LYNX®
Transit Master Plan

# 2030 Paw Print: The LYNX Transit Master Plan

## Technical Memorandum #1: Baseline Conditions

### Final Report

December 2010

metroplan orlando
A REGIONAL TRANSPORTATION PARTNERSHIP

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# LYNX
# Long Range
# Strategic Master Plan

## Technical Memorandum #1:
## Baseline Conditions

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**December 2010**

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# 1. Introduction

The *2030 Paw Print* is a long range strategic master plan (LRSMP) initiated to refine the network of 14 high-capacity transit corridors identified in LYNX's 2006 Comprehensive Operations Analysis (COA) and recent Transit Development Plan (TDP). At the request of METROPLAN Orlando, four corridors were added to the study and two corridors were extended based on its Streetcar/Bus Rapid Transit (BRT) project and the associated collector/distributor or circulation systems. The resulting 18 corridors cover three counties: Orange, Seminole, and Osceola.

The study will evaluate each corridor for transit modal improvements through 2030. Modal improvements could include local bus, express bus, BRT, streetcar, light rail, and commuter rail. High speed rail is only considered in the sense that these modes will connect with proposed high speed rail stations. In addition, the *2030 Paw Print* will establish a plan that prioritizes these modal improvements between now and 2030.

**STUDY OBJECTIVES**

A key goal of the plan is to significantly increase the level of transit usage in the region by creating a seamless, linked transit network using a variety of mobility services including local bus, express bus, BRT, streetcar, light rail, commuter rail, and high speed rail. Other important study objectives are as follows.

- **Serve as a bridge** between the Five-Year Service Plan and the METROPLAN Orlando 2030 LRTP.

- Provide a **blueprint for the growth and expansion** of LYNX public transportation services through 2030.

- **Clearly define and establish a hierarchy of transit services** that refines and builds upon the high-capacity transit corridors and the initial work completed as part of the five-year service plan.

- **Help drive economic development and redevelopment** throughout the region.

- **Reflect priorities for flexible and incremental implementation of transit improvements** on high-capacity transit corridors, as well as the supporting transit services that feed into these corridors and SunRail.

- **Understand regional travel patterns and have a strong transit-supportive land use component**, tying strongly to recent land use planning efforts, including My Region.org.

- **Integrate transit ITS applications to better manage operations and costs and provide real-time customer information;** continue adding to the state-the-art reputation for which LYNX continues to strive.

- Allocate a significant portion of resources to **community education, public involvement, and consensus-building with existing and future funding partners** of LYNX.

- **Create collaborative working relationships with partners** that lead to successful problem solving and, ultimately, project and program implementation.

- Compile a **clear list of transit service and capital projects** that will be based on need and geographic distribution of improvements to **funding partners**.

- Demonstrate to stakeholders and the community the **role that LYNX could play at various funding levels.**

## STUDY APPROACH

There are two significant study efforts that serve as the basis for the development of the *2030 Paw Print*. The first is the METROPLAN Orlando 2030 LRTP, which was completed in September 2009. This plan will be used as a basis for the regional vision of the transportation network in Central Florida. The work will build off of the analysis and land use data adopted in the 2030 LRTP to develop more detailed transit strategies than those in the LRTP. The adopted 2030 LRTP provided for member jurisdictions to more toward a more transit-oriented development pattern. The *2030 Paw Print* will examine how the implementation of a more transit-oriented development pattern could affect transit service implementation as compared to current development patterns.

The second effort is the Five-Year LNYX Service Plan. In 2008-2009, LYNX restructured much of its fixed-route bus service primarily in response to funding reductions. Service was also re-aligned based on current passenger travel patterns focusing more on the 14 main transit emphasis corridors, many of which were verified in the prior Comprehensive Operations Analysis completed in 2006, where LYNX envisions the potential implementation of premium transit service. This effort prepared a service plan built upon the recent changes and anticipated funding and costs for the next five years. The results of this plan are used as a starting point for the *2030 Paw Print*.

## PROJECT OVERVIEW

The following fact sheet was prepared to be used as a handout during public involvement events. It provides an overview of the project.

# 2030 Paw Print:
# The LYNX Transit Master Plan
# PROJECT OVERVIEW

## Who is leading the 2030 Paw Print study?

LYNX and MetroPlan Orlando are conducting this study. LYNX is the public transportation provider in Orange, Seminole, and Osceola Counties. MetroPlan Orlando is tasked with developing transportation plans and policy for the Orlando urban area.

## What is the 2030 Paw Print?

The 2030 Paw Print is a strategic transit master plan that will build upon MetroPlan Orlando's 2030 Long Range Transportation Plan. It will establish a plan for how the LYNX transit system will grow between today and 2030. Looking at 22 corridors in the 3-county region, the study aims to identify the appropriate forms of public transportation (see list below) for each corridor. Each corridor will be evaluated with regard to transit demand, mix of land uses, and other factors to determine which forms of public transportation make sense.

- Local bus
- Express bus (limited stops)
- Bus rapid transit (premium bus)
- Streetcar
- Light rail
- Commuter rail

## What are the project's objectives?

The project's objectives are listed below.

- To provide a blueprint for the growth and expansion of LYNX public transportation services through 2030.
- To help drive economic development and redevelopment throughout the region.
- To demonstrate to stakeholders and the community the role that LYNX could play at various funding levels.

## Why produce the 2030 Paw Print?

As congestion continues to worsen and mobility issues become more and more prevalent, LYNX aims to be bigger part of the solution. Public transportation improvements can offer:

- Mobility choices and options to all citizens and visitors;
- A transportation solution for those who do not have other options;
- Connectivity to and from commuter rail (SunRail) and high speed rail systems that are currently under development in the region; and
- Critical strategies for helping to improve air quality.

LYNX Transfer Facility

## How can you participate in the 2030 Paw Print study?

Please join us for one of our public meetings. Visit www.golynx.com or contact Laura Minns (LMinns@golynx.com) for more information.

# 2. Review of Plans & Studies

This section reviews transit policies at local and state levels of government. Various transportation planning and programming documents are summarized, with an emphasis on issues that may have implications for LYNX service.

## LOCAL AND REGIONAL PLANS

There are a number of organizations within Central Florida that are putting forth efforts to address regional transportation issues and intermodalism. In addition to the Florida Department of Transportation (FDOT) and the many agencies and organizations at the county level, there are other organizations working toward creating a transportation system that is more regional in scope, such as the East Central Florida Regional Planning Council and METROPLAN Orlando.

The following local and regional plans were reviewed in order to understand current transit policies and plans with potential implications for LYNX service.

- LYNX 2008 TDP Major Update
- LYNX TDP 2011 Minor Update
- METROPLAN Orlando 2030 LRTP
- LYNX Five-Year Service Plan
- LYNX 2006 COA
- SunRail Plan
- Downtown Orlando Transportation Plan
- City of Orlando Multimodal Transportation Impact Fee Update
- Osceola County Long Range Transit Plan
- Strategic Regional Policy Plan
- Downtown Circulator (LYMMO) Expansion Alternative Analysis
- High Speed Rail Plan

Local policies emphasize mobility, efficiency, cost effectiveness, and reduced congestion as essential components for the transportation network in the Orlando area. High Speed Rail, SunRail, and premium transit services developed as part of the *2030 Paw Print* will provide the region with a variety of transportation options.

## STATE AND FEDERAL PLANS/PROGRAMS

The following plans represent state and Federal initiatives affecting transit in the LYNX tri-county area.

- 2025 Florida Transportation Plan
- 2060 Florida Transportation Plan Update
- DOT Livability Initiative and Federal Sustainable Communities

Federal policies emphasize lessening the environmental impacts of the transportation sector and encouraging integration of efficient vehicle types into the transportation sector. State of Florida policies emphasize funding to ensure improved quality of life and responsible environmental stewardship. State policies also encourage expanding transportation options, enhancing local mobility, reducing vehicle miles traveled, increasing multimodal travel, and enhancing sustainability through reduced transportation costs and additional funding partnerships.

## SUMMARY OF FINDINGS

Central Florida's transportation system is influenced by many agencies and governmental jurisdictions. When reviewing and comparing many of these plans and programs of these agencies and jurisdictions, a shared vision is revealed. The vision is for increased mobility to ensure the quality of life expected and desired by Central Florida businesses and residents. The strategy to maintain as well as improve mobility can be achieved by creating an efficient, effective, and balanced intermodal and multimodal transportation system. The shared vision can be initiated and achieved only by coordinating the multitude of plans, programs, and policies.

LYNX must effectively operate in the local planning, financial, and policy environment in order to maintain and expand the regional transit system. In addition, LYNX must have input into future land use programs and development regulations of the member jurisdictions in order for land use and transit planning to be effective. While the METROPLAN Orlando 2030 LRTP provided for transit-oriented land use policies to be implemented in each of its member jurisdictions, it will be critical for those member jurisdictions to embrace those recommendations in order for LYNX to implement more premium transit service.

The following are some critical themes that are important for the integration of transit into the urban fabric in Central Florida, as well as issues regarding funding basic and enhanced regional transit services.

- **Transit-Friendly Land Development Patterns:** The existing highway-based system has become overburdened. Building and improving roads can no longer be the only alternative for Central Florida's mobility. Land uses and development patterns must evolve to better support the use of public transportation and the introduction of premium transit services.

- **Sufficient Financing to Operate and Maintain the Necessary Transit System:** A dedicated funding source is necessary to achieve and maintain the enhanced and premium transit services of the LYNX vision.

- **Integration of Transportation Plans and Special Studies to Achieve the Shared Vision:** LYNX needs to coordinate its efforts with other transportation and land use planning organizations. Other land use and transportation entities need to incorporate LYNX information into their studies.

- **Special Area Studies including Activity Center Plans:** LYNX should review the studies and plans in order to recommend, where appropriate, the incorporation of needed transit facilities into these new communities and neighborhoods. In addition, LYNX should coordinate with the member jurisdictions on the financing of identified transit improvements.

- **Major Development Approvals:** LYNX must work with policy-makers and staff to continue incorporating transit as a critical part of the development approval process, both large and small.

Table 2-1 provides a summary of key concepts, data, and resources available to support the *2030 Paw Print*. Appendix A of this document provides a more detailed summary of reviewed plans and programs, along with potential implications with regard to the development of the *2030 Paw Print*.

## Table 2-1
## Document Review Findings

| Document / Program Reviewed | Study / Program Details | | Guiding Principles | Recommendations |
|---|---|---|---|---|
| | Lead Department / Agency | Date of Most Recent Update | | |
| **LYNX TDP 2008 Major Update** | LYNX | 2007 | • Maximize mobility within the Orlando metropolitan area by ensuring that public transit is provided in the right places, at the right times, to satisfy the changing travel needs within the community<br>• Ensure that all transit services operated by LYNX are as safe, efficient, and cost effective as possible and, therefore, affordable to both LYNX customers and local taxpayers | • Keep fares low<br>• Continually improve service quality in order to retain and increase ridership<br>• Improve efficiency and productivity in any and all aspects of the operation in order to enhance cost recovery and minimize subsidy |
| **LYNX TDP 2011 Minor Update** | LYNX | 2010 | • Funding<br>• Human Resources<br>• Service Provision<br>• Internal and External Communication<br>• Organizational Efficiency Improvement | • Protect existing funding sources, pursue a variety of funding opportunities, secure a new dedicated funding source<br>• Develop and implement employee training program (professional development), conduct employee survey, develop program for employee retention and succession planning, review benefits and salaries for recruitment and retention of employees |

## Table 2-1
## Document Review Findings (Continued)

| Document / Program Reviewed | Study / Program Details | | Guiding Principles | Recommendations |
|---|---|---|---|---|
| | Lead Department / Agency | Date of Most Recent Update | | |
| **LYNX TDP 2011 Minor Update** | LYNX | 2010 | • N/A | • Improve on-time performance, implement technology, install shelters, explore developer provision of amenities<br>• Produce maps/visuals, expand public education program to grassroots level, institute internal education program for employees<br>• Evaluate processes for improvement |
| **METROPLAN ORLANDO 2030 LRTP** | METROPLAN ORLANDO | 2010 | • Create an integrated regional system, a balanced multimodal system, an efficient and cost-effective system<br>• Enhance system safety, quality of life, environmental sensitivity, and economic growth | • Increased mobility, decreased congestion, reduction of vehicle miles of travel and vehicle hours of travel, reduction in ozone-generating compounds, and reduction of greenhouse gases are emphasized in local plans<br>• Additional emphasis on transit systems is a focal point for the 2030 Plan |
| **LYNX Five-Year Service Plan** | LYNX | 2010 | • A planning-level strategic analysis to assess the development of premium transit services | • Headways along the 14 Primary Corridors at a maximum of 15 minutes<br>• Access to proposed SunRail commuter stations<br>• Service to new regional developments (e.g., Lake Nona) |

## Table 2-1
## Document Review Findings (Continued)

| Document / Program Reviewed | Study / Program Details | | Guiding Principles | Recommendations |
|---|---|---|---|---|
| | Lead Department / Agency | Date of Most Recent Update | | |
| **LYNX Five-Year Service Plan** | LYNX | 2010 | • The four elements of the 5-Year Service Plan are the Service Classifications, the Primary Corridors, the Financial Model, and the Recommended Plan Targets | • Identification of candidate BRT corridors<br>• Identification of feeder services/corridors |
| **LYNX 2006 COA** | LYNX | 2006 | • Provides necessary data for future expansion, solidifies the foundation of bus service delivery, and provides for service enhancements<br>• Provides opportunities for staff to improve routes, gauge passenger satisfaction, and gather passenger origin and destination characteristics | • New transit centers and park & ride lots<br>• Full implementation of the Central Florida Commuter Rail project's preferred alternative<br>• Selected route deviations and modified frequencies<br>• Implement call-and-ride zones<br>• LYMMO service expansion<br>• Additional service implementation run by outside operators<br>• Increase number of buses in fleet and annual bus hours |
| **SunRail Plan** | Central Florida Commuter Rail Commission | *In progress* | • SunRail will utilize the existing CSX freight rail line running 61 miles from DeLand in Volusia County through Poinciana in Osceola County | • Connect urban centers<br>• Create redevelopment opportunities<br>• Relieve automobile trips from I-4 |

## Table 2-1
## Document Review Findings (Continued)

| Document / Program Reviewed | Study / Program Details | | Guiding Principles | Recommendations |
|---|---|---|---|---|
| | Lead Department / Agency | Date of Most Recent Update | | |
| **Downtown Orlando Transportation Plan** | City of Orlando | 2006 | • The Downtown Orlando Transportation Plan (Downtown Plan) addresses transportation across all modes<br>• The plan recognizes that regardless of individual travel preferences, all trips begin and end as a pedestrian | • Use downtown transit circulators as a feeder/distributor system for commuter rail and regional transit to increase regional transit accessibility to residential, office, retail, and entertainment venues<br>• Utilize transit circulator system to reduce traffic and parking demands, and connect destinations and attractions for residents and visitors<br>• Support expanded and intensified mixture of transit supportive land uses and as a catalyst for quality redevelopment, and support mobility goals<br>• Amend and revise land development requirements for transit oriented development within ¼-mile of designated transit corridors<br>• Emphasize mobility and vitality of streets providing clear connections to regional transit systems<br>• Integrate recommendations for primary pedestrian streets along transit corridors<br>• Use roadway improvements and signal priority to make transit travel times competitive with other modes |

## Table 2-1
## Document Review Findings (Continued)

| Document / Program Reviewed | Study / Program Details | | Guiding Principles | Recommendations |
|---|---|---|---|---|
| | Lead Department / Agency | Date of Most Recent Update | | |
| **City of Orlando Multimodal Transportation Impact Fee Update** | City of Orlando | *In progress* | • A multimodal transportation impact fee using the current value of the total transportation assets that includes roads, transit, bicycle, and pedestrian facilities will be developed as part of the impact fee assessment process | • N/A |
| **Osceola County Long Range Transit Plan** | Osceola County | *In progress* | • This document has not been released to date; the draft is still under review by Osceola County staff | • N/A |
| **Strategic Regional Policy Plan (East Central Florida 2060 Plan)** | East Central Florida Regional Planning Council | 2010 | • Traffic congestion and delay are significant problems in the East Central Florida Region so the region should evaluate major transportation improvements by measuring the overall goals of a complementary land use and transportation system, including its impacts on quality of life for residents and potential for economic development | • Encourage multimodal transportation systems and construct bus pullout bays for buses at select locations<br>• Evaluate feasibility of mass transit projects as an alternative to road projects<br>• Consider ridership needs, market transit, assess increasing subsidies<br>• Provide park & ride facilities and encourage employer participation<br>• Coordinate transit into design and development of projects |

**Table 2-1**
**Document Review Findings (Continued)**

| Document / Program Reviewed | Study / Program Details | | Guiding Principles | Recommendations |
|---|---|---|---|---|
| | Lead Department / Agency | Date of Most Recent Update | | |
| **Strategic Regional Policy Plan (East Central Florida 2060 Plan)** | East Central Florida Regional Planning Council | 2010 | • To balance a regional transportation system, there must be consideration for land use reform, infrastructure reinvestment, and transit | • Strategic Regional Policy Plan as adopted July 1998<br>• Fair share transit contributions under SB360 |
| **Downtown Circulator (LYMMO) Expansion Alternatives Analysis** | LYNX, City of Orlando | *In progress* | • Purpose of study is to provide a fresh look at potential LYMMO expansion, following Federal Transit Administration (FTA) Alternatives Analysis procedures:<br>  • Mode and alignment alternative<br>  • Ridership demand<br>  • Costs and impacts<br>  • Potential funding strategies | • Improve mobility and transit accessibility throughout Central Orlando<br>• Assure equitable transportation options for the community<br>• Enhance the quality of the environment<br>• Enhance the social integrity of the urban community<br>• Promote economic development and new development/redevelopment opportunities<br>• Develop transportation options that are financially viable |
| **High Speed Rail** | FDOT | *In progress* | • The Tampa-Orlando line will run 84 miles from downtown Tampa to Orlando International Airport and is estimated to cost $2.6 billion to build; construction is projected to start in 2012 and system operation is scheduled for 2015 | • N/A |

## Table 2-1
## Document Review Findings (Continued)

| Document / Program Reviewed | Study / Program Details | | Guiding Principles | Recommendations |
|---|---|---|---|---|
| | Lead Department / Agency | Date of Most Recent Update | | |
| **2025 Florida Transportation Plan (FTP)** | FDOT | 2005 | • The 2025 FTP is Florida's statewide 20-year transportation plan, which provides a policy framework for allocating funding that will be spent to meet the transportation needs of the state | • Enrich quality of life and responsible environmental stewardship<br>• A stronger economy through enhanced mobility for people and freight<br>• Sustainable transportation investments in Florida's future |
| **2060 Florida Transportation Plan Update** | FDOT | *In progress* | • The 2060 FTP identifies the goals, objectives, and strategies to address the long-term needs of the state transportation system and to guide the expenditure of Federal, state, and local transportation funds | • N/A |
| **DOT Livability Initiative and Federal Sustainable Communities** | DOT | *In progress* | • FTA's grant programs provide flexibility for communities to make investments in transit as part of multimodal transportation networks, with connections to improved facilities for walking and bicycling, and encouragement of transit oriented developments | • Transit Oriented Development<br>• Joint Development<br>• Transit Enhancements<br>• Bike and Pedestrian<br>• Intercity Bus<br>• Art in Transit |

# 3. Baseline Conditions Assessment

This section provides a detailed review of the baseline conditions of the 18 corridors that will be assessed for implementation of premium transit by 2030. First, an overview of the types of transit services currently operated by LYNX within as well as outside of the selected corridors is presented. This is followed by descriptions of the corridors selected for the *2030 Paw Print* process.

## OVERVIEW OF TRANSIT SERVICE

The Central Florida Regional Transportation Authority (CFRTA), which began doing business as "LYNX" in 1993, is an agency of the State of Florida, created by the Florida Legislature to own, operate, maintain, and manage a public transportation system in the area of Orange, Osceola, and Seminole Counties. LYNX serves approximately 2,500 square miles with a resident population of 1.8 million people with an array of transit services, including fixed-route and flex-route bus services, downtown circulators, door-to-door paratransit services, carpool/vanpool services, schoolpool matching services, and community shuttle service to special events. In 2009, LYNX restructured a majority of its fixed bus routes to address funding reductions as well as to modify service based on current passenger travel patterns. A detailed overview of existing LYNX bus services is presented below.

### *LYNX Fast Facts*

- ***Service Area:*** *Orange, Osceola and Seminole Counties*
- ***Service Area Population:*** *1.81 million*
- ***Service Area Size:*** *2,538 square miles*
- ***Avg. Weekday Ridership****: 78,819*
- ***Annual Ridership:*** *24.6 million*
- ***% Riders Taking Bus to Work:*** *73 %*
- ***% Captive Riders****: 40 %*

*Sources: 2009 National Transit Database & LYNX*

### Fixed-Route Local Bus

The LYNX local fixed-route system currently operates a fleet of 290 buses on 65 routes, called Links. The service is provided every day of the year and the service frequencies typically range from 30 to 60 minutes.

### Express Service

Currently, two express routes are provided by LYNX on weekdays for commuters from Volusia and Lake Counties. One route connects Orange City in Volusia County to downtown Orlando. The service targets 20,000 commuters who travel daily from Volusia County to Orlando, primarily along the I-4 corridor. The service is a result of collaboration between Volusia County's Public Transit System, FDOT, and LYNX. In addition, Lake County and FDOT have partnered with LYNX to offer express service from a park & ride location on US 27 just south of Highway 50 into downtown Orlando along the Highway 50 corridor.

### LYMMO Service

Established in 1997, LYMMO is considered as the first fully-functional BRT system in the United States. The service is provided free of charge on all days of the week and provides access to public transportation in the downtown business, entertainment, and shopping district. With dedicated lanes and a traffic signal priority system on its three-mile route, the service is provided every five minutes during peak hours and every 10 minutes in the off-peak periods.

### PickUpLine

In April 2010, LYNX added its newest service, PickUpLine, to offer neighborhood transportation choices for people living in less-populated areas. The flex-route type service is designed to provide residents in less populated areas increased access to the LYNX fixed-route system. The flex service is operated from 5:30 A.M. to 8:00 P.M. and is available Monday through Saturday except in Bithlo and Buena Ventura Lakes where service is available Monday through Friday only. Riders in these flex-service areas are required to call LYNX in advance to schedule a pickup and the riders are picked up and dropped off in front of their residences, as needed.

## OVERVIEW OF PREMIUM TRANSIT CORRIDORS

This section provides a detailed overview of the existing conditions in the 18 transit corridors that are assessed as part of this study. The 18 corridors are presented below with a brief description and shown in Map 3-1.

1. **Winter Park SunRail Connector –** This corridor runs from the proposed SunRail station in Winter Park to US 17/92 at Lee Road via Morse Boulevard, Denning Avenue, and Webster Avenue.

2. **US 192: Disney to Kissimmee –** This corridor runs from the proposed SunRail station in downtown Kissimmee to the Disney Transportation Center at Walt Disney World via US 192 and World Drive.

3. **US 192: Lake County to St. Cloud –** This corridor runs along US 192 from US 27 through Kissimmee to St. Cloud.

4. **Silver Star Road to Parramore –** This corridor travels east and west along Silver Star Road from N. Hiawassee Road to Gore Street in downtown Orlando. In order to travel north and south to reach downtown Orlando, the corridor travels along US 441 (Orange Blossom Trail) to Colonial Drive and travels north and south along Parramore Avenue to Gore Street.

5. **Sanford SunRail Connector –** This corridor runs from downtown Sanford to the proposed SunRail station on First Street.

6. **Innovation Way: OIA to UCF –** This corridor runs from Orlando International Airport (OIA) to University of Central Florida (UCF) via the proposed Innovation Way planned development.

