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A REGIONAL TRANSPORTATION PARTNERSHIP

2050 Metropolitan Transportation Plan

Chapter 10 | Active Transportation Element

August 22, 2025

Draft

WHAT IS IN THIS DOCUMENT?

This chapter of MetroPlan Orlando's 2050 Metropolitan Transportation Plan (MTP) outlines the active transportation (bicycle and pedestrian) needs in the Central Florida region. This includes a comprehensive needs assessment, evaluation of level of traffic stress and pedestrian level of comfort, travel accessibility, and the identification of project needs to improve, enhance, or expand the active transportation network in Orange, Osceola, and Seminole Counties.

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10.1 What Is Active Transportation?

Active transportation refers to human-powered modes of travel such as walking and biking. Residents and visitors have access to a variety of different active transportation facilities, such as sidewalks, bike lanes, trails, and more. These facilities help people connect to transit stops, carpools, and other shared transportation options, and ultimately to their destinations, as well as provide opportunities to live a healthier lifestyle. To take a comprehensive, multifaceted look at the region's transportation needs, the 2050 Metropolitan Transportation Plan (MTP) considers active transportation demands in this chapter.

Throughout this document, all references to pedestrians are inclusive of people with disabilities who use mobility aids (i.e., scooters, and manual or electric wheelchairs) to access public pedestrian walkways.

10.1.1 REGIONAL ACTIVE TRANSPORTATION PLAN: RIDE & STRIDE 2050

To develop the 2050 MTP Active Transportation Element, this chapter draws on research conducted as part of the MetroPlan Orlando Active Transportation Plan (ATP): Ride & Stride 2050, published in 2024. This document serves as a roadmap to enhance active transportation options on the MPO Roadway Network throughout Orange, Osceola, and Seminole Counties. The ATP focused on developing a comprehensive set of strategies to provide better options for walking and biking, including access to transit. The ATP was based on three key objectives:

1. Improve transportation safety outcomes for vulnerable road users, including pedestrians, bicyclists, and other non-auto transportation system users.
2. Identify a regional active transportation network that complements other travel modes, especially transit, and supports future land use patterns.
3. Develop a feasible project list to incorporate into the 2050 Metropolitan Transportation Plan.

The ATP identifies infrastructure, policies, and processes based on public and stakeholder input to achieve the desired goals. The ATP processes, policies, and recommended project network are highlighted here to illustrate the methods of assessing the region's active transportation needs. To read the full 2050 ATP and technical appendices, visit MetroPlanOrlando.gov/2050.

10.1.2ACTIVE TRANSPORTATION NEEDS ASSESSMENT PROCESS HIGHLIGHTS

The Active Transportation Needs Assessment was developed through three main components:

- Development policy and strategy recommendations
- Analyzing existing conditions
- Identifying future project needs and developing a future network

The existing conditions analysis was based on evaluating the public's comfort level using existing facilities and determining how accessible certain destinations are via these networks. Once the existing planned facilities were confirmed with regional partners, an additional analysis of comfort, accessibility, and safety was conducted to identify gaps in the network and develop the preliminary 2050 Active Transportation needs list. The list includes new projects as well as enhancements to planned projects, such as incorporating a side path into a planned road widening.

10.2 Active Transportation Policies and Toolbox

The 2050 Active Transportation Needs Assessment followed the goals and policies set forth in the 2050 ATP. As a part of the Active Transportation Needs development, plans and policies from each MetroPlan Orlando jurisdiction were reviewed to identify potential barriers to project implementation and identify active transportation policy guidance that could be incorporated into future plans. Guidance on new policy language was developed around the following topics:

- ADA Compliance
- Active Transportation County Programs
- Micromobility Regulations
- Bicycle Facility Selection

To support the implementation of projects identified in the 2050 ATP and incorporated for this Active Transportation Needs Assessment, active transportation policies and strategies were developed to help guide future active transportation projects in the region, an example of which is shown in Figure 10-1. These strategies include context and implementation information for:

- Bicycle Infrastructure
- Pedestrian Infrastructure
- Transit Access
- Safety and Comfort

Figure 10-1 | Active Transportation Strategies Example

Source: MetroPlan Orlando

The proposed policy language and full toolbox of strategies are available in the Active Transportation Plan (available under separate cover).

10.3 Existing Conditions

This section summarizes the existing conditions of the active transportation network, including existing infrastructure, Level of Traffic Stress (LTS), Pedestrian Level of Comfort (PLOC) analyses, and an Accessibility and Comfort Analysis. These analyses are explored in this section.

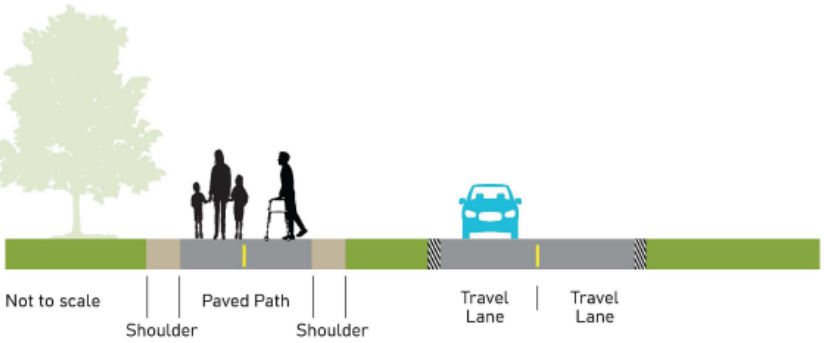
10.3.1 FACILITY TYPES

There is a wide variety of pedestrian and bicycle infrastructure in the region, including on-street bike lanes, paved shoulders, sidewalks, off-street shared use paths/trails, and side paths. Descriptions for these facilities are built on the facility type definitions provided by the Federal Highway Administration (FHWA) and the Florida Department of Transportation (FDOT) to reflect the local context and existing built environment. Examples of detailed cross sections of different facility types and their local naming conventions are shown in Figure 10-2 and Figure 10-3. Sidewalks and wide shoulders that are not designated as bicycle facilities but may be considered a bike facility by road users are also reflected in this plan.

- **Shared Use Path/Trail:** Provides a separate right-of-way and is generally designated for the exclusive use of people walking and bicycling with minimal roadway crossings.
- **Side Path/Trail:** Provides a separate right-of-way and is designated for the exclusive use of bicycles and pedestrians. Side paths/trails are adjacent to, but separated from, the roadway and may cross driveways and roadways. This is one of the examples in Figure 10-3.
- **Bike Lane:** Provides an exclusive bicycle facility adjacent to a roadway and distinct from the sidewalk.
- **Wide Bike Lane:** Provides an exclusive bicycle lane separated from the roadway by a painted buffer and distinct from the sidewalk. This may also be referred to as a buffered bike lane, but no physical elements are provided to separate the bike facility from the vehicle lane. This is one of the examples in Figure 10-3.
- **Separated Bike Facility:** Provides an exclusive bicycle facility physically separated from the roadway and distinct from the sidewalk. Separated bicycle facilities can be one-way or two-way, and may be at street level, sidewalk level, or in between.
- **Protected Bike Lane:** Provides an exclusive bicycle lane physically separated from the roadway with a vertical barrier and is distinct from the sidewalk.
- **Paved Shoulder (Unprotected Bike Lane):** Paved shoulders are wide (4 feet or greater) shoulders on the edge of a roadway that can be used by cyclists. Paved shoulders are typically provided as bicycle facilities in rural contexts.
- **Sidewalk:** Sidewalks are physically separated from the roadway and primarily designed for pedestrian use, although bicyclists are also permitted to use them. The standard sidewalk width is 6 feet. Older sidewalks or sidewalks in constrained areas may be narrower.
- **Wide Sidewalk:** This type of facility is physically separated from the roadway and typically 8 feet wide, wider than a standard 6-foot sidewalk but narrower than a 10-foot shared use path. While it is primarily intended for pedestrian use, it can also be used by cyclists.
- **Downtown Sidewalk:** Downtown sidewalks are physically separated from the roadway. While they may be wider than a standard 6-foot sidewalk, they often have other elements including street furniture, landscaping, outdoor seating/retail use, etc. Downtown sidewalks should have a space at least 5-feet wide that is unobstructed and dedicated for walking space. While cyclists may use the sidewalk, it is primarily intended for pedestrian use.

