



CITY-WIDE TRAILS MASTERPLAN

DRAFT PLAN | FEBRUARY 2021





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MASTERPLAN

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Acknowledgments

We appreciate the guidance provided by City Council, our Project Advisory Committee and the Project Management Team, plus the input of stakeholders, Town staff and community members who provided their time and shared ideas that are incorporated into this Master Plan. Together, we have established the foundation to implement Addison's city-wide trail system.

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Table of Contents

ACKNOWLEDGMENTS	ii
CHAPTER 1: INTRODUCTION	1
Purpose of the Plan	2
Plan Development Process	3
The Future of Addison Trails.....	4
Plan Organization and Overview	5
CHAPTER 2: EXISTING CONDITIONS	7
The Addison Community	8
Snapshot of the System	10
Opportunities and Constraints	12
CHAPTER 3: COMMUNITY VISION AND GOALS	25
Outreach and Engagement Process	26
Community Input Themes	28
Vision Framework	32
CHAPTER 4: COMPREHENSIVE RECOMMENDATIONS	35
Foundational Elements	36
Recommended Network.....	39
Trail Design Standards and Guidelines	46
CHAPTER 5: PRIORITY PROJECTS.....	73
Major East to West Alignments	74
Major North to South Alignments	78
Local Connectivity.....	83
Partnerships	87
Action Plan.....	89
APPENDICES	
Appendix A: Trail Inventories	A-1
Appendix B: Community Engagement Summaries	B-1
Appendix C: Trail Prioritization Criteria.....	C-1
Appendix D: Funding Strategies	D-1
Appendix E: Master Transportation Plan Revisions	E-1

Figures, Maps and Tables

CONTENT FORTHCOMING

FIGURES

- Figure 1-1 : Planning Process
- Figure 2-1:
- Figure 3-1:
- Figure 3-1:
- Figure 4-1:
- Figure 5-1:
- Figure 6-1:

MAPS

- Map 1-1:
- Map 2-1:
- Map 3-1:
- Map 4-1:
- Map 5-1:
- Map 6-1:

TABLES

- Table 1-1:
- Table 2-1:
- Table 3-1:
- Table 4-1:
- Table 5-1:
- Table 6-1:



Introduction

The first chapter of the City-Wide Trails Master Plan provides a call to action and summarizes the need for a more comprehensive and deliberate approach to developing trails in Addison. The chapter also includes overviews of the planning process and Plan organization.



Purpose of the Plan

The City-Wide Trails Master Plan is a critical effort in continuing to maintain and enhance the quality of life for residents, visitors and employees in Addison. Many residents enjoy trails and other pedestrian and bicycle facilities today, but many areas of Addison lack trail access and some lack any safe and comfortable connections for people who want to walk or bike.

The lack of walking and biking amenities is especially pronounced when trying get from one part of Addison to another or from Addison to the trail networks that are growing in neighboring communities.

The purpose of the City-Wide Trails Master Plan for Addison is to identify safe and comfortable pedestrian

and bicycle facilities that connect residents, visitors and employees to local and regional recreation, amenities and destinations. The Master Plan articulates a long-term vision for a fully built out trail network throughout Addison that is a critical piece of the larger regional trail network, but also delineates short-term and medium-term priorities to:

- Establish the core armature for the larger vision;
- Fill critical gaps and overcome challenging barriers;
- Introduce new and creative solutions, and perhaps most importantly;
- Connect Addison residents to each other and to the places they love.



Plan Development Process

This Master Plan involved technical analyses and extensive community engagement over a 1-year process. Advisory groups comprised of town staff, stakeholders and community leaders provided guidance and input throughout the process. The approach also involved a variety of outreach activities and encouraged participation from residents in numerous ways during the COVID-19 pandemic. In total, about 1,100 residents and workers weighed in through online surveys, phone interviews, intercept events, advisory group meetings, and email exchanges. This community input and advisory group guidance was gained throughout the plan development during four phases (Figure 1-1).

ENGAGEMENT AND OUTREACH IN A PANDEMIC:

This planning process occurred during the COVID-19 pandemic. As such, the engagement and outreach process required extra attention and thought. Most meetings and workshops were conducted virtually, and when in person, social distancing and mask wearing was required. However, meaningful input was gained through creative interventions throughout all plan phases. The process involved three advisory groups and offered four different community input opportunities. See Chapter 3 and Appendix B for summaries and detailed reports.

Figure 1-1: Planning Process (graphic forthcoming)

Phase 1: Preparation: March – May 2020

Initiate the project by collecting data, preparing a trails inventory and maps, meeting with advisory groups, and soliciting feedback through an online questionnaire.

Phase 2: Identification: June – August 2020

Identify the Master Plan's goals and strategies by hosting a community visioning workshop, assessing the existing trail system, developing trail typologies and criteria, and meeting with the advisory groups including the Project Advisory Committee (PAC), City Council and the Addison Town Staff.

Phase 3: Confirmation: September – November 2020

Establish the trail recommendations by confirming citywide alignments and trail standards with all advisory groups, and survey residents and workers at intercept events and a with an online questionnaire.

Phase 4: Codification: December – February 2020

Develop an action plan that includes a phasing strategy and planning-level costs, meet with advisory groups for draft Master Plan input, and establish and adopt a final Master Plan.

The Future of Addison Trails

While certain areas of Addison celebrate high quality neighborhood trails, there are limited opportunities to use trails or other safe walking and biking facilities to get from one neighborhood to another or from residential areas to nearby recreational and commercial destinations. If Addison were planned and built out today, it would undoubtedly include a complete network of loop trails, cross town trails and regional trail connections. Trails are highly desirable because they separate walkers, bikers and joggers from traffic while anchoring linear greenways, connecting neighborhoods, and enhancing the community.

Trails have multiple benefits including recreation, transportation, and economic development. Surveys conducted during the development of the *Parks, Recreation and Open Space (PROS) Master Plan* showed that trails were one of the most heavily used and desired recreational amenities in Addison. Similarly, input received during the development of the *Master Transportation Plan (MTP)* adopted in

2016 indicated that residents prioritized active and healthy lifestyles, trail improvements, more sidewalks, and other walking and biking improvements, in addition to addressing traffic congestion, efficiency and safety. As a result, the *MTP* laid out a strategy for improving pedestrian and bicycle facilities as roadways are improved through a combination of wider and buffered sidewalks, bike lanes and generous sidepath trails. And a growing number of studies now show that trails benefit property owners and business owners by improving property values, increasing access for businesses and boosting overall sales.

Since the Town of Addison is largely built out, the Trails Master Plan builds on recommendations laid out in the *PROS Master Plan* and the *MTP*. Namely, seize the opportunity to improve and create traditional off-street trails where opportunities still exist or can be created and integrate creative trail solutions into public roadway and private development projects over time to create a safe, inviting and complete trail network for Addison residents, visitors and employees.



Plan Organization and Overview

The Master Plan is a guiding document that will provide direction over the next twenty years. The remainder of this document is organized as follows:

Chapter 2: Existing Conditions provides a summary of the existing trail system and assesses its opportunities and constraints.

Chapter 3: Community Vision and Goals highlights community priorities and needs that helped form the guiding principles, trail goals and community vision framework.

Chapter 4: Comprehensive Recommendations provides recommendations, standards and guidelines to enhance and develop new and existing trails.

Chapter 5: Priority Projects emphasizes key trails along major alignments and in neighborhoods, describes partnership opportunities, and presents an approach to implementation.

Appendix A: Trail Inventories summarizes and classifies existing data.

Appendix B: Community Engagement Summaries provides detailed results of the community outreach efforts.

Appendix C: Trail Criteria describes the planning and design criteria used to prioritize trail development.

Appendix D: Funding Strategies identifies funding solutions for future trail projects.

Appendix E: Master Transportation Plan Revisions presents a map detailing how the changes in this Master Plan affect the *Master Transportation Plan*.





2

Existing Conditions

Chapter 2 provides a summary of existing conditions in Addison, including an overview of the community and the existing trail system. The chapter concludes with a set of maps and discussions framing the opportunities and constraints that influenced the Vision and Recommendations throughout the rest of the Plan.





Addison Community

Addison, Texas, is the place “where it all comes together.” With over 15,000 residents, 180 restaurants, 23 hotels, and 12 million square feet of office space all in 4.4 square miles, Addison blends community livability with iconic parks and trails, new urbanist development and unique special events that draw people from throughout the Dallas Metroplex.

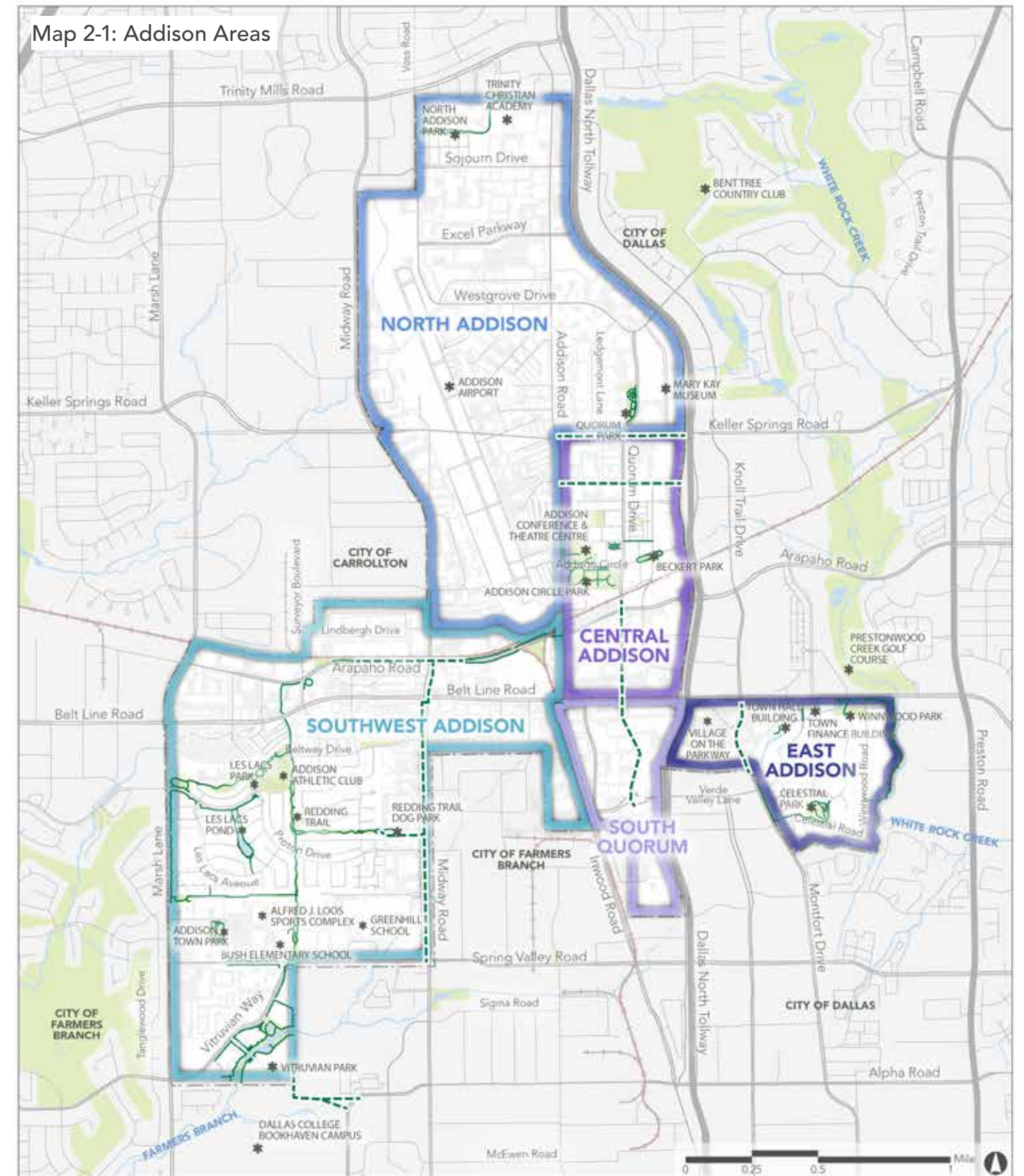
For this planning effort, Addison was evaluated using five areas, divided by neighborhoods, land uses and corridors (Map 2-1). Each area possesses different demographic and land use characteristics, yet each area deserves great trails. As such, this Master Plan defines these areas to assess trail opportunities and constraints and recommends enhanced trail connectivity in all areas.

ADDISON BY THE NUMBERS

- 15,626 residents live in Addison
- 50,513 people work in Addison
- 11,049 people work and live in Addison
- 80% of households are renter-occupied
- 17% of households have children
- 62% of residents are White
- 16% of residents are Black or African American
- 25% are of Hispanic origin
- 33% are young professionals (ages 25-34)
- 8% are older residents and retirees ages 65+

Sources: 2019 U.S. Census American Community Survey; NCTCOG 2018 Daytime Population Estimates

Map 2-1: Addison Areas



LEGEND		
--- Addison Boundary	— River/Stream	AREAS OF ADDISON
— Roadway	— Creek Channel	
— Pavement	— Rail	
— Parks/Open Space/Golf	— Existing Addison Trail	
— Water Body	— Planned Trail Project (5-year Capital Improvements Program)	
* Major Destination		North Addison
		Central Addison
		Southwest Addison
		South Quorum
		East Addison

Snapshot of the System

Addison’s existing trail system is primarily off-street and is located in parks or greenbelts. Greenbelt trails offer extensive mobility by linking to other greenbelts, parks and enhanced sidewalks. These trails are found running parallel to corridors such as power lines, rail lines, and creeks. The longest continuous trail stretch is the Redding Trail in Southwest Addison, which runs 3 miles and connects to other trails, establishing a neighborhood loop system. In contrast to greenbelt trails, most park trails are contained within the park, but in most cases connect to a sidewalk system. Furthermore, some parks such as Addison Circle Park and Vitruvian Park boast around 1 mile of off-street trails that residents use for exercise and leisure.

Addison currently has two miles of enhanced pedestrian paths within street rights-of-way. These paths are essentially wide sidewalks. These trail

segments are found as piecemeal improvements throughout the Town, apart from the contiguous Vitruvian streetscape. While currently only comprising two total miles of trails in town, this “along-the-street” trail typology is planned to grow, connecting missing sidewalk links and various neighborhoods throughout the Town. See a summary of the existing trail inventory in Table 2-1 and the complete inventory in Appendix A.

Existing trail miles per area of Addison are summarized below. (Map 2-1 references these Addison Areas)

- North Addison – 1.35 miles
- Central Addison – 1.87 miles
- Southwest Addison – 8.29 miles
- South Quorum – 0.03 miles
- East Addison – 1.62 miles

Note: Only 1% of all Addison trails are soft surface trails

Table 2-1: Existing Trail Inventory Summary

Categories	Miles	Function	Addison Area	Examples
Off-Street Trail Alignments				
Greenbelts Trails	5.2	Multi-purpose	Southwest, East	Arapaho Park Trails, Redding Trail, White Rock Creek Trail
Park Trails	5.8	Multi-purpose and Walking Paths	North, Central, Southwest, South Quorum, East	Addison Circle Park Walking Paths, George H.W. Bush Elementary Trails, North Addison Park Walking Paths
Public Space Trails	0.2	Walking Paths	Central, Southwest, East	City Hall Walking Paths, Surveyor Water Tower
<i>Subtotal</i>	<i>11.2</i>			
Trail Alignments in Rights-of-Way				
Enhanced Pedestrian Path	2.0	Multi-purpose and Walking Paths	North, Central, Southwest, East	Oaks North Drive, Spring Valley Road, Vitruvian Streetscape
<i>Subtotal</i>	<i>2.0</i>			
Grand Total	13.2			

FUNDED AND PLANNED TRAILS

While the purpose of this plan is to identify and prioritize Addison’s trail system, the network is already developing. As a part of the FY 2020-21 five-year Capital Improvements Program, six bond (plus 3 other projects) will add 4.5 miles of greenbelt trails, enhanced pedestrian paths, and shared-use paths along the street. These projects are included in this plan and additional recommendations have been made to improve connectivity in these areas (see Chapters 4 and 5). The following list summarizes the projects and Map 2-1 locates them.

1. Midway Road Reconstruction – As a part of the road construction a shared-use trail with vegetative buffers will extend from Spring Valley Road to Cotton Belt Railway. This project also includes completing a missing trail link adjacent to the Cotton Belt Railway and below Arapaho Road.
2. Keller Springs Reconstruction – Sidewalks with landscaping from Addison Road to the Dallas North Tollway.
3. Airport Parkway Reconstruction – Sidewalks with landscaping from Addison Road to the Dallas North Tollway.

4. Trail Rehab and Expansion of Redding Trail – Improve the existing trail’s drainage and ADA accessibility, and extend the trail from Redding Dog Park to Midway Road. Additionally, this project includes updating other greenbelt trails with wayfinding signage and safety improvements, plus installing fitness equipment near Les Lacs Park.
5. Quorum Drive Reconstruction – Sidewalks with landscaping buffers from the Cotton Belt Railway to the North Dallas Tollway.
6. Montfort Drive Reconstruction – Sidewalks with landscaping buffers from Belt Line Road to Addison city limits.
 - PARTNERSHIP TRAIL: Bella Lane Construction to Alpha Road – A trail connecting the Vitruvian Park area to the Farmers Branch trail system with a shared-use trail.
 - PARTNERSHIP TRAIL: Silver Line Project – Future DART passenger rail service running on the Cotton Belt Regional Rail Corridor will include the construction of a shared-use regional trail that connects through Addison.
 - OTHER TRAIL: Addison Groves Streetscape – Wide sidewalks and local access points will provide residents access to two pocket parks and retail on Belt Line Road.



Opportunities and Constraints

The existing trail network and collection of pedestrian and bicycle amenities throughout Addison provide opportunities and constraints that help to frame and inform the recommendations included in the remainder of the City-Wide Trails Master Plan. The most prominent opportunities and constraints are organized into several categories and summarized below.

QUALITY OF LIFE

One of the primary benefits of investing in Addison's trail network is to enhance the quality of life for residents. For easier reference throughout this document, five general areas have been defined to make it easier to describe loops, crosstown connections and regional linkages. Four of the five areas include housing and a residential population, although each has a unique mix of housing options and resident populations.

North Addison: Approximately half of the area delineated as North Addison comprises the Addison Airport. The other half of North Addison is a mix of employment uses, institutional uses, and attached single-family and multifamily residential development.



Trails in North Addison are currently limited to North Addison Park and the campus of Trinity Christian Academy.

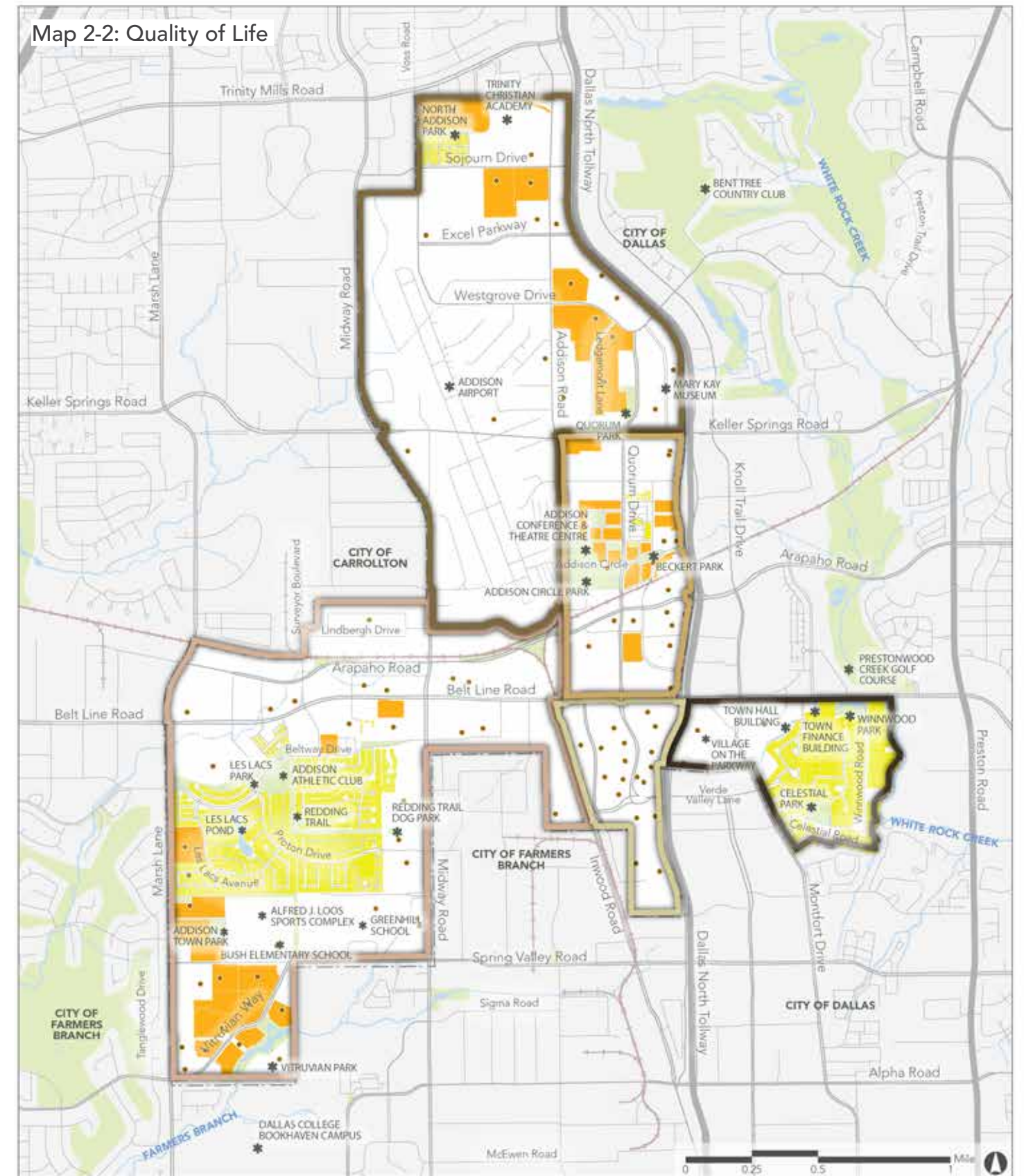
Central Addison: Central Addison is anchored by Addison Circle Park and a relatively large concentration of rental and for ownership multifamily housing. The DART Silver Line rail is planned to stop in Central Addison and a regional trail is being designed as part of the rail corridor improvements.

Southwest Addison: Southwest Addison includes the vast majority of existing trail connections in Addison. The northern portion of the area is largely defined by commercial development along and near Belt Line Road. Addison's largest collection of single-family homes is situated around Les Lacs Pond, the Addison Athletic Club and the Redding Trail. And another large concentration of multifamily housing is situated along Marsh Lane and adjacent to Vitruvian Park.

East Addison: The area delineated as East Addison is east of the Dallas North Tollway and south of Belt Line Road. In addition to a handful of Town facilities and commercial development in the west portion of this area, the majority of East Addison is occupied by White Rock Creek, Winnwood Park, Celestial Park, and larger single-family homes. Trails exist in East Addison in the two parks and along White Rock Creek.

Throughout the planning process, residents described walking and biking within the area that they live, but having few, if any options to connect to other areas of Addison or neighboring communities. The trail network is seen as an opportunity to significantly improve recreation and transportation options for all Addison residents.

Map 2-2: Quality of Life



LEGEND

- | | | |
|---|--|--|
| <ul style="list-style-type: none"> --- Addison Boundary — Roadway — Parks/Open Space/Golf — Water Body — River/Stream — Creek Channel — Rail | <p>RESIDENTIAL LAND USE</p> <ul style="list-style-type: none"> Single-Family Residential Parcel Multi-Family Residential Parcel <p>DESTINATIONS</p> <ul style="list-style-type: none"> Major Destination Point of Interest | <p>AREAS OF ADDISON</p> <ul style="list-style-type: none"> North Addison Central Addison Southwest Addison South Quorum East Addison |
|---|--|--|

RECREATION AND NATURE

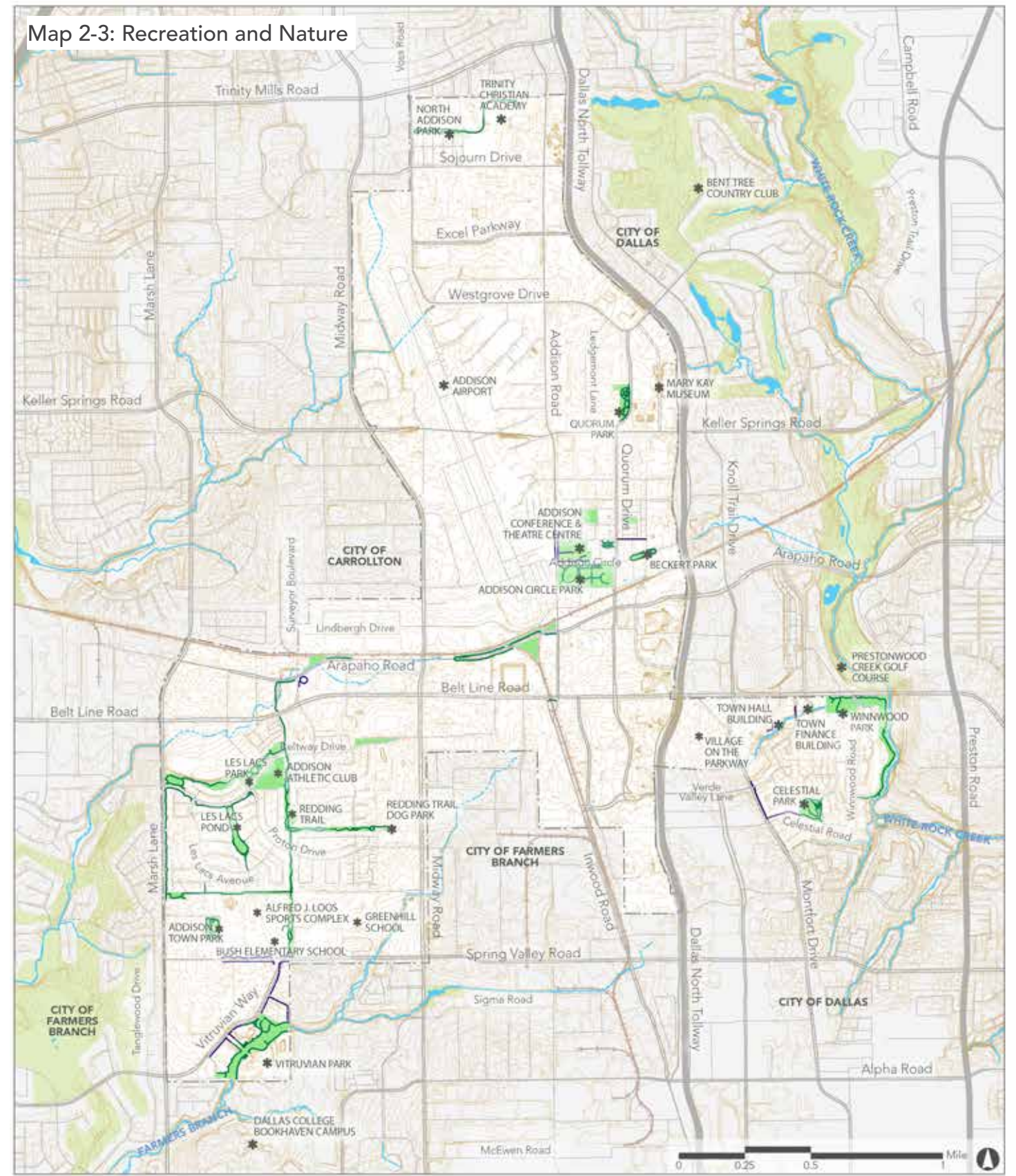
As introduced above, the existing and potential trail network provide a number of recreational opportunities for residents. In addition, the envisioned trail network could also create an even more inviting and desirable experience for visitors, employers and employees by better connecting people to the natural areas and urban respite.

