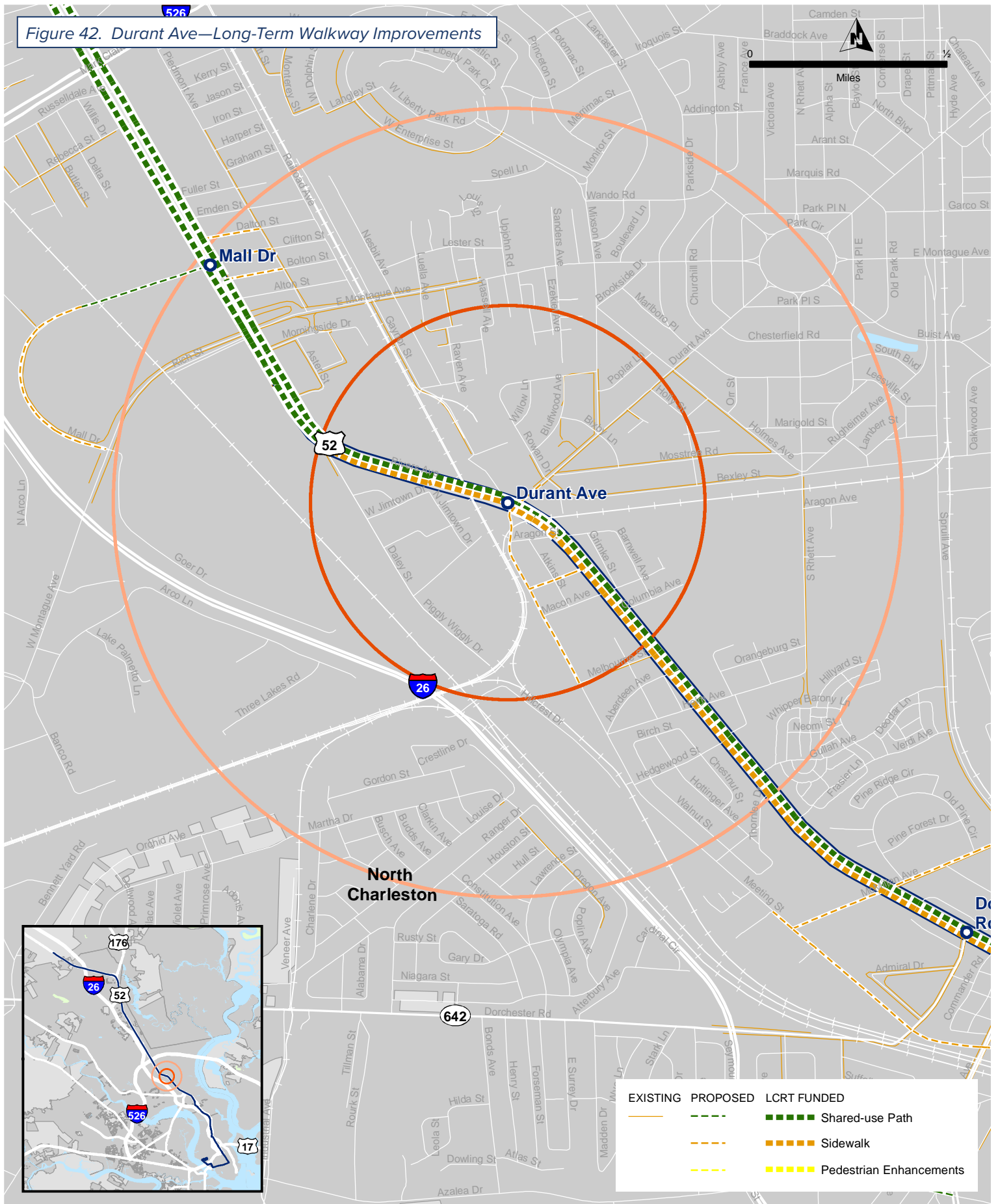
NETWORK BUFFER

 < 1/2 MI  1/2 - 1 MI  1 - 2 MI

The network buffers show the actual trip length from the LCRT station on the existing street grid.



Figure 42. Durant Ave—Long-Term Walkway Improvements



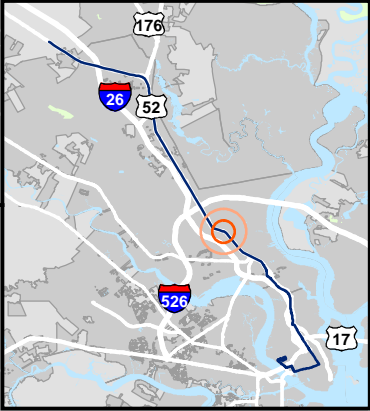
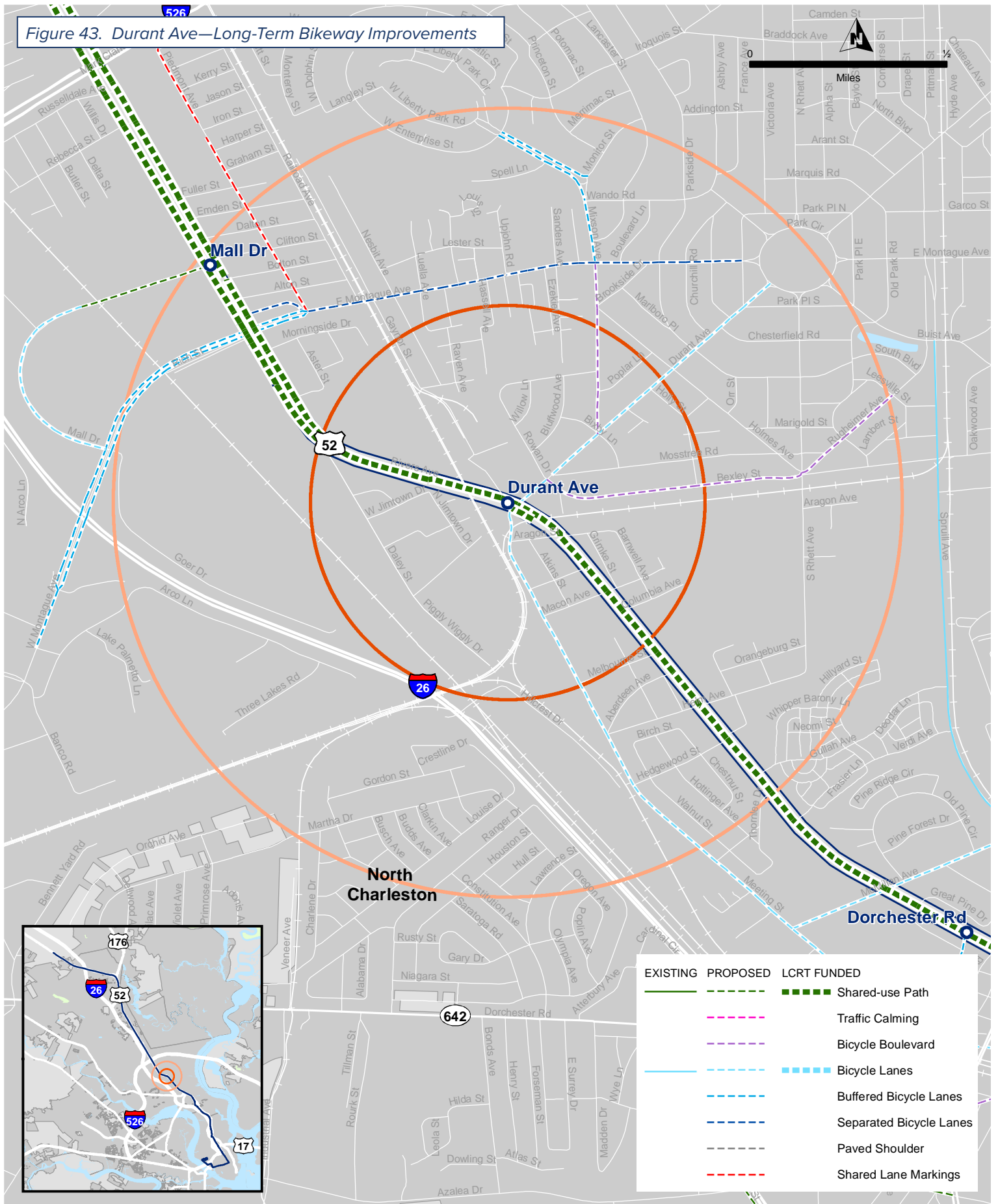
● LCRT Stations
— LCRT Alignment

○ 0.5-mile radius of Station Area
○ 1.0-mile radius of Station Area

Lowcountry Rapid Transit Durant Ave

Data Sources: BCDCOG, SCDOT

Figure 43. Durant Ave—Long-Term Bikeway Improvements



● LCRT Stations
— LCRT Alignment

○ 0.5-mile radius of Station Area
○ 1.0-mile radius of Station Area

Lowcountry Rapid Transit
Durant Ave

Data Sources: BCDCOG, SCDOT

Station 13: Mall Dr

In the Mall Dr area, there are several rail lines and highways that have disconnected the street grid, resulting in barriers to travel. This network design puts extra stress on the few connections that cross these barriers safely.

Mall Dr is important because it serves as the connection point to North Charleston’s City Hall and the American Red Cross Community Resource & Referral Center. This will be an important destination for transit users who access this area for shopping or employment. The bridge over the railroad, which connects these destinations to the station, does not have any sidewalks on it.

E. Montague Ave is also an important connection, as it links several schools and neighborhoods to Rivers Ave from across the railroad. It is also a direct link to a major commercial hub on the west side of the LCRT corridor. However, the bridge on E. Montague Ave does not currently support walking or bicycling, and the intersection with Alton Ave, Piedmont Ave, and Morningside Dr is not pedestrian friendly. Adding buffers and wider sidewalks to E. Montague Ave are important considerations for this priority connection.



At the underpass of I-526, people can be seen walking to destinations, bicycling, and exercising. Implementing a shared-use path in this area would be beneficial.



There is currently no space for a sidewalk on the Mall Dr bridge.

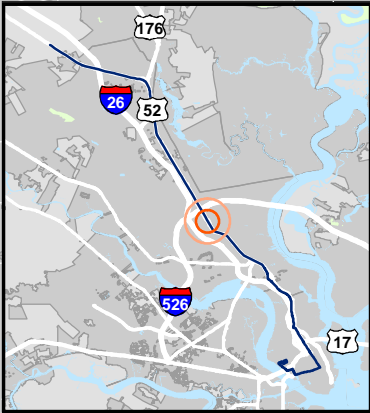
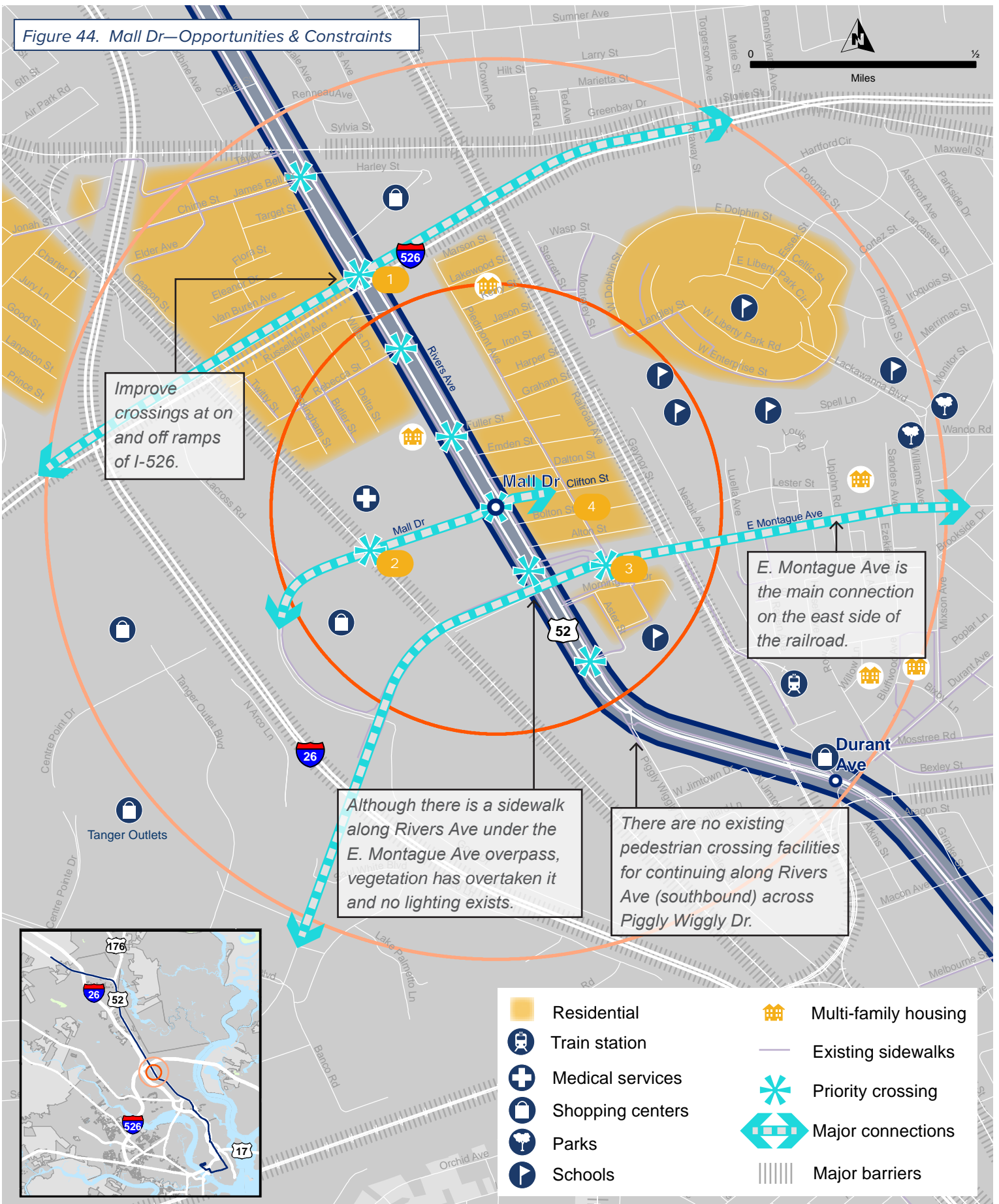


The intersection of E. Montague Ave, Alton Ave, Piedmont Ave, and Morningside Dr is wide and consists of several stopping points for pedestrians.



Piedmont Road is a low-volume neighborhood street that may serve as a comfortable pedestrian and bicyclist connection from E. Montague Ave to Mall Dr.

Figure 44. Mall Dr—Opportunities & Constraints



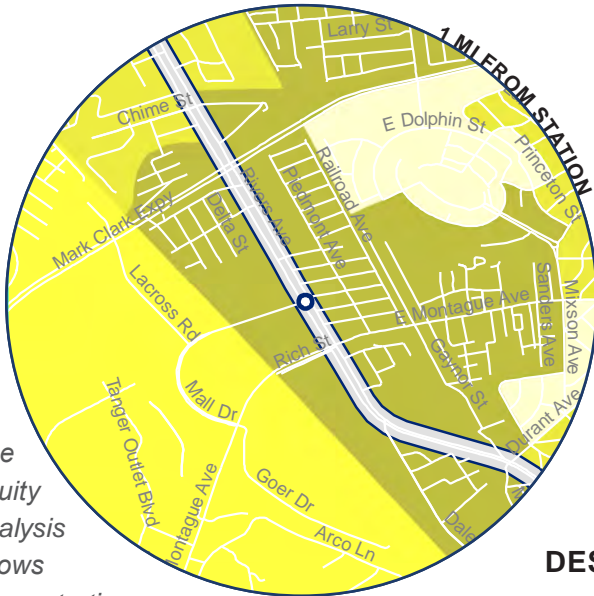
Station 13: Mall Dr

Station Area Analysis Diagrams

● LCRT Station — LCRT Alignment

CONCENTRATIONS OF VULNERABLE POPULATIONS¹

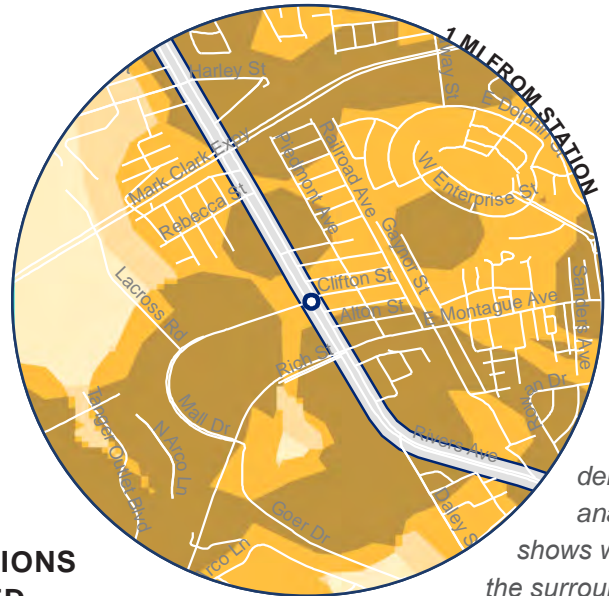
Lower Higher



The equity analysis shows concentrations of vulnerable populations who may rely on active transportation and transit.

RELATIVE DEMAND FOR WALKING AND BIKING¹

Lower Higher



The demand analysis shows where the surrounding land uses encourage walking and biking.

DESTINATIONS SERVED

Fewer More

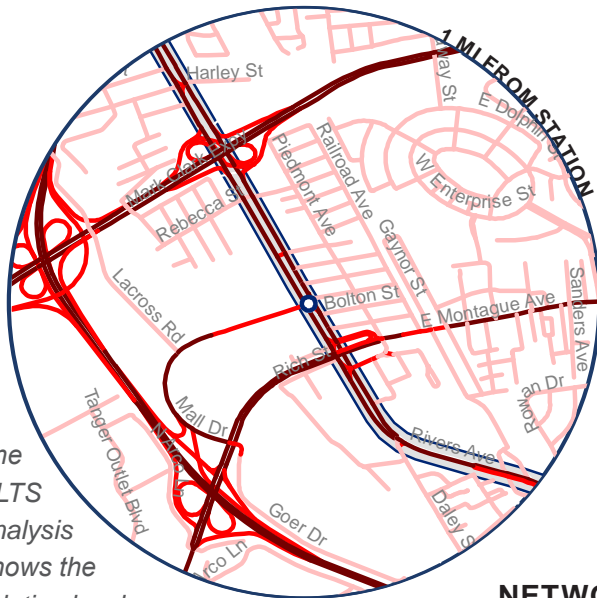


The destinations served map shows which streets provide the most direct access to major destinations.

¹ BCDCOG, Walk Bike BCD

BICYCLIST LEVEL OF TRAFFIC STRESS¹

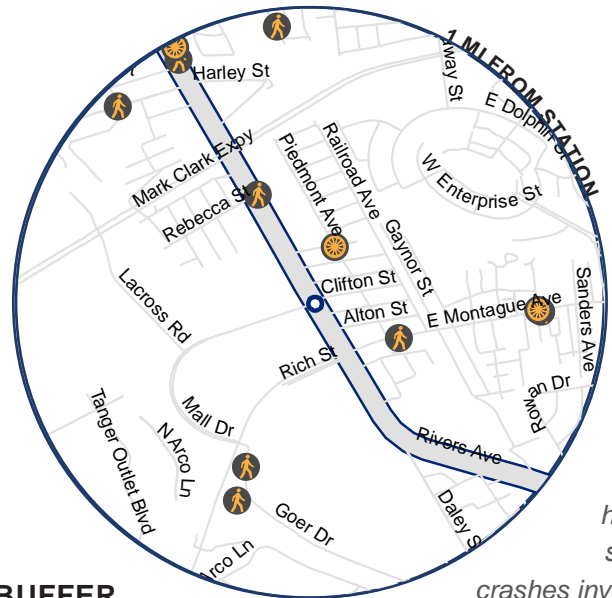
Lower  Higher



The BLTS analysis shows the relative level of stress given existing roadway characteristics.




PEDESTRIAN & BICYCLIST CRASH HISTORY (2010-2014)

 Pedestrian crash  Bicyclist crash



The crash history shows crashes involving pedestrians and bicyclists from 2010-2014.

NETWORK BUFFER

 < 1/2 MI  1/2 - 1 MI  1 - 2 MI



The network buffers show the actual trip length from the LCRT station on the existing street grid.

