metroplan orlando
A REGIONAL TRANSPORTATION PARTNERSHIP

2050 Metropolitan Transportation Plan

Chapter 8 | Transit Element

Adopted: December 10, 2025

What Is In This Document?

This chapter of MetroPlan Orlando's 2050 Metropolitan Transportation Plan (MTP) outlines the future of transit in the Central Florida region. This document includes challenges and opportunities for regional transit, needs for both bus and rail, and transit investment. This vision of Central Florida's transit was made in collaboration with the Central Florida Regional Transportation Authority (d/b/a LYNX), Florida Department of Transportation (FDOT) and the Central Florida Commuter Rail Commission (SunRail) as well as other relevant partners.

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8.1 Introduction

The MetroPlan Orlando region, which encompasses Orange, Osceola, and Seminole counties, continues to be one of the fastest-growing regions in the United States and one of the most visited places in the world. The tri-county population has increased from 1,837,359 in 2010 to 2,289,429 in 2020, indicating growth of 25%. Furthermore, the number of jobs has increased from 904,935 in 2010 to 1,202,699 in 2020 indicating a growth of 33%. This rapid growth has led to numerous transportation issues such as significant rise in trip volumes, congestion, longer travel times, and higher transportation costs. Thus, the future of transportation is one of the critical considerations for the MetroPlan Orlando region.

As our communities expand and evolve, so must our transit infrastructure and services to meet the growing needs of residents, commuters, and visitors alike. This chapter of the 2050 Metropolitan Transportation Plan (MTP) will serve as a roadmap to shape the trajectory of public transportation over the next 25 years and establish the vision of Central Florida's transit system for Orange, Osceola and Seminole Counties to enhance safety, provide reliable services, ensure access and a healthy and thriving community and strengthen the region's economy. This is a collaborative effort involving key stakeholders, transit providers, and the community at large. MetroPlan Orlando, in partnership with regional transit authorities such as the Central Florida Regional Transit Authority (d/b/a LYNX) and the Central Florida Regional Commuter Rail (SunRail), alongside private transit entities like Brightline, is spearheading the creation of this shared vision that will guide future investments and initiatives.

The projects outlined here will not only chart a course for the evolution of public transit, but also foster alignment with the broader goals of sustainable development and community well-being.

8.1.1 REPORT CONTENT

The Transit Chapter of the 2050 MTP is organized into seven sections as outlined below:

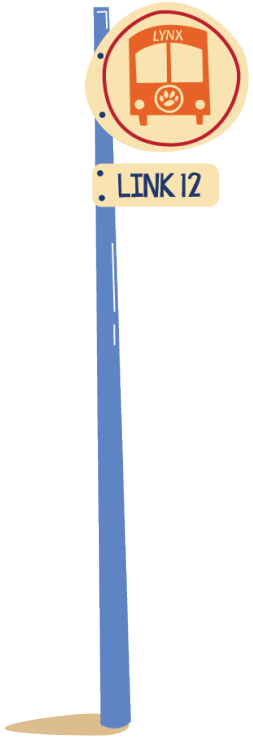
- **Data and Existing Conditions Summary** - This section provides an overview of transit services within the MetroPlan Orlando region. It details the services offered by SunRail and LYNX.
- **Key Challenges and Opportunities** – This section discusses critical hurdles and potential pathways for growth within the region by identifying opportunities and challenges faced by regional transit agencies.
- **Transit-Oriented Development –** An opportunity for transit-oriented development around SunRail stations and LYNX transit centers is discussed in this section.
- **Bus System Needs** – This section identifies all capital and bus system improvements per the LYNX Transit Development Plan (TDP) and the county plans, including cost.
- **Rail System Needs –** Identifies all service improvements and expansion plans for SunRail as well as the cost of these improvements.
- **The Future of Transit –** This section touches base with emerging trends in transit technology that can affect future ridership.
- **Transit Investments –** Existing funding sources for transit in the region, as well as an exploration of possible funding from federal and state sources are presented in this section.

8.2 Data and Existing Conditions Summary

This section provides an exploration of the transit services currently available within the MetroPlan Orlando region. It includes details of transit services offered by LYNX and SunRail.

8.2.1 EXISTING TRANSIT SERVICE

8.2.1.1 LYNX



LYNX is the Central Florida Regional Transportation Authority, which operates public transit services in Orange, Osceola, and Seminole counties. LYNX began operation in the Central Florida region in May of 1972 under the name Orange Seminole Osceola Transportation Authority (OSOTA). It later became Tri-County Transit in 1984 and transitioned to LYNX in 1992. The official name was changed to Central Florida Regional Transportation Authority (CFRTA) in March of 1994.

Services offered by LYNX include:

- Fixed-route bus service
- Fare-free services in Downtown Orlando (LYMMO)
- Limited stop service (FastLink)
- Flex-route services (NeighborLink) in the outlying areas
- Complementary paratransit service throughout the LYNX service area (ACCESS LYNX)
- Commuter and agency vanpool programs.

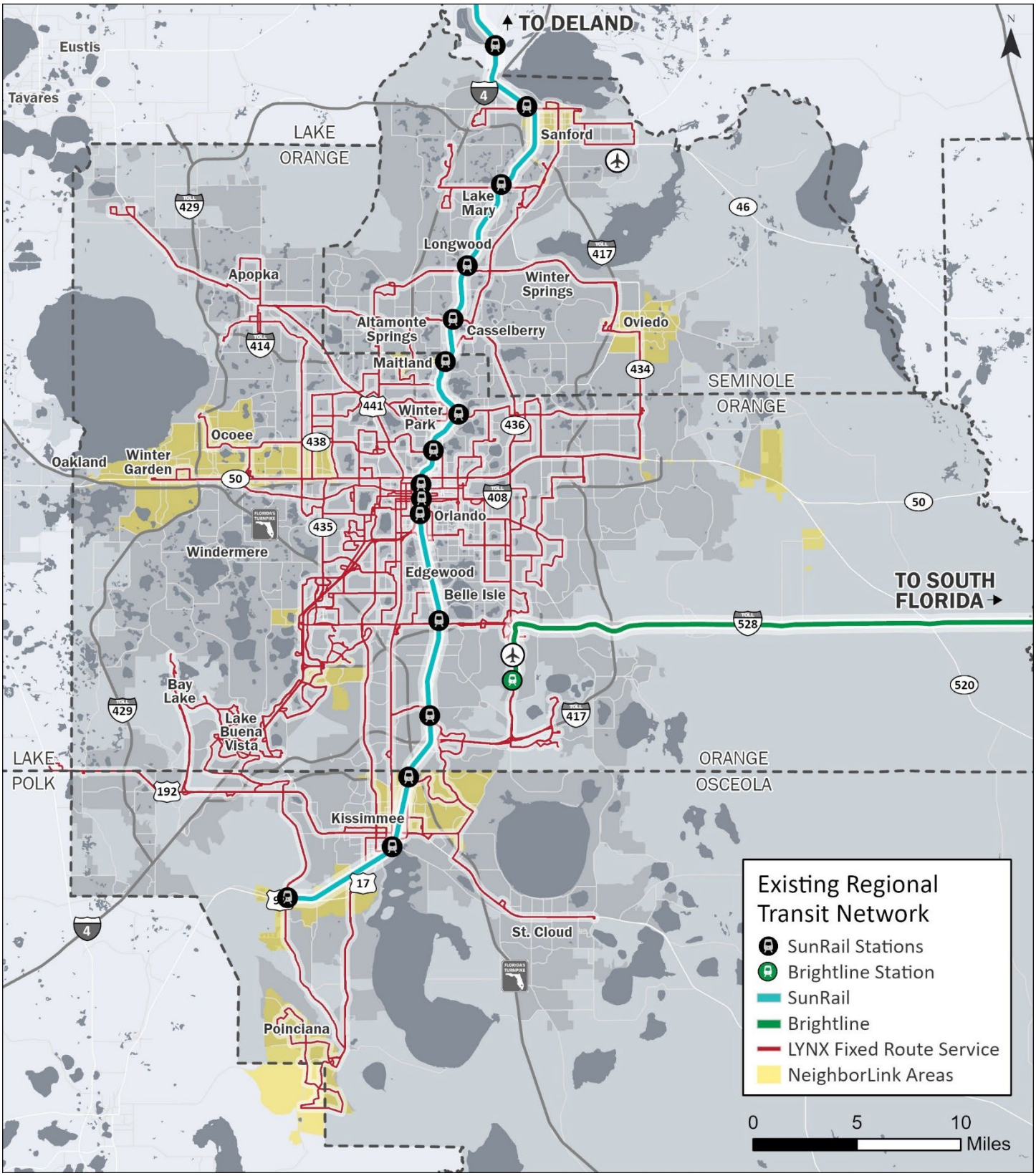
LYNX also provides regional connectivity to transit services in Lake and Polk Counties. At the time of the development of the 2050 MTP, LYNX has an existing transit network consisting of 76 bus routes (also referred to as “links”): 64 fixed-route Links and 12 on-demand NeighborLink (see Figure 8-1). LYNX serves approximately 2,540 square miles with about 2.2 million residents within the service area. A detailed overview of the demographics served by LYNX and the operating statistics can be found in the Transit Vision Master Plan (TVMP).

8.2.1.2 SUNRAIL

SunRail commuter rail service currently runs from DeBary in Volusia County, through Seminole and Orange Counties, to Poinciana Boulevard in Osceola County with over 49 miles of track and 16 stations (Figure 8-1). Phase 2 North is a segment which extended commuter rail service an additional 12 miles from the DeBary SunRail station to the DeLand Amtrak station in Volusia County and began revenue service in summer 2024. There are currently eight commuter rail stations in Orange County, three in Osceola County, four in Seminole County, and two in Volusia County.

