Lake Ridge Neighborhood Mobility Masterplan 2015 - 2025

FINAL REPORT

Prepared by:

TY·LIN INTERNATIONAL

November 2015

<THIS PAGE INTENTIONALLY LEFT BLANK>

Contents

List of Figures

List of Tables

APPENDICES

<THIS PAGE INTENTIONALLY LEFT BLANK>

Executive Summary

Context and Purpose of the Lake Ridge Neighborhood Mobility Masterplan

The development of the *Lake Ridge Neighborhood Mobility Masterplan,* which is the City's first neighborhood transportation master plan, has been a joint effort by the City of Fort Lauderdale Transportation and Mobility Department (TAM) and the Lake Ridge Neighborhood Association. This *Mobility Masterplan* identifies the goals and concerns voiced by neighborhood residents and businesses and contains a description of the current and future transportation system needs found through field surveys, collection of data, and analyses. Most importantly, the master plan recommends and prioritizes 39 local improvement projects that address the concerns and system deficiencies with a recommendation for how the projects should be implemented over the next 20 years. Many of these projects can be characterized as being low-cost and relatively simple to implement within the next five years, while others are more complex and costly and will take longer to construct.

The *Mobility Masterplan* was developed over a seven-month period that included three public meetings with the Lake Ridge Neighborhood Association – including their adoption of the Plan and its recommendations at the final meeting. These recommendations are being shared with the Florida Department of Transportation (FDOT), Broward County, and other City of Fort Lauderdale departments. Their continued consideration and development will be useful in discussions about other nearby transportation projects, including studies of Sunrise Boulevard operations and future needs by the Broward Metropolitan Planning Organization (MPO) and FDOT.

Lake Ridge Neighborhood Mobility Masterplan Components

The *Lake Ridge Neighborhood Mobility Masterplan* contains documentation of each of the steps of the master plan process, including an assessment of the existing and future conditions; a participatory planning process; identification of transportation issues/concerns and potential solutions; establishment of a vision as well as goals and objectives; technical evaluation, including project prioritization; and developing plan recommendations with corresponding cost estimates. Highlights of the major components of this *Mobility Masterplan* include:

- ***Existing Conditions –*** The predominant land use in the neighborhood is low-density residential with light industrial and commercial uses fronting its western and eastern/southern boundaries. Compared to other neighborhoods in the City and Broward County, Lake Ridge's population and demographic trends (population growth, racial mix, automobile availability, household income, etc.) vary widely. The existing land use and transportation network performs adequately for vehicular traffic, except for conditions at the intersections of Sunrise Boulevard/NE 15th Avenue and NE 15th Avenue at the Publix/Walgreens plaza, which experience congested conditions during peak and off-peak periods. In addition, there are speeding issues along NE 15th Avenue (between NE 11th and NE 13th Streets) and on NE 13th

Street (between NE 15th Avenue and US 1), and limited sight distance problems at the oblique-shaped intersections along Flagler Drive with NE 11th, NE 12th, and NE 13th Streets. With regard to the pedestrian and bicycle network, there is a lack of bicycle and pedestrian connectivity within the neighborhood as well as across Sunrise Boulevard. Finally, there are needs for designated on-street parking in the neighborhood, roadway repair and maintenance, and bicycle lane and sidewalk/crosswalk infrastructure.

- ***Future Conditions –*** Several development projects are being planned within the Lake Ridge neighborhood and its vicinity that will result in additional traffic. Population and job growth is forecast to increase by approximately one percent annually over the next 25 years. An assessment of future year (2025) traffic operations indicates that a majority of the intersections along Sunrise Boulevard will experience delay during morning or evening rush hours (i.e., Sunrise Boulevard/NE 15th Avenue and the Sunrise Boulevard/US 1 and Gateway intersections are expected to operate below the acceptable level of service (LOS) 'D', and traffic congestion along NE 15th Avenue at Publix/Walgreens plaza will further degrade). Given the increase in automobile traffic and lack of bicycle/pedestrian connectivity, including crosswalks along the Sunrise Boulevard and US 1 corridors, bicycle/pedestrian safety and mobility will become a greater need and concern than it is today.

  In addition, the increased train volume and corresponding crossing gate closings along the Florida East Coast (FEC) corridor (including the proposed All Aboard Florida [AAF] service) will result in a larger number of traffic delays and degradation in level of service at the Sunrise Boulevard/Flagler Drive intersection and some adverse impacts at the Sunrise Boulevard/NE 15th Avenue intersection. Traffic impacts due to more frequent railroad crossing gate closings will have an impact on NE 13th Street traffic as well, but is not expected to degrade to a point where traffic delays would significantly impact travel time. It should be noted that the FEC railroad corridor analysis did not consider the impact of freight trains or the proposed Tri-Rail Coastal Link (TRCL) service. Generally, freight trains are longer and travel at slower speeds that require the gate closure for a longer duration, resulting in more delay. With the expected freight train growth on the FEC system due to expanded capacity at both PortMiami and Port Everglades, these delays may be greater. All of the FEC railroad crossings are being evaluated by the FDOT to understand traffic impacts on cross streets and to identify crossing equipment needs.

- ***Public Participation –*** The public engagement process conducted for the *Lake Ridge Neighborhood Mobility Masterplan* began with the development of a *Public Participation Plan* (PPP) in September 2014. The PPP identified all of the stakeholders, community groups, and agencies that were believed to have interest in this *Mobility Masterplan*, and outlined the techniques and strategies to engage them throughout the planning process. Three public workshops were held between November 2014 to April 2015 to share project information and receive input from the community throughout the planning process as well as at specific

milestones. The public meetings were held at the ArtServe facility located at 1350 East Sunrise Boulevard in the City of Fort Lauderdale. In addition, six in-person meetings were held with the Lake Ridge Civic Association (LRCA) board members and key City staff over the seven-month planning process to ensure that the *Mobility Masterplan* was based on a comprehensive and transparent public participation process.

- ***Vision, Goals and Objectives –*** The Lake Ridge neighborhood adopted the following vision statement at the project outset:

> "*Enhance the quality of life by providing safe multimodal transportation options that improve mobility and accessibility for all Lake Ridge Neighborhood residents while preserving the neighborhood's character and increasing its economic vitality."*

  Further, three goals were established – a Mobility Goal, a Safety Goal, and a Quality of Life Goal – along with corresponding objectives to accomplish the community's vision. The neighborhood's vision, goals and objectives for this *Mobility Masterplan* are consistent with the City's overall goal to create a connected community – "*We Are Connected,*" as envisioned in the *Fast Forward Fort Lauderdale, Our City, Our Vision 2035* – as well as the goals included in the *2011 Sustainability Action Plan (SAP)*. The City's vision is being implemented through the *Connecting the Blocks Program (CTB).*

- ***Transportation Issues/Concerns & Potential Solutions –*** Approximately one hundred (100) comments describing transportation issues/concerns and needs were gathered at public and stakeholder meetings as well as through comment forms and email communications. The residents suggested 61 unique potential solutions/ideas to address mobility, accessibility, and safety issues/needs. These comments were mapped and then stratified into seven different groups or "improvement" categories (*Bicycle and safety improvements; Traffic calming improvements; Traffic circulation improvements; Parking improvements; NE 15th Avenue at Publix/Walgreens plaza improvements; Traffic congestion improvements;* and *General mobility and accessibility improvements*) for analysis purposes.

- ***Technical Analysis and Project Evaluation –*** A comprehensive five-step screening process was conducted of the 61 solutions/ideas identified by the community to address transportation issues/concerns in the neighborhood. The evaluation consisted of 18 different criteria corresponding to the *Masterplan* vision, goals, and objectives. Those projects passed through a screening process and were prioritized as short-term (less than five years), mid-term (five to 10 years), and long-term (more than 10 years) projects based on a SWOL analysis (Strengths, Weakness, Opportunities, and Limitations), which is a qualitative assessment technique.

  Based on the evaluation of the potential solutions/ideas, 39 improvement projects were identified to enhance transportation safety, increase bicycle/pedestrian connectivity and accessibility, improve traffic circulation, and provide on-street parking in the Lake Ridge neighborhood. These improvements were grouped together to correspond to the seven

"improvement" categories as well as specific corridors and/or locations. Some of these improvements were consolidated since they need to be implemented in conjunction to be effective and efficient from a capital cost and an engineering standpoint.

Plan Recommendations

The *Lake Ridge Neighborhood Mobility Masterplan* includes 39 improvement projects – a total investment of approximately $25.5 million, including some system-wide improvement projects, over the next 20 years. As shown in **Exhibit ES-1**, these projects include a variety of multimodal modal improvements, such as traffic operations ($16 million); Complete Streets ($5 million); traffic calming ($2.5 million); bicycle/pedestrian ($1.5 million); safety improvements ($0.03 million); as well as public art and parking improvements.

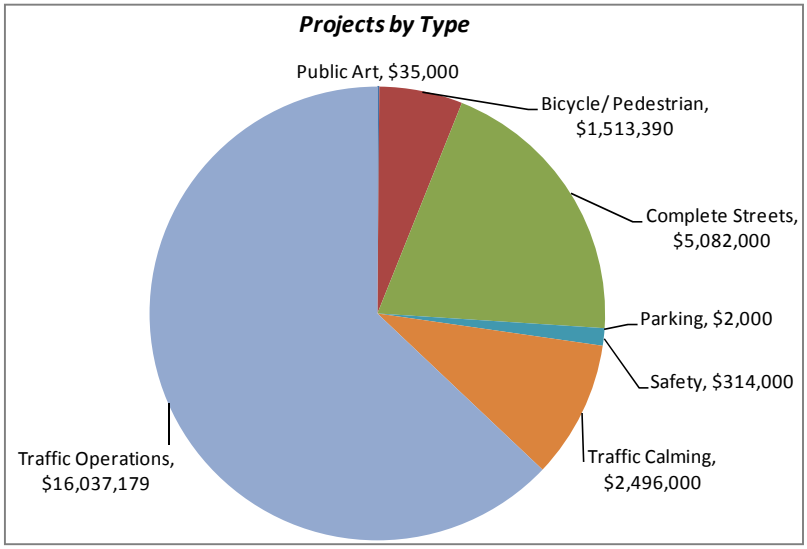


Exhibit ES-1: Project Cost by Type

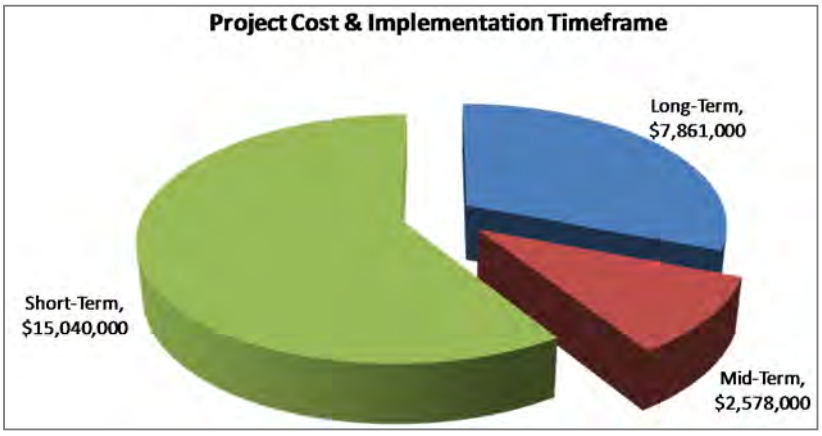


Exhibit ES-2: Project Cost by Implementation Timeframe

As illustrated in **Exhibit ES-2**, the majority of the projects identified in this *Masterplan* ($15 million) could be implemented within the next five years. Also included in the *Masterplan* are mid-term horizon projects ($2.6 million) to be implemented in the subsequent five to 10 years, and long-term projects ($7.9 million) which would be built over a longer timeframe (more than 10 years).