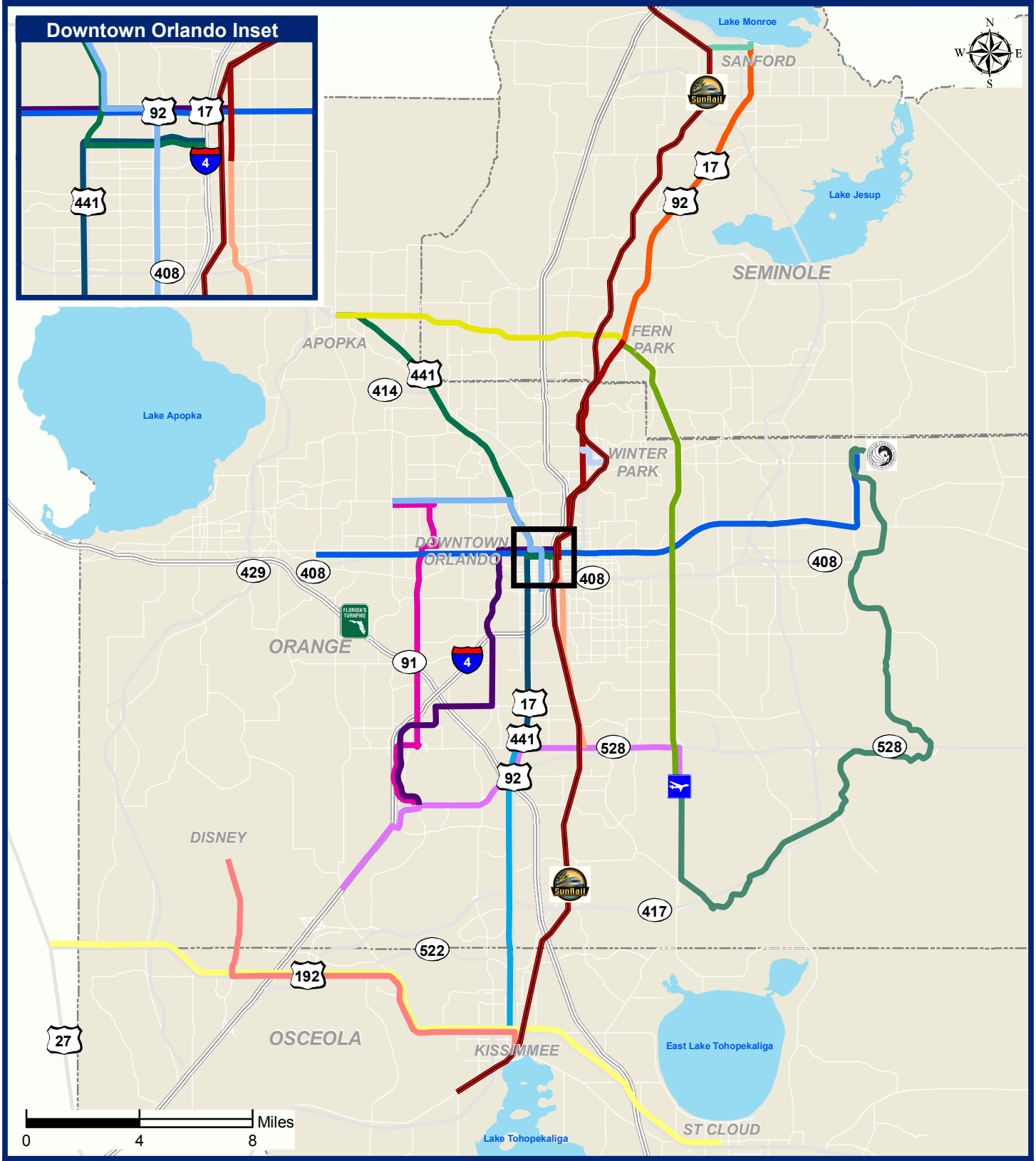
7. **US 17-92: Fern Park to Downtown –** This corridor runs north and south along US 17/92 from the Fern Park area to downtown Orlando. The corridor travels via Orange Avenue to downtown from the intersection of Orange Avenue and US 17/92.

8. **US 17-92: Sanford to Fern Park –** This corridor runs north and south along US 17/92 from Sanford to the Fern Park area.

9. **SR 436: Apopka to Fern Park –** This corridor runs east and west along SR 436 (Semoran Boulevard) from Apopka to the Fern Park area.

10. **SR 436: Fern Park to OIA –** This corridor runs north and south along SR 436 (Semoran Boulevard) from the Fern Park area to the OIA.

# 2030 Paw Print: The LYNX Transit Master Plan




## Map 3-1: LYNX Study Corridors

### Legend

**Study Corridors**

- Winter Park SunRail Connector
- US 192: Disney to Kissimmee
- US 192: Lake County to St. Cloud
- Silver Star Rd to Parramore
- Sanford SunRail Connector
- Innovation Way: OIA to UCF
- US 17-92: Fern Park to Downtown
- US 17-92: Sanford to Fern Park
- SR 436: Apopka to Fern Park
- SR 436: Fern Park to OIA
- US 441: Apopka to Downtown
- US 441/17-92: Downtown to Florida Mall
- US 441/17-92: Florida Mall to Kissimmee
- SR 50: West Oaks Mall to UCF
- John Young Pkwy: Downtown to International Drive
- Orange Ave: Downtown to Sand Lake Rd
- Kirkman Rd: Park Promenade to International Drive
- SR 528: Disney to OIA
- SunRail
- Orlando International Airport

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11. **US 441: Apopka to Downtown –** This corridor runs north and south along US 441 (Orange Blossom Trail) from Apopka to downtown Orlando. In downtown Orlando, the corridor runs east and west from I-4 to US 441 along Amelia Street.

12. **US 441/17-92: Downtown to Florida Mall –** This corridor runs north and south along US 441 (Orange Blossom Trail) from downtown Orlando to the Florida Mall at Sand Lake Road. In downtown Orlando, the corridor runs east and west from I-4 to Orange Blossom Trail along Amelia Street.

13. **US 441/17-92: Florida Mall to Kissimmee –** This corridor runs north and south along US 441 (Orange Blossom Trail) from the Florida Mall at Sand Lake Road to Vine Street in Kissimmee.

14. **SR 50: West Oaks Mall to UCF –** This corridor extends east and west along SR 50 (Colonial Drive) from West Oaks Mall through downtown Orlando. The corridor runs north and south along Alafaya Trail from SR 50 to reach the UCF.

15. **John Young Parkway: Downtown to International Drive –** This corridor runs north and south along John Young Parkway and International Drive from downtown Orlando to SR 528 Beach Line. The corridor travels via Colonial Drive in downtown from I-4 to John Young Parkway. The route runs east and west along Oak Ridge Road to travel between John Young Parkway and International Drive.

16. **Orange Avenue: Downtown to Sand Lake Road –** This corridor runs north and south along Orange Avenue from downtown Orlando to Sand Lake Road.

17. **Kirkman Road: Park Promenade to International Drive –** This corridor runs north and south along Kirkman Road and International Drive from Park Promenade to SR 528 Beach Line. The corridor travels east and west along Silver Star Road from Park Promenade to Pine Hills Road, north and south along Pine Hills Road to Colonial Drive, and east and west along Colonial Drive to Kirkman Road. The route runs east and west along Sand Lake Road to travel between John Young Parkway and International Drive.

18. **SR 528: Disney to OIA –** This corridor travels from OIA to Walt Disney World along Sand Lake Road, SR 528 Beach Line, and I-4.

## TRANSIT CORRIDOR PROFILES

This section contains a fact sheet dedicated to each corridor. The fact sheets contain a detailed evaluation of existing conditions for each of the 18 corridors. Data were combined from various sources in order to create these fact sheets. Fact sheets contain the following information.

Information is presented for the area within a ½-mile on either side of the corridor. The ½-mile distance represents a comfortable walking distance between ultimate origins/destinations and transit services along the corridor.

**Description of Corridor**

To aid in identifying the corridors, a brief description of each is provided. The corridors often include multiple roads connecting various points.

**Transit Service Profile**

The characteristics of existing transit service, where applicable, are provided for each corridor. The information is provided to understand current transit supply and demand. The transit service characteristics reviewed include the following.

- **Primary Bus Routes**: This is a list of all bus routes that run along the corridor.
- **Crossing Bus Routes**: This is a list of all bus routes that cross or intersect the corridor.
- **Days of Service**: This characteristic indicates the days of the week that the primary bus routes operate in the corridor. For those corridors with multiple primary transit routes, any day a primary route operates in the corridor is counted under this characteristic. For instance, if a corridor has two bus routes where one operates Monday through Friday and one operates Monday through Saturday, then the days of service are Monday through Saturday.
- **Hours of Service**: Hours of service indicates the time the first primary route begins service and the last primary route ends service for the day with the most service.
- **Peak Headways**: Peak headways indicates the shortest headways (i.e., most frequent) found among the primary bus routes during the morning and evening peak periods. If differing headways exist, the shortest is presented. The first number is for weekday travel; the second number is for weekend travel.
- **Off-Peak Headways**: Off-peak headways indicates the shortest headways found among the primary bus routes during the off-peak periods. Only one figure is presented for weekday and weekend periods.
- **Annual Revenue Miles** (2009): Annual revenue miles represent the total number of revenue miles for all primary transit routes operating in the corridor. Annual revenue miles for 2009 were provided for each route by LYNX staff. Annual revenue miles for each bus route were calculated for the corridor based on the percent of total route miles within the corridor buffer for each route. The annual revenue miles for each primary route were then summed for the figure presented in the fact sheet.
- **Annual Revenue Hours** (2009): Annual revenue hours represent the total number of revenue hours for all primary transit routes operating in the corridor. Annual revenue

hours for 2009 were provided for each route by LYNX staff. Annual revenue hours for each bus route were calculated for the corridor based on the percent of total revenue miles within the corridor buffer for each route. The annual revenue hours for each primary route were then summed for the figure presented in the fact sheet.

- **Annual Riders**: Annual riders represent the total number of riders boarding or alighting at a bus stop along the corridor. Both primary and crossing route boardings and alightings were counted. Ridership is based on average daily ridership figures captured from automatic passenger counters (APCs) between August 15 and December 13, 2010. The average daily ridership figures were then interpolated to represent an annual ridership figure.

### Corridor Characteristics

A number of corridor characteristics are reviewed for each of the corridors to assess key demographics of the ½-mile buffer areas. The corridor characteristics reviewed include the following.

- Population
- Employment
- Population Density (per square mile)
- Employment Density (per square mile)

### Major Activity Centers

In this section of the fact sheets, major activity centers are identified. Major activity centers can be areas such as downtowns or privately owned facilities such as Walt Disney World.

### Transit Facilities

In addition to the transit service profile, a review of transit facilities is also conducted to gauge the availability of transit infrastructure already located within each corridor. Information is provided on the following types of facilities.

- Transit Centers
- Transfer Centers
- Park & Ride Lots

### Land Use Distribution

A review of various land uses within the corridors is provided. The distribution of various land uses can help provide a better understanding of the corridor's potential for existing and future

transit services given the increased transit supportiveness of some land use types over others. The distribution of land uses within each of the selected corridors is categorized into the following categories. "Other" includes all land that is not categorized.

- Residential
- Institutional
- Right of Way
- Commercial
- Industrial
- Other

### Roadway and Traffic Conditions

The level of congestion on each road segment was measured by the roadway volume to capacity (V/C) ratio. For example, a V/C ratio over 1 indicates the corridor volume is greater than its capacity and therefore congested while a V/C ratio less than 1 may indicate a less congested corridor. The average V/C ratios for all 18 corridors, which were calculated based on roadway segment V/C ratios, are summarized for each corridor.

### Bicycle and Pedestrian Facilities

Since the two most utilized modes for accessing transit are walking and bicycling, the total number of miles of bicycle and sidewalk facilities within each corridor is reviewed. The data may provide a general indication of the level of potential transportation connectivity within each corridor. The analysis was conducted by measuring the total amount of these facilities within a ½-mile buffer of the corridor.

Caution should be exercised when interpreting these data as facilities within a ½-mile buffer area may not always be connected to the corridor main line. For example, a subdivision may only connect at one location to the corridor, but it may have a significant amount of sidewalk availability within a ½–mile of the corridor. While the pedestrian facilities may be plentiful, the connectivity to a transit line along the corridor for a pedestrian may actually be low because the pedestrian has to walk to the one connection point between the subdivision and the corridor.

### Corridor Map Series

In addition to the corridor profile fact sheets, a series of maps are presented. The maps present a visual representation of some of the characteristics presented in the corridor fact sheets, as well as other attributes that are typically helpful to transit service and infrastructure planning.

The maps developed for each of the 18 corridors include the following. It should be noted that, other than the Existing Transit Services and Facilities maps for each corridor, which are presented in this section, all other maps are included in Appendix B.

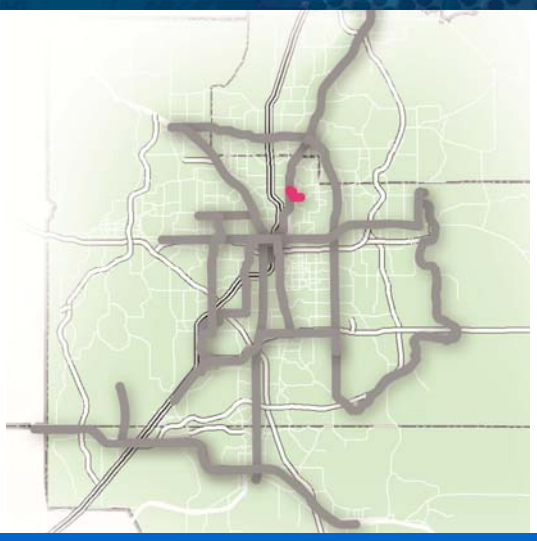
- Existing Transit Stop Locations
- Existing Land Use
- Existing Population Density (low-income & total income)
- Existing Employment Density (low-income & total income)
- Existing Roadway Condition (including number of lanes, median type [divided/undivided], and signalized intersections)
- Existing Congestion (roadway level of service)
- Existing Bicycle and Pedestrian Facilities
- Major Existing Activity Centers

The remainder of this section presents corridor profile fact sheets and maps showing the study area and the existing transit services and facilities for each of the 18 study corridors.

# 1: Winter Park SunRail Connector

## Description of Corridor

This corridor runs from the proposed SunRail station in Winter Park to US 17/92 at Lee Rd. via Morse Blvd., Denning Ave., and Webster Ave. The length of the corridor is 1.4 miles.



## Transit Service Profile (2010)

| | |
|---|---|
| Primary Bus Routes | 1, 9, 14, 23, 102, 443 |
| Crossing Bus Routes | - |
| Days of Service | Sun to Sat |
| Hours of Service | 6 AM to 11 PM |
| Peak Headways | < 30 / 30 minutes |
| Off-Peak Headways | < 30 minutes |
| Annual Miles (2009) | 90,079 |
| Annual Hours (2009) | 6,911 |
| Annual Riders | 649,335 |

## Corridor Characteristics (2010)

| | |
|---|---|
| Population | 19,663 |
| Employment | 34,360 |
| Population Density (per square mile) | 3,011 |
| Employment Density (per square mile) | 5,262 |

## Major Activity Centers

Downtown Winter Park

## Transit Facilities (2010)

| | |
|---|---|
| Transit Centers | 0 |
| Transfer Centers | 0 |
| Park & Ride Lots | 0 |

## Roadway Characteristics (2010)

| | |
|---|---|
| Number of Traffic Signals | 7 |

## Congested Road Segments

| | |
|---|---|
| Segment Average V/C Ratio | 1.17 |

## Bike & Pedestrian Facilities (2010)

| | |
|---|---|
| Miles of Bike Lanes/Trails | 1.40 |
| Miles of Sidewalks | 5.88 |

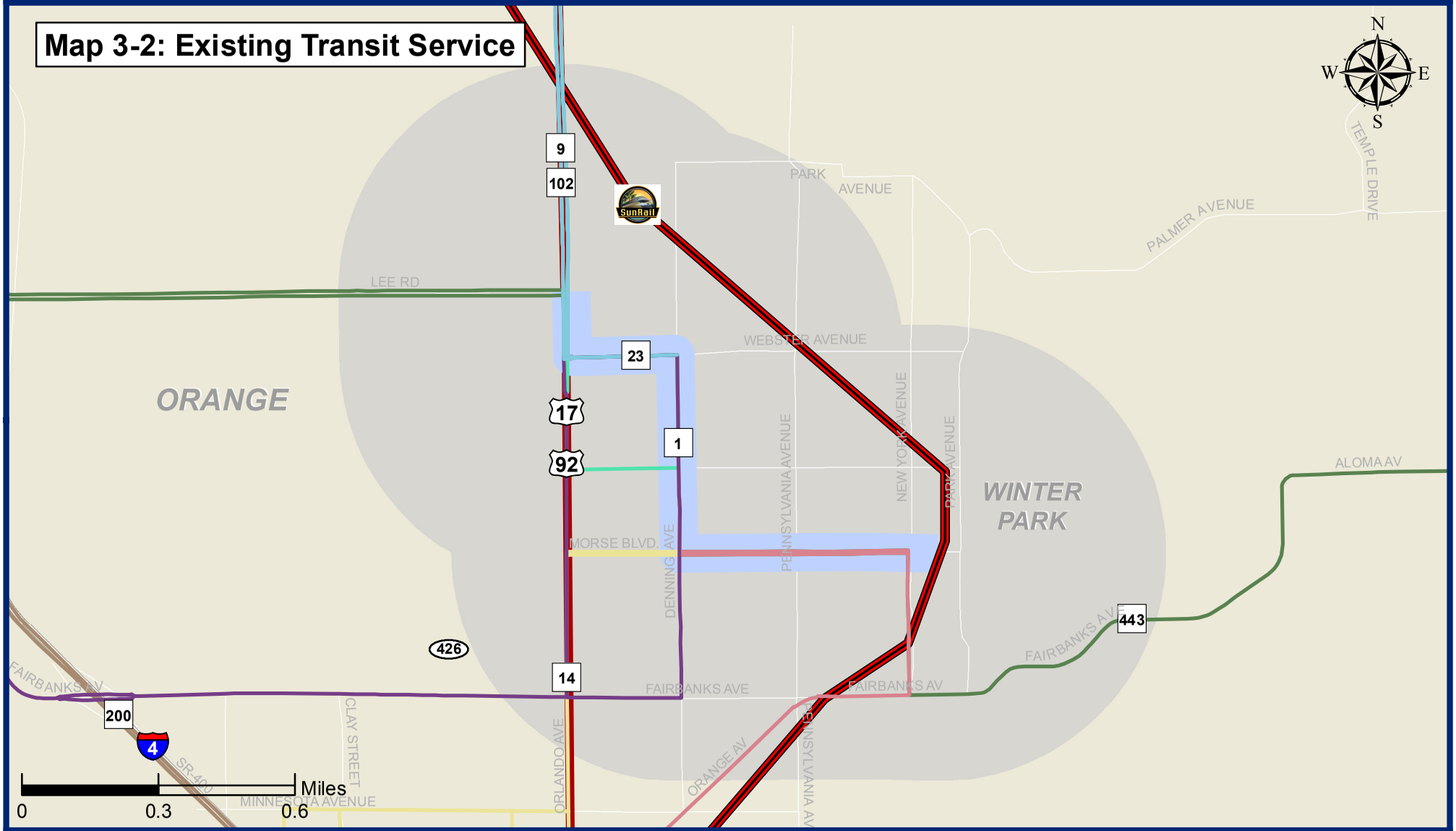
## Land Use Distribution (Percent)

| | |
|---|---|
| Residential | 31.75 |
| Institutional | 9.23 |
| Right of Way | 18.31 |
| Commercial | 14.89 |
| Industrial | 1.38 |
| Other | 24.50 |

## SIS Facilities

| | |
|---|---|
| SIS Facilities within Study Area | 2 |
| CSX, Winter Park Amtrak | |

# 2030 Paw Print: The LYNX Transit Master Plan




## LYNX Study Corridor 1 – Winter Park SunRail Connector

### Legend

**Study Corridors**

- SunRail
- Winter Park SunRail Connector
- US 17-92: Fern Park to Downtown
- 1-Mile Corridor Study Area

**Transit Routes**

302 Primary LYNX Bus Routes (1, 9, 14, 23, 102, 443)

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# 2: US 192 — Disney to Kissimmee

## Description of Corridor

This corridor runs from the proposed SunRail station in downtown Kissimmee to the Disney Transportation Center at Walt Disney World via US 192 and World Drive. The length of the corridor is 16.5 miles.

## Transit Service Profile (2010)

| | |
|---|---|
| Primary Bus Routes | 4, 10, 18, 26, 50, 55, 56, 111 |
| Crossing Bus Routes | 57, 301, 302, 303(pm), 305(am), 306 |
| Days of Service | Sun to Sat |
| Hours of Service | 6 AM to 11 PM |
| Peak Headways | 30 / 30 minutes |
| Off-Peak Headways | 30 minutes |
| Annual Miles (2009) | 562,324 |
| Annual Hours (2009) | 27,701 |
| Annual Riders | 1,519,130 |

## Corridor Characteristics (2010)

| | |
|---|---|
| Population | 58,413 |
| Employment | 69,554 |
| Population Density (per square mile) | 1,153 |
| Employment Density (per square mile) | 1,373 |

## Major Activity Centers

| |
|---|
| Walt Disney World |
| US 192 Tourist Corridor |
| Downtown Kissimmee |

## Transit Facilities (2010)

| | |
|---|---|
| Transit Centers | 0 |
| Transfer Centers | 1 |
| Park & Ride Lots | 0 |

## Roadway Characteristics (2010)

| | |
|---|---|
| Number of Traffic Signals | 24 |

## Congested Road Segments

| | |
|---|---|
| Segment Average V/C Ratio | 1.17 |

## Bike & Pedestrian Facilities (2010)

| | |
|---|---|
| Miles of Bike Lanes/Trails | 19.82 |
| Miles of Sidewalks | 19.14 |

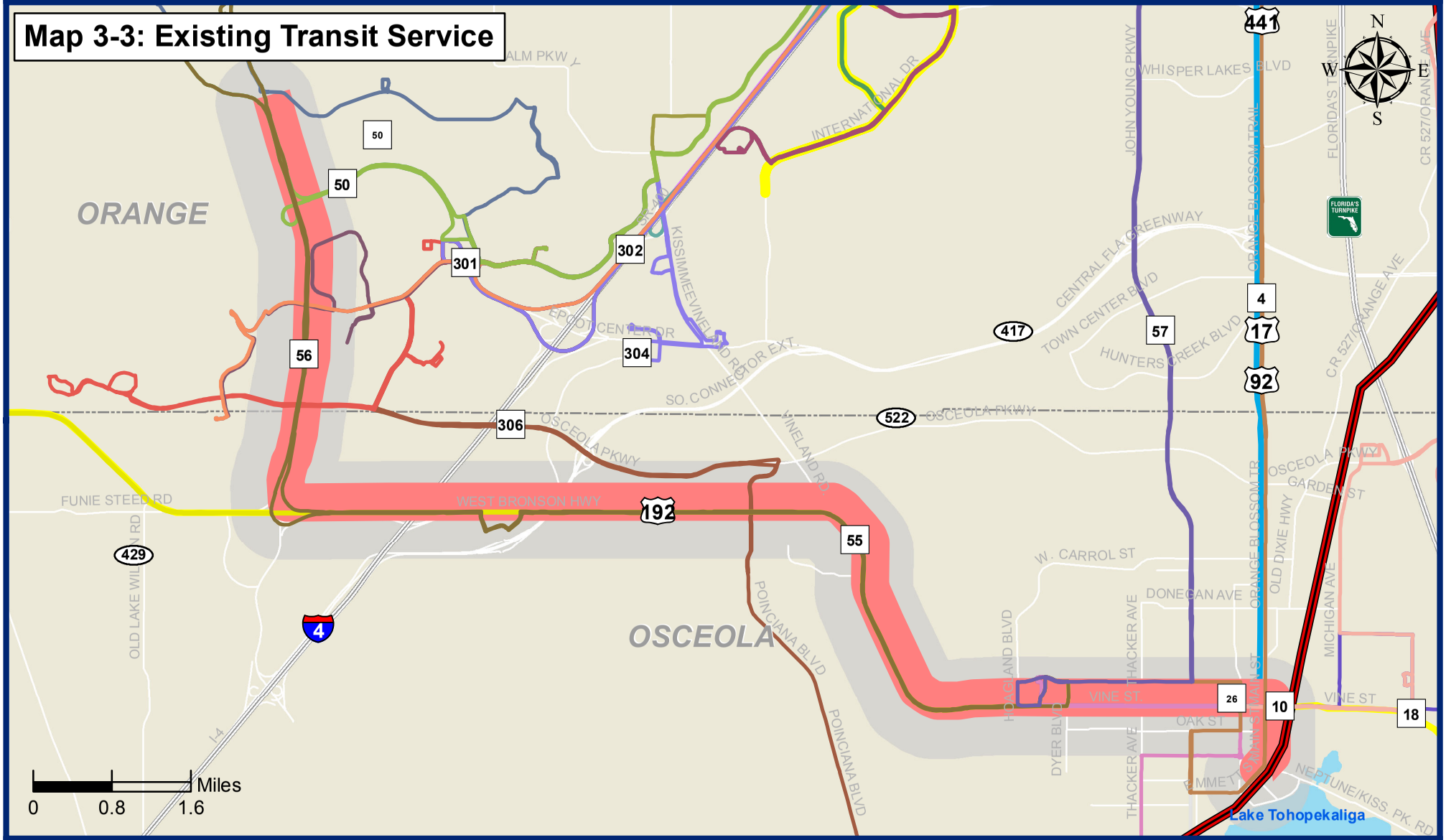
## Land Use Distribution (Percent)

| | |
|---|---|
| Residential | 13.26 |
| Institutional | 3.54 |
| Right of Way | 10.78 |
| Commercial | 14.03 |
| Industrial | 1.42 |
| Other | 56.98 |

## SIS Facilities

| | |
|---|---|
| SIS Facilities within Study Area | 9 |
| Kissimmee Gateway Airport, Kissimmee Intermodal Center, CSX, Kissimmee Amtrak, I-4, SR 417, US 192, Hoagland Blvd., US 441 | |

# 2030 Paw Print: The LYNX Transit Master Plan




## LYNX Study Corridor 2 – US 192: Disney to Kissimmee

### Legend

**Study Corridors**

- SunRail
- US 192: Disney to Kissimmee
- SR 528: Disney to OIA
- US 441/17-92: Florida Mall to Kissimmee
- US 192: Lake County to St. Cloud
- 1-Mile Corridor Study Area

**Transit Routes**

- Existing I-Ride Trolley Route
- 302 — Primary LYNX Bus Routes (4, 10, 18, 26, 50, 55, 56, 111)

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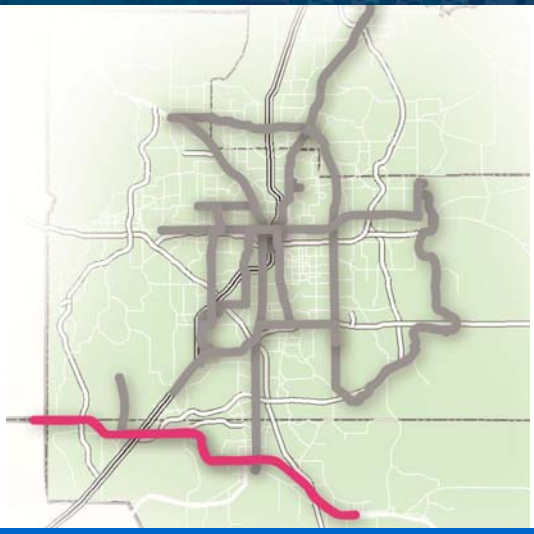
# 3: US 192 — Lake County to St. Cloud

## Description of Corridor

This corridor runs along US-192 from US-27 through Kissimmee to St. Cloud. The length of the corridor is 27 miles.