Natural Areas and Open Space: The majority of trails that exist in Addison today are situated adjacent to waterways and water bodies or with Town parks and greenways. New off-street trails in natural areas will be relatively limited. The Parks, Recreation and Open Space Master Plan does recommend several pathway and trail improvements within existing parks.

Health and Wellness: Walking, jogging and biking for exercise and transportation provide tremendous health benefits. Research shows that trail loops, trail variety, and trail amenities all contribute to greater trail usage (more frequent and longer trips). A trail network

that provides a series of interconnected and nested loops provides a host of options for frequent users and can have measurable benefits for community health and wellness.

Topography and Drainage: As previously noted, very few opportunities remain to create new trail experience within natural areas of Addison. Natural drainage ways can provide such opportunities, but very few exist in Addison that have not already been incorporated into parks and greenways. There is a short section running through the Greenhill School Campus in Southwest Addison, but the majority of that drainage way lies in Farmers Branch and is not included in their Trails Master Plan. The other opportunity runs from Marsh Road and behind the Town Hall and Town Finance Buildings leading to Winnwood Park in East Addison. Steep grades and property constraints will make this connection challenging but could create a new natural trail connection in Addison.



EMPLOYEES, EMPLOYERS AND ECONOMIC DEVELOPMENT

Addison is somewhat unique in that its daytime population far exceeds its overnight resident population, especially when you account for short-term temporary stays in hotels and other types of lodging. Thus, it is important to consider the opportunities and constraints related to employees and visitors to Addison.

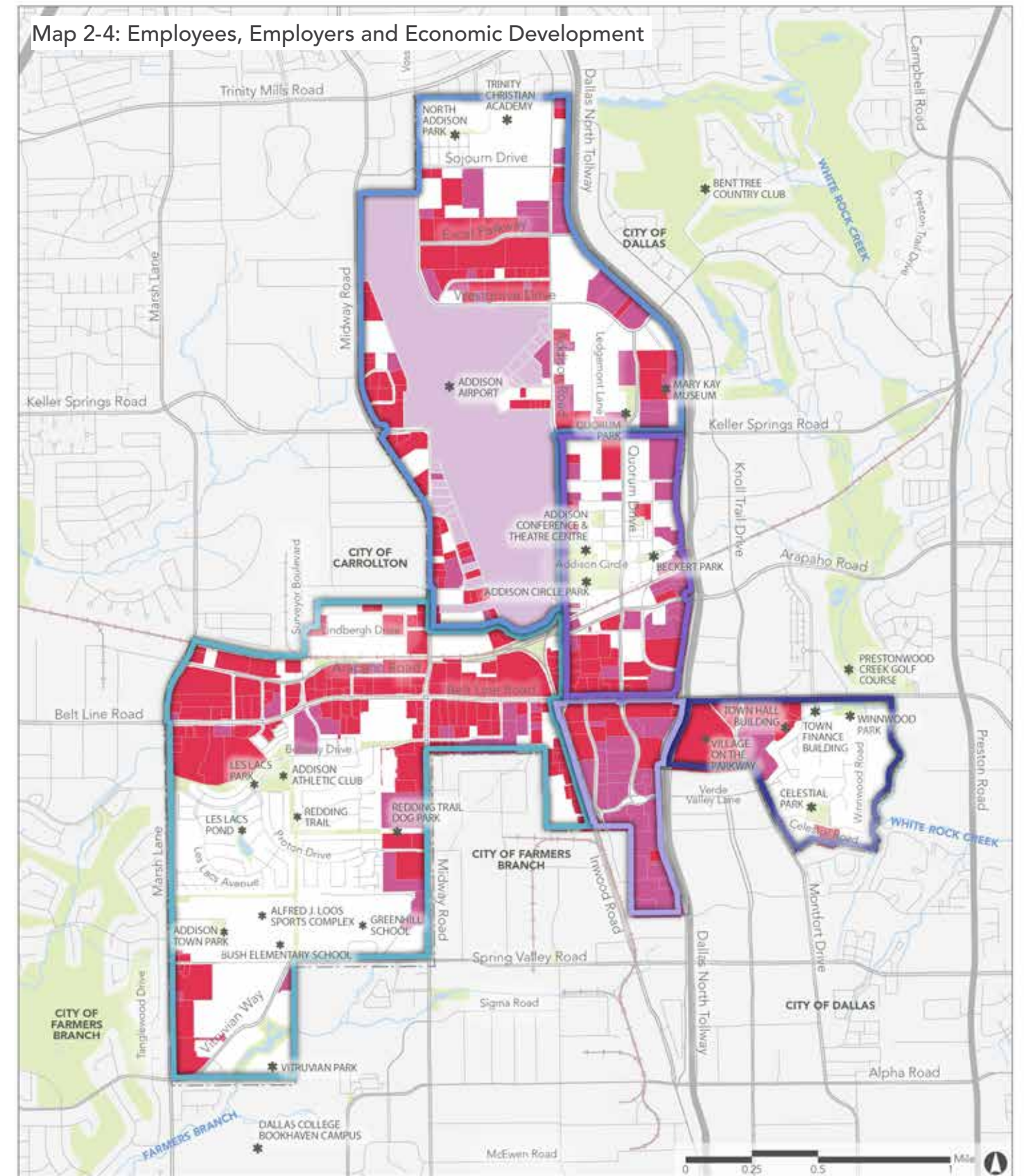
Employment Lands: As was previously discussed, the Addison Airport occupies a large portion of North Addison. An examination of other employment land shows large concentrations north and west of the airport, south along Marsh Road as well, along Belt Line Road, and in South Quorum. Many of these employment areas will be important to the envisioned trail network in Addison. They provide critical linkages between residential neighborhoods, include many of the destinations that residents want to visit when walking and biking, and—with the exceptions of Belt Line Road and Marsh Road—tend to be quieter and lower traffic on nights and weekends when residents will likely use trails most.

Amenitization for Employers and Employees: Another benefit of planning and constructing trail connections through employment areas is that it provides access to existing and potential employers and employees. COVID-19 and the pandemic have weakened the commercial real estate market. Trails and the access they can provide to existing dining and entertainment destinations can help Addison business and property owners better compete in what will undoubtedly be an even more competitive commercial real estate market over the next several years and beyond.

Economic Development: It was noted earlier, but trails can contribute to economic development and the financial success of existing businesses by providing additional ways to access businesses; amenities for visitors and employees; and a more attractive community overall to attract spending from outside Addison. Finally, studies show that people walking and biking to businesses tend to make more frequent visits. While spending on each individual trip may be less than someone arriving by car, the increased number of transactions tends to result in more spending by customers walking and biking.



Map 2-4: Employees, Employers and Economic Development



LEGEND		COMMERCIAL LAND USE		AREAS OF ADDISON	
--- Addison Boundary	— River/Stream	Red Commercial/Retail Parcel	Light Purple Airport Transportation Parcel	Light Blue North Addison	
— Roadway	— Creek Channel	Pink Office Parcel		Purple Central Addison	
Light Green Parks/Open Space/Golf	— Rail			Light Green Southwest Addison	
Blue Water Body	★ Major Destination			Light Purple South Quorum	
				Dark Blue East Addison	

CORRIDORS

Several of Addison's existing trails are located along utility easements and natural drainage ways. One of the most significant regional trail connections planned for Addison is planned as part of DART's Silver Line Rail project. Thus, corridors of all types should be examined for their ability to accommodate improved or new trail connections.

Rail Corridors: In addition to the Cotton Belt Trail being planned and designed along the future Silver Line Rail connection, the existing freight rail network extends south from Central Addison along Inwood Road and into Farmers Branch. Farmers Branch has plans to add trail connections along the rail line within their boundaries and to connect to their local and regional trail network.

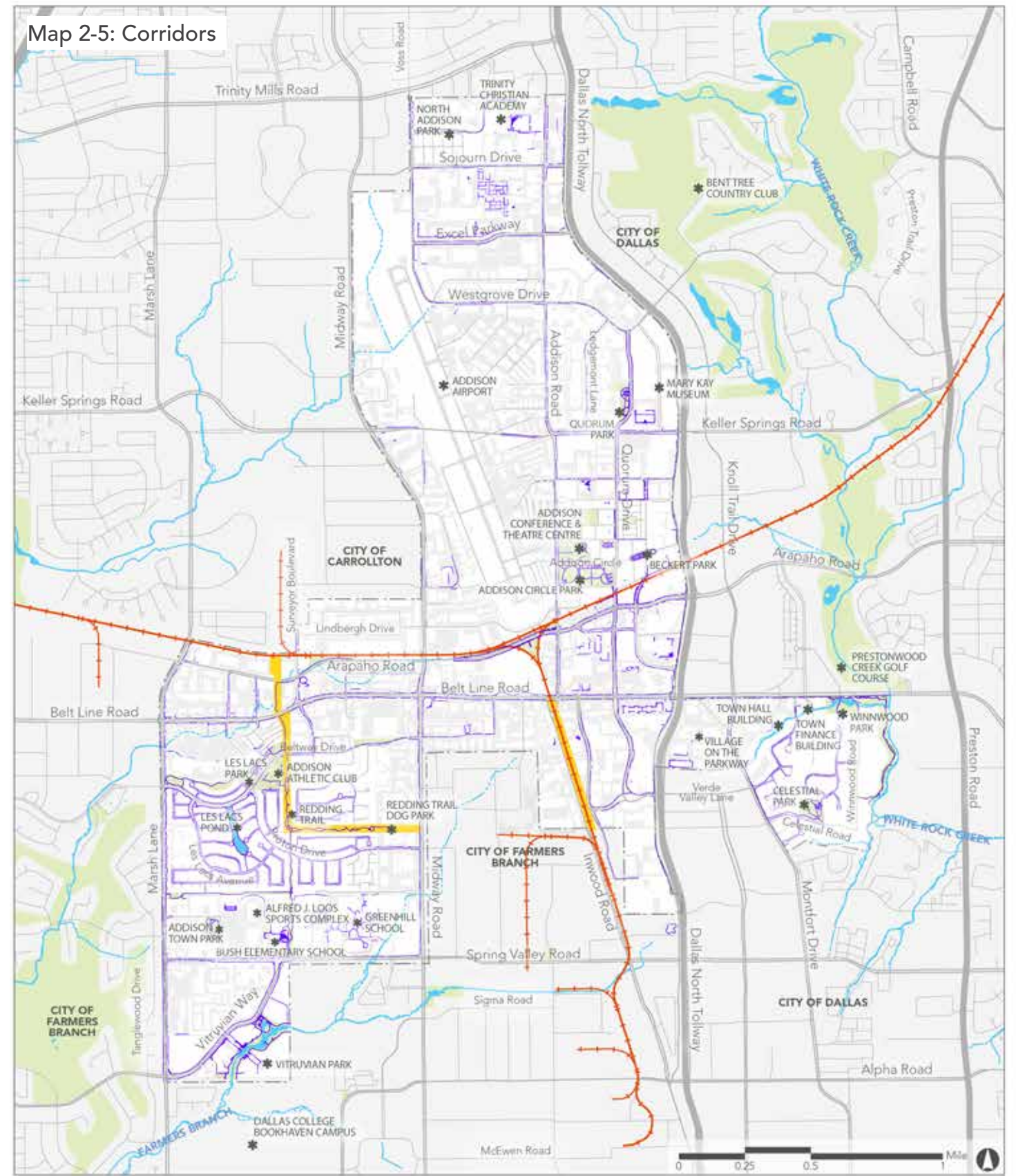
Utility Corridors: Addison's popular Redding Trail exists within a utility easement through a partnership with Oncor. This example of partnering with a utility company shines a light on other opportunities within Southwest Addison and in partnership with Farmers Branch connecting Southwest Addison to South Quorum.

Roadways: The *Master Transportation Plan (MTP)* included wide and buffered sidewalks, bike lanes, as well as wide sidepaths along many of the arterials and collector roads in Addison. In most cases, these pedestrian and bicycle facilities can be accommodated within the existing right-of-way (ROW), but certain roads or segments of roadway will require ROW acquisition and/or cooperation with adjacent property owners. The Trails Master Plan has examined each of the recommended routes in the *MTP* in greater detail, adjusted some to better respond to opportunities on the ground, and in a few instances, added additional recommendations to leverage new opportunities.

Creeks: As was mentioned above in the section discussing Recreation and Nature, new creek trail connections are very limited in Addison. In addition to the potential connection running behind the Town Hall and Town Finance Buildings, a regional connection to the Dallas White Rock Creek Trail should be explored through partnership opportunities.



Map 2-5: Corridors



LEGEND

- | | | |
|-------------------------|--|--------------------------------------|
| --- Addison Boundary | EXISTING NETWORK | CORRIDORS |
| — Roadway | — Paved Sidewalks and Trails* | — Utility or Transportation Easement |
| — Pavement | — Highway | — River/Stream |
| — Parks/Open Space/Golf | — Major Road | — Creek Channel |
| — Water Body | — Local Road | — Rail |
| * Major Destination | *Includes all public and some private paved sidewalks and trails | |

ACTIVE TRANSPORTATION

The *Master Transportation Plan* provides a strong foundation for the current effort. Its inclusion of Off-Street Trails, Enhanced Pedestrian Paths, and other Active Transportation Corridors as part of an Active Transportation Network provided a great starting point for the Trails Master Plan. In addition, the City of Farmers Branch and the City of Dallas have plans for more complete streets and other active transportation connections.

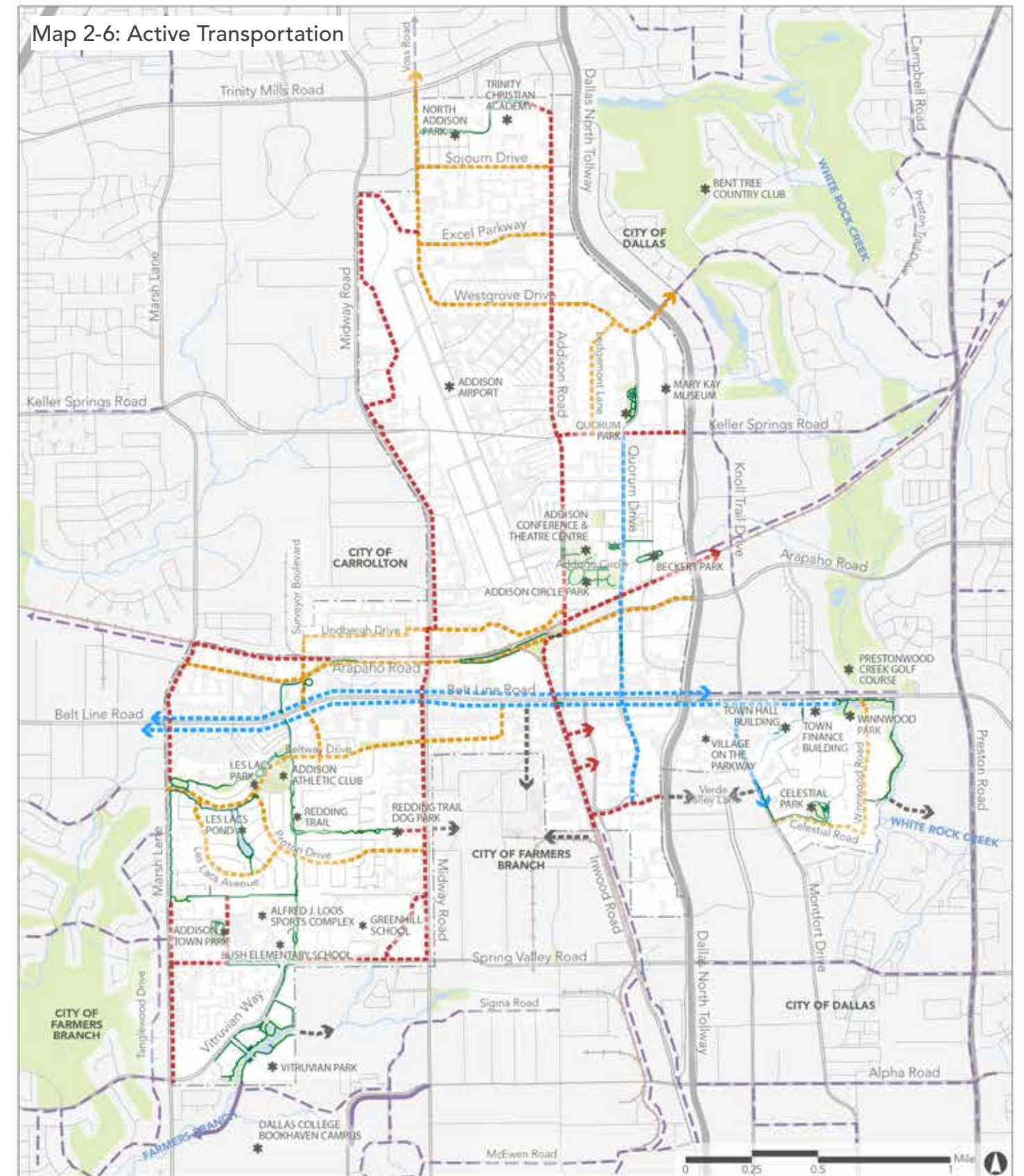
A Variety of Users: Wide sidewalks and bike lanes can provide safety for pedestrians and bicyclists commuting to work or accessing businesses along busy corridors. And these active transportation connections can help fill critical gaps in a more comprehensive trail network. With that said, it is important to remember that the trail network in Addison should accommodate all different skill levels, comfort levels and ages. Supplementing the active transportation network along busier roadways with off-street trails and connections along low traffic streets will provide a more inclusive and enjoyable trail network.

Short-Term and Long-Term Connections: It should be noted that some of the recommended trail connections included in this plan may require 10 to 20 years to realize. Factors include the need for property acquisition and/or coordination, the timing of redevelopment, partnerships, and cost. Pedestrian and bicycle facilities in the street ROW can provide opportunities to create connections in the shorter term while a more ideal trail solution is planned, designed and implemented.

Redundancy: There are many instances where redundancy is desired in a trail network. Parallel facilities that generally connect the same origins and destinations can provide separation of fast-moving cyclists from slower cyclists, walkers and joggers. Similarly, an off-street trail alternative to an on-street facility or a pathway in the street ROW can create separation of recreational users and commuters and those using the trail network for active transportation.



Map 2-6: Active Transportation





REGIONAL CONNECTIVITY

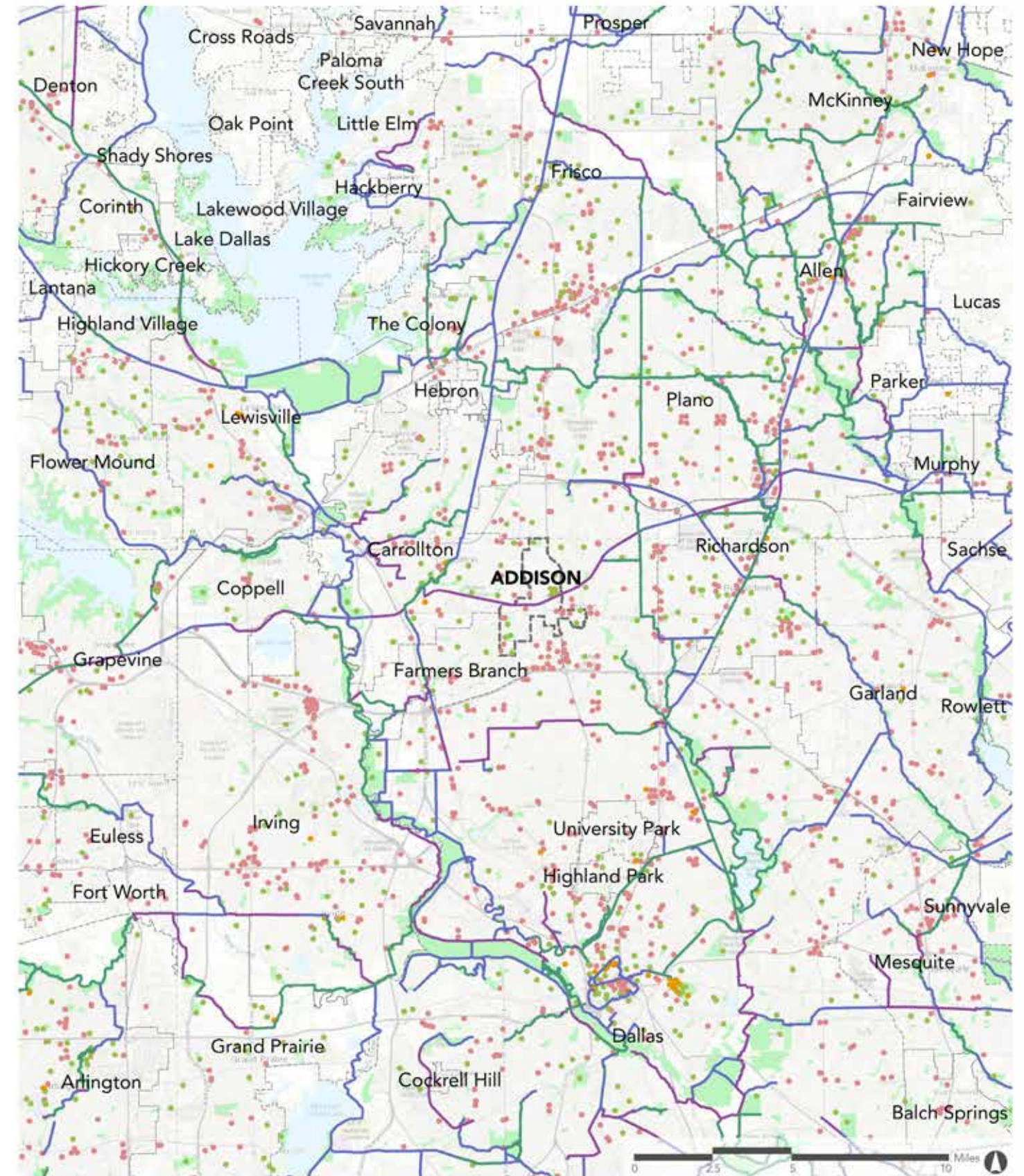
The development of this plan and the implementation of the trail network it recommends will have an even more significant impact for Addison when regional connectivity is considered. A more complete and connected network of trails in Addison that is connected to surrounding jurisdictions creates a number of noteworthy opportunities.

Access to Neighboring and Regional Trails: By connecting to adjacent trails, pathways and active transportation connections, Addison residents also gain safe and comfortable access to hundreds of miles of additional pedestrian and bicycle facilities and amenities throughout the region.

Access to Nearby Destinations: Regional connectivity can make Addison an even more desirable place to live without adding a single park, restaurant or entertainment destination. A regionally connected trail network will allow residents to explore neighboring jurisdictions and other parts of the region on foot and by bike.

Adding to the Collective Good: Addison's recommended trail network will help to fill gaps in the regional trail network and improve access for walkers, jogger and cyclists traveling to and through Addison.

Map 2-7: Regional Connectivity



LEGEND

- | | | |
|------------------------|--------------------------|-----------------------------|
| ----- Addison Boundary | REGIONAL VELOWEB TRAILS* | REGIONAL DESTINATIONS |
| ----- City Boundaries | Existing Trail | Major Retail Location |
| ----- Major Road | Funded Trail | Major Recreational Location |
| ----- Parks/Open Space | Planned Trail | Major Cultural Location |

* North Central Texas Council of Governments (NCTCOG) adopted 2040 Regional Veloweb

3

Community Vision and Goals

While there are many tried and true methods of retrofitting communities with trail connections, planning a network that uniquely fits Addison requires a greater understanding of the community's values and desires. This chapter highlights the engagement process, key advisory groups, and themes uncovered in the community discussions. The chapter concludes with a presentation of the Vision Framework for trails in Addison.



Outreach and Engagement Process

To ensure that the city-wide trail system effectively serves residents and the entire community, an adaptive outreach and engagement process involved three advisory groups and offered four different community input opportunities. The following groups convened during the COVID-19 pandemic which was met with new challenges and opportunities. The result was a robust effort that sought safe and productive ways to gain feedback.

COMMUNITY INPUT OPPORTUNITIES

Addison Trails Community Questionnaire:

Throughout May 2020, 706 residents, employees and trail/park visitor answered questions about the trail system. The results helped identify what is missing, what trail connections need to be made and what types of connections are most important.

Virtual Community Visioning Workshop: On July 30th, 2020, 39 residents joined a virtual workshop to identify trail needs and establish a vision for the future. The workshop featured a presentation and a fun and interactive polling exercise. For those unable to attend the meeting, a recording of the presentation was

posted on the Town's website with direction on how to fill out the electronic poll.

Large Map Pop-Up Events: Three pop-up events were held in parks and at existing community meetings in November and December 2020. Events at the Addison Athletic Club and Addison Circle Park attracted a total of about 150 residents, employees and visitors who shared their thoughts and ideas about Addison's future system. These events featured a large 10 by 15-foot floor map depicting the proposed trail route. Residents were prompted to have discuss the alignments with staff or add their comments directly to the map with sticky notes.

Draft Future Trail Network Questionnaire: In tandem with the large map pop-up events, the project team launched another map-based survey over six-week period, from November to December 2020. Targeted specifically at residents, over 250 community members participated and assessed proposed draft alignments and trail typologies. Additionally, they added new trails, trailheads and identified important connections with map pins.



ADVISORY GROUPS

Project Advisory Committee: The Project Advisory Committee (PAC) was created to advise the project team throughout the development of the Master Plan. The Committee met four times to offer insight about the local community, to provide technical feedback through online polling and mapping, and ensure the Master Plan addresses the needs of all Addison community members.

Project Management Team: The Project Management Team included staff members from different Town departments who reviewed materials, discussed project directions, and ensured the Master Plan incorporated relevant data and was consistent with concurrent Town planning efforts. The Project Management Team met five times during the planning process (four of which were virtual and one was in person, utilizing the large floor map).

City Council: City Council provided direction through stakeholder interviews, received regular updates on plan deliverables and findings, and went on a guided tour of all proposed routes to provide input.

Stakeholder Interviews: Twenty-eight interviews were conducted throughout the process with Council members and PAC members to discuss trail opportunities and constraints.

From these community meetings and activities, eight key outreach themes emerged as priorities for the city-wide trail system. Described on the next pages, these themes reflect the community's needs and aspirations for Addison's trails. (See Appendix B for additional details.)



Stakeholder Quote:

"Our trails are designed and used by walkers/ dog walkers and walks within neighborhoods are most common among Addison residents."

PRIMARY TRAIL USERS

Throughout the process, community members and stakeholders reminded the project team that the trail system should accommodate walkers, dog walkers, joggers, and bikers of all ages and ability levels. Community conversations also highlighted desires to create a trail network that serves recreation and transportation needs.

Answer	Count
Off-street multi-use paths	417
Wide walking paths and sidewalks	367
Unpaved or park trails	270
Multi-use paths in the public right-of-way	223
Separated bike lanes	171
Bike lanes	124
Two-way cycle tracks	94
Not completed or Not displayed	102

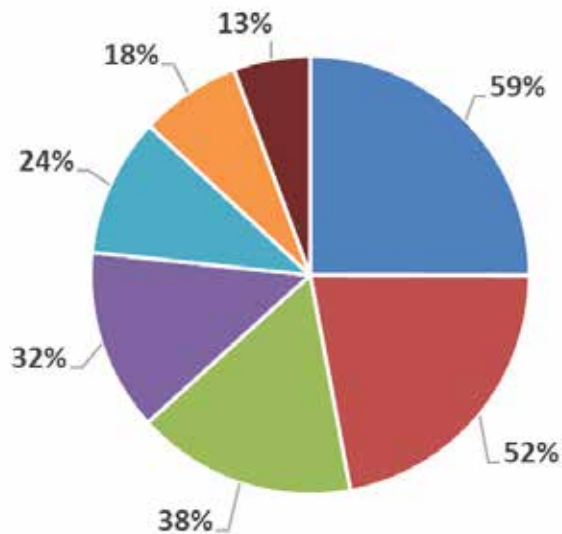


Figure 3-5: "What types of trail connections do you want to see more of around Town?" (results from the Addison Trails Community Questionnaire)

TRAIL INFORMATION, EDUCATION AND COMMUNICATION

Community members identified existing conflicts between trail users and expressed concerns about increased conflicts with an expanded system. Participants suggested supplementing physical improvements with enhanced information, education and communication about trail use and etiquette.