Funding for these recommended projects could be provided by a variety of agencies and organizations, including the FDOT, Broward County, the City of Fort Lauderdale, the Lake Ridge Neighborhood Association, and private property owners. At this time, much of the funding needed for the short-term and mid-term improvement projects is programmed in the FDOT and City of Fort Lauderdale budgets. Other projects will require discussion and possibly additional analysis with the City's partner agencies and City departments, and in some instances, private and non-profit agencies, to identify opportunities to add these improvements to other projects and or develop cost-sharing arrangements where improvements provide benefits to multiple agencies and organizations.

<THIS PAGE INTENTIONALLY LEFT BLANK>

1. Introduction

The *Lake Ridge Neighborhood Mobility Masterplan* is the City's first comprehensive area-wide mobility planning effort and was conducted in close collaboration with the Lake Ridge Civic Association (LCRA). Neighborhood Mobility Master Plans provide an outline of the needed multimodal network improvements based on a thorough assessment of transportation problems and concerns in the neighborhood utilizing input from residents and businesses and verification through technical analysis. Further, these plans prioritize improvements for implementation over the short-, mid-, and long-term timeframes. The goal in developing a Neighborhood Mobility Master Plan is to help tie neighbor-identified improvements with comprehensive City plans to promote a full multimodal transportation system that will enhance the safety and comfort for all users. Adopting a Neighborhood Mobility Master Plan helps the City Commission prioritize needed improvements in the Community Investment Program.

This plan document is organized as follows:

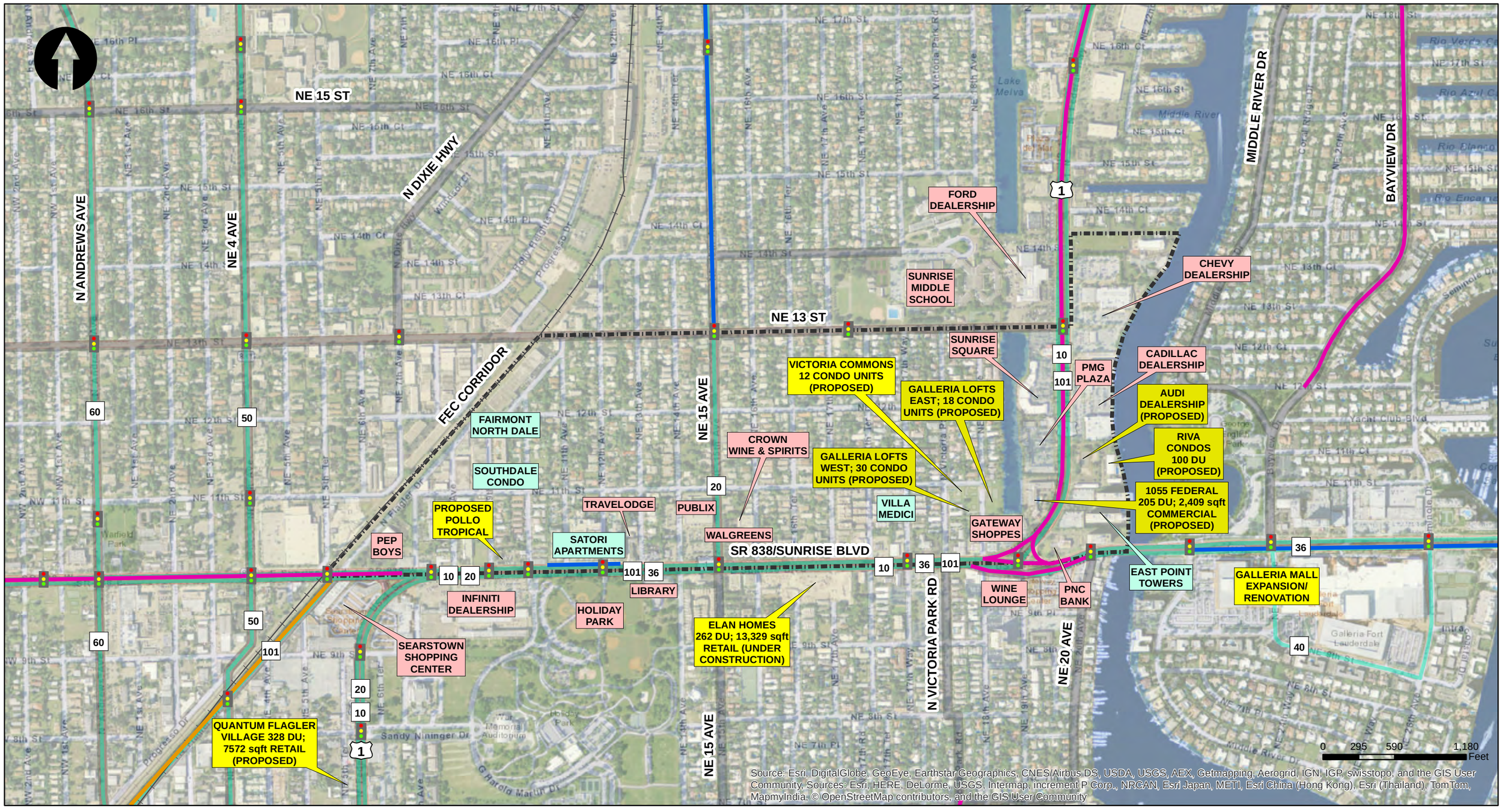
- ***Chapter 1 –*** Introduction provides planning context and purpose of *the Lake Ridge Mobility Masterplan*
- ***Chapter 2 –*** Existing Conditions summarizes demographic characteristics, includes a comprehensive inventory of existing land use and transportation infrastructure as well as existing traffic operational analysis and an assessment of safety based on crash data and speed count analysis.
- ***Chapter 3 –*** Future Conditions includes a brief discussion of the future land use plan, upcoming development projects in Lake Ridge neighborhood and its vicinity, and future year (2025) traffic operational analysis including the traffic impacts of additional passenger train service in the Florida East Coast (FEC) railroad corridor.
- ***Chapter 4 –*** Public Participation provides an overview of the public engagement process and highlights feedback and comments received throughout the planning process.
- ***Chapter 5 –*** Transportation Issues/Concerns and Potential Solutions provides an assessment of transportation problems and needs in the neighborhood identified by the community and validated through technical analyses. It also includes a description of the potential solutions/ideas to address these transportation issues/concerns.
- ***Chapter 6 –*** Vision, Goals, and Objectives states the Lake Ridge neighborhood's Vision Statement and describes the goals and objectives developed to accomplish this vision.
- ***Chapter 7 –*** Technical Analysis and Project Evaluation documents the processes utilized to package improvements and evaluate projects to prioritize them for implementation purposes.
- ***Chapter 8 –*** Plan Recommendations includes planning level order of magnitude cost estimates for improvements identified by this master plan and highlights actions that different agencies

could potentially take to implement the short-term projects and further advance the mid-term and long-term projects.

1.1 Regional Setting

The Lake Ridge neighborhood covers approximately a one-half (0.50) square mile area and is located in the east-central part of Broward County. As shown in **Figure 1-1**, this neighborhood is bounded by Sunrise Boulevard to the south, NE 13th Street to the north, the Florida East Coast (FEC) railroad corridor to the west, and the Intracoastal Waterway to the east. Some of the key activity centers in the vicinity of the Lake Ridge neighborhood include the Searstown Shopping Center, Holiday Park, ArtServe, and Gateway Shoppes just south of Sunrise Boulevard, and the Galleria Mall to the east of the Middle River. In addition, there are a number of new residential, commercial, and mixed use development projects proposed to be built over the next few years.

Major corridors in the Lake Ridge neighborhood include Sunrise Boulevard, US 1, Flagler Drive, NE 15th Avenue, and NE 13th Street, each of which facilitate automobile access and egress to and from the neighborhood. Broward County Transit (BCT) provides transit connectivity to the neighborhood through fixed route bus service along Sunrise Boulevard, NE 15th Avenue, and US 1. Currently, bicycle lane and sidewalk connectivity in the neighborhood is limited. **Figure 1-1** presents a physical representation of the neighborhood, its surrounding areas, and the existing multimodal transportation network.



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Legend

- Traffic Signal
- Railroad
- Major Road
- Lake Ridge Boundary
- Existing BCT Bus Route

Existing Bicycle Facility
- Bike Lanes
- Bike Path
- Wide Shoulders

- Proposed Development Project
- Existing Buildings
- Existing Multi-family

Source:
City of Ft. Lauderdale, Nov. 2014; TYLI Staff Field Observations, Nov. 2014

LAKE RIDGE NEIGHBORHOOD MOBILITY MASTER PLAN

FIGURE 1-1

REGIONAL SETTING

<THIS PAGE INTENTIONALLY LEFT BLANK>

2. Existing Conditions

This chapter summarizes the existing conditions and demographic characteristics of the Lake Ridge neighborhood and compares it with other neighborhoods within the City of Fort Lauderdale and Broward County to establish the planning context. It also provides background information for understanding the transportation issues and concerns in the neighborhood, analyzing and recommending appropriate solutions to address them.

2.1 Population Profile and Demographic Characteristics

According to the 2008-2012 American Community Survey (ACS) five-year estimates, the total population of the Lake Ridge Neighborhood was 3,141 in 2012. **Table 2-1** shows the population levels for the Lake Ridge neighborhood, the City of Fort Lauderdale, and Broward County. The Lake Ridge neighborhood population grew by one percent over the 12-year period from 3,115 in 2000 to 3,141 in 2012. This growth rate is slower than the total growth rate for the City of Fort Lauderdale and Broward County, which grew at rates of 10 percent and 9 percent, respectively. While the number of households in the Lake Ridge neighborhood decreased significantly (-13 percent) over the 12-year period and increased throughout the City and County, the neighborhood's youth population increased while it declined in the City and County. The proportion of elderly population (65 years of age and over) remained constant in the City of Fort Lauderdale, while Lake Ridge and Broward County's elderly population decreased over the 12-year period.

Table 2-1: Demographic Characteristics

Population Data	2000			2012			% Change (2000-2012)		
	Lake Ridge	Fort Lauderdale	Broward County	Lake Ridge	Fort Lauderdale	Broward County	Lake Ridge	Fort Lauderdale	Broward County
Population	3,115	152,397	1,623,018	3,141	167,370	1,761,993	0.83%	9.82%	8.56%
Persons under 18 years, percent	10.00%	19.40%	23.60%	10.80%	18.30%	22.20%	8.00%	-5.67%	-5.93%
Persons 65 years and over, percent	7.00%	15.30%	16.10%	6.40%	15.30%	14.30%	-8.57%	0.00%	-11.18%
Persons per square mile	5,216.7	4,383.0	1341.6	4759.1	4,813.6	1,456.4	-8.77%	9.82%	8.56%
Households	1,804	68,468	654,445	1,565	71,474	665,913	-13.25%	4.39%	1.75%
Persons per household	1.9	2.14	2.45	2	2.29	2.62	5.26%	7.01%	6.94%

Source: 2000 US Census & 2007-2011 American Community Survey 5-Year Estimates

Minority Population

Table 2-2 displays the percent distribution of minority populations within Lake Ridge, Fort Lauderdale, and Broward County. The proportion of Lake Ridge's non-minority population, approximately 65 percent, is greater than that of Fort Lauderdale and Broward County. Conversely, Lake Ridge's proportion of minority population is significantly less than that of Fort Lauderdale and Broward County.