## Transit Service Profile (2010)

| | |
|---|---|
| Primary Bus Routes | 10, 18, 26, 55, 56 |
| Crossing Bus Routes | 4, 57, 306 |
| Days of Service | Sun to Sat |
| Hours of Service | 6 AM to 11 PM |
| Peak Headways | 30 / 30 minutes |
| Off-Peak Headways | 30 minutes |
| Annual Miles (2009) | 619,339 |
| Annual Hours (2009) | 31,268 |
| Annual Riders | 1,902,745 |

## Corridor Characteristics (2010)

| | |
|---|---|
| Population | 133,322 |
| Employment | 58,507 |
| Population Density (per square mile) | 1,266 |
| Employment Density (per square mile) | 556 |

## Major Activity Centers

| |
|---|
| US 192 Tourist Corridor |
| Downtown Kissimmee |

## Transit Facilities (2010)

| | |
|---|---|
| Transit Centers | 0 |
| Transfer Centers | 1 |
| Park & Ride Lots | 2 |

## Roadway Characteristics (2010)

| | |
|---|---|
| Number of Traffic Signals | 52 |

## Congested Road Segments

| | |
|---|---|
| Segment Average V/C Ratio | 1.29 |

## Bike & Pedestrian Facilities (2010)

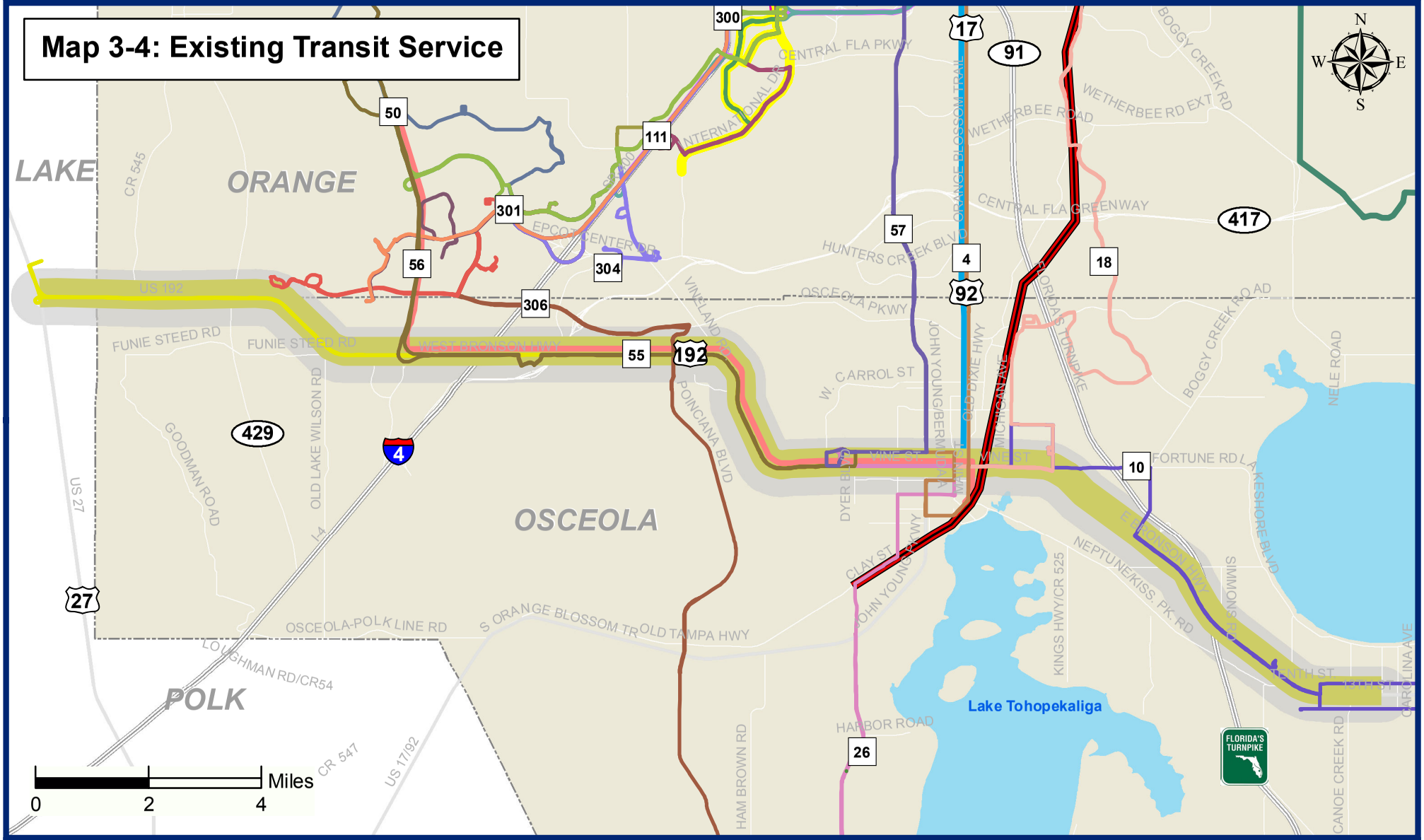
| | |
|---|---|
| Miles of Bike Lanes/Trails | 37.62 |
| Miles of Sidewalks | 25.58 |

## Land Use Distribution (Percent)

| | |
|---|---|
| Residential | 16.46 |
| Institutional | 2.37 |
| Right of Way | 13.00 |
| Commercial | 12.70 |
| Industrial | 1.31 |
| Other | 54.18 |

## SIS Facilities

| | |
|---|---|
| SIS Facilities within Study Area | 10 |
| Kissimmee Gateway Airport, CSX, I-4, Florida's Turnpike, SR 417, US 192, US 441, Hoagland Blvd., US 429, US 27 | |




LYNX Study Corridor 3 – US 192: Lake County to St. Cloud

## Legend

**Study Corridors**

- SunRail
- US 192: Lake County to St. Cloud
- SR 528: Disney to OIA
- US 441/17-92: Florida Mall to Kissimmee
- Innovation Way: OIA to UCF
- US 192: Disney to Kissimmee
- 1-Mile Corridor Study Area

**Transit Routes**

- Existing I-Ride Trolley Route
- 302 Primary LYNX Bus Routes (10, 18, 26, 55, 56)

LYNX Transit Master Plan

# 4: Silver Star Rd to Parramore

## Description of Corridor

This corridor travels east and west along Silver Star Rd. from N Hiawassee Rd. to Gore St. in downtown Orlando. In order to travel north and south to reach downtown Orlando, the corridor travels along US 441 (Orange Blossom Trail) to Colonial Drive and travels north and south along Parramore Ave. to Gore St. The length of the corridor is 8 miles.

## Transit Service Profile (2010)

| | |
|---|---|
| Primary Bus Routes | 8, 17, 20, 48, 49, 125, 301, 302, 443 |
| Crossing Bus Routes | 4, 21, 25, 36, 37, 44, 54, 319 |
| Days of Service | Sun to Sat |
| Hours of Service | 6 AM to 11 PM |
| Peak Headways | 30 / 30 minutes |
| Off-Peak Headways | 30 minutes |
| Annual Miles (2009) | 298,721 |
| Annual Hours (2009) | 19,430 |
| Annual Riders | 1,710,390 |

## Corridor Characteristics (2010)

| | |
|---|---|
| Population | 57,296 |
| Employment | 91,875 |
| Population Density (per square mile) | 3,362 |
| Employment Density (per square mile) | 5,391 |

## Major Activity Centers

Downtown Orlando

## Transit Facilities (2010)

| | |
|---|---|
| Transit Centers | 1 |
| Transfer Centers | 1 |
| Park & Ride Lots | 0 |

## Roadway Characteristics (2010)

| | |
|---|---|
| Number of Traffic Signals | 27 |

## Congested Road Segments

| | |
|---|---|
| Segment Average V/C Ratio | 1.34 |

## Bike & Pedestrian Facilities (2010)

| | |
|---|---|
| Miles of Bike Lanes/Trails | 20.87 |
| Miles of Sidewalks | 96.43 |

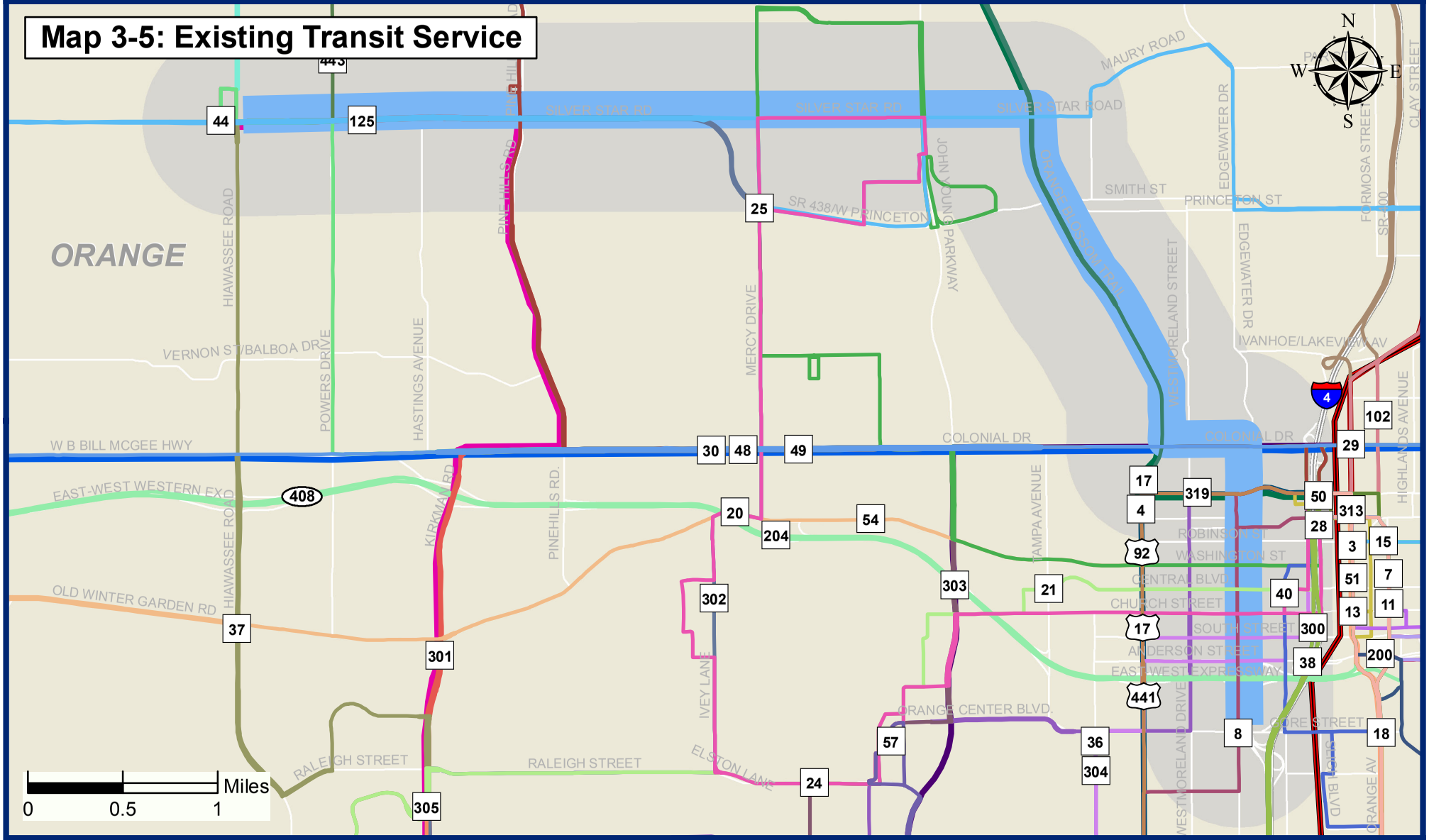
## Land Use Distribution (Percent)

| | |
|---|---|
| Residential | 43.11 |
| Institutional | 0.00 |
| Right of Way | 5.06 |
| Commercial | 2.89 |
| Industrial | 22.72 |
| Other | 26.22 |

## SIS Facilities

| | |
|---|---|
| SIS Facilities within Study Area | 4 |
| CSX, Florida Central Railroad, I-4, SR 408 | |

# Map 3-5: Existing Transit Service




## LYNX Study Corridor 4: Silver Star Road to Parramore

### Legend

**Study Corridors**

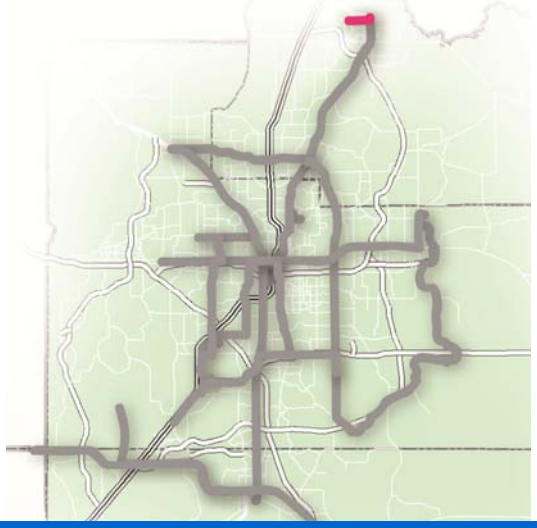
- SunRail
- Silver Star Road to Parramore
- US 17-92: Fern Park to Downtown
- Kirkman Rd: Park Promenade to International Drive
- Orange Ave: Downtown to Sand Lake Rd
- John Young Pkwy: Downtown to International Drive
- SR 50: West Oaks Mall to UCF
- US 441/17-92: Downtown to Florida Mall
- US 441: Apopka to Downtown
- 1/2 Mile Corridor Buffer

**Transit Routes**

- Existing I-Ride Trolley Route
- 302 Primary LYNX Bus Routes (8, 17, 20, 48, 49, 125, 301, 302, 443)

LYNX Transit Master Plan

# 5: Sanford SunRail Connector



## Description of Corridor

This corridor runs from downtown Sanford to the proposed SunRail station on 1st St. The length of the corridor is 1.8 miles.

## Transit Service Profile (2010)

| | |
|---|---|
| Primary Bus Routes | 34, 46E, 46W, 103 |
| Crossing Bus Routes | - |
| Days of Service | Sun to Sat |
| Hours of Service | 6 AM to 9 PM |
| Peak Headways | 60 / 60 minutes |
| Off-Peak Headways | 60 minutes |
| Annual Miles (2009) | 29,493 |
| Annual Hours (2009) | 1,677 |
| Annual Riders | 62,780 |

## Corridor Characteristics (2010)

| | |
|---|---|
| Population | 12,045 |
| Employment | 29,527 |
| Population Density (per square mile) | 1,696 |
| Employment Density (per square mile) | 4,158 |

## Major Activity Centers

Downtown Sanford

## Transit Facilities (2010)

| | |
|---|---|
| Transit Centers | 0 |
| Transfer Centers | 0 |
| Park & Ride Lots | 0 |

## Roadway Characteristics (2010)

| | |
|---|---|
| Number of Traffic Signals | 2 |

## Congested Road Segments

| | |
|---|---|
| Segment Average V/C Ratio | 0.61 |

## Bike & Pedestrian Facilities (2010)

| | |
|---|---|
| Miles of Bike Lanes/Trails | 5.64 |
| Miles of Sidewalks | 1.91 |

## Land Use Distribution (Percent)

| | |
|---|---|
| Residential | 11.85 |
| Institutional | 2.16 |
| Right of Way | 20.04 |
| Commercial | 3.32 |
| Industrial | 12.16 |
| Other | 50.47 |

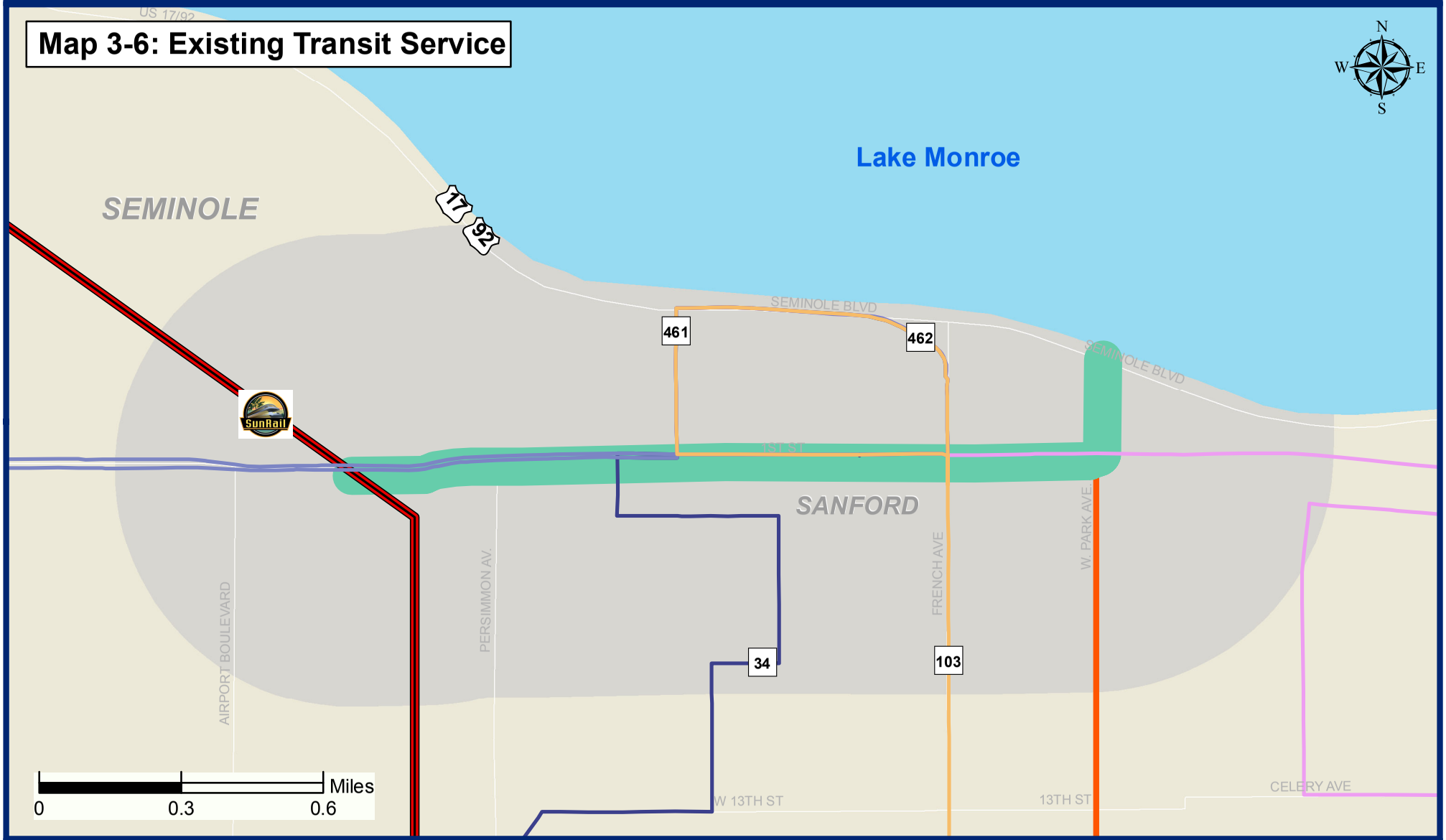
## SIS Facilities

| | |
|---|---|
| SIS Facilities within Study Area | 6 |

St Johns River, CSX, Sanford Amtrak Auto Train, CSX Sanford Bulk Transflo, SR 46, Persimmon Ave.

# 2030 Paw Print: The LYNX Transit Master Plan

## Map 3-6: Existing Transit Service




## LYNX Study Corridor 5 – Sanford SunRail Connector

### Legend

**Study Corridors**

- SunRail
- Sanford SunRail Connector
- US 17-92: Sanford to Fern Park
- 1-Mile Corridor Study Area

**Transit Routes**

302 Primary LYNX Bus Routes (34, 461/46E, 462/46W, 103)

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# 6: Innovation Way — OIA to UCF

## Description of Corridor

This corridor runs from OIA to UCF via the proposed Innovation Way. The length of the corridor is 30.7 miles.