Stakeholder Quote:

"Some trails are too narrow to accommodate bike and other modes. More posted information/ education is needed about trail etiquette/rules for all users and modes"



Figure 3-6: Identify trail opportunities that this plan and/or trail development should include. (results from the PAC SWOT Workshop Discussion)

TRAIL DESIGN AND AMENITIES

Participants expressed an interest in improving the design and amenitization of existing trails and being thoughtful about establishing expectations for future trail design. The community want trail designs and amenities to be context sensitive.

Stakeholder Quote:

" Provide amenities along trails, like pods of activity and meeting places that are shaded."

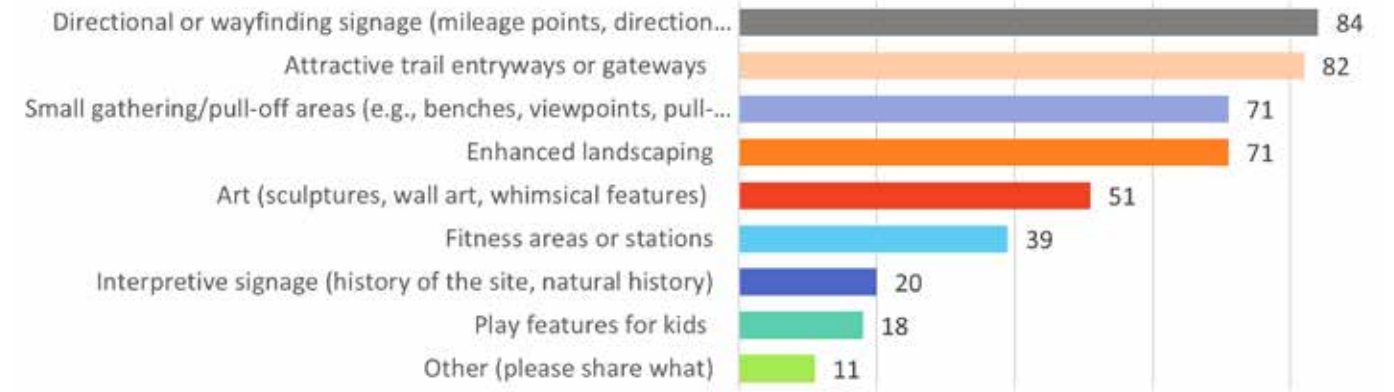


Figure 3-7: Pick your top three choices for amenities that should be included along the Cotton Belt Trail in Addison. (from the Draft Future Trail Network Questionnaire)

Stakeholder Quote:

"The future Cotton Belt Trail provides numerous opportunities such as... Regional connections... Interconnection of transit and trails... Proximity to the Circle... Trails as a conduit to bring people in and activate businesses... Provides neighborhood access and connections"

REGIONAL CONNECTIVITY

Many community members and stakeholders expressed a strong desire to implement the Cotton Belt Trail and make other connections to neighboring local and regional trails, as well as other pedestrian and bicycle facilities.

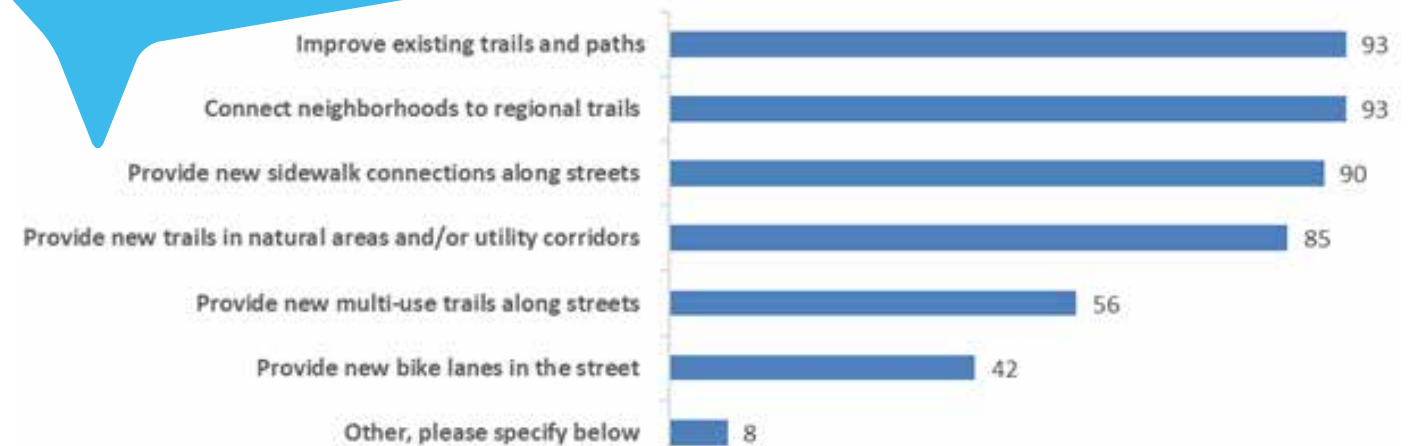


Figure 3-8: "What is the highest priority projects from the list above?" (results from the Addison Trails Community Questionnaire)



Vision Framework

The priorities, values and aspirations are the guiding forces for Addison's City-Wide Trails Master Plan. Through meetings with the Project Advisory Committee and input received from the community, these themes were integrated into a Vision Framework (see Figure 3-1). The Vision Framework provides the foundation for the Master Plan and is aligned with the Master Transportation Plan and the Parks, Recreation and Open Space Master Plan.

The Vision Framework includes the following elements:

Values: The qualities and ideals that guide the trail system.

Goals: Directions for long-range change. Goals represent the Town's overarching directions for the trail network.

Prioritization Criteria: Determinants of prioritizing projects in each phase. These were vetted by community members and Town staff.

Recommendations: Specific projects and initiatives that will achieve one or more trail goal. Recommendations are described at the system-wide level and at the project level.

Figure 3-1: Vision Framework



A large red arch bridge spans across a river. The bridge has two prominent arches. Below the bridge, there is a paved walkway on the right side where a person is walking a dog. The river is in the foreground, and there are some trees and a grassy area on the opposite bank. The sky is clear and blue.

4

Comprehensive Recommendations

The chapter includes the recommended trail network, suggested phasing, direction for trail design, and recommendations for a number of features and amenities to support the overall trail network and user experience. The first section highlights several elements of the planning approach that are foundational to the recommended trail network presented in the following section.



Foundational Elements

The Guiding Principles, Vision and Goals discussed in Chapter 3 provided strong guidance for the development of the recommendations included in this chapter and the remainder of the Trails Master Plan. With that said, several key concepts emerged through community and stakeholder discussions, site touring and on-the-ground exploration, and coordination with Town of Addison departments and partners. These elements are considered foundational to the recommended trail network and aid in understanding both the intent and nuance of the recommendations that follow.

IMPROVEMENTS TO EXISTING TRAILS

When planning for the future, it is sometimes easy to overlook what already exists or take those assets for granted. A foundational element of the City-Wide Trails Master Plan for Addison is maintaining and enhancing the trails that already exist in the community.

Improvements to existing trails should include, but not be limited to, proactively resurfacing trails on a regular maintenance schedule prior to their condition becoming a noticeable and more costly issue; better signing trails, especially where they end or connect to on-street facilities; designating bike free areas and/or dismount trail segments or entire trails if quality bicycle facilities can provide the same or similar connection; and widening trails existing trails where possible to provide greater opportunity to accommodate two-way traffic and a variety of user types.



INTEGRATION WITH MASTER TRANSPORTATION PLAN

With a relatively small number and miles of trails in Addison today, envisioning a complete trail network could have been an overwhelming charge. Fortunately, the *Master Transportation Plan* provided the next foundational element for the Trails Master Plan. The *Master Transportation Plan* identified a relatively robust network of Active Transportation corridors and connections within the public right-of-way as a part of planning for the transportation network.

Integration with the *MTP* helps to accomplish several important objectives and will significantly contribute to the implementation of the envisioned trail network. First, the *MTP* created an expectation and set of recommendations whereby a large portion of pedestrian and bicycle facilities are integrated into the re-design and construction of roadways throughout the community. As such, the Trail Master Plan is able to fine tune those recommendations and supplement them with additional off-street connections, critical crossing improvements, and trail access and amenities.

The integrated approach to active transportation in the *MTP* also helps in two other important ways. With Addison being largely built out, a network comprised entirely of off-street trails would be relatively sparse and very disconnected. The Trails Master Plan relies on a creative approach that leverages critical pedestrian and bicycle facilities in the street rights-of-way and uses those connections to link off-street facilities. A more integrated approach to transportation and recreation will also help to leverage available resources and provide more funding opportunities when seeking grant dollars, as well as regional, state, and federal allocations.

PROACTIVE PLANNING IN DEVELOPING AND REDEVELOPING AREAS

It was stated above that Addison is largely built out. While that may be true, there are a handful of significant development and redevelopment projects in various stages of implementation in Central and Southwest Addison. It will be important to continue to work with the developers of these important areas to integrate trail connections into development that is still planned and to help realize the larger vision articulated in the Trails Master Plan.

With the planned DART rail line running east and west through Southwest and Central Addison, there is a relatively significant transit-oriented development opportunity between Addison Road and the Dallas North Tollway. As part of this development, additional trail connections should be integrated into the design for the area to provide critical linkages to the DART Station, the Cotton Belt Trail, and existing Addison Circle recreation and entertainment destinations.

Another longer-term redevelopment is planned for the area along and west of Inwood Road. Conceptual plans for this redevelopment include important pedestrian and bicycle connections running parallel to Inwood Road and connecting west from Inwood Road through the future redevelopment. The Trails Master Plan integrates these conceptual alignments and provides recommendations to ensure they are well connected to the larger trail network.

The successful Vitruvian development in Southwest Addison includes additional phases that include trails and pedestrian promenades as key organizing elements tying future development to the completed portions of Vitruvian and the popular trails in and around Vitruvian Park.

CREATION OF NESTED LOOPS

One of the original drivers for the Trails Master Plan was a resounding chorus of input heard during the development of the *Parks, Recreation and Open Space Master Plan* calling for new and improved trails connecting to parks and other destinations throughout Addison. Participants in that planning process began to highlight the benefit of loops within parks, within neighborhoods, and extending out to other neighborhoods. Community and stakeholder input throughout the planning process for the Trails Master Plan underscored the passion around creating a set of interconnected trail loops that can be used for recreation and transportation.

Responding to community input and feedback, a fundamental element of the recommended trail network is the creation of nested trail loops. The general idea is smaller loops are nested within and become part of larger loops. This approach provides the optimal balance of connectivity and choice for trail users. With the number of nested loops achieved in the envisioned future trail network, the variety of trail experiences is nearly endless. The recommended trail network will allow walkers, joggers and bikers to create a range of preferred trail routes with a diversity of trail types, surrounding contexts and lengths.



ENHANCEMENT OF REGIONAL CONNECTIVITY

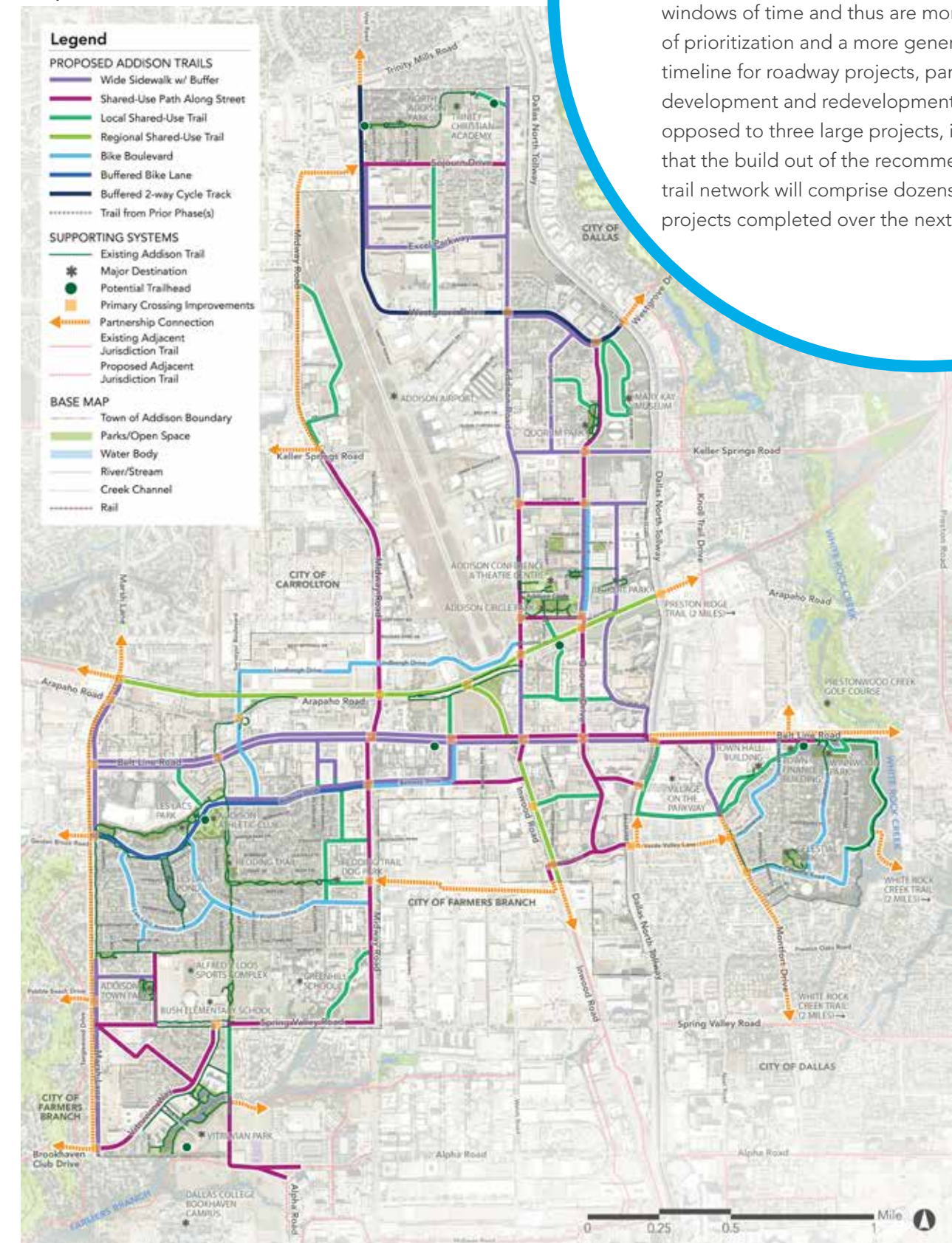
The footprint of Addison is approximately four-square miles, so it is easy to head in one direction and quickly find oneself in another neighboring jurisdiction. The Trails Master Plan embraces this quality to maximize trail connections to the surrounding communities and maximize regional connectivity.

The Cotton Belt Trail along the DART Silver Line will provide a high-quality multi-use trail cutting across the northern part of the region from Dallas-Fort Worth International Airport east to Plano. This important connection will be supplemented with approximately one dozen additional local connections to Carrollton, Farmers Branch and Dallas. These more localized linkages connecting the Addison trail network to those of the trail and active transportation networks of the surrounding communities will maximize the recreation and transportation benefits for Addison residents.

Recommended Network

The recommended trail network for Addison builds upon the foundational elements summarized above and is presented in three phases below. The three phases represent windows of time and thus are more suggestive of prioritization and a more generalized timeline for roadway projects, partnerships, and development and redevelopment efforts. As opposed to three large projects, it is anticipated that the build out of the recommended Addison trail network will comprise dozens of smaller projects completed over the next 15 to 20 years.

Map 4-1: Future Trail Network



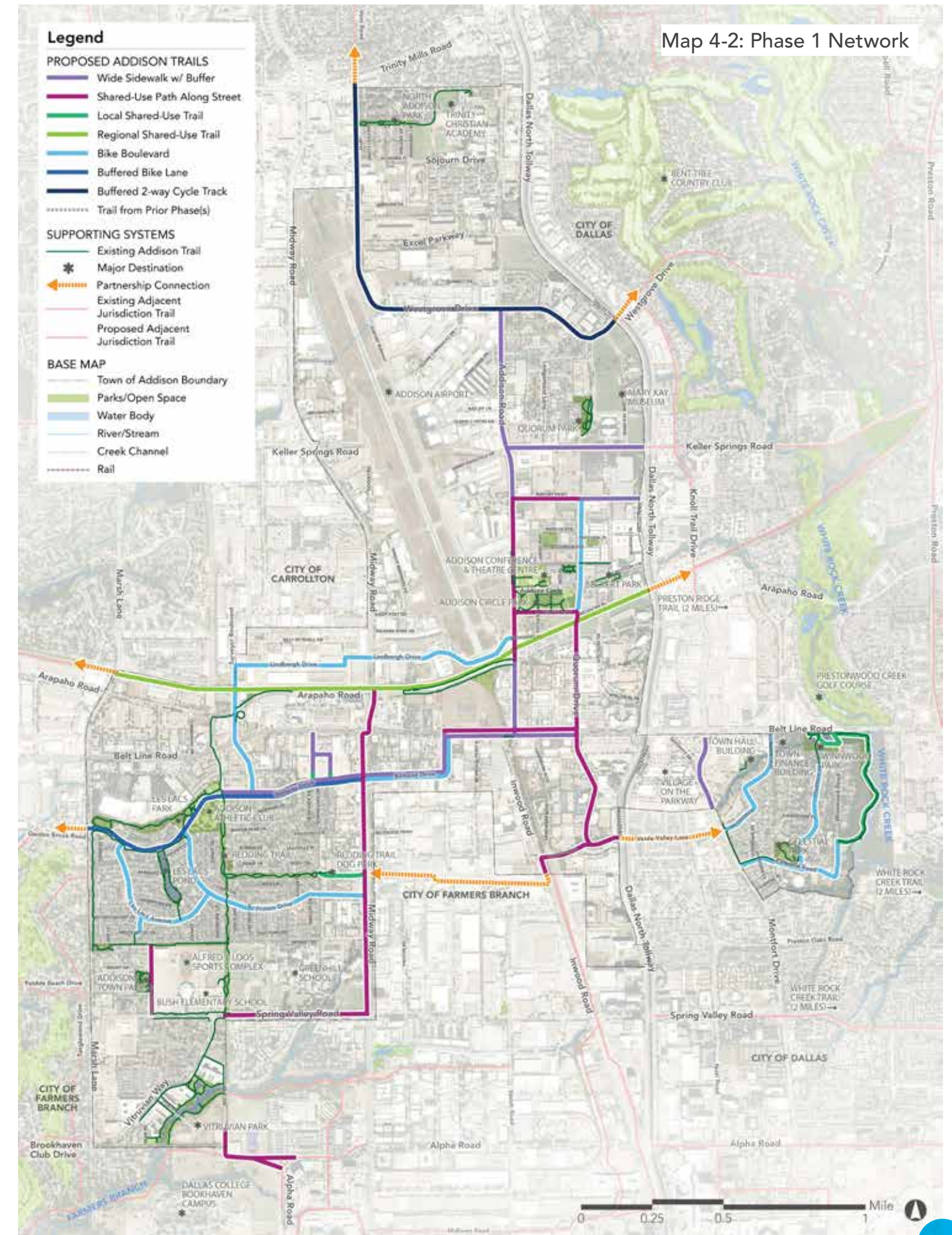
PHASE 1: SHORT-TERM (0-5 YEARS)

The first phase of the Future Trail Network will establish the primary armature of an enhanced pedestrian and bicycle infrastructure throughout Addison. This initial phase of projects establishes connections between the various areas in Addison and completes many connections within many neighborhoods and districts. It should also be noted that the initial set of recommended improvements includes examples of nearly all trail types and several projects that will be part of roadway improvements that are already underway or scheduled to be in the next several years. Alignments highlighted in yellow on the map of Phase 1 trail improvements are already identified in the 5-Year Capital Improvements Program (CIP) for the Town.

Key aspects of Phase 1 of the Future Trail Network include:

- **Critical east-west and north-south connections** that cross Addison and connect trail users to other areas of the Town, as well as neighboring communities. These connections include:
 - A shared-use path along Spring Valley Road connecting existing paths near Bush Elementary School west to Midway Road.
 - An extension of the Redding Trail alignment westward through a combination of shared-use trails and shared-use path long the street and utilizing partnership connections to extend along an Onco utility easement through Farmers Branch, through South Quorum along Landmark Place and Quorum Drive and continuing east along Verde Valley Lane in the City of Dallas over to new bike boulevards on Paladium Drive and Oaks North Drive in East Addison.
 - Another east-west alignment connecting Southwest Addison to Central Addison using a combination of bike lanes, bike boulevard, and widened sidewalks with buffers along Beltway Drive and continuing east along Belt Line Road with widened sidewalks and a shared-use path along the street.
 - Implementation of the Cotton Belt Trail with the construction of the DART Silver Line Regional Rail.
 - Bike Boulevard improvements along Lindbergh Drive.

- Important improvements to Westgrove Drive including a 2-way cycle track that creates north-south and east-west connectivity in North Addison and a connection eastward across the Dallas North Tollway into the City of Dallas.
- Completion of the Midway Road improvements with the shared-use path along the street.
- A combination of widened and buffered sidewalks along with shared-use paths along the street extending from Belt Line Road north to Westgrove Drive.
- Shared-use path along Quorum Drive from Landmark Place in South Quorum north to Festival Way and then bike boulevard treatments complementing the already generous sidewalks extending from Festival Way north to Airport Parkway.
- **New local loops and connections** within several areas of Addison, including:
 - Shared-use path along Woodway Drive along the east edge of Addison Town Park.
 - Bike boulevard improvements along Les Lacs Avenue and Proton Drive in the Les Lacs Pond area.
 - Widened sidewalks extending through the new development between Beltway Drive and Belt Line Road.
 - Bike boulevards in East Addison along Celestial Road, Palladium Drive, Oaks North Drive, and portions of Bellbrook Drive and Winwood Road.
 - Sidewalk improvements to Montfort Drive south of Belt Line Road within the Town of Addison.
 - A combination of shared-use path and widened sidewalks along Airport Parkway.
 - Widened and buffered sidewalks along Keller Springs Road.
- **Partnership connections** connecting Phase 1 trail improvements to surrounding jurisdictions. In addition to those already noted above as part of the Cotton Belt Trail and other east-west crosstown connections, these include:
 - A connection to the Brookhaven Campus and Farmers Branch trails with an extension of Bella Lane.
 - A crossing of Marsh Lane at Garden Brook Road.
 - An improved crossing of the Dallas North Tollway along Westgrove Drive.
 - An improved crossing of Trinity Mills Road to make a connection north from Westgrove Drive to Voss Road.



Map 4-2: Phase 1 Network

PHASE 2: MEDIUM-TERM (6-10 YEARS)

The second phase of the Future Trail Network includes a number of improvements that largely fall into two categories. The first are projects along major roads that will require an additional level of coordination with Public Works and neighboring jurisdictions. The second are projects that create additional connections and loops within the various areas of Addison.

Key aspects of Phase 2 of the Future Trail Network include:

- **Improvements along several principal and minor arterials**, including:
 - Widened sidewalks with buffers long Marsh Lane, as well as an improved crossing at Pebble Beach Drive.
 - Widened sidewalks with buffers and shared-use paths along Belt Line Road extending from Quorum Drive east to Winnwood Park, as well as an improved connection across Belt Line Drive at Prestonwood Boulevard.
 - Shared-use path extending north along Quorum Drive from Airport Parkway to Westgrove Drive.
 - Widened sidewalks with buffers along Addison Road from Westgrove Drive north to Trinity Christian Academy.

- **Improvements to complete loops and create additional connections** within several parts of Addison, including:

Southwest Addison:

- Extension of shared-use paths along Spring Valley Road from Woodway Drive to Marsh Lane.
- Wide sidewalks with buffers along Sidney Drive from Woodway Drive to Marsh Lane.

South Quorum:

- Regional shared-use trail connection along the railroad east of Inwood Road.
- A local shared-use trail running east and west across South Quorum in partnership with landowners.

East Addison:

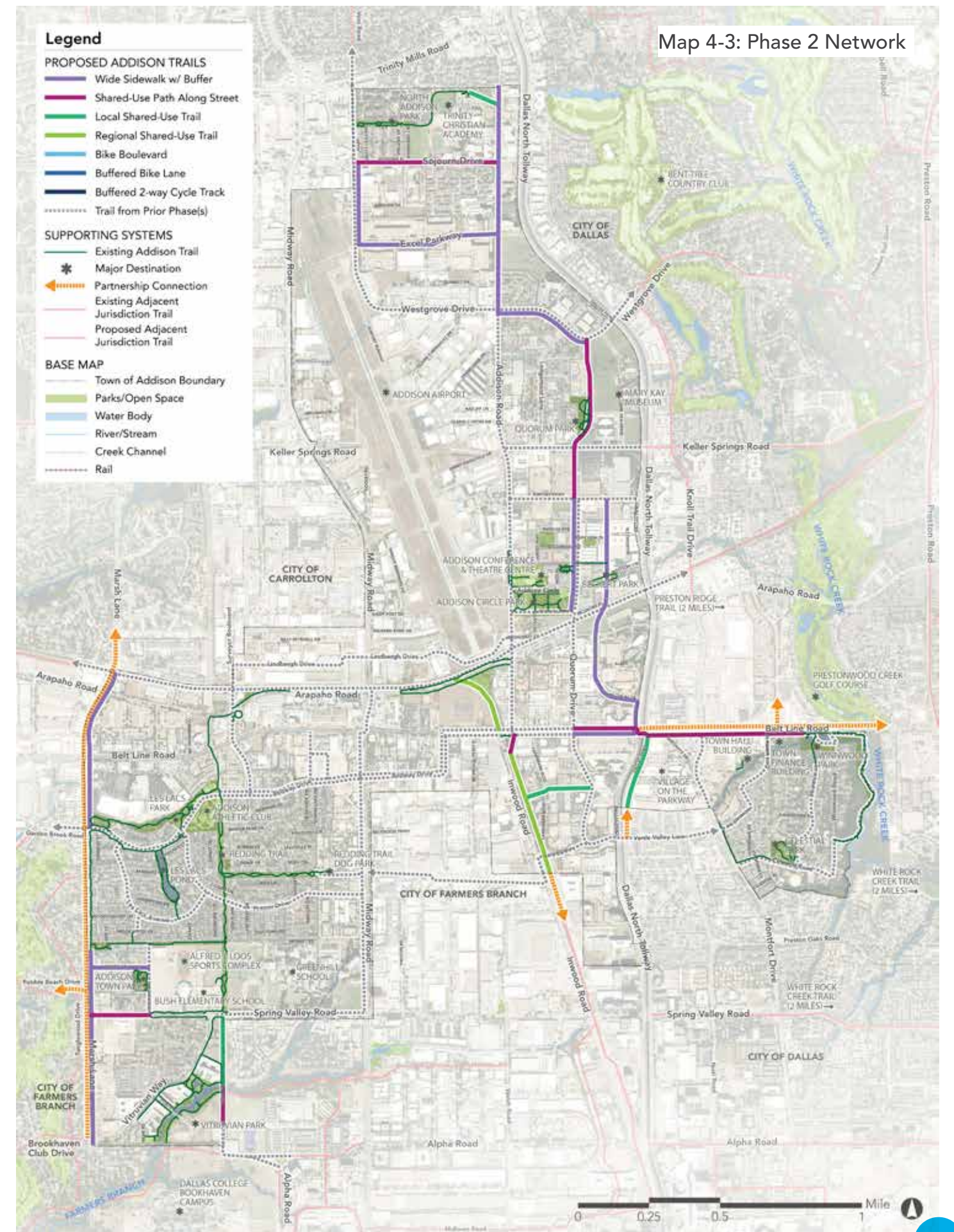
- A local shared-use trail along the Dallas North Tollway frontage road on the east side of the tollway.