Figure 45. Mall Dr—Long-Term Walkway Improvements

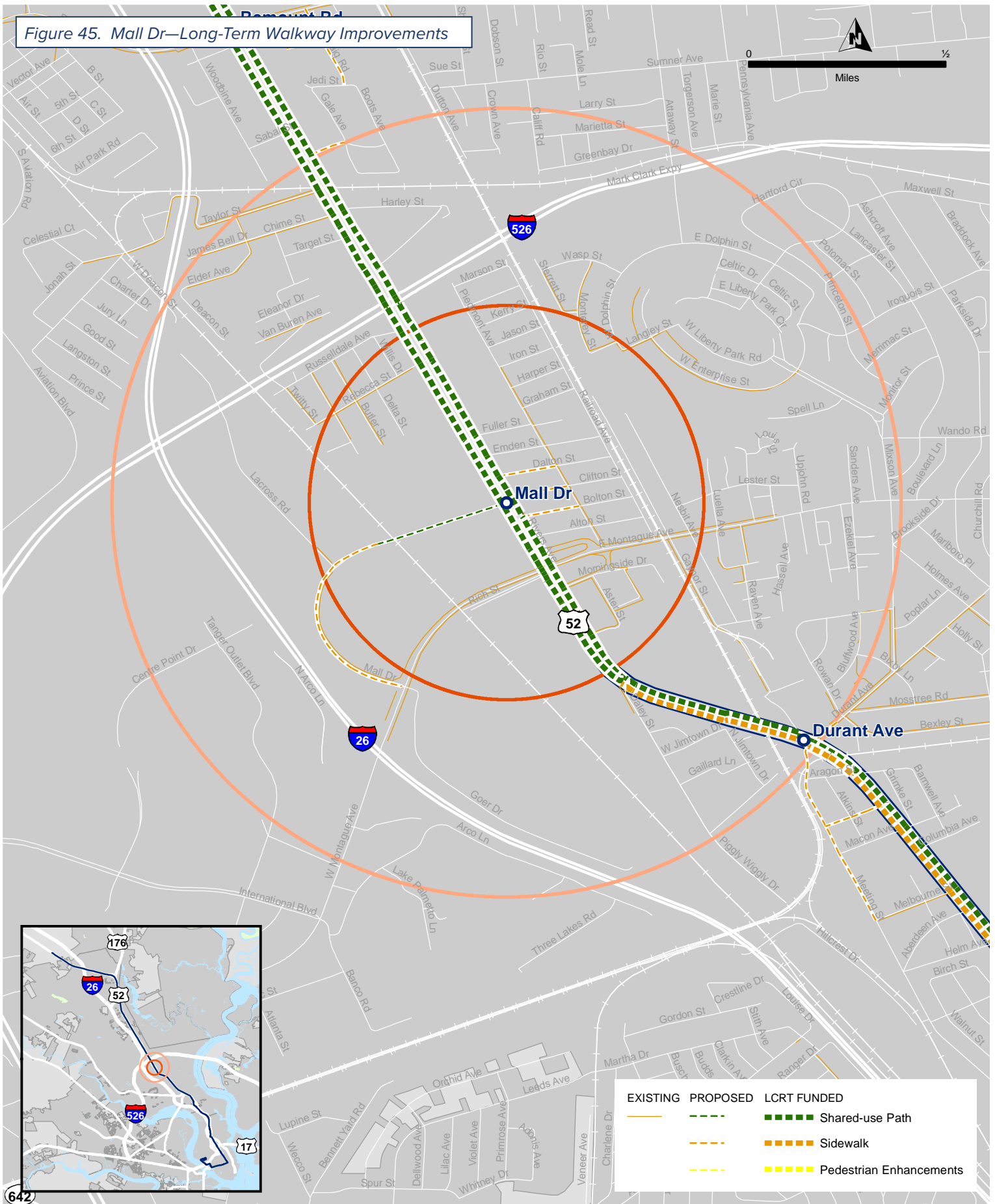
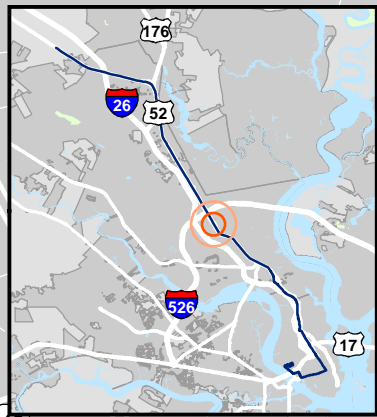
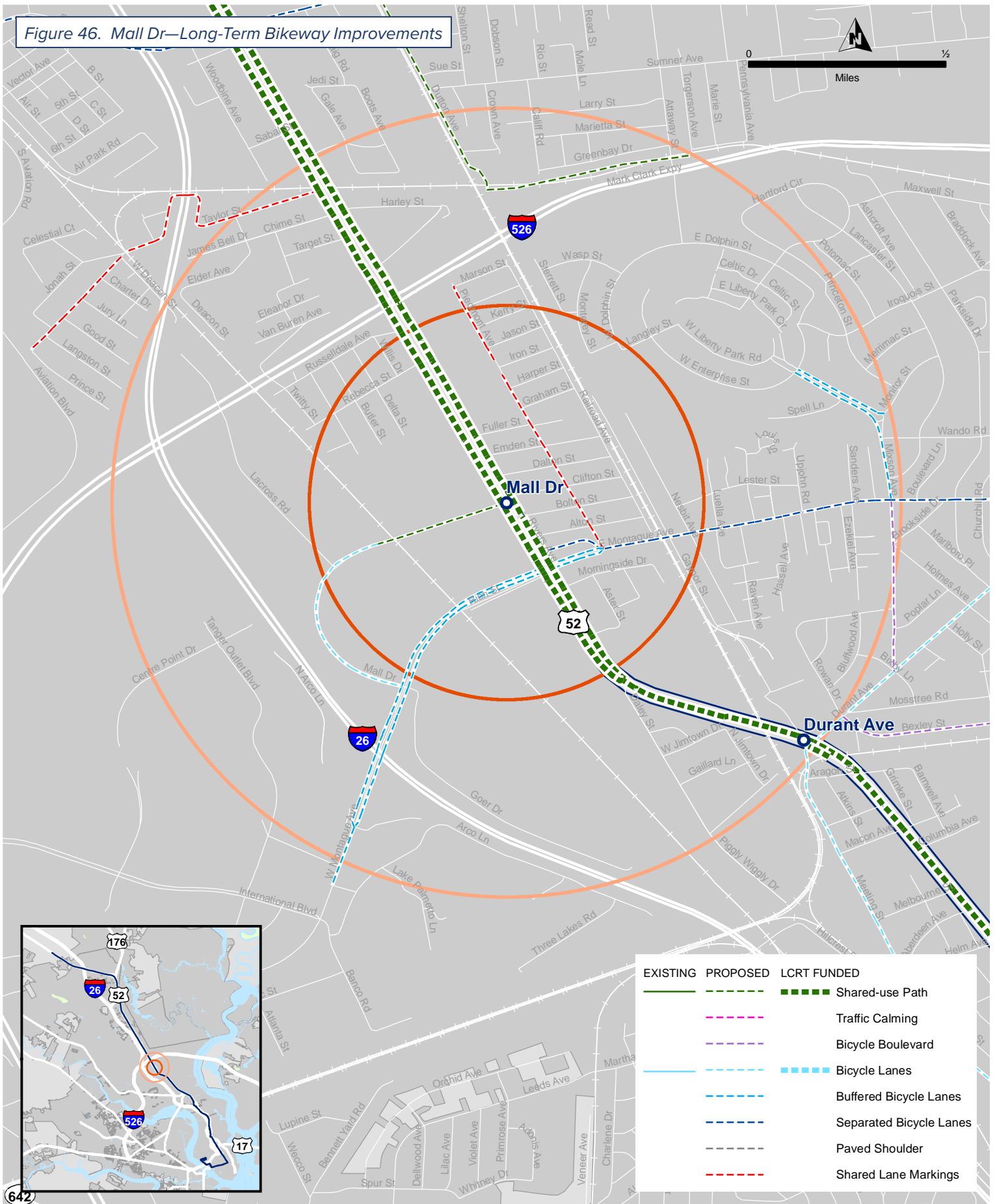


Figure 46. Mall Dr—Long-Term Bikeway Improvements



EXISTING	PROPOSED	LCRT FUNDED
		Shared-use Path
		Traffic Calming
		Bicycle Boulevard
		Bicycle Lanes
		Buffered Bicycle Lanes
		Separated Bicycle Lanes
		Paved Shoulder
		Shared Lane Markings

- LCRT Stations
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area
- LCRT Alignment

Lowcountry Rapid Transit
Mall Dr

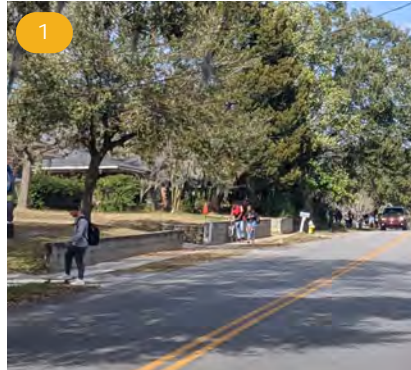
Data Sources: BCDCOG, SCDOT



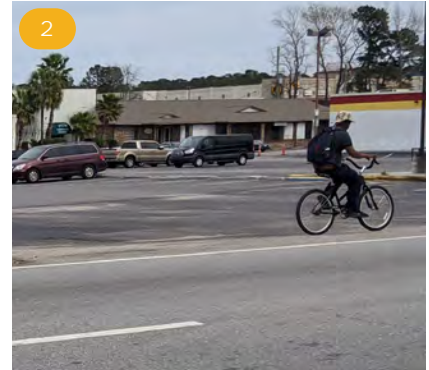
Station 14: Remount Rd

Although most of the 1/2-mile radius around the Remount Rd station is dedicated to commercial activity, there are many neighborhoods in the area. Remount Rd is a busy connection that runs perpendicular to the LCRT corridor and serves as the arterial roadway for these surrounding neighborhoods. Because it is a key connection from the LCRT through Hanahan, the roadway could use many improvements to enhance the pedestrian and bicyclist experience. Driveway management and crossing treatments should be considered, as well as the addition of protected bicycle lanes and widened, buffered sidewalks.

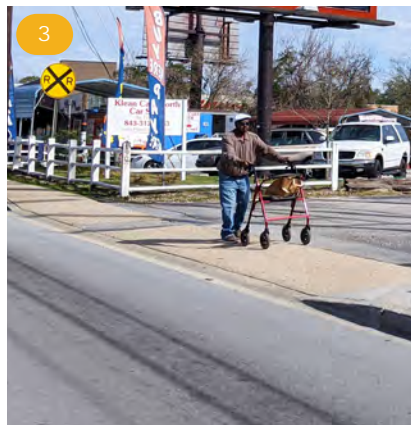
It is also important that the smaller neighborhoods along Rivers Ave have plenty of access to necessities around them, via improved roadway intersections or mid-block crossings.



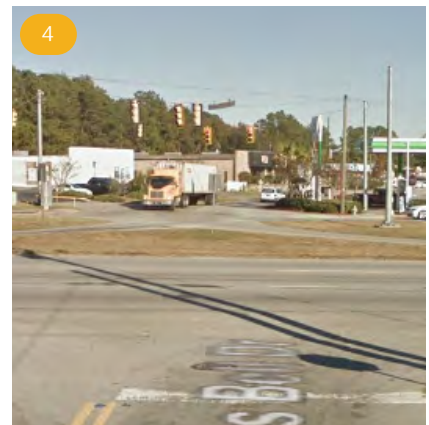
Neighborhoods east of the railroad that parallels Dutton Ave currently have high active transportation activity. This is largely due to the schools in the area.



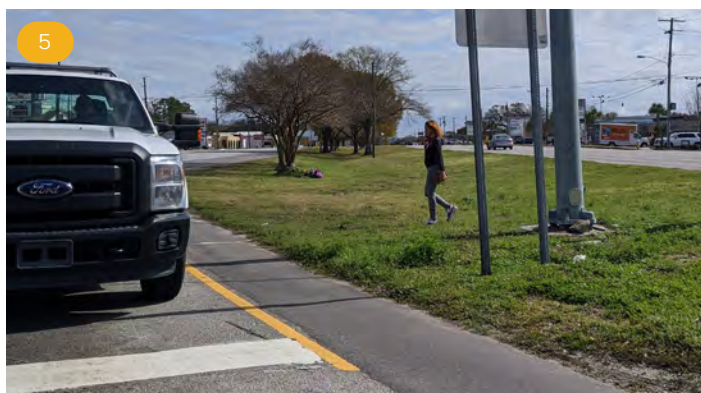
Similar to many areas along Rivers Ave, bicyclists can be seen using the sidewalks along the roadway.



Remount Rd has five travel lanes and narrow, 5-foot-wide sidewalks with no landscape buffer.

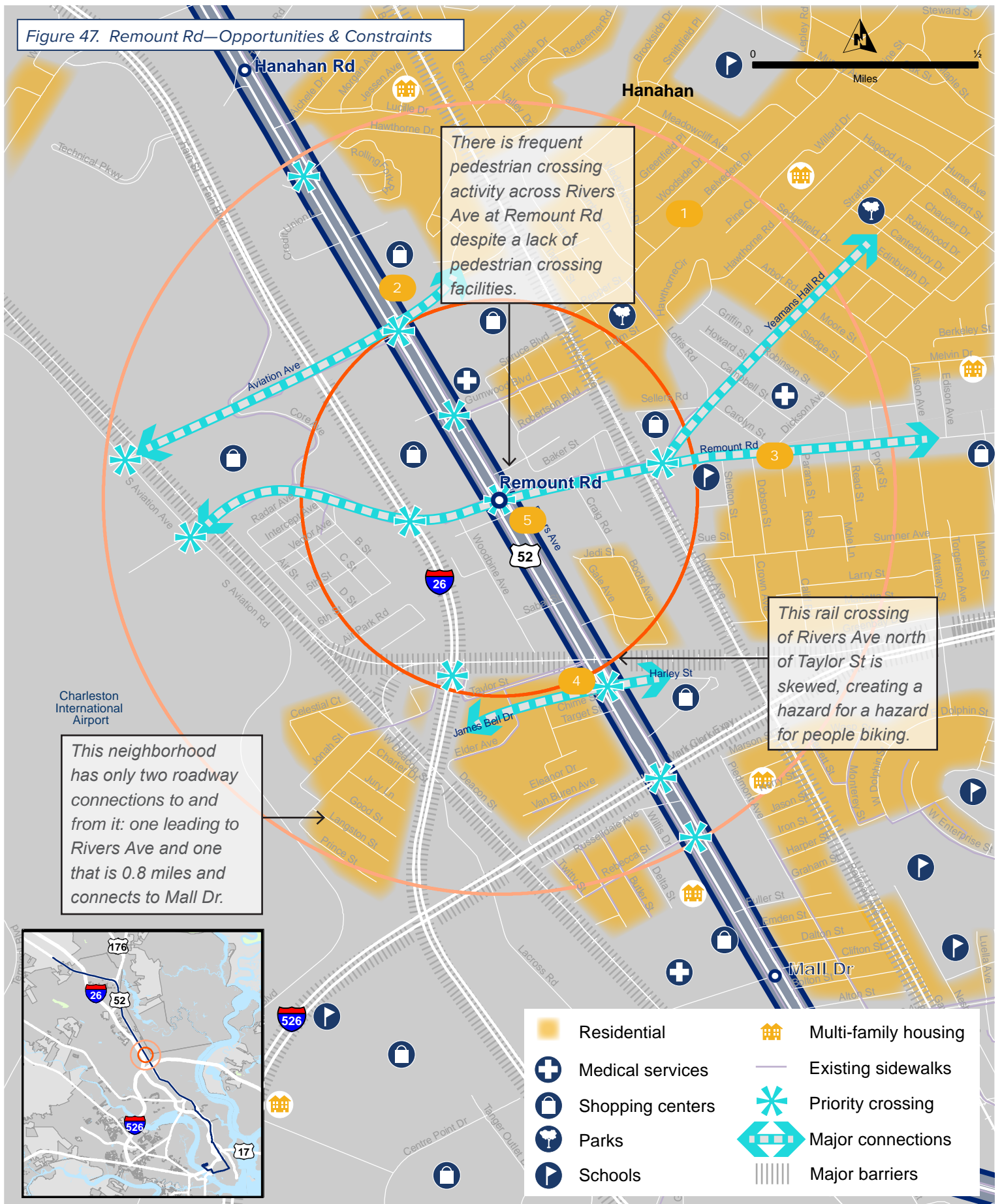


James Bell Rd is a neighborhood connector street that is in close proximity to a grocery store, but there is no current pedestrian crossing across Rivers Ave to reach it. Creating a crossing here would provide much needed access to the LCRT corridor.



Many pedestrians were observed walking in the median at the intersection of Remount Road and Rivers Ave where there is currently no crossing.

Figure 47. Remount Rd—Opportunities & Constraints



There is frequent pedestrian crossing activity across Rivers Ave at Remount Rd despite a lack of pedestrian crossing facilities.

This rail crossing of Rivers Ave north of Taylor St is skewed, creating a hazard for a hazard for people biking.

This neighborhood has only two roadway connections to and from it: one leading to Rivers Ave and one that is 0.8 miles and connects to Mall Dr.

- Residential
- Multi-family housing
- Medical services
- Shopping centers
- Parks
- Schools
- Existing sidewalks
- Priority crossing
- Major connections
- Major barriers



- LCRT Alignment
- LCRT Stations

- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area

Lowcountry Rapid Transit
Remount Rd

Data Sources: BCDCOG, SCDOT

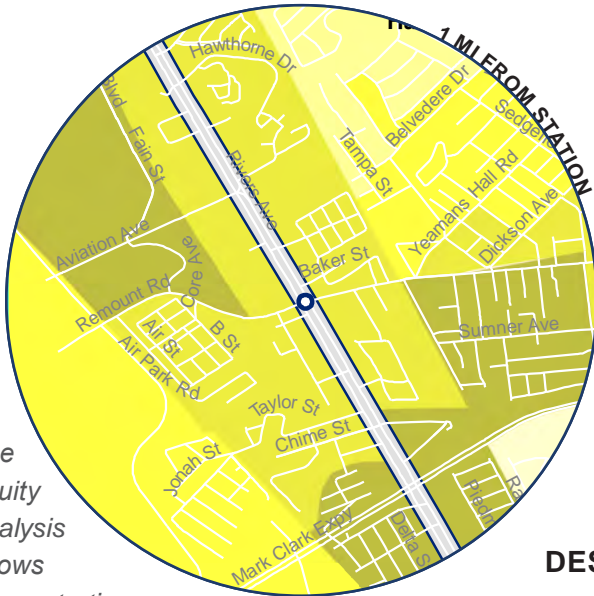
Station 14: Remount Rd

Station Area Analysis Diagrams

● LCRT Station █ LCRT Alignment

CONCENTRATIONS OF VULNERABLE POPULATIONS¹

Lower Higher



The equity analysis shows concentrations of vulnerable populations who may rely on active transportation and transit.

RELATIVE DEMAND FOR WALKING AND BIKING¹

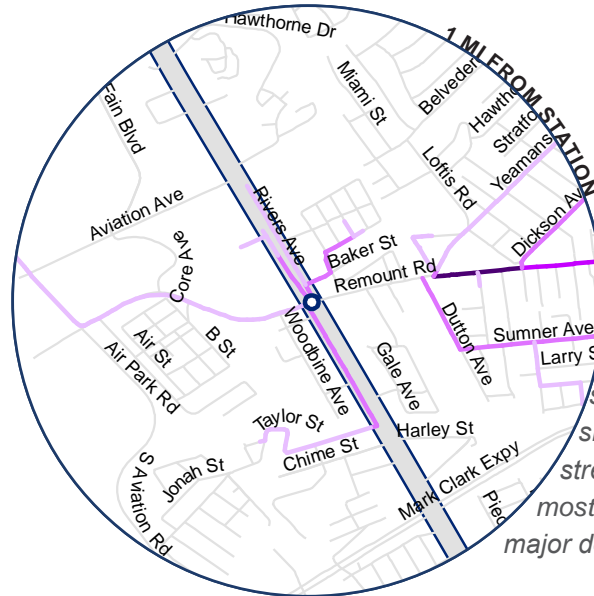
Lower Higher



The demand analysis shows where the surrounding land uses encourage walking and biking.

DESTINATIONS SERVED

Fewer More

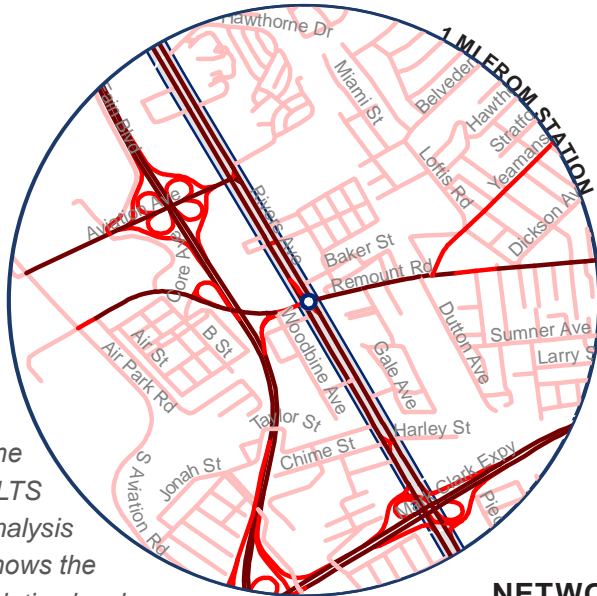


The destinations served map shows which streets provide the most direct access to major destinations.

¹ BCDCOG, Walk Bike BCD

BICYCLIST LEVEL OF TRAFFIC STRESS¹

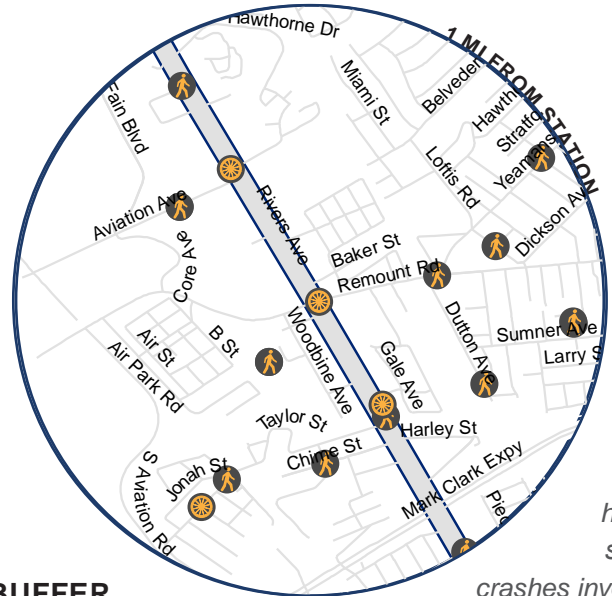
Lower  Higher



The BLTS analysis shows the relative level of stress given existing roadway characteristics.

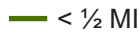
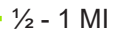

PEDESTRIAN & BICYCLIST CRASH HISTORY (2010-2014)

 Pedestrian crash  Bicyclist crash



The crash history shows crashes involving pedestrians and bicyclists from 2010-2014.

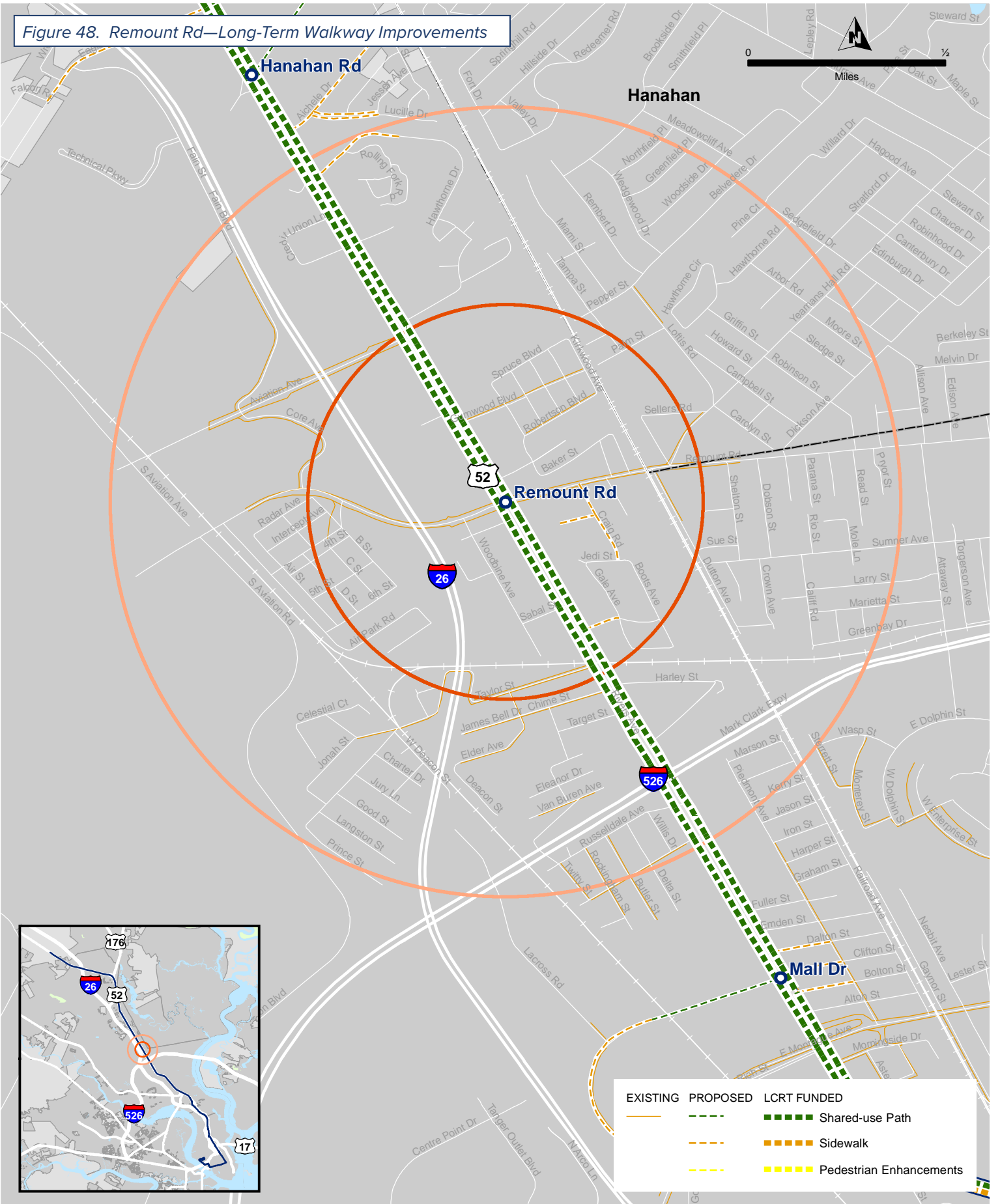
NETWORK BUFFER

 < 1/2 MI  1/2 - 1 MI  1 - 2 MI

The network buffers show the actual trip length from the LCRT station on the existing street grid.