## Transit Service Profile (2010)

| | |
|---|---|
| Primary Bus Routes | - |
| Crossing Bus Routes | 11, 13, 30, 41, 42, 51, 111, 434, 621 |
| Days of Service | - |
| Hours of Service | - |
| Peak Headways | - |
| Off-Peak Headways | - |
| Annual Miles (2009) | 0 |
| Annual Hours (2009) | 0 |
| Annual Riders | 25,915 |

## Corridor Characteristics (2010)

| | |
|---|---|
| Population | 109,338 |
| Employment | 48,188 |
| Population Density (per square mile) | 1,333 |
| Employment Density (per square mile) | 587 |

## Major Activity Centers

- Medical City/Innovation Way
- Central Florida Research Park
- University of Central Florida
- Orlando International Airport

## Transit Facilities (2010)

| | |
|---|---|
| Transit Centers | 0 |
| Transfer Centers | 2 |
| Park & Ride Lots | 0 |

## Roadway Characteristics (2010)

| | |
|---|---|
| Number of Traffic Signals | 4 |

## Congested Road Segments

| | |
|---|---|
| Segment Average V/C Ratio | 0.79 |

## Bike & Pedestrian Facilities (2010)

| | |
|---|---|
| Miles of Bike Lanes/Trails | 15.26 |
| Miles of Sidewalks | 8.48 |

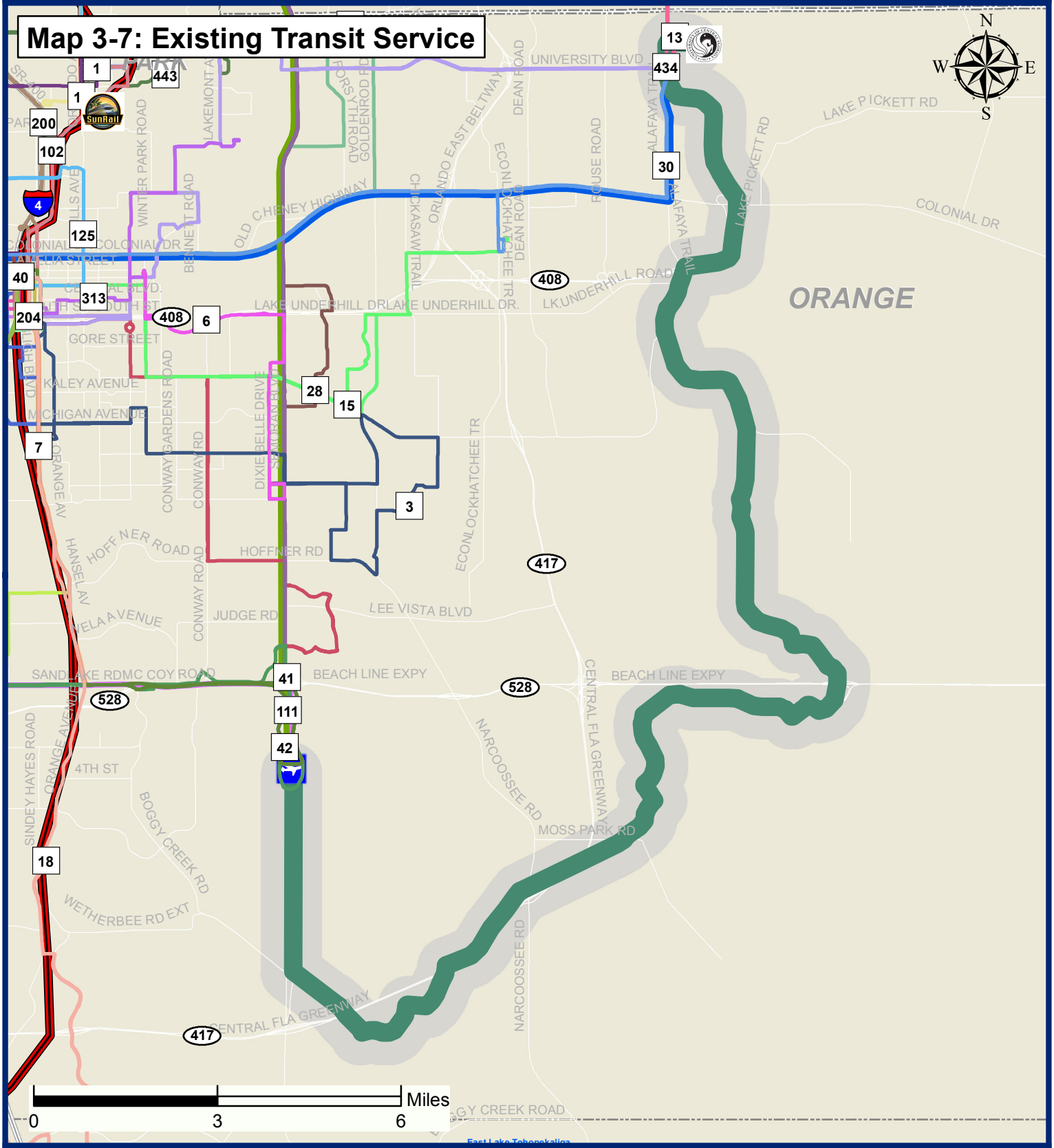
## Land Use Distribution (Percent)

| | |
|---|---|
| Residential | 6.73 |
| Institutional | 0.03 |
| Right of Way | 5.44 |
| Commercial | 0.56 |
| Industrial | 14.92 |
| Other | 72.33 |

## SIS Facilities

| | |
|---|---|
| SIS Facilities within Study Area | 3 |
| Orlando International Airport, SR 417, SR 528 | |

# 2030 Paw Print: The LYNX Transit Master Plan




## LYNX Study Corridor 6 – Innovation Way: OIA to UCF

### Legend

**Study Corridors**

- SR 528: Disney to OIA
- SR 50: West Oaks Mall to UCF
- SR 436: Fern Park to OIA
- Innovation Way: OIA to UCF
- Winter Park SunRail Connector
- SunRail

- Orlando International Airport
- University of Central Florida
- 1-Mile Corridor Study Area

**Transit Routes**

- Existing I-Ride Trolley Route
- 302 Primary LYNX Bus Routes ( -------- )

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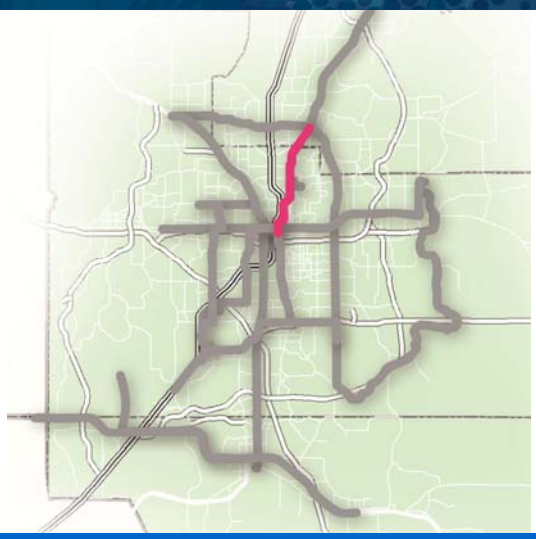
# 7: US 17-92 — Fern Park to Downtown

## Description of Corridor

This corridor runs north and south along US 17/92 from the Fern Park area to downtown Orlando. The corridor travels via Orange Ave. to downtown from the intersection of Orange Ave. and US 17/92. The length of the corridor is 8.6 miles.



## Transit Service Profile (2010)

| | |
|---|---|
| Primary Bus Routes | 1, 9, 14, 102 |
| Crossing Bus Routes | 3, 4, 7, 8, 11, 13, 15, 17, 18, 20, 21, 23, 25, 28, 29, 36, 38, 40, 41, 48, 49, 51, 54, 103, 125, 200, 204, 300, 313, 319, 443 |
| Days of Service | Sun to Sat |
| Hours of Service | 6 AM to 11 PM |
| Peak Headways | < 30 / 30 minutes |
| Off-Peak Headways | < 30 minutes |
| Annual Miles (2009) | 355,846 |
| Annual Hours (2009) | 27,471 |
| Annual Riders | 593,490 |

## Corridor Characteristics (2010)

| | |
|---|---|
| Population | 58,587 |
| Employment | 118,575 |
| Population Density (per square mile) | 3,022 |
| Employment Density (per square mile) | 6,117 |

## Major Activity Centers

Downtown Orlando

## Transit Facilities (2010)

| | |
|---|---|
| Transit Centers | 1 |
| Transfer Centers | 1 |
| Park & Ride Lots | 0 |

## Roadway Characteristics (2010)

| | |
|---|---|
| Number of Traffic Signals | 38 |

## Congested Road Segments

| | |
|---|---|
| Segment Average V/C Ratio | 1.39 |

## Bike & Pedestrian Facilities (2010)

| | |
|---|---|
| Miles of Bike Lanes/Trails | 23.23 |
| Miles of Sidewalks | 83.72 |

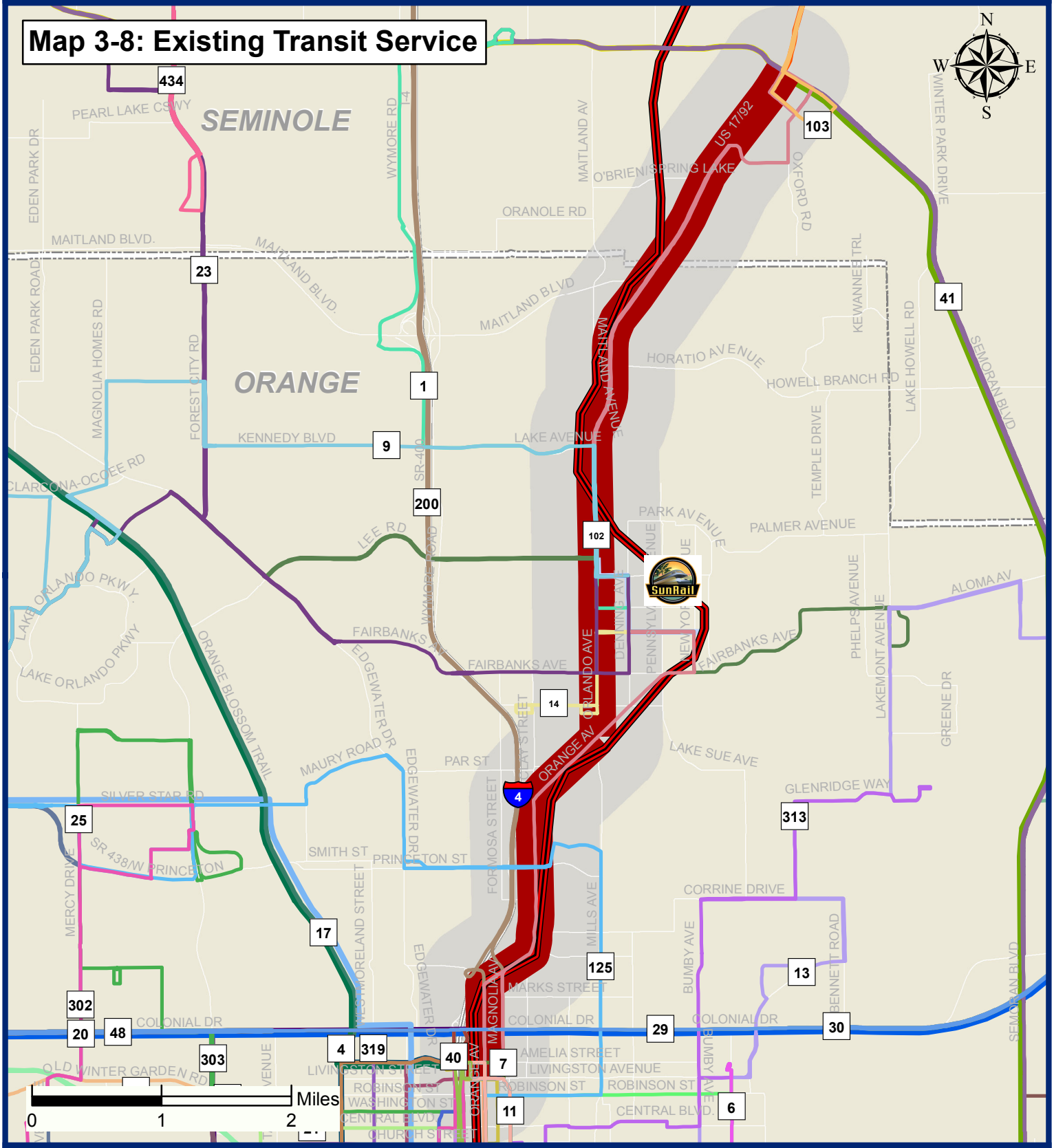
## Land Use Distribution (Percent)

| | |
|---|---|
| Residential | 39.63 |
| Institutional | 0.81 |
| Right of Way | 10.41 |
| Commercial | 8.68 |
| Industrial | 4.31 |
| Other | 36.15 |

## SIS Facilities

| | |
|---|---|
| SIS Facilities within Study Area | 2 |
| CSX, I-4 | |

# Map 3-8: Existing Transit Service




## LYNX Study Corridor 7 – US 17-92: Fern Park to Downtown

### Legend

**Study Corridors**

- US 17-92: Fern Park to Downtown
- Orange Ave: Downtown to Sand Lake Rd
- John Young Pkwy: Downtown to International Drive
- SR 50: West Oaks Mall to UCF
- US 441/17-92: Downtown to Florida Mall
- US 441: Apopka to Downtown
- SR 436: Fern Park to OIA
- SR 436: Apopka to Fern Park
- US 17-92: Sanford to Fern Park
- Silver Star Road to Parramore
- Winter Park SunRail Connector
- SunRail
- 1-Mile Corridor Study Area

**Transit Routes**

- Existing I-Ride Trolley Route
- 302 Primary LYNX Bus Routes (1, 9, 14, 102)



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# 8: US 17-92 — Sanford to Fern Park

## Description of Corridor

This corridor runs north and south along US 17/92 from Sanford to the Fern Park area. The length of the corridor is 12 miles.

## Transit Service Profile (2010)

| | |
|---|---|
| Primary Bus Routes | 35, 45, 103 |
| Crossing Bus Routes | 41, 46E, 102, 434 |
| Days of Service | Sun to Sat |
| Hours of Service | 6 AM to 9 PM |
| Peak Headways | < 30 / 30 minutes |
| Off-Peak Headways | < 30 minutes |
| Annual Miles (2009) | 154,271 |
| Annual Hours (2009) | 9,086 |
| Annual Riders | 594,220 |

## Corridor Characteristics (2010)

| | |
|---|---|
| Population | 76,211 |
| Employment | 53,142 |
| Population Density (per square mile) | 1,771 |
| Employment Density (per square mile) | 1,235 |

## Major Activity Centers

Seminole State College

## Transit Facilities (2010)

| | |
|---|---|
| Transit Centers | 0 |
| Transfer Centers | 2 |
| Park & Ride Lots | 0 |

## Roadway Characteristics (2010)

| | |
|---|---|
| Number of Traffic Signals | 34 |
| Number of Lanes | |

## Congested Road Segments

| | |
|---|---|
| Segment Average V/C Ratio | 1.07 |

## Bike & Pedestrian Facilities (2010)

| | |
|---|---|
| Miles of Bike Lanes/Trails | 12.36 |
| Miles of Sidewalks | 14.09 |

## Land Use Distribution (Percent)

| | |
|---|---|
| Residential | 30.20 |
| Institutional | 4.99 |
| Right of Way | 16.56 |
| Commercial | 17.20 |
| Industrial | 5.09 |
| Other | 25.96 |

## SIS Facilities

| | |
|---|---|
| SIS Facilities within Study Area | 3 |
| Sanford Greyhound, CSX, Seminole Expressway | |


## LYNX Study Corridor 8: US 17-92 Sanford to Fern Park

### Legend

**Study Corridors**

- US 17-92 Sanford to Fern Park
- US 17-92 Fern Park to Downtown
- SR 436 Fern Park to OIA
- SR 436 Apopka to Fern Park
- Sanford SunRail Connector
- SunRail
- 1-Mile Corridor Study Area

**Transit Routes**

- Existing I-Ride Trolley Route
- 302 Primary LYNX Bus Routes (34, 45, 103)

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# 9: SR 436 — Apopka to Fern Park

## Description of Corridor

This corridor runs east and west along SR 436 (Semoran Blvd.) from Apopka to the Fern Park area. The length of the corridor is 10.5 miles.

## Transit Service Profile (2010)

| | |
|---|---|
| Primary Bus Routes | 1, 41 |
| Crossing Bus Routes | 17, 23, 44, 102, 103, 405, 434 |
| Days of Service | Sun to Sat |
| Hours of Service | 6 AM to 11 PM |
| Peak Headways | 30 / 30 minutes |
| Off-Peak Headways | 30 minutes |
| Annual Miles (2009) | 713,407 |
| Annual Hours (2009) | 46,358 |
| Annual Riders | 847,895 |

## Corridor Characteristics (2010)

| | |
|---|---|
| Population | 83,258 |
| Employment | 60,622 |
| Population Density (per square mile) | 3,395 |
| Employment Density (per square mile) | 2,472 |

## Major Activity Centers

| |
|---|
| Altamonte Regional Business Center |
| Altamonte Mall |

## Transit Facilities (2010)

| | |
|---|---|
| Transit Centers | 0 |
| Transfer Centers | 2 |
| Park & Ride Lots | 0 |

## Roadway Characteristics (2010)

| | |
|---|---|
| Number of Traffic Signals | 47 |

## Congested Road Segments

| | |
|---|---|
| Segment Average V/C Ratio | 1.33 |

## Bike & Pedestrian Facilities (2010)

| | |
|---|---|
| Miles of Bike Lanes/Trails | 9.28 |
| Miles of Sidewalks | 12.80 |

## Land Use Distribution (Percent)

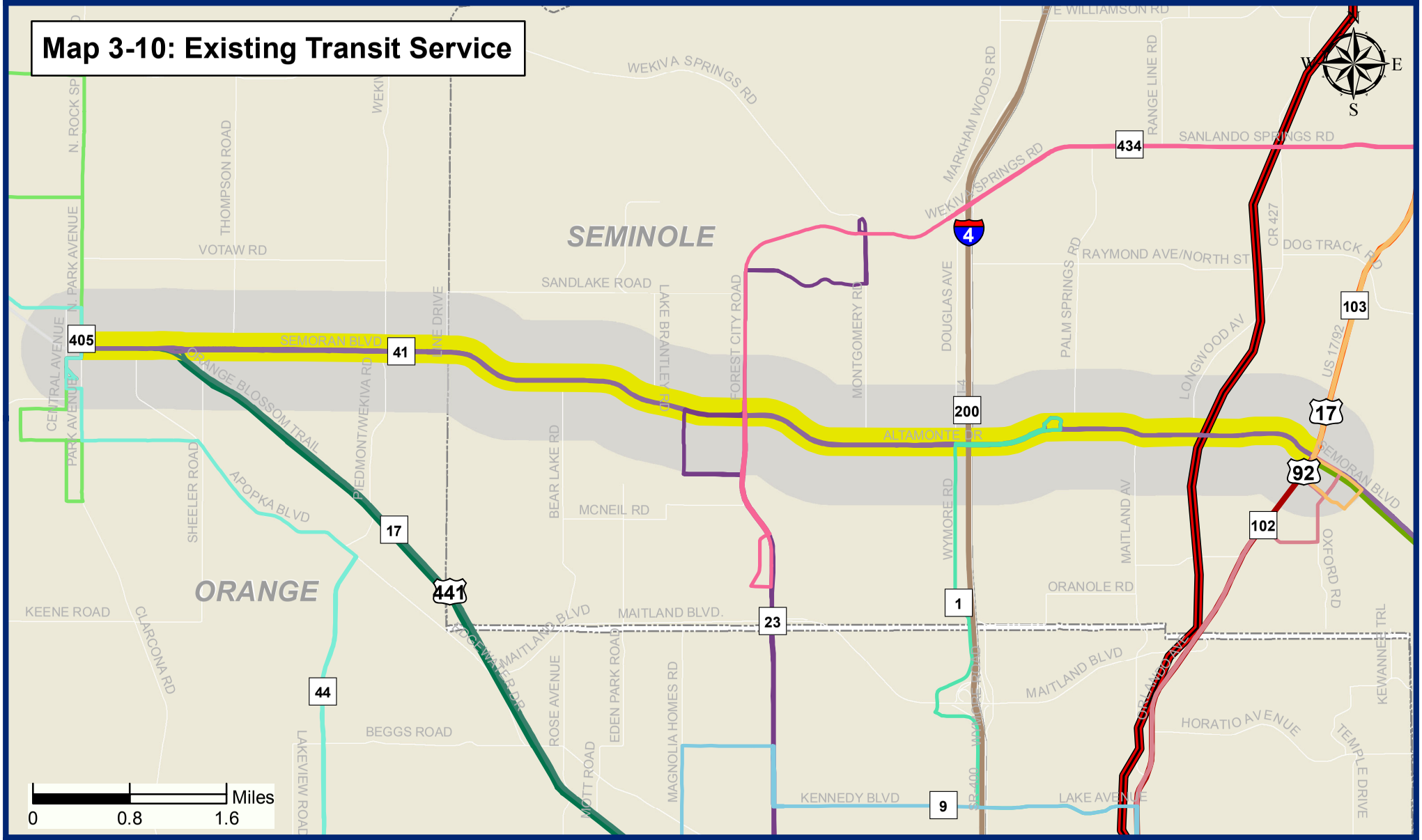
| | |
|---|---|
| Residential | 38.62 |
| Institutional | 11.77 |
| Right of Way | 5.22 |
| Commercial | 21.12 |
| Industrial | 7.80 |
| Other | 15.47 |

## SIS Facilities

| | |
|---|---|
| SIS Facilities within Study Area | 2 |
| Florida Central Railroad, I-4 | |

# 2030 Paw Print: The LYNX Transit Master Plan

## Map 3-10: Existing Transit Service




## LYNX Study Corridor 9 – SR 436: Apopka to Fern Park

### Legend

**Study Corridors**

- US 441: Apopka to Downtown
- SR 436: Apopka to Fern Park
- US 17-92: Fern Park to Downtown
- SR 436: Fern Park to OIA
- US 17-92: Sanford to Fern Park
- 1-Mile Corridor Study Corridor
- SunRail

**Transit Routes**

- Existing I-Ride Trolley Route
- 302 Primary LYNX Bus Routes (1, 41)

LYNX 2030 Transit Master Plan

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# 10: SR 436 — Fern Park to OIA

## Description of Corridor

This corridor runs north and south along SR 436 (Semoran Blvd.) from the Fern Park area to OIA. The length of the corridor is 16.6 miles.