Central Addison:

- Widened sidewalks with buffers along Spectrum Drive.

North Addison:

- Widened sidewalks with buffers along Excel Parkway from Westgrove Drive to Addison Road.
- Shared-use path along Sojourn Drive extending from Westgrove Drive to Addison Road.
- A local shared-use trail connecting Addison Road to existing trails west on the Trinity Christian Academy campus and in North Addison Park.



Map 4-3: Phase 2 Network

PHASE 3: LONG-TERM (11+ YEARS)

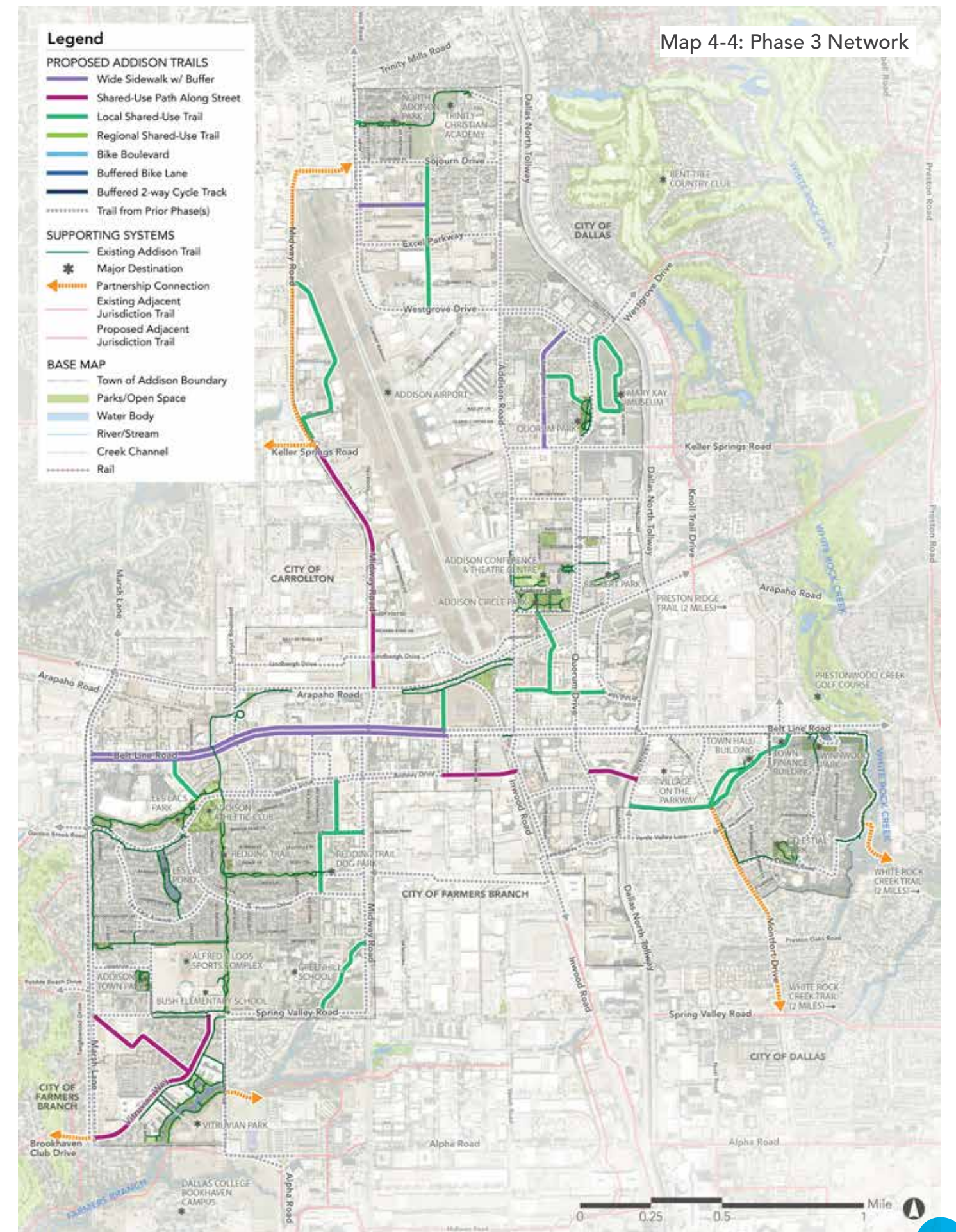
The last phase of the Future Trail Network primarily includes a collection of connections that will require longer term coordination and collaboration with neighboring jurisdictions and individual property owners as properties develop or redevelop.

Key aspects of Phase 3 of the Future Trail Network include:

- A large collection of desired **connections that can enhance the trail network resulting from Phases 1 and 2 implementation**, but requiring coordination with individual redevelopment projects, including:
 - Shared-use paths along Vitruvian Way and new roadways included in future phases of the Vitruvian development.
 - Shared-use paths extending east and west connections south of Beltway Drive from and through South Quorum generally along the Beltway Drive alignment.
 - Local shared-use trails throughout portions of Southwest Addison connecting to Midway Road and Belt Line Road, East Addison through Village on the Parkway and running along the drainageway behind the Town Hall and Town Finance Buildings, Central Addison as part of the Addison Circle transit-oriented development, and in North Addison west of

the airport, linking Sojourn Drive to Westgrove Drive and at and near the Mary Kay Campus.

- Widened sidewalks with buffers along Belt Line Road from Beltway Drive west to Marsh Lane.
- **Contribution to a loop around the Addison Airport:**
 - Shared-use path along Midway Road from the Cotton Belt Trail north to Keller Springs Road, in conjunction with local shared-use trail connections identified above and partnership connections identified below.
- **Longer-term connections** working with neighboring jurisdictions:
 - Connections east and west from Vitruvian at Brookhaven Club Drive and along Farmers Branch Creek.
 - Improvements south along Montfort Drive linking to Spring Valley Road.
 - A possible connection of the Addison White Rock Creek Trail to White Rock Creek Trail in Dallas.
 - Roadway improvements west of the airport along Midway Road, Keller Springs Road and Sojourn Drive.
- **Completion or enhancement of local trail loops** in North Addison:
 - Widened sidewalks along Airborn Drive.
 - Widened sidewalks along Ledgemont Lane.



Map 4-4: Phase 3 Network

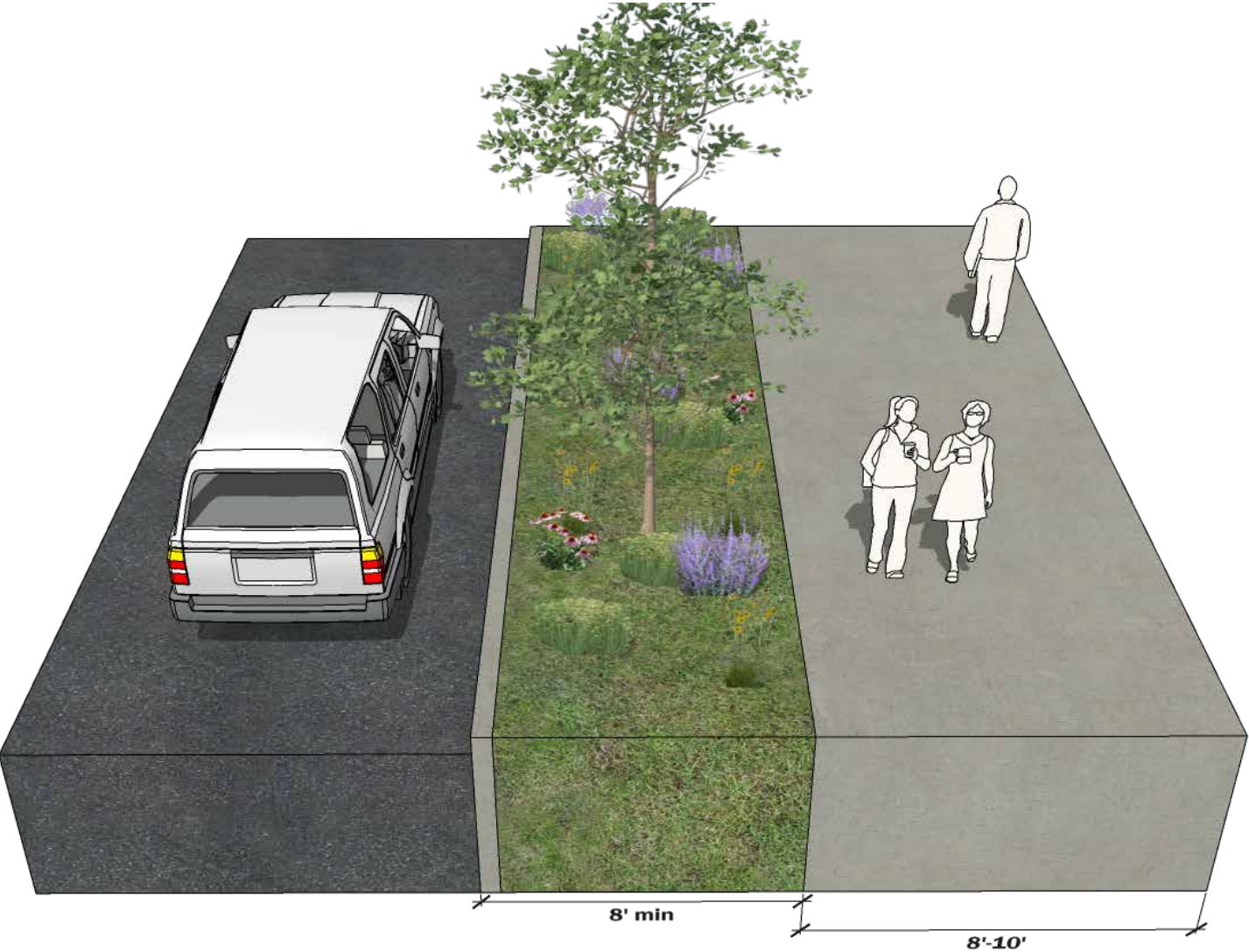
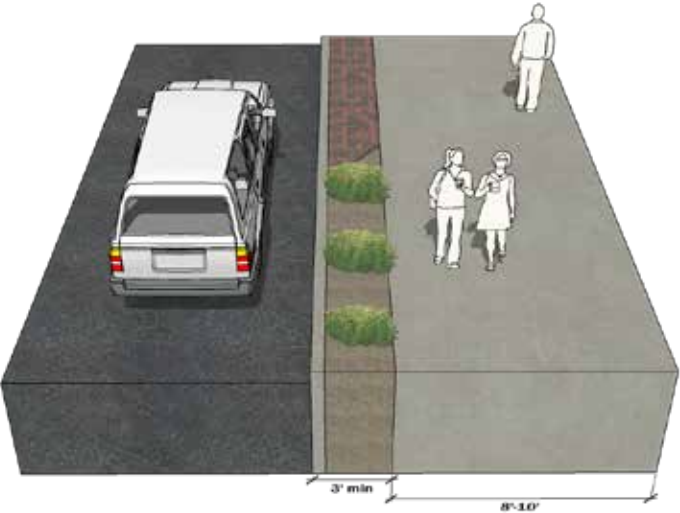
Trail Design Standards and Guidelines

The following core attributes are needed for quality Addison Trails.

TRAIL TYPOLOGIES

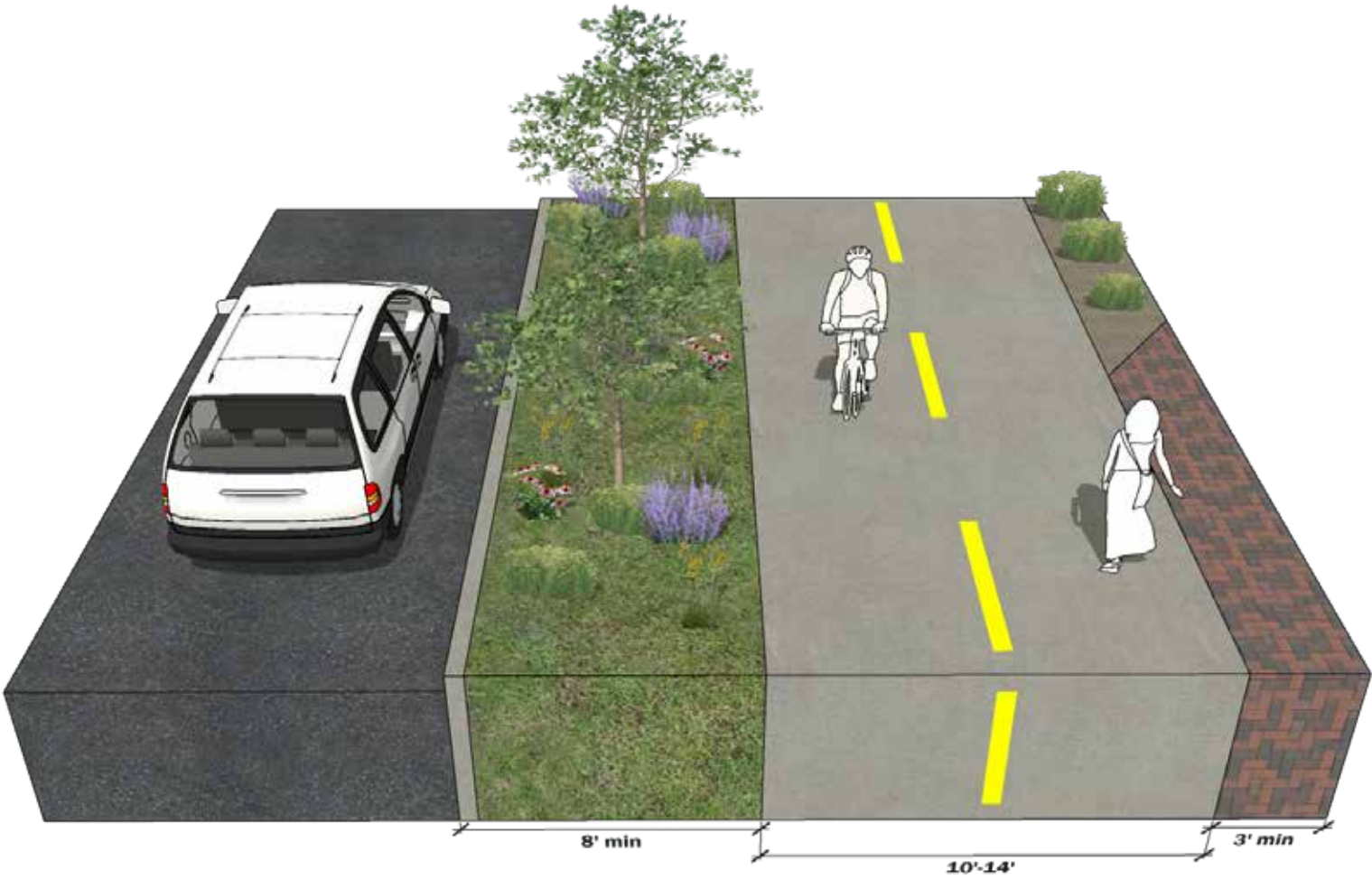
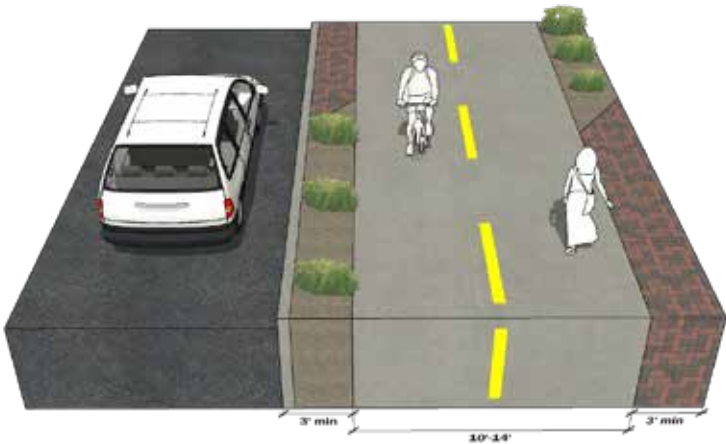
Wide Sidewalk with Buffer

Sidewalks provide great pedestrian facilities and can also accommodate joggers and bicyclists if they are wide enough. New sidewalks in Addison should be 8-10 feet wide wherever feasible and include a landscaped buffer between the back of curb and the sidewalk. The buffer should be a minimum of 3 feet, but a buffer width of 8 feet is preferred.



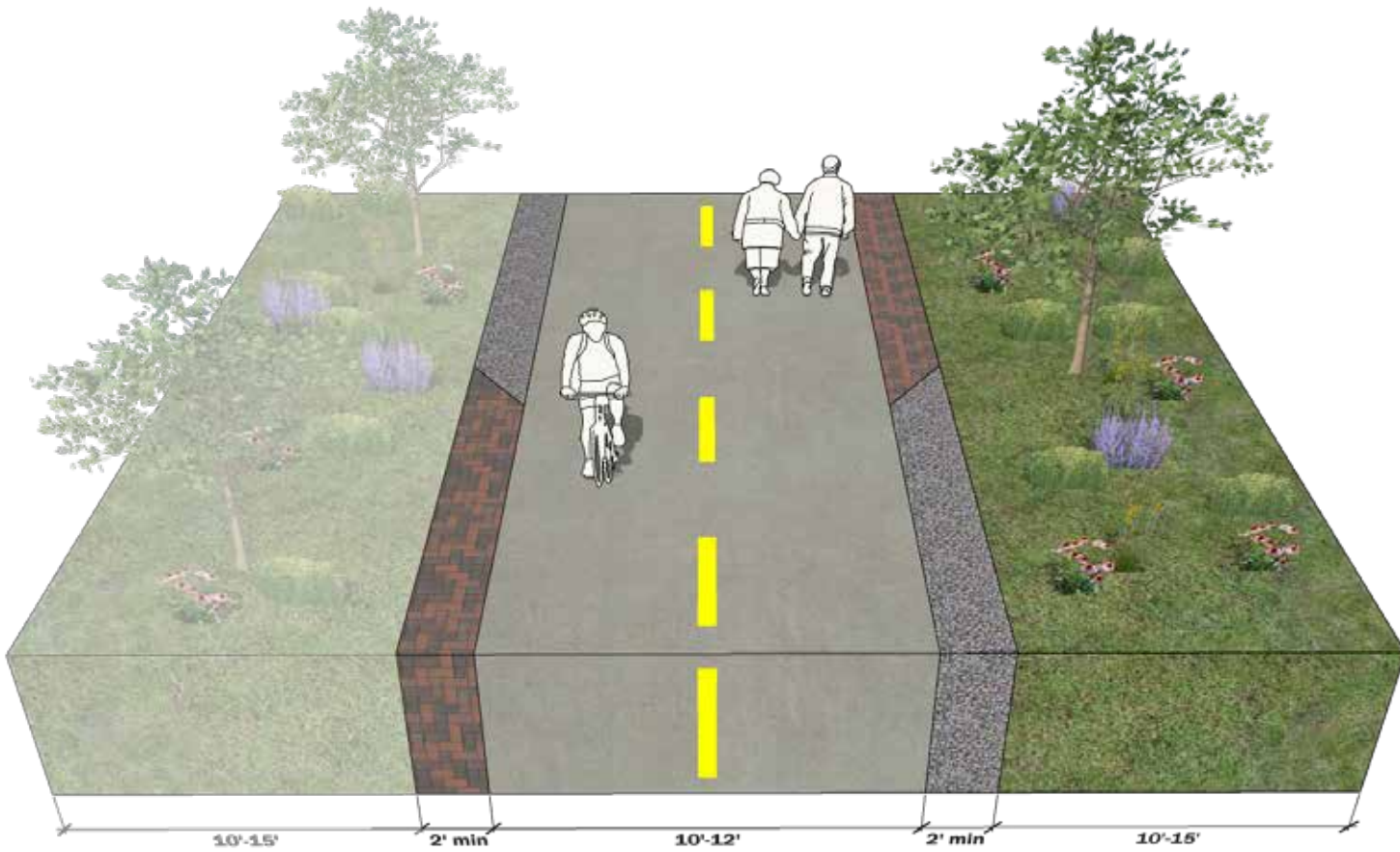
Separated Shared-Use Path Along Street

Separated shared-use paths along streets are a key element of the Master Transportation Plan's Active Transportation Network. Shared-use paths are great for pedestrians, joggers and cyclists. Shared-use paths along streets should be 10-14 feet wide and include a landscaped buffer between the back of curb and the path. The buffer should be a minimum of 3 feet, but a buffer width of 8 feet is preferred.



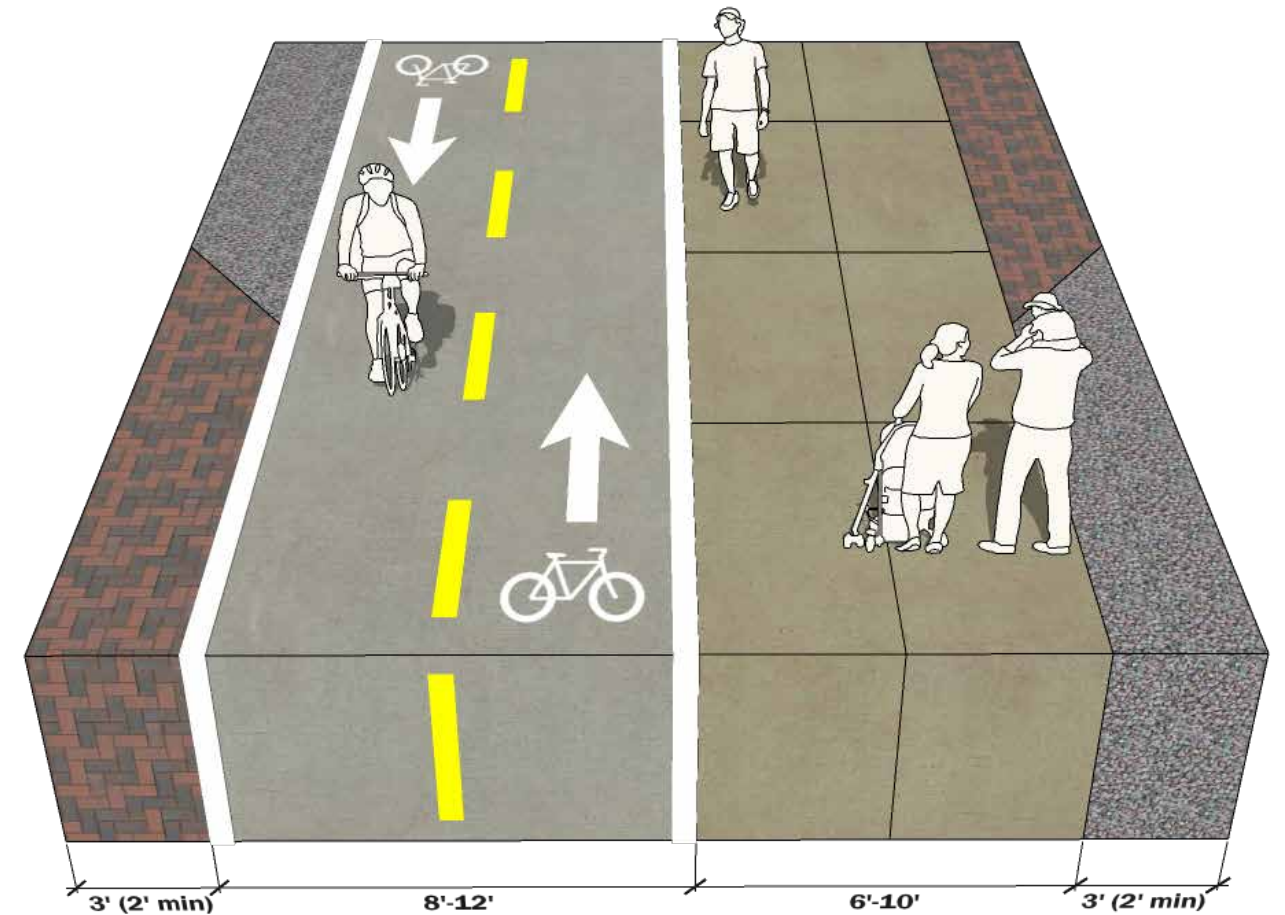
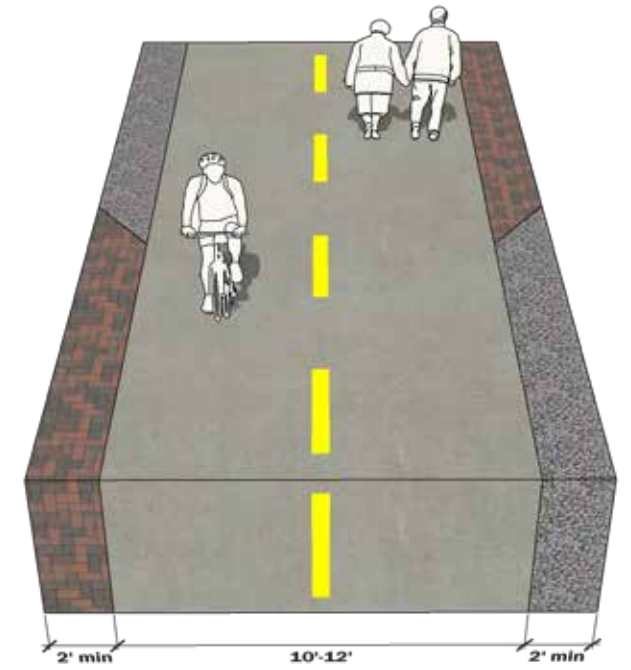
Local Shared-Use Trails

Local shared-use paths are typically the safest and most comfortable facilities for pedestrian, joggers and bicyclists. They provide full separation from motor vehicles, except at street crossings. Local shared-use trails should be 10-12 feet wide and include buffers on both sides of the trail. The buffers should be a minimum of 2 feet, but wider buffers with landscaping and screening are highly encouraged. Landscaped buffers of 10-15 feet are highly desirable.