At present, SunRail operates during weekdays, and service is generally from 5:00 AM to 11:30 PM. Occasional weekend service is provided, typically coinciding with large public events near stations, such as festivals in downtown Orlando or events at the Kia Center. The headways are generally 30 minutes in the AM and PM peak hours and 60 to 120 minutes during the off peak, midday, and evenings. At the time of writing this document, SunRail is operated by the Florida Department of Transportation (FDOT). A detailed overview of the operating statistics of SunRail can be found in the TVMP.

Figure 8-1 | Existing Regional Network



Source: LYNX & SunRail GTFS 2024

8.2.1.3 INTERCITY TRANSIT PROVIDERS

Brightline

Brightline is a privately owned and operated intercity passenger railroad operating between Central Florida (Orlando) and South Florida (Miami). It started operating in January 2018, initially between Fort Lauderdale and West Palm Beach; the Miami to Fort Lauderdale segment began revenue service in May 2018. Infill stations at Aventura and Boca Raton opened in December 2022, and the West Palm Beach to Orlando segment began revenue service in September 2023. Future expansions include new potential infill stations in Stuart and Brevard County, as well as an passenger rail service extension to Tampa.

Amtrak

Amtrak is the national passenger railroad company of the United States. It operates intercity rail service in 46 of the 48 contiguous U.S. states and three Canadian provinces. In the Central Florida region, it provides services through stations in Sanford, Winter Park, Orlando, and Kissimmee. The Silver Service line provides a connection to Tampa (through which travel to Miami is possible) and north to South Carolina, Washington, D.C., and New York. The Auto Train (boarding in Sanford) allows riders to transport their vehicles to auto train stations in the D.C. area.

Sanford Trolley

The City of Sanford's Community Redevelopment Agency (CRA) provides a free downtown trolley service. The Sanford trolley provides transportation between the Sanford SunRail station and downtown Sanford.

I-Ride Trolley

The I-Ride Trolley is a fixed-route service operated by the I-Drive Improvement District in Orange County.

- The Red Line Trolley transportation route services the International Drive both north and southbound. Red Line trolleys arrive approximately every 20 minutes.
- The Green Line Trolley transportation route is the counterpart to the Red Line Trolley route, beginning service in the Major Boulevard business district, it travels along Universal Boulevard and then shadows the Red Line Trolley Route on South International Drive. Green Line trolleys arrive approximately every 60 minutes.

Intercity Bus Providers

Other intercity bus providers operate in the MetroPlan Orlando region including Greyhound, RedCoach, MegaBus, Jet Set Express, SuperTours, GMG Transport and other shuttle services. Also, many of the tourist destinations provide direct shuttle or charter services from the Orlando International Airport to their locations.

8.2.2 PEER REVIEW

A peer analysis is a process where an agency compares its performance measures with the other similar/comparable organizations, cities, or regions. A peer analysis is important for the competitive positioning of the region in the country by evaluating the public facilities and services in Central Florida against similarly positioned areas.

Identification of Peers

Peers were selected based on their similarities in terms of size and population with MetroPlan Orlando. Seven metropolitan areas were identified (Figure 8-2). The rationale for selecting each of these peers is discussed below.

Charlotte: This urbanized area is similar to that of Orlando. It is one of the fastest growing metro areas of the southeast USA along with Central Florida.

Jacksonville: The Jacksonville and St. Augustine urbanized areas are also included. This peer is located in Florida and shares close geographic proximity with the Orlando Metro Area.

Las Vegas: This peer includes Las Vegas, Henderson, and Paradise urbanized areas. The urbanized area and urbanized area population of this peer is significantly less than Orlando, but the fact that this metro area also has a substantial tourism-based economy is the reason behind its selection.

Nashville: This peer includes urbanized areas of Nashville and Davidson in the state of Tennessee.

Phoenix: Phoenix, Mesa, and Scottsdale urbanized areas are included. This peer reflects the anticipated future of MetroPlan Orlando and is included based on the recommendation of planning staff.

San Antonio: The urbanized area and population of this peer is comparable to Orlando. Like Orlando, San Antonio is also one of the most visited tourist destinations in the state of Texas.

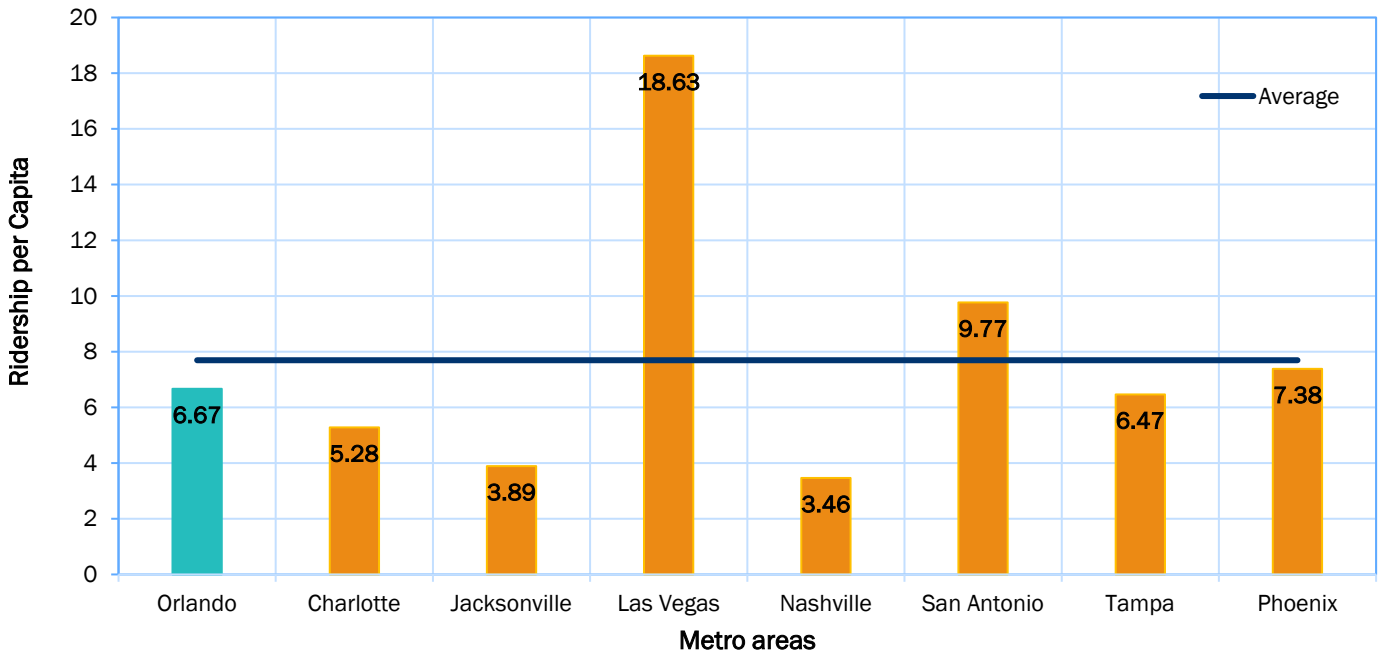
Tampa: This peer includes Tampa, St-Petersburg and Spring Hill urbanized areas and shares geographic proximity with the Orlando Metropolitan Area in the state of Florida.

Figure 8-2 | Peer Regions

Ridership per Capita

Transit ridership per capita serves as a crucial metric in assessing the utilization of public transportation within various cities, providing insights into the efficiency and popularity of transit systems relative to the population they serve. In Figure 8-3, the peers are compared based on transit ridership per capita (including all modes) for fiscal year 2022. The average ridership per capita across all peers is 7.69. Las Vegas stands out with a high ridership per capita of 18.63, suggesting a significant reliance on public transportation in comparison to its population. Las Vegas has the highest population density among all the peer regions, and spends more on transit, as can be seen from Figure 8-4. On the other hand, Nashville and Jacksonville exhibit lower numbers, indicating relatively lower transit usage per person. In the case of Orlando, the transit ridership per capita is found to be 6.67, slightly below the overall average of 7.69. Cities with ridership per capita below the average may need to assess and address factors affecting public transit usage, such as accessibility, coverage, or convenience.