## Transit Service Profile (2010)

| | |
|---|---|
| Primary Bus Routes | 16, 28, 29, 41, 51 |
| Crossing Bus Routes | 3, 11, 13, 15, 30, 42, 102, 103, 111 |
| Days of Service | Sun to Sat |
| Hours of Service | 6 AM to 11 PM |
| Peak Headways | 30 / 30 minutes |
| Off-Peak Headways | 30 minutes |
| Annual Miles (2009) | 442,816 |
| Annual Hours (2009) | 29,372 |
| Annual Riders | 2,681,290 |

## Corridor Characteristics (2010)

| | |
|---|---|
| Population | 127,442 |
| Employment | 67,676 |
| Population Density (per square mile) | 3,481 |
| Employment Density (per square mile) | 1,849 |

## Major Activity Centers

| |
|---|
| Lee Vista |
| Orlando International Airport |

## Transit Facilities (2010)

| | |
|---|---|
| Transit Centers | 0 |
| Transfer Centers | 2 |
| Park & Ride Lots | 0 |

## Roadway Characteristics (2010)

| | |
|---|---|
| Number of Traffic Signals | 42 |

## Congested Road Segments

| | |
|---|---|
| Segment Average V/C Ratio | 1.25 |

## Bike & Pedestrian Facilities (2010)

| | |
|---|---|
| Miles of Bike Lanes/Trails | 32.17 |
| Miles of Sidewalks | 32.20 |

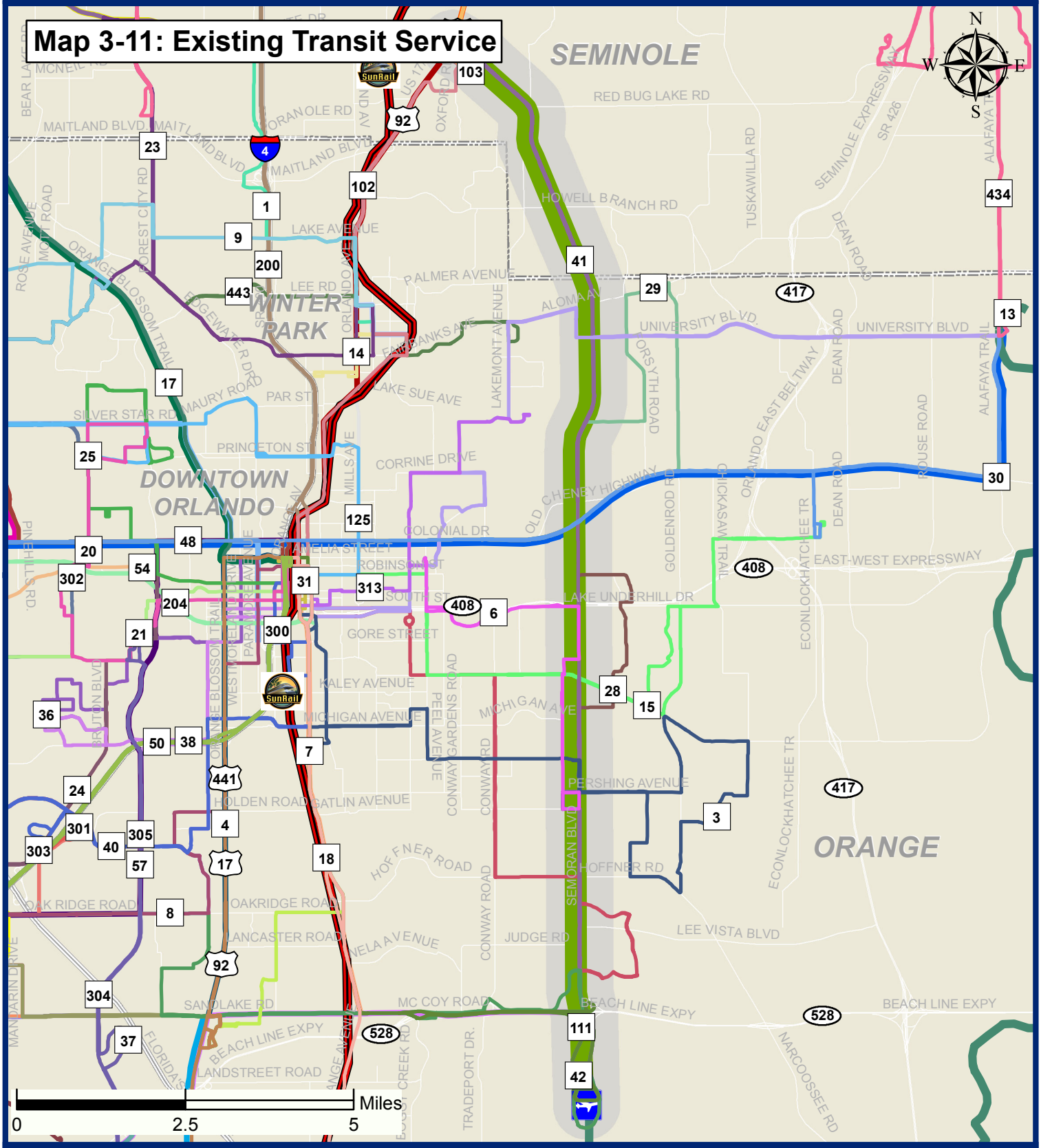
## Land Use Distribution (Percent)

| | |
|---|---|
| Residential | 42.38 |
| Institutional | 4.55 |
| Right of Way | 4.48 |
| Commercial | 9.20 |
| Industrial | 6.27 |
| Other | 33.11 |

## SIS Facilities

| | |
|---|---|
| SIS Facilities within Study Area | 0 |
| Orlando International Airport, SR 408, SR 528, Airport Blvd. | |

# Map 3-11: Existing Transit Service




## LYNX Study Corridor 10 – SR 436: Fern Park to OIA

### Legend

**Study Corridors**

- SR 436: Fern Park to OIA
- US 17-92: Fern Park to Downtown
- SR 528: Disney to OIA
- Orange Ave: Downtown to Sand Lake Rd
- John Young Pkwy: Downtown to International Drive
- SR 50: West Oaks Mall to UCF
- US 441/17-92: Florida Mall to Kissimmee
- US 441/17-92: Downtown to Florida Mall
- US 441: Apopka to Downtown
- SR 436: Apopka to Fern Park
- US 17-92: Sanford to Fern Park
- Silver Star Road to Parramore
- Winter Park SunRail Connector
- SunRail
- Orlando International Airport
- 1-Mile Corridor Study Area

**Transit Routes**

- Existing I-Ride Trolley Route
- 302 Primary LYNX Bus Routes (6, 28, 29, 41, 51)

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# 11: US 441 — Apopka to Downtown

## Description of Corridor

This corridor runs north and south along US 441 (Orange Blossom Trail) from Apopka to downtown Orlando. In downtown Orlando, the corridor runs east and west from I-4 to US 441 along Amelia St. The length of the corridor is 12.6 miles.

## Transit Service Profile (2010)

| | |
|---|---|
| Primary Bus Routes | 17 |
| Crossing Bus Routes | 3, 4, 7, 8, 9, 11, 13, 15, 18, 20, 21, 23, 25, 28, 29, 36, 38, 40, 41, 48, 49, 50, 51, 54, 102, 125, 204, 300, 302, 313, 319, 443 |
| Days of Service | Sun to Sat |
| Hours of Service | 6 AM to 11 PM |
| Peak Headways | 30 / 30 minutes |
| Off-Peak Headways | 30 minutes |
| Annual Miles (2009) | 309,017 |
| Annual Hours (2009) | 18,638 |
| Annual Riders | 1,579,720 |

## Corridor Characteristics (2010)

| | |
|---|---|
| Population | 76,028 |
| Employment | 85,617 |
| Population Density (per square mile) | 2,651 |
| Employment Density (per square mile) | 2,985 |

## Major Activity Centers

Downtown Orlando

## Transit Facilities (2010)

| | |
|---|---|
| Transit Centers | 1 |
| Transfer Centers | 2 |
| Park & Ride Lots | 0 |

## Roadway Characteristics (2010)

| | |
|---|---|
| Number of Traffic Signals | 22 |

## Congested Road Segments

| | |
|---|---|
| Segment Average V/C Ratio | 1.27 |

## Bike & Pedestrian Facilities (2010)

| | |
|---|---|
| Miles of Bike Lanes/Trails | 26.02 |
| Miles of Sidewalks | 81.67 |

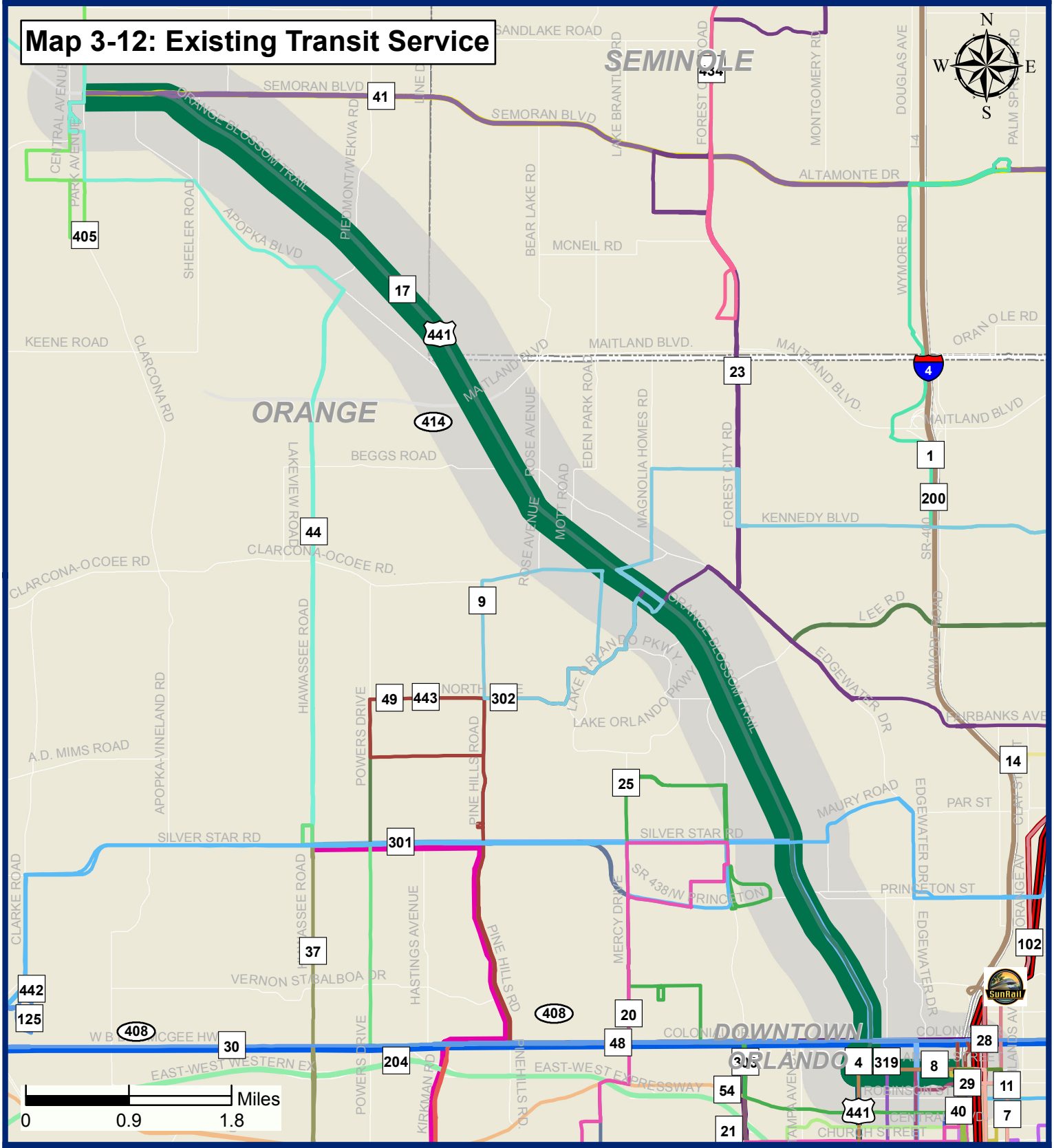
## Land Use Distribution (Percent)

| | |
|---|---|
| Residential | 35.17 |
| Institutional | 1.32 |
| Right of Way | 9.52 |
| Commercial | 8.74 |
| Industrial | 19.71 |
| Other | 25.54 |

## SIS Facilities

| | |
|---|---|
| SIS Facilities within Study Area | 3 |
| CSX, Florida Central Railroad, I-4 | |

# Map 3-12: Existing Transit Service




## LYNX Study Corridor 11 – US 441: Apopka to Downtown

### Legend

**Study Corridors**

- US 441: Apopka to Downtown
- US 17-92: Fern Park to Downtown
- Kirkman Rd: Park Promenade to International Drive
- Orange Ave: Downtown to Sand Lake Rd
- John Young Pkwy: Downtown to International Drive
- SR 50: West Oaks Mall to UCF
- US 441/17-92: Downtown to Florida Mall
- SR 436: Apopka to Fern Park
- Silver Star Road to Parramore
- SunRail
- 1-Mile Corridor Study Area

**Transit Routes**

- Existing I-Ride Trolley Route
- 302 Primary LYNX Bus Routes (17)

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# 12: US 441/17-92 — Downtown to Florida Mall

## Description of Corridor

This corridor runs north and south along US 441 (Orange Blossom Trail) from downtown Orlando to the Florida Mall at Sand Lake Rd. In downtown Orlando, the corridor runs east and west from I-4 to Orange Blossom Trail along Amelia St. The length of the corridor is 7.8 miles.

## Transit Service Profile (2010)

| | |
|---|---|
| Primary Bus Routes | 4, 8 |
| Crossing Bus Routes | 3, 7, 11, 13, 15, 17, 18 ,20, 21, 25, 28, 29, 36, 37, 38, 40, 42, 48, 49, 50, 51, 54, 102, 111, 125, 204, 300, 304, 313, 319 |
| Days of Service | Sun to Sat |
| Hours of Service | 6 AM to 11 PM |
| Peak Headways | 30 / 30 minutes |
| Off-Peak Headways | 30 minutes |
| Annual Miles (2009) | 413,665 |
| Annual Hours (2009) | 29,276 |
| Annual Riders | 3,293,760 |

## Corridor Characteristics (2010)

| | |
|---|---|
| Population | 53,722 |
| Employment | 84,293 |
| Population Density (per square mile) | 3,214 |
| Employment Density (per square mile) | 5,043 |

## Major Activity Centers

| |
|---|
| Downtown Orlando |
| Florida Mall |

## Transit Facilities (2010)

| | |
|---|---|
| Transit Centers | 1 |
| Transfer Centers | 1 |
| Park & Ride Lots | 0 |

## Roadway Characteristics (2010)

| | |
|---|---|
| Number of Traffic Signals | 26 |

## Congested Road Segments

| | |
|---|---|
| Segment Average V/C Ratio | 1.25 |

## Bike & Pedestrian Facilities (2010)

| | |
|---|---|
| Miles of Bike Lanes/Trails | 14.21 |
| Miles of Sidewalks | 85.27 |

## Land Use Distribution (Percent)

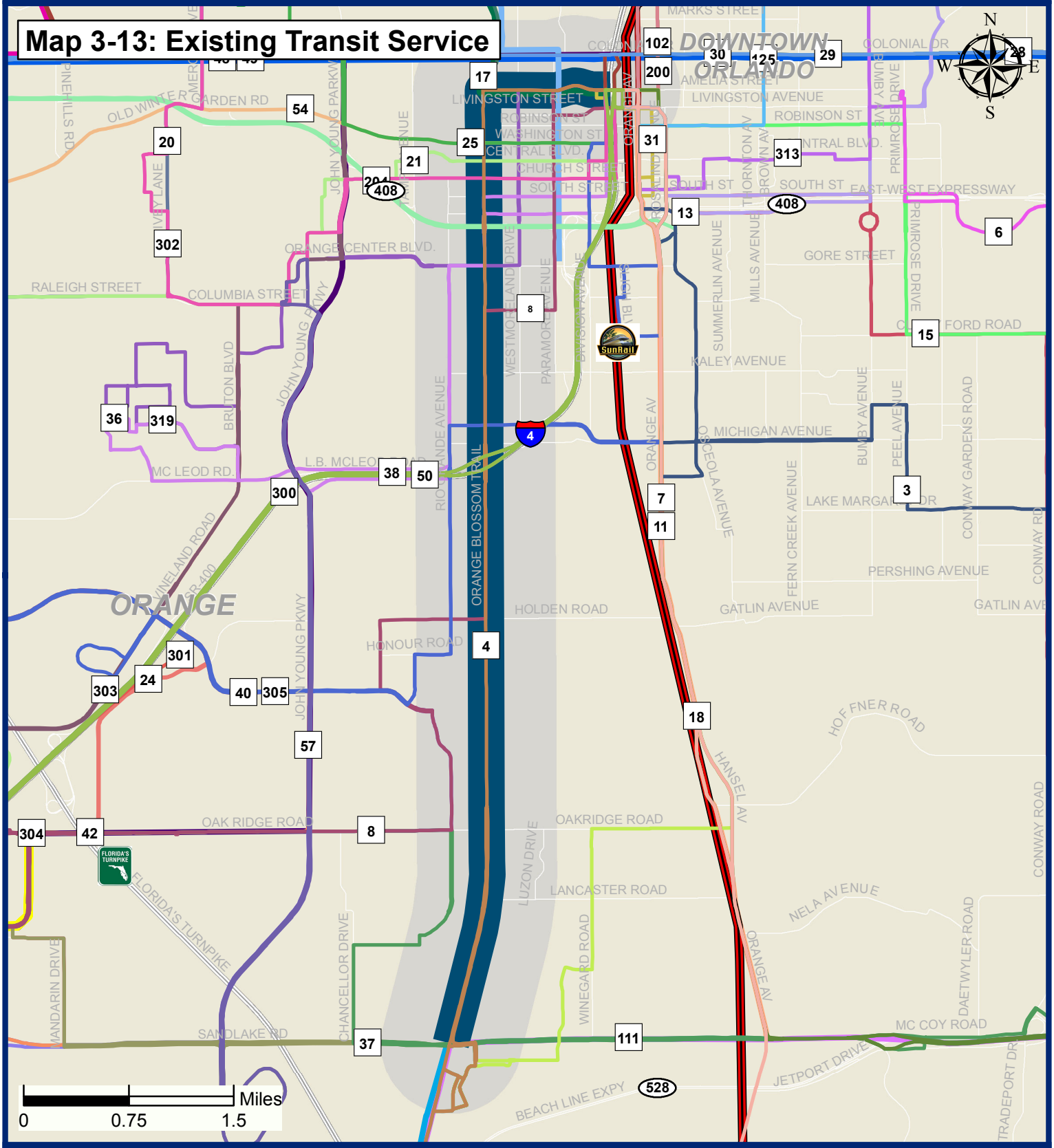
| | |
|---|---|
| Residential | 36.13 |
| Institutional | 0.00 |
| Right of Way | 7.58 |
| Commercial | 8.88 |
| Industrial | 12.37 |
| Other | 35.04 |

## SIS Facilities

| | |
|---|---|
| SIS Facilities within Study Area | 4 |
| CSX, Florida Central Railroad, I-4, SR 408 | |

# 2030 Paw Print: The LYNX Transit Master Plan

## Map 3-13: Existing Transit Service




## LYNX Study Corridor 12 – US 441/17-92: Downtown to Florida Mall

### Legend

**Study Corridors**

- US 441/17-92: Downtown to Florida Mall
- US 17-92: Fern Park to Downtown
- SR 528: Disney to OIA
- Orange Ave: Downtown to Sand Lake Rd
- John Young Pkwy: Downtown to International Drive
- SR 50: West Oaks Mall to UCF
- US 441/17-92: Florida Mall to Kissimmee
- US 441: Apopka to Downtown
- Silver Star Road to Parramore
- SunRail
- 1/2 Mile Corridor Buffer

**Transit Routes**

- Existing I-Ride Trolley Route
- 302 Primary LYNX Bus Routes (4, 8)

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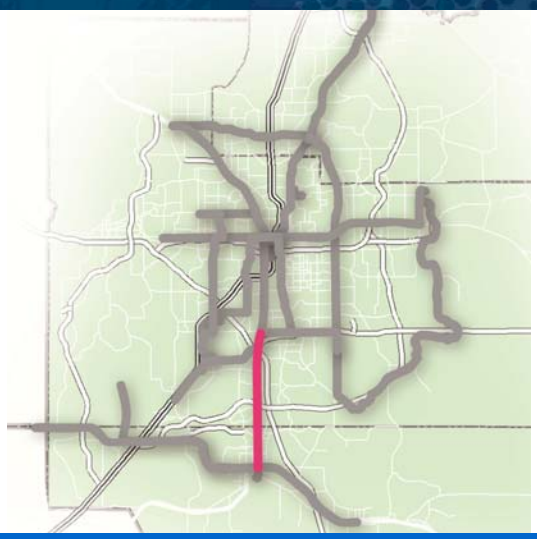
# 13: US 441/17-92 — Florida Mall to Kissimmee

## Description of Corridor

This corridor runs north and south along US 441 (Orange Blossom Trail) from the Florida Mall at Sand Lake Rd. to Vine St. in Kissimmee. The length of the corridor is 10 miles.



## Transit Service Profile (2010)

| | |
|---|---|
| Primary Bus Routes | 4, 111 |
| Crossing Bus Routes | 7, 10, 18, 37, 42 |
| Days of Service | Sun to Sat |
| Hours of Service | 6 AM to 11 PM |
| Peak Headways | 30 / 30 minutes |
| Off-Peak Headways | 30 minutes |
| Annual Miles (2009) | 438,422 |
| Annual Hours (2009) | 30,953 |
| Annual Riders | 1,040,250 |

## Corridor Characteristics (2010)

| | |
|---|---|
| Population | 58,825 |
| Employment | 60,137 |
| Population Density (per square mile) | 2,191 |
| Employment Density (per square mile) | 2,240 |

## Major Activity Centers

| |
|---|
| Florida Mall |
| Downtown Kissimmee |

## Transit Facilities (2010)

| | |
|---|---|
| Transit Centers | 0 |
| Transfer Centers | 1 |
| Park & Ride Lots | 0 |

## Roadway Characteristics (2010)

| | |
|---|---|
| Number of Traffic Signals | 23 |

## Congested Road Segments

| | |
|---|---|
| Segment Average V/C Ratio | 1.38 |

## Bike & Pedestrian Facilities (2010)

| | |
|---|---|
| Miles of Bike Lanes/Trails | 11.88 |
| Miles of Sidewalks | 10.07 |

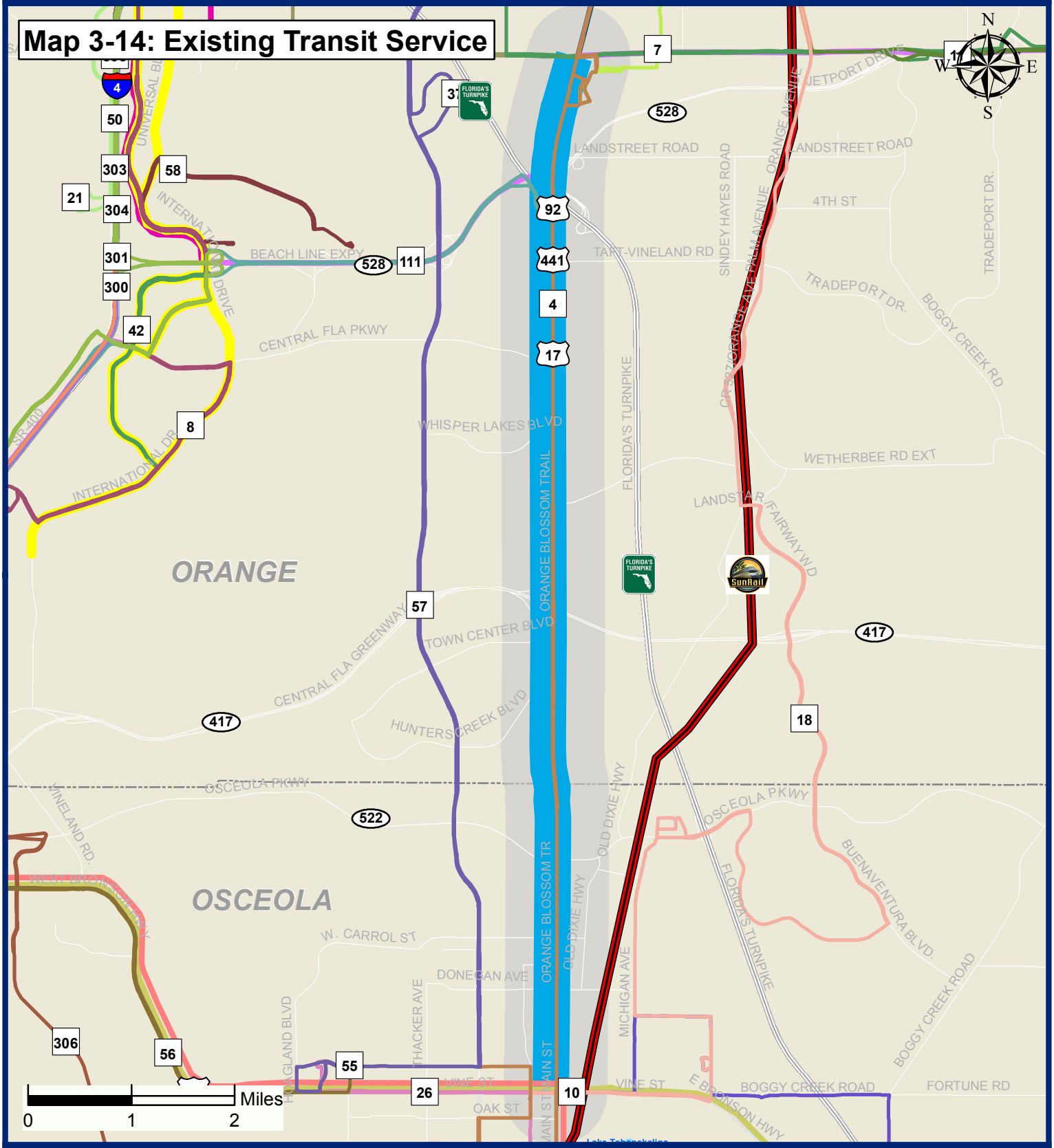
## Land Use Distribution (Percent)

| | |
|---|---|
| Residential | 14.68 |
| Institutional | 0.92 |
| Right of Way | 16.46 |
| Commercial | 9.93 |
| Industrial | 17.33 |
| Other | 40.69 |

## SIS Facilities

| | |
|---|---|
| SIS Facilities within Study Area | 7 |
| CSX, SR 528, Florida's Turnpike, SR 417, US 441, US 192, Hoagland Blvd. | |

# 2030 Paw Print: The LYNX Transit Master Plan




## LYNX Study Corridor 13 –US 441/17-92: Florida Mall to Kissimmee

### Legend

**Study Corridors**

- US 441/17-92: Florida Mall to Kissimmee
- SR 528: Disney to OIA
- Kirkman Rd: Park Promenade to International Drive
- Orange Ave: Downtown to Sand Lake Rd
- John Young Pkwy: Downtown to International Drive
- US 441/17-92: Downtown to Florida Mall
- US 192: Lake County to St. Cloud
- US 192: Disney to Kissimmee
- SunRail
- 1-Mile Corridor Study Area

**Transit Routes**

- Existing I-Ride Trolley Route
- 302 Primary LYNX Bus Routes (4, 111)

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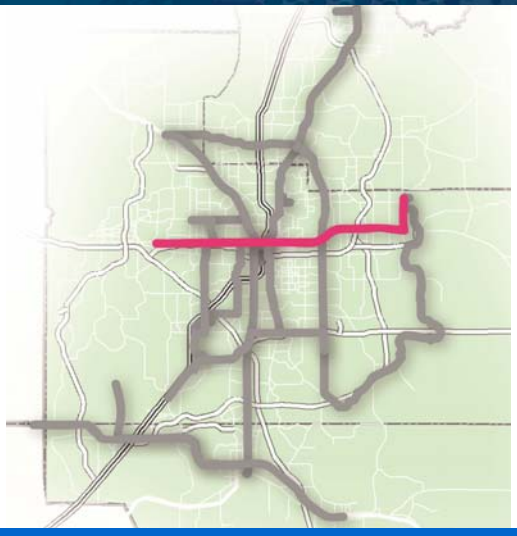
# 14: SR 50 — West Oaks Mall to UCF



## Description of Corridor

This corridor extends east and west along SR 50 (Colonial Drive) from West Oaks Mall through downtown Orlando. The corridor runs north and south along Alafaya Trail from SR 50 to reach UCF. The length of the corridor is 21.8 miles.