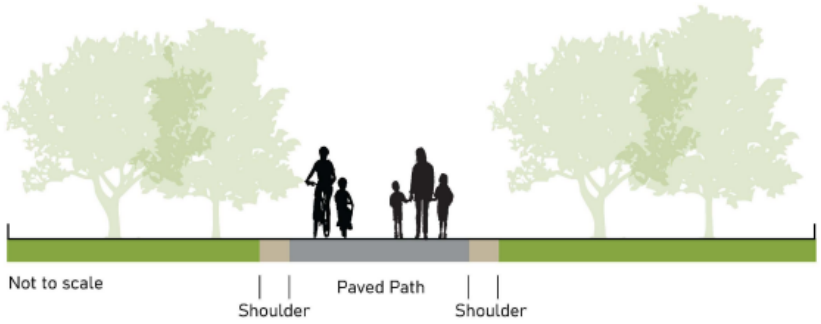
Figure 10-2 | Facility Types for Side Path, Shared Use Path, Trail, Wide Bike Lane, and Separated Bike Facility

SIDE PATH / TRAIL



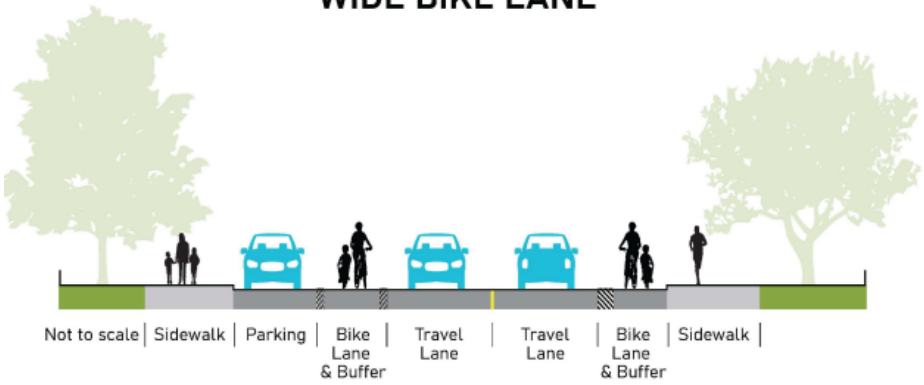
Key Elements: Provides a separate right-of-way and is designated for the exclusive use of bicycles and pedestrians. Side Paths/Trails are adjacent to, but separated from, the roadway and may cross driveways and roadways.

SHARED USE PATH / TRAIL



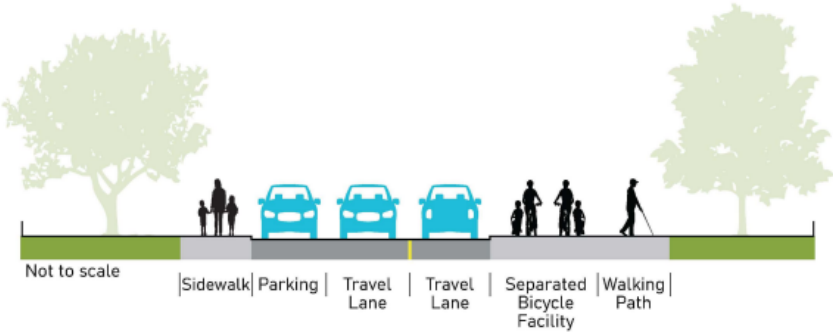
Key Elements: Provides a separate right-of-way and is generally designated for the exclusive use of people walking and bicycling with minimal roadway crossings.

WIDE BIKE LANE



Key Elements: Provides an exclusive bicycle lane that is separated from the roadway by a painted buffer and is distinct from the sidewalk. This may also be referred to as a buffered bike lane, but no physical elements are provided to separate the bike facility from the vehicle lane.

SEPARATED BIKE FACILITY

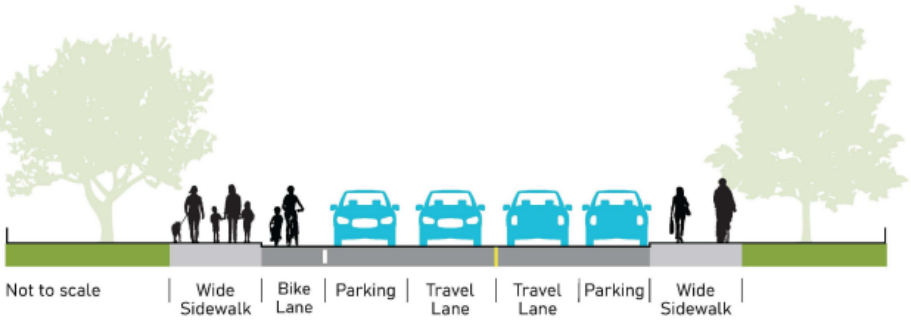


Key Elements: Provides an exclusive bicycle facility that is physically separated from the roadway and distinct from the sidewalk. Separated bicycle facilities can be one-way or two-way, and may be at street level, at sidewalk level, or in between.

Source: MetroPlan Orlando, 2024

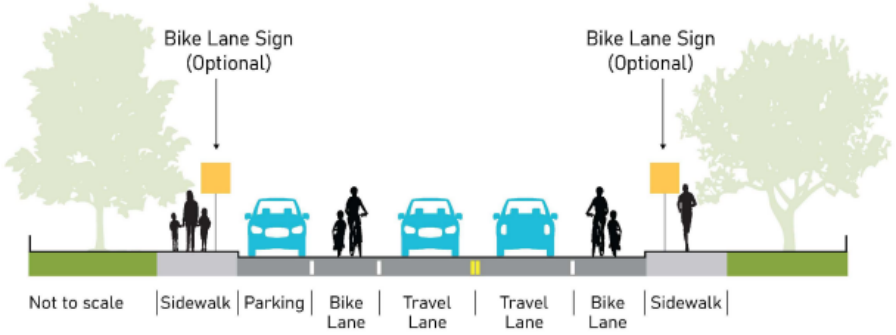
Figure 10-3 | Facility Types for Wide Sidewalk, Downtown Sidewalk, Bike Lane, and Protected Bike Lane

WIDE SIDEWALK



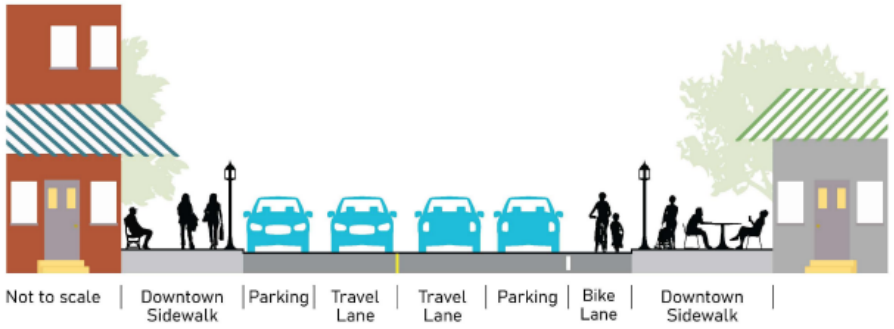
Key Elements: Provides a facility that is physically separated from the roadway. The sidewalk is 8-feet wide, which is wider than the standard 6-foot sidewalk but more narrow than a 10-foot shared use path. While it is primarily intended for pedestrian use, it can also be used by cyclists.

BIKE LANE



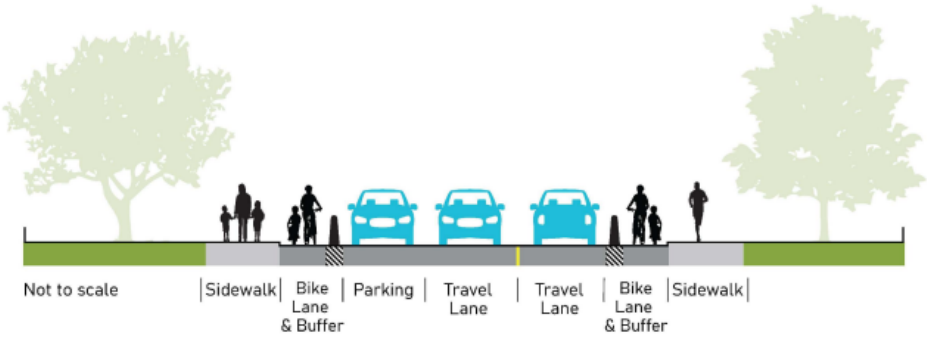
Key Elements: Provides an exclusive bicycle facility that is adjacent to a roadway and is distinct from the sidewalk.

DOWNTOWN SIDEWALK



Key Elements: Downtown sidewalks are physically separated from the roadway. While they may be wider than a standard 6-foot sidewalk, they often have other elements including street furniture, landscaping, outdoor seating/retail use, etc. Downtown sidewalks should have a space at least 5-feet wide that is unobstructed, dedicated for walking space. While cyclists may use the sidewalk, it is primarily intended for pedestrian use.

PROTECTED BIKE LANE



Key Elements: Provides an exclusive bicycle lane(s) that is physically separated from the roadway with a vertical barrier and is distinct from the sidewalk.

Source: MetroPlan Orlando, 2024

10.3.2 EXISTING NETWORK

The existing active transportation network, including sidewalks, bike facilities, shared use paths, and trails were presented in Chapter 3. As shown in Table 10-1, fewer than 20% of roadways in the region with a speed of 35 mph (miles per hour) or higher have a dedicated bike facility, but about 73% of the roadway network has sidewalks on at least one side of the road. In addition to sidewalks and on-street bike lanes, there are also around 340 miles of side paths and 160 miles of shared use paths/trails within the region.