Figure 8-3 | Ridership per Capita for Peer Regions

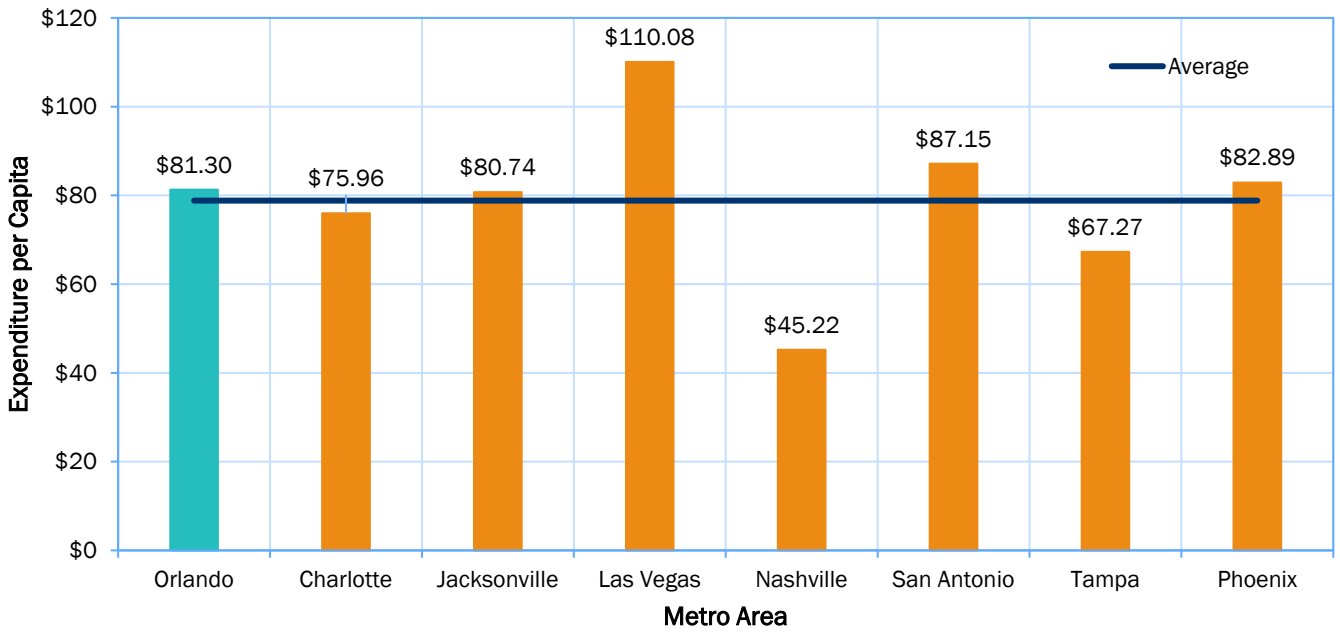


Source: NTD 2022

Expenditure per Capita

Expenditure per capita evaluates the cost-effectiveness and financial sustainability of public transit systems. It measures the total expenditure on transit services (all modes) per person in an area, providing insights into the cost per unit supply to measure the financial efficiency of transit agencies. In this analysis, we delve into expenditure per capita for transit agencies in the peer regions (Figure 8-4). Nashville demonstrates a frugal approach, with the lowest expenditure per capita, below the average of $78.3 while Las Vegas stands out with significantly higher spending. Orlando is slightly higher than the average. Expenditure per capita below the average may be considered more financially efficient, utilizing resources effectively to provide transit services, while expenditure per capita above the average may need to scrutinize their spending patterns and explore ways to optimize costs while maintaining service quality.

Figure 8-4 | Expenditure per Capita for Peer Regions



Source: NTD 2022

8.3 Key Challenges and Opportunities

Transit agencies, like many organizations, face a myriad of challenges and opportunities that shape their trajectory in the market. In this section, we delve into the key issues and opportunities that LYNX and SunRail face, offering insights into the potential pathways for growth and success.

8.3.1 KEY CHALLENGES

Funding

A significant threat to LYNX is funding shortages, which can impede the organization's ability to maintain and enhance its services, invest in infrastructure improvements, and implement innovative transportation solutions. None of the three counties LYNX serves have a dedicated funding source for transit. A lack of reliable funding can lead to service cuts, reduced frequency, and limited expansion which hinders LYNX's ability to address operational challenges and to meet the needs of the growing population.

On-Time Performance

LYNX's on-time performance (OTP) for the fixed route is currently 73% and LYMMO at 77%. This inconsistency in meeting scheduled arrival times undermines the reliability of the service, reducing customer confidence and potentially leading to decreased ridership or heightened passenger frustration. Improving OTP is important for enhancing overall customer satisfaction and ensuring the efficient use of transit resources. By progressively improving on-time performance, LYNX can build confidence in its services, attract more riders, and fulfill its mission of providing reliable and punctual transportation. In addition, as traffic congestion in the region increases, maintaining a strong OTP will require additional resources simply to maintain current service levels.

Transportation Safety

There are many transit stops that do not have connecting sidewalks and are far from marked and controlled crossing locations especially on six-lane arterials, forcing riders with a destination on the other side of the street (or for one end of their trip) to either walk a far distance out of their way or cross an arterial at an uncontrolled location where there may not be sufficient gaps in traffic signals for pedestrian crossings. Many riders get on and off the buses on the region's high injury network[1], a collection of roads where a disproportionate number of fatal and severe injury crashes occur which raises serious safety concerns.

Personal Safety

The lack of adequate security measures and surveillance in certain areas of the transit system can raise personal safety concerns for passengers, particularly during off-peak hours and in less populated areas. Addressing these issues is essential to improve the overall security and trust in LYNX service, ensuring a secure and comfortable transit experience for all passengers, regardless of the time or location of their journey.

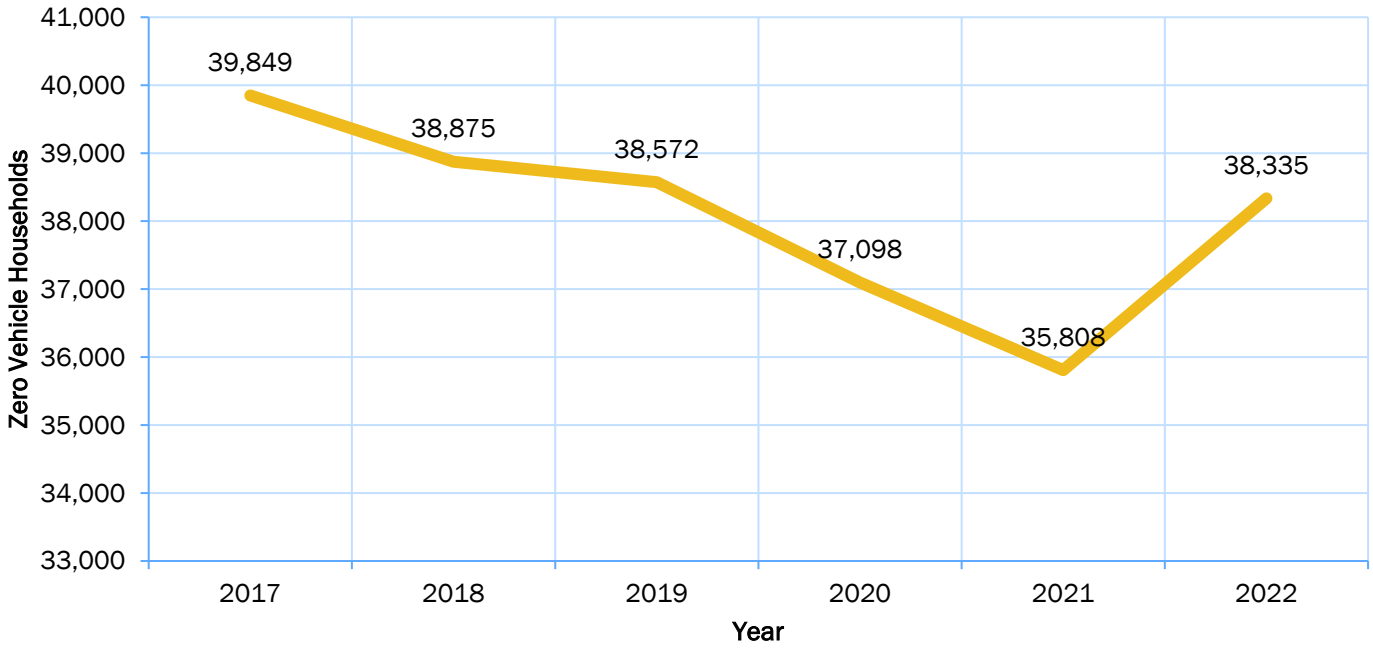
Vehicle Ownership Trends Within the Region

The continued increase in car ownership poses a significant challenge to LYNX as it often leads to a decline in public transit ridership and a corresponding reduction in fare revenue. From 2017 to 2021, the number of households without vehicles decreased at an average rate of about 2.6% per year, however, in 2022, there was an increase of about 7% (Figure 8-5). Despite a notable increase in the number of households without vehicles in 2022, the broader

[1] MetroPlan Orlando Regional Vision Zero Action Plan, 2024.

trend of vehicle ownership remains on an upward trajectory indicating a growing inclination towards vehicle ownership. As more residents opt to use personal vehicles, the dependency on or interest in fixed route transit diminishes, potentially resulting in decreased utilization. Additionally, increased vehicle ownership causes increased traffic congestion, which impacts transit speed and reliability and further incentivizes individuals to choose personal vehicles for their trips. The sprawling nature of development in the region can also be a contributing factor to the increasing vehicle ownership.

Figure 8-5 | Vehicle Ownership



Source: ACS 2022

8.3.2 OPPORTUNITIES

Tourism and Entertainment Sector Jobs

The MetroPlan Orlando region's strength in the tourism and entertainment sector, employing around 14.5% of its workforce, underscores the region's appeal as a vibrant cultural and leisure destination. Given the nature of roles within this sector, reliance of these workers on transit not only emphasizes the importance of a robust transit system but also presents an opportunity to meet needs by making transit more reliable and accessible to this workforce.

Service Enhancement

LYNX has a valuable opportunity to expand its on-demand services and enhance service frequency on its local routes where necessary to better serve growing communities and adapt to evolving transportation needs. By strategically expanding the service coverage and increasing the frequency of routes, LYNX can improve accessibility, accommodate population growth, and meet the increasing demand for reliable and efficient public transportation. Considering that LYNX has only about 50% of jobs in the region within its catchment area, this expansion of service can target job centers as work trips generate daily trips.

Micromobility

Integrating LYNX with micro-mobility options presents a significant opportunity by expanding market reach and tapping into the growing demand for flexible, last-mile transportation solutions. This integration enhances connectivity, making public transit more accessible and appealing, which can increase ridership and promote sustainability through eco-friendly travel options. Moreover, it opens avenues for strategic partnerships with micro-mobility providers.

Multimodal Integration

There are opportunities to better integrate SunRail service and bus service through such means as an integrated fare system for both modes, better service connections, and other aspects. The prospect of a single agency operating both services in the future should improve the likelihood of more seamlessness. LYNX also has an opportunity to enhance its services by further integrating with other transportation modes like Brightline, I-Ride Trolley and micromobility options. Strengthening these integrations can create a seamless and interconnected transit network, providing passengers with more convenient and flexible travel options.

Other opportunities exist with transit-oriented development which will be discussed in Chapter 4, and potential technology advancement in public transit discussed in Chapter 7.