## Transit Service Profile (2010)

| | |
|---|---|
| Primary Bus Routes | 28, 29, 30, 48, 49 |
| Crossing Bus Routes | 13, 17, 20, 25, 37, 41, 54, 102, 125, 200, 301, 302, 303, 313, 434 |
| Days of Service | Sun to Sat |
| Hours of Service | 6 AM to 11 PM |
| Peak Headways | < 30 / 30 minutes |
| Off-Peak Headways | < 30 minutes |
| Annual Miles (2009) | 1,004,329 |
| Annual Hours (2009) | 67,195 |
| Annual Riders | 4,125,595 |

## Corridor Characteristics (2010)

| | |
|---|---|
| Population | 170,151 |
| Employment | 137,014 |
| Population Density (persons per sq. mile) | 3,304 |
| Employment Density (employees per sq. mile) | 2,660 |

## Major Activity Centers

- West Oaks Mall
- Fashion Square Mall
- Central Florida Research Park
- University of Central Florida

## Transit Facilities (2010)

| | |
|---|---|
| Transit Centers | 1 |
| Transfer Centers | 3 |
| Park & Ride Lots | 2 |

## Roadway Characteristics (2010)

| | |
|---|---|
| Number of Traffic Signals | 64 |

## Congested Road Segments

| | |
|---|---|
| Segment Average V/C Ratio | 1.28 |

## Bike & Pedestrian Facilities (2010)

| | |
|---|---|
| Miles of Bike Lanes/Trails | 44.92 |
| Miles of Sidewalks | 124.62 |

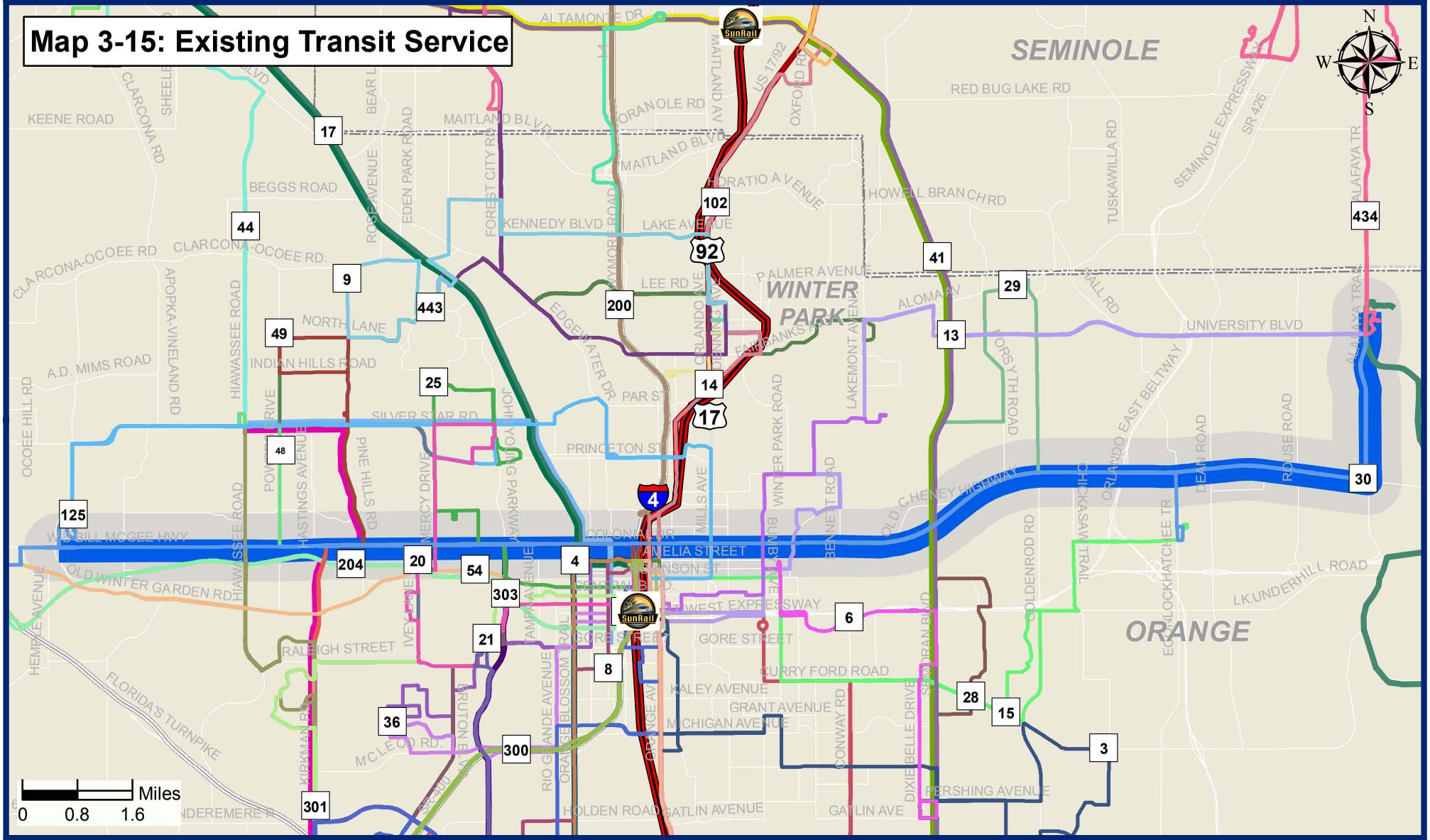
## Land Use Distribution (Percent)

| | |
|---|---|
| Residential | 36.03 |
| Institutional | 0.15 |
| Right of Way | 11.75 |
| Commercial | 10.80 |
| Industrial | 6.35 |
| Other | 34.93 |

## SIS Facilities

| | |
|---|---|
| SIS Facilities within Study Area | 5 |
| Orlando Executive Airport, CSX, Florida Central Railroad, SR 408, SR 417 | |

# 2030 Paw Print: The LYNX Transit Master Plan




## LYNX Study Corridor 14 – SR 50: West Oaks Mall to UCF

## Legend

### Study Corridors

- Innovation Way: OIA to UCF
- SR 50: West Oaks Mall to UCF
- US 17-92: Fern Park to Downtown
- Kirkman Rd: Park Promenade to International Drive
- Orange Ave: Downtown to Sand Lake Rd
- John Young Pkwy: Downtown to International Drive
- US 441/17-92: Downtown to Florida Mall
- US 441: Apopka to Downtown
- SR 436: Fern Park to OIA
- Silver Star Road to Parramore
- Winter Park SunRail Connector
- 1-Mile Corridor Study Area
- SunRail

### Transit Routes

- Existing I-Ride Trolley Route
- 302 Primary LYNX Bus Routes (28, 29, 30, 48, 49)

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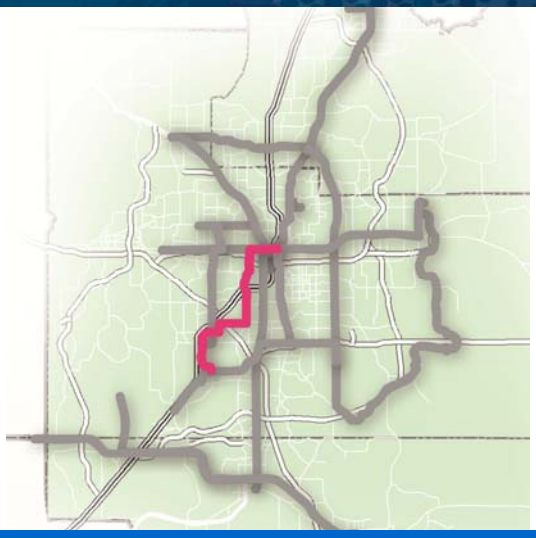
# 15: John Young Pkwy — Downtown to International Drive

## Description of Corridor

This corridor runs north and south along John Young Parkway and International Drive from downtown Orlando to the SR 528 Beach Line. The corridor travels via Colonial Drive in downtown from I-4 to John Young Parkway. The route runs east and west along Oak Ridge Rd. to travel between John Young Parkway and International Drive. The length of the corridor is 14.8 miles.



## Transit Service Profile (2010)

| | |
|---|---|
| Primary Bus Routes | 8, 20, 24, 25, 30, 38, 42, 48, 49, 57, 58, 303, 305(am) |
| Crossing Bus Routes | 17, 21, 28, 29, 36, 37, 40, 50, 54, 102, 111, 200, 204, 300, 319 |
| Days of Service | Sun to Sat |
| Hours of Service | 6 AM to 11 PM |
| Peak Headways | < 30 / < 30 minutes |
| Off-Peak Headways | < 30 minutes |
| Annual Miles (2009) | 1,062,435 |
| Annual Hours (2009) | 68,657 |
| Annual Riders | 3,833,960 |

## Corridor Characteristics (2010)

| | |
|---|---|
| Population | 95,411 |
| Employment | 132,580 |
| Population Density (per square mile) | 2,706 |
| Employment Density (per square mile) | 3,760 |

## Major Activity Centers

| |
|---|
| Downtown Orlando |
| Orange County Convention Center |
| Mall at Millenia |

## Transit Facilities (2010)

| | |
|---|---|
| Transit Centers | 1 |
| Transfer Centers | 2 |
| Park & Ride Lots | 0 |

## Roadway Characteristics (2010)

| | |
|---|---|
| Number of Traffic Signals | 62 |

## Congested Road Segments

| | |
|---|---|
| Segment Average V/C Ratio | 1.26 |

## Bike & Pedestrian Facilities (2010)

| | |
|---|---|
| Miles of Bike Lanes/Trails | 32.18 |
| Miles of Sidewalks | 122.68 |

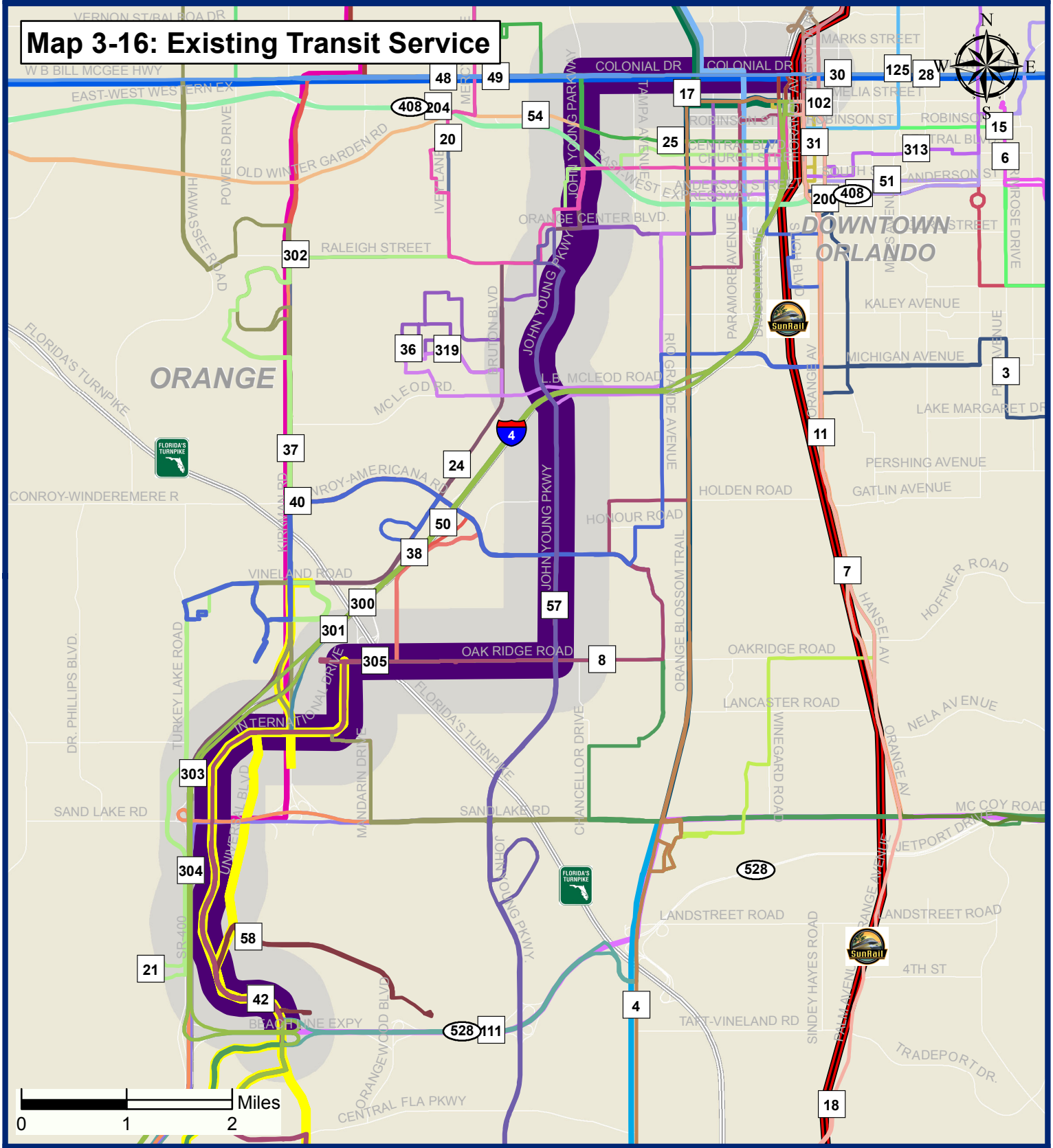
## Land Use Distribution (Percent)

| | |
|---|---|
| Residential | 31.40 |
| Institutional | 0.00 |
| Right of Way | 7.90 |
| Commercial | 8.71 |
| Industrial | 11.69 |
| Other | 40.30 |

## SIS Facilities

| | |
|---|---|
| SIS Facilities within Study Area | 5 |
| CSX, Florida Central Railroad, I-4, Florida's Turnpike, SR 528 | |

# 2030 Paw Print: The LYNX Transit Master Plan




## LYNX Study Corridor 15 – John Young Pkwy: Downtown to International Drive

### Legend

**Study Corridors**

- John Young Pkwy: Downtown to International Drive
- US 17-92: Fern Park to Downtown
- SR 528: Disney to OIA
- Kirkman Rd: Park Promenade to International Drive
- Orange Ave: Downtown to Sand Lake Rd
- SR 50: West Oaks Mall to UCF
- US 441/17-92: Florida Mall to Kissimmee
- US 441/17-92: Downtown to Florida Mall
- US 441: Apopka to Downtown
- SunRail
- 1/2 Mile Corridor Buffer

**Transit Routes**

- Existing I-Ride Trolley Route
- 302 Primary LYNX Bus Routes (8, 20, 24, 25, 30, 38, 42, 48, 49, 57, 58, 303, 305)

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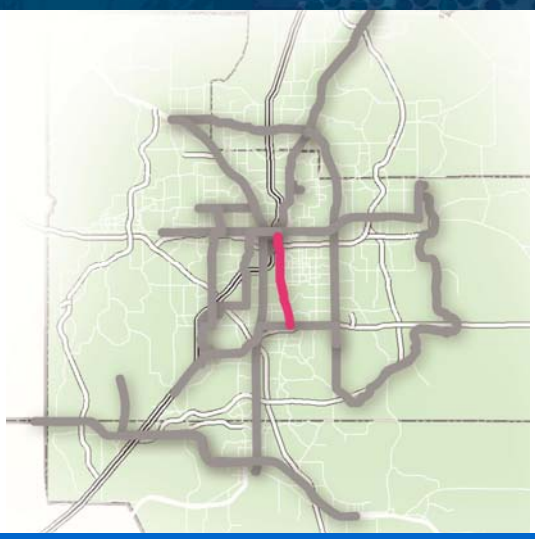
# 16: Orange Ave — Downtown to Sand Lake Rd



## Description of Corridor

This corridor runs north and south along Orange Ave. from downtown Orlando to Sand Lake Rd. The length of the corridor is 6.8 miles.

## Transit Service Profile (2010)

| | |
|---|---|
| Primary Bus Routes | 7, 11, 18, 40 |
| Crossing Bus Routes | 3, 4, 8, 13, 15, 17, 20, 21, 25, 28, 29, 36, 38, 42, 48, 49, 50, 51, 54, 102, 111, 125, 204, 300, 313, 319 |
| Days of Service | Sun to Sat |
| Hours of Service | 6 AM to 11 PM |
| Peak Headways | 60 / 60 minutes |
| Off-Peak Headways | 60 minutes |
| Annual Miles (2009) | 387,525 |
| Annual Hours (2009) | 23,300 |
| Annual Riders | 1,354,880 |

## Corridor Characteristics (2010)

| | |
|---|---|
| Population | 44,626 |
| Employment | 119,785 |
| Population Density (per square mile) | 2,550 |
| Employment Density (per square mile) | 6,845 |

## Major Activity Centers

Downtown Orlando

## Transit Facilities (2010)

| | |
|---|---|
| Transit Centers | 1 |
| Transfer Centers | 0 |
| Park & Ride Lots | 0 |

## Roadway Characteristics (2010)

| | |
|---|---|
| Number of Traffic Signals | 33 |

## Congested Road Segments

| | |
|---|---|
| Segment Average V/C Ratio | 1.40 |

## Bike & Pedestrian Facilities (2010)

| | |
|---|---|
| Miles of Bike Lanes/Trails | 24.14 |
| Miles of Sidewalks | 87.14 |

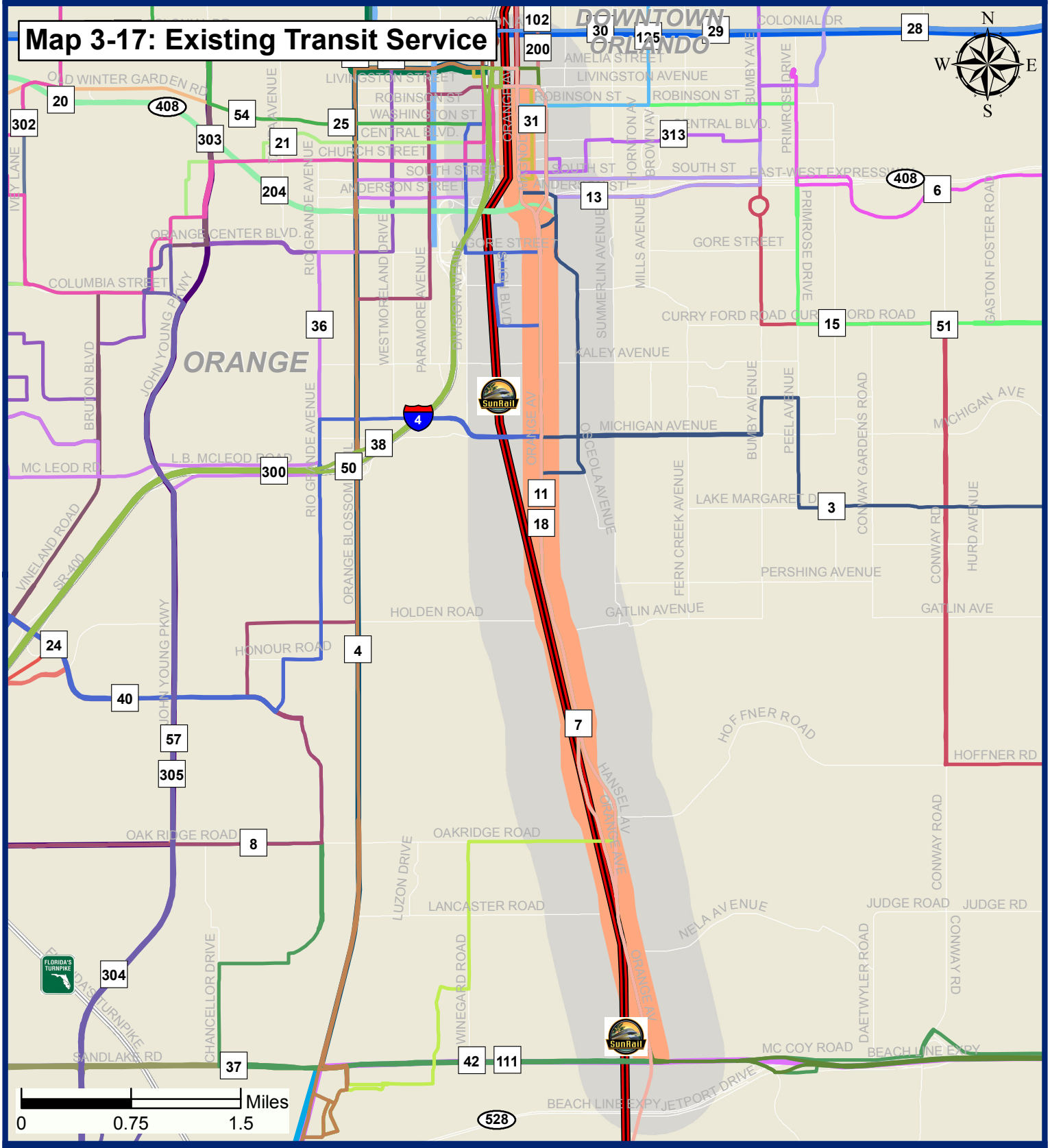
## Land Use Distribution (Percent)

| | |
|---|---|
| Residential | 37.98 |
| Institutional | 0.01 |
| Right of Way | 9.18 |
| Commercial | 8.75 |
| Industrial | 16.16 |
| Other | 27.92 |

## SIS Facilities

| | |
|---|---|
| SIS Facilities within Study Area | 9 |
| Southern Whse & Distrbtn: Orlando, CSX, Florida Central Railroad, Orlando Amtrak, I-4, SR 408, Sligh Blvd, Columbia St, SR 528 | |

# 2030 Paw Print: The LYNX Transit Master Plan




## LYNX Study Corridor 16 – Orange Ave: Downtown to Sand Lake Rd

### Legend

**Study Corridors**

- Orange Ave: Downtown to Sand Lake Rd
- US 17-92: Fern Park to Downtown
- SR 528: Disney to OIA
- John Young Pkwy: Downtown to International Drive
- SR 50: West Oaks Mall to UCF
- US 441/17-92: Florida Mall to Kissimmee
- US 441/17-92: Downtown to Florida Mall
- US 441: Apopka to Downtown
- Silver Star Road to Parramore
- SunRail
- 1-Mile Corridor Study Area

**Transit Routes**

- Existing I-Ride Trolley Route
- 302 Primary LYNX Bus Routes (7, 11, 18, 40)

LYNX® 2030 Transit Master Plan

LYNX®

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A REGIONAL TRANSPORTATION PARTNERSHIP

LYNX 2030 Transit Master Plan

# 17: Kirkman Rd — Park Promenade to International Drive

## Description of Corridor

This corridor runs north and south along Kirkman Rd. and International Drive from Park Promenade to the SR 528 Beach Line. The corridor travels east and west along Silver Star Rd. from Park Promenade to Pine Hills Rd., north and south along Pine Hills Rd. to Colonial Drive, and east and west along Colonial Drive to Kirkman Rd. The route runs east and west along Sand Lake Rd. to travel between John Young Parkway and International Drive. The length of the corridor is 14.1 miles.