Table 10-1 | Miles of Active Transportation Facilities by Posted Speed of Road

	30 MPH or Less (% of MPO Network Centerline Miles)	35 to 45 MPH (% of MPO Network Centerline Miles)	50 MPH or More (% of MPO Network Centerline Miles)
MPO Roadway Network	391	1,191	389
Bike Lane (4 feet or greater)	37 (9%)	216 (18%)	92 (24%)
Sidewalk (One Side of the Road)	239 (61%)	765 (64%)	69 (18%)
Sidewalk (Both Sides)	108 (28%)	223 (19%)	38 (10%)

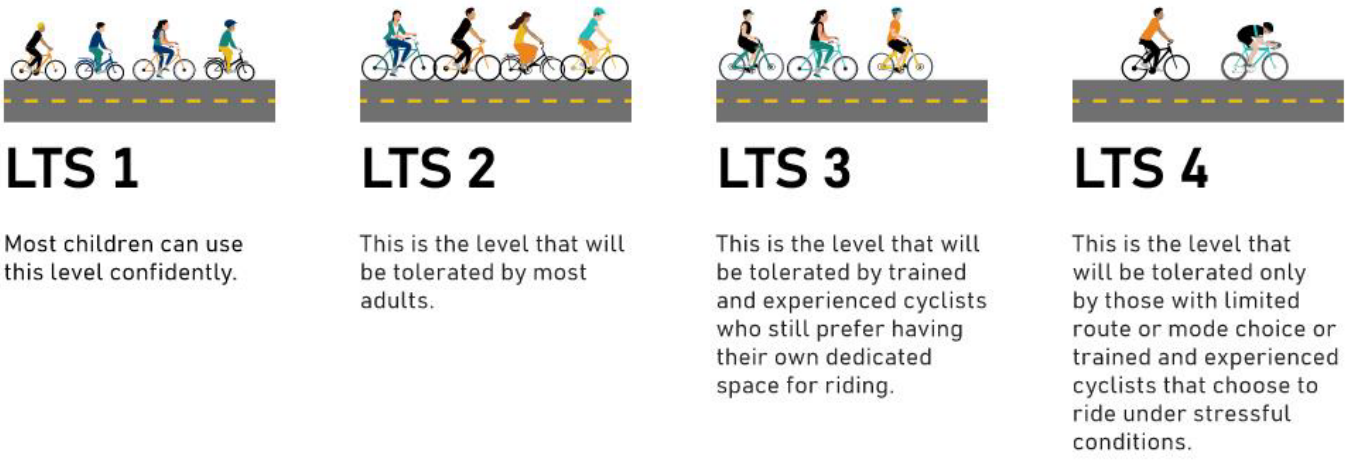
Source: Active Transportation Plan 2024

10.3.3 LEVEL OF TRAFFIC STRESS AND PEDESTRIAN LEVEL OF COMFORT

To determine where new and enhanced walking and bicycling facilities could improve accessibility within the MetroPlan Orlando region, Level of Traffic Stress (LTS) and a Pedestrian Level of Comfort (PLOC) analysis were conducted to assess the comfort of people bicycling and walking within the region.

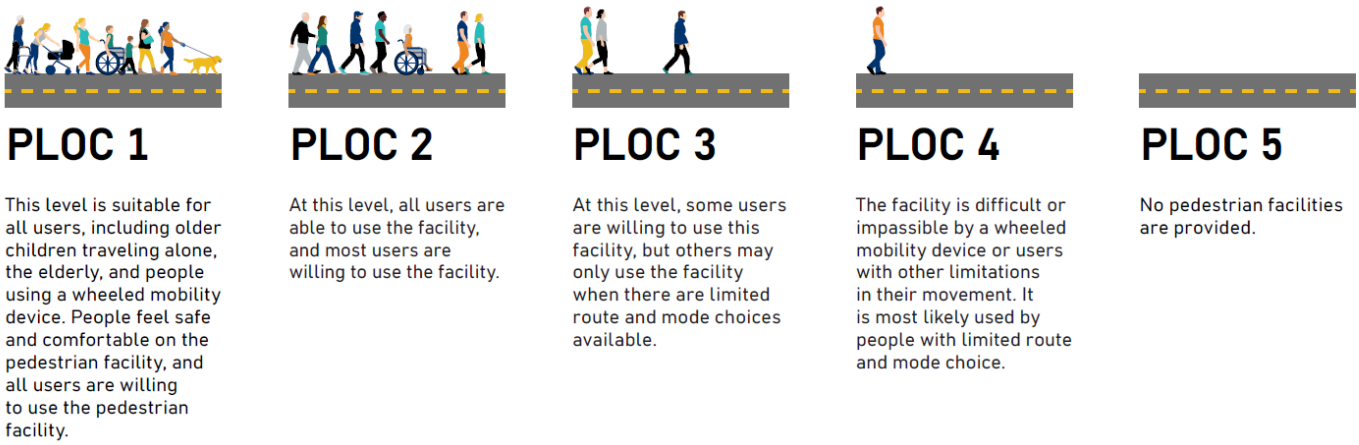
LTS and PLOC are ways of quantifying the stress and comfort levels of active transportation users on a given roadway. They are functional indicators of whether a person will choose to walk or bike on that roadway. For bicycling and walking, lower stress facilities are typically separated from the vehicular travel lanes. An example of a lower stress facility includes a side path or sidewalk with a landscaped buffer between the vehicular and bicyclist/pedestrian travel way. On the following page, Figure 10-4 and Figure 10-5 provide visual depictions of the LTS/PLOC ratings.

Figure 10-4 | Levels of Traffic Stress



Source: MetroPlan Orlando, 2024

Figure 10-5 | Pedestrian Levels of Comfort



Source: MetroPlan Orlando, 2024

Results of the existing conditions LTS are presented in Table 10-2 and results of the existing conditions PLOC analysis are presented in Table 10-3.

Table 10-2 | Existing LTS Score for MPO Network by Bicycle Facility Type (in miles of facility)

LTS Score	Shared Use Path/ Trail	Side Path*	Bicycle Lanes/ Paved Shoulder	No Bicycle Facility
1	157 (100%)	145 (100%)	73 (10%)	123 (10%)
2	-	-	30 (4%)	74 (6%)
3	-	-	85 (12%)	249 (20%)
4	-	-	533 (74%)	802 (64%)

**There are an additional 191 miles of side paths in the region that are not on a Federal Aid Network roadway.*

Source: xGeographic; Fehr & Peers, 2024

Table 10-3 | Existing PLOC Score for MPO Network by Pedestrian Facility Type (in miles of facility)

PLOC	Shared Use Path/ Trail	Side Path*	Sidewalks Both Side	Sidewalks One Side	No Sidewalks
1	157	145	166	-	-
2	-	-	396	88	-
3	-	-	250	195	-
4	-	-	260	85	-
5	-	-	-	-	529

Source: xGeographic; Fehr & Peers, 2024. Note: There are an additional 191 miles of side paths in the region that are not on a Federal Aid Network roadway.

Among the roadways where bike lanes or paved shoulders 4-foot wide or wider are provided, around 87% of the facilities are higher stress (LTS 3 or 4). As bikes are allowed to use the roadway even if a bike lane is not provided, an analysis was conducted on the roads without bike lanes as well; 84% of roads without bike lanes are considered stressful. About 55% of the existing pedestrian facilities are higher stress (PLOC 3 or 4). For bicycling and walking, lower stress facilities are typically separated from the vehicular travel way, such as side path or sidewalk with a landscaped buffer between the vehicular and bicyclist/pedestrian travel way. There are about 529 miles of roadway on the MPO network (excluding limited access facilities) where a sidewalk is not provided on either side of the street.

LTS and PLOC are useful indicators of whether a person will choose to walk or bike. However, there are areas where the only option for walking and biking trips is a high-stress facility, and people must use it due to a lack of other choices. Filling gaps in the active transportation network, particularly on or near high stress facilities, could be a good opportunity to improve bicyclist and pedestrian comfort in the region, and provide improved travel choices.

10.3.4 TRAVEL ACCESSIBILITY AND COMFORT ANALYSIS

A travel access analysis was conducted to identify locations in the region that have a high level of access to a variety of destinations via low stress walking and bicycling facilities, and parts of the region that may have high levels of access, but only on high-stress facilities. This analysis is referred to as an accessibility analysis. While this analysis seeks to understand how accessible different destinations are, it does not measure Americans with Disability Act (ADA) accessibility.

The following points of interest (POIs) were considered locations where travel access would be prioritized:

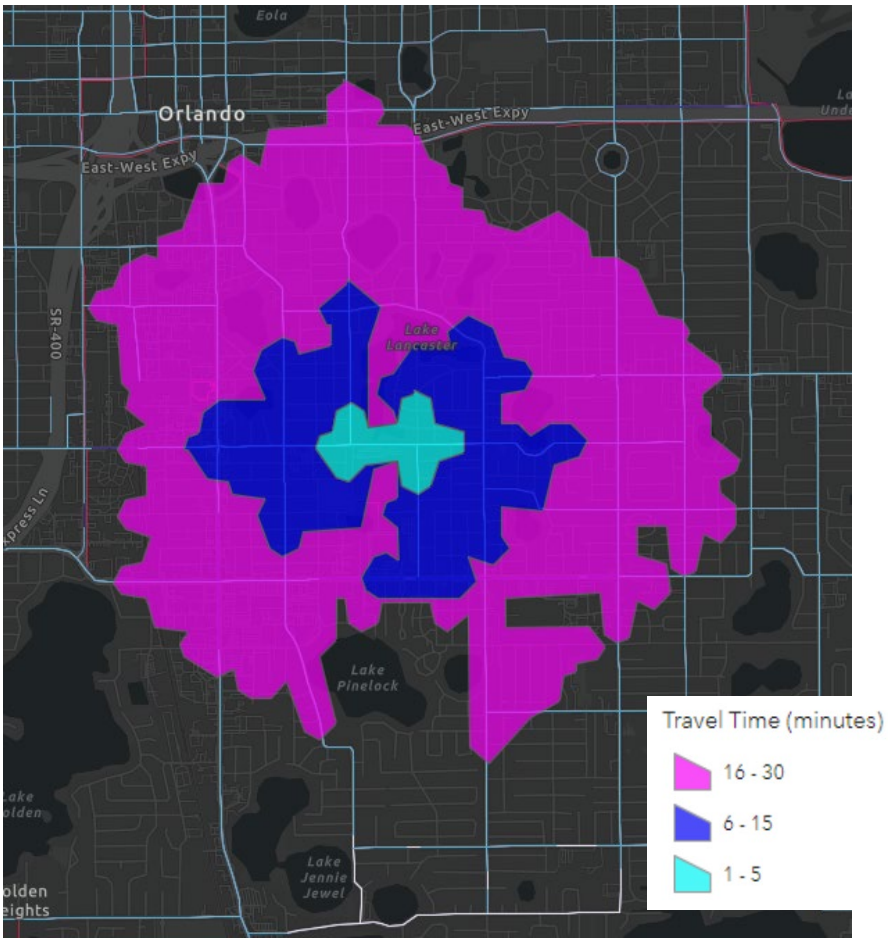
- Public schools
- Transit facilities, such as LYNX stops and SunRail stations
- Parks, including neighborhood parks and regional parks
- Jobs
- Shopping, including grocery stores

The accessibility analysis consists of three primary components.