Table 2-2: Minority and Non-Minority Population

Geographic Location	Minority Population	% of Total Population	Non-Minority Population	% of Total Population
Lake Ridge	1,095	35.2%	2,020	64.8%
Fort Lauderdale	80,398	48.0%	86,972	52.0%
Broward County	995,214	56.5%	766,779	43.5%

Source: 2008-2012 American Community Survey 5-Year Estimates

Age Distribution

In general, young people and older adults are more likely to use public transportation. These populations include youths aged 15 and younger who cannot legally operate a motor vehicle and, therefore, typically have a higher propensity for using transit, as well as older adults, who often prefer public transportation to use of a personal automobile.

As shown in **Table 2-3**, the age distribution of the Lake Ridge neighborhood is dissimilar to the age distribution of Fort Lauderdale and Broward County as a whole. The typical transit dependent age group – persons under age 18 and persons aged 65 and over – represents approximately 19 percent of the total population in Lake Ridge compared to approximately 34 percent in Fort Lauderdale and approximately 37 percent in Broward County.

Table 2-3: Population and Age Distribution

Geography	Age					
	Under 18 years	18 to 34 years	35 to 54 years	55 to 64 years	65 years and over	Median Age
Lake Ridge	222	597	865	319	188	46
% of total population	10.1%	27.3%	39.5%	14.6%	8.6%	
Fort Lauderdale	30,548	37,809	50,707	22,694	25,612	42
% of total population	18.3%	22.5%	30.3%	13.6%	15.3%	
Broward County	391,475	378,313	530,357	209,132	252,716	40
% of total population	22.2%	21.6%	30.1%	11.8%	14.3%	

Source: 2008-2012 American Community Survey 5-Year Estimates

Income

As shown in **Table 2-4**, the distribution of household incomes for Lake Ridge is similar to that of Fort Lauderdale for the lowest income category. The biggest difference between Lake Ridge and Fort Lauderdale and/or Broward County is in the "$75,000 and Over" household income category, with Fort Lauderdale and Broward County at approximately 33 percent while Lake Ridge is at approximately 25 percent.

Table 2-4: Household Income

Geography	Household Income						
	Less than $15,000	$15,000 to $24,999	$25,000 to $49,999	$50,000 to $74,999	$75,000 or more	Median household income	Mean household income
Lake Ridge	215	215	475	215	385	$46,944	$57,770
% of total households	14.3%	14.3%	31.6%	14.3%	25.6%		
Fort Lauderdale	9,739	8,461	17,434	11,678	24,162	$50,191	$80,683
% of total households	13.6%	11.8%	24.4%	16.3%	33.8%		
Broward County	82,178	72,367	168,881	120,153	222,334	$51,603	$72,122
% of total households	12.3%	10.9%	25.4%	18.0%	33.4%		

Source: 2008-2012 American Community Survey 5-Year Estimates

Vehicle Availability

Household vehicle availability plays an important role in determining public transit needs. Zero vehicle households are traditionally considered transit dependent, as they rely heavily upon transit to fulfill their transportation needs. **Table 2-5** shows the number of vehicles available by household within Lake Ridge, Fort Lauderdale, and Broward County. The proportion of Lake Ridge's "Zero Car Households" is significantly greater than both Fort Lauderdale and Broward County.

Table 2-5: Vehicle Availability

Geography	Number of Vehicles Available			
	No vehicles available	1 vehicle available	2 vehicles available	3 or more vehicle available
Lake Ridge	334	762	323	146
% of total households	21.3%	48.7%	20.6%	9.3%
Fort Lauderdale	6,603	35,437	22,406	7,028
% of total households	9.2%	49.6%	31.3%	9.8%
Broward County	50,754	280,783	242,209	92,167
% of total households	7.6%	42.2%	36.4%	13.8%

Source: 2008-2012 American Community Survey 5-Year Estimates

Jobs

Table 2-6 displays the total employment for the year 2010.

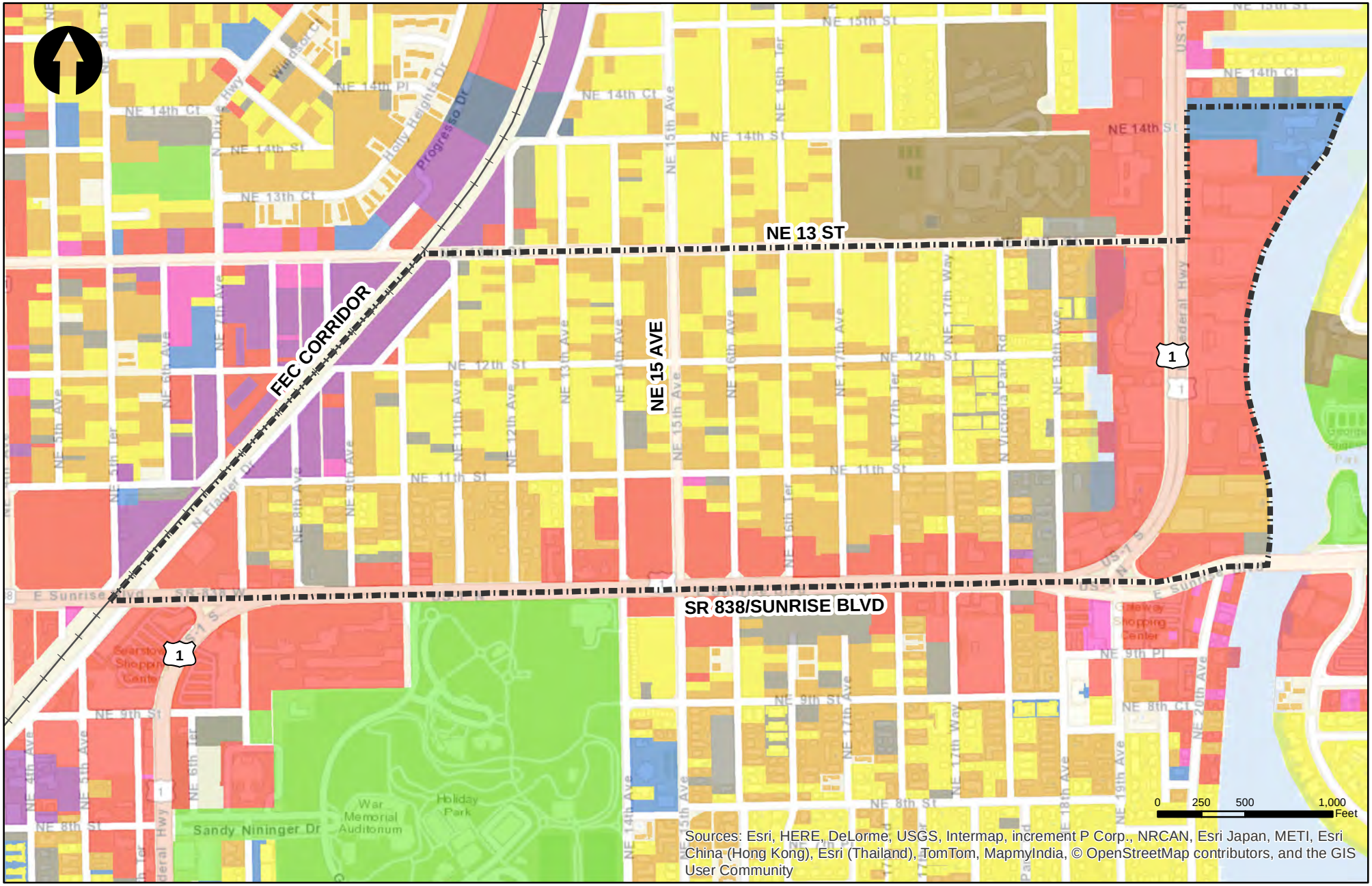
Table 2-6: Employment Characteristics

Category	2010		
	Lake Ridge	Fort Lauderdale	Broward County
Employment	1,517	166,873	861,521

Source: Southeast Florida Regional Planning Model (SERPM), Version 7.0; FDOT District Four

2.2 Existing Land Use

The Lake Ridge neighborhood is located in east-central Broward County and encompasses an area measuring approximately one-half (0.5) square mile, which is bounded by NW 13th Street to the north, the Intracoastal Waterway to the east, Sunrise Boulevard (SR 838) to the south, and the Florida East Coast Railway (FEC) to the west. The primary land uses are residential and commercial. Along the southern and eastern limits of the neighborhood is a mix of commercial and multi-family residential units. Along the western limits of the neighborhood are mixes of commercial and industrial land uses. Lastly, along the northern limits and central part of the neighborhood lies a mix of single-family and multi-family residential units. These land use designations and their distribution within the neighborhood limits is depicted in **Figure 2-1**.



Legend

Existing Land Use

- SINGLE FAMILY
- MULTI FAMILY
- COMMUNITY SERVICES
- RETAIL / OFFICE / COMMERCIAL
- MIXED USE
- SCHOOLS
- RECREATION
- INDUSTRIAL
- UTILITES
- VACANT
- Railroad
- Lake Ridge Boundary