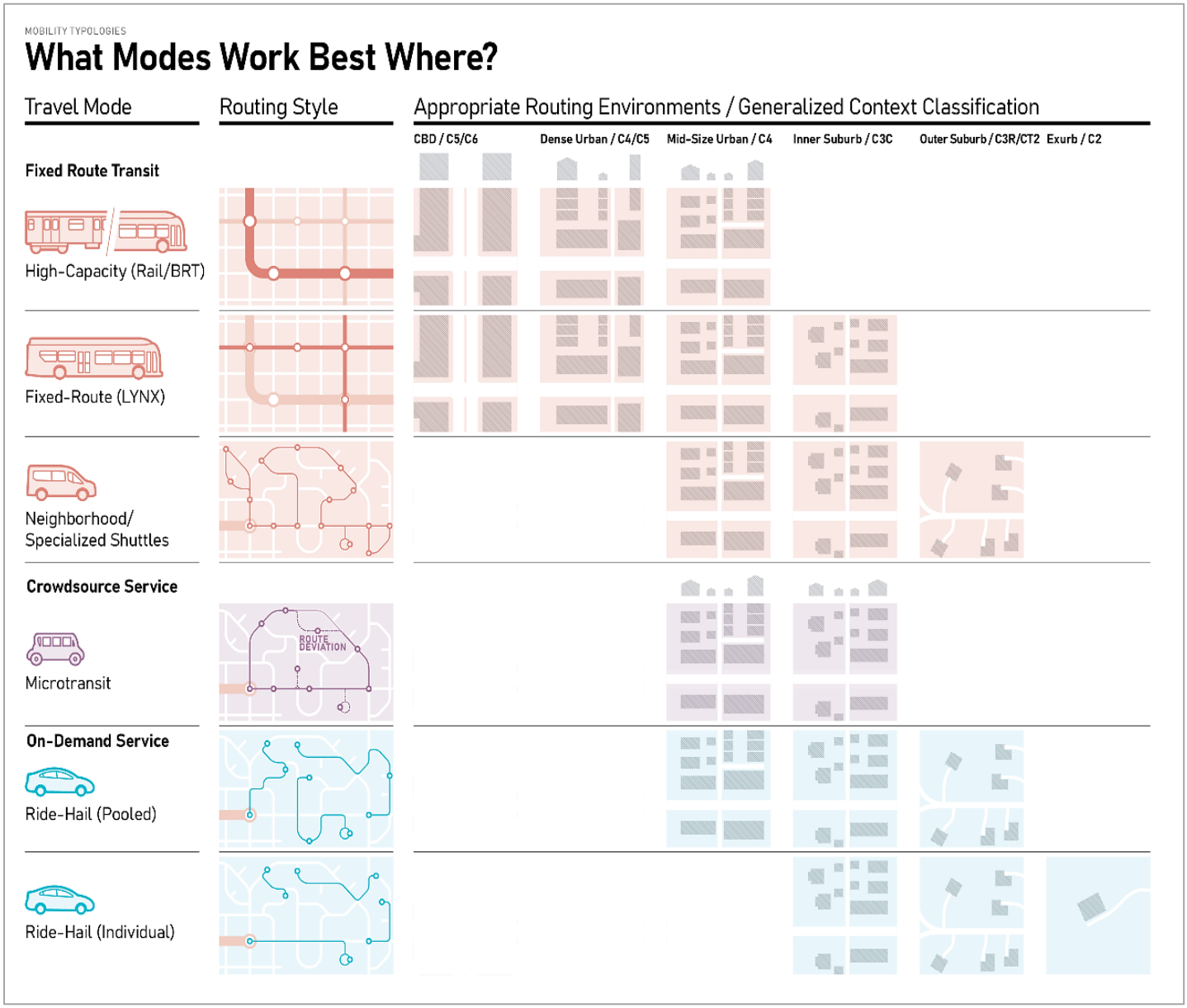
8.4 Transit Oriented Development

SunRail and LYNX have an opportunity to catalyze Transit-Oriented Development (TOD) around its stops and stations, leveraging its existing infrastructure and ridership. LYNX and the City of Orlando are actively studying TOD opportunities along Semoran Boulevard (SR 436) to inform future development. Strategically developing TOD can encourage the following:

- Creation of mixed-use developments
- Affordable housing
- Commercial spaces within walking distance of stations.
- Higher density development and a mixture of housing types
- Pedestrian friendly design
- Transit supportive parking policies and development standards

This approach not only maximizes the utilization of land near stations but also enhances accessibility and encourages sustainable urban growth. Additionally, TOD initiatives can generate revenue streams for SunRail through lease agreements and increased ridership, while simultaneously fostering vibrant communities and reducing car dependency. An example of this is the development that has occurred around the Lake Mary SunRail station. The city has taken advantage of the station to revitalize the downtown and create mixed-use TOD, including the creation of a Downtown Development District and Downtown Master Plan. The recently constructed $32 million Station House Apartments project has provided two hundred multi-family residential units extremely close to the station and serves as a prime example of how SunRail stations can catalyze significant development. Figure 8-6 depicts the type of transit that is supported by different land development patterns. As part of a separate process, MetroPlan Orlando will be preparing additional guidance related to transit supportive design and policies to help local jurisdictions interested in increasing transit service in their communities develop transit-ready neighborhoods.

Figure 8-6 | Transit Supportive Development Patterns



Source: Fehr & Peers

8.5 Bus System Needs

The LYNX Transit Development Plan (TDP) as well as each of the county plans included bus-related capital improvements such as the Bus Rapid Transit (BRT) and enhanced service corridors, transit centers and the acquisition of vehicles and other bus system improvements. Integrating bus needs and investments into long-range planning process ensures an efficient and sustainable transportation system which can cater to the growing transit needs in the future. For a full list of bus system needs, please refer to Appendix H – Transit System Needs List.

8.5.1 BRT & ENHANCED BUS CORRIDORS

A BRT system is a higher capacity bus service, often operating on dedicated and semi-dedicated lanes with signal and communication technologies designed to move the service faster in congested roadway corridors. BRT service is often viewed as an alternative to rail service with comparable speed and capacity at a lower capital cost as compared to rail-based modes. Both the BRT and enhanced bus corridors will have elements such as well-designed ADA accessible stations, and a high-frequency service, however, BRT will have dedicated bus lanes. BRT service assists in alleviating congestion, supports economic development and promotes environmental sustainability. Seven BRT corridors and four enhanced bus corridors (Figure 8-7) were identified in the county plans to be implemented within the next 20 years. Those BRT corridors can be found in Table 8-1 and the enhanced bus corridors can be found in Table 8-2.

BRT Corridors

Table 8-1 | BRT Corridors

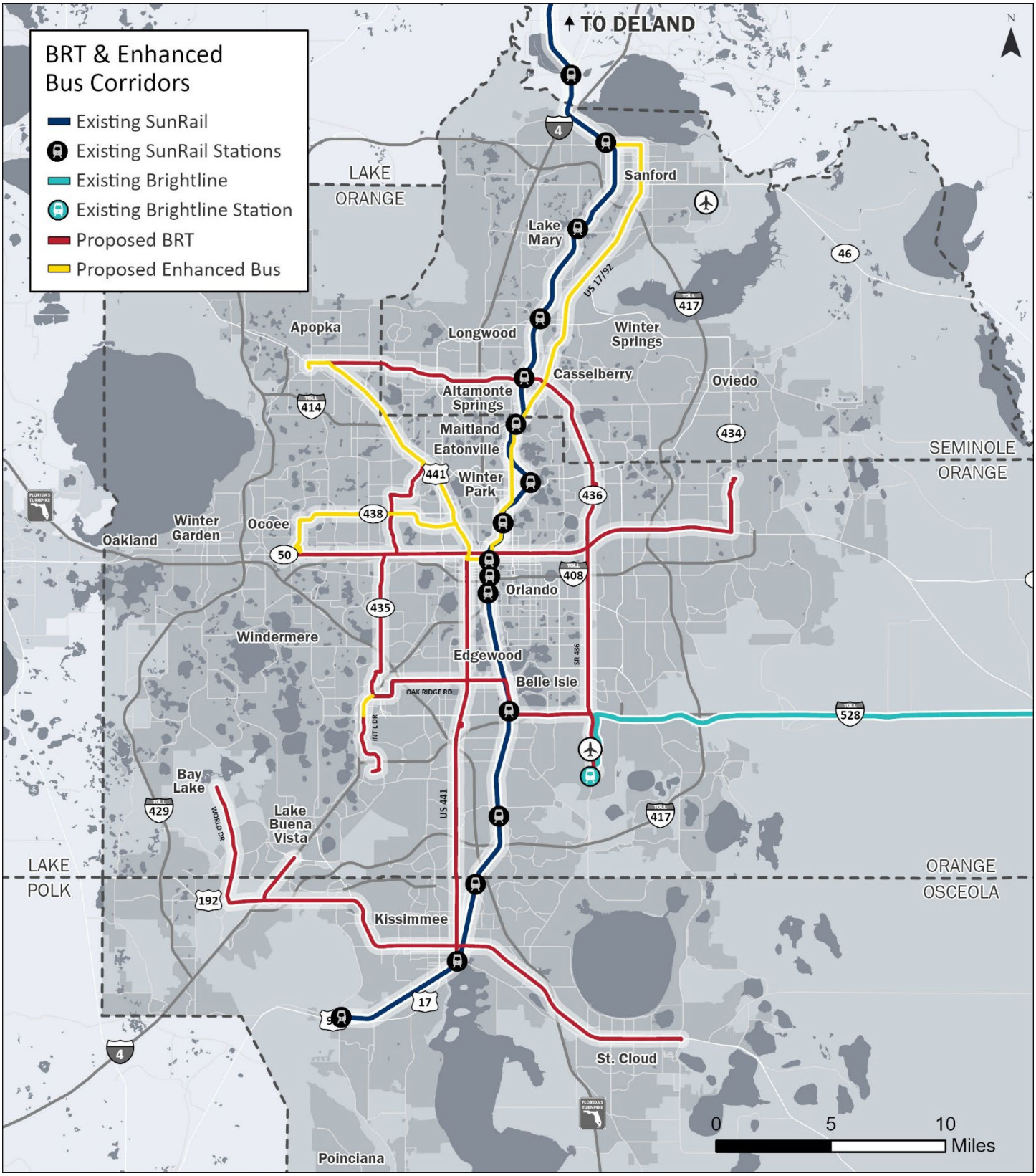
Corridor	Capital Cost
Semoran Boulevard (S.R. 436)	$451,000,000
Colonial Drive (S.R. 50)	$353,000,000
Kirkman Road	$170,000,000
Oak Ridge Drive	$178,000,000
South International Drive	$144,000,000
Orange Blossom Trail (U.S. 441)	$208,000,000
Irlo Bronson Memorial Highway (U.S. 192) with extension to Walt Disney World	$135,000,000
Total	**$1,639,000,000**