1. Travel Access—the number of destinations a person can get to within a certain amount of time
2. Mobility—how far a person can travel in a specific amount of time by each mode of travel
3. Accessibility—a combination of access and mobility determining the number and type of destinations available by time and mode of travel

For each destination type, the travel shed, or the areas that could be reached within 1-5 minutes, 6-15 minutes, and 16-30 minutes, based on a walking speed of 3 mph and a biking speed of 10 mph, were assessed. It was assumed that no walking trips were able to pass without a sidewalk. An example walk shed is shown in Figure 10-6 on the following page.

Figure 10-6 | Example of a 5-, 10-, and 15-Minute Walk Shed



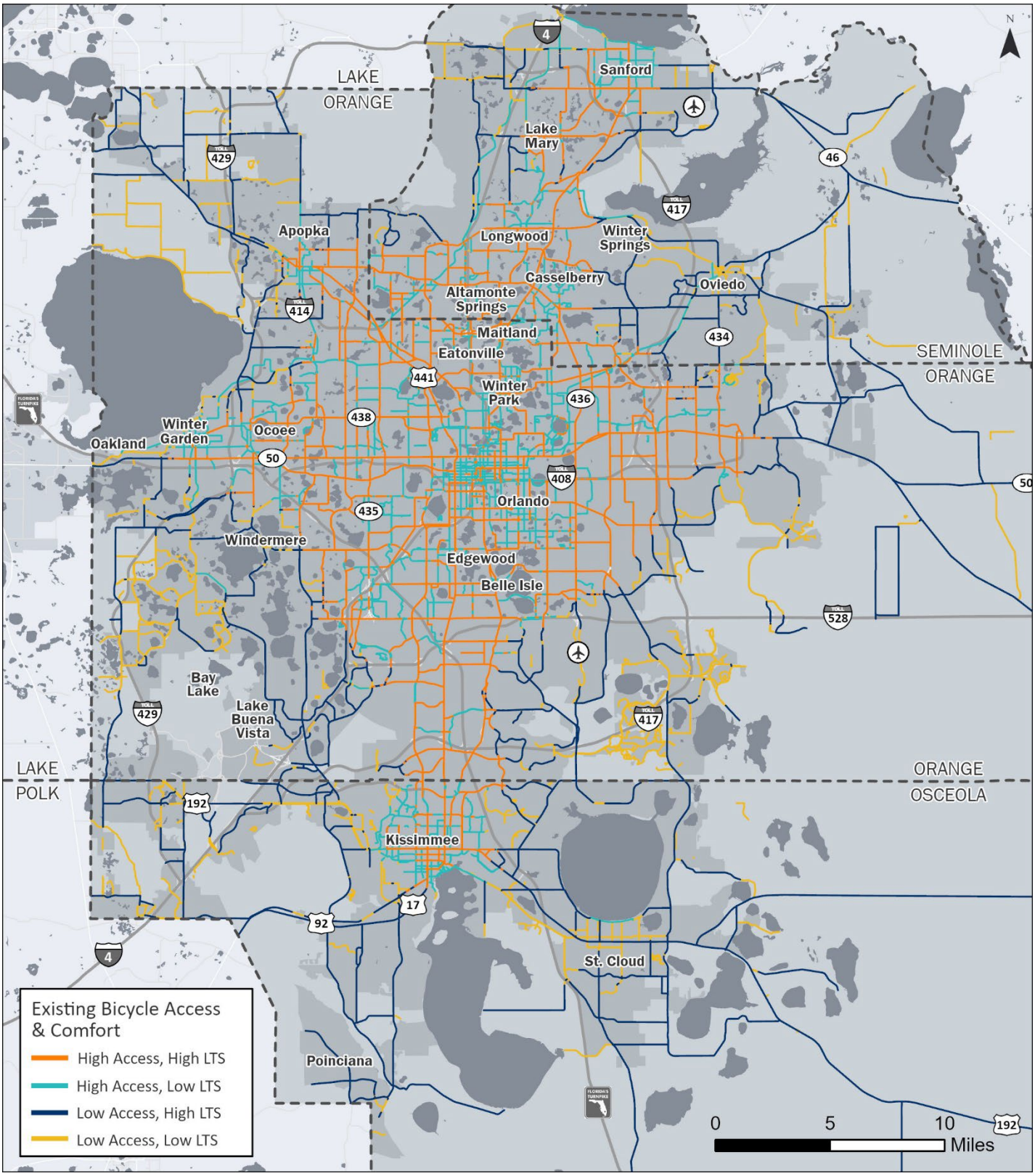
Source: xGeographic, 2024

The results were then summed across all key destinations within that travel shed. The accessibility rating is then a combination of access and mobility – typically, people have much greater access to destinations in vehicles than walking. The higher the total accessibility score, the higher the level of access via bicycling and walking. Detailed results are provided in the Active Transportation Plan (available under separate cover). These results were then combined with the level of traffic stress and pedestrian level of comfort analysis. Roadways were rated with one of four scores:

- **High Access and Low LTS/PLOC:** these are roadways where there are many destinations within the travel buffers (above average access score), and the route is comfortable (average LTS/PLOC score of 2 or better)
- **Low Access and Low LTS/PLOC:** these are roadways where there are not many destinations within the travel buffers (lower than average access score), but the route is comfortable (average LTS/PLOC score of 2 or better)
- **High Access and High LTS/PLOC:** these are roadways where there are many destinations within the travel buffers (above average access score), but the route is uncomfortable (average LTS/PLOC score greater than 2)
- **Low Access and High LTS/PLOC:** these are roadways where there are not many destinations within the travel buffers (lower than average access score), and the route is uncomfortable (average LTS/PLOC score greater than 2)

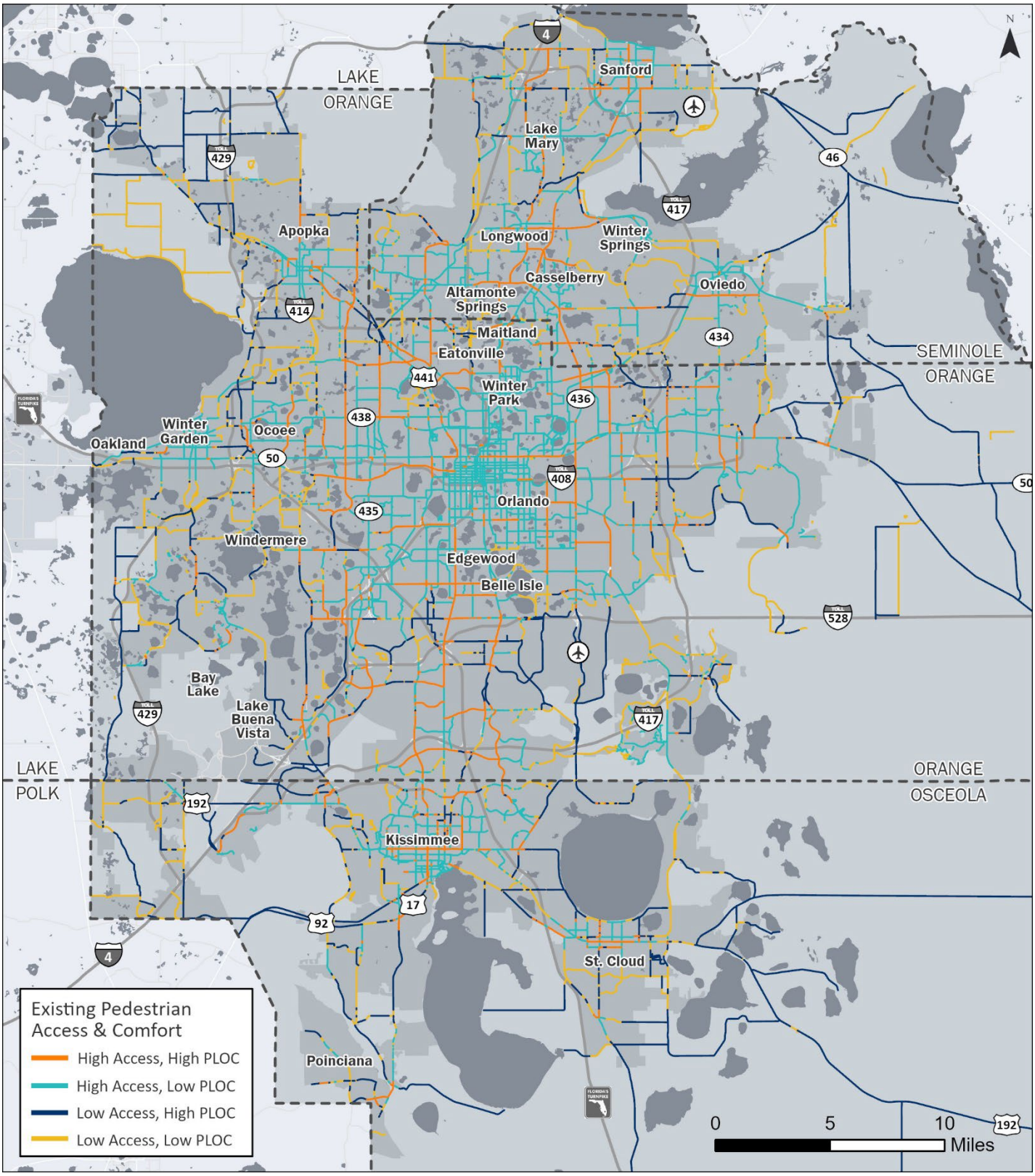
The analysis results are shown on Figure 10-7 for bicyclist access and comfort and Figure 10-8 for pedestrian access and comfort under current, existing conditions.