Figure 48. Remount Rd—Long-Term Walkway Improvements



EXISTING	PROPOSED	LCRT FUNDED

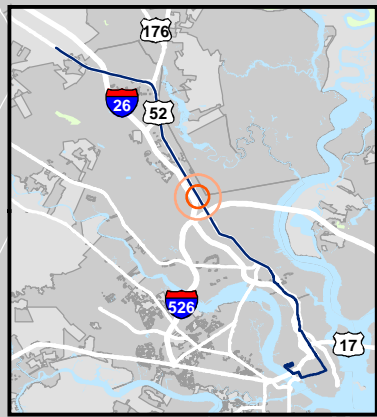
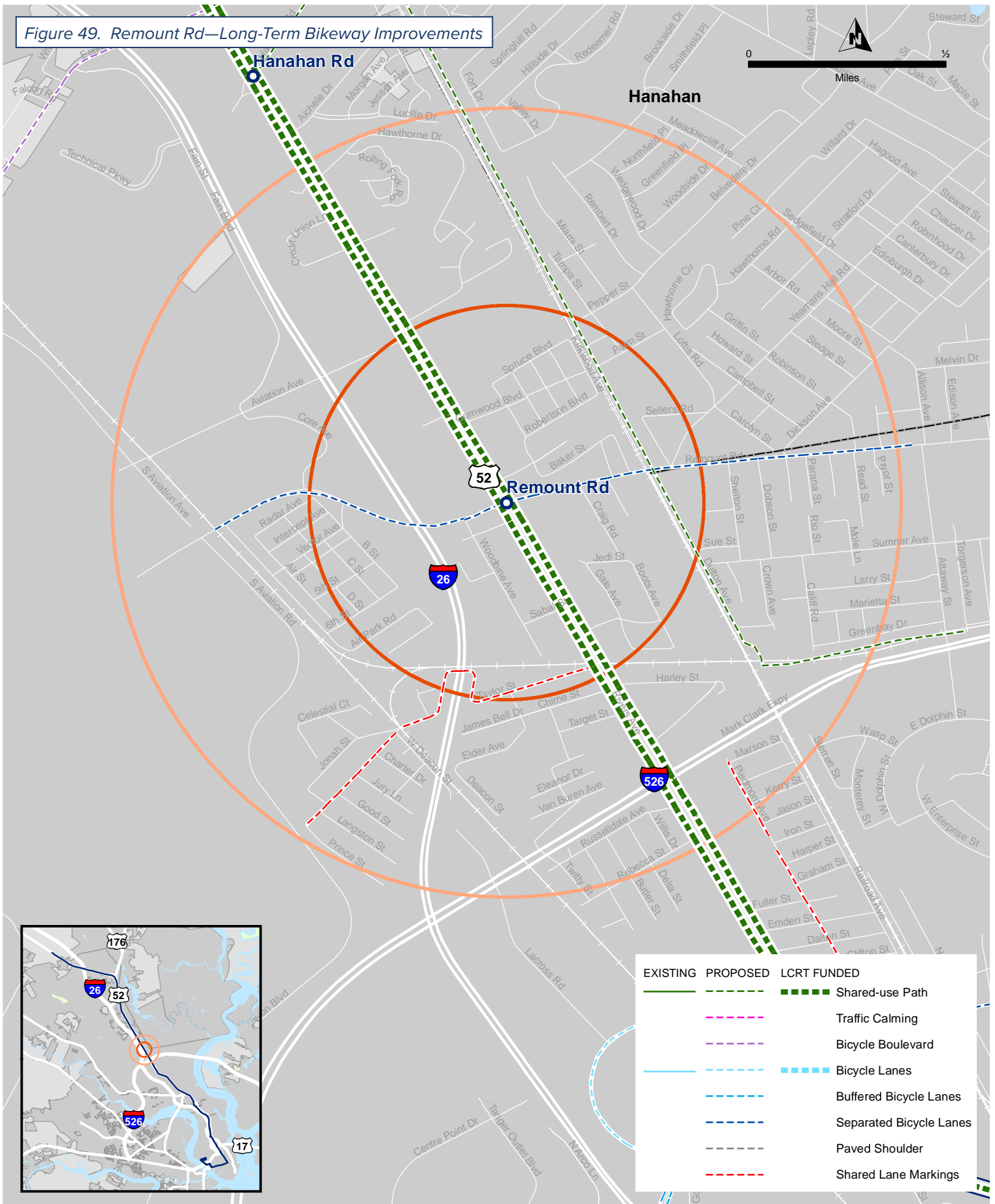
- LCRT Stations
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area
- LCRT Alignment

Lowcountry Rapid Transit
Remount Rd

Data Sources: BCDCOG, SCDOT



Figure 49. Remount Rd—Long-Term Bikeway Improvements



EXISTING	PROPOSED	LCRT FUNDED

- Shared-use Path
- Traffic Calming
- Bicycle Boulevard
- Bicycle Lanes
- Buffered Bicycle Lanes
- Separated Bicycle Lanes
- Paved Shoulder
- Shared Lane Markings

- LCRT Stations
- LCRT Alignment
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area

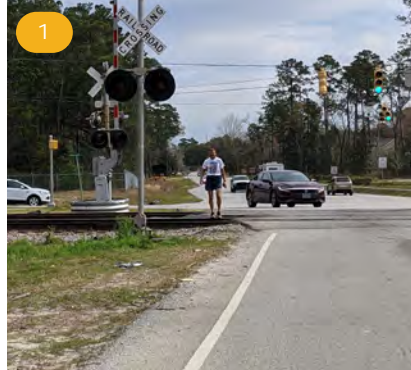


**Lowcountry Rapid Transit
Remount Rd**

Data Sources: BCDCOG, SCDOT

Station 15: Hanahan Rd

Hanahan Rd is one of the few roads in this vicinity that provide access to the LCRT corridor across the railroad parallel to Railroad Ave as well as to the neighborhoods east of it. Sidewalks were recently constructed on one side of the street in front of a new multi-family housing development. The junction of the railroad crossing and intersection between Railroad Ave, Highland Park Rd, and Hanahan Rd/Murray Dr is one of the most crucial crossing locations in the vicinity, as it connects several neighborhoods to the community assets of Hanahan.



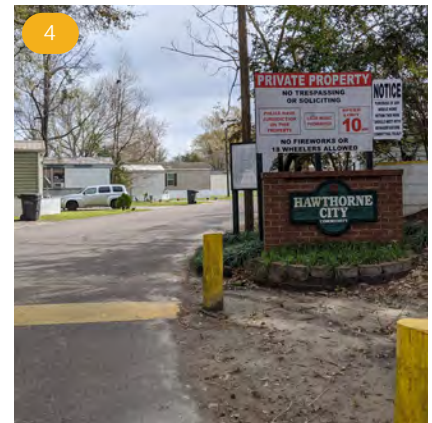
The intersection of Railroad Ave, Highland Park Rd, and Hanahan Rd is an important node in the network as it is in close proximity to a park, library, educational garden, and SC Works. There are currently sidewalk gaps on Hanahan Rd leading up to this intersection.



Driveways along Rivers Ave, such as at the Post Office, could have consolidated and narrowed driveways as well as high-visibility crosswalk markings.

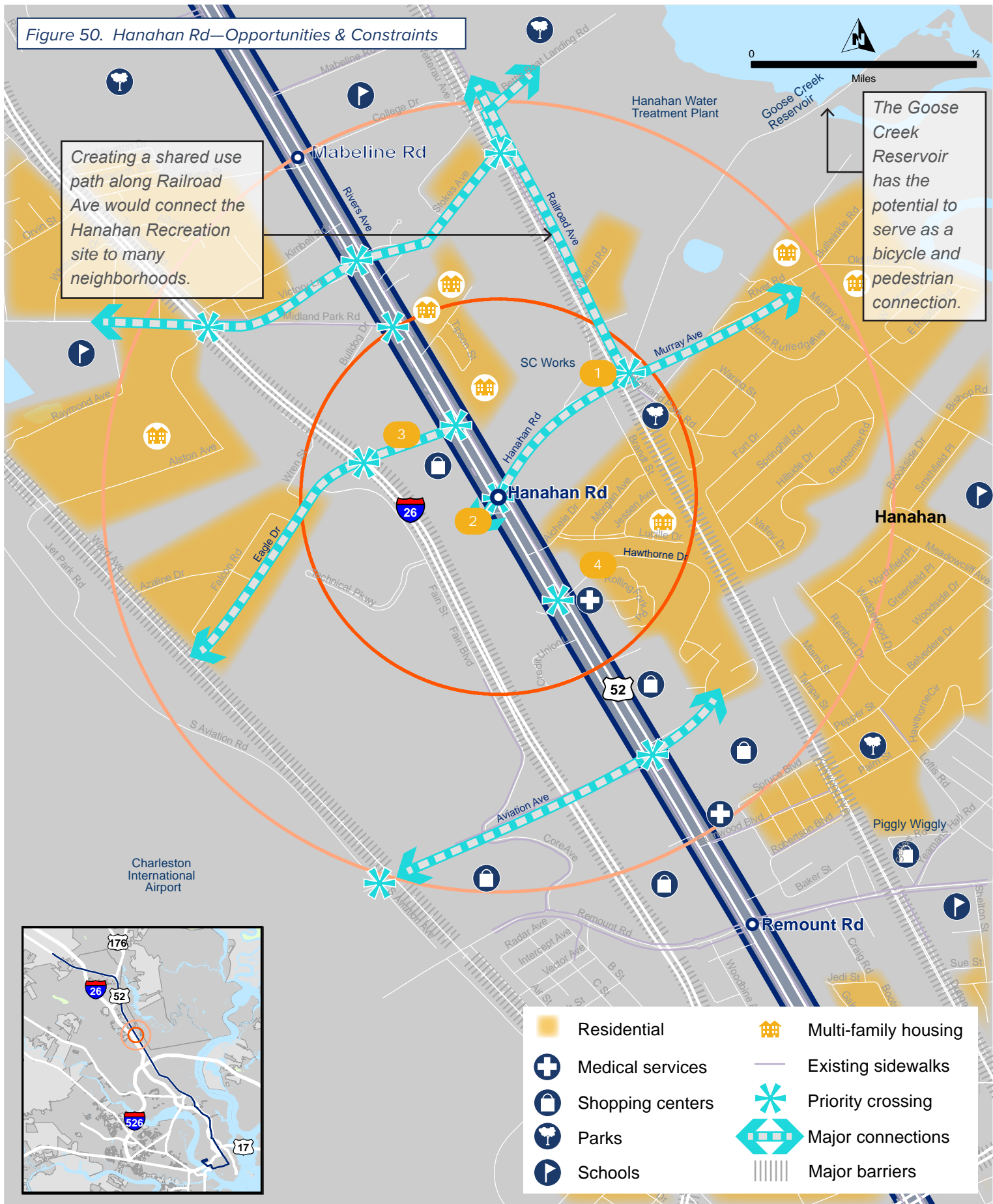


Eagle Dr is a connection to many residences, yet it currently has no sidewalks along it except for a narrow sidewalk on the bridge crossing.



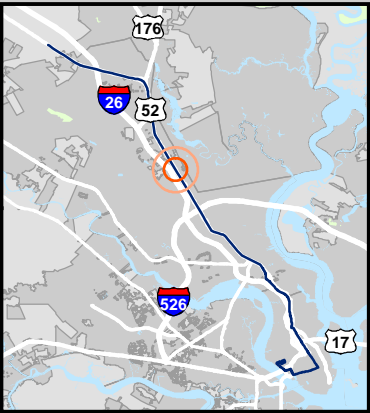
Hawthorne Dr is also a roadway that serves as a major connection between housing and the LCRT. There is currently no pedestrian crossing where it meets Rivers Ave, but the addition of one would fill a gap in crossing locations across the busy road.

Figure 50. Hanahan Rd—Opportunities & Constraints



Creating a shared use path along Railroad Ave would connect the Hanahan Recreation site to many neighborhoods.

The Goose Creek Reservoir has the potential to serve as a bicycle and pedestrian connection.



- Residential
- Multi-family housing
- Medical services
- Existing sidewalks
- Shopping centers
- Priority crossing
- Parks
- Major connections
- Schools
- Major barriers

Path: C:\Egnyte\Shared\PROJECTS\201900-2019-223 Charleston, SC Bud Rapid Transit\GIS\Processes\StationMaps_Base for issues and opps diagrams.mxd - User: KatMaines - Date: 7/28/2020

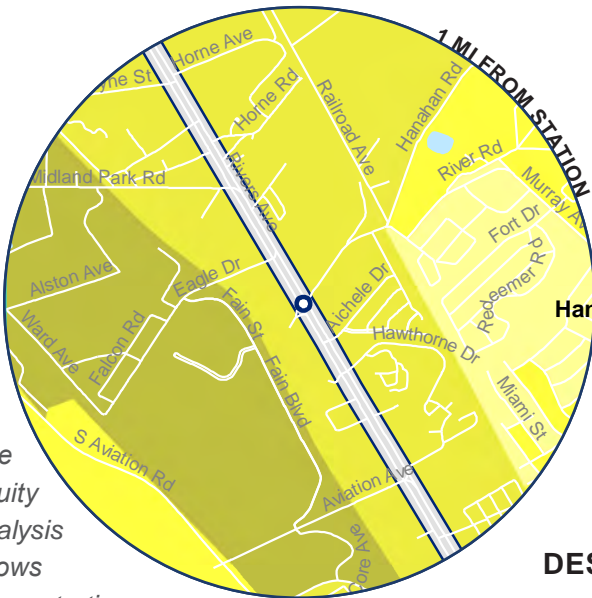
Station 15: Hanahan Rd

Station Area Analysis Diagrams

● LCRT Station █ LCRT Alignment

CONCENTRATIONS OF VULNERABLE POPULATIONS¹

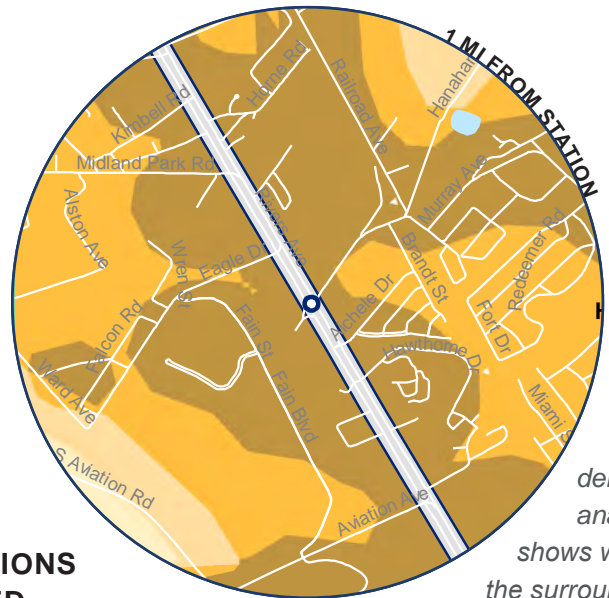
Lower Higher



The equity analysis shows concentrations of vulnerable populations who may rely on active transportation and transit.

RELATIVE DEMAND FOR WALKING AND BIKING¹

Lower Higher



The demand analysis shows where the surrounding land uses encourage walking and biking.

DESTINATIONS SERVED

Fewer More

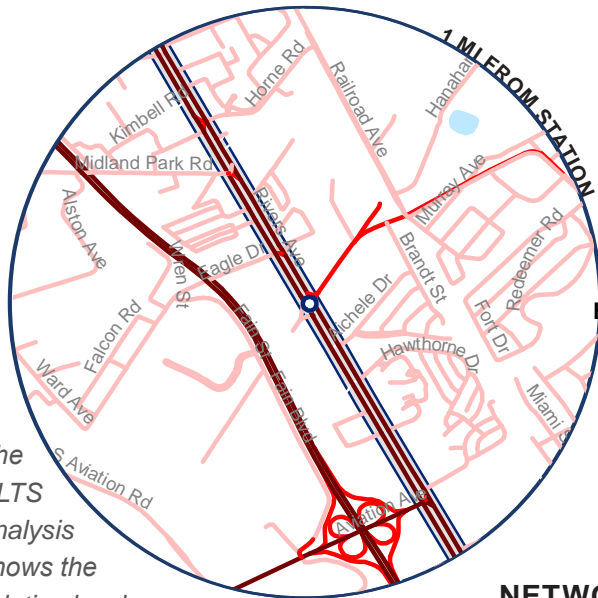


The destinations served map shows which streets provide the most direct access to major destinations.

¹ BCDCOG, Walk Bike BCD

BICYCLIST LEVEL OF TRAFFIC STRESS¹

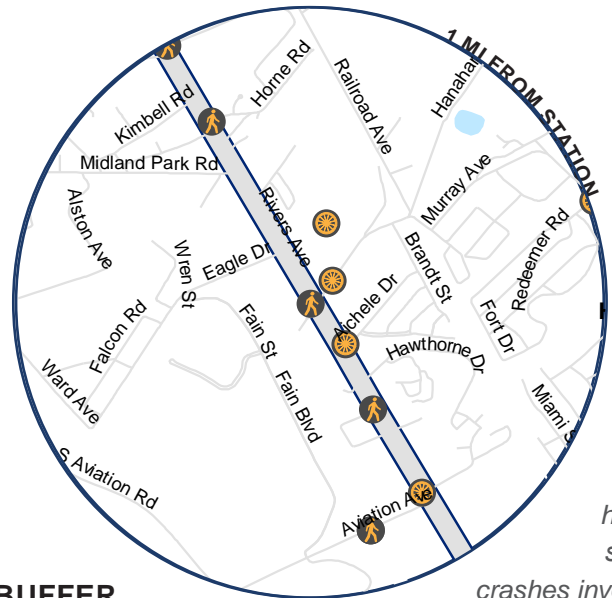
Lower  Higher



The BLTS analysis shows the relative level of stress given existing roadway characteristics.




PEDESTRIAN & BICYCLIST CRASH HISTORY (2010-2014)

 Pedestrian crash  Bicyclist crash



The crash history shows crashes involving pedestrians and bicyclists from 2010-2014.

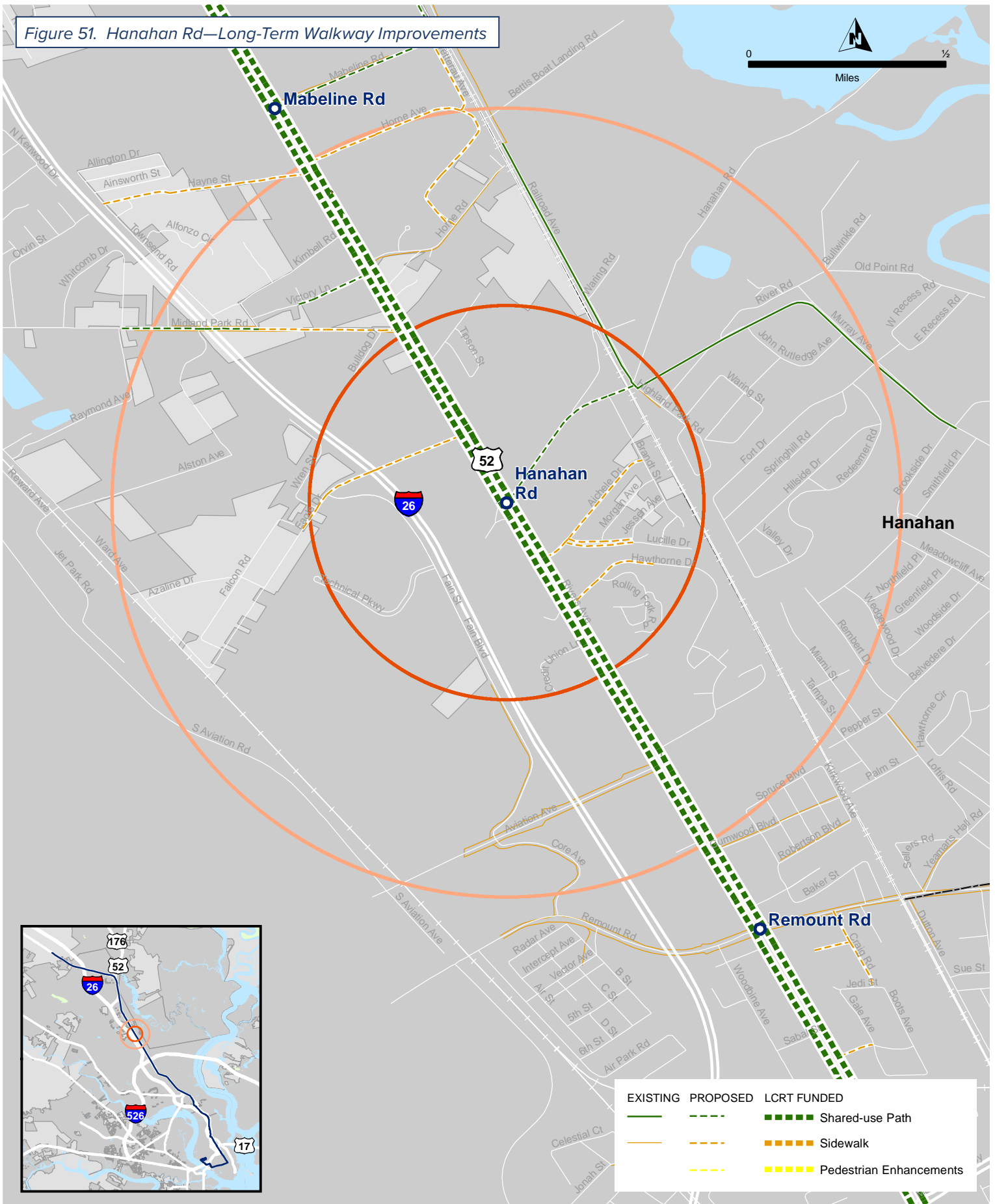
NETWORK BUFFER

 < 1/2 MI  1/2 - 1 MI  1 - 2 MI



The network buffers show the actual trip length from the LCRT station on the existing street grid.