Source: Florida Dept. of Revenue, June 2012

LAKE RIDGE NEIGHBORHOOD MOBILITY MASTER PLAN

FIGURE 2-1

EXISTING LAND USE

2.3 Existing Transportation Infrastructure

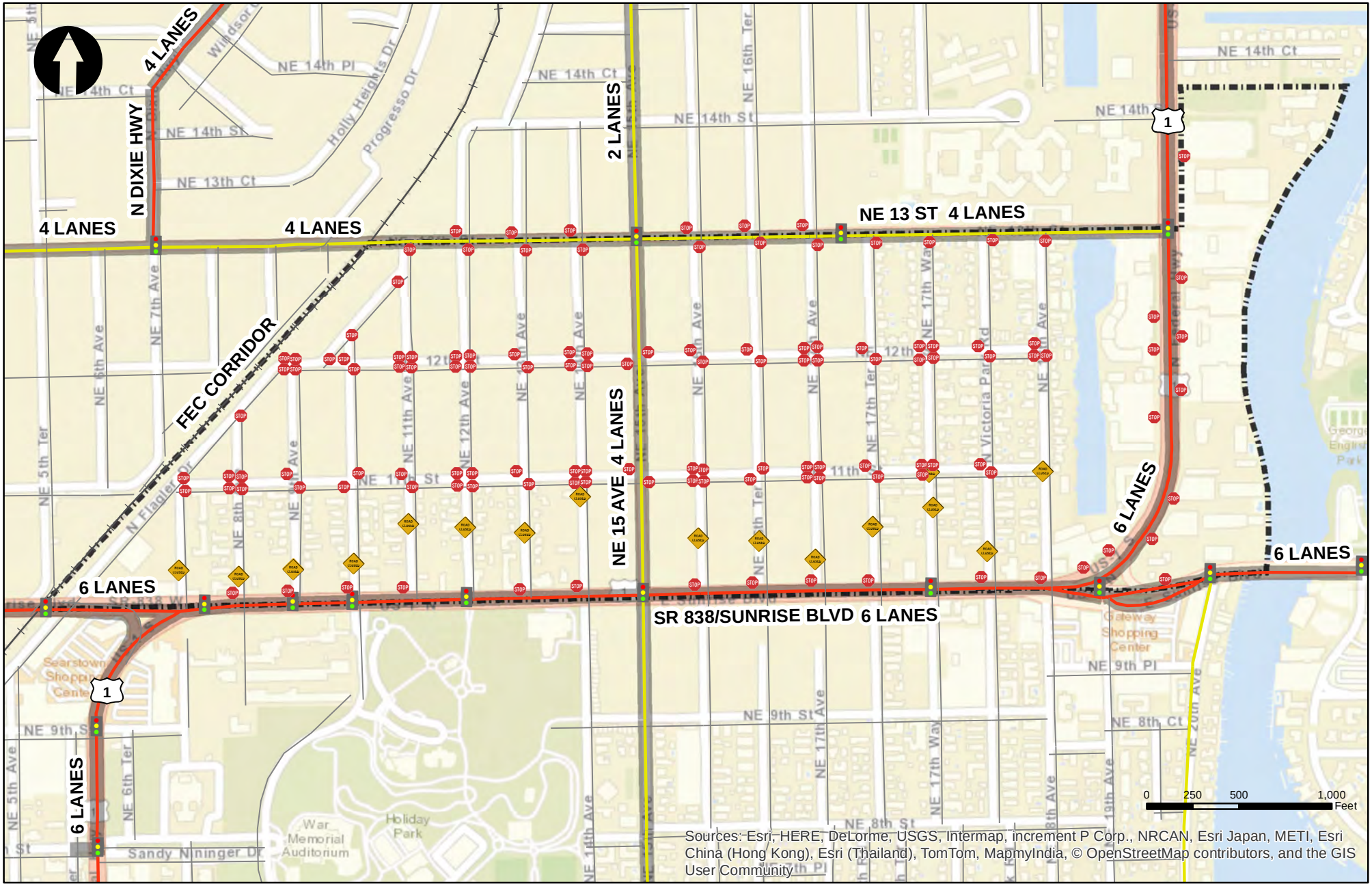
The neighborhood's transportation system is served by roadways, sidewalks, bicycle lanes, a Class 1 Railroad corridor, and fixed route bus service from Broward County Transit. A detailed description of the existing transportation infrastructure and facilities in the neighborhood follows.

2.3.1 Roadway Network

The neighborhood's roadway network is comprised of two north-south and east-west arterial roads (US 1 and Sunrise Boulevard), and two north-south and east-west collector roads (NE 15th Avenue and NE 13th Street) providing connectivity with the rest of the Broward County along with the network of local residential streets that facilitate traffic circulation and provide accessibility to homes and businesses. **Figure 2-2** illustrates the existing roadway network including traffic signals, stop signs (more than 100), street closures (15), and functional classification.

US 1 south of NE 13th Street, Looking North

Street Closure, NE 18th Avenue



Legend

- Stop Sign
- Traffic Signal
- Gate/Road Closure

Functional Classification

- Arterial Roads
- Collector Roads
- Local Roads
- Railroad
- Major Road
- Lake Ridge Boundary

Source: TY LIN Staff Field Observation, Nov. 2014; City of Fort Lauderdale, 2014

LAKE RIDGE NEIGHBORHOOD MOBILITY MASTER PLAN

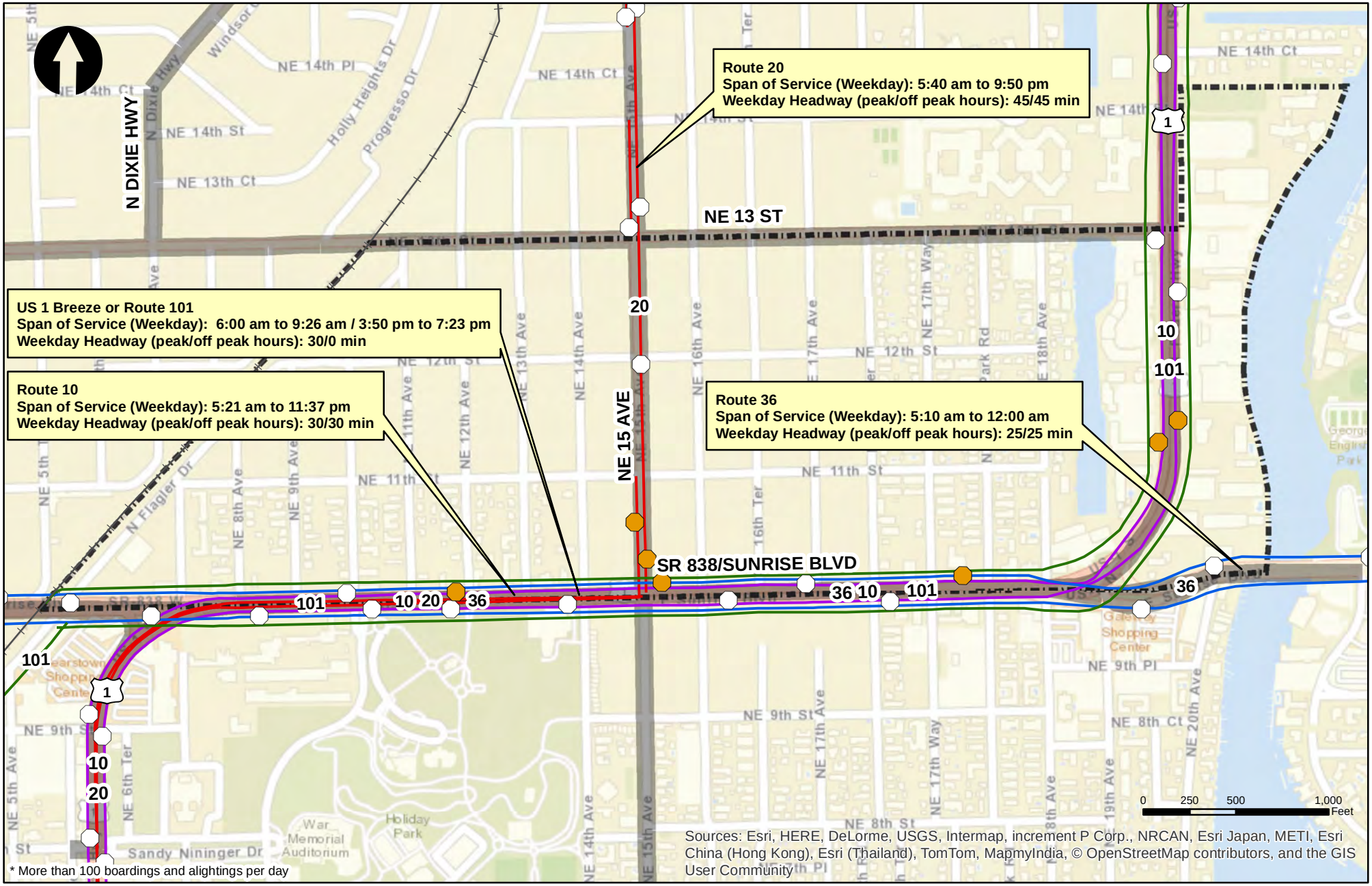
FIGURE 2-2

EXISTING ROADWAY NETWORK

2.3.2 Transit Network

As shown in **Figure 2-3**, Broward County Transit (BCT) provides fixed route bus service at 23 bus stops to the residents of Lake Ridge through its Route 10 (Broward Central Terminal to Mizner Park in Boca Raton), Route 20 (Broward Central Terminal to Broward Health North), and Route 36 (Fort Lauderdale Beach to Sawgrass Mills Mall). In January 2015, BCT discontinued the US 1 Breeze route that had provided limited-stop service. BCT Route 50 operates in close proximity to the Lake Ridge neighborhood.

Existing sidewalks along Sunrise Boulevard and US 1 provide access to bus stops, but the occasional lack of crosswalks along these corridors creates safety issues for transit patrons. Bicycle access to bus stops also needs improvement.



* More than 100 boardings and alightings per day

Legend

- High Ridership Bus Stop*
- Existing Bus Stop
- Lake Ridge Boundary
- Railroad
- Major Road
- Existing Bus Route (10, 20, 36, 101)

Source: Broward County Transit, Oct. 2014

LAKE RIDGE NEIGHBORHOOD MOBILITY MASTER PLAN

FIGURE 2-3

EXISTING TRANSIT NETWORK

Table 2-6 shows the operating characteristics of the bus routes serving the neighborhood.

Table 2-6: Fixed Route Bus Operating Characteristics (2013), Broward County Transit

Route	Span of Service			Peak/Off Peak Hour Headway (in minutes)		
	Weekday	Saturday	Sunday	Weekday	Saturday	Sunday
Route 36	5:10a. – 12:00a	5:40a. – 12:00a	7:20a. – 9:00a	25/25	25/25	25/25
US 1 Breeze	6:00a. – 9:26a 3:50p – 7:23p	No Service	No Service	30	-	-
Route 10	5:21a. – 11:37p	5:21a. – 11:10p	8:20a. – 8:45p	30/30	30/30	40/40
Route 20	5:40a. – 9:50p	6:00a. – 8:50p	10:00a. – 7:45p	45/45	60/60	60/60
Route 50	5:20a. – 10:58p	5:30a. – 11:00p	7:45a. – 8:55p	20/30	45/45	45/45

Source: Broward County Transit (BCT), 2014

Combined daily ridership for all 23 bus stops in the neighborhood is approximately 1,395 riders (700 boarding and 695 alighting). **Table 2-7** shows daily ridership (ons and offs) for bus stops having at least 40 riders per day. Approximately 97 riders use the bus stops on US 1 in front of the Audi dealership and in front of the International House of Pancakes ("IHOP") restaurant. There are no crosswalks along US 1 to provide safe pedestrian crossing between the Sunrise Boulevard/US 1 intersection (Gateway) and the NE 13th Street/US 1 intersection. The majority of the bus stops in the neighborhood do not have amenities such as bike racks, trash cans, or shelters. BCT did, however, install bus shelters and made ADA (Americans with Disabilities Act) improvements at several bus stops serving the Lake Ridge neighborhood in the year 2014.