Enhanced Bus Corridors

Table 8-2 | Enhanced Bus Corridors

Corridor	Capital Cost
Silver Star Road	$16,300,000
Orlando Dr (U.S. 17/92)	$81,000,000
Orange Blossom Trail (U.S. 441) North	$13,300,000
North International Drive	$5,300,000
Total	**$115,900,000**

Figure 8-7 | BRT and Enhanced Bus Corridors



8.5.2 TRANSIT CENTERS

Transit centers are facilities where customers can transfer between multiple routes; and where buses can lay over for extended periods of time. The LYNX system has existing major transit centers in downtown Orlando (LYNX Central Station) and one in Kissimmee. Other transit center facilities exist in Apopka, at Colonial Plaza, Disney Springs and on the UCF campus. These transit centers have passenger amenities and restrooms for bus operators. The three county plans have identified three (3) park and ride facilities and thirty-three (33) transit centers that will either be new establishments or expansions of improvements of existing ones (see Figure 8-8). Current transit centers and stops will still remain, transit centers shown in Figure 8-8 are only the ones that will either be improved or expanded. The estimated cost associated with each of these new transit centers is detailed in Table 8-3.

New Transit Centers

- Colonial Drive S.R. 50/ Semoran Boulevard S.R. 436
- Orlando Health Central Hospital/Walmart (West Orange)
- University Boulevard/ Semoran Boulevard S.R. 436 (Full Sail)
- Northeast of Semoran Boulevard S.R. 436 (Lee Vista/S.R. 436)
- Curry Ford/ Semoran Boulevard S.R. 436
- Lake Nona
- Valencia College West
- Waterford Lakes Town Center (Waterford Lakes)
- Altamonte Mall
- Orlando Packing District (Princeton/U.S. 441)
- New Independence Parkway and Daniel Webster Western Beltway (SR 429)
- Universal Studios
- West Vine Street US 192 at Hoagland Boulevard (Plaza del Sol)
- West Vine Street US 192 at Westside Boulevard (Four Corners)
- West Vine Street US 192 at Commerce Center Boulevard (St. Cloud Commerce Center)
- West Vine Street US 192 at Narcoossee Road (St. Cloud Narcoossee)
- Osceola Parkway at Simpson Road

New Transit Centers

- Longwood SunRail Station
- Seminole Towne Center
- Oviedo Mall

Improved Transit Centers

- LYNX Central Station

Expanded Transit Centers

- OIA South Terminal
- Disney Springs
- Florida Mall
- Rosemont Superstop
- International Drive South
- Maitland SunRail Station
- Sand Lake Road SunRail Station
- Meadow Woods SunRail Station
- Kissimmee Intermodal Station
- Irlo Bronson Memorial Highway U.S. 17/92 at Seminole Center
- Altamonte Springs SunRail Station

Park and Ride Facilities

- Waterford Lakes Town Center
- New Independence Parkway
- West Colonial Drive and Florida Turnpike

Figure 8-8 | Transit Centers

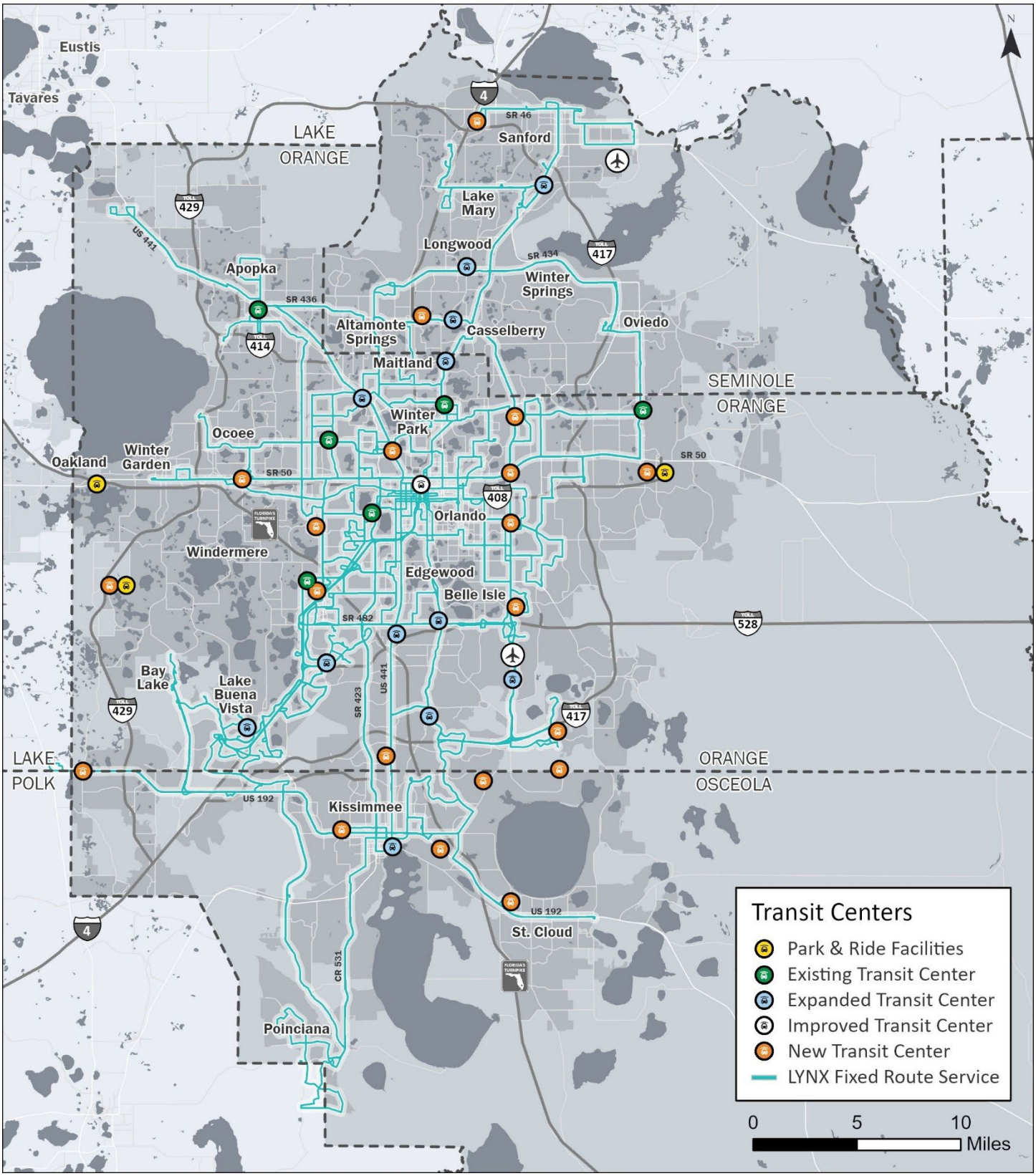


Table 8-3 | Transit Centers

County	Number of Transit Centers	Estimated Capital Cost
Orange	21	$169,787,750
Oceola	7	21,300,000
Seminole	5	$19,600,000
Total	**33**	**$210,687,750**

8.5.3 BUS SERVICE IMPROVEMENTS

Table 8-4 presents systemwide operational statistics by service types in the time frame of 25 years. The high frequency local stop and limited stop routes are the biggest contributor of service hours and service miles followed by primary and secondary local stop routes.

Table 8-4 | Systemwide 25-Year Service Improvement by Service Type

Service Type	# of Routes	Revenue Hours	Annual Operating Cost(in millions)
Current Service	79	1,157,605	$145.2
Planned Service	-	-	-
High Frequency Service	28	1,208,287	$146.8
Regional and Commuter Express	17	387,152	$47.6
Primary & Secondary Local	44	1,009,965	$124.2
Community/Circulator & On-Demand/Flexible Service	37	390,261	$39.6
Total for Planned Service	**126**		**$358.3**

8.6 Rail System Needs

When SunRail began operating in 2014, it was envisioned as the foundation to a greater regional transit network. With the extension to DeLand complete, there have been a series of additional expansion opportunities identified across the system. These initiatives will make SunRail service better, connect more areas, and meet the changing needs of regional travelers. With these expansions, SunRail will play a bigger part in Central Florida's transit system, boosting the economy and making commuting easier and more reliable for everyone.

For a full list of rail system needs, please refer to Appendix H – Transit System Needs List.

8.6.1 SERVICE IMPROVEMENTS

The operating characteristics of the existing SunRail system will be improved upon as acknowledged in the 2022 county transit plans. Within Orange County, future morning, afternoon peak hour, and midday service is identified to operate every 15 and 30 minutes, respectively, from Sand Lake Road to Maitland, while early morning and evening service headways will consistently operate at 60 minutes. In addition, weekend and holiday service is identified to be added within Orange County, operating at 60 minutes headway all day.

Enhanced weekday service frequencies are provided through an identified extension of SunRail service from the Sand Lake Road Station to Orlando International Airport. Half of the trains from Maitland would serve the airport on 30-minute peak weekday service, while the others continue south to Meadow Woods Station and stations within Osceola County, as currently operated. All the proposed SunRail improvements are depicted in Figure 8-9.