Figure 51. Hanahan Rd—Long-Term Walkway Improvements



EXISTING	PROPOSED	LCRT FUNDED
		Shared-use Path
		Sidewalk
		Pedestrian Enhancements

BCDCOG

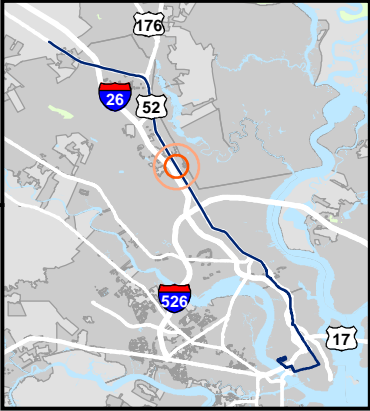
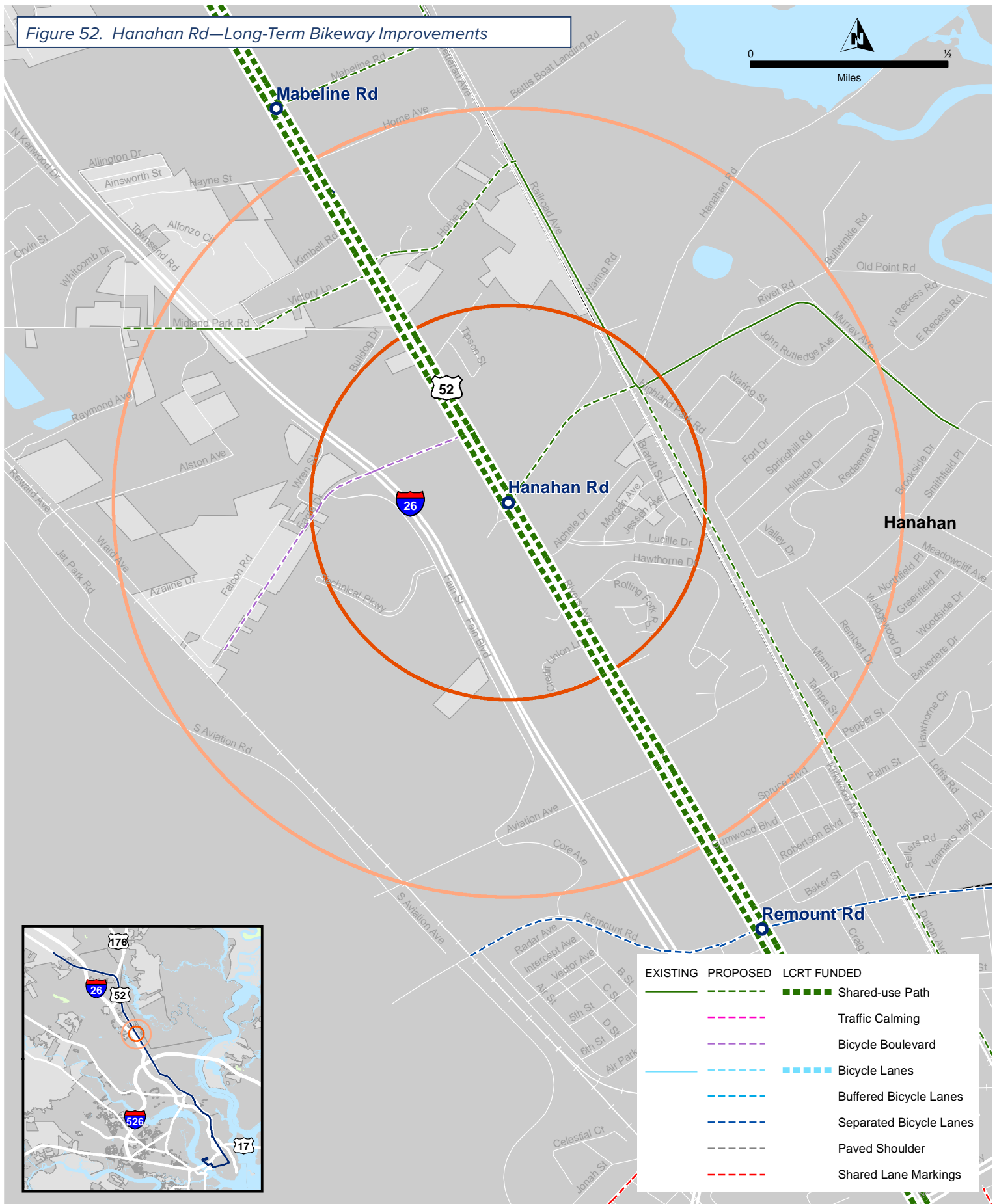
LCRT Stations
 LCRT Alignment

0.5-mile radius of Station Area
 1.0-mile radius of Station Area

**Lowcountry Rapid Transit
Hanahan Rd**

Data Sources: BCDCOG, SCDOT

Figure 52. Hanahan Rd—Long-Term Bikeway Improvements



LCRT Stations
 LCRT Alignment

0.5-mile radius of Station Area
 1.0-mile radius of Station Area

**Lowcountry Rapid Transit
Hanahan Rd**

Data Sources: BCDCOG, SCDOT

Station 16: Mabeline Rd

This station vicinity, around Trident Technical College, is home to several important community elements. There are many neighborhoods and multi-family housing units within one mile. There is a large parcel of land dedicated to Hanahan Park facilities and there are several grade schools in the area.

The street grid on the campus and surrounding areas is circuitous and disconnected. Improvements should be made to support students walking and biking to and from campus, such as installing sidewalks connecting to nearby multi-family housing. The key roads in the vicinity include Midland Park Rd, Stokes Ave, College Dr, and Railroad Ave. These roads serve as important connections throughout Hanahan and to the LCRT corridor.



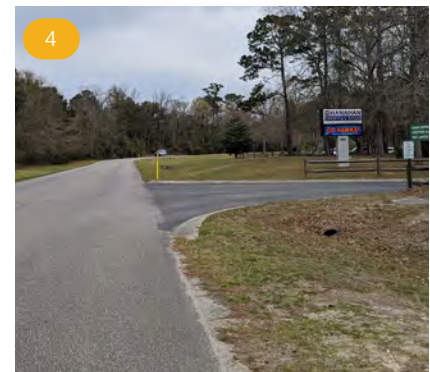
The main roads at Trident College support many parking lots and are generally calm roads. However, there is a lack of designated and accessible pedestrian crossing locations. Bicycle facilities for the campus can be accommodated with shared lane markings.



There is currently no direct access from College Dr to the Hanahan Recreation facilities. Creating this connection, as well as improving crossing locations on Mabeline Rd and Stokes Ave, would create access for college students and the community.

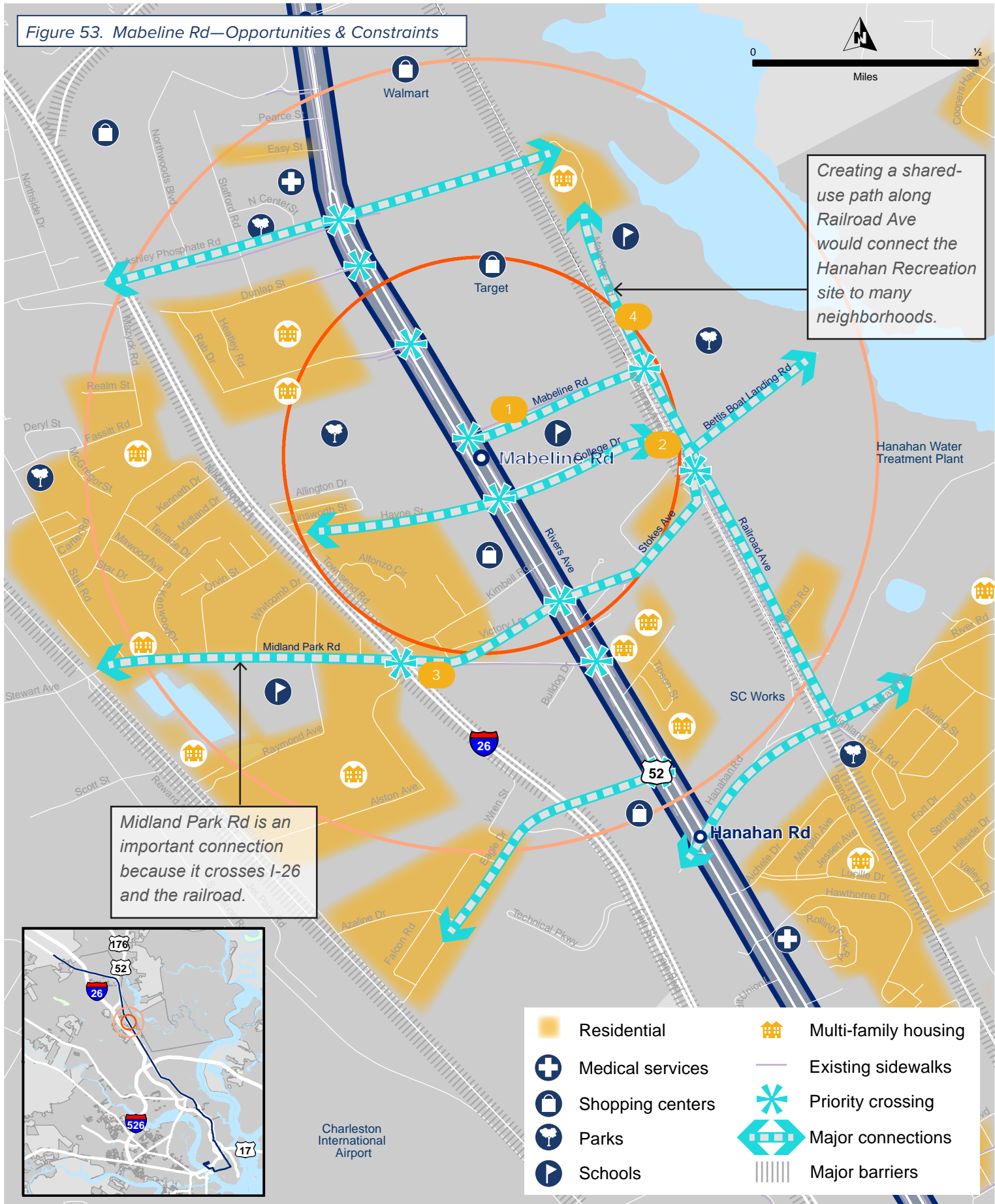


Midland Park Rd serves as an important connection for several neighborhoods and schools in the vicinity of the LCRT. The crossing underneath I-26 on Midland Park Road has potential to be transformed into a walk- and bicycle-friendly space. With two travel lanes within a 45-foot-wide right of way, there is room within the existing right of way to accommodate bicycle lanes and wider sidewalks.



Creating a shared-use path along Railroad Ave would connect the Hanahan Recreation site to many neighborhoods, as well as to Hanahan Elementary School and the Hanahan Public Library.

Figure 53. Mabeline Rd—Opportunities & Constraints



Creating a shared-use path along Railroad Ave would connect the Hanahan Recreation site to many neighborhoods.

Midland Park Rd is an important connection because it crosses I-26 and the railroad.

- Residential
- Multi-family housing
- Medical services
- Shopping centers
- Parks
- Schools
- Existing sidewalks
- Priority crossing
- Major connections
- Major barriers



- LCRT Alignment
- LCRT Stations

- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area

Lowcountry Rapid Transit
Mabeline Rd

Data Sources: BCDCOG, SCDOT

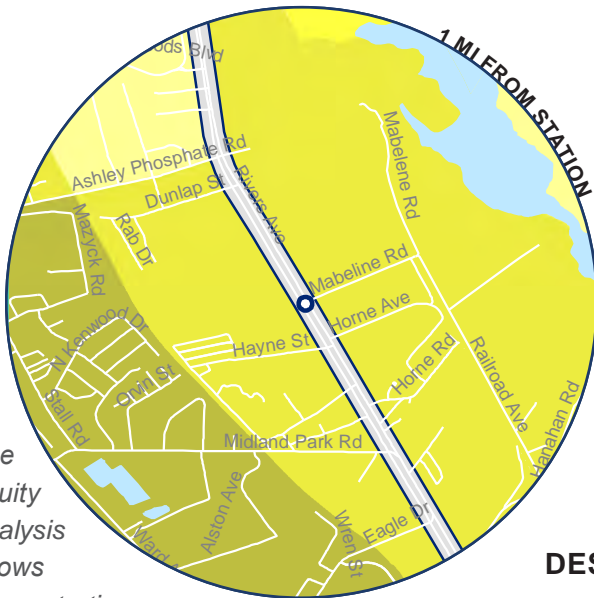
Station 16: Mabeline Rd

Station Area Analysis Diagrams

● LCRT Station — LCRT Alignment

CONCENTRATIONS OF VULNERABLE POPULATIONS¹

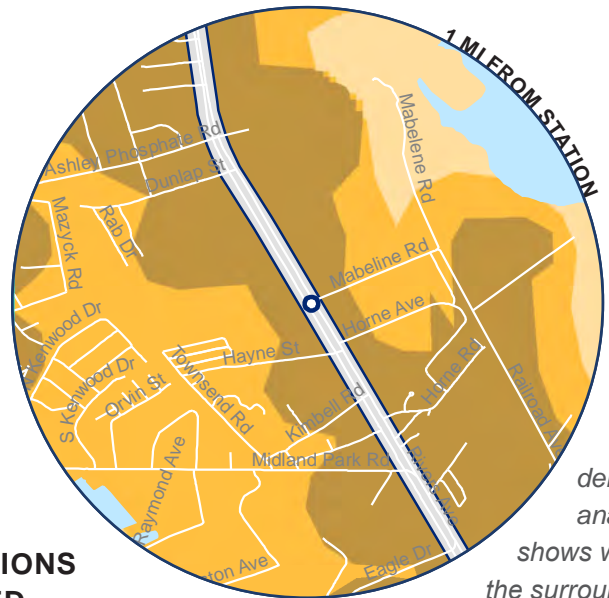
Lower Higher



The equity analysis shows concentrations of vulnerable populations who may rely on active transportation and transit.

RELATIVE DEMAND FOR WALKING AND BIKING¹

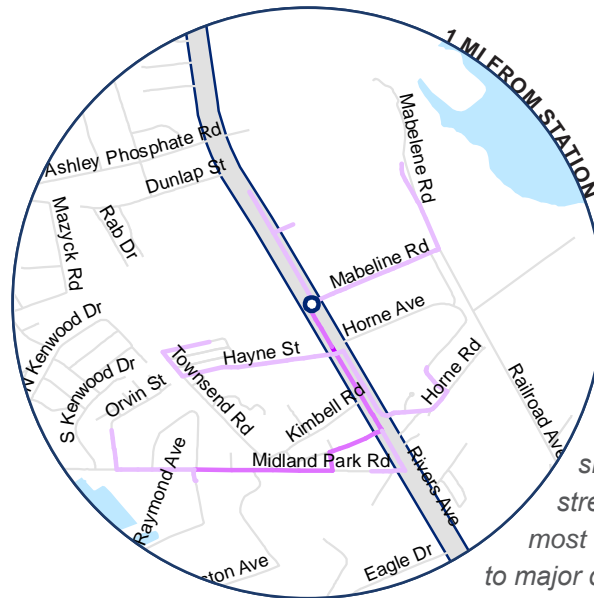
Lower Higher



The demand analysis shows where the surrounding land uses encourage walking and biking.

DESTINATIONS SERVED

Fewer More

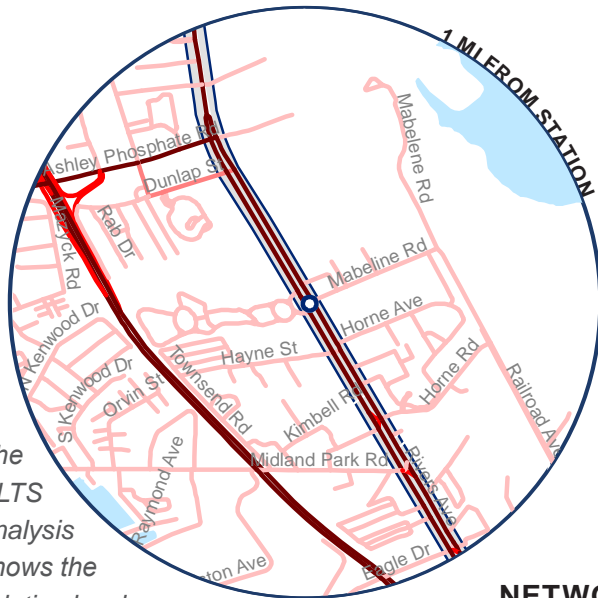


The destinations served map shows which streets provide the most direct access to major destinations.

¹ BCDCOG, Walk Bike BCD

BICYCLIST LEVEL OF TRAFFIC STRESS¹

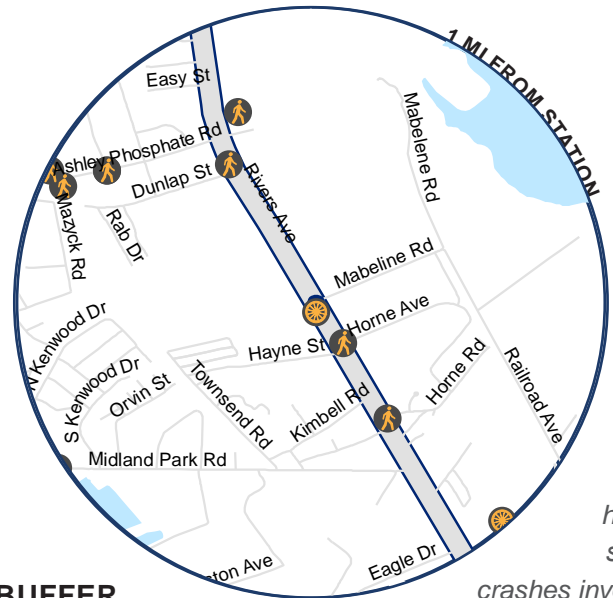
Lower  Higher



The BLTS analysis shows the relative level of stress given existing roadway characteristics.




PEDESTRIAN & BICYCLIST CRASH HISTORY (2010-2014)

 Pedestrian crash  Bicyclist crash



The crash history shows crashes involving pedestrians and bicyclists from 2010-2014.

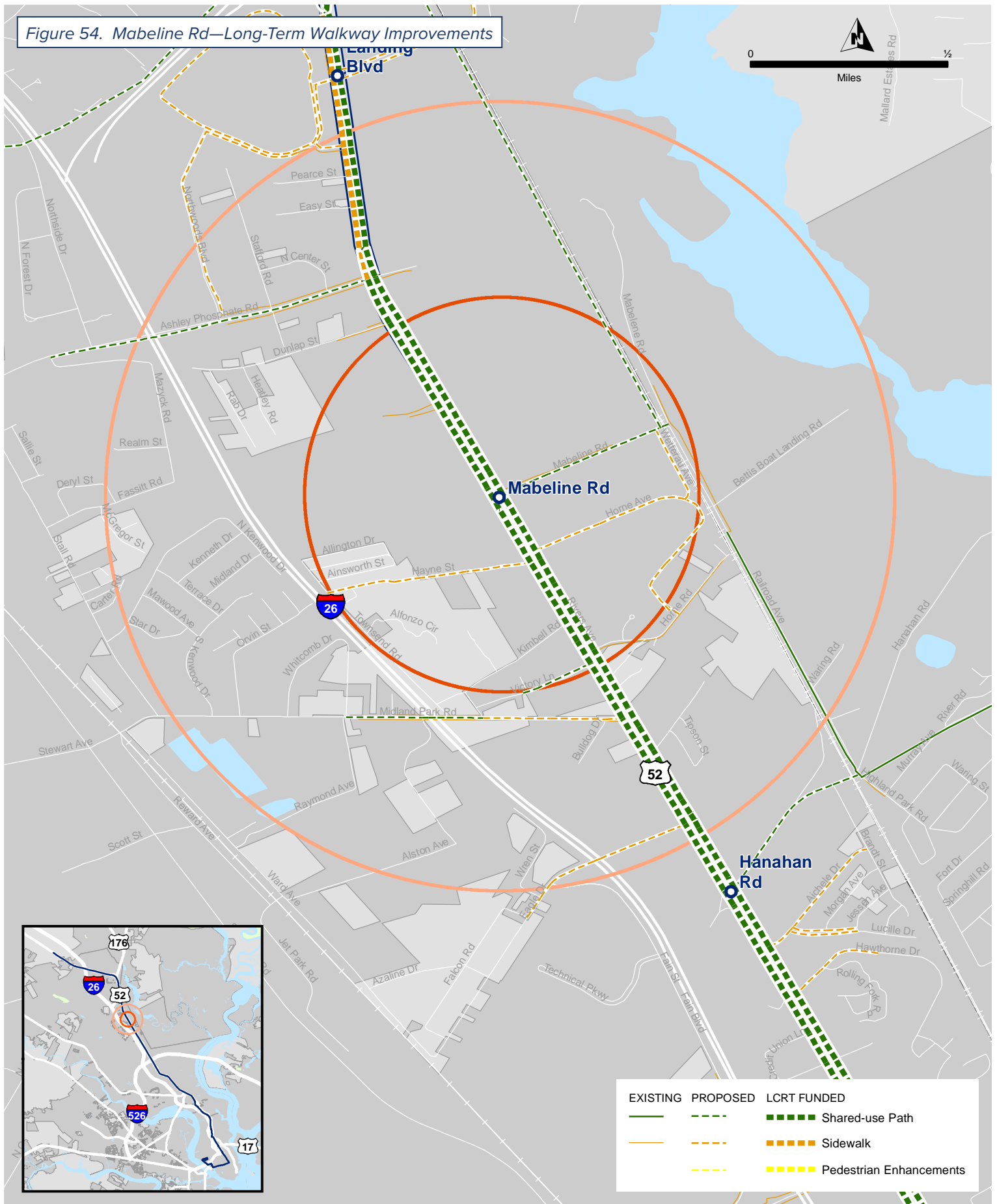
NETWORK BUFFER

 < 1/2 MI  1/2 - 1 MI  1 - 2 MI



The network buffers show the actual trip length from the LCRT station on the existing street grid.

Figure 54. Mabeline Rd—Long-Term Walkway Improvements



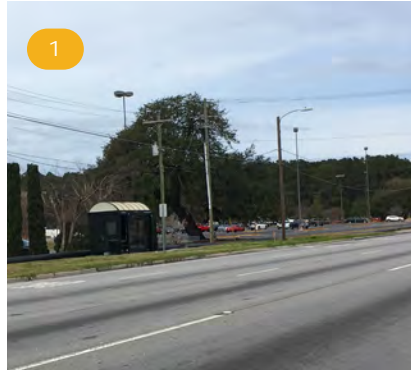
- LCRT Stations
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area
- LCRT Alignment

Lowcountry Rapid Transit
Mabeline Rd

Data Sources: BCDCOG, SCDOT

Station 17: Eagle Landing Blvd

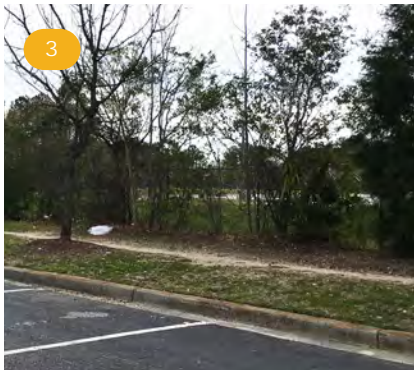
Northwoods Mall is a hub for commercial activity and obtaining necessities, yet several gaps in the pedestrian and bicyclist system make it difficult to safely access these amenities. Many people can be observed walking and exercising along Rivers Ave, but streets feeding into this road lack sidewalks. The development pattern has produced mega-blocks, forcing much of the foot traffic into the parking lots. Creating safe and comfortable walkways and bikeways will create a transit-oriented environment that supports the LCRT service.



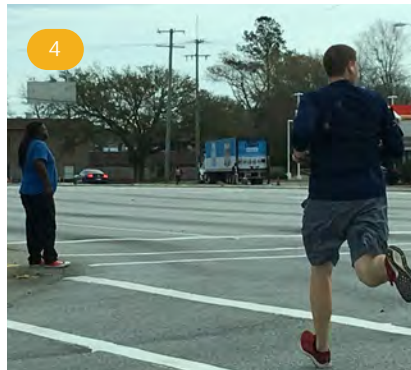
The current bus stop adjacent to the mall is set back from the intersection, 200 feet from the nearest crossing point. This may encourage transit users to cross mid-block if they are trying to catch the bus or avoid out-of-direction travel.