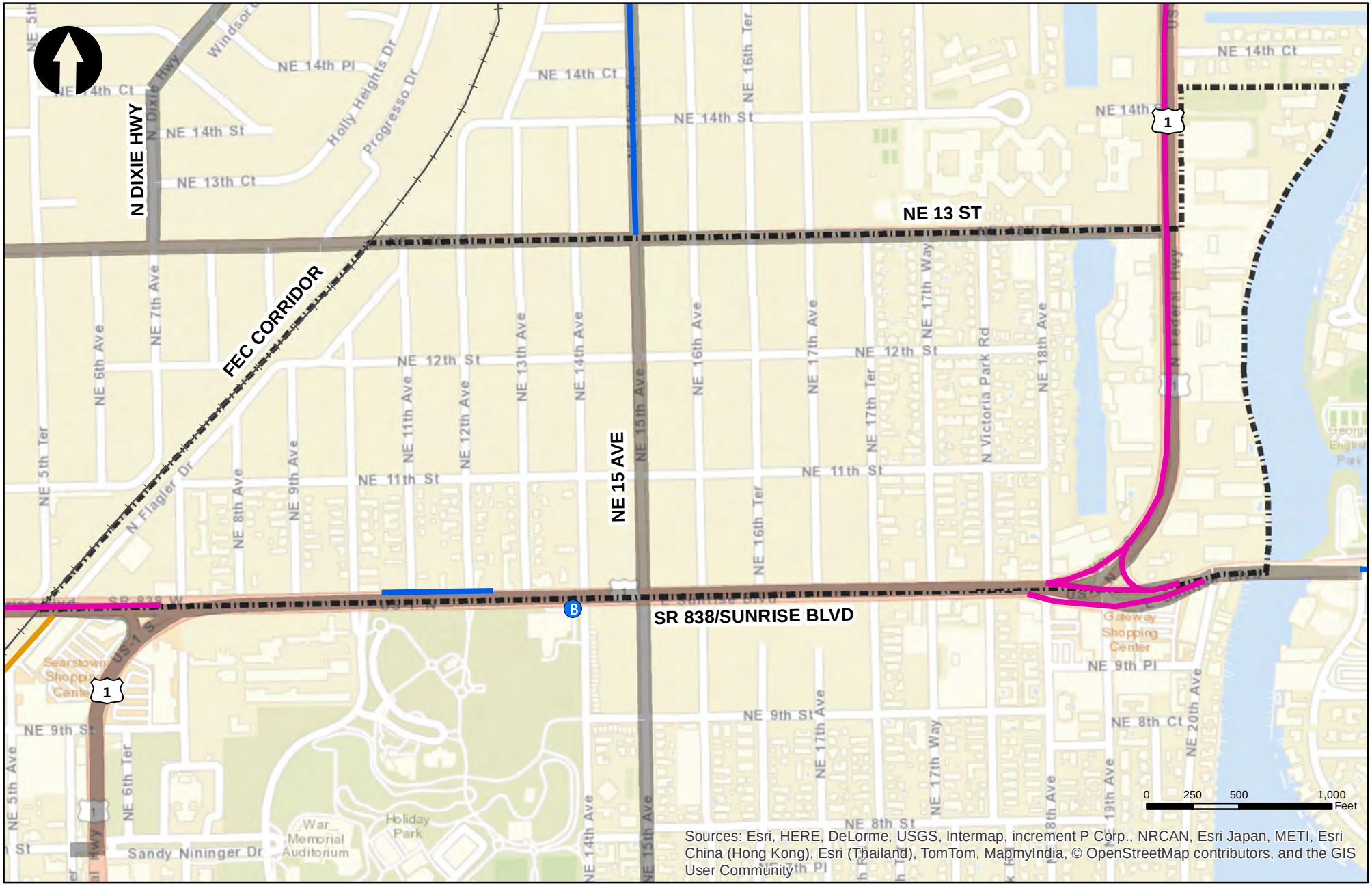
Table 2-7: Daily Ons/Offs at Lake Ridge Neighborhood Bus Stops, BCT Fixed Route Bus Service

Bus Stop Location	BCT Bus Stop ID	Daily Ridership, 2014		
		Ons	Offs	Total (Ons/Off)
Sunrise Boulevard/NE 15th Avenue	882	138	72	210
Sunrise Boulevard/NE 14th Avenue	758	65	101	166
Sunrise Boulevard/NE 12th Avenue	884	88	41	129
Sunrise Boulevard/NE 17th Way	760	41	80	121
Sunrise Boulevard/NE 17th Way	880	73	43	116
Sunrise Boulevard/NE 16th Avenue	759	37	71	108
Sunrise Boulevard/NE 17th Avenue	881	56	31	87
Sunrise Boulevard/NE 10th Avenue	756	29	28	57
Sunrise Boulevard/NE 8th Avenue	755	24	32	56
Sunrise Boulevard/US 1 (Audi)	762	38	18	56
NE 15th Avenue/Sunrise Boulevard (N) (Walgreens)	1513	29	20	49
US 1/Sunrise Boulevard (IHOP)	879	14	27	41

Source: Broward County Transit (BCT), 2014

2.3.3 Bicycle Network

The existing bicycle network is depicted in **Figure 2-4**. There are no designated bicycle routes or lanes within the neighborhood. Few bicycle facilities exist along the arterial roadways under FDOT jurisdiction. There is a lack of bicycle connectivity on the major corridors of NE 15th Avenue, NE 13th Street, and Sunrise Boulevard (SR 838) as well as a lack of bicycle infrastructure such as bicycle racks. There is one Broward B-Cycle (bike sharing) location adjacent to the ArtServe facility/Fort Lauderdale Branch Library located at 1350 East Sunrise Boulevard.



Legend

- B-Cycle Location
- Lake Ridge Boundary

Existing Bicycle Facility

- Bike Lanes
- Bike Path
- Wide Shoulders

- Railroad
- Major Road

Source: City of Fort Lauderdale, 2014

LAKE RIDGE NEIGHBORHOOD MOBILITY MASTER PLAN

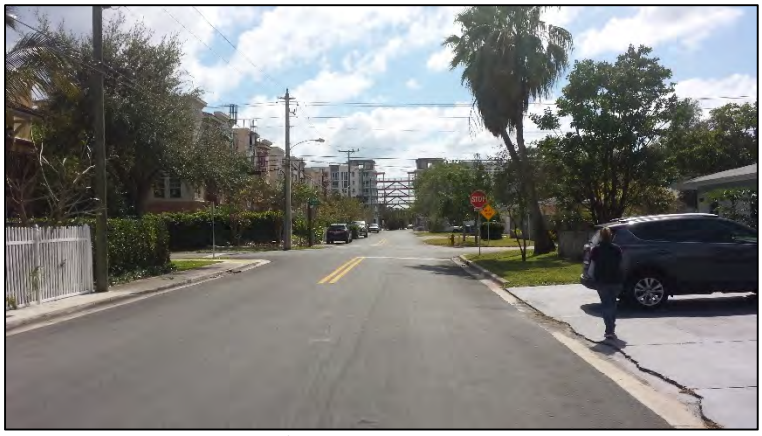
FIGURE 2-4

EXISTING BICYCLE NETWORK

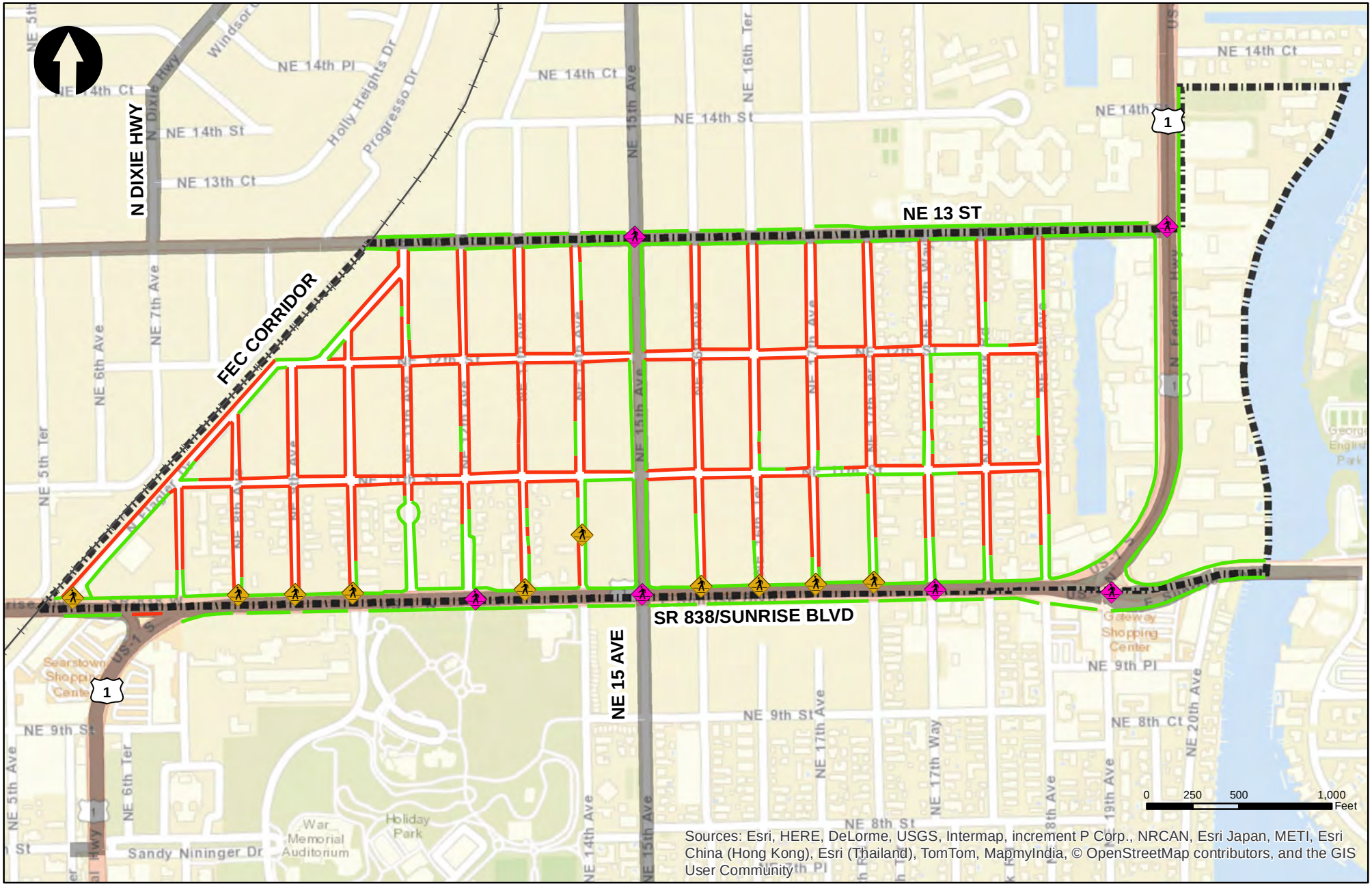
2.3.4 Sidewalk Network

Sidewalk coverage is sufficient along the major state roads and collector roads within the neighborhood; however, there are gaps in the sidewalk network within the neighborhood along local residential roads. In addition, there are a limited number of marked crosswalks along Sunrise Boulevard, US 1, NE 15th Avenue, and NE 13th Street for residents to access activity centers in the vicinity of the neighborhood. This lack of sidewalk connectivity along local residential streets creates safety issues for pedestrians in the neighborhood. **Figure 2-5** depicts the existing sidewalk network.