## Transit Service Profile (2010)

| | |
|---|---|
| Primary Bus Routes | 8, 21, 37, 38, 40, 42, 49, 58, 125, 301, 302, 304, 305(am) |
| Crossing Bus Routes | 30, 37, 44, 48, 50, 54, 111, 204, 300, 443 |
| Days of Service | Sun to Sat |
| Hours of Service | 6 AM to 11 PM |
| Peak Headways | < 30 / 30 minutes |
| Off-Peak Headways | < 30 minutes |
| Annual Miles (2009) | 641,019 |
| Annual Hours (2009) | 40,542 |
| Annual Riders | 2,598,070 |

## Corridor Characteristics (2010)

| | |
|---|---|
| Population | 103,355 |
| Employment | 88,475 |
| Population Density (per square mile) | 3,085 |
| Employment Density (per square mile) | 2,641 |

## Major Activity Centers

- Valencia Community College - West Campus
- Universal Studios
- Orange County Convention Center

## Transit Facilities (2010)

| | |
|---|---|
| Transit Centers | 0 |
| Transfer Centers | 2 |
| Park & Ride Lots | 0 |

## Roadway Characteristics (2010)

| | |
|---|---|
| Number of Traffic Signals | 46 |

## Congested Road Segments

| | |
|---|---|
| Segment Average V/C Ratio | 1.34 |

## Bike & Pedestrian Facilities (2010)

| | |
|---|---|
| Miles of Bike Lanes/Trails | 33.04 |
| Miles of Sidewalks | 43.63 |

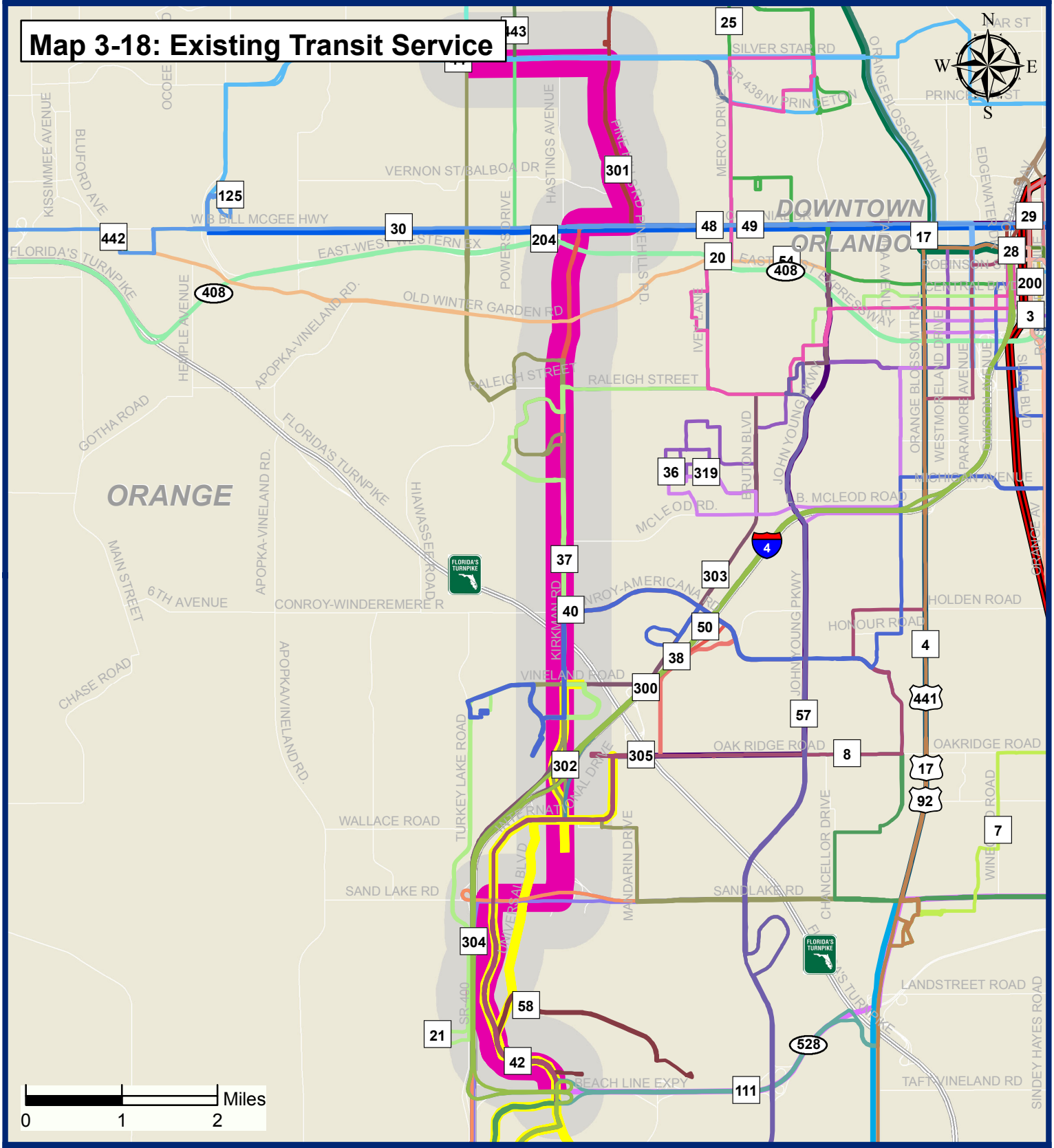
## Land Use Distribution (Percent)

| | |
|---|---|
| Residential | 29.95 |
| Institutional | 0.00 |
| Right of Way | 10.65 |
| Commercial | 11.71 |
| Industrial | 7.68 |
| Other | 40.02 |

## SIS Facilities

| | |
|---|---|
| SIS Facilities within Study Area | 4 |
| I-4, Florida Turnpike, SR 408, SR 528 | |

# 2030 Paw Print: The LYNX Transit Master Plan




## LYNX Study Corridor 17 – Kirkman Rd: Park Promenade to International Drive

### Legend

**Study Corridors**

- Kirkman Rd: Park Promenade to International Dr
- SR 528: Disney to OIA
- John Young Pkwy: Downtown to International Drive
- SR 50: West Oaks Mall to UCF
- US 441/17-92: Florida Mall to Kissimmee
- US 441/17-92: Downtown to Florida Mall
- US 441: Apopka to Downtown
- Silver Star Road to Parramore
- 1-Mile Corridor Study Area
- SunRail

**Transit Routes**

- Existing I-Ride Trolley Route
- 302 Primary LYNX Bus Routes (8, 21, 27, 37, 38, 40, 42, 49, 58, 125, 301, 302, 304, 305)

LYNX 2030 Transit Master Plan

LYNX

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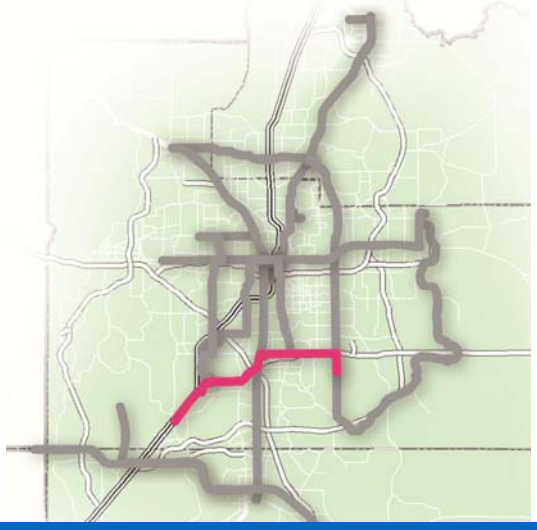
# 18: SR 528 — Disney to OIA



## Description of Corridor

This corridor travels from OIA to Walt Disney World along Sand Lake Rd., SR 528 Beach Line, and I-4. The length of the corridor is 16.3 miles.

## Transit Service Profile (2010)

| | |
|---|---|
| Primary Bus Routes | 4, 11, 42, 111, 301, 302, 303, 304, 305 (am) |
| Crossing Bus Routes | 7,, 8, 18, 37, 38, 41, 50, 51, 57 |
| Days of Service | Sun to Sat |
| Hours of Service | 6 AM to 11 PM |
| Peak Headways | 30 / 30 minutes |
| Off-Peak Headways | 30 minutes |
| Annual Miles (2009) | 682,210 |
| Annual Hours (2009) | 37,855 |
| Annual Riders | 988,055 |

## Corridor Characteristics (2010)

| | |
|---|---|
| Population | 39,998 |
| Employment | 111,362 |
| Population Density (per square mile) | 899 |
| Employment Density (per square mile) | 2,504 |

## Major Activity Centers

- Walt Disney World
- Orange County Convention Center
- Florida Mall
- Orlando International Airport

## Transit Facilities (2010)

| | |
|---|---|
| Transit Centers | 0 |
| Transfer Centers | 3 |
| Park & Ride Lots | 0 |

## Roadway Characteristics (2010)

| | |
|---|---|
| Number of Traffic Signals | 18 |

## Congested Road Segments

| | |
|---|---|
| Segment Average V/C Ratio | 1.02 |

## Bike & Pedestrian Facilities (2010)

| | |
|---|---|
| Miles of Bike Lanes/Trails | 10.28 |
| Miles of Sidewalks | 4.69 |

## Land Use Distribution (Percent)

| | |
|---|---|
| Residential | 10.11 |
| Institutional | 0.05 |
| Right of Way | 14.76 |
| Commercial | 5.10 |
| Industrial | 12.11 |
| Other | 57.86 |

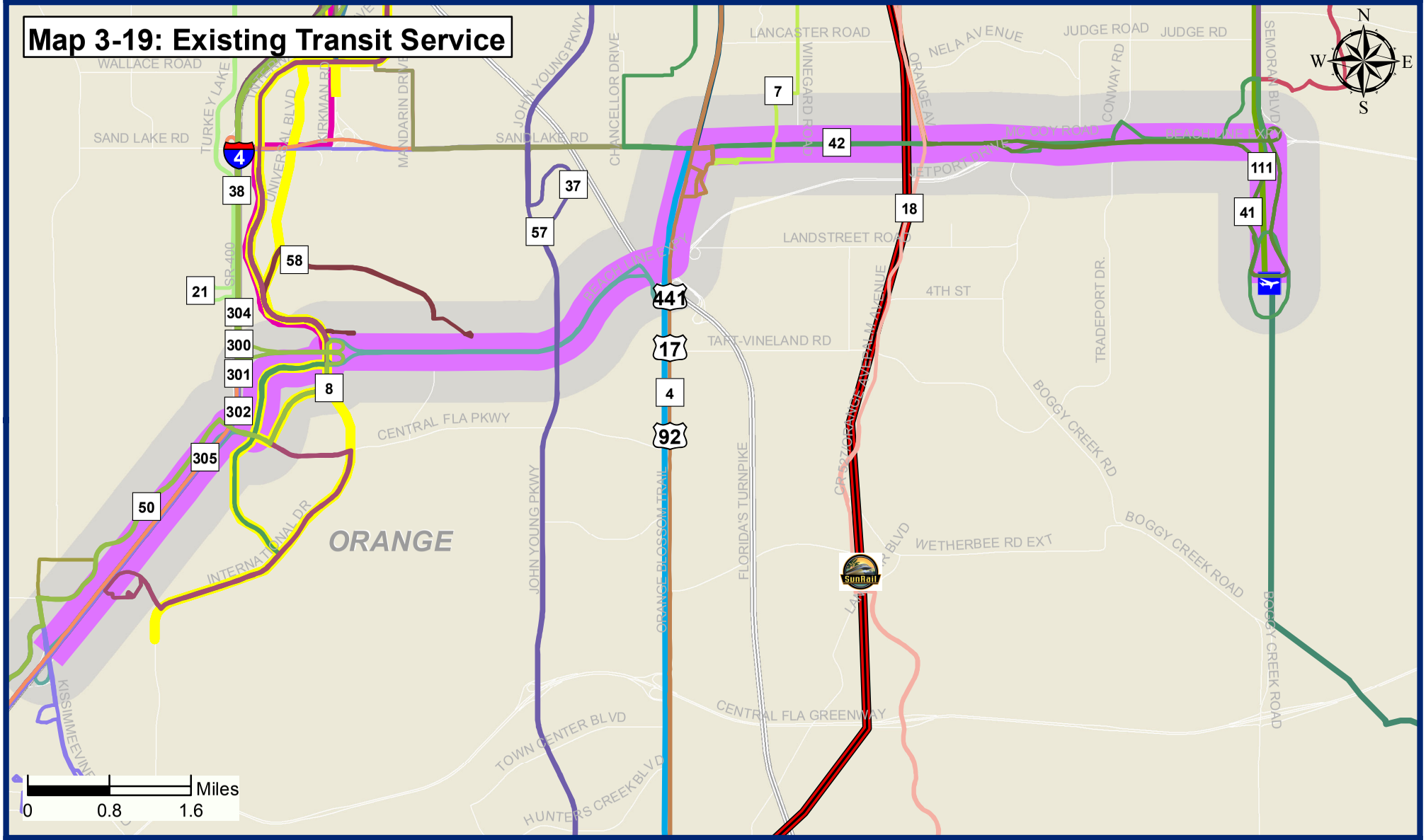
## SIS Facilities

| | |
|---|---|
| SIS Facilities within Study Area | 8 |

Orlando International Airport, CSX, I-4, Florida's Turnpike, SR 528, Tradeport Dr., Boggy Creek Rd., Airport Blvd.

# 2030 Paw Print: The LYNX Transit Master Plan

## Map 3-19: Existing Transit Service




## LYNX Study Corridor 18 – SR 528: Disney to OIA

### Legend

**Study Corridors**

- SR 528: Disney to OIA
- Kirkman Rd: Park Promenade to International Drive
- Orange Ave: Downtown to Sand Lake Rd
- John Young Pkwy: Downtown to International Drive
- US 441/17-92: Florida Mall to Kissimmee
- US 441/17-92: Downtown to Florida Mall
- SR 436: Fern Park to OIA
- Innovation Way: OIA to UCF
- 1-Mile Corridor Study Area
- SunRail

**Transit Routes**

- Existing I-Ride Trolley Route
- 302 — Primary LYNX Bus Routes (4, 11, 42, 111, 301, 302, 303, 304, 305)

LYNX 2030 Transit Master Plan

LYNX

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# 4. Review of Five-Year Service Plan

LYNX recently completed its Five-Year Service Plan which is a planning-level strategic analysis to assess the development of premium transit services between 2009 and 2014. There are four elements of the Five-Year Service Plan: Service Classifications, Primary Corridors, Financial Model, and Recommended Plan Targets. The remainder of this section summarizes the Five-Year Service Plan as it relates to the *2030 Paw Print*.

## SERVICE CLASSIFICATIONS

The first task of the Five-Year Service Plan was to determine service classification definitions. Data such as passengers per hour, residential population served, employment centers served, and transit-dependent riders were considered as part of the evaluation.

The Plan identified the following service classifications:

- **Premium Service -** Serves the region's major roadways and is targeted for 15-minute headways with stops every ¼- to ½- mile.
- **Local Fixed-Route Service -** Feeds into the Premium Service routes, typically serves the region's secondary roadways, and has lower frequency than Premium Service.
- **Flex-Route Service -** Features smaller vehicles circulating within a defined area; can feed into Premium Service routes to provide more regional trips.
- **Deviated Fixed-Route Service -** Serves fixed stops but also allows limited route deviations (typically within ¾-miles of the route).
- **Park & Ride Express -** Limited-stop, commuter-oriented service that serves park & ride lots.
- **Demand Response -** Curb-to-curb service for the transportation disadvantaged.

## PRIMARY CORRIDORS

According to the Five-Year Service Plan, Primary Corridors are defined as those corridors that link the highest trip generating locations (residential areas that have relatively high transit usage)

with the highest employment or commercial trip attraction locations. Census and daily ridership data were used in the plan to identify fourteen Primary Corridors. The information used to define the Primary Corridors in the plan included the following.

- Passenger daily ridership totals by route
- Passenger boarding and alighting data by transit stop
- Population density by area
- Household median income averages by area
- Low automobile ownership by area
- Predominant minority residential areas
- Employment destinations

## FINANCIAL MODEL

The financial model is a comprehensive financial analysis tool that enables LYNX staff to analyze the financial impact of alternative bus system service plans relative to the existing service plan. The financial model allows comparisons on both the system-wide and individual route level. The model was developed to allow for simple updates to the cost and revenue assumptions and growth rates. There are four components of the model: operating and maintenance costs, operating revenues, capital costs, and capital revenues.

## FIVE-YEAR PLAN RECOMMENDATIONS

The Five-Year Service Plan examined the primary corridors of the current transit system and then identified a 2014 Enhanced Core System. Based on this approach, primary objectives were identified in the Five-Year Service Plan for the 2014 Enhanced Core System:

- Transit service on the 14 Primary Corridors should operate at a maximum of 15-minute headways
- LYNX services should provide access to proposed SunRail commuter stations
- Service to new regional developments (e.g., Lake Nona) should be considered
- LYNX should identify candidate Bus Rapid Transit (BRT) corridors
- LYNX should identify feeder services/corridors

Primary Corridors and existing routes with high ridership were reviewed for potential implementation of Premium Transit service or BRT. The following corridors and routes were identified for the potential implementation of BRT.

- SR 50 from Oakland to Alafaya Trail (Link 30)
- SR 436 from Apopka to Orlando International Airport (Link 41)

- US 441 from Apopka to Kissimmee (Links 17 and 4)
- US 192 from US 27/Clermont to St. Cloud (Links 55 and 10)

The Five-Year Service Plan anticipates the need for capital improvements to support BRT and other Premium Transit Services. New bus units, improved shelters, transfer stations with electronic information systems, and potentially a new maintenance facility are all expected future capital improvements.

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# 5. Strategic Master Plan Framework

This section summarizes the proposed framework for the *2030 Paw Print*. The framework is developed with the main focus of incrementally building a strong premium transit network that will serve as the backbone of the regional transit network in the tri-county service area.

A key goal of the strategic plan is to significantly increase the level of transit usage in the region by creating a seamless, linked transit network using a variety of mobility services, including local bus, express bus, BRT, streetcar, light rail, commuter rail, and high speed rail, thereby helping to build the balanced transportation system envisioned in the regional METROPLAN Orlando 2030 LRTP.

With this goal in mind, the LYNX strategic plan service development framework is designed to incorporate input from various growth scenario analyses as well as local and regional stakeholders. The process provides for an incremental development of the existing high capacity bus transit corridors into a well-connected premium transit network over the next 20 years. To be successful, as each of the high capacity transit corridors moves up to premium transit service, a network of supporting transit services also has to be developed.

## FRAMEWORK

The framework consists of three steps.

**Step 1 Segment Identification** - The corridors were divided into segments for ease of analysis. Segments were determined based on the following characteristics:

- Population density
- Employment density
- Land use
- Area type (e.g., downtown versus suburban)
- User market (e.g., tourist versus resident)
- Accessibility (i.e., where two segments overlap)

Some corridors consist of only one segment while some consist of five or six segments.

**Step 2 Segment Potential** - In this component of the framework, corridors are evaluated at the segment level using a number of criteria:

- Criteria used in Step 1
- Transit orientation (i.e., its ability to support transit based on the percentage of low-income households, zero-vehicle households, youth, and older Americans)
- Activity centers
- Average trip length
- Existing transit ridership
- Right-of-way availability

Using these criteria, preliminary segment-mode combinations are developed for each of the 18 study corridors.

**Step 3 Corridor Prioritization** - In the corridor prioritization component, a set of refined segment-mode combinations are developed based on the preliminary results from the Corridor Potential component, corridor characteristics, and any operational and policy guidance from LYNX and/or other key stakeholders. The 18 corridors with selected premium transit mode combinations are then assessed using an array of well-defined corridor evaluation criteria, resulting in a rank ordering of the 18 corridor/mode combinations for the next 20 years.

- Criteria used in Step 1 and 2
- Transit demand (i.e., future demand for transit services)
- Traffic conditions (i.e., the extent to which a road is congested)
- Planned roadway improvements
- Compatibility (i.e., the compatibility of the corridors once aggregated into a system)

**Scenarios**

In addition, the framework takes into account the two distinct land use development patterns as identified by METROPLAN Orlando in its LRTP. The first is the trend land use development pattern in which current land development and population growth patterns prevail. The second is the transit-oriented land use development pattern which examines land development and population growth if smart growth principles are applied. The latter was the land use development scenario adopted in the 2030 LRTP.

In addition to the two land use development patterns, two funding levels were applied. The two funding levels include the current funding level and a higher funding level which would emerge from securing a dedicated transit funding source. The result is an analysis for a baseline and two

scenarios.

- **Baseline (auto-oriented, current land use development pattern with current funding) -** This includes the service development framework if the historical land use approach is continued for the next 20 years

- **Transit-Oriented Land Use Scenario with Current Funding** - This includes the adopted alternative land use scenario without any new funding available from a local revenue sources

- **Transit-Oriented Land Use Scenario with Increased Funding** - This includes the adopted smart growth principles-based alternative land use scenario with the availability of new dedicated local funding for transit improvements

Figure 5-1 presents the proposed framework for the strategic plan transit service development for the tri-county area in the next 20 years.

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# Figure 5-2
# Corridor Service Development Framework

## 18 Corridors

- Corridor #1
- Corridor #2
- Corridor #3
- ……
- ……
- Corridor #17
- Corridor #18

## Corridor Potential

### Alternative Land Use Scenario

### Baseline

**Step 1**

**Corridor Segments**

**Corridor Segment Characteristics** + **Transit Mode Characteristics**

**Corridor Segment Evaluation Criteria**

- Evaluation Criteria 1
- Evaluation Criteria 2
- Evaluation Criteria 3

**Step 2**

**Preliminary Segment-Mode Combinations**

| Corridor | Segments | Segment Mode Potential: Short-Term | Mid-Term | Long-Term |
|---|---|---|---|---|
| 1 | Segment A | | | |
| | Segment B | | | |
| | Segment C | | | |
| 2 | Segment A | | | |
| | Segment B | | | |
| 3 | Segment A | | | |
| | Segment B | | | |
| … | … | | | |
| 17 | Segment A | | | |
| | Segment B | | | |
| 18 | Segment A | | | |
| | Segment B | | | |

- Light Rail (LRT)*
- Bus Rapid Transit (BRT)
- Enhanced Express Bus (EEB)
- No Premium Transit

* Includes LRT or Street car

## Corridor Prioritization

### Alt. Land Use with Current Funding

### Alt. Land Use with Increased Funding

### Baseline

**Preliminary Segment-Mode Combinations**

**Corridor Characteristics** +  Committee Input

**Refined Segment-Mode Combinations**

**Step 3**

**Corridor Prioritization Criteria**

- Prioritization Criteria 1
- Prioritization Criteria 2
- Prioritization Criteria 3
- Prioritization Criteria 4
- Prioritization Criteria 5

**Corridor Characteristics** +  Committee Input

**Corridor Priorities/Modes - Premium Transit**

| Rank | Corridor | Short-Term | Mid-Term | Long-Term |
|---|---|---|---|---|
| 1 | Corridor 2 | • BRT • EEB | • BRT | • LRT |
| 2 | Corridor 3 | • BRT • LRT | • BRT • LRT | • LRT |
| 3 | Corridor 12 | • EEB | • BRT | • LRT |
| … | … | | | |
| 17 | Corridor 9 | • EEB | • EEB | • EEB |
| 18 | Corridor 7 | • EEB | • EEB • BRT | • BRT |

**Circulator Network** + **Feeder Network**

**Premium Network** + **Feeder Network** + **Circulator Network**

**Strategic Master Plan Network**

Note: Not all the corridors under study are shown. Data shown are for display purposes only. Information presented here are subject to change based on additional input.

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# Appendix A Review of Plans & Studies

This appendix provides a more detailed review and assessment of each document or program summarized in Table 1. Also provided is a discussion of the relationship to or potential implications for LYNX.

## LYNX TDP 2008 MAJOR UPDATE

The most recent major TDP update was developed in 2007 for Fiscal Year 2008. The next scheduled major update is in 2012 for Fiscal Year 2013. LYNX developed two major objectives for planning transit services in the tri-county area as part of the TDP 2008 Major Update:

1. Maximize mobility within the Orlando metropolitan area by ensuring that public transit is provided in the right places, at the right times, to satisfy the changing travel needs within the community.
2. Ensure that all transit services operated by LYNX are as safe, efficient, and cost effective as possible and, therefore, affordable to both the LYNX customers and local taxpayers.

Some challenges that face LYNX in continuing to implement ITS strategies include:

- Providing low-cost, safe, and reliable service to those individuals who have very limited transportation options. Cost is a critical concern for these individuals.
- The need to maintain and increase ridership, especially among those who have the option of driving their own vehicles, in order to advance regional air quality and traffic congestion objectives.
- To maximize available capacity and reduce subsidy (the difference between revenues and costs).
- Provide a level of service (frequency and reliability) that rivals the personal vehicle.