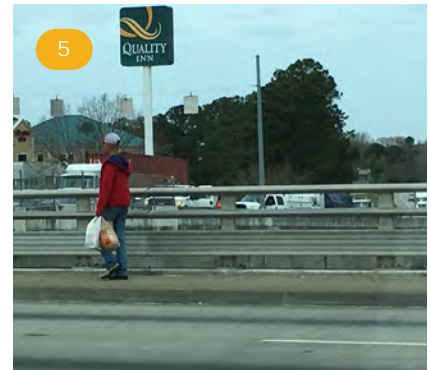
This intersection of Rivers Ave and Eagle Landing Blvd, connecting Northwoods Mall to local neighborhoods, is extremely wide and doesn't accommodate pedestrian crossings at all legs. Incorporating median refuge islands and high-visibility crosswalk markings would create a safer and more comfortable crossing.



Foot traffic has created an informal footpath adjacent to the Walmart parking lot, potentially leading from Rivers Ave to the neighborhood across the railroad.

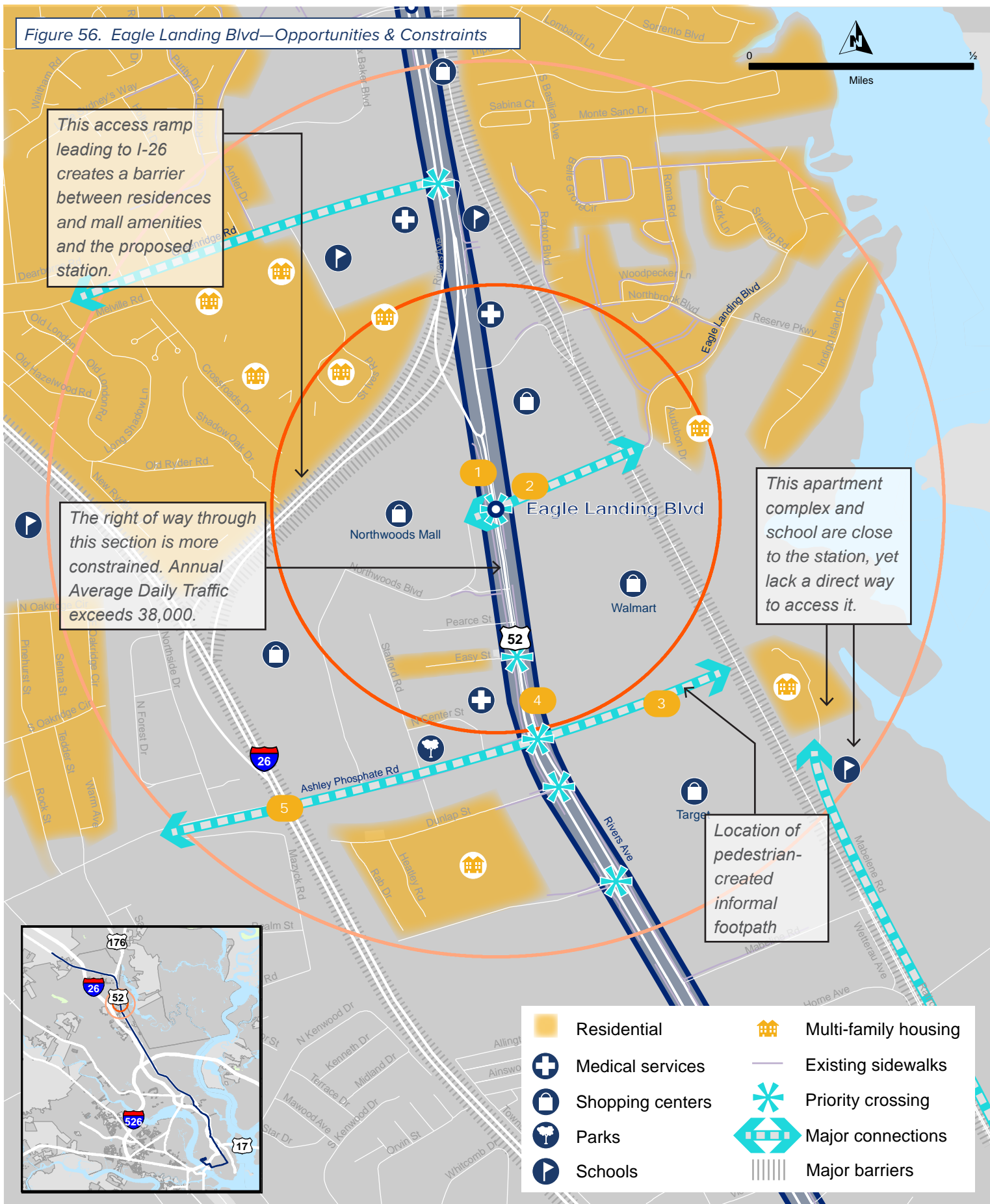


Many people were observed using Rivers Ave to access amenities and exercise.



Ashley Phosphate Rd also supports many walking trips per day. This road leads from the mall to the large neighborhoods along Tedder St and Rock St.

Figure 56. Eagle Landing Blvd—Opportunities & Constraints



This access ramp leading to I-26 creates a barrier between residences and mall amenities and the proposed station.

The right of way through this section is more constrained. Annual Average Daily Traffic exceeds 38,000.

This apartment complex and school are close to the station, yet lack a direct way to access it.

Location of pedestrian-created informal footpath

- Residential
- Multi-family housing
- + Medical services
- + Existing sidewalks
- 🛒 Shopping centers
- ✳️ Priority crossing
- 🌳 Parks
- 🏠 Major connections
- 🎓 Schools
- ||||| Major barriers



LCRT Alignment
 LCRT Stations

0.5-mile radius of Station Area
 1.0-mile radius of Station Area

Lowcountry Rapid Transit
Eagle Landing Blvd

Data Sources: BCDCOG, SCDOT

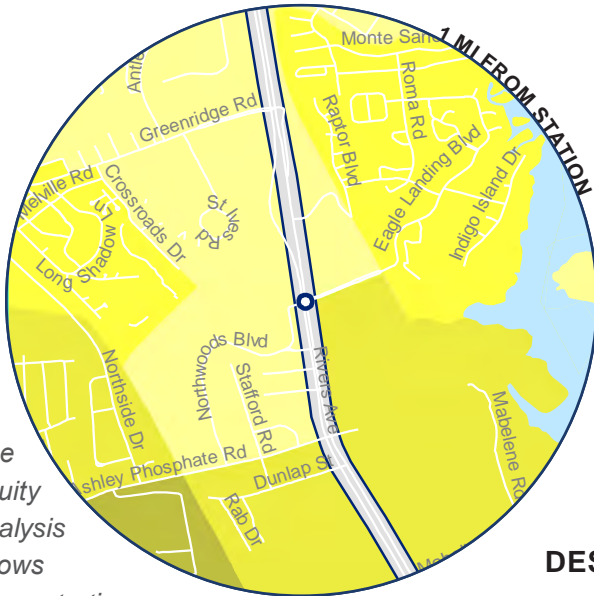
Station 17: Eagle Landing Blvd

Station Area Analysis Diagrams

● LCRT Station █ LCRT Alignment

CONCENTRATIONS OF VULNERABLE POPULATIONS¹

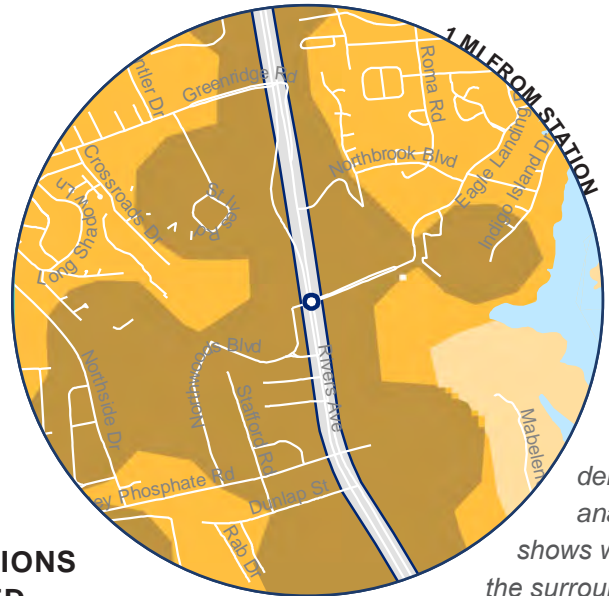
Lower Higher



The equity analysis shows concentrations of vulnerable populations who may rely on active transportation and transit.

RELATIVE DEMAND FOR WALKING AND BIKING¹

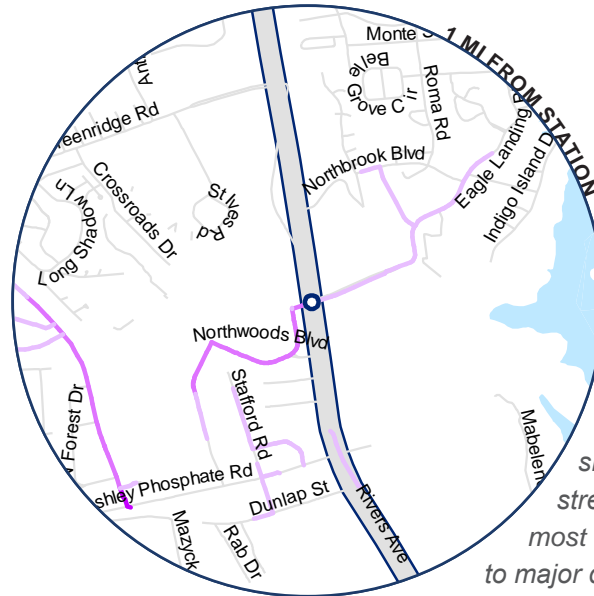
Lower Higher



The demand analysis shows where the surrounding land uses encourage walking and biking.

DESTINATIONS SERVED

Fewer More

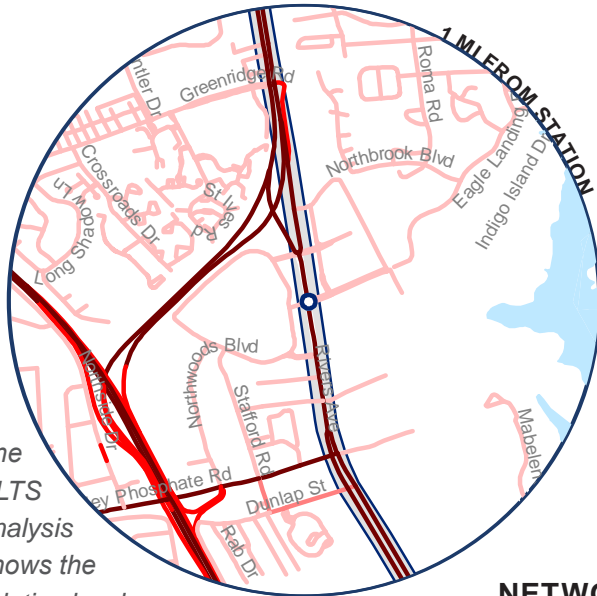


The destinations served map shows which streets provide the most direct access to major destinations.

¹ BCDCOG, Walk Bike BCD

BICYCLIST LEVEL OF TRAFFIC STRESS¹

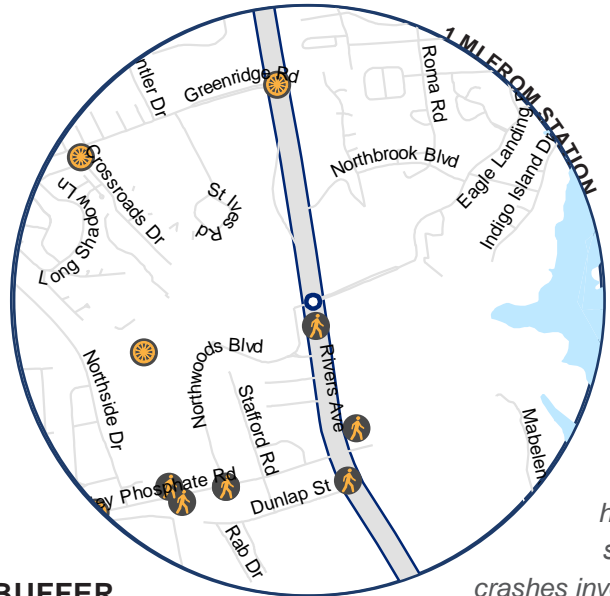
Lower  Higher



The BLTS analysis shows the relative level of stress given existing roadway characteristics.

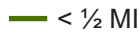
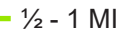
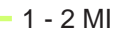
PEDESTRIAN & BICYCLIST CRASH HISTORY (2010-2014)

 Pedestrian crash  Bicyclist crash



The crash history shows crashes involving pedestrians and bicyclists from 2010-2014.

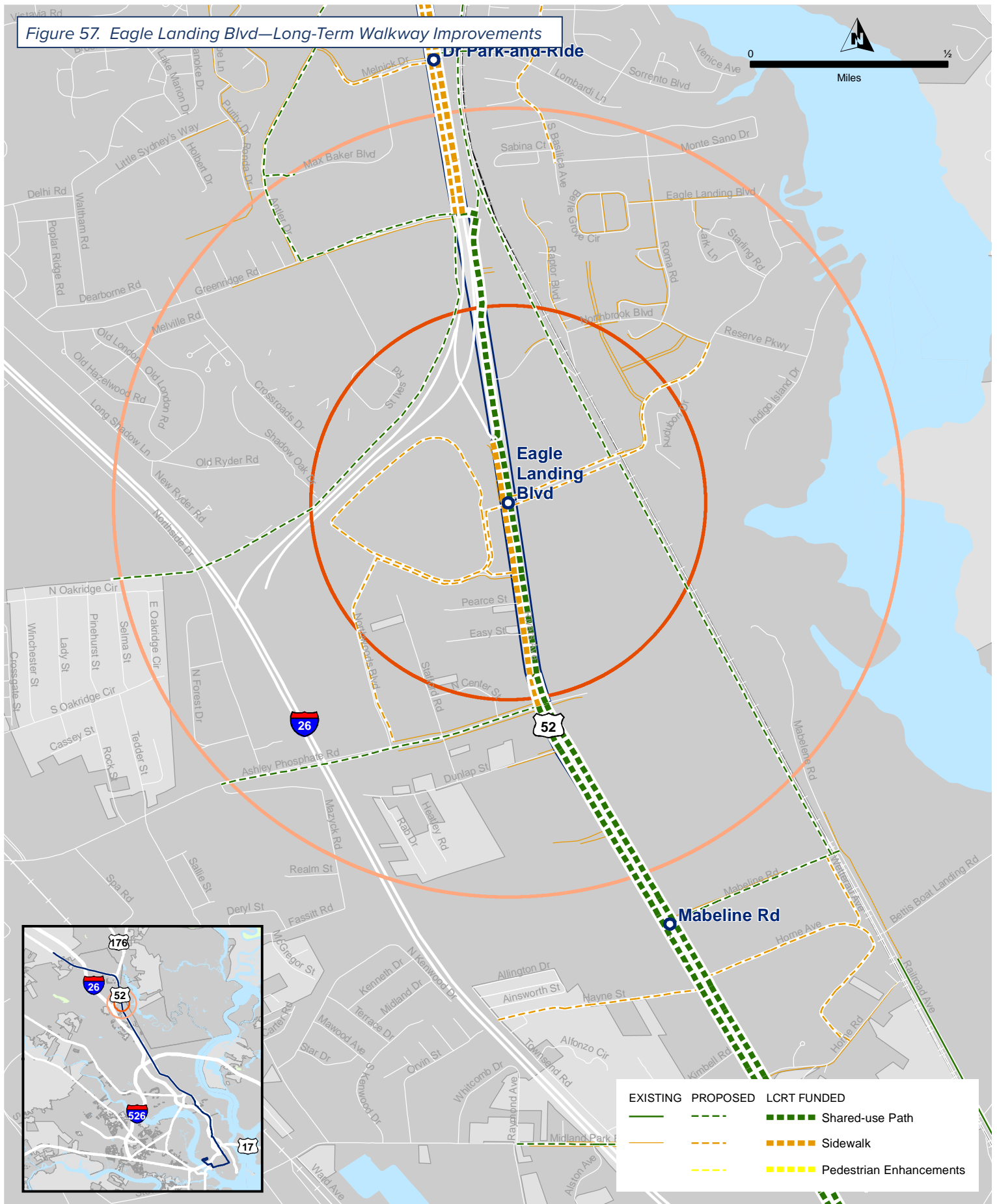
NETWORK BUFFER

 < 1/2 MI  1/2 - 1 MI  1 - 2 MI



The network buffers show the actual trip length from the LCRT station on the existing street grid.

Figure 57. Eagle Landing Blvd—Long-Term Walkway Improvements

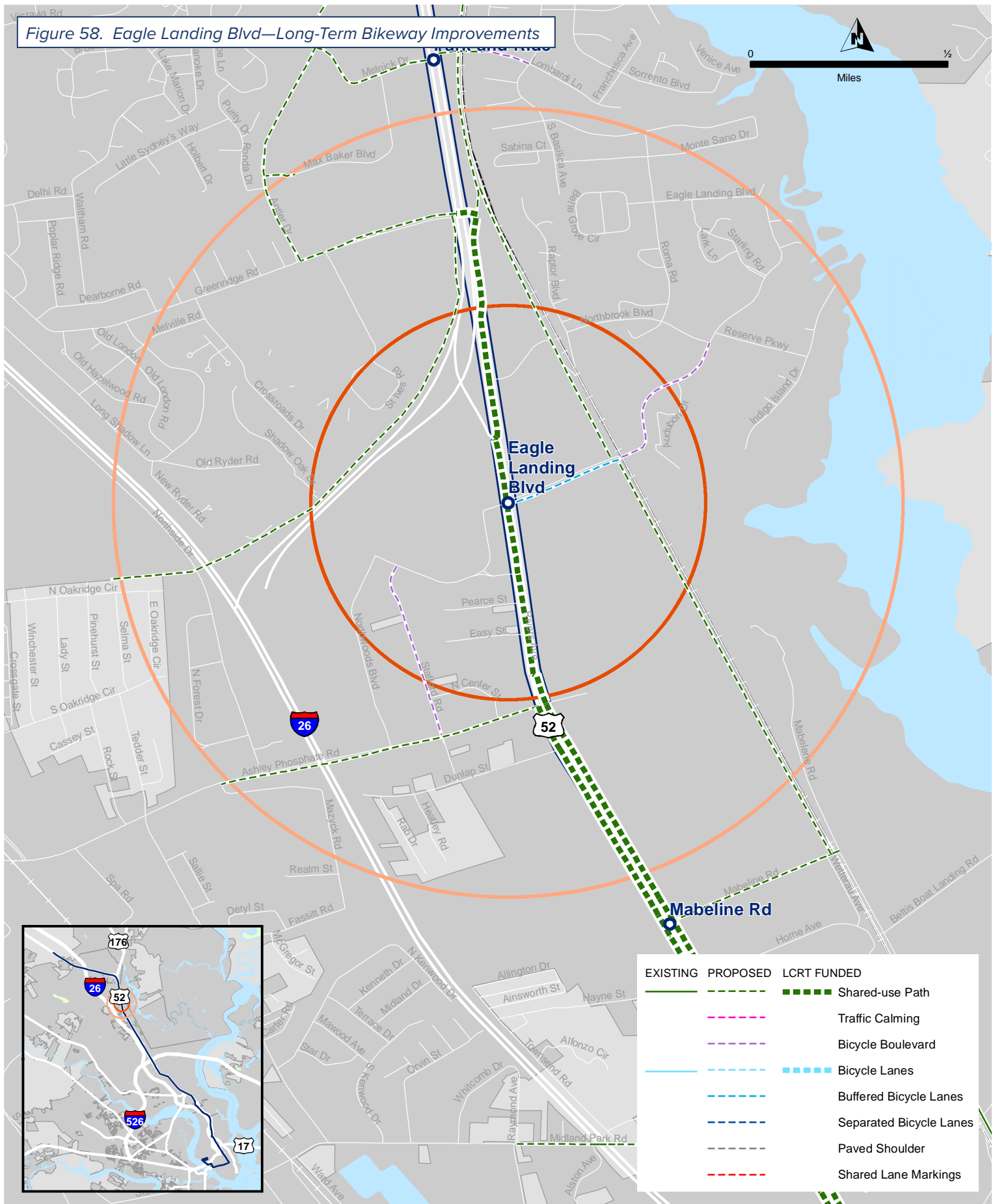


- LCRT Stations
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area
- LCRT Alignment

Lowcountry Rapid Transit Eagle Landing Blvd

Data Sources: BCDCOG, SCDOT

Figure 58. Eagle Landing Blvd—Long-Term Bikeway Improvements



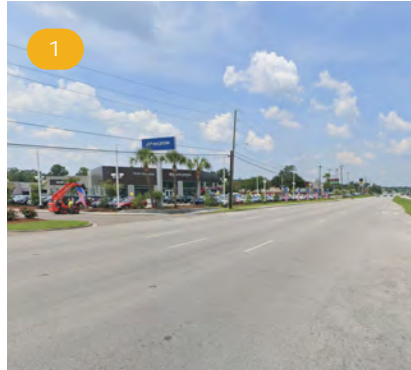
- LCRT Stations
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area
- LCRT Alignment

**Lowcountry Rapid Transit
Eagle Landing Blvd**

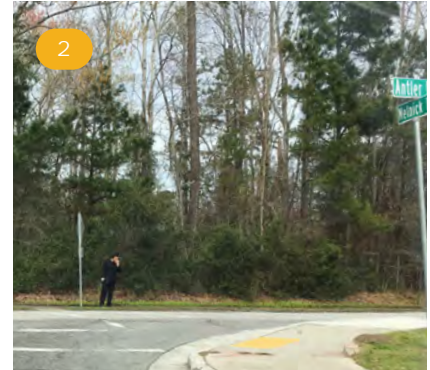
Data Sources: BCDCOG, SCDOT

Station 18: Melnick Dr Park-and-Ride

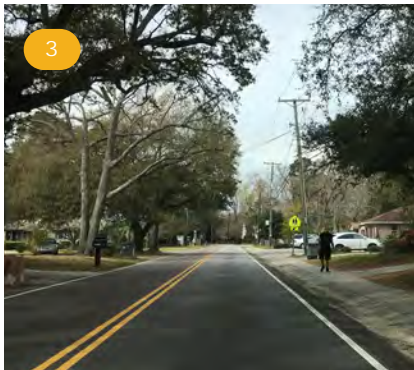
This section of Rivers Ave serves as an important connection for several neighborhoods, schools, and businesses. It is also an important node for transit riders, due to the park-and-ride developed next to the new T-Mobile office/ call center. Ensuring that key intersections and the connections leading to them are accessible and safe are crucial to serving the largest amount of people possible. Should these improvements be made, this node could see many more people encouraged to utilize the LCRT service.



The intersection at Melnick Dr consists of wide travel lanes on each leg, and contains no crosswalks or pedestrian refuge islands. Adding these elements would improve the connections of this node and the potential station area.