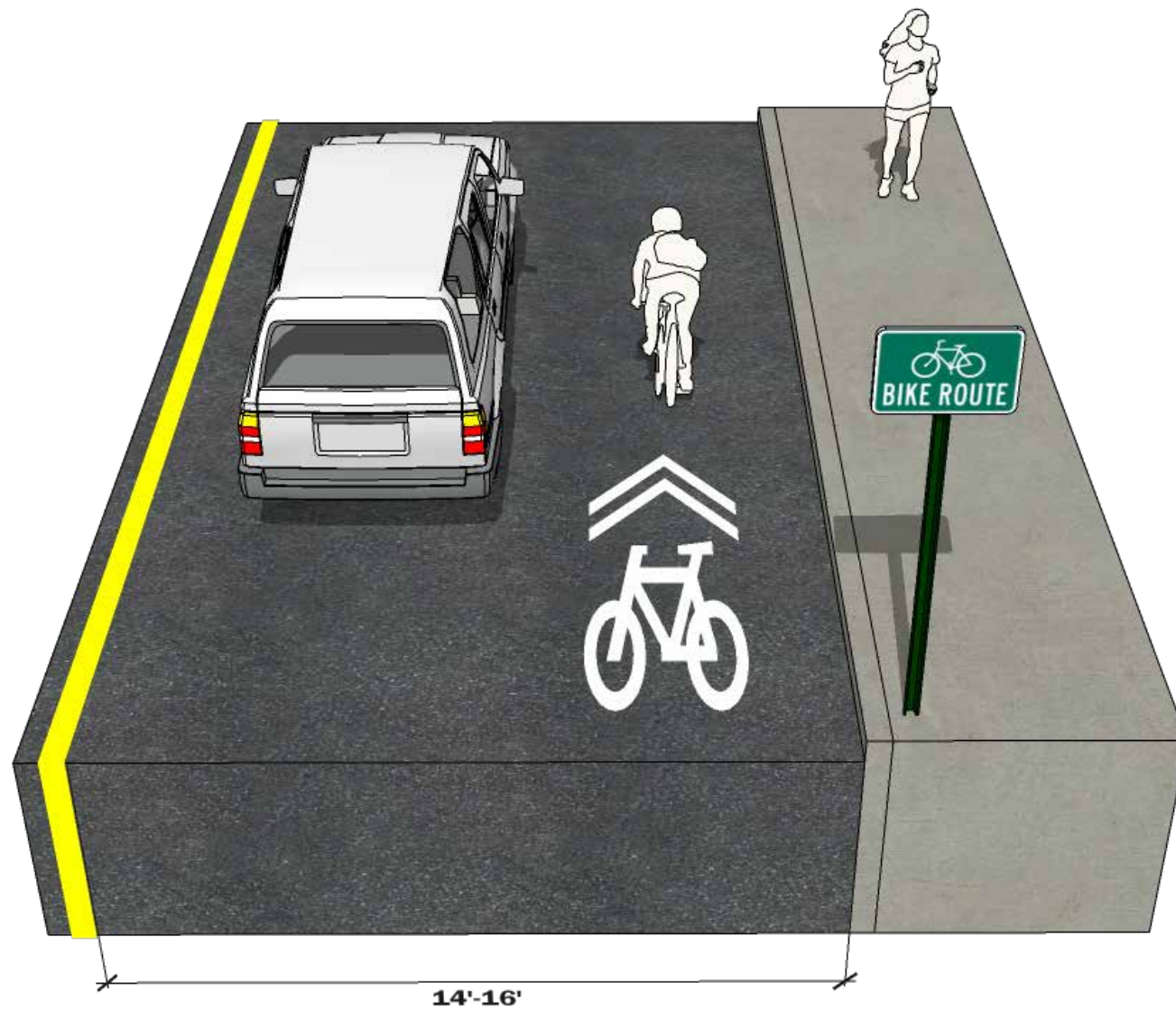
Regional Shared-Use Trail

Regional shared-use paths are also very safe and comfortable for pedestrian, joggers and bicyclists. Like local shared-use trails, they provide full separation from motor vehicles, except at street crossings. Due to their regional nature, they tend to cross busier roadways and must navigate other natural and man-made obstacles. At a minimum, regional shared-use trails should be 10-12 feet wide and include at least 2 foot buffers on both sides of the trail. When possible, 6-10 feet of additional trail width to separate walkers from joggers and bicyclists is recommended. Landscaped buffers with screening of 10-15 feet are highly desirable.



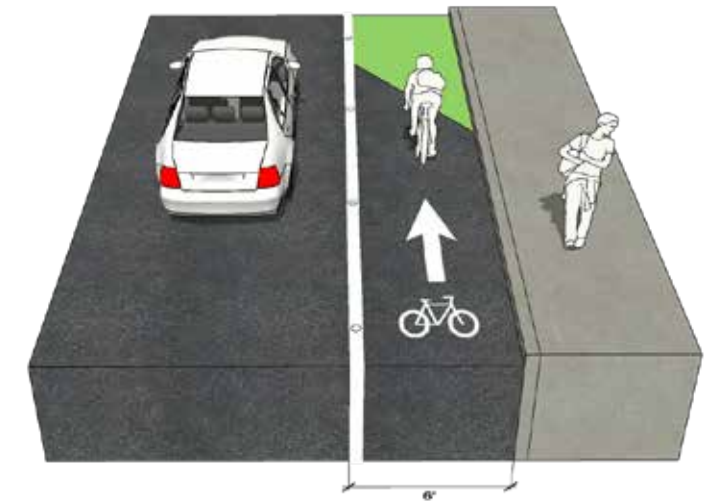
Bike Boulevards with Wayfinding

Bike boulevards are a unique treatment, typically reserved for lower traffic and often narrower streets. Improvements associated with a bike boulevard include sharrow markings on the roadway and signage. Sharrow markings should be in the flow of traffic when stenciled on streets with on-street parking. Additional traffic calming measures are also recommended on routes with faster moving traffic.



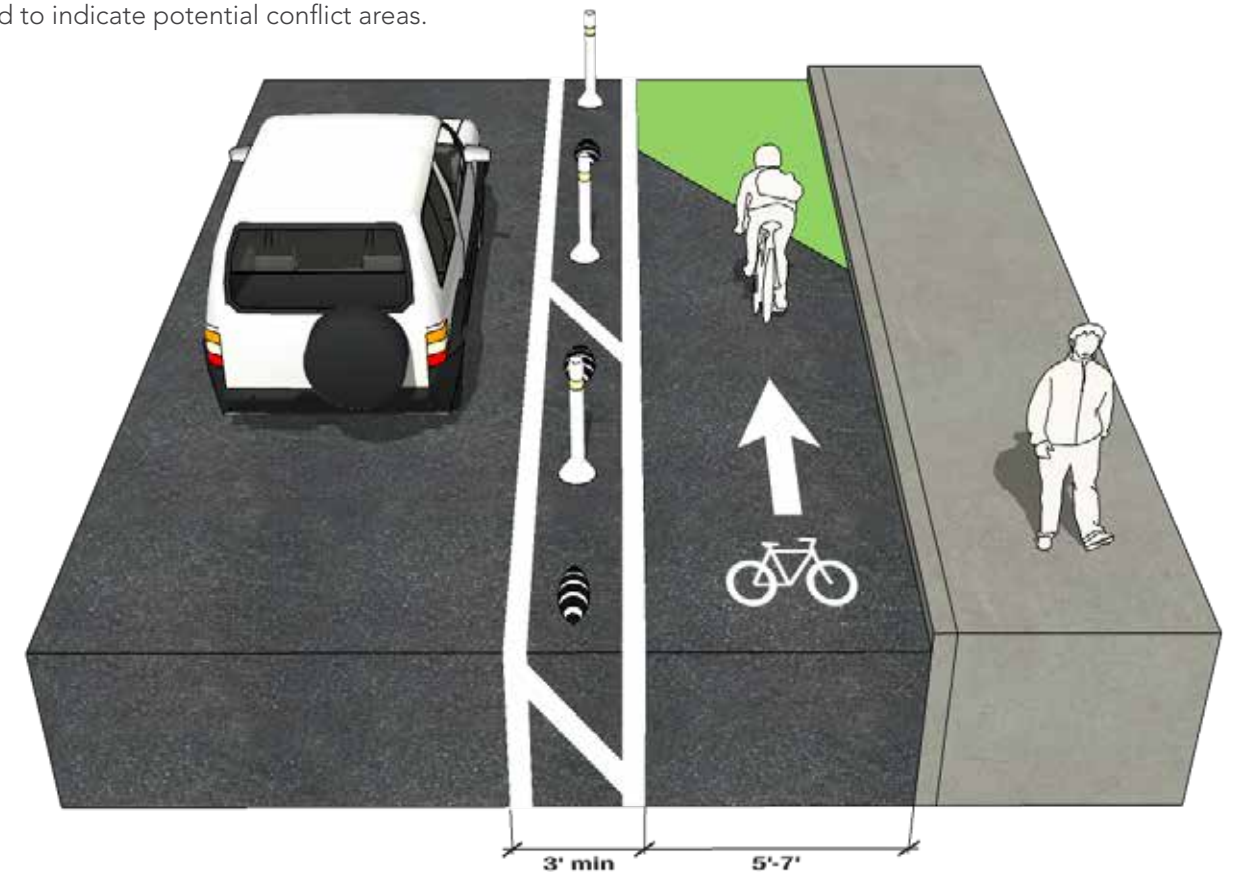
Bike Lanes

Bike lanes are one of the most traditional types of dedicated bike facility. The preferred application in Addison is a 6 foot width with bicycle stencils, a 6 inch stripe and bolted plastic reflectors at regular intervals on the stripe. Solid or hatched green paint or thermoplastic applications can be used to indicate potential conflict areas.



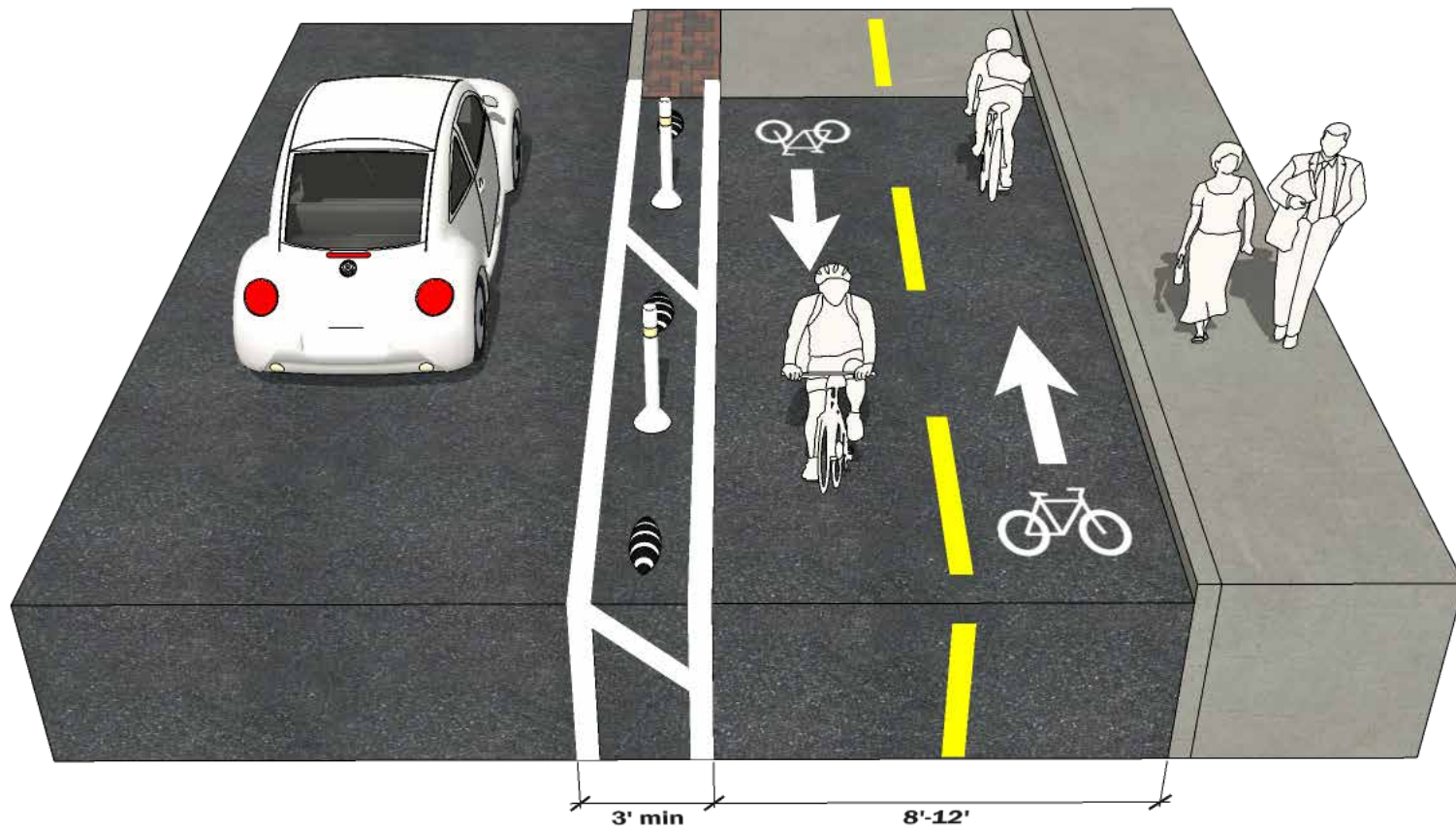
Buffered Bike Lanes

Buffered bike lanes are a preferred alternative to traditional bike lanes where space allows. They should include a bike lanes with a width of 5-7 feet, bicycle stencils in the bike lane and a minimum striped buffer of 3 feet. The striped buffer should include bolted plastic separators or another physical barrier. Solid or hatched green paint or thermoplastic applications can be used to indicate potential conflict areas.



Two-Way Cycle Track

Cycle tracks have become a relatively popular bicycle facility type in certain circumstances, especially when a buffered separation of the bike facility is desired, but space is too constrained to provide buffered bike lanes on both sides of the street. The two-way cycle track should be at least 8-12 feet in width with stencils and striping delineating the two directions of travel. A striped buffer of at least 3 feet should include bolted plastic separators or another physical barrier such as a durable planter box, plastic lane dividers or breakaway bollards.

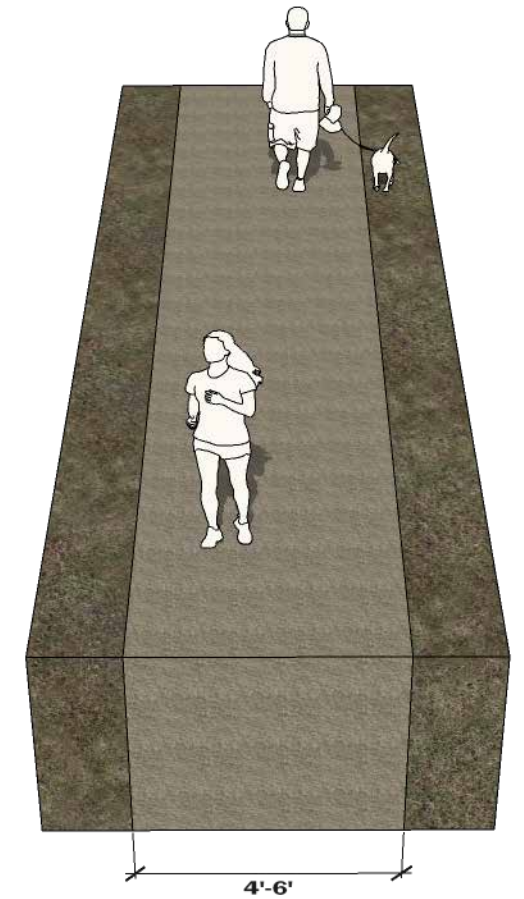
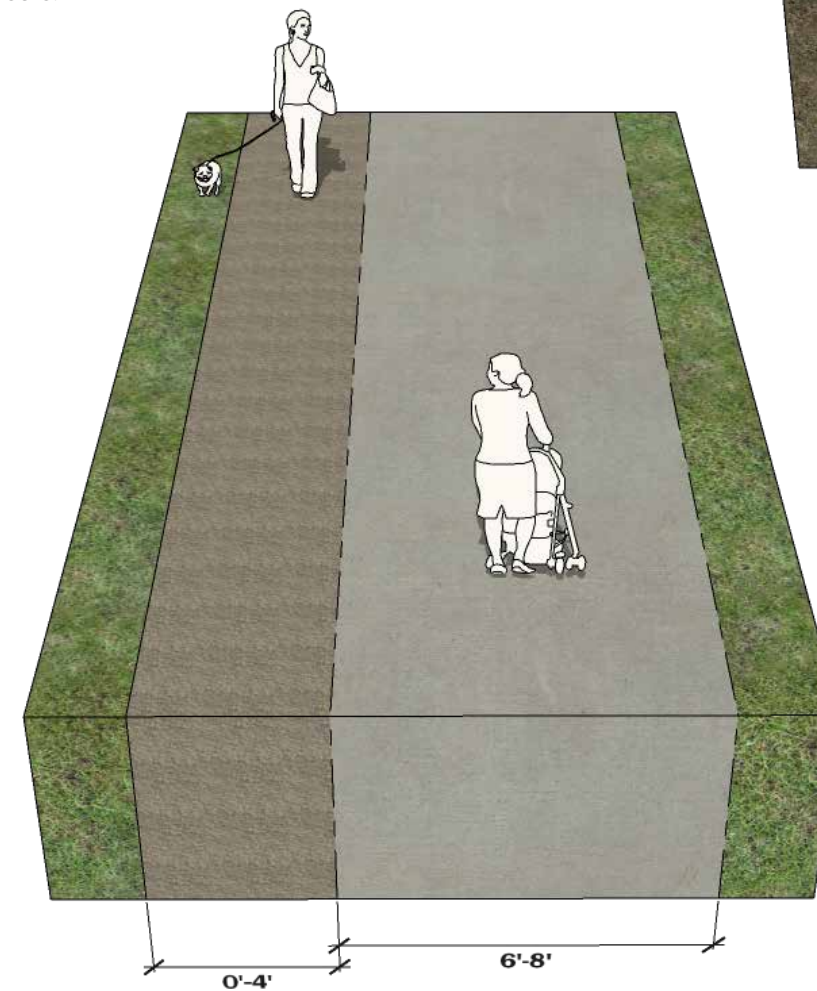


Soft Surface Park Trails

Soft surface park trails are a highly desirable surface for walking and jogging because it causes less strain on joints. The preferred treatment for soft surface park trails is a decomposed granite surface with a width of at least 4-6 feet.

Paved Park Trails

Paved park trails should be concrete and at least 6-8 feet wide. A decomposed granite buffer or apron is desired and should be at least 1-2' on both sides of the trail when possible. A wider decomposed granite path of at least 4' on one side of the paved trail can provide a desirable option for slower moving trail users.



Supporting Systems

Trail Surfacing: Concrete paving is preferred for most trail surfaces. Crusher fine granite surfacing may be suggested for use as trail buffers, soft-surface side trails or nature paths. Hard-surfaced pavers may also be used as trail buffers in areas that are more urban or desire a more finished look and feel. Hard-packed surfacing is common to interim trails.

Site Grading and Layout: When considering where to develop a trail path, effective stormwater management is essential. Either a modest cross slope along the trail or a gentle running slope in the direction of travel can prevent erosion, trail repairs or closure. Additional tips for site grading and layout include:

- Paths should be smooth and continuous, avoiding vertical disruption or changes in surfacing, and avoiding low points.
- Trails should strive to have running slopes of less than 5% and cross slopes less than 2% to provide positive drainage and accessibility. Trails should drain with the natural drainage pattern, if applicable, with runoff buffered with landscaping to avoid erosion.
- Sharp turns should be avoided. At turns, clear the approaches of trees and shrubs to maximize decision time for users.

- Trail alignment should strive to sustain 5' of clearance from fences, particularly if private gates onto Town-owned trail segments are possible or likely.
- Trails should end at a street or destination; they should not dead-end.

Striping: With most Addison's trails being paved and along streets, striping will be used heavily to identify trail direction, define an intersection and warn for areas of caution. All striping should follow the TxDOT Roadway Design Manual, the Manual on Uniform Traffic Control Devices (MUTCD) and other standards. Additional tips for striping include:

- **Yellow, centerline broken striping:** Are typically applied along segments of trail with good visibility to separate trail directions or modes of travel.
- **Yellow, centerline solid striping:** Are typically applied along segments of trail with limited visibility and at high traffic bicycle and pedestrian crossings
- **White, solid shoulder striping:** Are typically applied along paved trail edges to indicate a potential risk
- **Stop bar:** Are typically applied at street crossings or trailheads with "Stop" signage

TRAILHEADS AND ACCESS POINTS

Access Points

Access points offer public access to off-street trails and are generally small in scale. Access points are designed to provide access to off-street trails from neighborhoods, an on-street trail or a park. They provide essential and simple trail amenities such as signage, seating, shade and trash receptacles, but may also include enhanced amenities (see Figure 4-3). The diagram depicted in Figure 4-2 shows a prototypical trail access point.

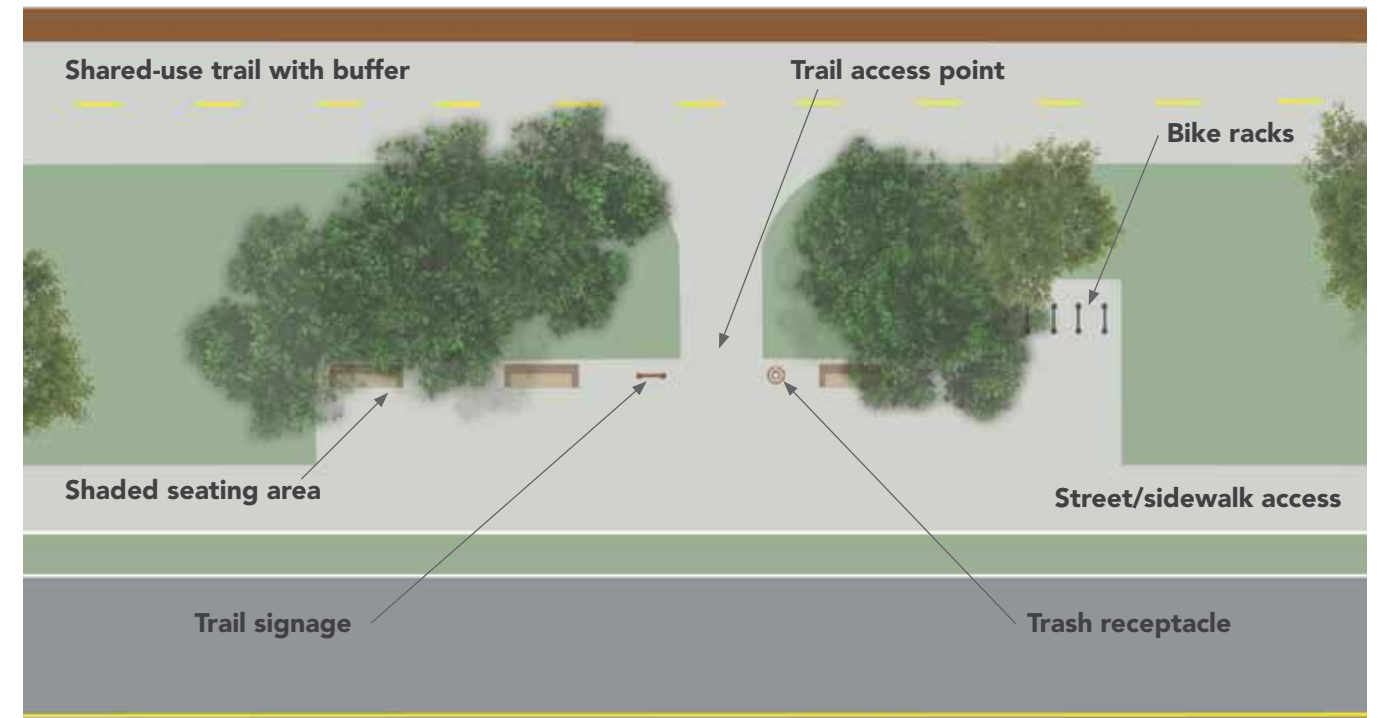


Figure 4-1: Prototypical Access Point with Basic Amenities

Trailheads

Trailheads offer access to an off-street trail or trail system by providing parking and additional support amenities. These areas will vary in scale and shape depending on available land and the amount of trail activity. Trailheads may be constructed solely on public property such as the fringe of a park, on

a civic building lot or on another property that the Town owns. Additionally, there may be opportunities to develop a trailhead on private property by establishing a shared parking lot. Figure 4-2 diagrams a prototypical trailhead layout and Figure 4-3 indicates which amenities should or could be included.

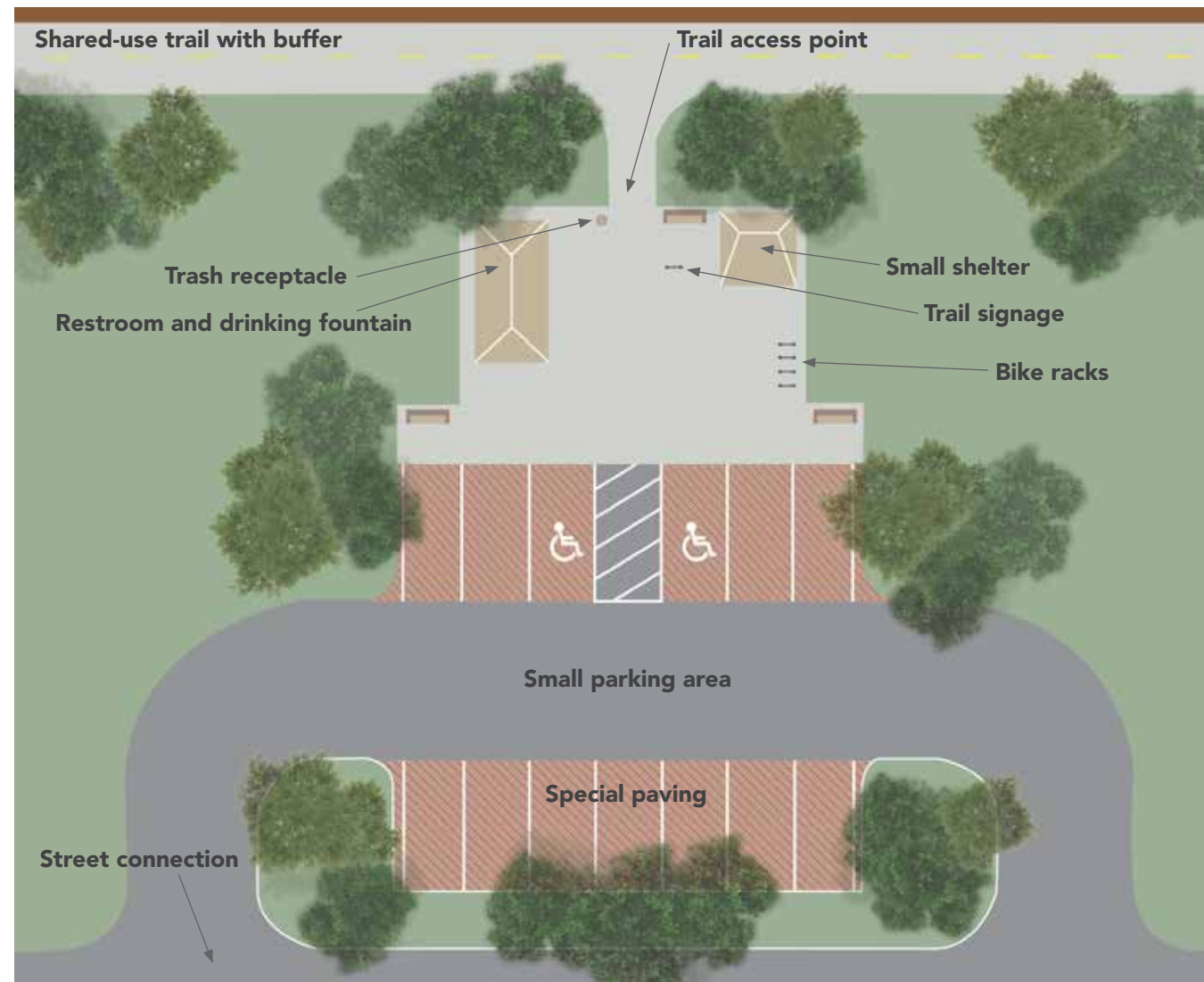
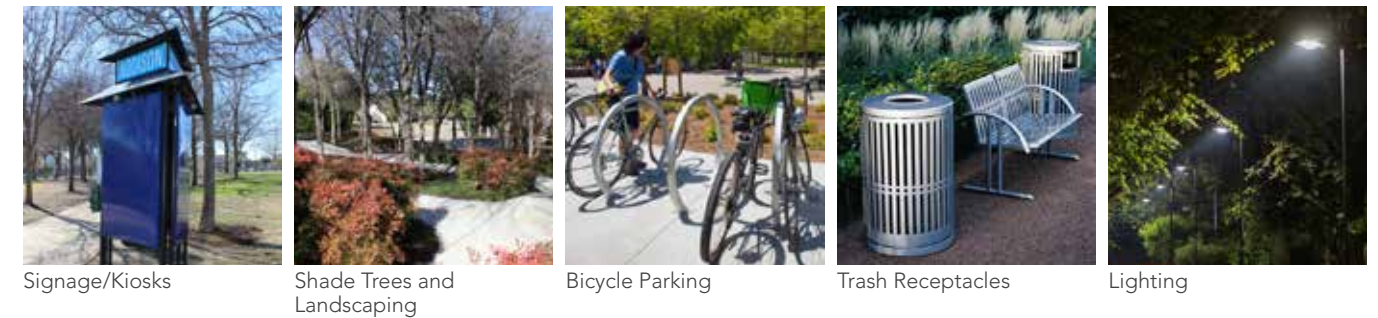


Figure 4-2: Prototypical Trailhead with Basic Amenities

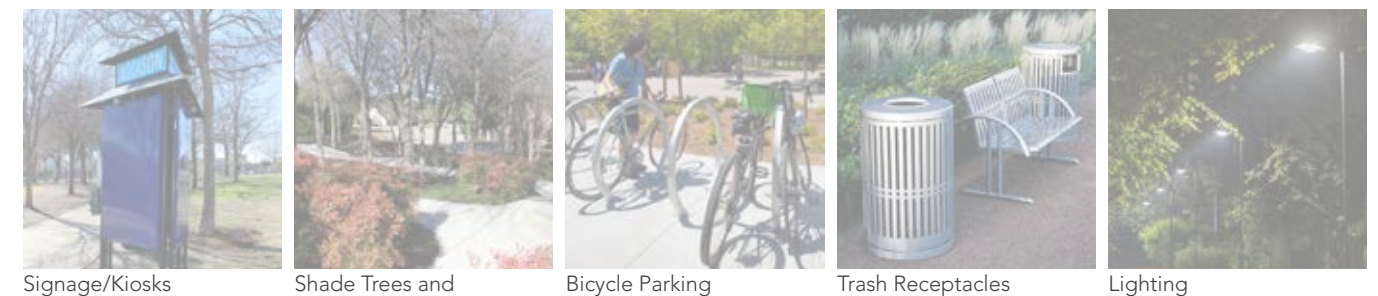
Figure 4-3: Access Amenities Toolkit

The graphics below identify essential trailhead and access point amenities. In addition, enhanced access amenities may be applied to trailheads or access points to enhance the placemaking experience.