These challenges combine to create three basic conclusions for the future of LYNX service:

- Keep fares low.
- Continually improve service quality in order to retain and increase ridership.
- Improve efficiency and productivity in any and all aspects of the operation in order to enhance cost recovery and minimize subsidy.

**LYNX TDP 2011 MINOR UPDATE**

While the next major TDP update is scheduled for 2012, annual updates are developed in interim years. The current version is the TDP 2011 Minor Update. Five strategic areas were identified as appropriate goals for the coming year. The Board then identified objectives under each goal. After identifying goals, LYNX began a vigorous campaign of activities to achieve these goals. Goals, Objectives, and Activities include the following:

Goal #1: Funding

Objectives:

- Protect existing funding sources
- Identify and pursue a variety of funding sources/opportunities to meet service needs (Federal and state grants, etc.)
- Identify and secure a new dedicated funding source

Activities:

- Keep in constant contact with local Representatives and monitoring legislative activities regarding transit funding and infrastructure
- Develop close relationships with local funding partners
- Pursue grants such as these under Homeland Security, Job Access and Reverse Commute (JARC) and New Freedom Program (NFP)
- Continue to advertise
- Pursue an Alternative Fuel Grant

Goal #2: Human Resources

Objectives:

- Develop and implement employee training program (professional development)
- Conduct employee survey
- Develop program for employee retention and succession planning
- Review benefits and salaries for recruitment and retention of employees

Activities:

- LYNX University was created to align training in support of employee's job descriptions
- Performance evaluations were revamped and changed into a more service excellence-focused document known as the Professional Development Assessment
- LYNX Service Standards and Service Philosophy were added to all job descriptions and job postings
- Service excellence training was incorporated into the New Hire Orientation
- Began recognizing employees who are celebrating memorable anniversary dates with the agency at the monthly managers/chiefs meeting

Goal #3: Service Provision

Objectives:

- Improve on-time performance
- Adopt appropriate technology to enhance service provision
- Design and install additional shelters
- Explore possibility of developer provision of amenities (shelters, bus pull-outs, etc.)

Activities:

- Increased efficiency of services: later and weekend service added on existing Links and frequency increased on certain Links
- Some services were reduced or eliminated in order to increase system-wide efficiency
- Installed twenty six (26) shelters with ten (10) more in progress for site work and installation

Goal #4: Internal and External Communication

Objectives:

- Produce maps/visuals showing routes, schedules, ridership, shelters, passenger information at stops
- Expand public education program to grassroots level (i.e., electronic, personal, partners, beyond three counties)
- Internal education program for employees

Activities:

- A new LYNX trip planner was introduced
- A number of publications, including *InTheLoop, Between the Routes*, and *ACCESS LYNX Update*, were developed to communicate with LYNX employees, customers, and the community

Goal #5: Improving Organizational Efficiency

Objectives:

- Evaluate processes for improving procurement, warranties, hiring, payroll processes, staffing levels, and duplication of effort (documenting and educating)

Activities:

- Developed measurement strategy for key areas in the agency
- Updated and expanded the “Nip-It-In-The-Bud” program to include all employees of the organization
- Implemented “Ask the CEO” question boxes to identify areas needing improvement, and then acted on the items suggested
- Re-designed the company newsletter to make it more attractive
- Designed poster for all three facilities to better display upcoming event information

- Wellness Committee opened and expanded the Blood Pressure Awareness campaign for all employees
- A health screening assessment was implemented for all employees

Finally, recommendations were added for the new tenth year of the updated plan. According to the *FDOT Guidance for Producing a Transit Development Plan* manual, "It is recognized that the tenth year action plan will not have the benefit of the comprehensive study carried out in the original TDP development. Thus, this tenth year plan…may well be modified at the next major TDP update." Per the above, LYNX does not have specific added recommendations for the new tenth year (FY 2020) at this time. However, it is anticipated that the *2030 Paw Print* will have added recommendations for the new tenth year. These recommendations will be reflected in next year's annual report, and will be incorporated into the next major update of the LYNX TDP in 2012.

**METROPLAN ORLANDO 2030 LRTP**

The 2030 METROPLAN Orlando LRTP represents the latest effort to anticipate the region's future transportation needs. The following seven goals were established for the 2030 LRTP.

- Goal #1: Integrated Regional System
- Goal #2: Balanced Multimodal System
- Goal #3: System Safety
- Goal #4: Efficient and Cost-Effective System
- Goal #5: Quality of Life
- Goal #6: Environmental Sensitivity
- Goal #7: Economic Growth

To reach these goals, the following recommendations made under the 2030 Plan:

- Increase funding,
- Control development,
- Reduce demand,
- Provide a multimodal system, and
- Develop new technologies.

Under the 2030 Plan, a new "shift" in land use patterns has been assumed. The *How Shall We Grow?*- based alternative land use represents a major shift from previous transportation plans for the region. The adopted land use pattern focuses on transit oriented development. The adopted LRTP provides land use development plans for each local government covered by the LRTP. Resulting benefits of this approach were consistent across the board: increased mobility,

decreased congestion, reduction of vehicle miles of travel and vehicle hours of travel, reduction in ozone-generating compounds, and reduction of greenhouse gases.

The 2030 LRTP makes assumptions as to the future funding mechanisms to be available to LYNX, but the revenues from these sources will not be able to fund all of the transportation projects needed in the region. Therefore, additional funding strategies must be developed in the future to reach a level of funding that can keep up with the transportation needs of the region.

**LYNX FIVE-YEAR SERVICE PLAN**

In 2009-2010, LYNX developed the Five-Year Service Plan. The Five-Year Service Plan is a planning-level strategic analysis to assess the development of premium transit services. There are four elements of the Five-Year Service Plan: Service Classifications, Primary Corridors, Financial Model, and Recommended Plan Targets.

As part of the Service Classifications section, the Five-Year Service Plan identified the following Service Classifications.

- Premium Service
- Local Fixed-Route Service
- Flex-Route Service (e.g., PickUpLine)
- Deviated Fixed-Route Service
- Park & Ride Express
- Demand Response (e.g., ACCESS LYNX)

In addition to Service Classifications, Primary Corridors were identified. Primary Corridors serve a majority of daily riders along the area's major roadways. The Primary Corridors link the highest trip-generating locations (residential areas that have relatively high transit usage) with the highest employment or commercial trip attraction locations.

The financial model is a comprehensive financial analysis tool that enables LYNX staff to analyze the financial impact of alternative bus system service plans relative to the existing service plan. The financial model allows comparisons on both the system-wide and individual link level. The model was developed to allow for simple updates to the cost and revenue assumptions and growth rates. There are four components of the model: operating and maintenance costs, operating revenues, capital costs and capital revenues.

The final element of the Plan identified potential regional service modifications based upon the review of current services and financial performance. Recommended modifications include high frequency premium transit service along the area's major roadways, served by community and

neighborhood-based feeder transit. This Enhanced System represents a short-term, five-year target for LYNX.

The primary objectives of the Enhanced System for the horizon year of 2014 are as follows.

- Transit service on the 14 Primary Corridors should operate at a maximum of 15-minute headways
- LYNX services should provide access to proposed SunRail commuter stations
- Service to new regional developments (e.g., Lake Nona) should be considered
- LYNX should identify candidate Bus Rapid Transit (BRT) corridors
- LYNX should identify feeder services/corridors

## LYNX 2006 COMPREHENSIVE OPERATIONS ANALYSIS

The last full COA was conducted in 2006. Through the COA, two components of the LYNX fixed-route bus system—efficiency and effectiveness—are assessed. Through review of existing bus service, route alignment changes, schedules and frequencies, and infrastructure modifications since the previous COA, an action plan for current and future service is developed. This analysis provides necessary data for future expansion, solidifies the foundation of bus service delivery, and provides for service enhancements. The COA provides opportunities for staff to improve routes, gauge passenger satisfaction, and gather passenger origin and destination characteristics. The COA consisted of surveys, GIS-based analyses, management and line personnel input, automated passenger counter (APC) data, local service requests, and other quantitative and qualitative tools.

The LYNX short-range plan as identified in the 2006 COA includes the following recommendations.

- New transit centers and park & ride lots
- Full implementation of the Central Florida Commuter Rail project's preferred alternative
- Selected route deviations and modified frequencies
- Implementation of call-and-ride zones
- LYMMO service expansion
- Additional service implementation run by outside operators
- Increased number of buses and annual bus hours

## SUNRAIL PLAN

In December 2009, Governor Charlie Crist signed legislation enacting the start-up of commuter rail services in the greater Orlando area, to be called SunRail. The 31-mile first phase of SunRail will serve 12 stations, linking DeBary in Volusia County to Orlando in Orange County. Phase II

will serve five additional stations, north to DeLand and south to Poinciana. Service for Phase I is expected to begin in 2013. Feeder services from the rail stations in Seminole, Osceola, and Orange Counties will be provided through the existing LYNX fixed-route network, with enhancements to these routes funded through FDOT. LYNX is presently developing the feeder bus network and associated costs with FDOT and their consultant. This process is expected to be finalized within the next three to six months.

SunRail will utilize the existing CSX freight rail line running 61 miles from Deland in Volusia County through Poinciana in Osceola County. This SunRail corridor offers the opportunity to:

- Connect urban centers,
- Create redevelopment opportunities, and
- Relieve automobile trips from Interstate 4.

The total construction cost of the system is estimated at $615 million. The four counties that will be served by SunRail supported the initiative and all of the proposed 17 stations are at some level of design. SunRail is the spine of the transportation system of the future, and one of the most critically important transportation legs of the Regional Vision. It has been supported by the 2030 and 2035 LRTPs for the four counties it will serve. SunRail could work as a catalyst for intense economic growth around commuter rail stops by promoting higher densities and mixed uses, and redirecting growth towards areas served by transit.

**DOWNTOWN ORLANDO TRANSPORTATION PLAN**

The Downtown Orlando Transportation Plan (Downtown Plan) addresses transportation across all modes. The plan recognizes that regardless of individual travel preferences, all trips begin and end with the traveler as a pedestrian. Transit is a natural extension of a pedestrian trip and vastly expands the range a pedestrian can cover in a short time. Transit becomes practical and attractive to auto owners when the same trip can be made by walking and transit faster and/or cheaper than by driving and parking. Moreover, available roadway capacity solutions will be costly and can provide only limited net new capacity to the downtown. The Downtown Plan identifies projects and strategies following these principles that result in plans, programs, and policies for adoption and implementation in the City land development regulations, Capital Improvement Plan, Growth Management Plan, and in coordination with regional transportation agency plans. The following strategies were developed as part of the Downtown Plan.

- Reduce through-traffic on Orange Avenue by coordinating parallel road improvements, investing in transit options, and integrating system and demand management measures to allow two-way traffic to occur, where feasible.

- The majority of automobile trips to/from the downtown are via I-4 and SR 408. Traffic from access ramps should be efficiently directed to parking with minimal circulation.
- Apply the hierarchy of major and minor traffic streets for related on-street parking, freight zone, and streetscape requirements.
- Minimize traffic diversion onto neighborhood streets by prioritizing signals and capacity for major and minor traffic streets.

Several guiding principles were developed as a means to make public transportation in Orlando reliable, convenient, and attractive.

- Use downtown transit circulators as a feeder/distributor system for commuter rail and regional transit to increase regional transit accessibility to residential, office, retail, and entertainment venues.
- Utilize the transit circulator system to reduce traffic and parking demands and connect destinations and attractions for residents and visitors.
- Downtown circulators should maintain a unique identity from other regional and local transit options for branding, marketing, and user recognition.
- Support expanded and intensified mixture of transit supportive land uses as a catalyst for quality redevelopment and support mobility goals.
- Amend and revise land development requirements for transit oriented development within ¼- mile of designated transit corridors.
- Emphasize mobility and vitality of streets providing clear connections to regional transit systems.
- Integrate recommendations for primary pedestrian streets along transit corridors.
- Use roadway improvements and signal priority to make transit travel times competitive with other modes.

## CITY OF ORLANDO MULTIMODAL TRANSPORTATION IMPACT FEE UPDATE

The City currently levies a transportation impact fee that was updated in 1996 and 2006. In 2007, the City formed an Ad Hoc Transportation Advisory Committee to discuss transportation supply, demand, funding, and fees. Based on the recommendations of the Committee, a new transportation impact fee study that accounts for multiple modes of transportation and that also addresses future potential revenue sources to reduce the transportation funding gap identified by the Transportation Advisory Committee will be prepared. Phase I of the project will involve data gathering, stakeholder interviews, meetings with City staff, and an initial impact fee advisory committee meeting. Phase II will include technical analysis, documentation, revenue enhancements, staff meetings, and an Impact Fee Advisory Committee (IFAC) meeting. Phase III is the adoption process and includes the legal review with ordinance comments, the final IFAC meeting, staff meetings, and administration/council briefings.

A multimodal transportation impact fee using the current value of the total transportation assets, which includes automobile, transit, bicycle, and pedestrian facilities will be developed as part of the impact fee assessment process. Initially, the total value of the assets will be heavily weighted toward automobile facilities. However, as the emphasis of future transportation system improvements shifts toward non-automobile improvements, the mix of assets will transition to a greater percentage of asset value for transit, bicycle, and pedestrian assets.

**OSCEOLA COUNTY LONG RANGE TRANSIT PLAN**

*This document has not been released to date. The draft is still under review by Osceola County staff.*

**STRATEGIC REGIONAL POLICY PLAN (EAST CENTRAL FLORIDA 2060 PLAN)**

Traffic congestion and delay are significant problems in the East Central Florida Region. From 1982 to 2005, the Orlando metro area ranked seventh worst nationally for large cities in delay per traveler with an annual delay of 36 hours per traveler. This is caused primarily by two factors:

- Low density auto-oriented sprawling development patterns that force people to drive everywhere for almost every human need.
- A disconnected local street network, which prevents cross connections between neighborhoods, thus forcing local trips onto the collectors, arterials, and even interstates. This overloads these roads and requires them to be widened, which causes more delay with dedicated left turns at intersections, making the problem worse.

FDOT used computer modeling to project future delay and congestion on the region's roads, and found that if the current low-density, auto-oriented sprawl development patterns are continued, the region's major roads will be severely congested by 2050. This will further erode quality of life and make it more difficult for the region to compete in the world economic marketplace.

Recommendations include the following:

- The region should evaluate major transportation improvements by measuring the overall goals of a complementary land use and transportation system, including its impacts on quality of life for residents and potential for economic development.
- To balance a regional transportation system, there must be consideration for land use reform, infrastructure reinvestment, and transit.

Based on these recommendations, the following goals and objectives were identified:

- Encourage multimodal transportation systems
- Construct parking bays for buses at select locations
- Evaluate feasibility of mass transit projects as an alternative to road projects
- Consider ridership needs, market transit, assess increasing subsidies
- Provide park & ride facilities and encourage employer participation
- Coordinate transit in design and development of projects
- Follow the Strategic Regional Policy Plan as Adopted July 1998
- Provide for Fair Share transit contributions under SB360

**DOWNTOWN CIRCULATOR (LYMMO) EXPANSION ALTERNATIVES ANALYSIS**

The purpose of this study is to provide a fresh look at potential LYMMO expansion, following FTA's Alternatives Analysis procedures. The report will analyze the following:

- Mode and alignment alternatives
- Ridership demand
- Costs and impacts
- Potential funding strategies

The study area is defined as by the following guidelines:

- Focuses on downtown Orlando and surrounding area
- Includes all of the downtown Community Redevelopment Agency (CRA) area
- Includes residential areas such as Parramore, Thornton Park, and College Park
- Includes two major hospital areas (Florida Hospital, Orlando Health)
- Includes potential connections to Mills Park and the area referred to as SODO (i.e., South of Downtown Orlando)

The project consists of three phases to be completed between 2010 and 2013. The first phase focuses on data gathering and existing conditions. The second phase incorporates public involvement and initial screenings with a report submitted to FTA. The third phase involves applying to FTA for Federal funding.

The following draft goals have been identified for the Alternatives Analysis.

Goal #1: Improve Mobility and Transit Accessibility throughout Central Orlando
Objectives:

- Improve travel circulation by connecting major activity centers in area
- Provide an effective connection to existing and future regional transit services, including SunRail

- Improve transit level of service between existing and future major trip destinations
- Support development of a pedestrian environment with increased transit use and more walking in central city area
- Accommodate travel demand associated with special events through alternative modes

Goal #2: Assure Equitable Transportation Options for the Community
Objectives:

- Provide additional services for the transit dependent population
- Provide equitable transportation services and benefits to all users
- Provide equitable sharing of costs for transit improvements among those who benefit from them

Goal #3: Enhance the Quality of the Environment
Objectives:

- Promote transit improvements that are consistent with adopted growth management plans
- Manage parking demand within downtown and other activity centers to promote sustainability
- Improve air quality by reducing automobile emissions and pollutants
- Minimize encroachment on sensitive residential areas and environmental features

Goal #4: Enhance the Social Integrity of the Urban Community
Objectives:

- Improve neighborhood accessibility and connectivity with enhanced transit service
- Provide transit improvements in a manner that does not bisect communities

Goal #5: Promote Economic Development and New Development/Redevelopment Opportunities
Objectives:

- Serve existing and future high-density land uses (e.g. mixed-use, residential, commercial, office, and institutional use) with improved transit
- Provide transit investments supportive of the City's redevelopment/development and land use plans
- Encourage transit-oriented development projects by the public and private sector that would promote transit use

Goal #6: Develop Transportation Options that are Financially Viable
Objectives:

- Determine the ability of local agencies to fund the estimated local share of capital costs

- Determine the ability of local agencies and the private sector to fund estimated operating and maintenance (O&M) costs
- Develop transit improvements in the most cost-effective manner
- Maximize the economic benefits gained from transit capital investments
- Implement transit improvements in a timely manner

## HIGH SPEED RAIL

In April 2009, the Federal government unveiled a new national plan for intercity passenger rail. On January 28, 2010, President Obama announced that Florida was awarded $1.25 billion in American Recovery and Reinvestment Act (ARRA) funds to start construction of the Tampa-Orlando leg of the Federally-designated Tampa-Orlando-Miami high speed rail corridor. The Tampa-Orlando line will run 84 miles from downtown Tampa to Orlando International Airport and is estimated to cost $2.6 billion to build. Trains will operate at speeds as high as 168 miles per hour. FDOT is responsible for building the project with oversight by the Federal Railroad Administration (FRA). Construction is projected to start in 2012 and system operation is scheduled for 2015.

## 2025 FLORIDA TRANSPORTATION PLAN

The 2025 Florida Transportation Plan (FTP) was updated and adopted in 2005. The 2025 FTP is Florida's statewide 20-year transportation plan, which provides a policy framework for allocating funding that will be spent to meet the transportation needs of the state. Florida is committed to providing livable communities and mobility for people and freight through greater connectivity and meeting the rising needs of businesses and households for safety, security, efficiency, and reliability. The FTP provides goals and objectives for Florida's transportation system. The long range goals and objectives that are pertinent to LYNX are provided below.

Goal #1: Enrich quality of life and responsible environmental stewardship
Objective

- Plan, develop, implement, and fund the transportation system to accommodate the human scale, including pedestrian, bicycle, transit-oriented, and other community-enhancing features, unless inappropriate

Goal #2: A stronger economy through enhanced mobility for people and freight
Objectives

- Focus attention on meeting regional mobility needs that transcend traditional jurisdictional boundaries and ensuring connectivity between Strategic Intermodal System (SIS), regional, and local facilities
- Facilitate economic development opportunities in Florida's economically-distressed areas by improving transportation access from these areas to markets in a manner that reflects regional and community visions

- Develop multimodal transportation systems that support community visions
- Expand transportation choices to enhance local mobility and to maintain the performance of the SIS and regionally-significant facilities
- Reduce per capita vehicle miles traveled by single occupancy vehicles, especially during peak hours of highway use
- Ensure that the transportation system is accessible to all users, including young, elderly, disabled, and economically-disadvantaged persons

Goal #3: Sustainable transportation investments in Florida's future

- Reduce the cost of providing and operating transportation facilities
- Document the gap between funding resources and needs across all levels and all modes in a consistent and compatible format

In summary, the FTP supports the development of state, regional, and local transit services. The growth in Florida requires new and innovative approaches by all modes to meet the needs today and in the future.

## 2060 FLORIDA TRANSPORTATION PLAN UPDATE

FDOT is currently in the process of creating the 2060 FTP Update. For the first time, the planning horizon for the FTP will extend beyond 20 years. The longer planning horizon will help focus attention on Florida's most pressing long-term issues over the next 50 years, rather than just on current transportation needs. The 2060 FTP identifies the goals, objectives, and strategies to address the long-term needs of the state transportation system and to guide the expenditure of Federal, state, and local transportation funds. As the statewide transportation plan for all of Florida, the 2060 FTP is developed with the cooperation of the many public, private, and civic partners involved in transportation. FDOT is charged by state law with convening these partners and the public to develop a state transportation plan every five years. The 2060 FTP is expected to be adopted by December 2010.

## DOT LIVABILITY INITIATIVE AND THE FEDERAL SUSTAINABLE COMMUNITIES PROGRAM

All of FTA's programs work to enhance the livability of communities by providing transportation options for people and communities across the country. FTA's grant programs provide flexibility for communities to make investments in transit as part of multimodal transportation networks, with connections to improved facilities for walking and bicycling, and encouragement of transit oriented developments. The programs below represent highlights of the policies and provisions specifically intended to help communities improve their quality of life by identifying investments in transit. Note: Most of these policies/provisions do not have designated funding sources associated with them. Rather, these elements are eligible for Federal transit funds under appropriate FTA grant programs.

- **Transit Oriented Development:** FTA encourages Transit Oriented Developments (TODs) through its grants, programs, research, and technical assistance, and various partnerships. TOD is defined as compact, mixed-use development near transit facilities with high-quality walking environments. TODs create sustainable communities where people of all ages and incomes have transportation and housing choices, increasing location efficiency where people can walk, bike and take transit. In addition, TODs boost transit ridership and reduce automobile congestion, providing value for both the public and private sectors, while creating a sense of community and place. Transit elements of TOD are eligible for FTA funding.

- **Joint Development:** Joint development is a specific form of transit-oriented development that is often project- specific, taking place on, above, or adjacent to transit agency property that was acquired (in whole or in part) with Federal transit funds. It involves the common use of transit-owned property for transit and non-transit (public or private) purposes. Proximity to rapid transit has been shown to enhance economic development and can increase the opportunity for fostering community and development partnerships. Joint development activities are subject to FTA review for eligibility of transit funding.

- **Transit Enhancements:** The term "transit enhancement" (TE) means projects or project elements that are designed to enhance mass transportation service or use and are physically or functionally related to transit facilities. FTA's Urbanized Area Formula Grant Program requires at least one percent of money to be used for transit enhancements. Transit enhancement activities might include landscaping, public art, bus shelters, bicycle access and storage facilities, signage, access for persons with disabilities, and historic preservation. Other transit enhancement funding is also available under the Surface Transportation Program (STP).

- **Bike and Pedestrian:** Federal surface transportation law provides tremendous flexibility to states, metropolitan planning organizations, and transit agencies to fund bicycle and pedestrian improvements from a wide variety of programs. As such, funding from FTA grant programs can be used for bicycle facilities and access, and pedestrian-related enhancements connected to transit facilities.

- **Intercity Bus (5311(f)):** The Intercity Bus program under FTA's Nonurbanized Area Formula Grant Program supports the connection between nonurbanized areas and the larger regional or national system of intercity bus service. The program provides critical transit access to residents in nonurbanized areas to employment, health, educational, and other important "human" services and opportunities.

- **Art in Transit:** "Art in Transit" is an example of the quality of life initiatives FTA is able to support through the Urbanized Area Formula Grant Program, STP, and other funding sources. FTA program funds may be used for the costs of design, fabrication, and installation of art that is part of a transit facility. FTA's Art in Transit program encourages the creation of transit facilities that are integral components of communities. Information about the character, makeup, and history of the neighborhood can be included in the public art through artist involvement with the local residents and businesses.

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# Appendix B – Corridor Map Series

Appendix B contains the corridor map series used to create the corridor profiles found in Section 3. The appendix is ordered by corridor. For each corridor, the following maps are provided. Each map represents the most recent data available.

- Transit Services & Facilities
- Population Density (low-income)
- Population Density (total-income)
- Employment Density (low-income)
- Employment Density (total-income)
- Roadway Number of Lanes
- Roadway Level of Service
- Existing Bicycle Facilities & Sidewalks
- Land Use

Due to the large number of maps, they were not reproduced in this document, but copies are provided on the enclosed compact disc.

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