8.6.2 EXTENSION/IMPROVEMENT OF SERVICE

Proposed rail-based service extensions and improvements include:

- Sunshine Corridor: The Sunshine Corridor will provide new east – west service connecting the Orlando International Airport (OIA), south International Drive / Orange County Convention Center, and Disney Springs. Ultimately, providing direct transfers to a privately operated intercity passenger rail system connecting Miami and Orlando, with a proposed connection to Tampa in the future.
- Eastern Rail Extension: This is an extension from Orlando International Airport (OIA) to Innovation Way. The stretch is about 13 miles in length and only includes the terminus stations.
- New Edgewood Station.
- Adding a second rail track in locations currently with single track.
- Orange Blossom Express (OBE): A proposed commuter rail service between downtown Orlando and Zellwood along the Florida Central Railroad alignment. This commuter rail service would serve seven stations, located at Zellwood, S.R. 429, Apopka, Lockhart/Rosemont, Princeton Street, Amelia Street, and Robinson Street, as identified in previous studies.
- Polk County Extension: Southern extension of the railway line from Poinciana to Lakeland with stations at Haines City, Lake Alfred, and Lakeland. This extension is outside the three-county MetroPlan Orlando area but is included as it could impact the existing commuter rail service.

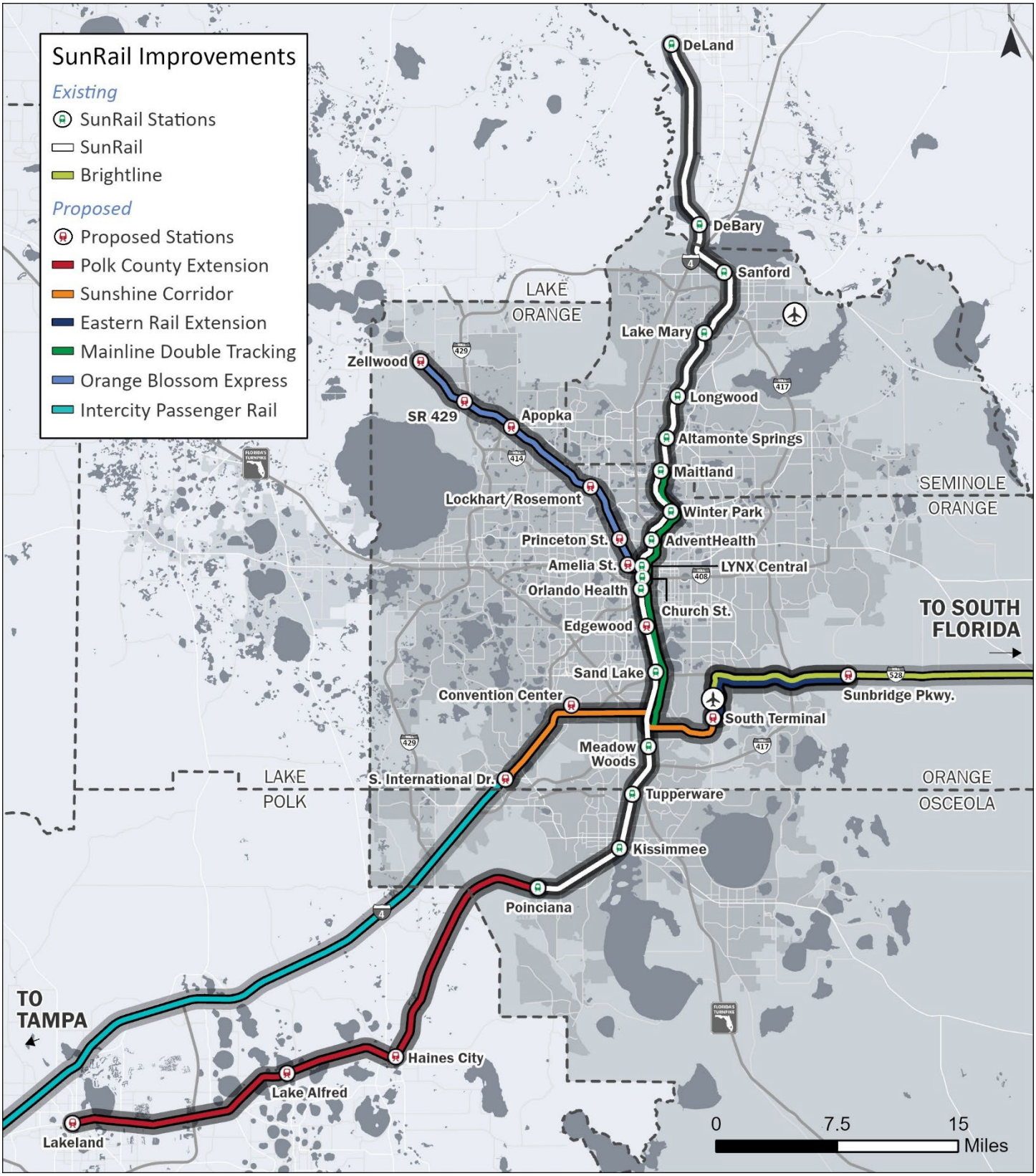
8.6.3 NEW STATION

The demand for increased transit along the South Orange Avenue corridor, presents an opportunity to add a new commuter rail station between the existing Orlando Health/Amtrak and Sand Lake Road SunRail station at the intersection of Holden Avenue with the SunRail corridor: the Edgewood SunRail Station.

As SunRail undergoes these planned extensions, more residents and employees would be able to use the service for accessing jobs and daily travel needs. A summary of the demographics potentially being served is noted below.

- An increase in the metro population being served by 1.98%
- An increase in the number of jobs accessible by 3.82%
- An increase in the low-income population being served by 1.97%
- An increase in the number of zero-vehicle households being served by 2.31%

Figure 8-9 | SunRail Improvements



RAIL NEEDS COST

Table 8-5 outlines the projects and associated capital costs for improvements and expansions to commuter rail service between 2030 to 2050.

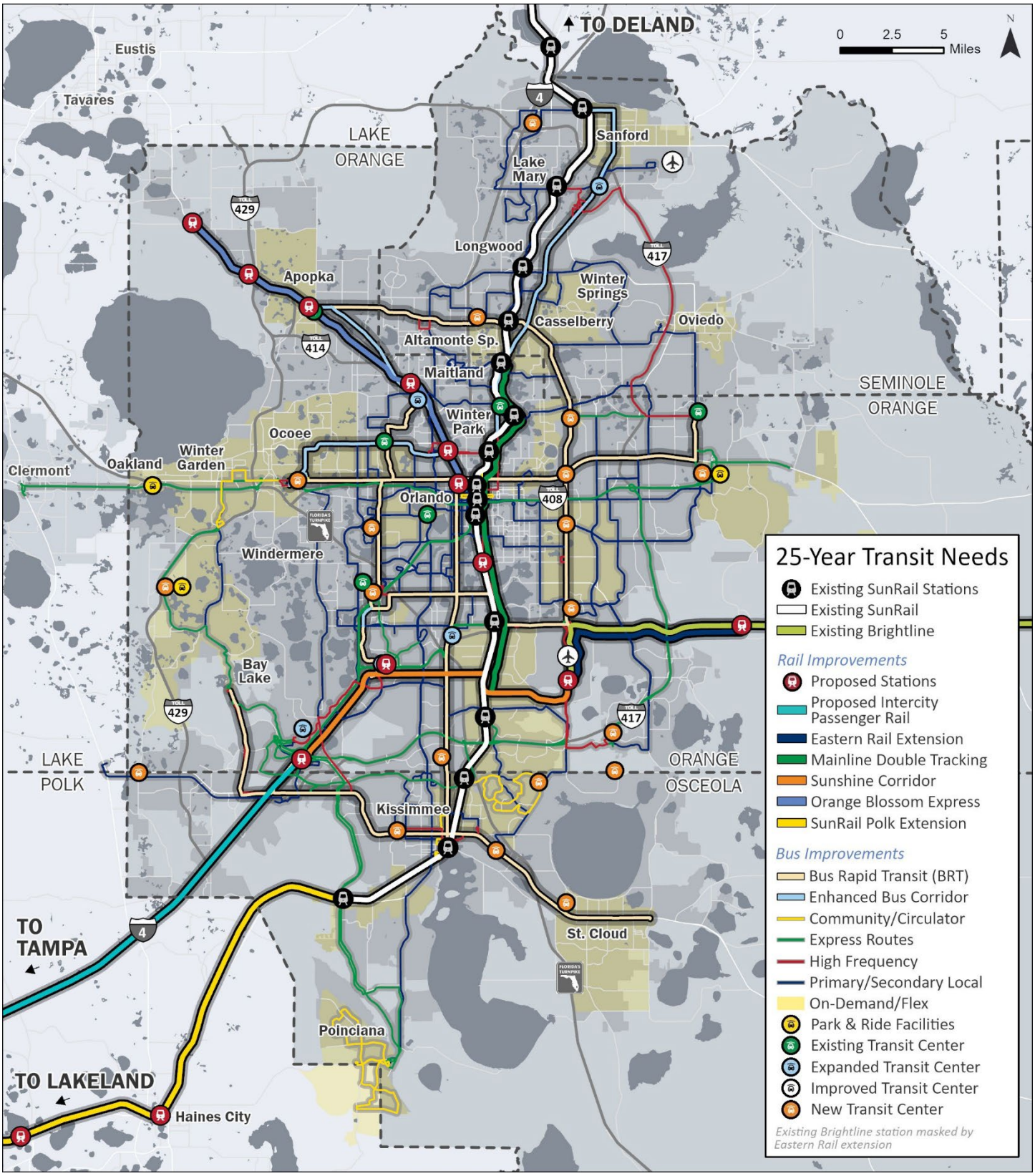
Table 8-5 | SunRail Improvements with Capital Cost

Project	Capital Cost
Existing SunRail Double Tracking	$75,000,000
Sunshine Corridor	$4,830,000,000*
Edgewood Station	$18,000,000
Orange Blossom Express	$1,035,000,000
Eastern Rail Extension	$345,000,000
Total	**$6,303,000,000**

Note: Sunshine Corridor capital cost estimate is for the highest possible alternative. Additional information about the alternatives being studied can be found in the FDOT TCAR Study.