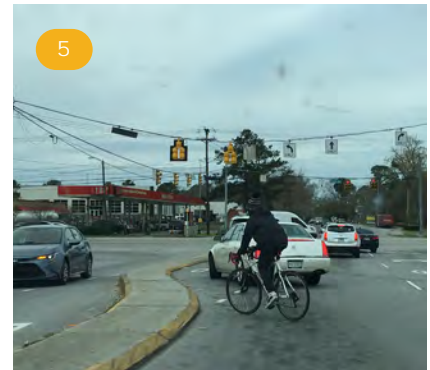
The existing bus stop at the intersection of Melnick Dr and Antler Dr is adjacent to the park-and-ride, a school, and several neighborhoods. Enhancing the intersection's crosswalks and traffic calming elements, as well as adding tactile warning strips to all ramps, would create a safer environment for those connecting to the surrounding resources.



Otranto Rd serves as the primary access route to several schools and neighborhoods. There is a sidewalk on the north side of the street, but it is narrow and in need of maintenance. Adding a sidewalk to the south side of the street and improving crossing conditions would make it safer and more comfortable to walk on Otranto Rd.

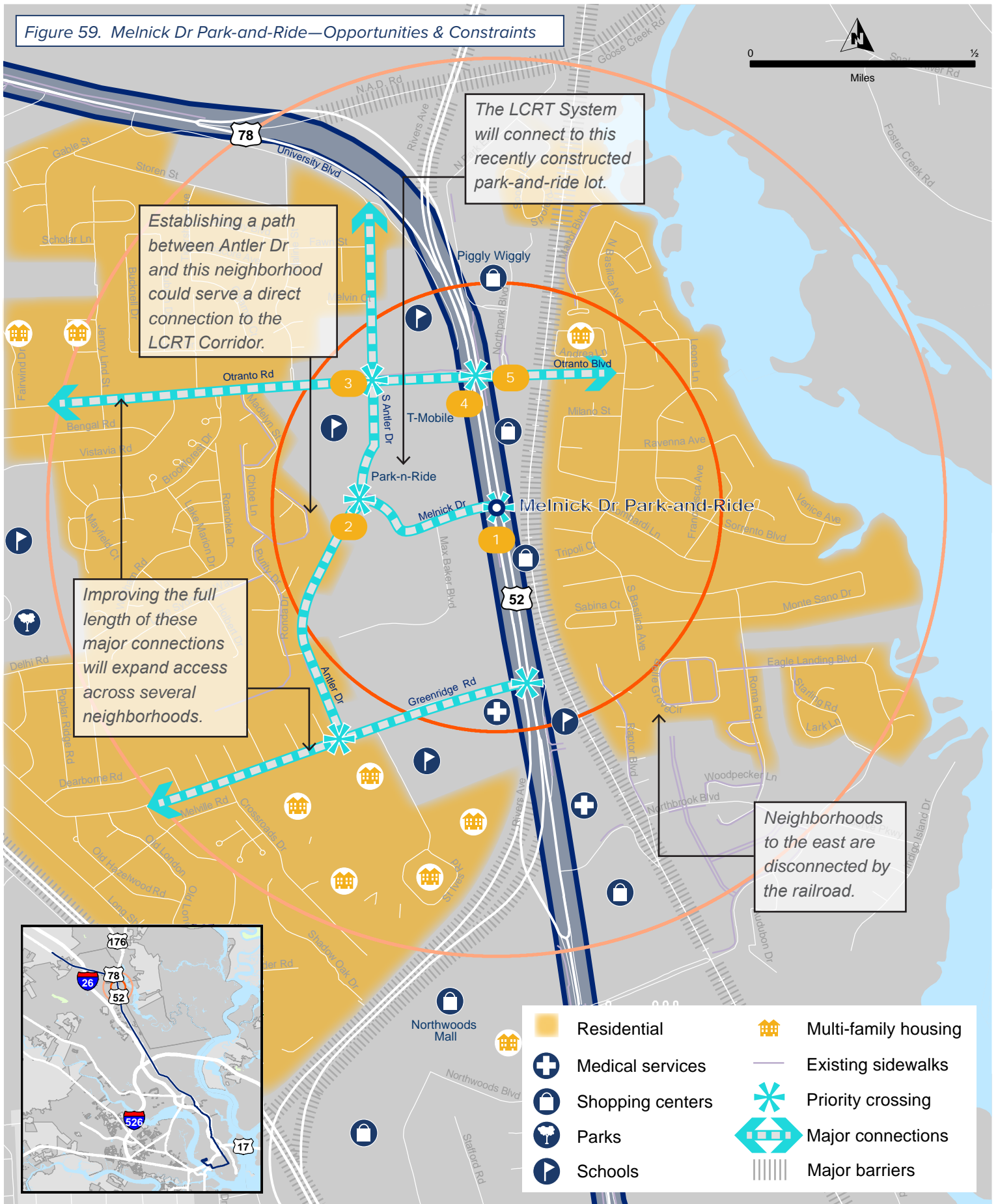


The intersection of Otranto Rd and Rivers Ave is not currently ADA accessible due to slope issues, queuing areas that are too small, and a lack of high-visibility crosswalk markings. In addition, only a small stretch of disconnected sidewalk connect east from Rivers Ave. Addressing these issues would increase the accessibility of the neighborhoods connecting to Otranto Rd.



This photo shows a bicyclist that is about to cross over the median and enter the adjacent parking lot. It displays an example of how bicyclists choose to maneuver the area, given the lack of intuitive and/or dedicated bicycle routes.

Figure 59. Melnick Dr Park-and-Ride—Opportunities & Constraints



- LCRT Alignment
- LCRT Stations
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area

Lowcountry Rapid Transit
Melnick Dr Park-and-Ride

Data Sources: BCDCOG, SCDOT

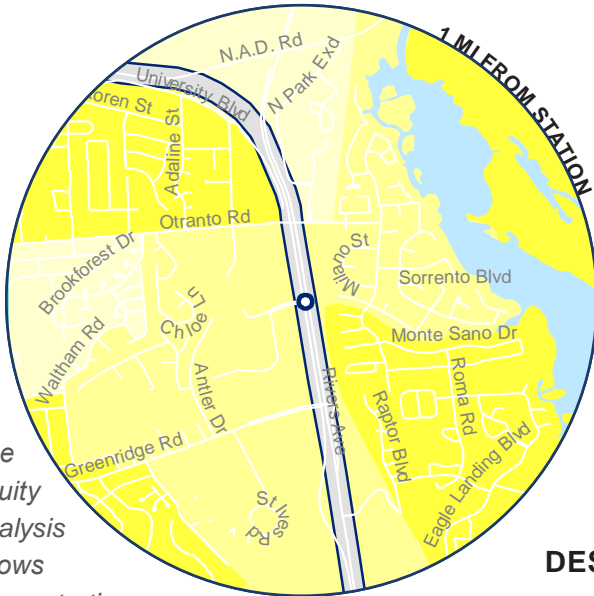
Station 18: Melnick Dr Park-and-Ride

Station Area Analysis Diagrams

● LCRT Station █ LCRT Alignment

CONCENTRATIONS OF VULNERABLE POPULATIONS¹

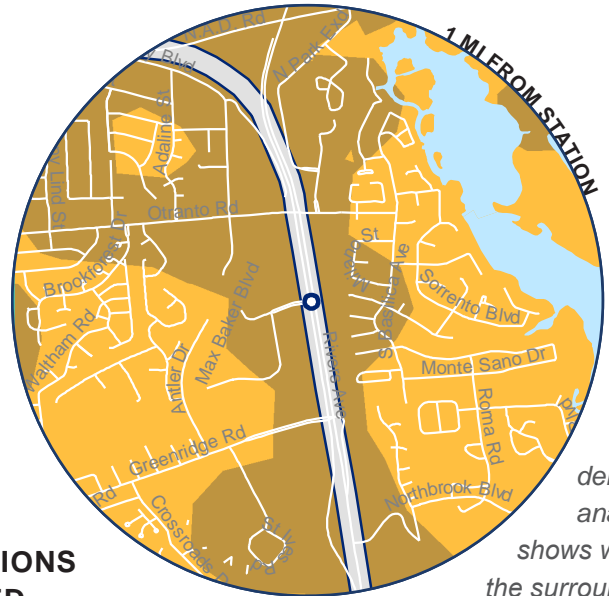
Lower Higher



The equity analysis shows concentrations of vulnerable populations who may rely on active transportation and transit.

RELATIVE DEMAND FOR WALKING AND BIKING¹

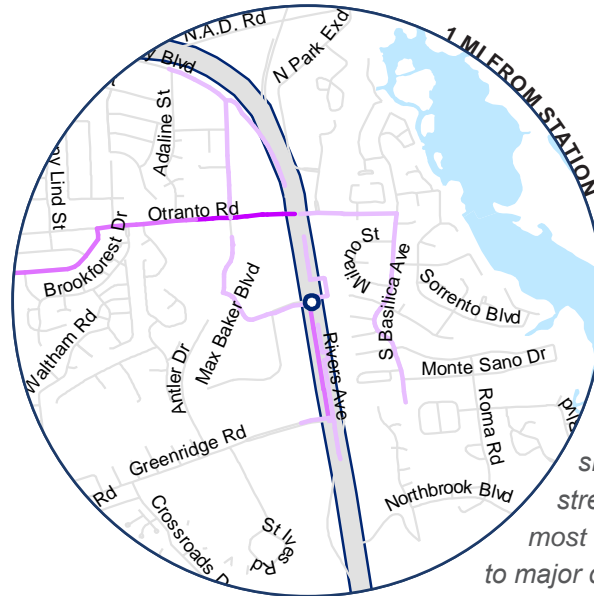
Lower Higher



The demand analysis shows where the surrounding land uses encourage walking and biking.

DESTINATIONS SERVED

Fewer More

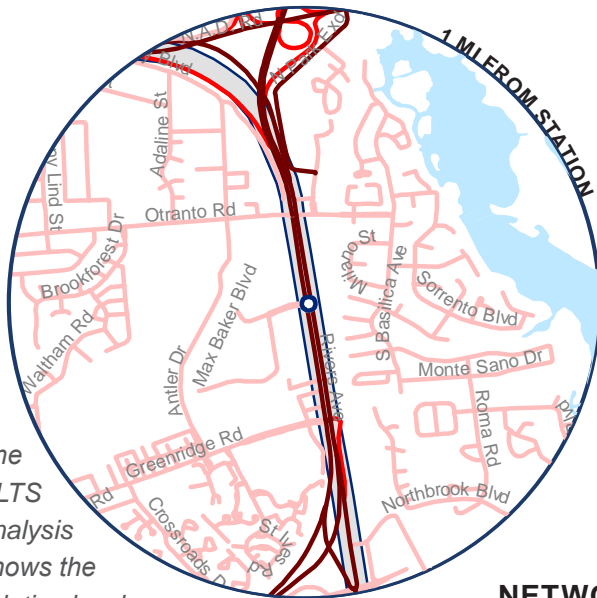


The destinations served map shows which streets provide the most direct access to major destinations.

¹ BCDCOG, Walk Bike BCD

BICYCLIST LEVEL OF TRAFFIC STRESS¹

Lower  Higher



The BLTS analysis shows the relative level of stress given existing roadway characteristics.




PEDESTRIAN & BICYCLIST CRASH HISTORY (2010-2014)

 Pedestrian crash  Bicyclist crash



The crash history shows crashes involving pedestrians and bicyclists from 2010-2014.

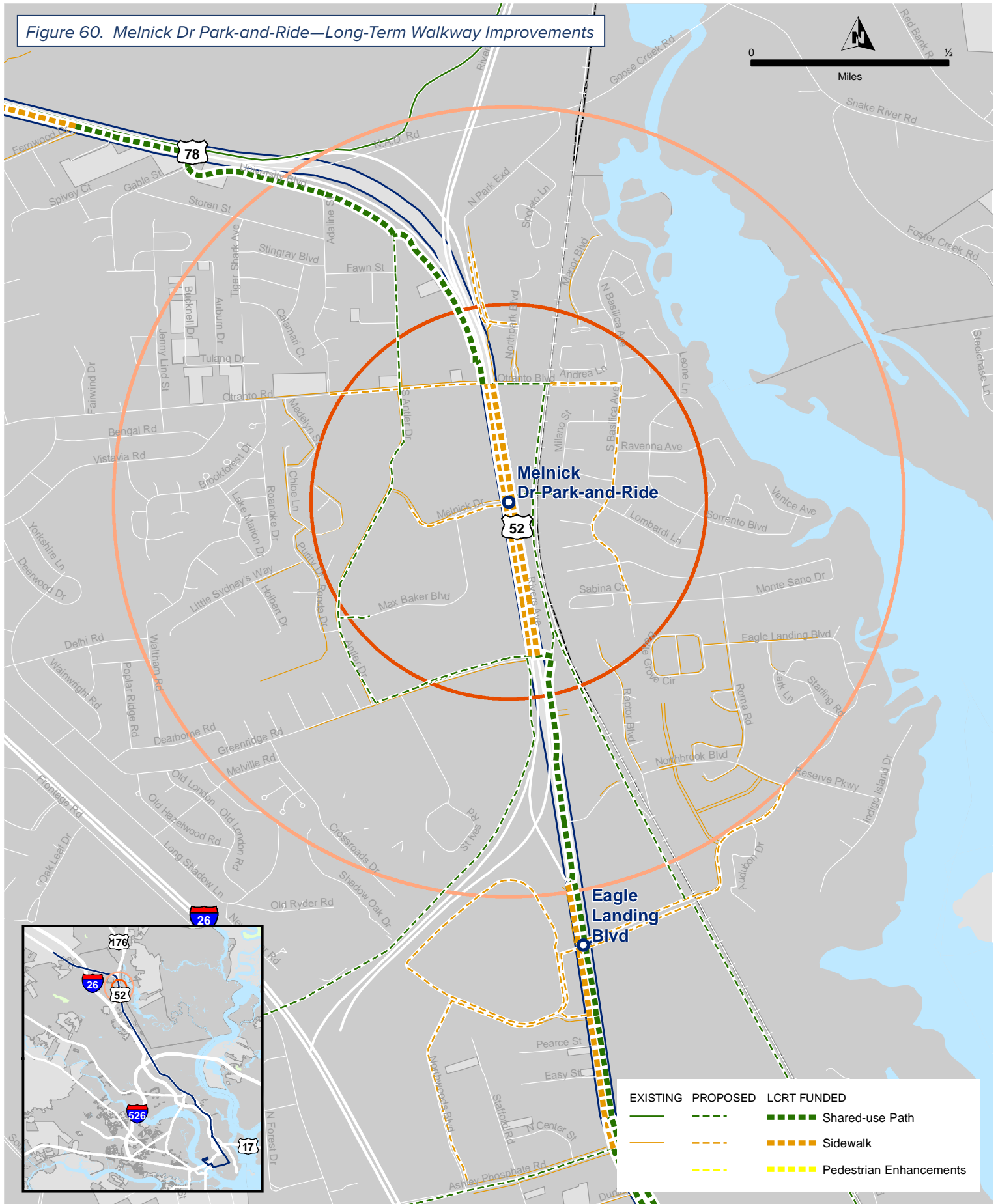
NETWORK BUFFER

 < 1/2 MI  1/2 - 1 MI  1 - 2 MI

The network buffers show the actual trip length from the LCRT station on the existing street grid.



Figure 60. Melnick Dr Park-and-Ride—Long-Term Walkway Improvements



EXISTING	PROPOSED	LCRT FUNDED

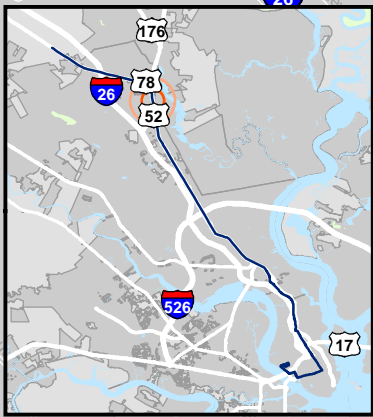
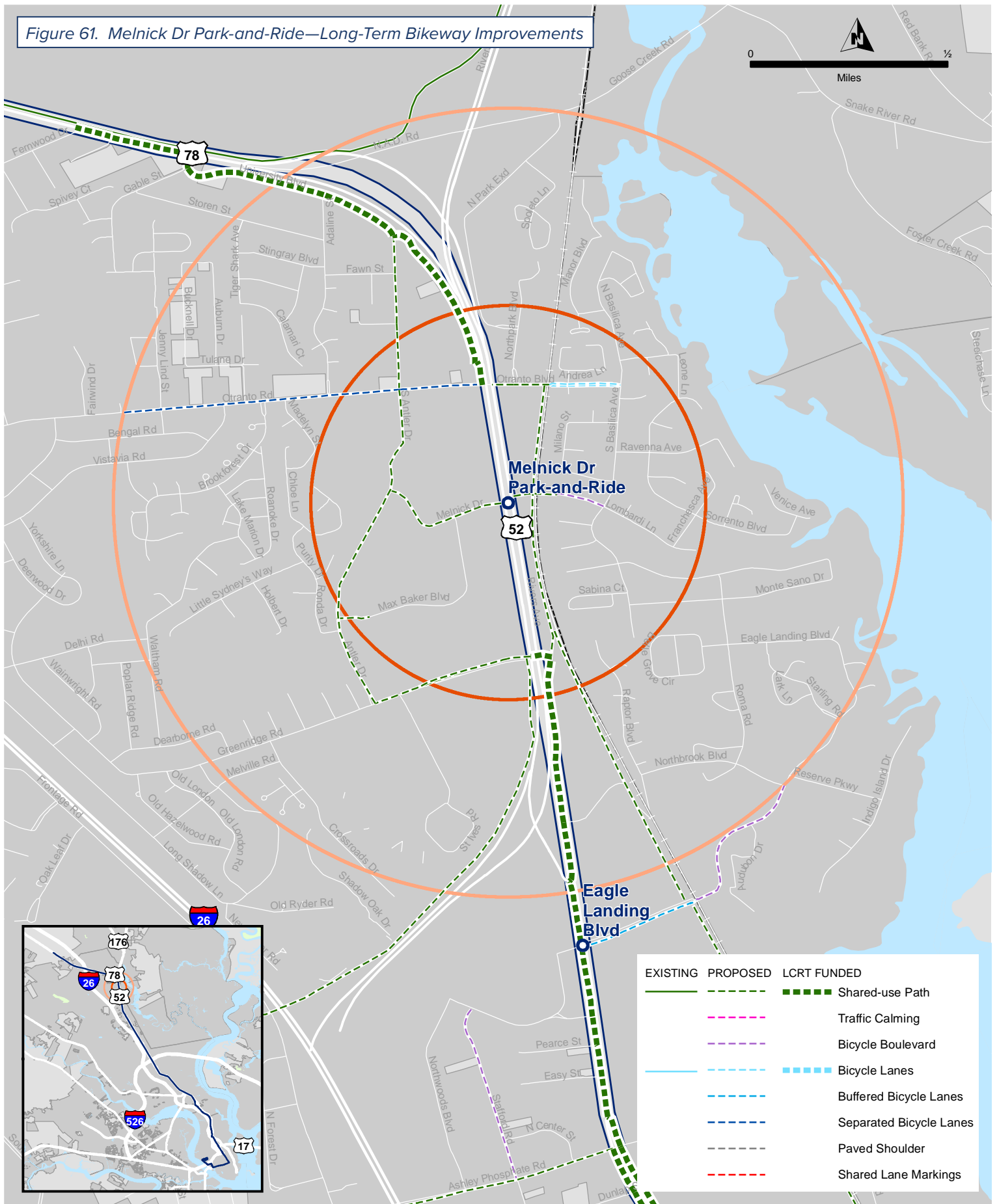
- LCRT Stations
- LCRT Alignment
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area

**Lowcountry Rapid Transit
Melnick Dr Park-and-Ride**

Data Sources: BCDCOG, SCDOT



Figure 61. Melnick Dr Park-and-Ride—Long-Term Bikeway Improvements



EXISTING	PROPOSED	LCRT FUNDED

- Shared-use Path
- Traffic Calming
- Bicycle Boulevard
- Bicycle Lanes
- Buffered Bicycle Lanes
- Separated Bicycle Lanes
- Paved Shoulder
- Shared Lane Markings

BCDCOG

LCRT Stations

LCRT Alignment

0.5-mile radius of Station Area

1.0-mile radius of Station Area

Lowcountry Rapid Transit
Melnick Dr Park-and-Ride

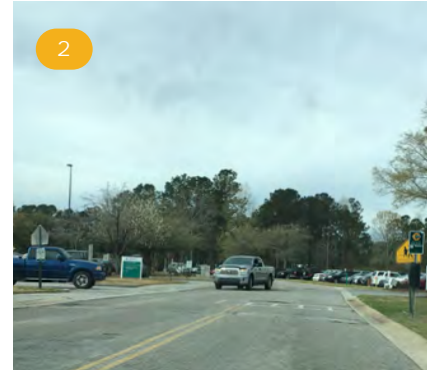
Data Sources: BCDCOG, SCDOT

Station 19: Medical Plaza Dr

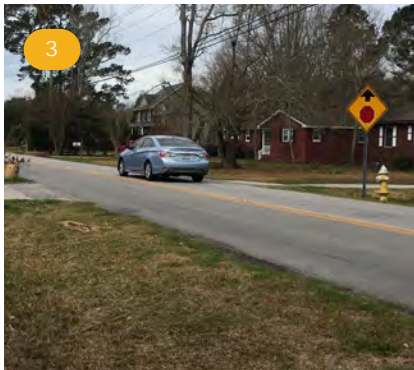
This proposed station area provides many important services to the surrounding communities. Not only does the medical campus and Charleston Southern University constantly draw in visitors, but there are many residences in the surrounding area.



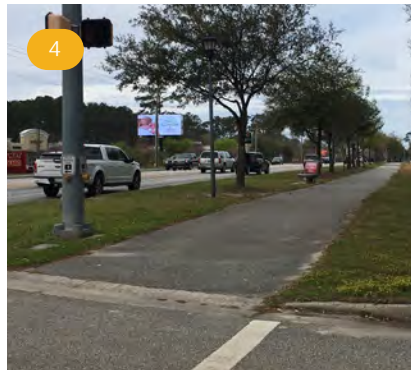
The intersection of University Blvd and Medical Plaza Dr, the access points of Charleston Southern University and Trident Health Campus, could be improved by enhancing pedestrian queuing space, incorporating high visibility crosswalks, and implementing pedestrian refuge islands.



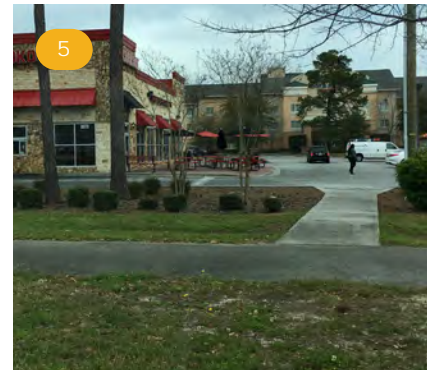
Medical Plaza Dr is home to important destinations, yet it is not fully accessible for people walking and biking. The street has sidewalks on one side of the street in some areas and no sidewalks at others. A medical patient was observed walking in the road towards University Blvd.



Roads like Fernwood Dr and Deerwood Dr serve as important connections for local neighborhoods but have limited sidewalk connectivity and formal crossings. Ensuring that these streets are fully accessible is necessary for connectivity to the LCRT Corridor.