Figure 10-7 | Existing Bicycle Accessibility and Comfort Summary



Source: MetroPlan Orlando, 2024

Figure 10-8 | Existing Pedestrian Accessibility and Comfort Summary



Source: MetroPlan Orlando, 2024

10.4 Needs Assessment

Following the analyses discussed in Section 10.3, a planned project network could be established and honed into specific project recommendations. These recommendations and enhancements are the result of the full active transportation needs assessment, all of which will be discussed in this section of the chapter.

10.4.1 PLANNED PROJECT NETWORK AND PROJECT RECOMMENDATIONS

The network development began with a review of the previously planned active transportation projects. From there, local agency partners confirmed that these projects reflected the needs of the community and were still being planned for implementation. The miles of planned shared use paths/trails, side paths, and on-street bicycle facilities on or adjacent to the federal-aid network, are shown in Table 10-4.

Table 10-4 | Miles of Planned Facility Types on MPO Network

Facility Type	Total
Shared Use Path / Trail	41
Side Path	613
Separated Bike Facilities	6
Bike Lane (4+ feet)	109

Based on technical analysis and feedback from partner agencies and the public, a final list of active transportation needs was developed, which includes 253 projects in the following general categories:

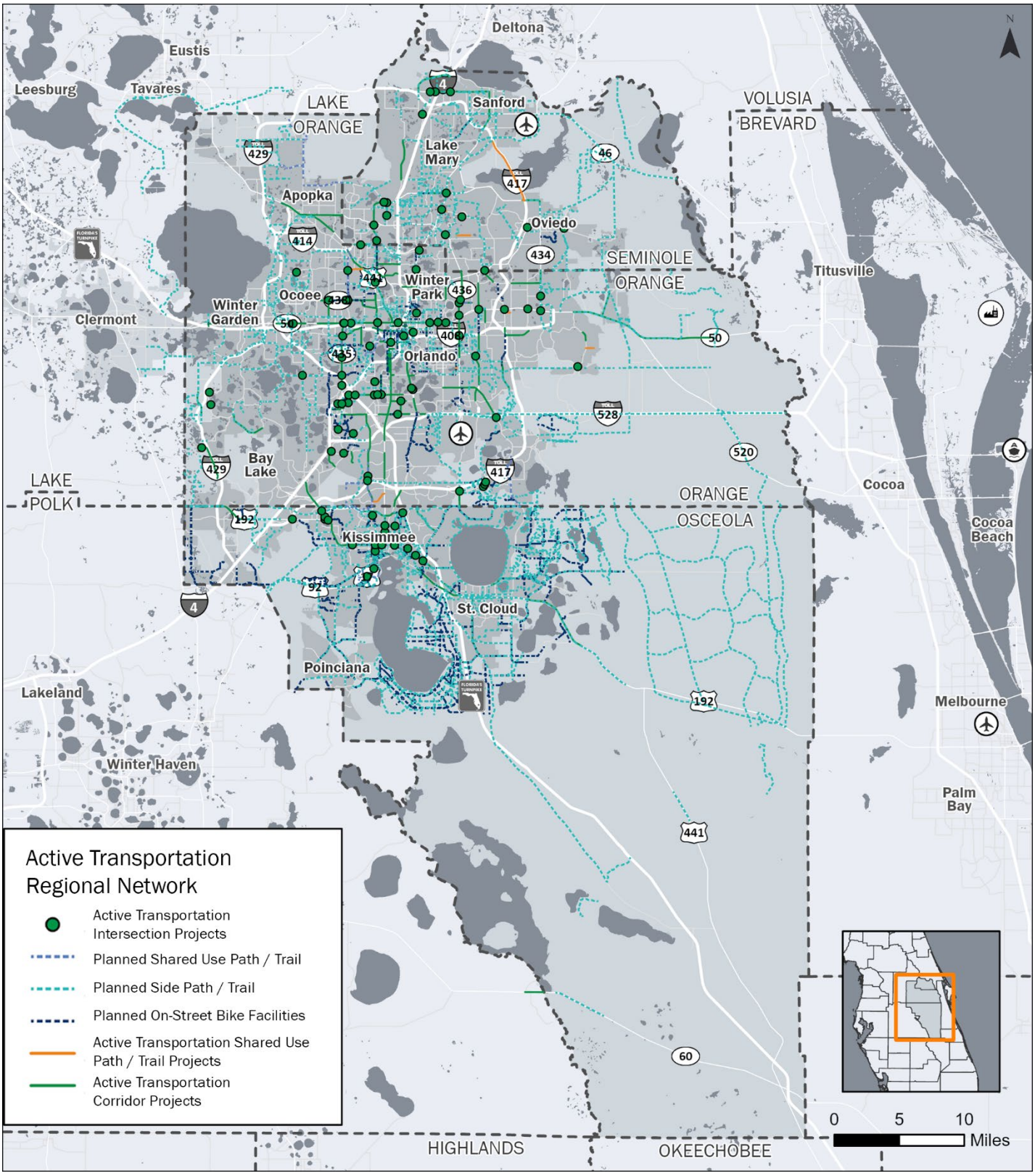
- 3 existing bicycle lane modifications
- 47 bicycle lane enhancements to already planned projects
- 4 bicycle bridges/tunnels
- 65 new corridor projects, which include adding or widening bike lanes, adding side paths, speed management, and/or a safety focus
- 20 enhancements to already planned corridor projects.
- 7 new trail segments
- 5 trail gap closures
- 25 enhancements to already planned trail crossing projects
- 7 new trail crossing improvements
- 57 new intersection improvements, some with a signing, striping & signal timing focus, and others with reconfiguration elements, such as reducing curb radii, adding pedestrian refuge islands, and providing directional curb ramps
- 10 enhancements to already planned intersection improvements
- 3 enhancements to already planned trail crossing improvements

Of the 253 projects, 105 are enhancements to already planned projects, and 148 are new projects. The new project locations for all of the MetroPlan Orlando region are located in Figure 10-9. New Orange County projects are displayed in Figure 10-10, with a closer inset map of Orange County communities located in Figure 10-11. New project locations for Osceola County are located in Figure 10-12, with Source: MetroPlan Orlando, 2024

Figure 10-13 showing a closer view of select Osceola County communities. Finally, Figure 10-14 represents new project locations for Seminole County. The list of final active transportation needs is included in Chapter 19.