Access Point Essentials



Trailhead Essentials



Enhanced Access Amenities (Additional)



STREET CROSSING TYPOLOGIES

Given most of the proposed trails in Addison are along streets, establishing safe crossings for pedestrian and bicycles are essential in developing a successful trail system. The following typologies represents best practices for street crossings.

Pedestrian and Bike Intersection

- Crosswalks should be designed to offer as much comfort and protection for bicyclists and pedestrians as possible, especially at major intersections or high-traffic locations.
- High-visibility ladder, zebra, and continental crosswalk markings should be implemented to increase visibility and improve yielding behavior.
- Approaches to key intersections with extensive bicycle activity should be painted green to increase visibility and limit vehicular conflicts.
- Crosswalks should be as wide as or wider than the walkway it connects to.
- An advanced stop bar should be located in advance of the crosswalk to reinforce yielding to pedestrians/bicyclists.
- Push button signal activation should be provided for pedestrians/bicyclists

- Americans with Disabilities Act (ADA) accessible curb ramps are required for all approaches
- Pedestrian safety islands should be at least 6-feet wide and are recommended where pedestrians must cross three lanes of traffic in one direction.
- OPTIONAL: Right-turn-on-red restrictions may be applied Town-wide or in areas where pedestrian/bicyclist conflicts are frequent.
- OPTIONAL: A separate bicycle signal head can provide a leading bicycle phase, which allows bicyclists to begin crossing the street in advance of other traffic.



Figure 4-4: Prototypical Belt Line Road Bike and Pedestrian Crossing

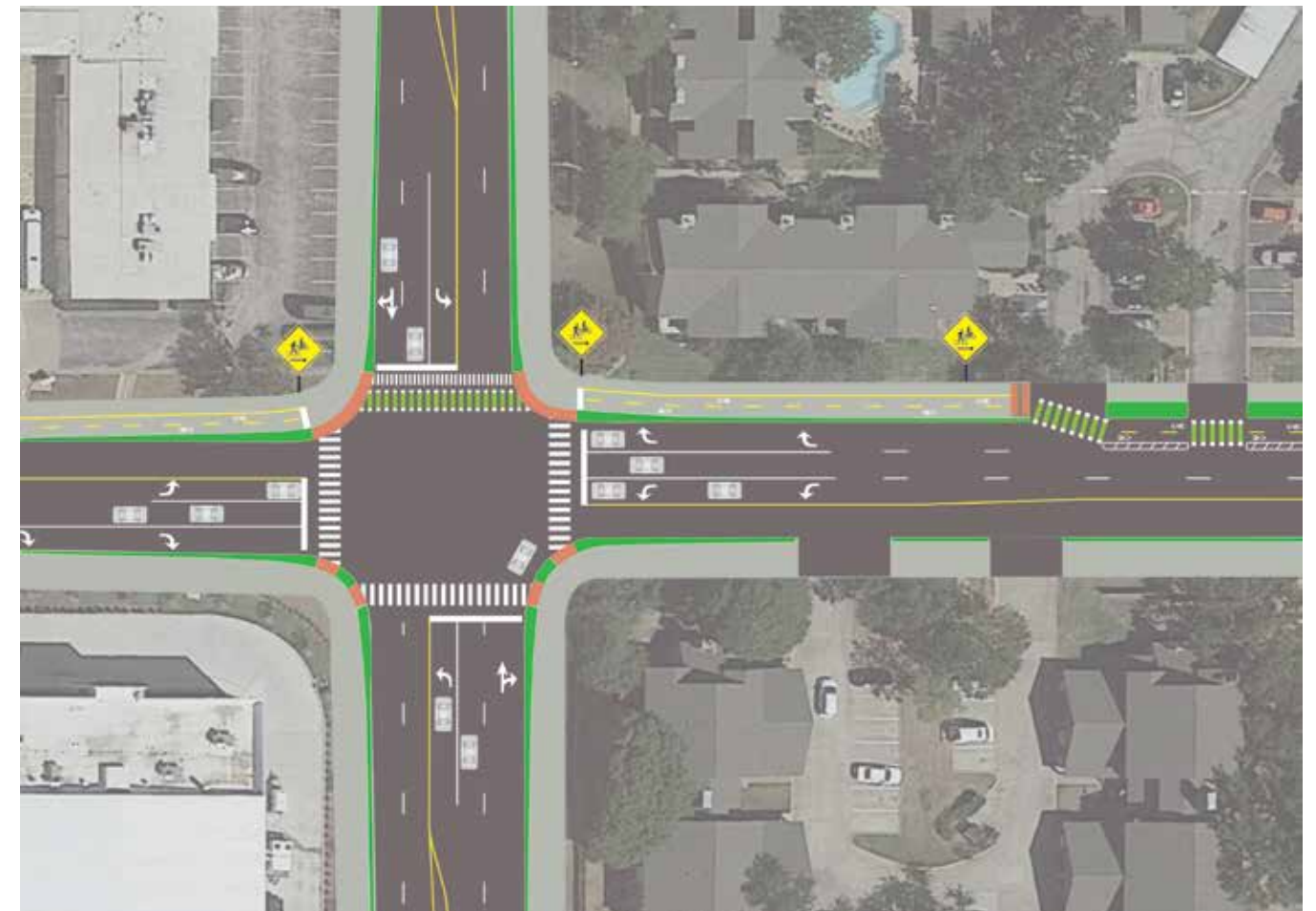


Figure 4-5: Prototypical Bike and Pedestrian Crossing (Westgrove and Addison)

Mid-Block Crossings

- Crosswalks should be designed to offer as much comfort and protection for bicyclists and pedestrians as possible, especially at major intersections or high-traffic locations.
- High-visibility ladder, zebra, and continental crosswalk markings should be implemented to increase visibility and improve yielding behavior.
- Crosswalks should be as wide as or wider than the walkway it connects to.
- Appropriate Manual on Uniform Traffic Control Devices (MUTCD) signage should be installed to make vehicles aware of crossing as well as bicyclists aware that cross traffic does not stop (if unsignalized).
- Americans with Disabilities Act (ADA) accessible curb ramps are required for all approaches
- If installed within a signal system, signal engineers should evaluate the need for hybrid beacon to be coordinated with other signals.
- A Rectangular Rapid Flashing Beacon can be installed to alert drivers to yield where bicyclists have the right-of-way crossing the road.
- Active warning beacons should be installed on the side of the road and in center islands/medians for secondary locations.
- Pedestrian safety islands should be at least 6-feet wide and are recommended where pedestrians must cross three lanes of traffic in one direction.
- Bollards should be placed at entrance to deter motor vehicle access and adequately spaced to allow easy passage by bicyclists, pedestrians, and other users.

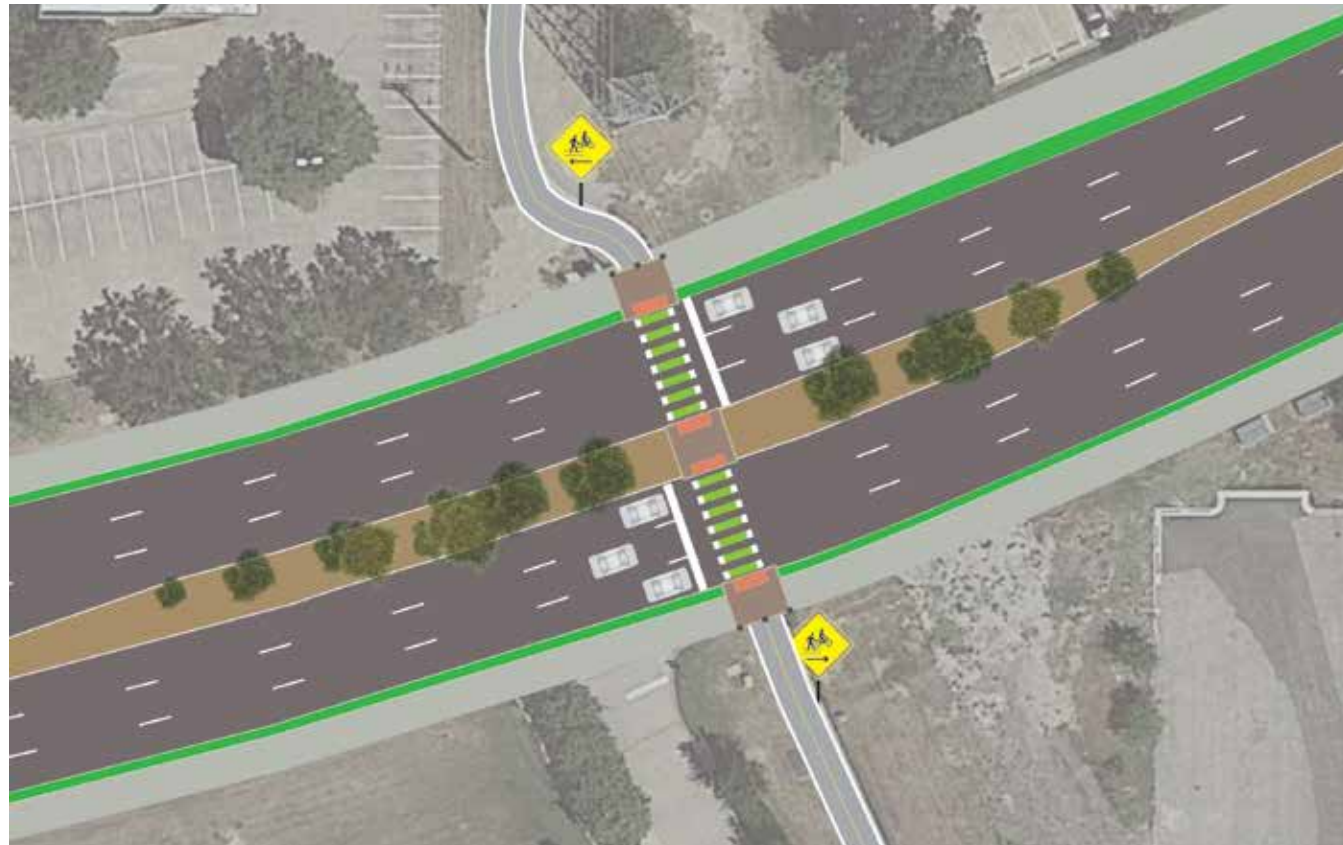


Figure 4-6: Prototypical Arterial Street Mid-Block Crossing (Belt Line Road)

Supporting Systems

Bridges that accommodate pedestrians and bicyclists may be necessary for trail continuity or access. They are required to span roadways, rivers or to address a significant grade change. Bridges are expensive solutions but provide an opportunity to create a focal point that enhances the trail experience and supports cross-town connectivity. When constructing a bridge, best practices say to provide a minimum 12-foot width to meet Class I Bikeway standards.

Undercrossings provide trail continuity beneath roadways and other locations where trails meet or cross significant public infrastructure. They can help sustain an unobstructed Class I trail system. Furthermore, existing vehicle undercrossings can be adapted to provide a safe crossing option alongside vehicles. Appropriate lighting can illuminate the undercrossings for safety. Additionally, artistic/aesthetic elements can be installed along surfaces and vertical elements to enhance the trail experience.



Ramps of various sizes and types should be installed to provide access to trails for all user types.

- **Wheelchair Ramps** are commonly installed where an off-street trail reaches an on-street intersection to ensure crosswalk access. This ramp is intended to support access for persons in a wheelchair, but they also support bicyclists, persons with some physical limitations, and parents with strollers. ADA markings are required to convey a crossing.
- **Vehicle Access Ramps** should be used where there is planned access for maintenance or emergency vehicles.
- **Curb Ramps** are used in instances where trails intersect roadways or driveways. These will be commonly used in conditions where trails run along the street.
- **Bike Ramps** may be installed where access from on-street bike lanes to off-street trails is desired but doesn't align with an intersection or legal crossing of the roadway. These are similar to wheelchair ramps, but include "Bike" stenciling to convey its special function.



PLACEMAKING AMENITIES

Addison Trails are a defining element of the Town. As the system grows, Addison will be known for its quality trails and bike and pedestrian friendliness. Incorporating specific placemaking amenities will add to the Town’s image and quality system. The following amenities create visual interest and make the Addison trail experience more memorable.



Trail Design Themes

The Town is encouraged to choose a design theme for each of its major trails to support a sense of place and uniqueness. Chapter 5 identifies major trail alignments and local connections and applies nomenclature to distinct and important alignments. While the nomenclature in this plan is only a suggestion, the table below provides additional direction on how to establish unique features along specific stretches of trail.

Trail Gateways

The intent of a gateway is to increase the visibility of the trail from roadways and trails. Trail gateways are typically installed at a trail access point or trailhead, and/or at the transition from an on-street trail to an off-street trail system. A gateway should establish a unique design theme and character for the trail or trail system. Gateways can be comprised of a variety of design features including monumental signage, decorative pavement, seat walls, stone-clad columns, custom fencing, etc.

Table 4-1: Trail Systems and Design Themes Example

Trail Name	Icon	Theme	Forms & Materials	Gateway Feature
A unique trail name that brands an alignment to establish its identity	A graphic symbol that relates to the trail name and is depicted on trail signage	A broader theme that nods to Addison’s culture, history or nature	Unique placemaking elements and site furnishings specific to the trail theme	Small or large elements that assume the form of a decorative feature that attracts attention, public art pieces, or interpretive areas

Interpretive Features and Signage

Interpretive features and signage provide visitors, commuters, and residents with a unique perspective or story that enriches their trail experience. Interpretation can cover a wide range of subjects including interesting facts about the site location, history, culture, or other topics. Typically, these features are signs, yet other forms of interpretation may include immersive sculptures demonstration areas. These areas may be highlighted by a change in trail surface to expand the experience into a larger interpretive area.

When providing interpretive signage, choose subject matter with an audience in mind. A trail that is likely to attract new users warrants a “Did you know?” sign installation. Whereas a short, neighborhood-serving trail might include a small sign to identify a unique tree or provide direction to a special view.

Public Art

Addison is already known for its public art and its trails present a wonderful opportunity to showcase it. The planned Art Walk trails in South Quorum will incorporate art as a way establish a destination and encourage exploration. Ideally, the art or amenity is large scale and related to Addison’s identity. Successful trail art has longevity, is memorable and visually rewards trail users. In instances where public art already exists and is visibly accessible wayfinding signage should be provided or sight lines preserved.



Play Elements

Instead of using trails as a means to get from one place to another, trails may be destinations in and of themselves. Buffers adjacent to trails provide opportunities to activate a trail edge with spaces for fitness and play. These elements may include nature play elements (e.g., climbing rocks, stepping stumps, spinner poles), fitness stations, interactive art and interpretive features. These elements may be interspersed along a corridor or clustered together near an access point or trailhead.



Formalized Pause Points

Formalized pause points with seating may be considered where trail width is sufficient. These areas are recommended to be shaded, landscaped and marked with special paving to provide comfort and a natural appeal. While these areas are intended to provide a formal space for social interaction, they may also provide space for trail pull-offs to accommodate social distancing and a variety of movement patterns and fitness levels.



SITE FURNISHINGS

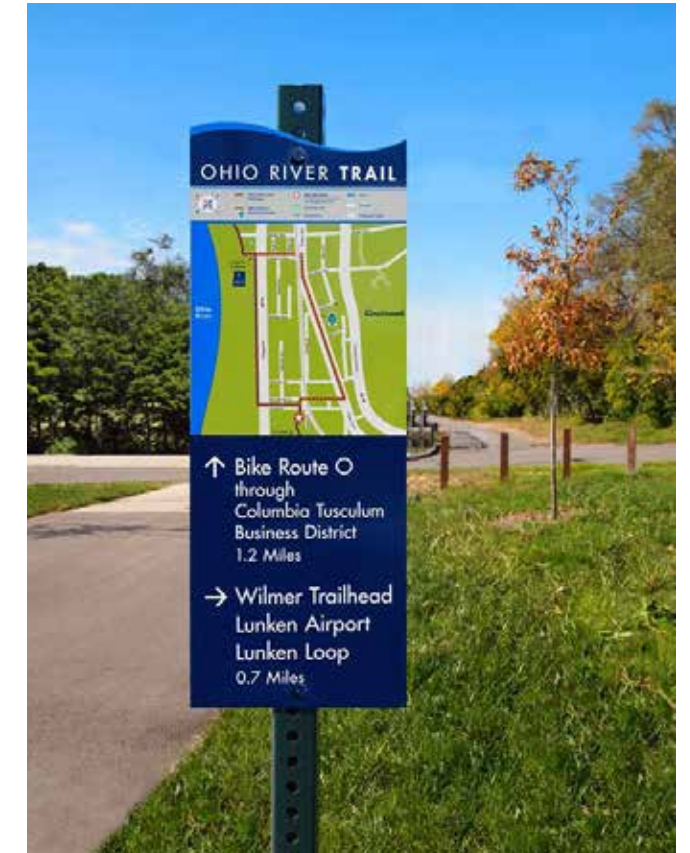
Trails can be supported by numerous amenities to increase enjoyment and use.

Signage

Addison desires signage and information that balances the display of information without overdoing it and creating sign clutter or obstructing views along trails. The following signage types may be strategically used along trails:

Identification and wayfinding signage identify the trail by name, provide wayfinding or directional information, and identify locations of destinations and amenities. These signs are typically posted at trail entry points and intersections and should identify the system by name and potentially an iconic trail symbol. These signs may be applied to trail systems that will regularly draw new users or people unfamiliar with the surrounding, such as regional trails or trails in Central Addison. Wayfinding is intended to guide trail users to useful or interesting resources such as, trailheads, public restrooms, food locations, or unique points of interest.

Milestone markers are special signs with location information that provide recreation benefits and enhance safety. Recreational users can utilize the sequentially numbered signs to track distances traveled on their run, walk, or bike ride. For safety, that same numbering system can be utilized by emergency response crews to locate trail users in need of assistance.





Regulatory signs are generally limited to “Trail Rules” that are posted at trailheads and access points. Rules and regulation signage may include postings such as, no motor vehicles, no trespassing, dismount bike zones, dog ordinance, stop and yield signs, pass left/keep right, and temporary trail closures.

Warning signs are very similar to traffic signs by alerting users to changes in the trail such as curves, narrowing, cross traffic, steep grades, and areas of potential high water.

Sponsorship signage Additionally, partnership agencies may be included as information beneath the identification signage to identify participating agency brands.

Lighting

Lighting supports a safer user experience and is designed and installed to reduce impacts to adjacent land uses. Directional (LED) lights offer a precise direction of light that limits ambient spillover in unwanted areas such as private property and sensitive natural areas. When possible, lighting should be installed closer to the ground than streetlights, providing a pedestrian-scaled aesthetic and use.



Seating

Addison encourages a variety of seating types throughout the network yet seeks consistent styles per individual trail or neighborhood. Durable, accessible custom seating, such as chairs, seat walls, artistic benches, or alternative seating options are encouraged, subject to the approval of the Town. Local materials such as excavated limestone may be reused to create unique seating alternatives. General tips for seating include:

- Locate where natural surveillance is maximized, such as near trail entry/exit points or within clearings in the landscape.
- Deploy at regular intervals (optimum: ½ mile) to provide opportunities to rest.
- Consider the user experience; locate beneath shade when possible and at a scenic location.
- Provide space adjacent to seating to meet ADA requirement for universal access.
- Design in a manner to prevent skateboarding and other damaging activities.
- Select to deter long-term occupancy and social distancing. Backless benches or mid-point armrests should be considered as well as armchair variations.





Picnic Areas

Picnic areas may be considered along trail corridors with sufficient width, such as greenbelts. Although, parkland is a more appropriate space for these areas. Instead, consider installation of a shaded area with benches or chairs and a small table.

Small Shelters

Small shelters are preferably located in adjacent park sites or at trailheads. They may be considered at trail nodes with sufficient width such as formalized pause point or in areas with high trail activity and a lack of tree shading. These shelters are small, but large enough to accommodate a seating area.



Bike Racks

Bike racks are included where there are points of interest directly accessible at the trail edge. These may include parks, trailheads, public restrooms, interpretive/art areas. However, in most circumstances, the destination will be a private entity, such as a shop or restaurant. In these instances, the bike racks should be placed along the trail alignment, in the trail buffer. Additionally, it may be preferable to work with the destination's site manager or owner to consider a private installation adjacent to the trail alignment.



Bike Repair Stations

Bike repair stations are a desirable amenity but are site-specific and do not serve all trails users. As such, these should be limited to regional trails and located at trailheads or at key trail intersections.

Fitness Stations

Fitness stations may be considered along trail corridors with sufficient width such as greenbelts. Stations should be grouped to offer multiple exercises within a defined and highly visible space. Ideally, these fitness stations are shaded, easily accessible yet separated from the trail, and includes instructional signage.

Trash Receptacles

Trash receptacles are to be installed at trail entry points and as-needed (or as-anticipated).

Engaging the Town's operations staff is highly encouraged to optimize placement and validate the likely need.

Dog Waste Stations

Addison is considered a dog-friendly community. As such, accommodations should be made along all neighborhood-loop trails to ensure dog waste is properly disposed.

Drinking Fountains

As a high-maintenance amenity, drinking fountains are encouraged only at trailheads and parks where management is optimized.



Fencing

In general, fences should be used only when required by code or to address a hazard, establish rights-of-way, or protect privacy. This approach will help ensure safe access to trails whenever possible. Additionally, fences and railings should be designed in a way that is attractive, durable and consistent with exiting neighborhood-character aesthetics and styles.

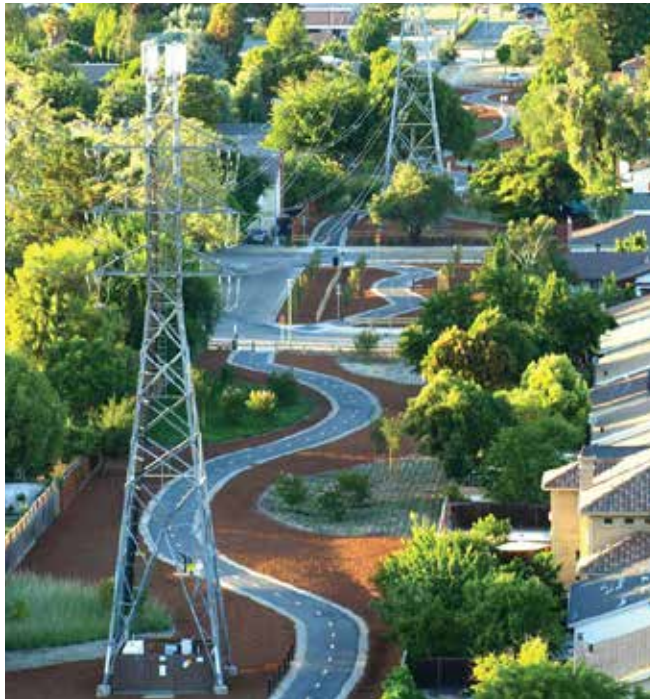
Bollards and Gates

Bollards can be installed at trail entries from roadways and are intended to prevent or discourage vehicular trespassing upon a trail. A swing arm gate may also be used when sufficient width exists and there is a regular need for vehicular access to the trail while preventing illegal entry.

Restrooms

Restrooms are preferably located in adjacent park sites or at trailheads to leverage existing maintenance.





LANDSCAPING

Addison trails will be developed through a variety of urban and natural landscapes. Trail construction should always leverage the existing landscape, enhance when possible, and mitigate when required. Furthermore, all trail construction projects should protect the existing tree canopy for shade purposes and environmental benefits. While tree lined trails with enhanced landscaping is the image Addison seeks to achieve, certain trail corridors will require special landscaping treatments. These are summarized as follows.

Utility Corridors

Plantings in utility corridors (underground and overhead) may have restrictions that impact species selection and locations where plantings are allowed. While limited, most locations should offer opportunities to restore or incorporate native, unornamental vegetation along the trail corridor to create a more natural trail experience and support the ecological function of the open space area.

Street Corridors

Landscaping in street corridors should follow direction from the Master Transportation Plan and the Parks and Open Space Master Plan. In general, street trail corridors incorporate landscape buffers w/ street trees and a blend of plantings. When trail width is not available to establish a lush, landscaped environment, priority should be given to establishing a safe buffer that is easy to maintain.



Park Corridors

Trails passing next to existing parks and in greenways should leverage irrigation availability. Landscaping on the trail should blend seamlessly with the design of the park. Grass turf may be provided immediately along the trail or in specific places to support recreation needs; however, the entire corridor should not be maintained that way and may include native plantings and trees.

Riparian Corridors

If landscaping is allowed, vegetation should be native (local, ideally watershed specific), non-invasive, or non-hybridizing species. The plantings should contribute to the stabilization of these corridors by providing wildlife habitat, protecting water quality, filtering stormwater runoff, enhancing urban trees and connecting people to nature.

Enhanced Landscape

An enhanced planting palette, including ornamental and nonnative plants, is most appropriate at points of entry, intersection or pause.

Best Practices

- Use lower-maintenance plants
- Select trees to provide shade and visual interest
- Seek to landscape 50% of site area when extensive buffering is required
- Favor native (local, ideally watershed specific in riparian corridors) or climate appropriate plants
- Leverage existing landscapes and determine if supplemental landscape offers value
- Place plants and trees based upon mature growth. Avoid roots uplifting trails and shrubs encroaching upon trail.



5

Priority Projects

This chapter takes a deeper dive into several of the key projects included in the full Future Trail Network described in Chapter 4. While all alignments and segments included in the Future Trails Network are deemed important, this chapter focuses on projects that 1) require immediate or short-term action, 2) comprise multiple trail types and/or navigate more challenging contexts, and 3) include technically difficult design challenges.