Obstructions in the sidewalk, Sunrise Boulevard



Missing sidewalk, NE 17th Avenue



CITY OF FORT LAUDERDALE — VENICE OF AMERICA

LAKE RIDGE CIVIC ASSOCIATION

Legend

Existing Crosswalk
- Along the Street
- Signalized Intersection

- Existing Sidewalk
- Sidewalk Gap
- Major Road
- Railroad
- Lake Ridge Boundary

Source: TY LIN Staff Field Observation (Midday), Nov., 2014

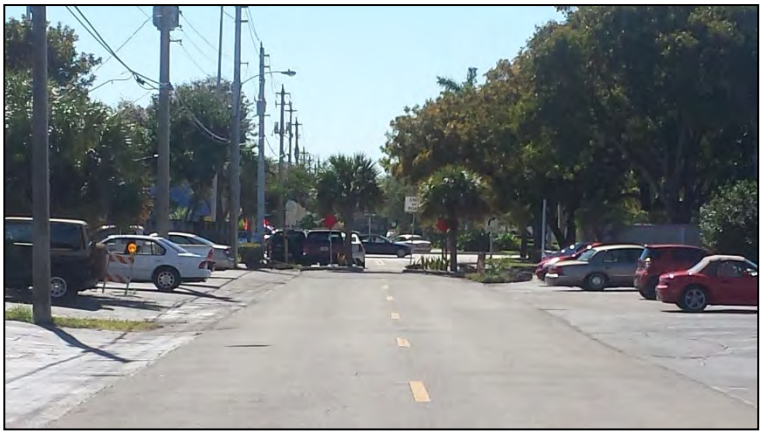
LAKE RIDGE NEIGHBORHOOD MOBILITY MASTER PLAN

FIGURE 2-5

EXISTING SIDEWALK NETWORK

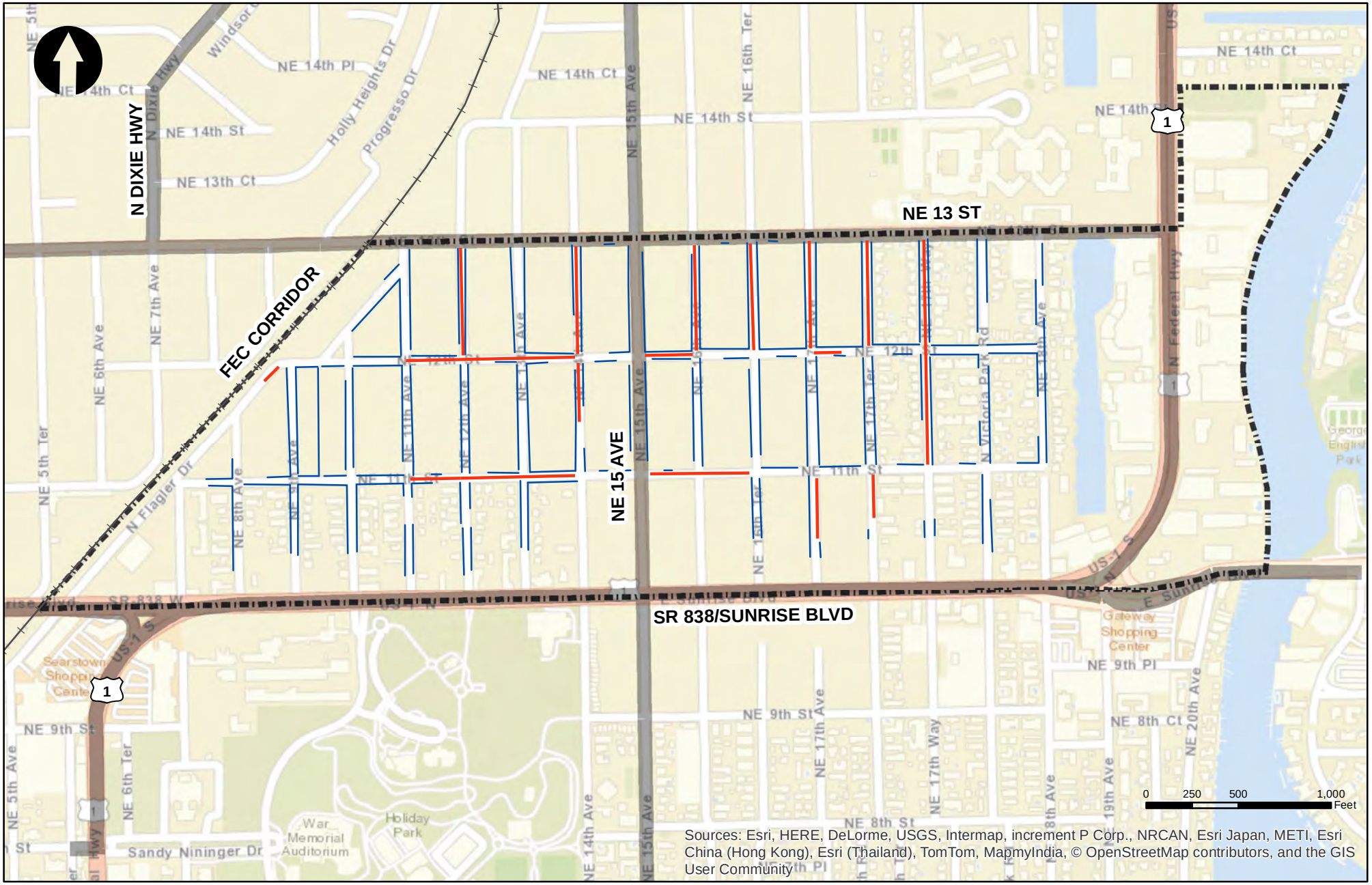
2.3.5 Parking

On-street parking within the neighborhood is not well defined. There are many locations within the interior of the neighborhood where cars are parked on-street in undesignated locations. There is also a significant amount of back-out parking along NE 15th Avenue that may pose a hazard to oncoming traffic, pedestrians, and bicyclists. **Figure 2-6** depicts the existing parking facilities.



Back-out parking, east of the Villa Medici complex

Undesignated parking, NE 11th Street



Legend

- Railroad
- Major Road
- Lake Ridge Boundary

Existing Parking Type

- Undesignated On-street
- Back-Out

Source: TY LIN Staff Field Observation (Midday), Nov., 2014

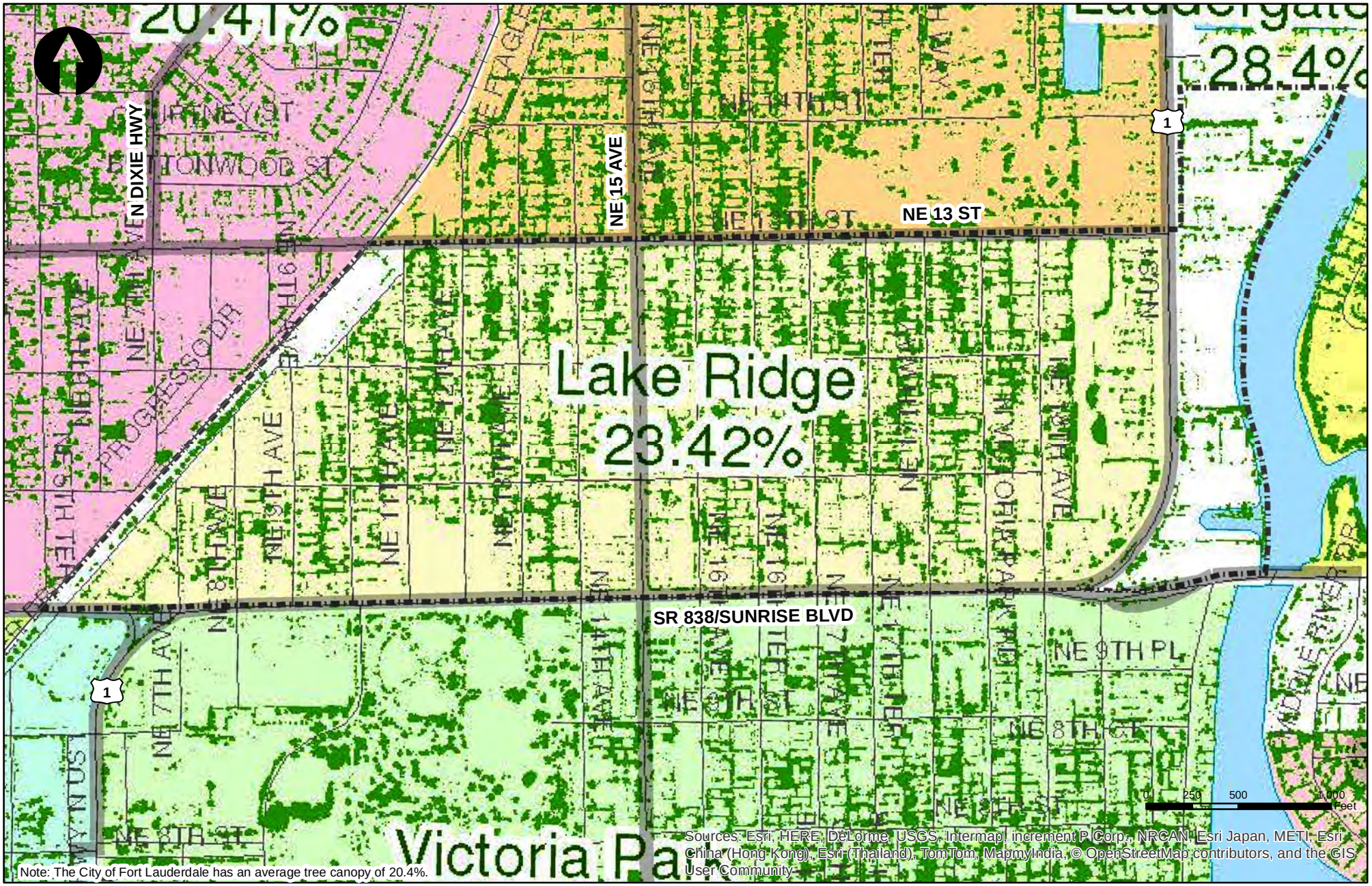
LAKE RIDGE NEIGHBORHOOD MOBILITY MASTER PLAN

FIGURE 2-6

EXISTING ON-STREET (PARALLEL) & BACKOUT PARKING

2.3.6 Tree Cover and Street Lighting

Tree cover and street lights are integral components of Complete Streets projects, since they enhance the pedestrian environment by providing comfort/shade and safety. **Figure 2-7** and **Figure 2-8** illustrate the existing tree canopy and street lights in the neighborhood. Existing tree cover in Lake Ridge is estimated at 23.4 percent, which is higher than the average tree cover in the City as a whole (20.4 percent). The Neighborhood Community Investment Program (NCIP) includes funding for installing additional trees in the Lake Ridge neighborhood. The existing street light density in the neighborhood provides sufficient illumination and safety.