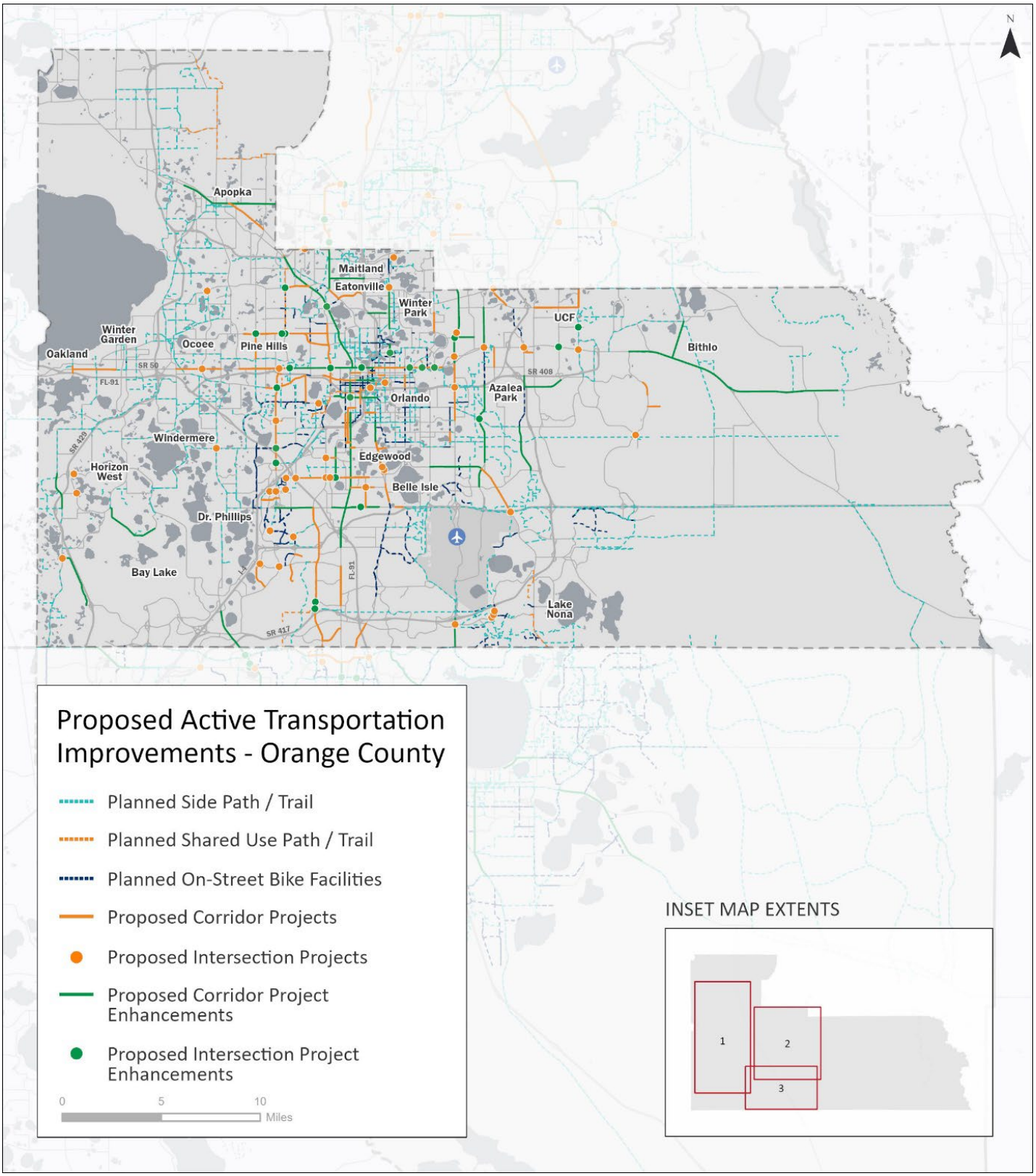
The resulting overall Active Transportation Network, considering planned and active transportation projects, is shown in Figure 10-9 for the region. These projects were incorporated into the overall multimodal needs assessment for 2050, which is described in detail in Chapter 13.