Figure 8-10 presents a map showing the locations of all capital and bus improvement needs and opportunities.

Figure 8-10 | 25-Year Transit Needs and Opportunities



8.7 The Future of Transit

In many communities around the United States, transit ridership on a per capita basis has been declining for decades; with the advent of transportation network companies (TNCs) such as Uber and Lyft, micromobility devices such as electric scooters and electric bikes, and most recently the COVID-19 pandemic; transit ridership declines have accelerated. Land development patterns centered around auto-mobility have made it challenging to provide high quality transit service in many communities, further contributing to ridership declines on a per capita basis. Additional known and unknown trends will continue to affect how transit services are funded and delivered within the region. Although there is uncertainty about the future, understanding the general trends can help policy and decision makers develop flexible plans that consider an uncertain future. The following sections touch on some trends that have the potential to affect future transit ridership.

8.7.1 AUTOMATED, CONNECTED, ELECTRIC AND SHARED (ACES)

As automated vehicle technology improves, autonomous vehicles can provide point-to-point travel more effectively than fixed-route transit, especially for shorter rides. Autonomous ride-hailing services, like the one offered by Waymo One in San Francisco, operates like a traditional TNCs, but without the cost of the driver. For people who own autonomous vehicles, there are also future scenarios where the vehicle can drop the person at their ultimate destination, like a downtown office building, and then return to a home base. This type of activity could increase congestion on roads because there would be zero-occupant vehicles operating on roadways, which might make operating fixed-route transit less reliable and could eliminate the cost of parking in downtown areas as a barrier to driving to work.

To take advantage of this technology, there are opportunities to better integrate autonomous vehicle operations in transit operations. Several communities in Central Florida are engaged in the piloting of small autonomous shuttles, including the SWAN Shuttle (Orlando), Move Nona (Lake Nona), and CraneRIDES (Altamonte Springs), all operated by Beep. The primary purpose of these programs is to demonstrate proof of concept, gain public acceptance related to the technology, and better understand the type of infrastructure that is needed to support larger scale deployment of autonomous transit vehicles, especially as the technology evolves. For example, when CraneRIDES was first envisioned in Altamonte Springs, there was the expectation that travel on the higher speed roadways would need to occur in a dedicated lane, but since the initial planning studies, the technology has advanced such that newer autonomous shuttles will be able to travel at speeds up to 35 miles per hour and travel in mixed-traffic on public roads, expanding the reach of the service. These smaller autonomous shuttles can provide important connections between lower density neighborhoods, and activity centers and major transit hubs. This could provide an important connection to higher capacity transit, like SunRail or Bus Rapid Transit (BRT), and be more cost competitive than an autonomous hailed ride.

Under some future scenarios, autonomous vehicles might result in greater levels of suburban sprawl as the time cost of travel is reduced. If you can work or engage in other activities while a car takes you to work, you might be more likely to live farther away from your place of work. This trend could increase overall vehicle miles of travel within a region, potentially resulting in greater levels of congestion on some corridors. As many corridors within the MetroPlan Orlando region are built to their ultimate right-of-way, it may be challenging to add capacity to accommodate increased vehicle miles traveled under some future scenarios. There are expected to be some future capacity benefits from autonomous vehicles operations that could be offset by increased demand.

Provision of transit-only lanes could help off-set the potential for transit vehicles to be delayed by zero-passenger vehicle travel, which may be challenging under the current legislative landscape. The electrification of the vehicle fleet could also affect how transit services are delivered in the region. Currently, the buses used to run the LYMMO services are electric. As fuel efficiency standards increase and more people purchase electric vehicles, gas taxes are expected to decline, which could affect the overall funding available to transit agencies. Identifying alternative funding mechanisms, such as through sales taxes, will be critical to maintaining and expanding transit service in the region.

8.7.2 TRANSIT'S NEW NORMAL?

Even before the COVID-19 pandemic, transit ridership was falling in many cities and few systems in the United States have returned to pre-pandemic ridership levels. Factors that were previously associated with transit ridership, like work and telework have shifted, and new variables in estimating transit ridership, like transit hesitancy, can make planning for transit even more challenging. Understanding how work from home and other trends might affect future route and service planning is critical.

In many cities, transit hesitancy is emerging from research as a contributing factor in ridership declines, and a failure to attract new riders, especially younger riders. Factors such as perceived asocial behaviors on transit vehicles, safety or security considerations at transit stops (with documented gender differences), and an increased unpredictability of service caused by labor shortages and budget shortfalls, are all documented factors in other regions contributing to a hesitancy of people to make transit part of their daily routine and not seen as the travel option of last resort. Understanding how these factors might be affecting transit use in the MetroPlan Orlando region will be important to address.

8.7.3 CONNECTION TO TRANSPORTATION SAFETY

As stated by the American Public Transportation Association, public transit is 10 times safer per mile than a private vehicle and people reduce their chances of being in an accident by 90% by choosing public transit. This makes traveling by bus one of the safest ways to travel in our region, but accessing the bus stop can be one of the most dangerous. As part of the MetroPlan Orlando Regional Vision Zero Action Plan, transit boardings and alightings were correlated to the regional High Injury Network (HIN) – roads within the region where a disproportionate number of fatal and severe injury crashes occur. Approximately half of the region's boardings and alightings occur on the HIN – reflecting about 2% of our roads. Accessing bus stops on these roads can often be challenging, especially as marked and controlled crossing locations are often located away from transit stop locations, requiring out-of-direction travel for transit riders or mid-block crossings of multilane, high-speed roads. There are not continuous sidewalks to some bus stops, and many are lacking shelters. As the projects, programs and strategies identified in the Regional Vision Zero Action Plan are implemented, there are opportunities to improve access to transit stops within the region, creating a more transit supportive environment.

8.7.4 TECHNOLOGY

In addition to autonomous vehicles, other types of technology have the potential to improve the rider's experience, decrease headways, and improve the safety of transit riders. Some technologies have been around for decades, such as transit vehicle signal priority or preemption, but others are emerging, such as headway-management platforms, collision avoidance software, and pedestrian alert systems, which aid drivers in identifying nearby pedestrians, providing drivers with warnings and alerts. Providing additional real-time transit information through the Paw Pass app and fare integration between LYNX and SunRail can help improve the overall rider experience. Fare integration could also allow for regional fare capping and other payment strategies that can boost overall ridership.

Monitoring and understanding these future trends will be critical in the delivery of cost-effective transit service that maintains and improves ridership levels.

8.8 Transit Investment

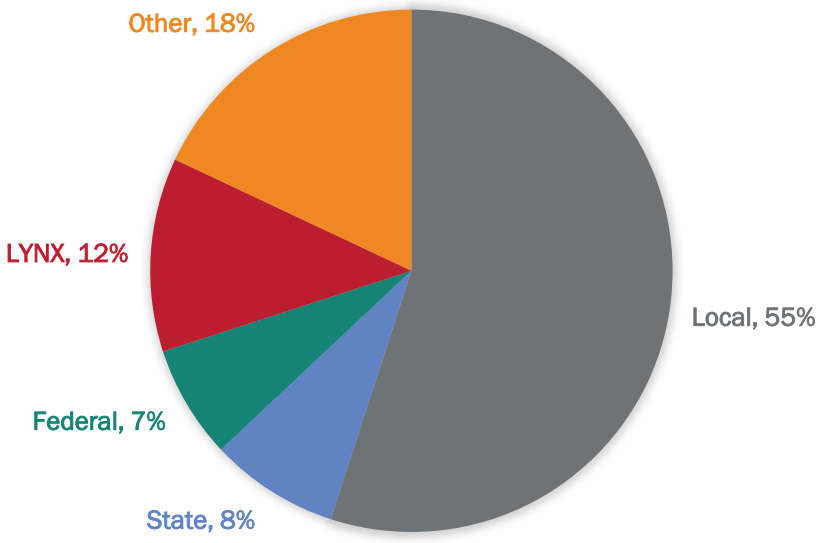
The success and sustainability of any transit vision plan hinges upon robust financial backing. Thus, it is imperative to review existing funding sources and explore potential avenues for future investment. Understanding the current financial landscape provides a solid foundation for devising strategies to support the expansion, enhancement, and maintenance of the transit infrastructure. This section delves into an analysis of the funding mechanisms currently in place, followed by an exploration of innovative and potential dedicated funding sources to propel the transit vision forward.

8.8.1 ANALYSIS OF CURRENT FUNDING SOURCES

8.8.1.1 SOURCES OF OPERATING FUNDS

LYNX's operational budget of $192,403,670 for 2024 draws from multiple funding sources (Figure 8), each playing a pivotal role in sustaining its services. The largest proportion, constituting 55% of the total budget, is derived from local revenue, indicative of a strong local agency commitment to public transit from the three counties. Complementing this substantial local support, LYNX also benefits from state and federal revenue streams, contributing 8% and 7.96%, respectively. These allocations underscore the significance of governmental backing in bolstering LYNX's operational capabilities and ensuring its broader accessibility. Additionally, LYNX secures 12% of its budget from internally generated funding including customer fares, contract services and advertisement; demonstrating a degree of self-sufficiency within its operational framework. Furthermore, other revenues constitute the remaining 18% of the funds. Collectively, these revenue streams delineate a financial foundation for LYNX, enabling the organization to fulfill its mission of facilitating efficient and reliable transit services for the community.

Figure 8-11 | Sources of Operating Funds (LYNX)



Source: LYNX FY-2024

Funds from local sources that make the greatest share of the operating funds come from different funding partners within the region. Table 8-6 details the funding partners and the funding agreements made with LYNX in 2023.