LAKE RIDGE CIVIC ASSOCIATION

Legend

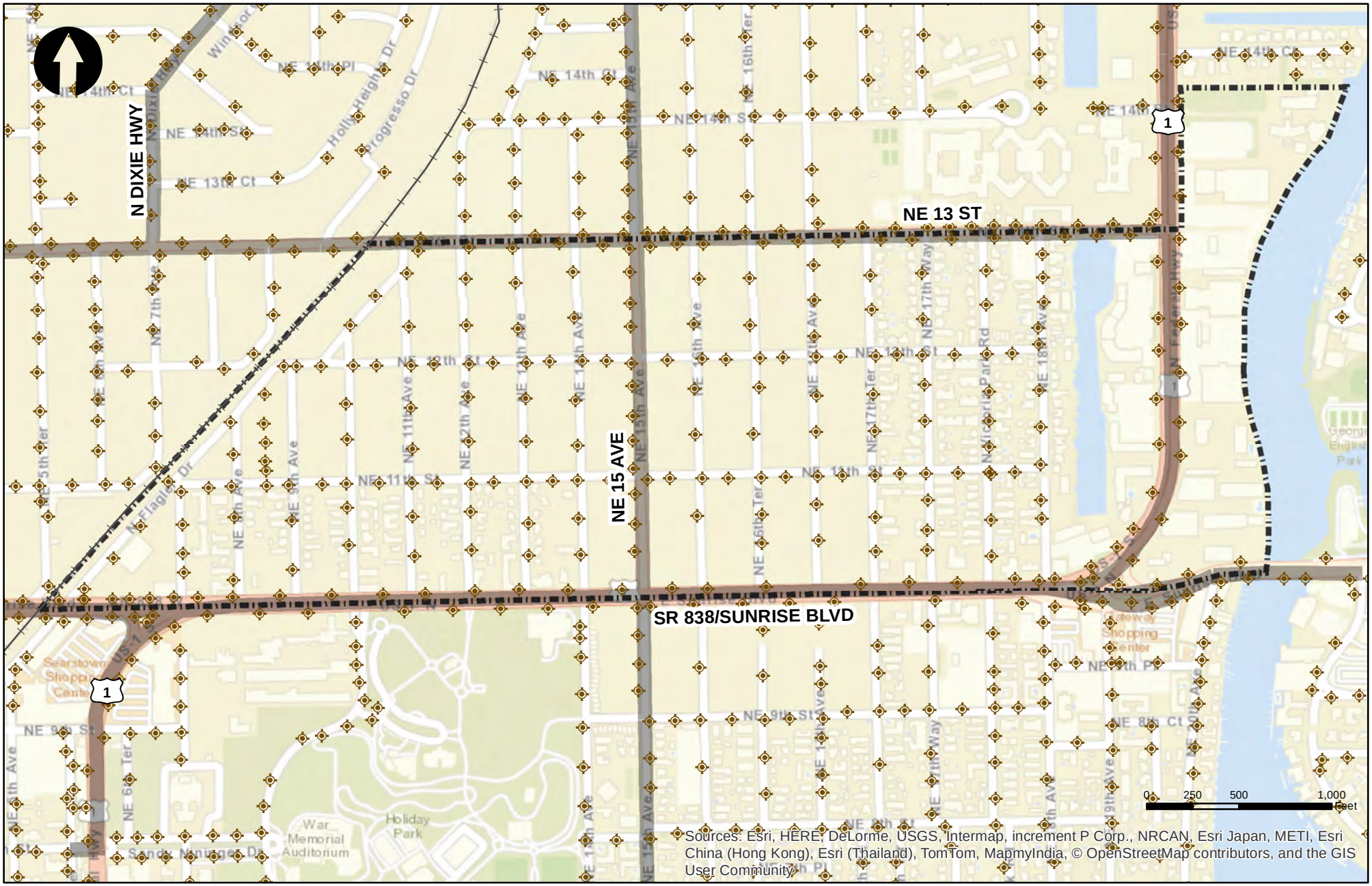
- Railroad
- Major Road
- Lake Ridge Boundary
- Neighborhood Association
- Tree Canopy

Source: City of Fort Lauderdale, 2010

LAKE RIDGE NEIGHBORHOOD MOBILITY MASTER PLAN

FIGURE 2-7

TREE COVER



CITY OF FORT LAUDERDALE — VENICE OF AMERICA

LAKE RIDGE CIVIC ASSOCIATION

Legend

- Street Lighting
- Lake Ridge Boundary
- Railroad
- Major Road

Source: City of Fort Lauderdale, 2014

LAKE RIDGE NEIGHBORHOOD MOBILITY MASTER PLAN

FIGURE 2-8

STREET LIGHTING

2.4 Existing Conditions Traffic Operations Analysis, Year 2014

This section summarizes the existing (Year 2014) traffic conditions and operational characteristics to validate and identify problem areas. It also helps compare and evaluate the impact of additional traffic in the future (Year 2025) in the study area; i.e., the Lake Ridge neighborhood boundary.

Per FDOT's *Florida Traffic Online* (http://www2.dot.state.fl.us/FloridaTrafficOnline/viewer.html) data, the 2013 Annual Average Daily Traffic (AADT) on Sunrise Boulevard is approximately 55,500 to 56,000 vehicles and 42,500 vehicles on US 1 within the study area, while traffic volumes are relatively low at 9,100 to 14,000 AADT on NE 13th Street and 13,000 on NE 15th Avenue.

As illustrated in **Figure 2-9**, the City undertook an extensive data collection effort that included traffic counts, speed counts, bicycle/pedestrian counts, as well as turning movement counts at the outset of the project. The following data were collected for comprehensive traffic operational analysis:

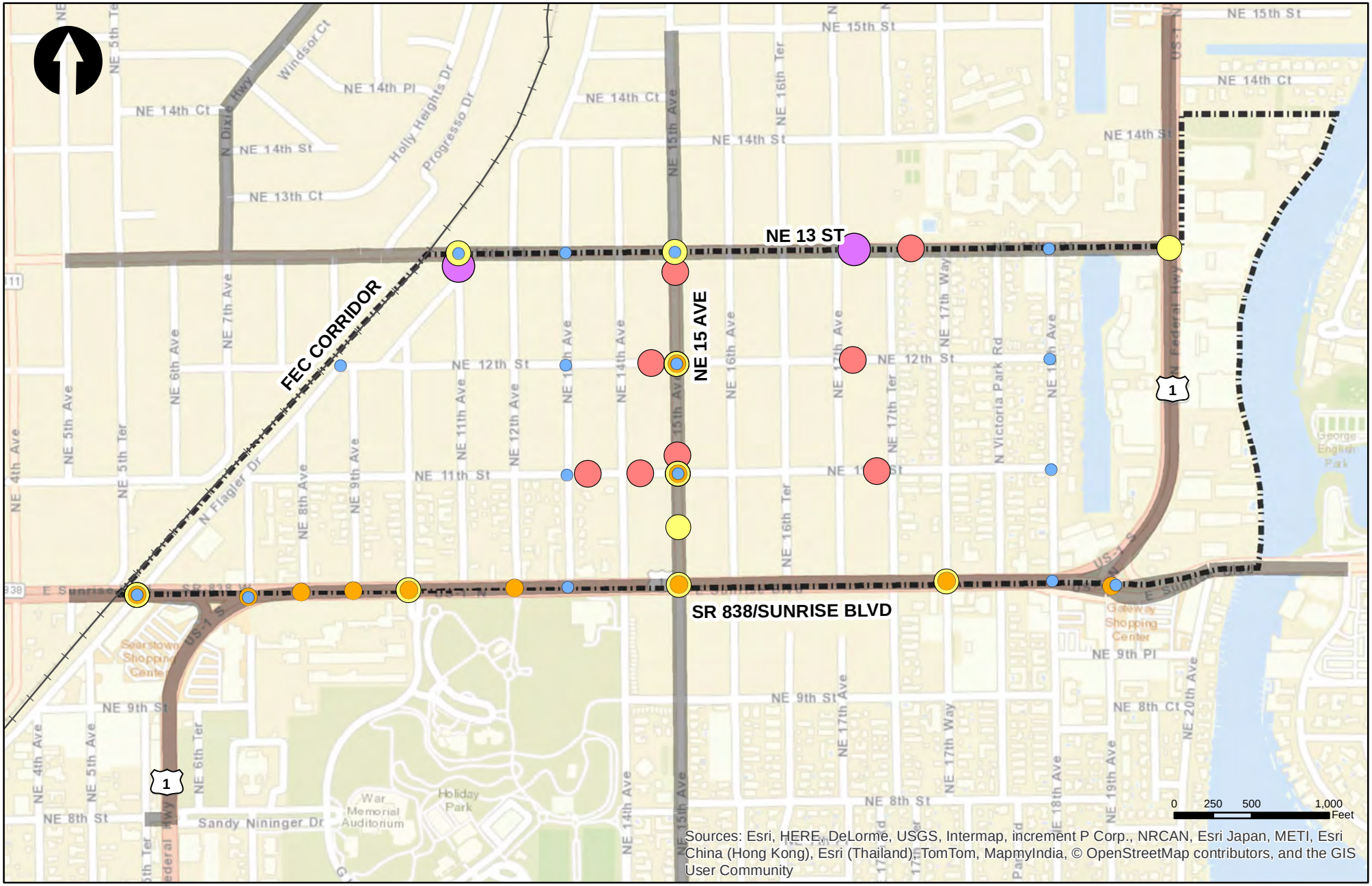
1) 24-hour weekday traffic counts on September 17, 2014 and September 18, 2014 and weekends on September 20, 2014 and September 21, 2014 at nine different locations in the neighborhood.

2) 12-hour turning movement count (TMC) data were collected on September 17, 2014 and September 18, 2014 at 12 locations throughout the study area.

3) 24-hour speed counts on a weekday, September 17, 2014 and a weekend, September 20, 2014 at nine different locations in the neighborhood.

4) Bicycle and pedestrian count data was collected during the morning (7:00-9:00 AM) and evening (4:00-6:00 PM) peak hours between September 18, 2014 and October 7, 2014.

The raw traffic and speed data collected during the September-October 2014 timeframe is included in **Appendix A**. Traffic counts and TMCs were adjusted to reflect peak season conditions by applying FDOT's peak season conversion factors; specifically, a peak season conversion factor of 1.04 was applied (see **Appendix B**). It should be noted that since traffic data at the Sunrise Boulevard/US 1 intersection (Searstown) was collected on October 1, 2014, a peak season factor of 1.03 was used to adjust traffic data.



CITY OF FORT LAUDERDALE — VENICE OF AMERICA

LAKE RIDGE CIVIC ASSOCIATION

Legend

Count Location Type

- Bicycle
- Pedestrian
- Turning Movement
- Speed
- Traffic
- Lake Ridge Boundary
- Railroad
- Major Road

Source: TYLIN, 2014

LAKE RIDGE NEIGHBORHOOD MOBILITY MASTER PLAN

FIGURE 2-9

TRAFFIC COUNT DATA COLLECTION

2.4.1 Intersection Performance Evaluation, Year 2014

The intersection evaluation focused on the following seven signalized intersections and five unsignalized intersections within the study area:

Signalized Intersections

- Sunrise Boulevard at Flagler Drive
- Sunrise Boulevard at US 1 (Searstown)
- Sunrise Boulevard at NE 15th Avenue
- Sunrise Boulevard at NE 17th Way
- Sunrise Boulevard at US 1 (Gateway)
- NE 13th Street at NE 15th Avenue
- NE 13th Street at US 1

Unsignalized Intersections

- Sunrise Boulevard at NE 10th Avenue
- NE 11th Street at NE 15th Avenue
- Publix/Walgreens at NE 15th Avenue
- NE 12th Street at NE 15th Avenue
- NE 13th Street at NE 11th Avenue

Intersection analysis was performed using the Synchro and Highway Capacity Software (HCS 2010™) software to determine the intersection multimodal level of service (MMLOS) during the morning and evening peak hours under existing conditions (Year 2014). **Tables 2-8** and **2-9** show the intersection performance based on Synchro results.

Table 2-8: Signalized Intersection Multimodal Level of Service (MMLOS), Peak Hour, Year 2014

Signalized Intersection	Existing Level of Service, AM [PM]			
	Auto	Bicycle[1]	Pedestrian[2]	Transit
Sunrise Boulevard/Flagler Drive	D [C]	-	-	LOS **'C'** *on Sunrise Boulevard and US 1*; LOS **'E'** *on NE 15th Avenue*
Sunrise Boulevard/US 1 (Searstown)	D [D]	D [D]	C [C]	
Sunrise Boulevard/NE 10th Avenue	A [A	-	-	
Sunrise Boulevard/NE 15th Avenue	F [F]	C [D]	C [C]	
Sunrise Boulevard/NE 17th Way	D [C]	B [C]	C [C]	
Sunrise Boulevard/US 1 (Gateway)	C [D]	-	-	
NE 13th Street/NE 15th Avenue	C [D]	C [C]	B [B]	
NE 13th Street/US 1	B [C]	B [C]	B [C]	

Source: TYLI, March 2014

[1] Bicycle LOS includes factors such as, traffic volumes, lane configuration, crossing distance, bicycle lane or outside lane width

[2] Pedestrian LOS includes factors such as, traffic volumes, turn movement counts, signal phasing, crossing distance, intersection configuration.