Figure 10-9 | 2050 Recommended Active Transportation Network



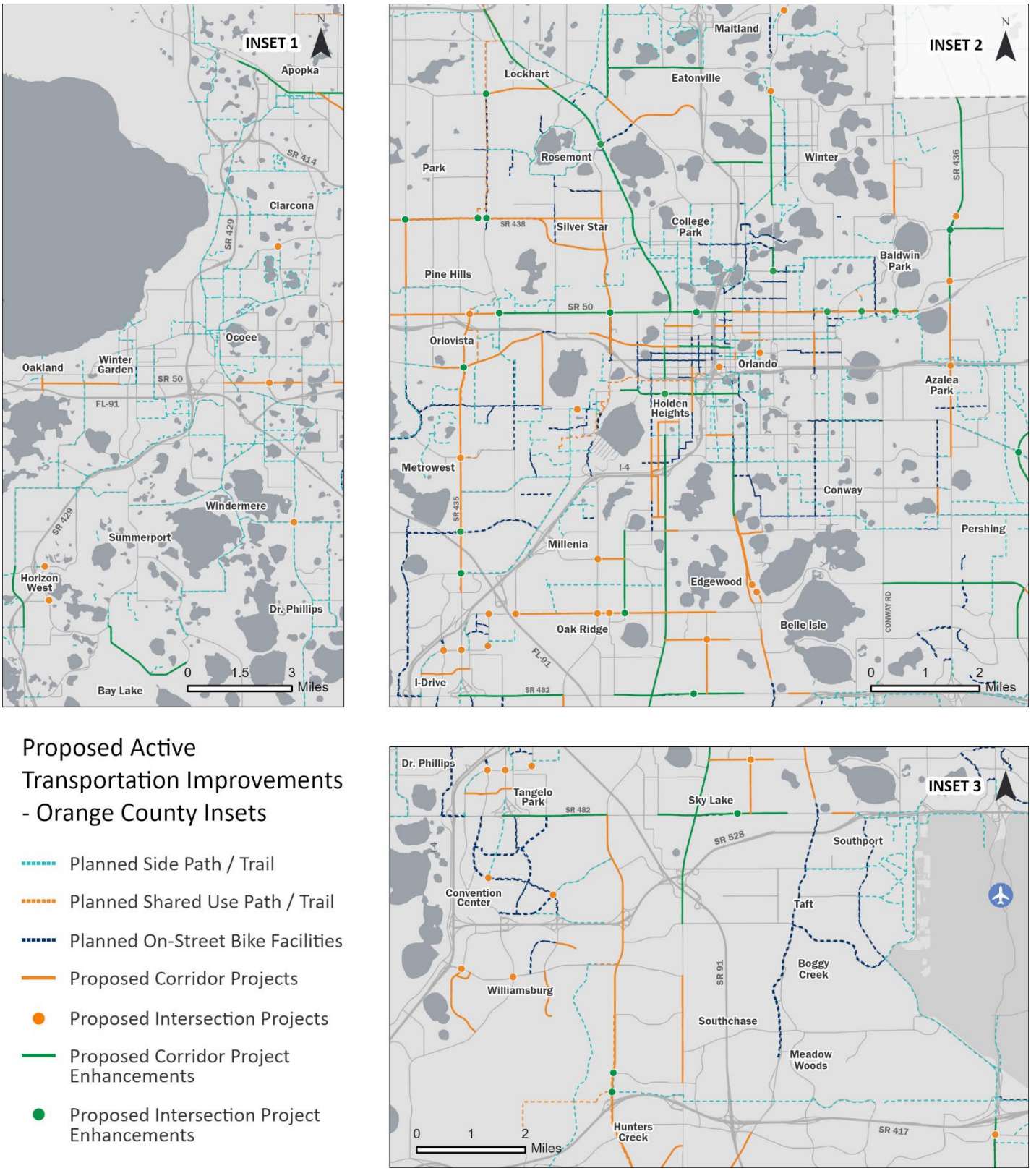
Source: MetroPlan Orlando, 2024

Figure 10-10 | 2050 Active Transportation Network, Orange County



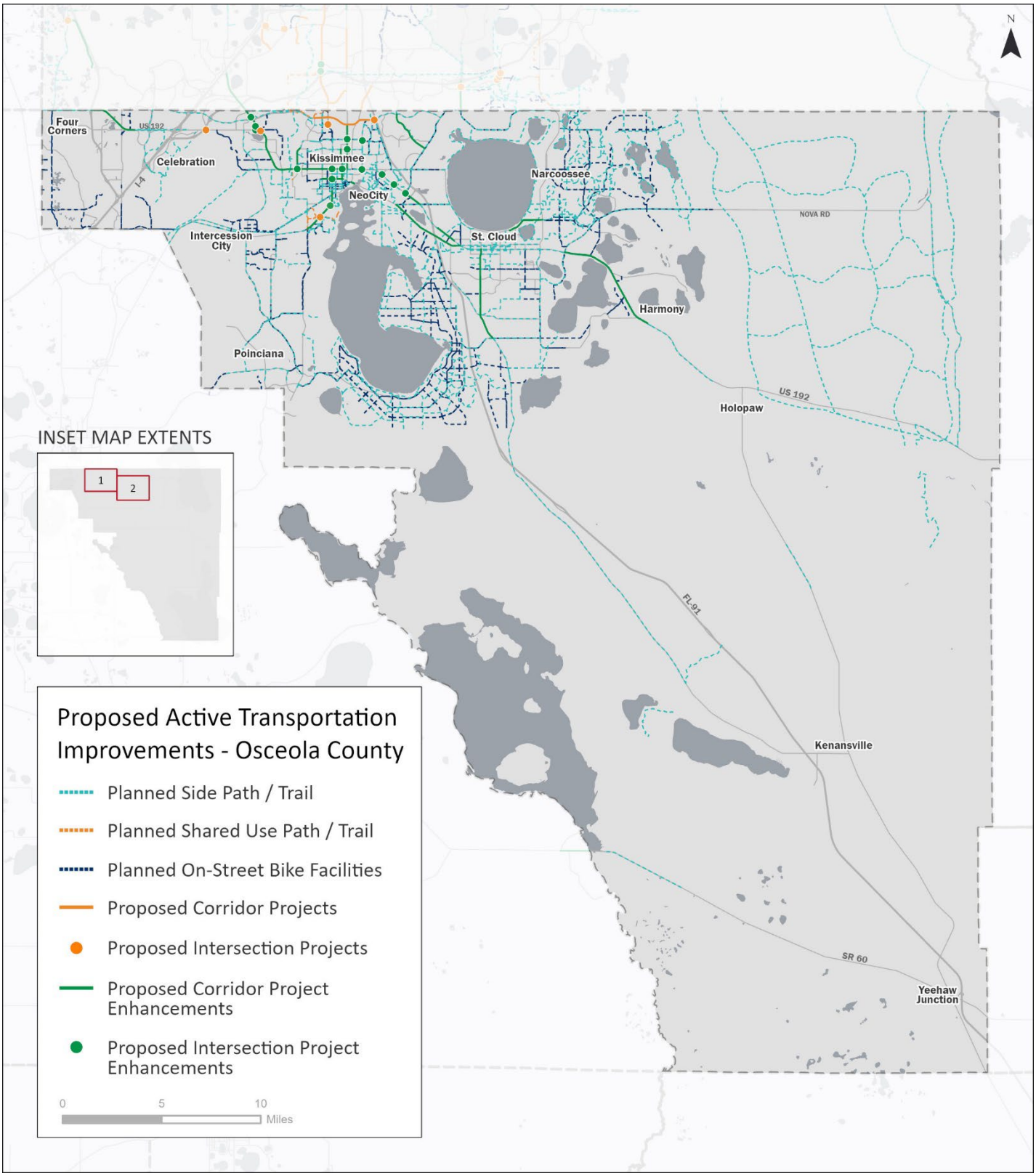
Source: MetroPlan Orlando, 2024

Figure 10-11 | 2050 Active Transportation Network, Orange County Insets



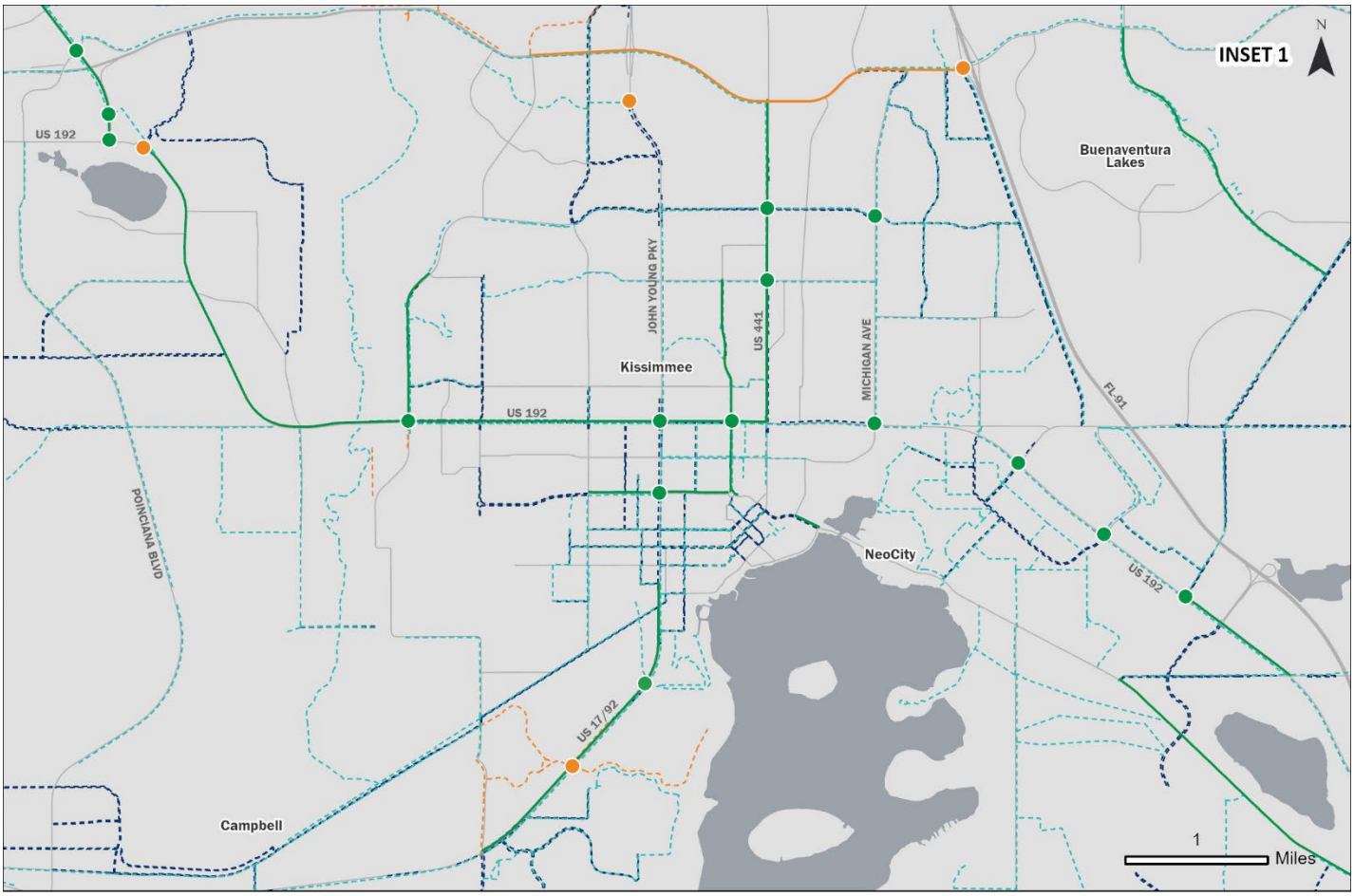
Source: MetroPlan Orlando, 2024

Figure 10-12 | 2050 Active Transportation Network, Osceola County



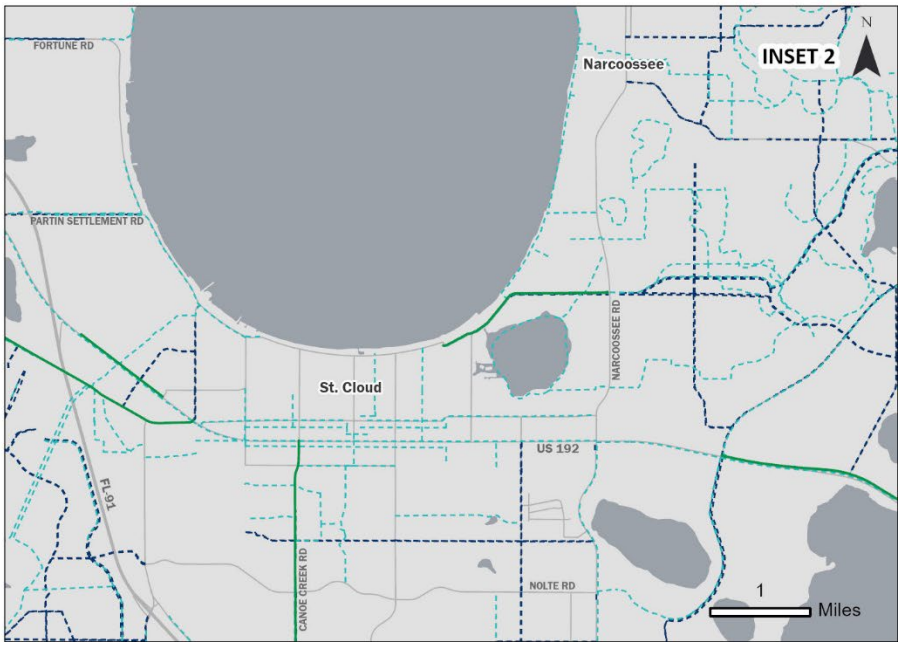
Source: MetroPlan Orlando, 2024

Figure 10-13 | 2050 Active Transportation Network, Osceola County Insets



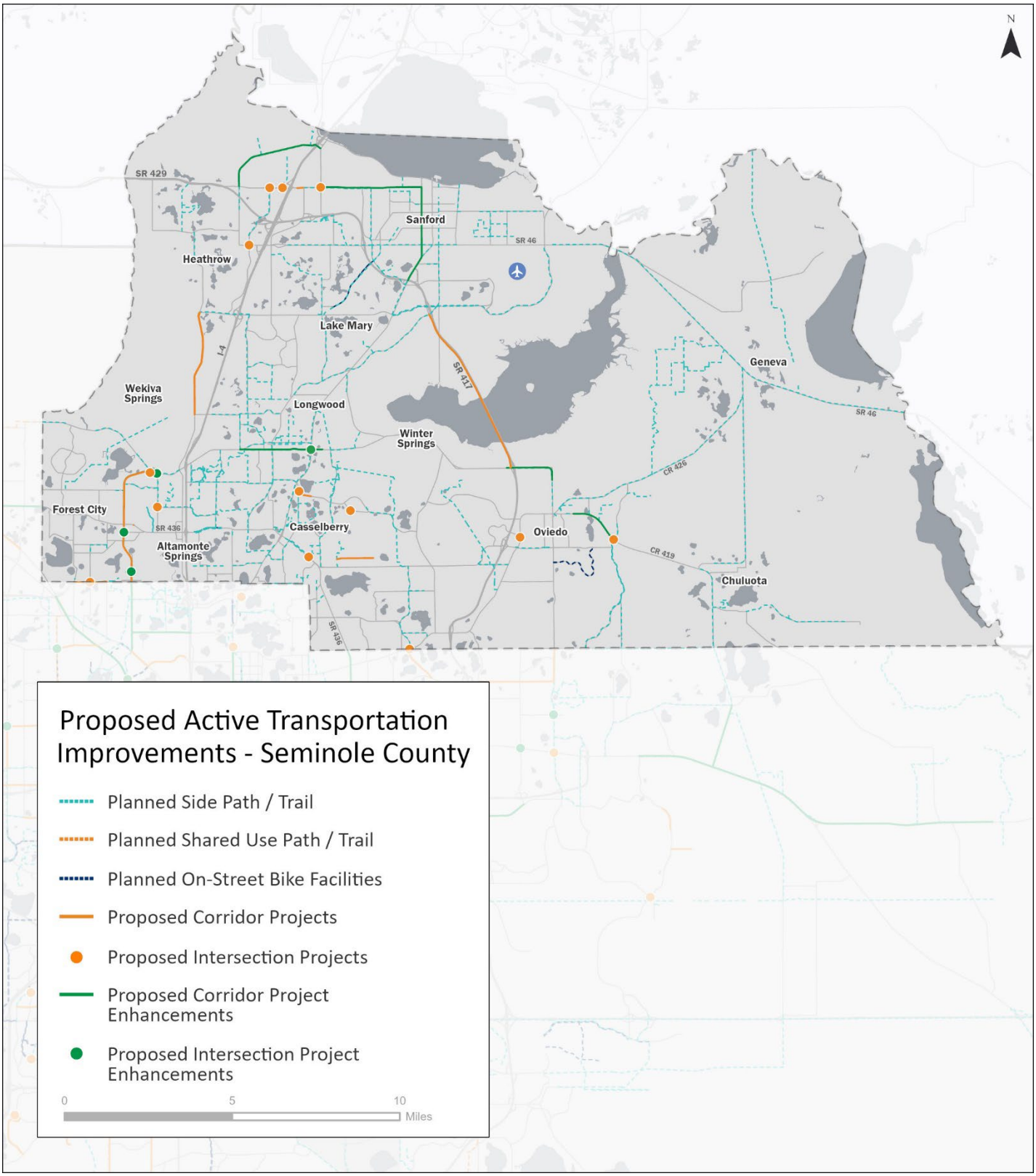
Proposed Active Transportation Improvements - Osceola County Insets