The Priority Projects are organized into three categories, including:

- Major East to West Alignments
- Major North to South Alignments
- Local Connectivity

The chapter concludes with a section highlighting various reasons to and different types of partnerships. It highlights the importance of partnerships for realizing the community's trail vision and many aspects of plan implementation.



Town of Addison
Perennial Trials Gardens
October 2015

Special thanks to Southwest Wholesale Nursery,
Shades of Green, and Green Lake Nursery
for their generous donation of plant materials.

Major East to West Alignments

COTTON BELT TRAIL (ALONG THE DART SILVER LINE REGIONAL RAIL CORRIDOR)

The DART 2030 Transit System Plan (TSP) identified the Cotton Belt Corridor as a priority project. The project was accelerated to a 2022 completion target in DART's FY2017 Twenty-Year Financial Plan. In conjunction with the Regional Rail improvements, DART is working with local jurisdictions and the North Central Texas Council of Government (NCTCOG) to implement a corridor-wide hike and bike trail as an important component of the regional trail network referred to as the Velo Web. The DART owned right-of-way is approximately 100 feet wide. Although final design may modify this slightly, the hike and bike trail will typically be 12 feet wide. It can range between 10 to 14 feet wide depending on the location.

Important Design Details and Considerations

- Access to the Cotton Belt Trail should be created

at Marsh Lane, Surveyor Boulevard, Midway Road, Addison Road, Quorum Drive and Spectrum Drive.

- The trail width should be at least 12 feet through Addison to accommodate the large volume of users and variety of user types anticipated.
- The segment between Addison Road and Quorum Drive should be at least 14 feet wide or supplemented with an additional parallel walking path.
- A trailhead should be provided at or near the DART rail station between Addison Road and Quorum Drive.
- An additional layer of amenities should be provided along the trail through Addison, especially between Addison Road and Spectrum Drive; additional amenities should include benches, shade coverings, short-term and long-term bike parking, drinking fountains, trash and recycling receptacles, and a combination of wayfinding, identity, and interpretive signage.
- Public art of different types should be integrated into the trail design throughout Addison.



Figure 5-1: Cotton Belt Trail Connection to the "Rail Trail"

BELTWAY DRIVE MOBILITY CORRIDOR

As described in Chapter 4, Beltway Drive can provide a critical east-west connection running parallel to Belt Line Road, as well as a connection north to Belt Line Road near the center of Addison. The Beltway Drive Mobility Corridor provides an important connection through Southwest Addison on a relatively low traffic roadway.

Important Design Details and Considerations (from west to east)

- Create a safe crossing of Marsh Lane on the west end of Beltway Drive to Garden Brook Drive.

- Reduce Beltway Drive to a single lane in each direction through its entire length.
- Stripe bike lanes on both sides of the roadway from Marsh Lane to Midway Road.
- Add a continuous widened sidewalk that is buffered from traffic, extending from Les Lacs Park east and continuing north to Belt Line Road.
- Prioritize safe pedestrian and bicycle crossing of Midway Road.
- Add sharrow markings and other bike boulevard amenities east of Midway Road where the curb-to-curb width of Beltway Drive is especially constrained.

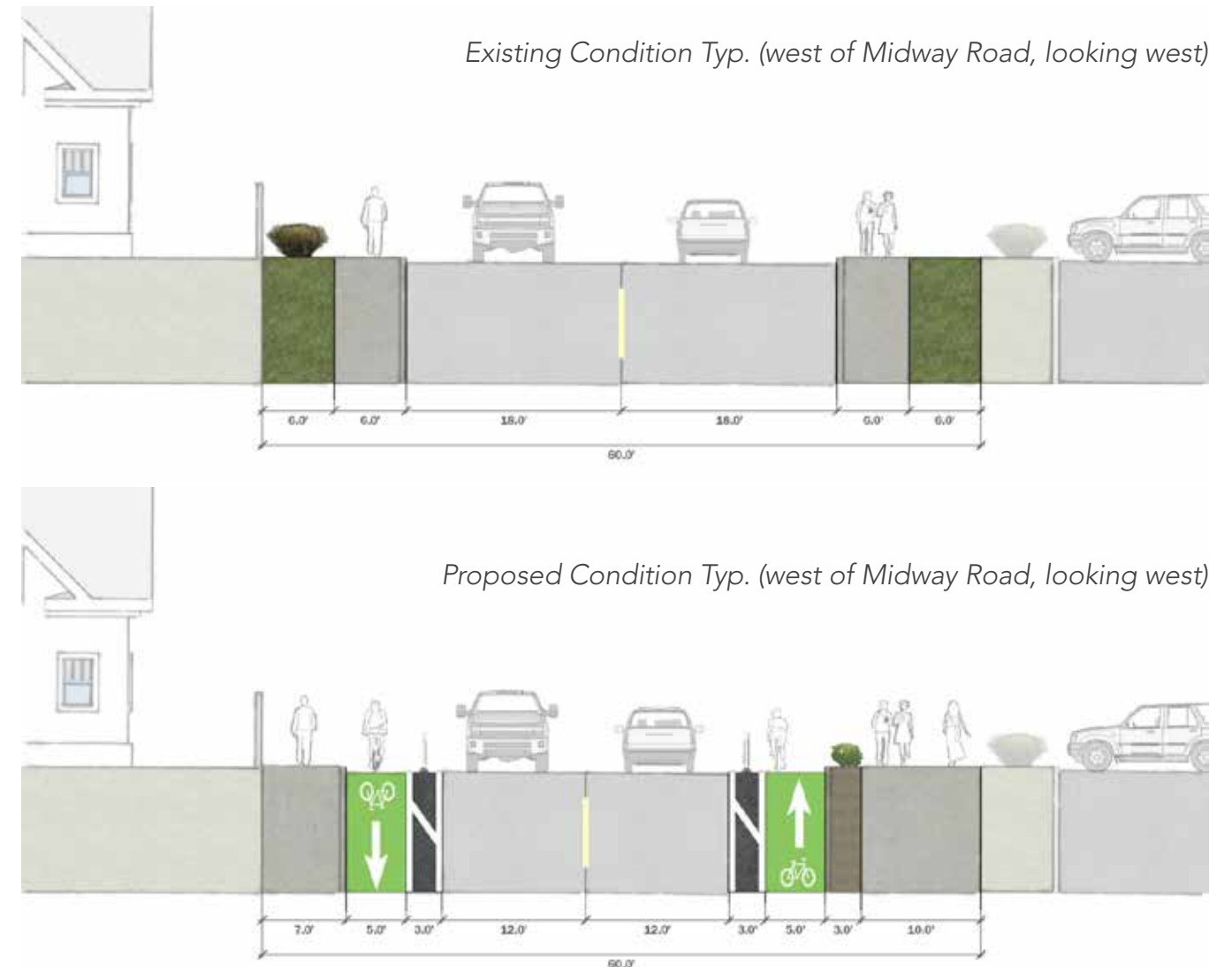


Figure 5-2: Beltway Drive Bike Lanes and Wide Sidewalk

"POWER LINE" CONNECTOR (ONCOR EASEMENT THROUGH FARMERS BRANCH)

East-west connectivity is extremely limited through Addison south of Belt Line Road, especially between Midway Road and Inwood Road. The Redding Trail is one of the most popular trails in Addison and may provide the inspiration for a solution to this challenging gap in the larger transportation network. Working with Farmers Branch, the Town of Addison should partner with Oncor to develop an east-west trail connection along the power line easement extending between Midway Road and Inwood Road.

Important Design Details and Considerations

- The Redding Trail should be extended along the Dog Park at its eastern terminus and extended

further through the Oncor easement to Midway Road.

- A new mid-block crossing with signalization should be added to Midway Roadway beneath the power line corridor.
- A new multi-use trail of at least 10 feet in width should be constructed just south of the powerline corridor and just north of the rail line where it begins at Gillis Road.
- Low landscaping should be planted along the new trail alignment where space allows.
- Create a connection along the western side of Inwood Road connecting the east terminus of the "Power Line" Connector to Landmark Place.
- Amenities along the "Power Line" Connector should include seating and trash/recycling containers.

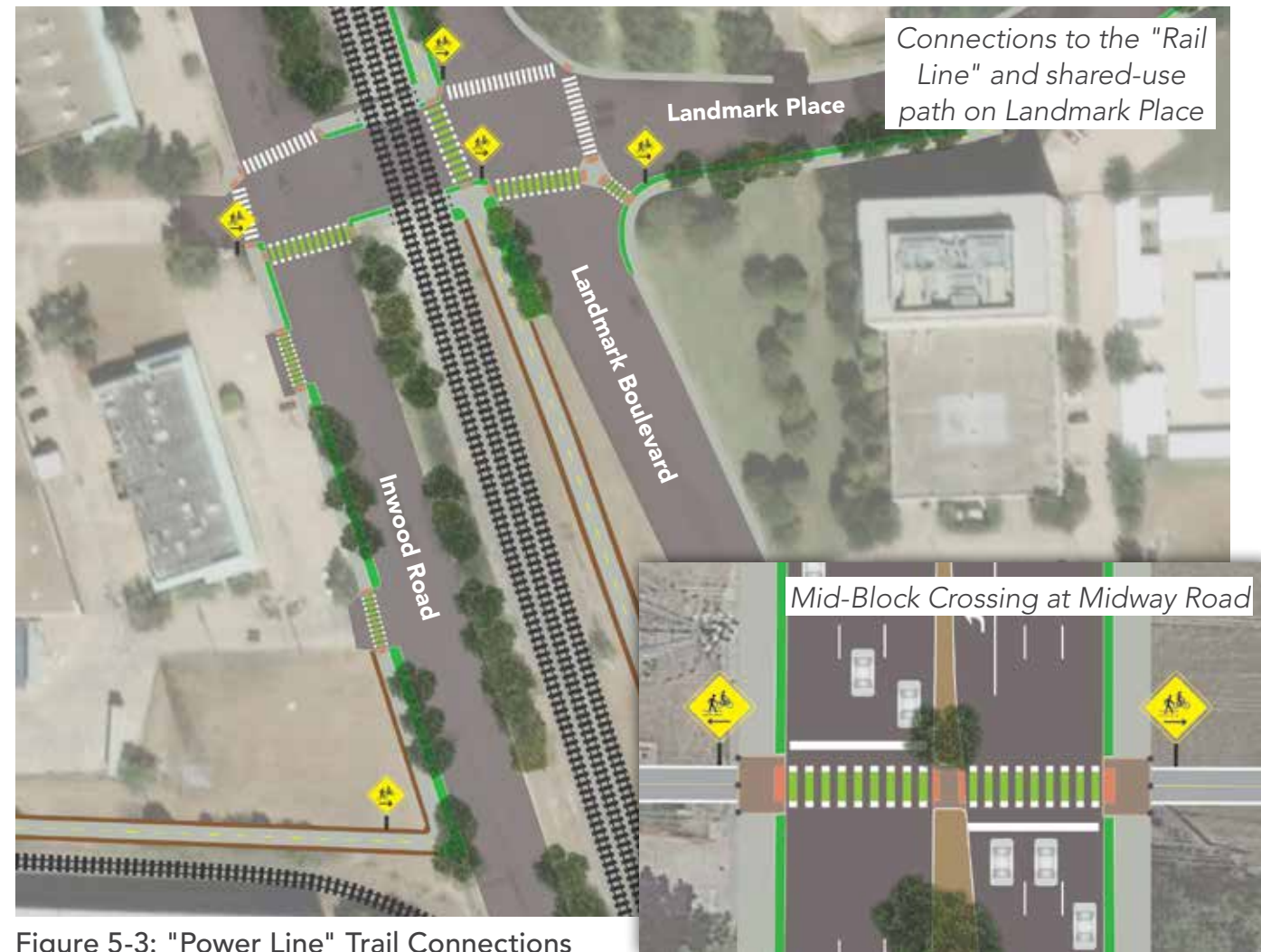


Figure 5-3: "Power Line" Trail Connections

BELT LINE MULTI-MODAL SEGMENTS

Belt Line Road is the major east-west connector through Addison. As such, it also has the highest traffic volumes of any roadway in the Town with the exception of the Dallas North Tollway. It also includes the greatest concentration of dining, hospitality and entertainment destination in Addison and perhaps the region. Movement along the corridor and across the corridor should be equally prioritized through implementation of the Trails Master Plan.

Important Design Details and Considerations

- Wide sidewalks buffered from the travel lanes with landscaped planting strips should be added on the north side of Belt Line Road from Marsh Lane to Beltway Drive and on the south side of Belt Line Road from Marsh Lane to the Dallas North Tollway.
- In locations where it is not feasible to include

a landscaped buffer between the curb and the sidewalk, planting areas should be included behind the sidewalk as part of the property frontage/setback.

- Enhanced pedestrian crossings should be constructed along Belt Line Road at Marsh Lane, Midway Road, Beltway Drive, Addison Road, Quorum Drive, and Dallas North Tollway.
- A shared-use path should be improved along the north side of Belt Line Road from Beltway Drive to the Dallas North Tollway.
- A shared-use path should be added along the south side of Belt Line Road from the Dallas North Tollway to Winnwood Park.
- Driveway access to businesses along Belt Line Road should be consolidated and shared to the extent possible.
- At busy and offset driveway access locations, pedestrian crossings with markings should be encouraged.

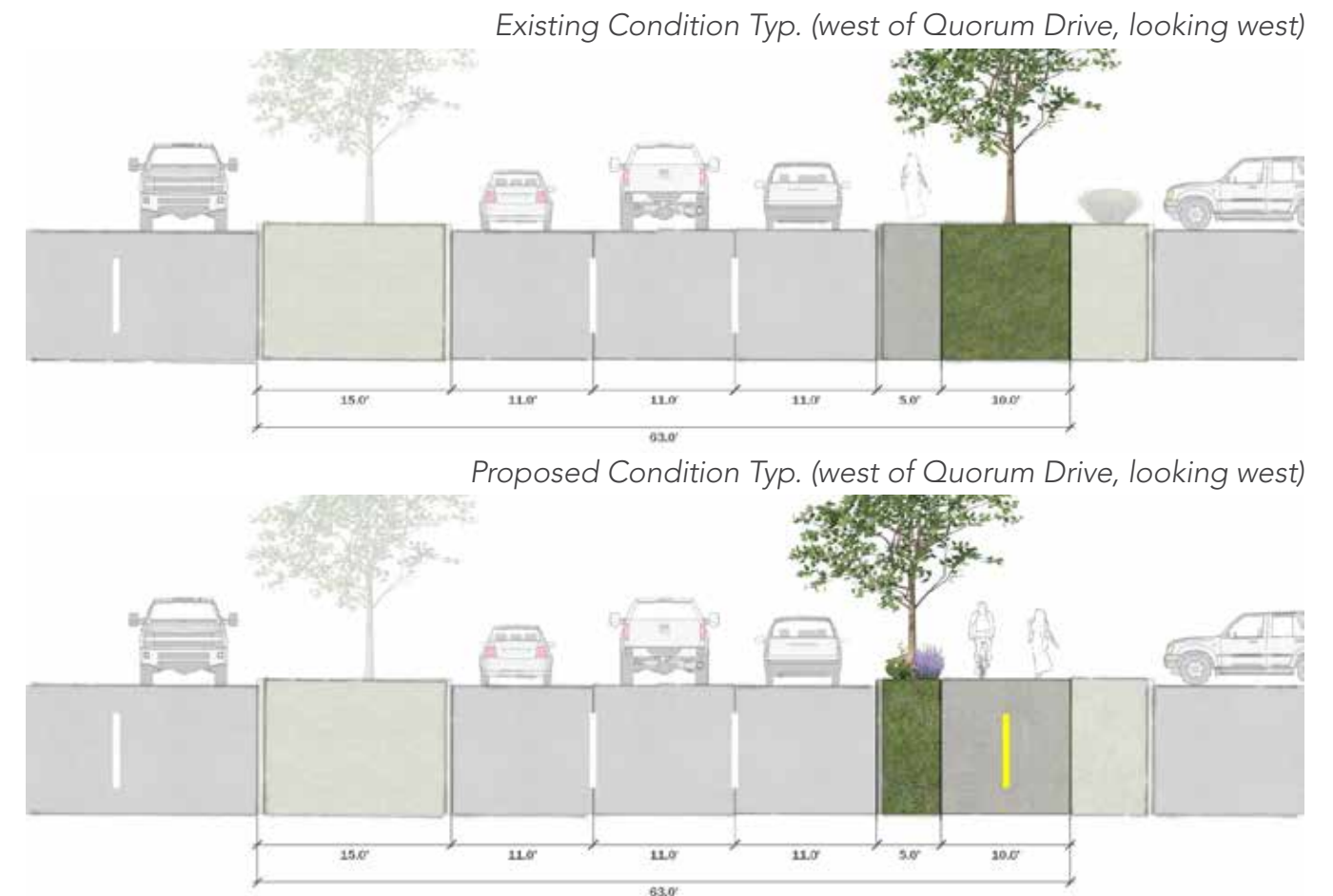


Figure 5-4: Belt Line Road Shared-Use Path

Major North to South Alignments

MIDWAY ROAD IMPROVEMENTS

One of the early implementation projects resulting from the Master Transportation Plan is Midway Road. It includes a shared-use path along the newly constructed roadway as part of the recommended Active Transportation network.

Important Design Details and Considerations

- Midway Road is being improved from Spring Valley Road north to Arapaho Road.
- The shared-use trail will have a typical width of 8 feet and be separated from the travel lanes by the curb and a landscaped buffer in most locations.

The shared-use trail will narrow to a 6-foot width in certain locations and may not include a landscaped buffer where turn lanes require additional right-of-way.

- The shared-use trail runs along the west side of Midway Road south of Belt Line Road and switches to the east side of the roadway north of Belt Line Road.
- The trail along Arapaho Road will be connected to Midway Road as part of the current roadway improvement project.
- The shared-use trail should be extended north from Arapaho Road to Keller Springs Road in the future to provide a critical link in a loop around the Addison Airport.

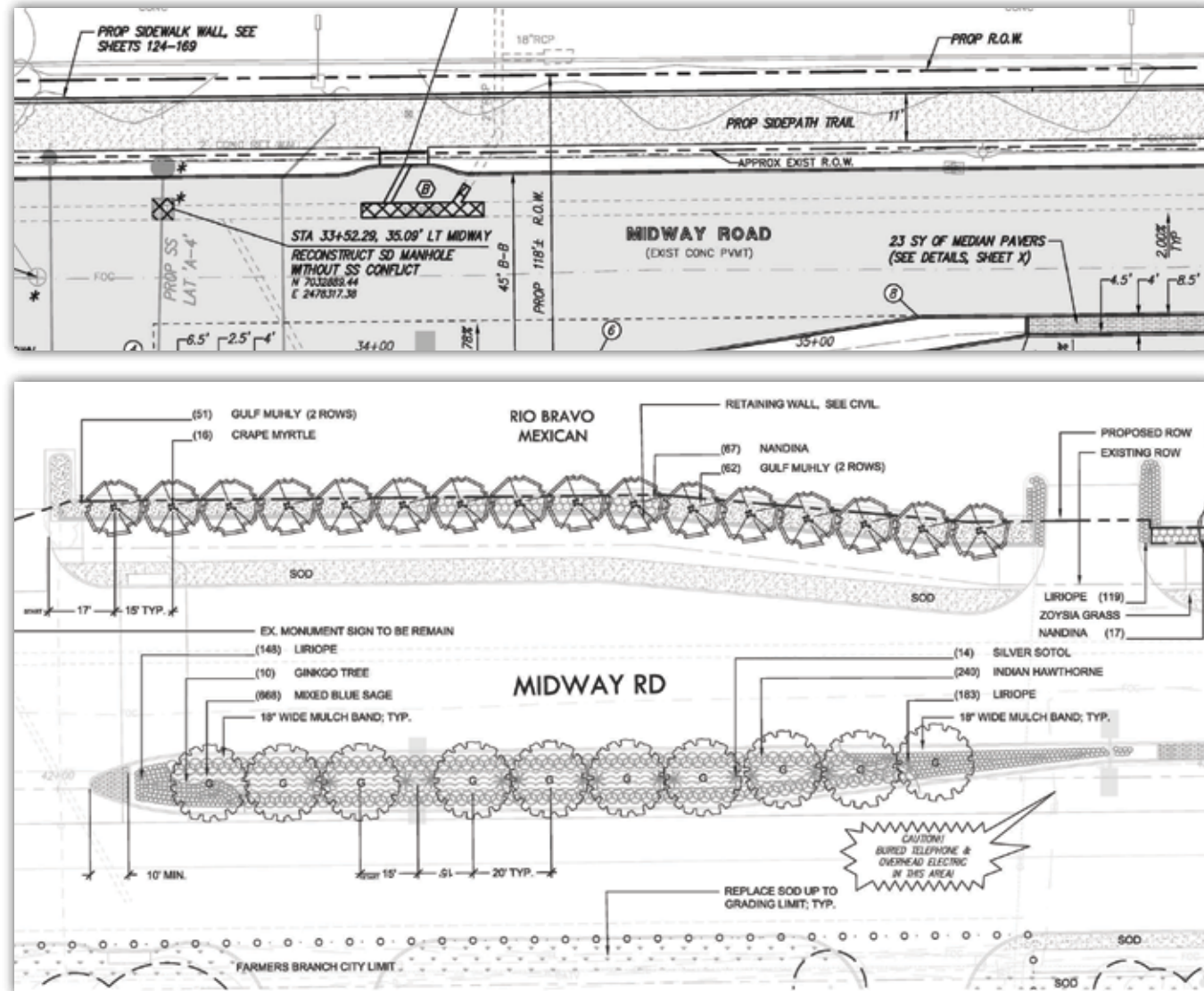


Figure 5-5: Midway Road Construction Drawings

INWOOD "RAIL TRAIL" TO ADDISON CENTRAL

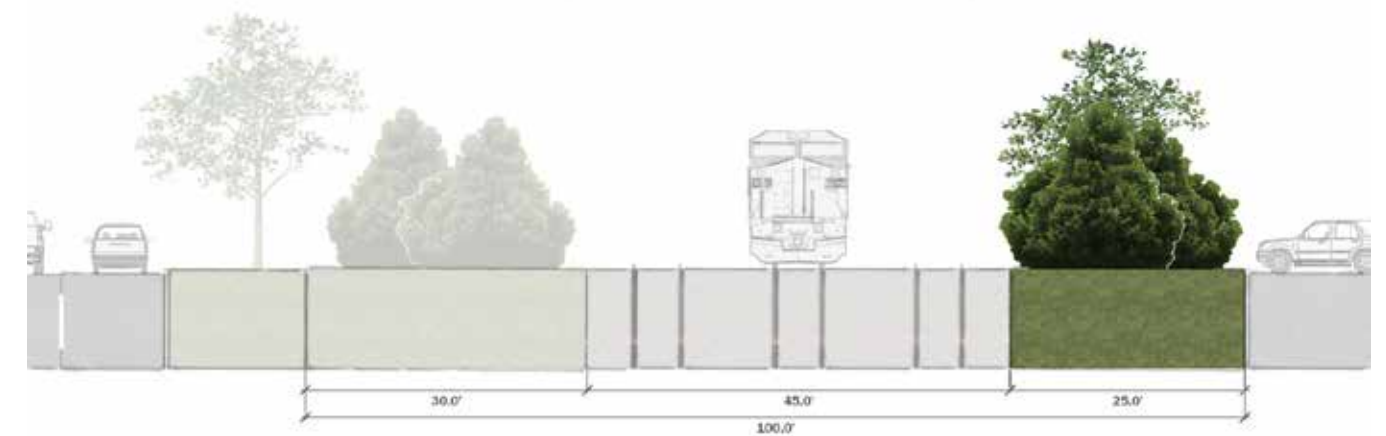
The Inwood "Rail Trail" will provide a necessary connection from the "Power Line" Connection and a shared-use trail along Landmark Place north to Belt Line Road and the Cotton Belt Trail.

Important Design Details and Considerations

- The connection to a rail trail alignment south of Addison in Farmers Branch should be carefully planned and coordinated to ensure a seamless trail experience and a consistent or compatible trail design.
- A regional shared-use trail should be constructed along the east side of the rail alignment north to Inwood Road where it crosses the railroad tracks.

- The regional shared-use trail should be at least 10 feet in width with public art and other amenities strategically located along the alignment.
- The regional shared-use trail should connect to a shared-use trail along the east edge of Inwood Road at the railroad crossing, providing trail users a safe connection north to the signalized intersection of Inwood Road and Belt Line Road.
- The intersection of Inwood Road and Belt Line Road should be improved to provide safe crossings for pedestrians and bicyclists.
- A shared-use trail along the north side of Belt Line Road should connect trail users to another regional shared-use trail connection running along the west side of the rail alignment north of Belt Line Road.

Existing Condition Typ. (east of Inwood Road, looking north)



Proposed Condition Typ. (east of Inwood Road, looking north)

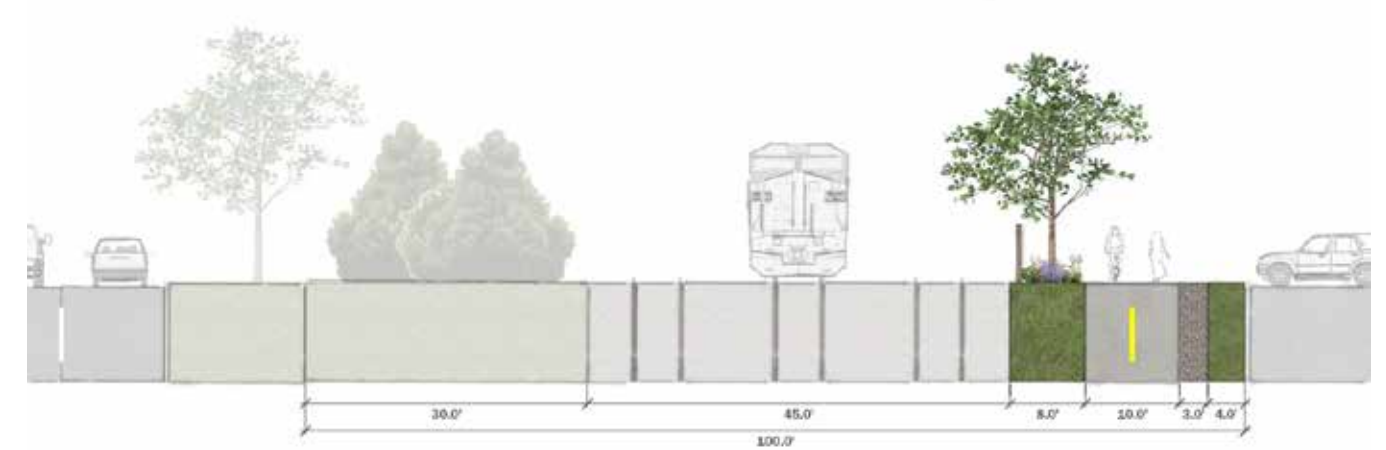


Figure 5-6: Inwood Road "Rail Trail"

ADDISON ROAD TRAIL

Addison Road provides the most continuous north-south connection through Addison east of Midway Road. It extends from Belt Line Road to the northern border of Addison. Trail improvements along this important corridor include a combination of wide sidewalks with buffers and shared-use paths along the street.

Important Design Details and Considerations

- Wide sidewalks with buffers should be provided between Belt Line Road and just south of the Cotton Belt Trail, and from Airport Parkway to the Town's northern boundary.
- A shared-use path along the street should be added on the east side of Addison Road from just south of the Cotton Belt Trail to Airport Parkway.
- A wider shared-use pathway should be considered along the western edge of Addison Circle Park and the Addison Conference and Theatre Centre.
- Pedestrian crossing enhancements should be made at the intersection of Addison Road with the Cotton Belt Trail, Festival Way, Airport Parkway, and Westgrove Drive.