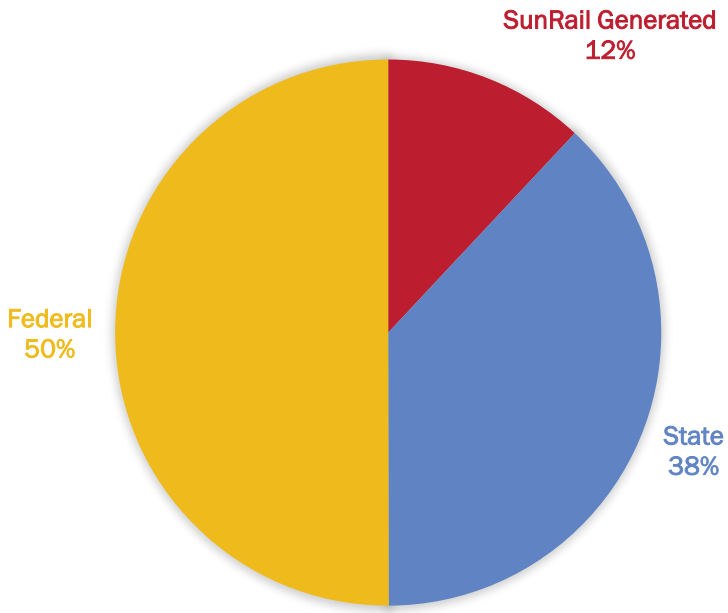
Table 8-6 | LYNX Operating Contributions by Local Jurisdiction

Jurisdiction	Amount	% Share
Orange County	$59,280,043	66.38%
Osceola County	$10,464,246	11.72%
Seminole County	$10,248,484	11.48%
City of Orlando	$4,078,006	4.57%
City of Orlando-LYMMO	$2,861,057	3.20%
FDOT (SunRail Feeder Route)	$1,713,747	1.92%
Reedy Creek	$441,445	0.49%
City of Altamonte Springs	$120,900	0.14%
City of Sanford	$93,000	0.10%
Total	**$89,300,928**	

Source: LYNX FY-2024

The total operating budget for SunRail in 2023 amounts to $67,887,771, with contributions from various sources; federal, state and internally generated. Figure 8 shows the portion contributed by the various sources.

Figure 8-12 | Sources of Operating Funds (SunRail)

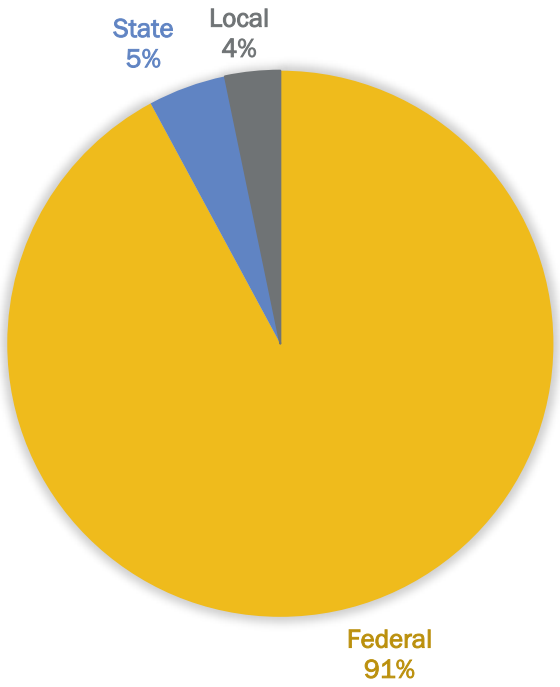


Source: SunRail FY-2023 NTD Reports

8.8.1.2 SOURCES OF CAPITAL FUNDS

The capital budget fund sources for LYNX (Figure 8) indicate a significant reliance on federal revenue, comprising 91% of the total budget of $134,100,650. This suggests a heavy dependence on federal funding for the operation's capital projects and initiatives. State grants contribute a smaller but still notable portion, accounting for 5% of the total budget at $6,839,683. Local revenue represents the smallest proportion at 4%, totaling $5,960,609. The capital funds were spent on the expansion and replacement of vehicles, updates to the LYMMO Orange lanes, site selection and development of the Southern Operations Base, passenger amenities, security, and support equipment.

Figure 8-13 | Sources of Capital Funds (LYNX)



Source: LYNX FY-2024

Capital funds from local distributions come from the three counties. Table 8-7 details the amounts contributed.

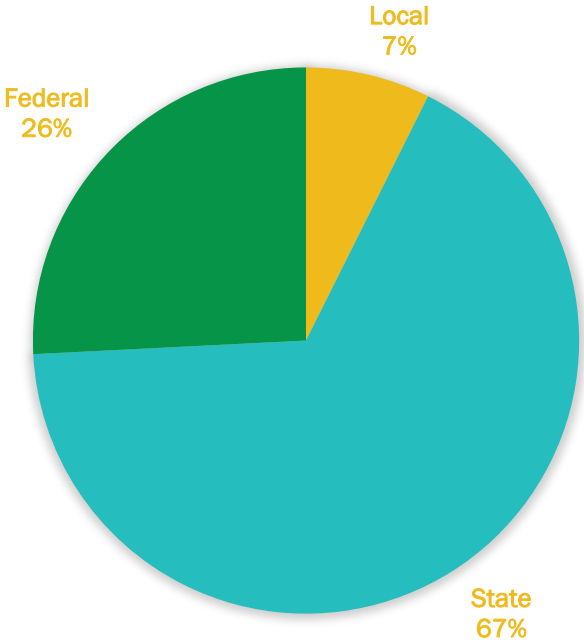
Table 8-7 | LYNX Capital Contributions by Local Jurisdiction

Jurisdiction	Amount	% share
Orange County	$2,833,556	78.11%
Osceola County	$417,228	11.50%
Seminole County	$376,712	10.38%
Total	**$3,627,496**	

Source: LYNX FY-2024

SunRail generated $59,942,563 of capital funding in 2023. The majority (67%) of this came from state sources, followed by federal government and local sources (Figure 8).

Figure 8-14 | Sources of Capital Funds (SunRail)



Source: SunRail FY-2023 NTD Reports

8.8.2 EXISTING FEDERAL FORMULA GRANTS

The growing urban population of the Orlando and Kissimmee Metropolitan Areas coupled with additional revenue miles on behalf of the service expansion plans would ensure additional apportionments from Federal Transit Administration (FTA) to support LYNX's services in future. The estimate of the assistance from FTA is based on the historic apportionment's unit value of service miles via 5307/5340 and 5339 formula grants (Table 8-8 and Table 8-9). The large increase from 2023 to 2024 is due to the FTA using the 2020 Census in 2024 for the first time. Due to the fast growth of the Orlando and Kissimmee urban areas, Central Florida received a larger portion of these funds.

Table 8-8 | Combined 5307/5340 Apportionments

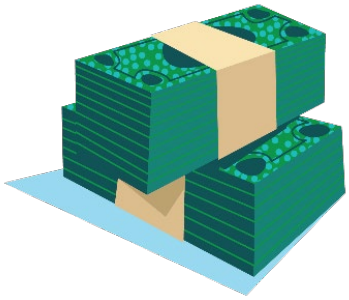
Urban Area	2022	2023	2024
Orlando-Sanford	$42,603,180	$43,466,137	$53,336,707
Kissimmee-St Cloud	$5,983,602	$6,102,184	$8,721,073
Total	**$48,586,782**	**$49,568,321**	**$ 62,057,780**

Table 8-9 | 5339 Bus and Bus Facility Apportionments

Urban Area	2022	2023	2024
Orlando-Sanford	$2,464,167	$2,542,413	$2,959,170
Kissimmee-St Cloud	$497,470	$511,839	$648,042
Total	**$2,961,637**	**$3,054,252**	**$3,607,212**

A portion of 5307 and 5339 formula grants are derived from service provided, based on revenue service miles. The total revenue miles per service expansion plan for the next 20 years is 40,253,973. The existing service revenue miles are 17,078,335 (LYNX NTD 2023); this results in a 23,175,638 net increase in the revenue miles. Based on the formula used in 2024, this increase in miles would result in additional assistance of $17,822,066 annually from FTA via formula grants.

8.8.3 POSSIBLE FUTURE FUNDING STRATEGIES



To realize the objectives outlined in the Transit Vision Master Plan, it is crucial to explore potential future funding sources. Additional Federal and state sources can be found in the TVMP. These sources are in most cases additional methods of providing capital funds. However, in all cases some local match participation is required, and for large projects, the local funding would likely need to be a minimum of 25% of project costs. These sources are also limited on a nationwide or statewide basis and the process of receiving them is often competitive.

The largest share of the funding needed for public transportation is operating and maintenance costs. For large urban areas such as Central Florida, the operating and maintenance costs of transit are mostly supplied by local funds. The current local contributions provided by the three counties are sufficient to meet the service levels provided today. The large number of service plan improvements will require additional local funding of some variety. Additionally, each capital element included in the plan itself requires a significant amount of operating and capital funding, and grantors at the federal and state level will require evidence that the local community can fund these new operational costs.

8.9 Conclusion

This transit element marks a pivotal milestone in shaping the future of public transit in Central Florida. By addressing current challenges, identifying strategic opportunities, and outlining a comprehensive blueprint for transit development, it aligns with broader goals of the Metropolitan Transportation Plan to provide a safe, reliable, accessible, healthy and thriving community and strengthen the region’s economy. As technologies evolve and demographics shift, this forward-looking approach will guide future investments and policies, ensuring Central Florida remains a model for innovative and efficient public transportation.

Despite the lack of a dedicated funding source in the three counties served by LYNX, strategic navigation of federal and state funding opportunities and cultivating partnerships with local stakeholders will be crucial. Through continued collaboration, innovation, and planning, we are poised to exceed the expectations of residents, commuters, and visitors. Together, we will build a transportation network that enhances connectivity, supports vibrant communities, and preserves our region's natural beauty for future generations.

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