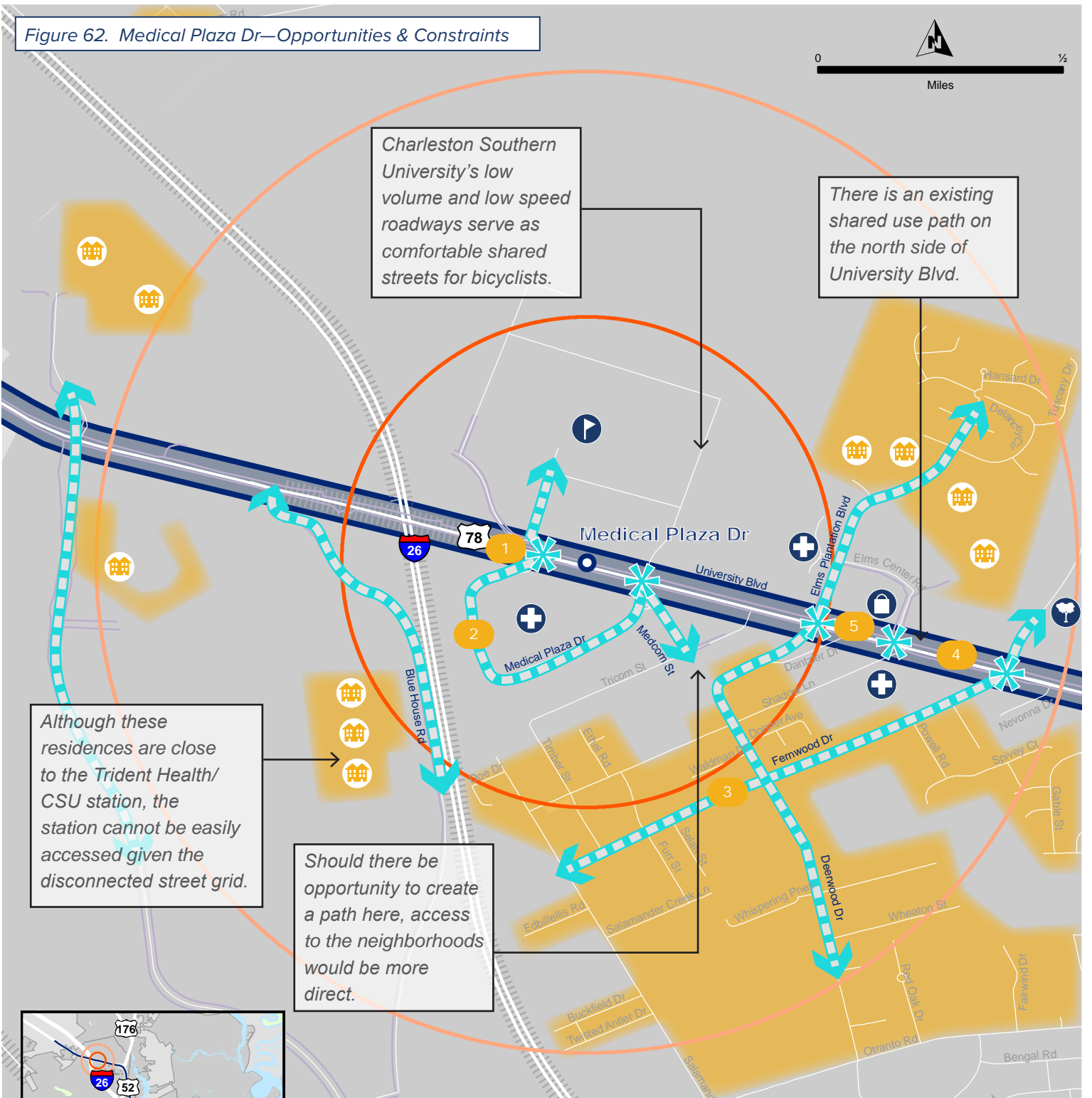


A successful example of pedestrian and bicyclist connectivity exists on University Blvd, beginning at CSU. A shared-use path follows the busy road east to the US-52/US-78 junction and continues north.



At this commercial center, businesses have provided connections to the path and seating near-by. This demonstrates how private development is able to further improve access for people walking and biking given the presence of the shared-use path.

Figure 62. Medical Plaza Dr—Opportunities & Constraints

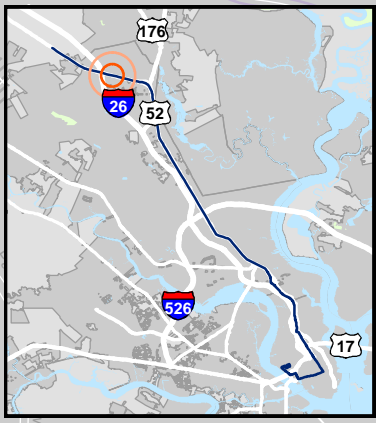


Charleston Southern University's low volume and low speed roadways serve as comfortable shared streets for bicyclists.

There is an existing shared use path on the north side of University Blvd.

Although these residences are close to the Trident Health/ CSU station, the station cannot be easily accessed given the disconnected street grid.

Should there be opportunity to create a path here, access to the neighborhoods would be more direct.



Residential	Multi-family housing
Medical services	Existing sidewalks
Shopping centers	Priority crossing
Parks	Major connections
Schools	Major barriers

Path: C:\Egnytel\Shared\PROJECTS\201900-2019-223 Charleston, SC Bud Rapid Transit\GIS\Processes\StationMaps - Base for issues and opps diagrams.mxd - User: KatMaines - Date: 3/31/2020

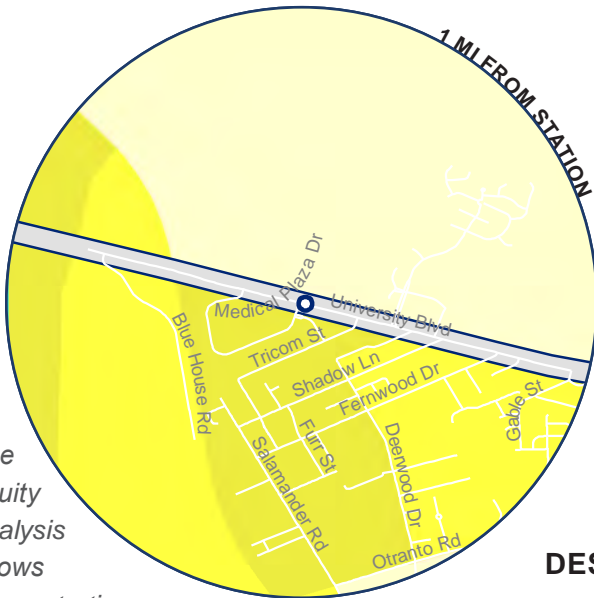
Station 19: Medical Plaza Dr

Station Area Analysis Diagrams

● LCRT Station — LCRT Alignment

CONCENTRATIONS OF VULNERABLE POPULATIONS¹

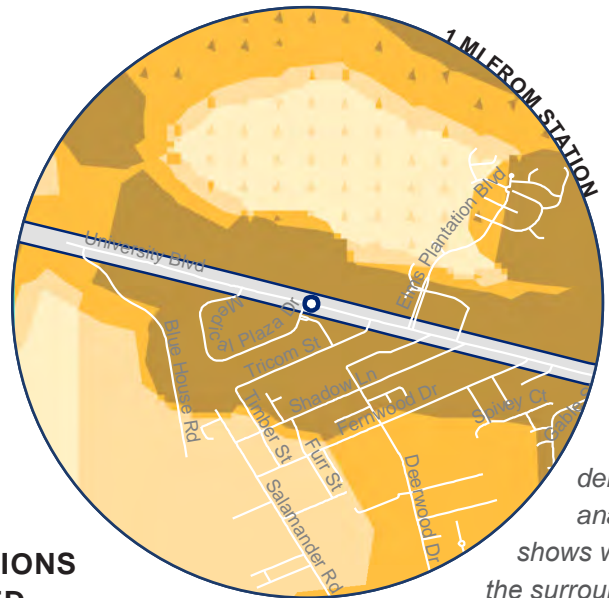
Lower Higher



The equity analysis shows concentrations of vulnerable populations who may rely on active transportation and transit.

RELATIVE DEMAND FOR WALKING AND BIKING¹

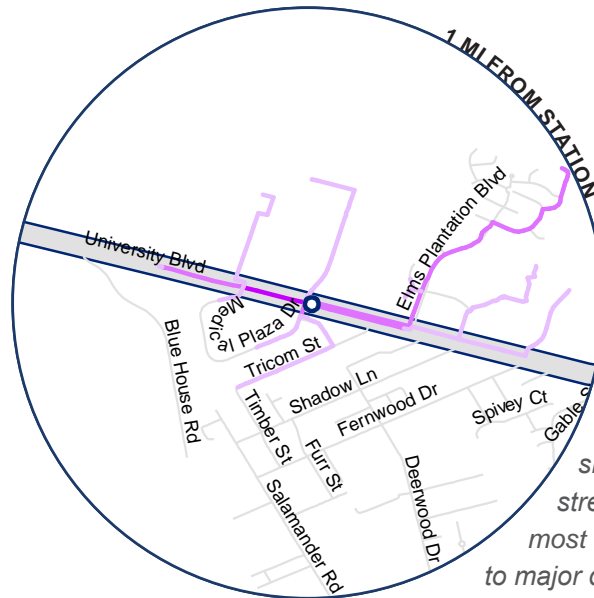
Lower Higher



The demand analysis shows where the surrounding land uses encourage walking and biking.

DESTINATIONS SERVED

Fewer More

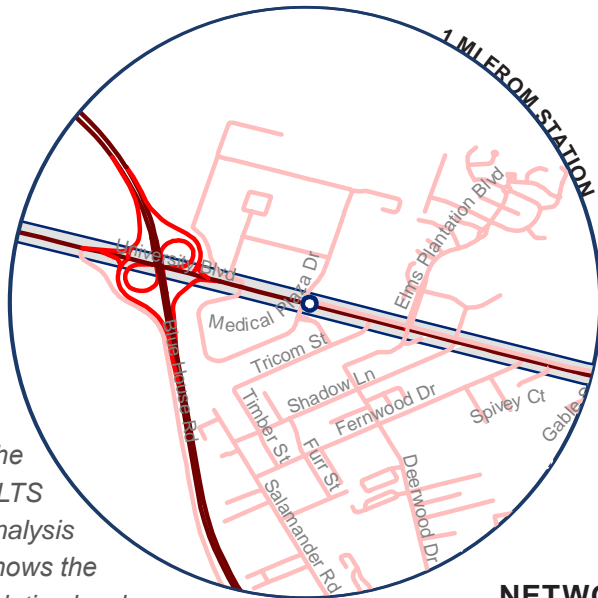


The destinations served map shows which streets provide the most direct access to major destinations.

¹ BCDCOG, Walk Bike BCD

BICYCLIST LEVEL OF TRAFFIC STRESS¹

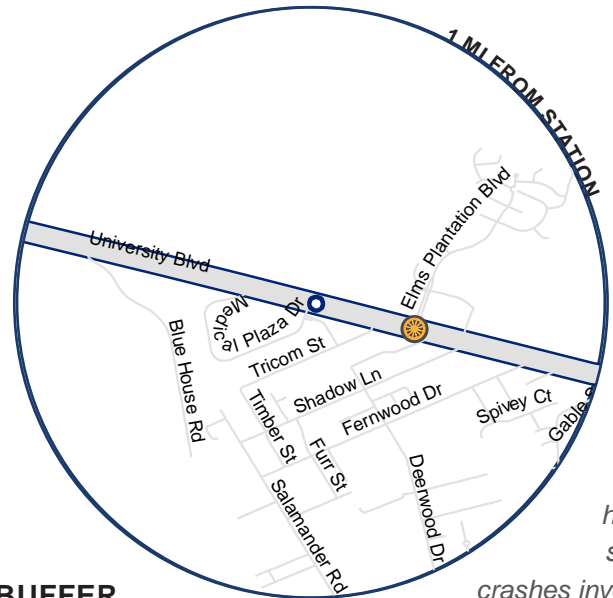
Lower  Higher



The BLTS analysis shows the relative level of stress given existing roadway characteristics.




PEDESTRIAN & BICYCLIST CRASH HISTORY (2010-2014)

 Pedestrian crash  Bicyclist crash



The crash history shows crashes involving pedestrians and bicyclists from 2010-2014.

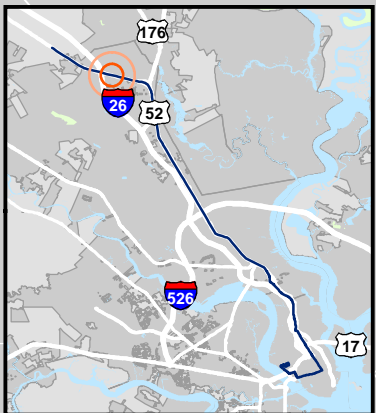
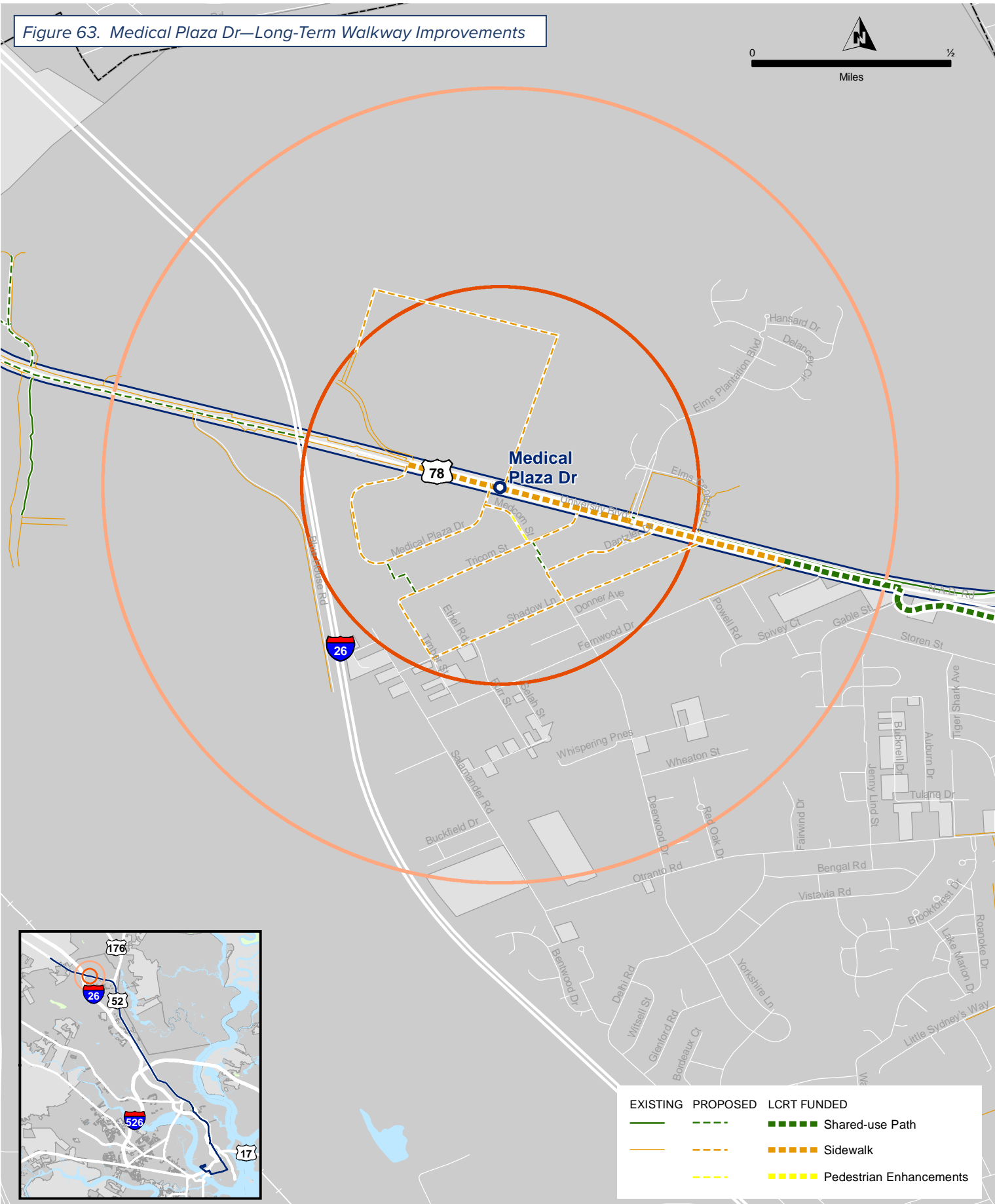
NETWORK BUFFER

 < 1/2 MI  1/2 - 1 MI  1 - 2 MI



The network buffers show the actual trip length from the LCRT station on the existing street grid.

Figure 63. Medical Plaza Dr—Long-Term Walkway Improvements



EXISTING	PROPOSED	LCRT FUNDED
		Shared-use Path
		Sidewalk
		Pedestrian Enhancements

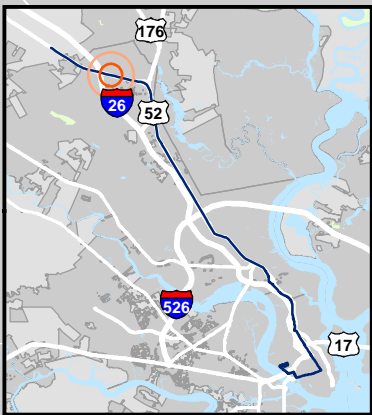
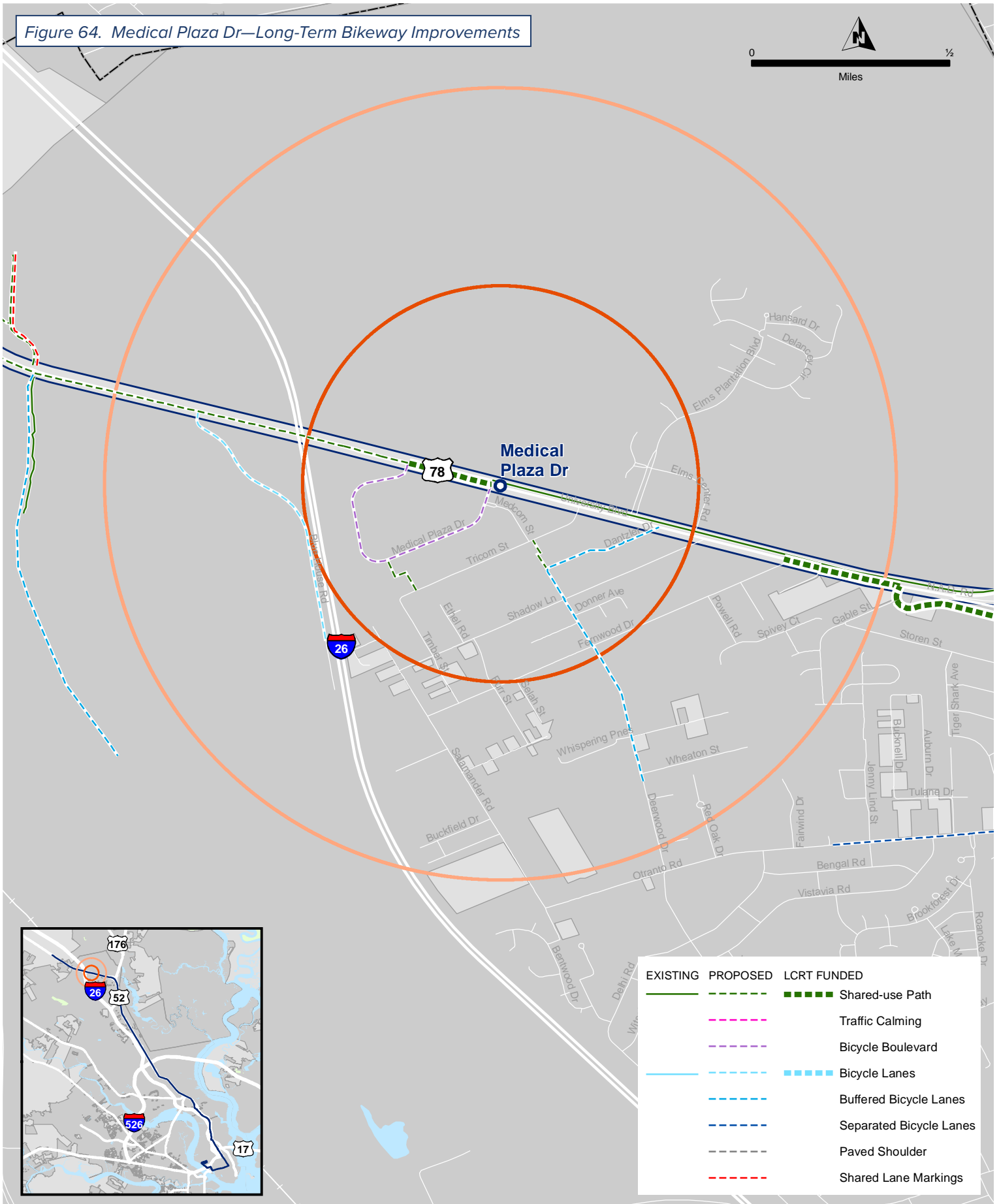
- LCRT Stations
- LCRT Alignment
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area

Lowcountry Rapid Transit
Medical Plaza Dr

Data Sources: BCDCOG, SCDOT



Figure 64. Medical Plaza Dr—Long-Term Bikeway Improvements



EXISTING	PROPOSED	LCRRT FUNDED	
			Shared-use Path
			Traffic Calming
			Bicycle Boulevard
			Bicycle Lanes
			Buffered Bicycle Lanes
			Separated Bicycle Lanes
			Paved Shoulder
			Shared Lane Markings

- LCRRT Stations
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area
- LCRRT Alignment

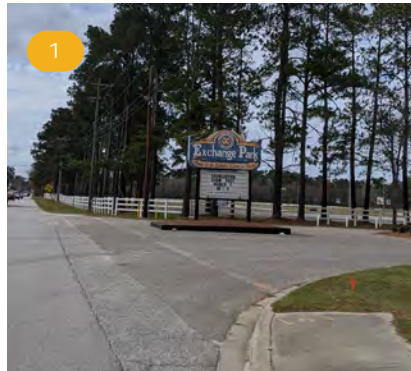
**Lowcountry Rapid Transit
Medical Plaza Dr**

Data Sources: BCDCOG, SCDOT

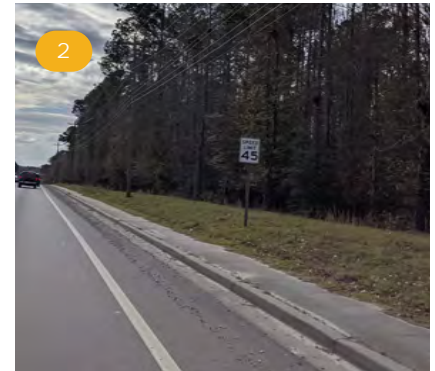


Station 20: Exchange Park Fairgrounds Park-and-Ride

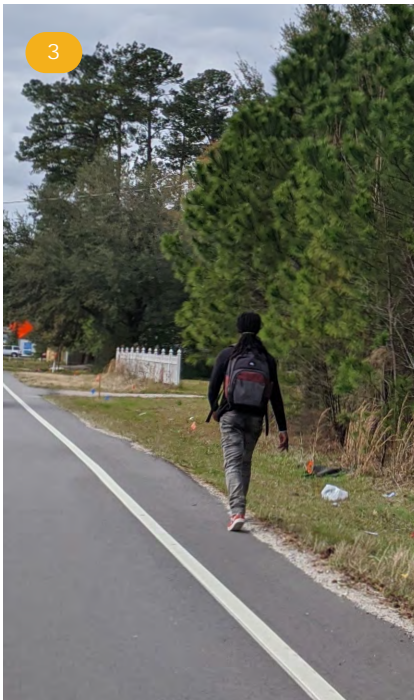
Fairgrounds & College Park will serve as the northern terminus for the new LCRT line. The site for the park-and-ride facility is Exchange Park, a large outdoor event venue with ample parking and open fields. The surrounding land use is a mix of industry and lower density neighborhoods. Most of the streets flow out onto US-78.