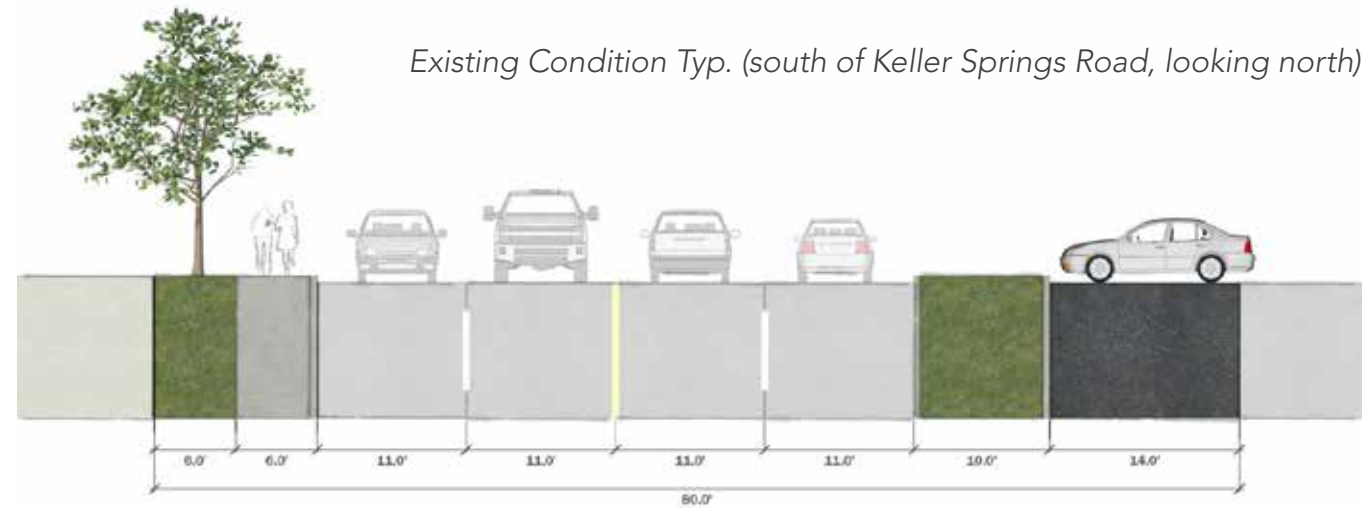


Figure 5-7: Addison Road Shared-Use Path

QUORUM DRIVE TRAIL

Quorum Drive has tremendous potential as a high-quality north-south connector extending from South Quorum to North Addison. Quorum Drive through Central Addison is already one of the most desirable pedestrian environments in the Town and the Art Walk and roadway improvements planned for South Quorum further enhance this key corridor.

Important Design Details and Considerations

- Shared-use paths should be added on both sides of Quorum Drive from Landmark Place to Festival Way.

- The existing wide sidewalks along Quorum Drive through Central Addison should be paired with bike boulevard enhancements to the roadway.
- Signage should be added at the north and south ends of the bike boulevard segment to help bicyclists navigate from the shared-use paths behind the curb to a shared travel lane configuration.
- Pedestrian crossing enhancements should be made at the intersection of Quorum Drive with the Cotton Belt Trail, Festival Way, Airport Parkway, Keller Springs Road, and Westgrove Drive.
- The Art Walk should be extended north along the entire length of Quorum Drive.

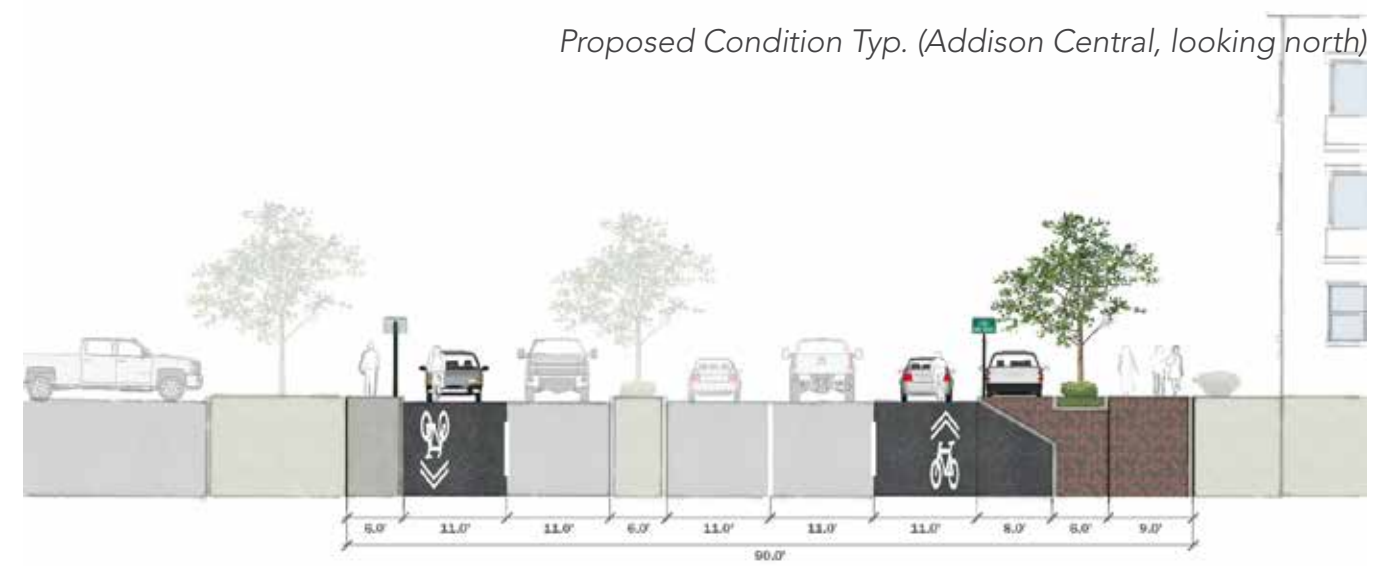
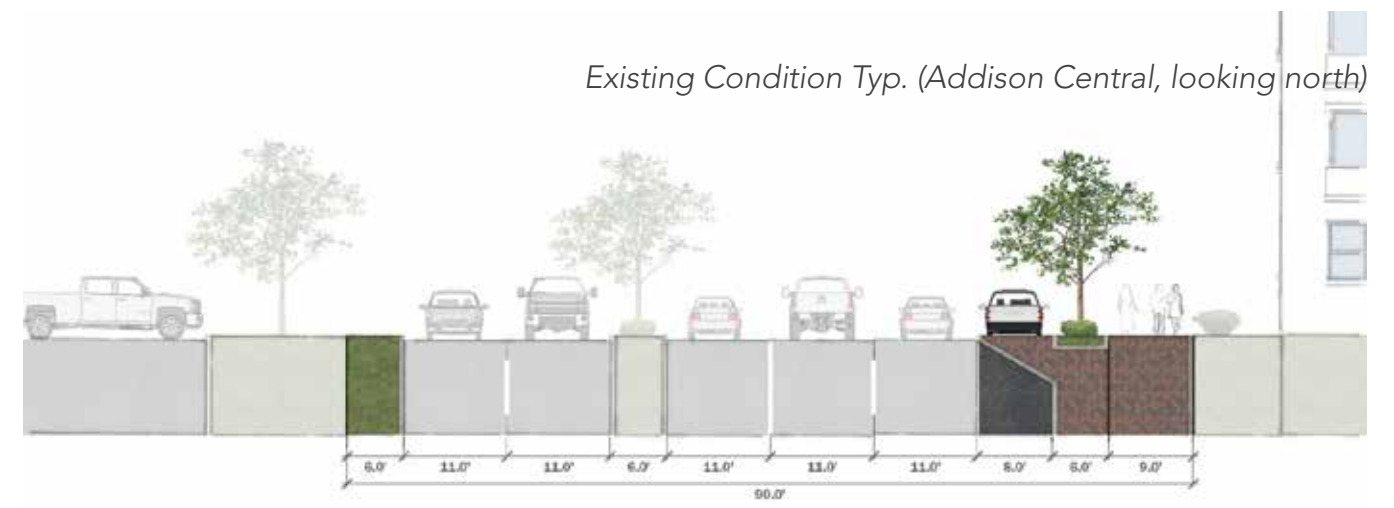


Figure 5-8: Quorum Drive Bike Boulevard

WESTGROVE DRIVE CYCLE TRACK

Another exciting project that is an important priority for North Addison is the construction of a two-way cycle track on the north and east sides of Westgrove Drive. This trail alignment will provide a high-quality bicycle facility connecting North Addison to Carrollton and Dallas.

Important Design Details and Considerations

- A two-way cycle track should be constructed in the roadway next to the curb on the east side and north side of Westgrove Drive from the northern boundary of Addison to the Dallas North Tollway.

- The on-street two-way cycle track treatment should transition to back of curb at intersections to improve bicyclist safety and minimize conflict points.
- Signals at the intersections of Westgrove Drive with Addison Road and Quorum Drive should be augmented to include cycle-specific signalization; signalization should explore giving pedestrians prioritization with advance timing over bicycles, as well as giving bicycles advance timing over motorists.
- Transitions to traditional bike lanes, sidewalks or a shared route configuration using both sides of the roadway should occur within Addison's boundaries to avoid the two-way cycle track ending abruptly and putting cyclists in an unsafe contraflow situation.

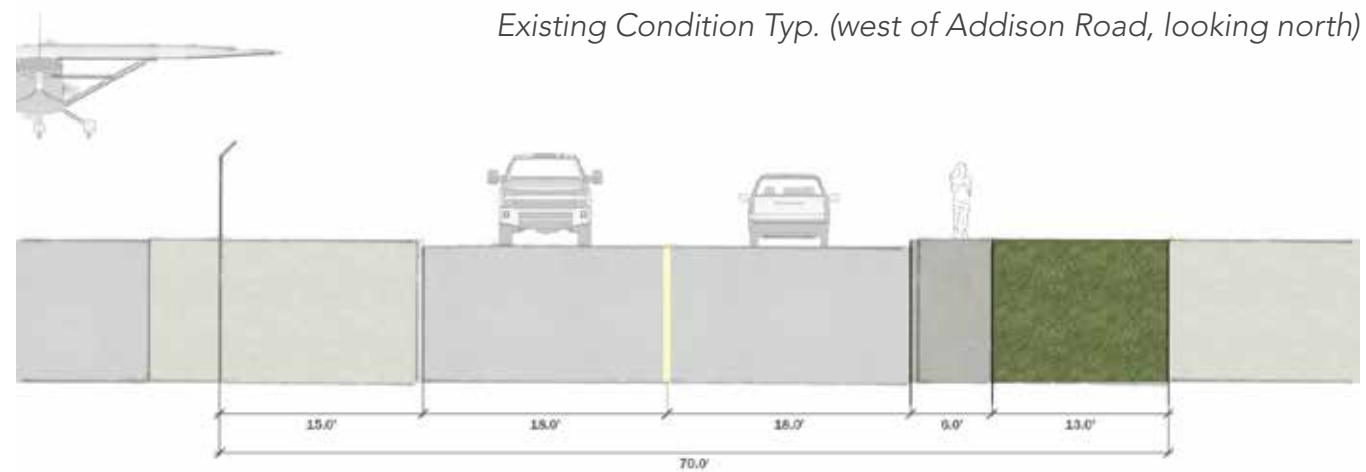


Figure 5-9: Westgrove Drive Cycle Track and Wide Sidewalk

Local Connectivity

"WOODED WALKWAY" IN EAST ADDISON

One of the few remaining opportunities to create a more traditional trail through a natural area exists in East Addison. A local shared-use trail is recommended between the Dallas North Tollway frontage road and the east side of the Tollway to the Town Finance Building and Winnwood Park. The portion between the frontage road and Montfort Drive would use an improved fire lane on the south edge of the Village on the Parkway property. From Montfort Drive to Belt Line Road, the desire is a combined boardwalk and trail alignment along the drainage that runs behind the commercial properties at Prestonwood Pond II, the Town Hall Building and the Town Finance Building.

Important Design Details and Considerations (for the segment from Montfort Drive east)

- Construct a midblock crossing of Montfort Drive where the local shared-use trail crosses the roadway.
- Construct a boardwalk along or across the Prestonwood Pond.
- Construct a decomposed granite trail from the east side of Prestonwood Pond to the drainageway behind the commercial structure at Prestonwood Pond II.
- Construct a boardwalk above the drainage way or cantilever a trail off the parking structure of

Prestonwood Pond II to connect to the southwest corner of the Town Hall grounds.

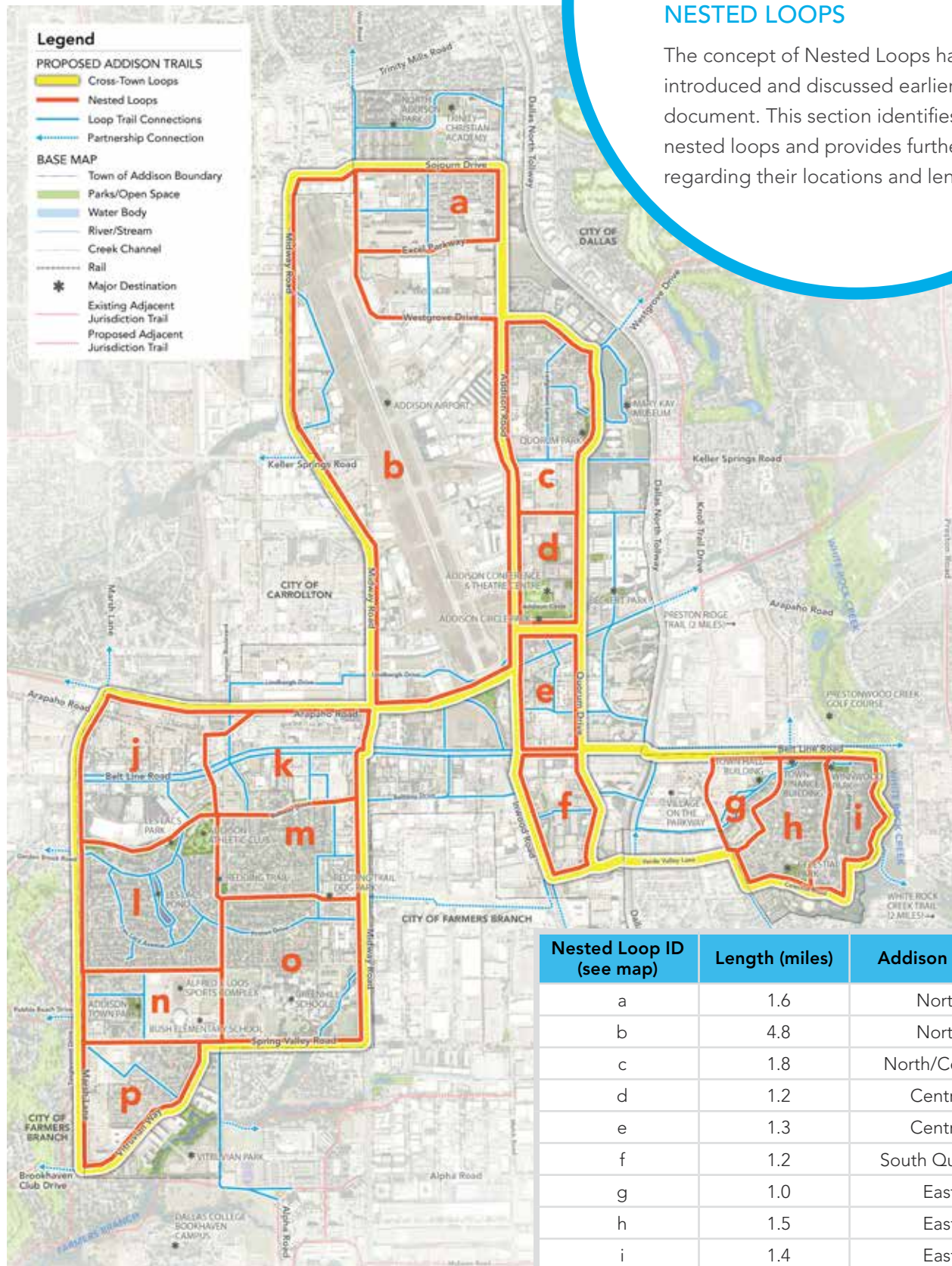
- Widen and reinforce the existing paths south of the Town Hall Building and extend east and north to the Town Hall Square commercial development parking lot.
- Construct a trail connection or designated pedestrian connection along the south edge of the Town Hall Square commercial development parking lot.
- Utilize the median in Oaks North Drive to create an offset pedestrian crossing with a pedestrian refuge island.
- Construct a trail along the south edge of the Town Finance Building property.
- If the Town is able to purchase the property east of the Town Finance Building, then construct a trail connection to Winnwood Park and consider adding a trailhead at this location.
- If the Town does not purchase the property east of the Town Finance Building, then connect to the south side of Belt Line Road and construct a shared-use trail east to Winnwood Park.

Note: If the shared-use trail connection along the drainageway south of Prestonwood Pond II proves too difficult or infeasible, the Town should work with the property owners to route a marked pedestrian connection through the parking lot and linking to the fire lane on the east side of the property and just west of the Town Hall grounds.



NESTED LOOPS

The concept of Nested Loops has been introduced and discussed earlier in this document. This section identifies several of the nested loops and provides further information regarding their locations and length.



Nested Loop ID (see map)	Length (miles)	Addison Area
a	1.6	North
b	4.8	North
c	1.8	North/Central
d	1.2	Central
e	1.3	Central
f	1.2	South Quorum
g	1.0	East
h	1.5	East
i	1.4	East
j	2.2	Southwest
k	1.7	Southwest
l	2.0	Southwest
m	1.6	Southwest
n	1.4	Southwest
o	2.0	Southwest
p	1.5	Southwest

Table 5-1: Nested Loops Identification

Figure 5-10: Proposed Trails Loop Concept

TOLLWAY CROSSINGS

The Dallas North Tollway is the most challenging barrier to walking and biking in Addison. Existing crossings at Westgrove Drive and Keller Springs Road should be improved for pedestrians and bicyclists. The new multi-use Cotton Belt Trail will provide one of the safest crossings of the Tollway for pedestrian and bicyclists. The rest of this section highlights recommended crossing locations at Belt Line Road and south.

Belt Line Overpass

- A shared-use path should be improved along the south side of the overpass of the Tollway along Belt Line Road.
- The shared-use path should be situated between the southernmost eastbound travel lane and the turnaround lane on the south side of the overpass.

- Improvements along the shared-use path should be explored, including:
 - Bollards on the north and south sides of the pathway.
 - Pedestrian lighting.
 - Covering protecting pedestrians from the sun and rain.
- Trim and/or adjust landscaping east and west of the overpass to ensure good sight lines and visibility for pedestrians and motorists.
- Conduct a traffic study to determine whether one or more slip lanes can be removed to ensure bicycle and pedestrian safety.

Pedestrian Bridge

- The Future Trail Network includes a pedestrian bridge over the Tollway between Belt Line Road and Verde Valley Lane, connecting the South Quorum area to the Village on the Parkway.
- If possible, the pedestrian bridge should be designed to also serve as a gateway to Addison.



Valley Verde Underpass

- The existing underpass extending east from Landmark Place in South Quorum east along Verde Valley Lane should be improved to create a safe and comfortable connection for pedestrians and bicyclists.
- Traffic counts suggest that a travel lane may be taken away to accommodate development of a wider shared-use path on one side of the underpass.
- Ideally, this path is situated on the south side of the underpass and ties into a shared-use path on Quorum Drive.

- Other improvements along the shared-use path under the underpass may include:
 - Bollards separating vehicular traffic from pedestrians and bicyclists.
 - Pedestrian lighting that is shielded from automobiles.
 - Art or mural installations.
- Bike boulevards or bike lanes may also be considered on either side of the underpass, so long as wide sidewalks connect to the underpass both west to Addison and east to Dallas.



Figure 5-11: Valley Verde Underpass

Partnerships

As has been discussed throughout the Master Plan, implementing the full Future Trail Network envisioned by the community will require that Addison collaborate with neighboring jurisdictions, regional organizations and private property owners.

REGIONAL CONNECTIVITY

There are five important ways in which Addison must collaborate and coordinate with local and regional agency partners. These are summarized below.

Shared Jurisdiction of Important Roadways. Marsh Lane, portions of Midway Road and portions of Belt Line Road are all examples of roadways with shared jurisdiction. In some cases, jurisdictional responsibility is split at the center line of the roadway and in other cases jurisdictional responsibility switches as you move long a roadway. In both instances, coordination with the other responsible jurisdictions will be critical to the implementation of the envisioned trail network.

Key Crossings and Connections to Neighboring Pedestrian and Bicycle Routes. Truly connecting across Addison and to the neighboring and regional trail network will require collaboration and partnerships with the Farmers Branch, Carrollton, Dallas, and the Dallas North Tollway.

Critical Connections Outside of Addison.

Connections from Addison's Future Trail Network to other regional trails and destinations will require coordination with neighboring jurisdictions. The most important of these partnerships, based on the recommendations highlighted above and in Chapter 4 of the Master Plan, will be with Farmers Branch and the City of Dallas.

Trail Improvements Along Utility and Rail Corridors.

Implementing these key trail connections will require coordination with utility and rail operators to establish use agreements, as well as mutually agreed upon designs, construction arrangements and maintenance agreements.

Regional Trail Improvements. The Cotton Belt Trail improvements will require continued coordination with DART to ensure that the segment of the trail extending through Addison meets the standards and expectations established within this Master Plan. Addison also has an opportunity to play a bigger role in the discussion of regional trail connectivity moving forward and should be proactive in participating in North Central Texas Council of Governments (NCTCOG) Bicycle and Pedestrian Advisory Committee and associated programs.



COORDINATION WITH PRIVATE PROPERTY OWNERS

Partnerships with private developers will be critical in three primary ways throughout implementation. These are summarized below.

Constrained Rights-of-Way (ROW). In a few select cases, the envisioned trail improvements within or along roadways will require additional ROW to implement to the standards recommended in Chapter 4. The Town should work with private property owners to acquire necessary frontage to widen ROW to a sufficient width and to explore options for making trail improvements along the frontage of private parcels.

Local Shared-Use Trail Connections. Many of the local shared-use trail connections identified as part of Phase 3 of the Future Trail Network cross private property or run along the edge of private parcels. In nearly all cases, the recommended trail improvements are not possible given existing development and site improvements. The Town should work proactively with private property owners to educate them about the longer-term desire to add these connections and to integrate the local shared-use trail connections into redevelopment plans whenever those are developed.

Trailheads. As outlined in Chapter 4, a variety of trailheads and trail access points are included in the recommendations for the Future Trail Network. In many cases, the best opportunities to create new trail access points or parking opportunities at trail access points will be through partnerships with private property owners. Using existing off-street parking when it is not in use (often evenings and weekends) is one such opportunity. Use agreements should be established and signage and enforcement related to any necessary restrictions should be considered.

Action Plan

This plan will guide the Town for the next 10+ years. However, the majority of the priority projects in this chapter are recommended for construction within the next 10 years. These key projects will provide major cross town connectivity, establish neighborhood loops and link to regional destinations.

Tables 5-2 and 5-3 provide a summary of costs associated with the three high-level phases of Future Trail Network implementation.

Table 5-2 provides a summary of each phase with an indication of costs already accounted for in the 5-year Capital Improvements Program (CIP) and the percentage of project costs already planned for in the *Master Transportation Plan (MTP)*. At the highest level, the three phases generally break down to thirds. More specifically, Phase 1 accounts for 35.2% of the total estimated system cost, Phase 2 accounts for 25.9% of the total estimated system cost, and Phase 3 accounts for 38.9% of the total estimated system cost.

Table 5-3 provides a more detailed breakdown of each phase by trail type and includes a total quantity of linear feet per phase, overall linear feet for each trail

type and the per linear foot and total cost for each trail type. The total miles of facilities included in the Future Trail Network totals approximately 37.9 miles. Of that total, approximately 30% of the network will be sidewalks with buffers, 23.5% will be shared-use path along streets, and 17% will be local shared-use trail. The other significant portions of the system include approximately 13% as bike boulevards, 6.5% as regional shared-use trail, 4% as two-way cycle tracks, 3% as buffered bike lanes, and approximately 3% represent priority shared-use paths with partners.

The cost estimates for each trail type include allocations for site preparation and survey; removal of existing paving, landscaping, etc.; all hardscape and landscape materials; miscellaneous drainage improvements; and contractor mobilization, overhead and improvement, and contingency (at 35%). Cost estimates do not include provisions for property acquisition; signage for types other than the bike boulevard; or educational programming. All cost estimates are in 2021 dollars and do not include provisions for inflation or escalations.

Table 5-2: Estimated Cost by Phase

Phase	Total Cost	Percent of Total Cost	MTP Project Overlap Percentage
Phase 1 (Funded)*	\$6,121,200	12.5%	95.4%
Phase 1 (Planned)**	\$11,124,700	22.7%	80.0%
Phase 2	\$12,687,700	25.9%	66.2%
Phase 3	\$19,082,700	38.9%	43.3%
Grand Total	\$49,016,300		

*Includes six FY 2000-21 Five-Year Capital Improvements Program projects and three others identified in Chapter 2.

**Includes all other Phase 1 projects identified in this Master Plan

Table 5-3: Action Plan Matrix

Typology	Description	Linear Feet					Cost per Linear Foot	Total Cost
		Phase 1 Funded*	Phase 1 Planned**	Phase 2	Phase 3	All Phases		
Wide Sidewalk w/ Buffer	8-10' sidewalks w/ 3' minimum buffer (preferred 8' landscaped buffer separated from traffic)	6,800	12,300	26,100	17,800	63,000	\$244	\$15,369,100
Separated Shared-Use Path Along Street	10-14' trail w/ minimum 3' buffers on both sides (preferred 8' landscaped buffer separated from traffic)	12,200	12,300	12,400	12,800	49,700	\$294	\$14,589,100
Regional Shared-Use Trail	10'-12' trail w/ 2' minimum buffers on both sides (when required, 10-15' buffer with landscape screening) or 6'-10' additional trail width (etched concrete) w/ 2' minimum buffer	2,100	8,200	3,800	-	14,100	\$183	\$2,579,400
Local Shared-Use Trail	10'-12' trail w/ 10-15' buffer with landscape screening (2' minimum buffers required on both sides)	700	4,500	4,700	26,000	35,900	\$422	\$15,165,000
Partner Shared-Use Path***	10'-12' trail w/ 2' minimum buffers on both sides	2,200	3,700	-	-	5,900	\$91	\$539,600
Bike Boulevard	Signage and stencil sharing a 14-16' travel lane	-	27,500	-	-	27,500	\$9	\$259,900
Bike Lane	6' bike lane stencil/striped w/ bolted plastic reflectors	-	-	-	-	-	\$25	\$0
Buffered Bike Lane	5-7' bike lane stencil/striped w/ minimum 3' buffer and bolted plastic separators or another physical barrier	-	5,800	-	-	5,800	\$31	\$180,100
Two-Way Cycle Track	8-12' cycle track stencil/striped w/ minimum 3' buffer and bolted plastic separators or another physical barrier	-	9,000	-	-	9,000	\$37	\$334,100
Paved Park Trail	6'-8' wide concrete off-street trail with optional 4' decomposed granite trail side trail (or 2' on both sides)	-	-	-	-	-	\$126	\$0
Soft-Surface Park Trail	4-6' wide decomposed granite trail	-	-	-	-	-	\$77	\$0
TOTALS		24,000	83,300	47,000	56,600	210,900		\$49,016,300

*Includes six FY 2000-21 Five-Year Capital Improvements Program projects and three others identified in Chapter 2.

**Includes all other Phase 1 projects identified in this Master Plan

***Includes the "Power Line Trail" (Oncor Utility Easement through Farmers Branch) and the Alpha Road Connector (to Farmers Branch)





**CITY-WIDE TRAILS
MASTERPLAN**

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