- Planned Side Path / Trail
- Planned Shared Use Path / Trail
- Planned On-Street Bike Facilities
- Proposed Corridor Projects
- Proposed Intersection Projects
- Proposed Corridor Project Enhancements
- Proposed Intersection Project Enhancements



Source: MetroPlan Orlando, 2024

Figure 10-14 | 2050 Active Transportation Network, Seminole County



Source: MetroPlan Orlando, 2024

10.4.2 CRITICAL SIDEWALK GAPS

The presence of sidewalks plays a key factor in advancing MetroPlan Orlando's goals related to pedestrian safety and accessibility. As of 2023, there are 4,131 miles of roadway within the MetroPlan Orlando area without any type of sidewalk facility, and 1,517 miles of roadway have sidewalk coverage on only one side of the road (excluding limited access facilities). These sidewalk gaps are typically short, often less than a quarter mile long.

Table 10-5 | Miles of Sidewalk Gaps in Regional Network

County	No Sidewalk	Sidewalk on only One Side of Street	Total
Orange	1,709	879	2,588
Osceola	1,532	290	1,821
Seminole	891	348	1,239
Total	4,132	1,517	5,648

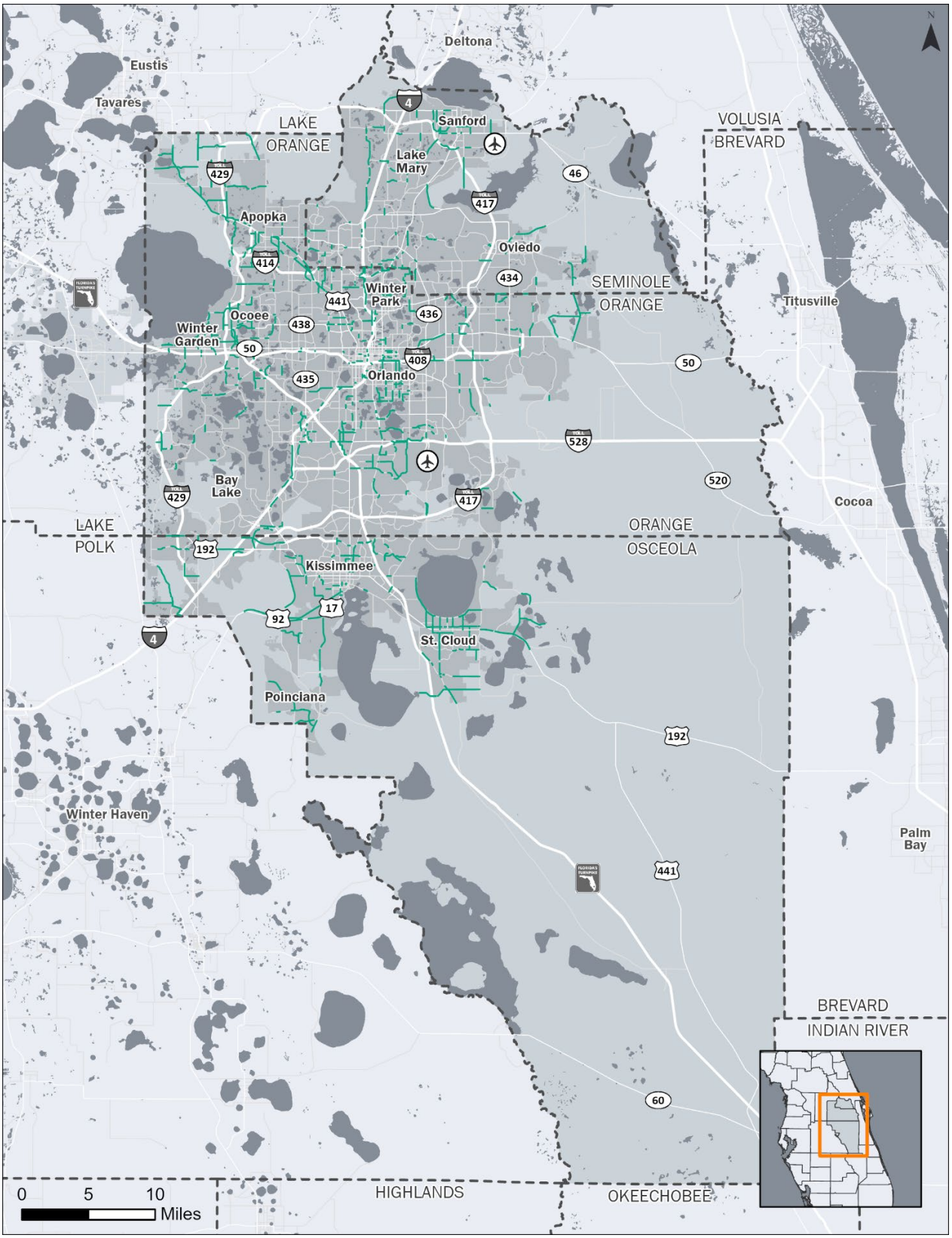
Source: Wave Database, XGeographic, February 2022

After identifying these gaps, they were further assessed to find the critical sidewalk needs across the entire MetroPlan Orand planning area. Critical sidewalk needs were identified by:

- Located on a functionally classified roadway
- Proximity to transit
- Proximity to schools
- Sidewalk presence (i.e. on one side of road, both sides of the road, or not present)
- Accessibility to points of interest

Critical sidewalk gaps were identified by assessing how important the missing sidewalk is to the connectivity of the network and its proximity to both schools and transit and resulted in approximately 20% of sidewalk gaps being identified as the greatest needs. These segments were then bundled together to create feasible projects for future implementation through the School Mobility and Hazardous Walking Conditions program. Additional information about this program is included in Chapter 19. The full list of critical sidewalk projects is shown in Figure 10-15, and listed in Appendix J.

Figure 10-15 | Active Transportation Critical Sidewalk Gap Bundles



Source: MetroPlan Orlando, 2024

10.5 Moving Forward

The 2050 Active Transportation Needs Assessment draws on the research and efforts of the Active Transportation Plan due to its development of data-driven strategies, stakeholder input, and public participation. By combining those efforts, the Active Transportation Needs of the region will be guided by the policies and project recommendations outlined in this Chapter. The project needs identified in this chapter were further analyzed in the overall MTP multimodal needs assessment (Chapter 13), prioritized (Chapter 16), and ultimately assessed to determine their cost feasibility (Chapter 19).

10.5.1 FURTHER CONSIDERATIONS

To further support the Active Transportation Needs and the regional active transportation network, the following topics should also be considered and included in local and regional policy updates (additional information is available in the Active Transportation Plan, available under separate cover):

- **Americans with Disabilities Act (ADA) Compliance:** New active transportation projects within the public right-of-way during all phases of the project (planning through construction) should be assessed for compliance with the ADA and the Public Right-of-Way Accessibility Guidelines (PROWAG) requirements.
- **Active Transportation Count Programs:** Temporary and permanent bicycle and pedestrian counters can be implemented on both existing and planned active transportation facilities and projects. Counters are important for understanding and capturing:
    - Use of bicycle and pedestrian users and their direction of travel
    - Track seasonality / weather involving bicycle and pedestrian travel
    - Plan for and accommodate bicycle and pedestrian demand
    - Better understand bicycle and pedestrian facility usage
    - Support grant applications and usage
- **Micromobility Regulations:** Micromobility often refers to light-weight individual vehicles used for short-term travel or first- and last-mile connections. These vehicles can include, but are not limited to, standard bicycles, e-bikes, e-scooters, e-skateboards, shared bicycle fleets, and electric pedal-assisted bicycles.
- **Bikeway Selection:** Bicycle facility selection that is the most appropriate for creating a network that meets the goals of the 2050 ATP, the 2050 MTP, and local goals and objectives. The network should be comfortable, improve safety, and increase accessibility by non-auto travel modes. To select the most appropriate bicycle facility or when updating existing facilities, local agencies should follow guidance and best practices from FHWA's Bikeway Selection Guide and FDOT Design Manual, among others.

MetroPlanOrlando.gov
250 S. Orange Ave., Suite 200
Orlando, FL 32801

MTP@MetroPlanOrlando.gov

(407) 481-5672