Sidewalks currently terminate at the main entrance to Exchange Park along US-78.



Facilities along Ladson Rd do not provide sufficient separation for pedestrians and bicyclists given traffic volumes and speeds.

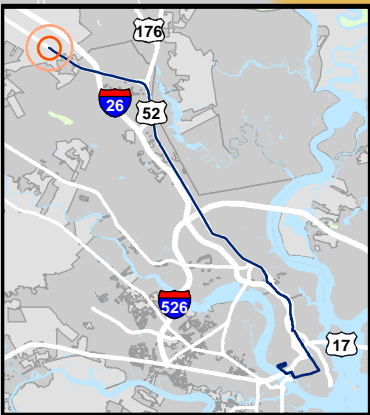
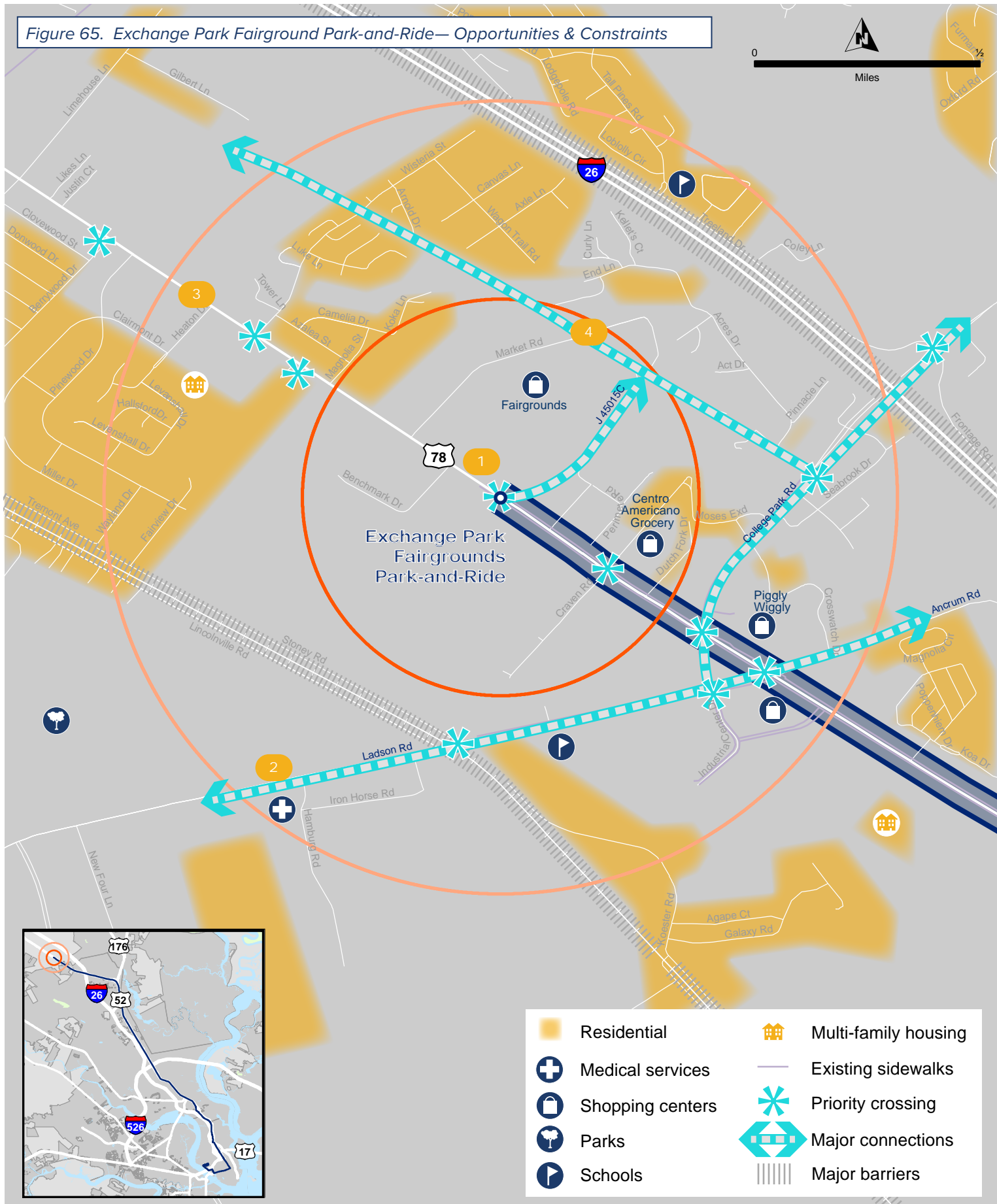


Pedestrians are forced to walk in the shoulder along US-78 where there is no sidewalk.



There is a secondary entrance to Exchange Park on Market Rd from College Park Rd. There is a previously proposed shared use path in the utility corridor running parallel to Market Rd and then crossing Exchange Park to the northwest.

Figure 65. Exchange Park Fairground Park-and-Ride— Opportunities & Constraints



	Residential		Multi-family housing
	Medical services		Existing sidewalks
	Shopping centers		Priority crossing
	Parks		Major connections
	Schools		Major barriers

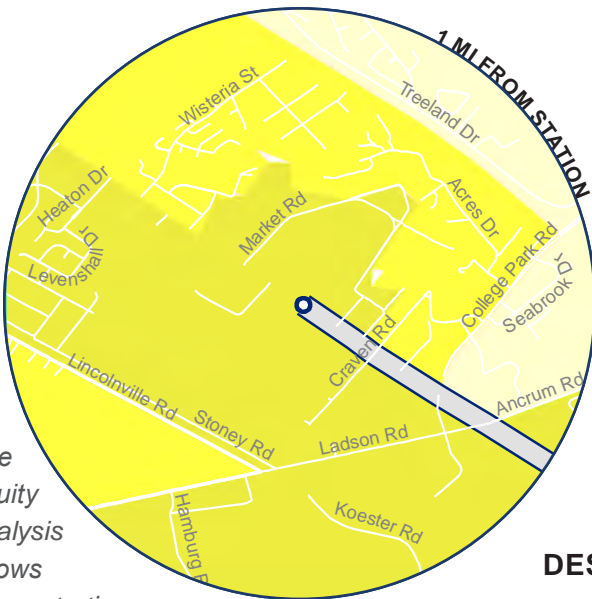
Station 20: Exchange Park Fairgrounds Park-and-Ride

Station Area Analysis Diagrams

● LCRT Station — LCRT Alignment

CONCENTRATIONS OF VULNERABLE POPULATIONS¹

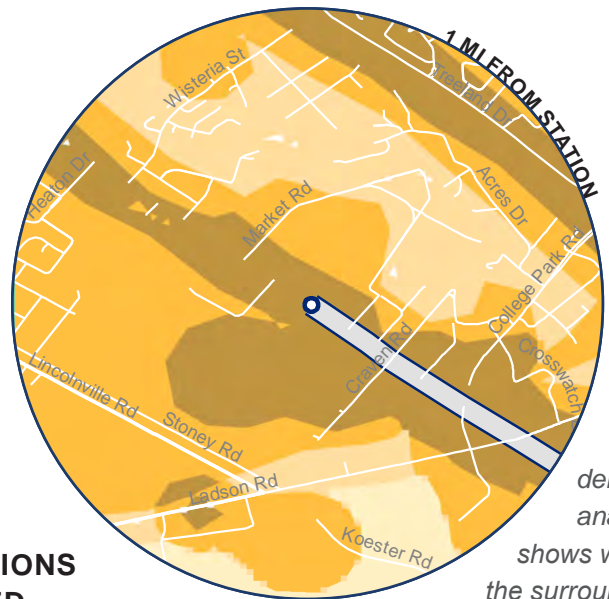
Lower Higher



The equity analysis shows concentrations of vulnerable populations who may rely on active transportation and transit.

RELATIVE DEMAND FOR WALKING AND BIKING¹

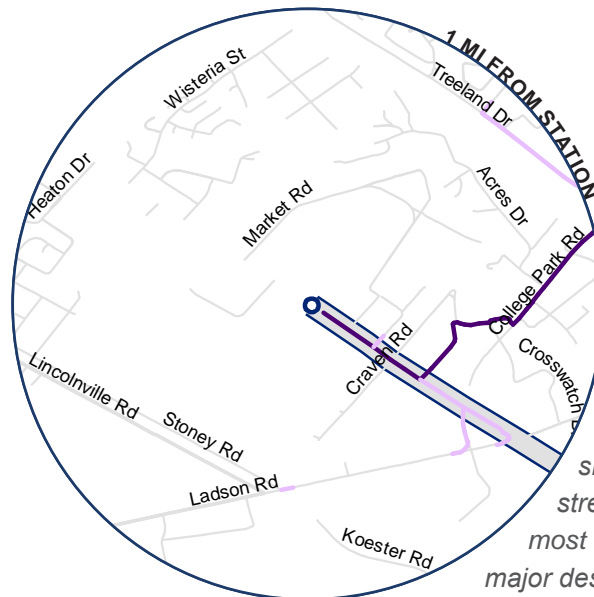
Lower Higher



The demand analysis shows where the surrounding land uses encourage walking and biking.

DESTINATIONS SERVED

Fewer More

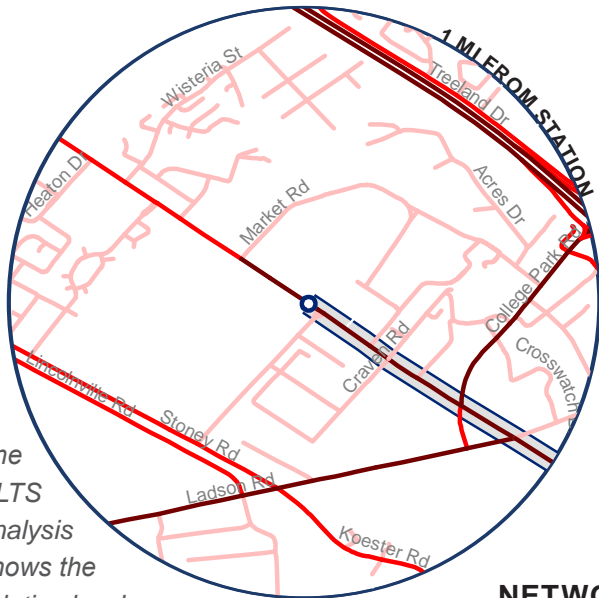


The destinations served map shows which streets provide the most direct access to major destinations.

¹ BCDCOG, Walk Bike BCD

BICYCLIST LEVEL OF TRAFFIC STRESS¹

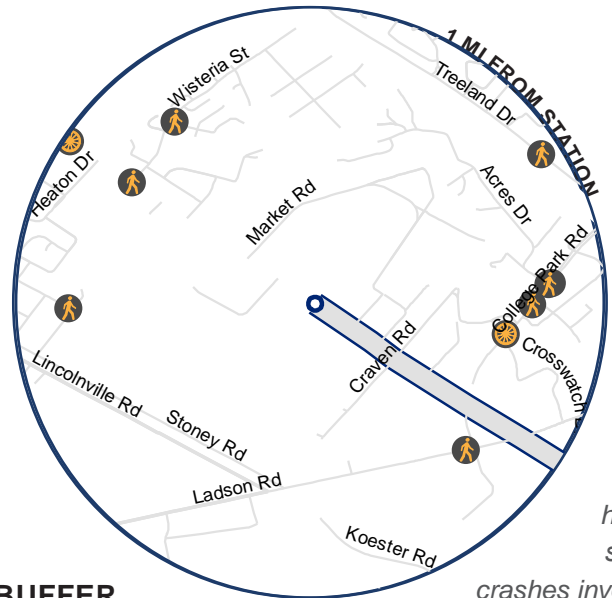
Lower  Higher



The BLTS analysis shows the relative level of stress given existing roadway characteristics.




PEDESTRIAN & BICYCLIST CRASH HISTORY (2010-2014)

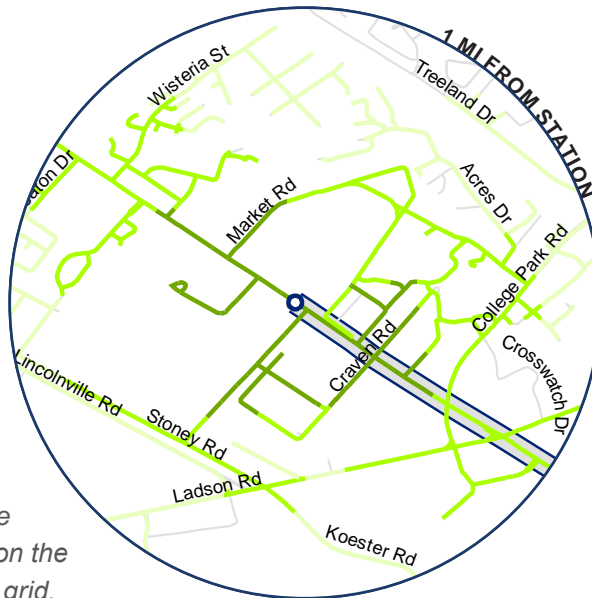
 Pedestrian crash  Bicyclist crash



The crash history shows crashes involving pedestrians and bicyclists from 2010-2014.

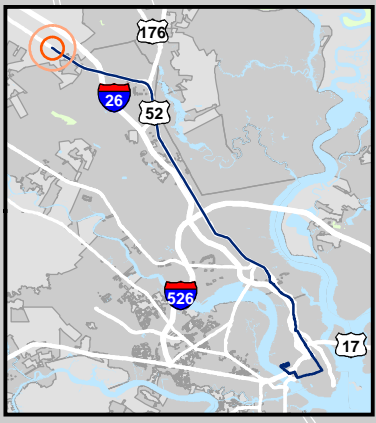
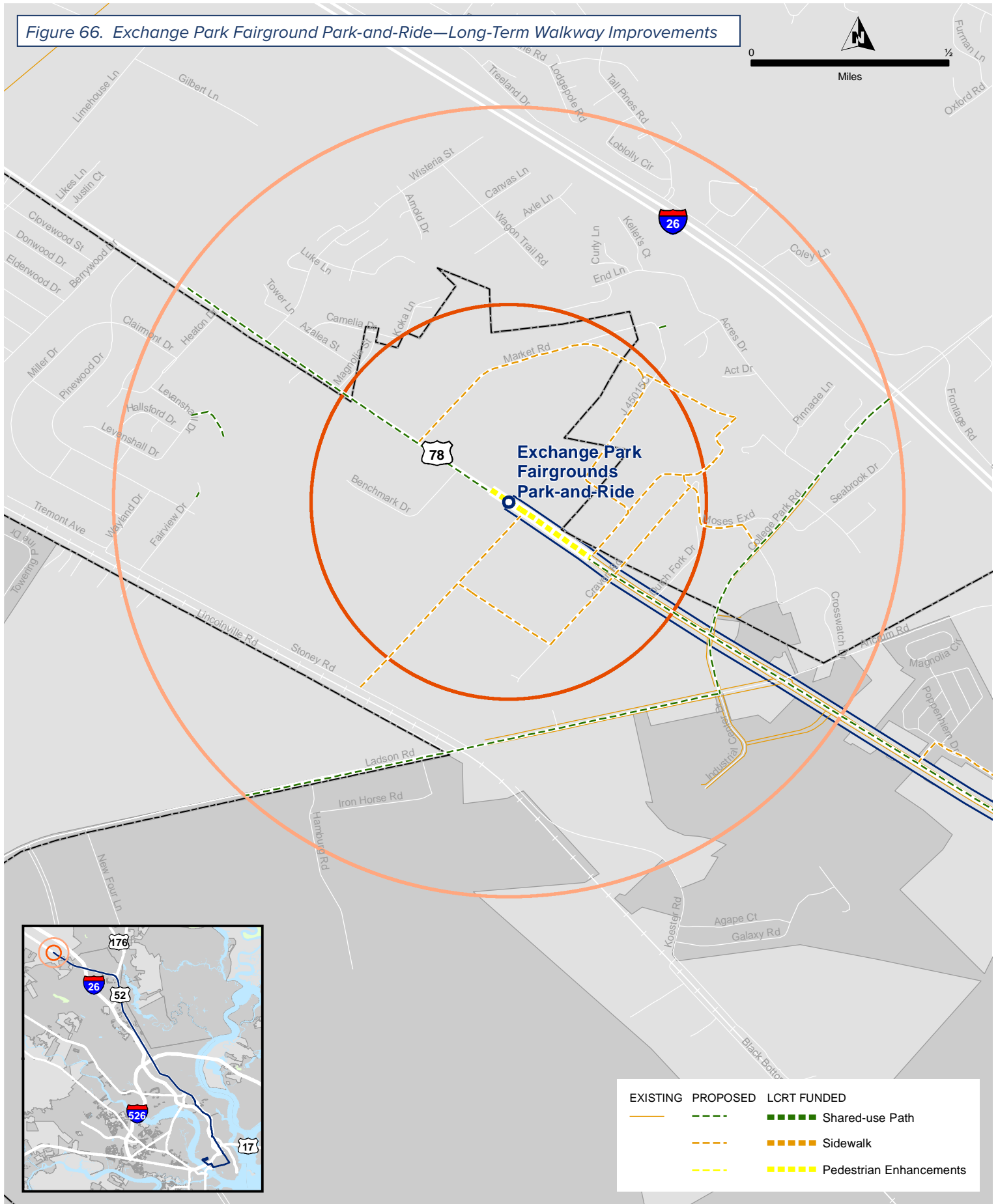
NETWORK BUFFER

 < 1/2 MI  1/2 - 1 MI  1 - 2 MI



The network buffers show the actual trip length from the LCRT station on the existing street grid.

Figure 66. Exchange Park Fairground Park-and-Ride—Long-Term Walkway Improvements



EXISTING	PROPOSED	LCRT FUNDED

BCDCOG

LCRT Stations

LCRT Alignment

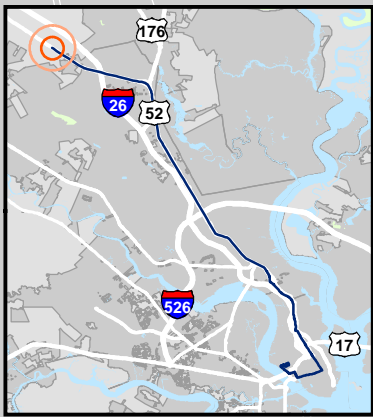
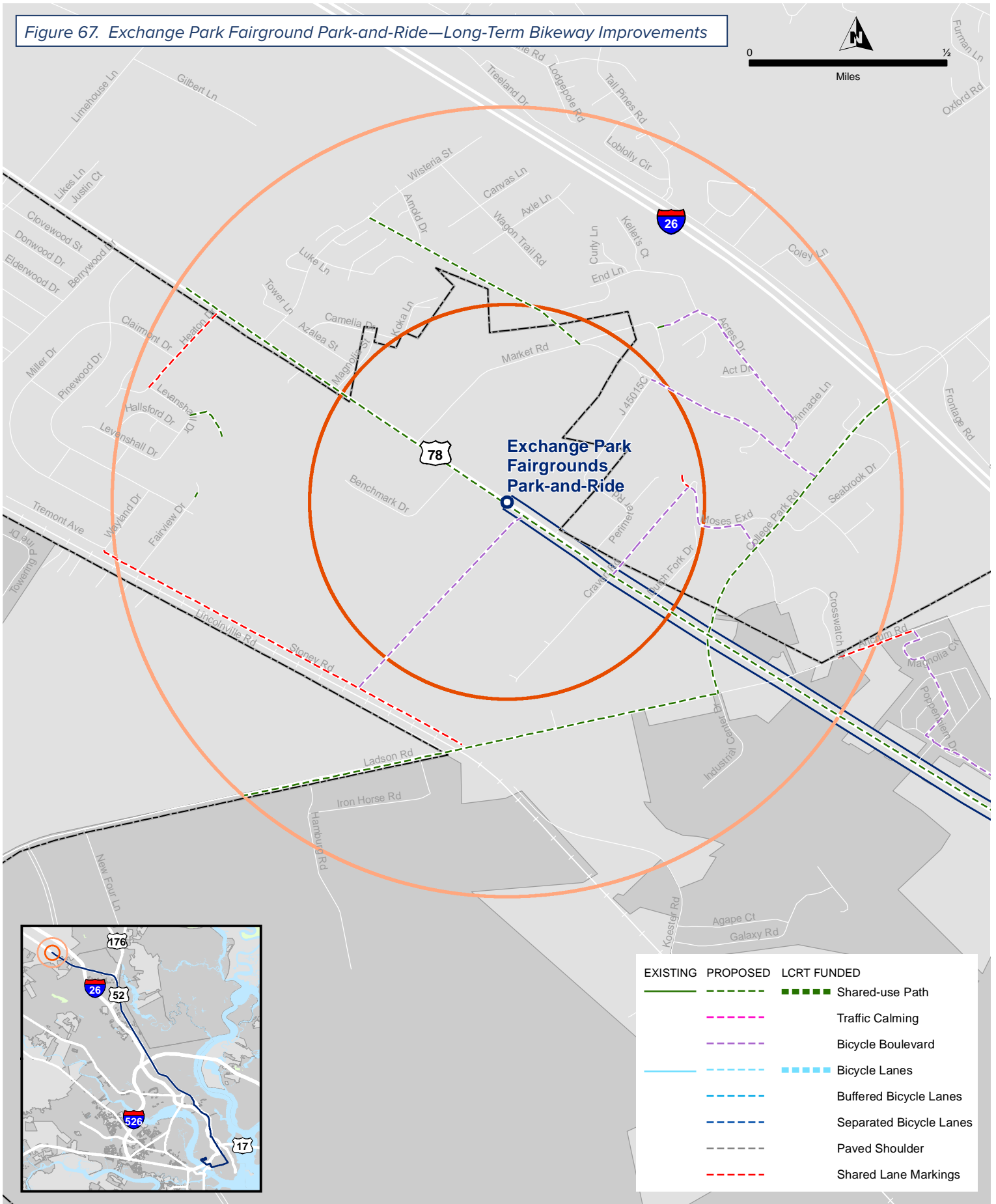
0.5-mile radius of Station Area

1.0-mile radius of Station Area

Lowcountry Rapid Transit
Exchange Park Fairgrounds Park-and-Ride

Data Sources: BCDCOG, SCDOT

Figure 67. Exchange Park Fairground Park-and-Ride—Long-Term Bikeway Improvements



EXISTING	PROPOSED	LCRT FUNDED	
			Shared-use Path
			Traffic Calming
			Bicycle Boulevard
			Bicycle Lanes
			Buffered Bicycle Lanes
			Separated Bicycle Lanes
			Paved Shoulder
			Shared Lane Markings

- LCRT Stations
- 0.5-mile radius of Station Area
- 1.0-mile radius of Station Area
- LCRT Alignment

Lowcountry Rapid Transit
Exchange Park Fairgrounds Park-and-Ride

Data Sources: BCDCOG, SCDOT