Table 2-9: Unsignalized Intersection Level of Service (LOS), Peak Hour, Year 2014

Unsignalized Intersection	Existing Level of Service, AM [PM]			
	Northbound	Southbound	Eastbound	Westbound
NE 11th Street/NE 15th Avenue	B [A]	A [A]	C [F]	D [F]
Publix/Walgreens at NE 15th Avenue	A [A]	A [A]	D [F]	E [F]
NE 12th Street/NE 15th Avenue	A [A]	A [A]	C [C]	D [D]
NE 13th Street/NE 11th Avenue	C [A]	-	A [C]	A [C]

Source: TYLI, March 2014

Key Findings

Below are key findings from the existing conditions (Year 2014) traffic operational analysis. Detailed outputs from Synchro HCS 2010™ software showing approach delay, queue length, intersection delay, and bicycle/pedestrian level of service by direction are included in Appendix B.

- As shown in **Tables 2-8** and **2-9**, the Sunrise Boulevard/NE 15th Avenue intersection performs below the acceptable LOS 'D' in both morning and evening peak hours, while the unsignalized intersections along NE 15th Avenue at the Publix/Walgreens (driveway) and NE 11th Street operate at LOS 'F' during the evening peak hours.

- Overall, the bicycle/pedestrian LOS is generally acceptable in the corridor; however, bicycle/pedestrian LOS could not be determined for the Sunrise Boulevard/Flagler Drive and Sunrise Boulevard/US 1 (Gateway) intersections due to constraints in coding the signal timing (cycle lengths) in the Synchro software.

- Transit LOS along Sunrise Boulevard and US 1 is at a LOS 'C' condition due to higher average frequency of bus service (shorter headways) given the multiple BCT routes operating in these corridors; however, the transit LOS 'E' on NE 15th Avenue could be improved in the future as appropriate.

2.5 Safety

The Miami-Fort Lauderdale metropolitan area has one of the nation's highest number of bicycle and pedestrian crashes. All of the transportation partners in Broward County including the City of Fort Lauderdale, the Broward MPO, and FDOT have identified enhancement of bicycle and pedestrian safety as one of their top priorities. These agencies are developing various plans and policies to address the bicycle/pedestrian safety issue.

2.5.1 Crash Data Analysis, Year 2010-2013

The project team conducted a high level crash analysis using FDOT's 2010-2013 crash data available from the Crash Analysis Reporting System (CARS) and the Signal Four Analytics dataset. The crash data analysis was focused on identifying bicycle and pedestrian crash locations as well as comparing average, actual, and critical crash rates for various segments. **Table 2-10** presents a crash

data summary. During the five-year period from 2010 to 2014, a total of 538 crashes occurred in the study area and included 17 bicycle crashes and 27 pedestrian crashes, accounting for three and five percent of all crashes, respectively. In 2013, a large number of these crashes occurred at two locations: the Gateway area was the scene of three bicycle/pedestrian crashes, and eight bicycle/pedestrian crashes were recorded in the Sunrise Boulevard/US 1 corridor, including one pedestrian fatality.

Table 2-10: Crash Summary, 2010-2013

Year & Segment/Location	Crashes			Fatalities	
	All Modes	Bicycle	Pedestrians	Bicycle	Pedestrian
Sunrise Boulevard/US 1: Flagler Drive to NE 13th Street					
Year 2010	89	4	4	0	1
Year 2011	59	3	5	0	1
Year 2012	101	3	10	0	1
Year 2013	171	4	4	0	1
Sunrise Boulevard/US 1 (Searstown): 770 feet west of the shift in alignment					
Year 2010	4	0	0	0	0
Year 2011	8	1	0	0	0
Year 2012	10	0	0	0	0
Year 2013	19	0	0	0	0
Sunrise Boulevard/US 1 (Gateway): 1720 feet east of US 1					
Year 2010	18	0	0	0	0
Year 2011	14	1	1	0	0
Year 2012	16	0	1	0	1
Year 2013	29	1	2	0	0
Total	**538**	**17**	**27**	**0**	**5**

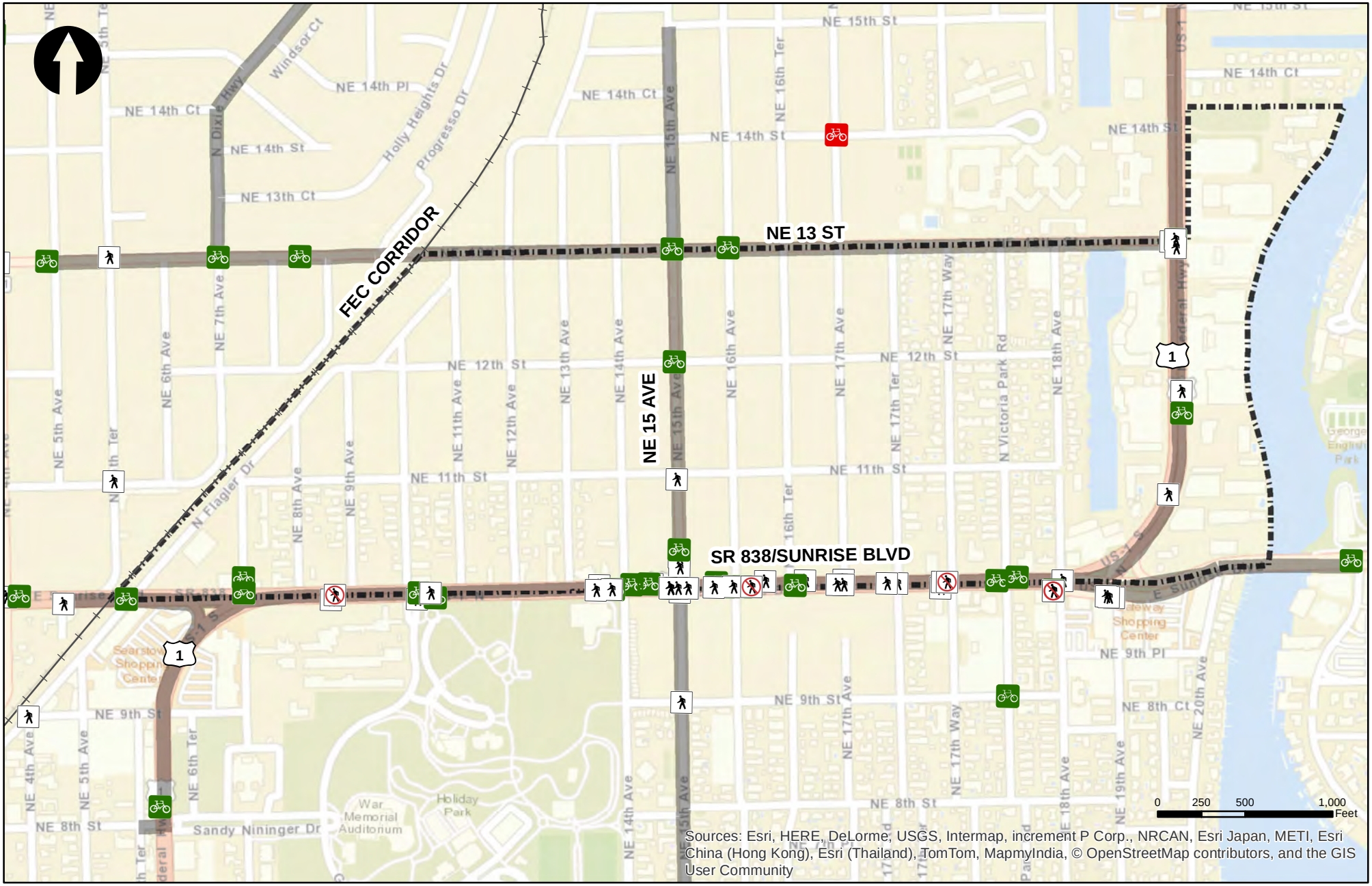
Source: Crash Analysis Reporting System (CARS), FDOT and Signal Four Analytics, February 2014

Figure 2-10 shows the general location of all of the bicycle and pedestrian crashes, including crashes involving a fatality. Per the spatial distribution of the bicycle and pedestrian crashes, these crashes tend to be concentrated at the following locations:

- Sunrise Boulevard at NE 10th Avenue – Holiday Park entrance
- Sunrise Boulevard/NE 15th Avenue intersection
- Sunrise Boulevard between NE 15th Avenue and US 1 (Gateway).

In addition, bicycle and pedestrian crashes also occurred at the Sunrise Boulevard/US 1 (Searstown) intersection and at a midblock location along US 1 (Audi dealership/IHOP), as well as along NE

13th Street and NE 15th Avenue. Each of these locations experience significant bicycle/pedestrian activity given the land uses and transit connectivity (stop location).



Legend

- Bicycle Crash (No Fatality)
- Bicycle Crash (1 Fatality)
- Pedestrian Crash (No Fatality)
- Pedestrian Crash (1 Fatality)
- Railroad
- Major Road
- Lake Ridge Boundary

Source: City of Fort Lauderdale & Florida Department of Transportation

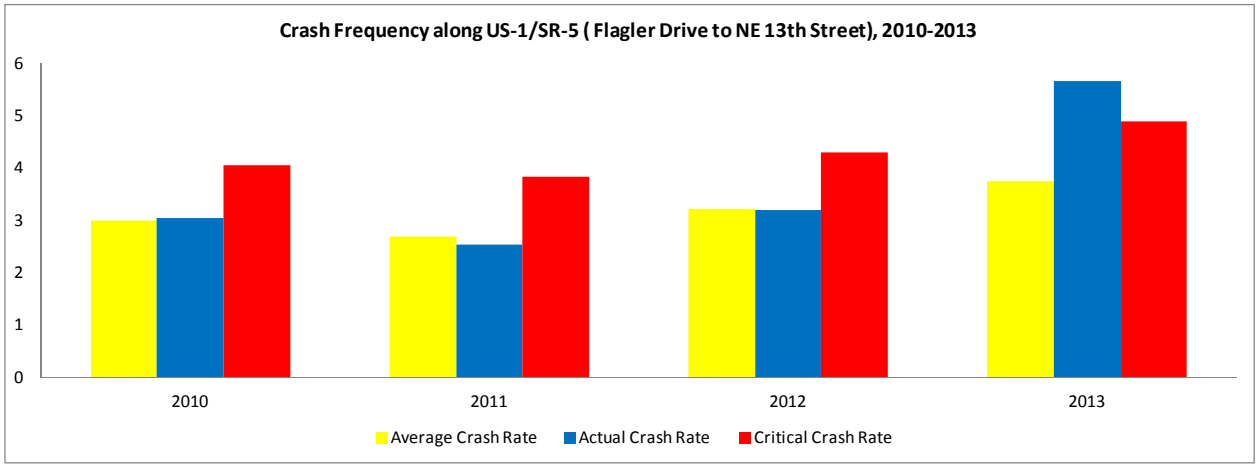
LAKE RIDGE CIVIC ASSOCIATION

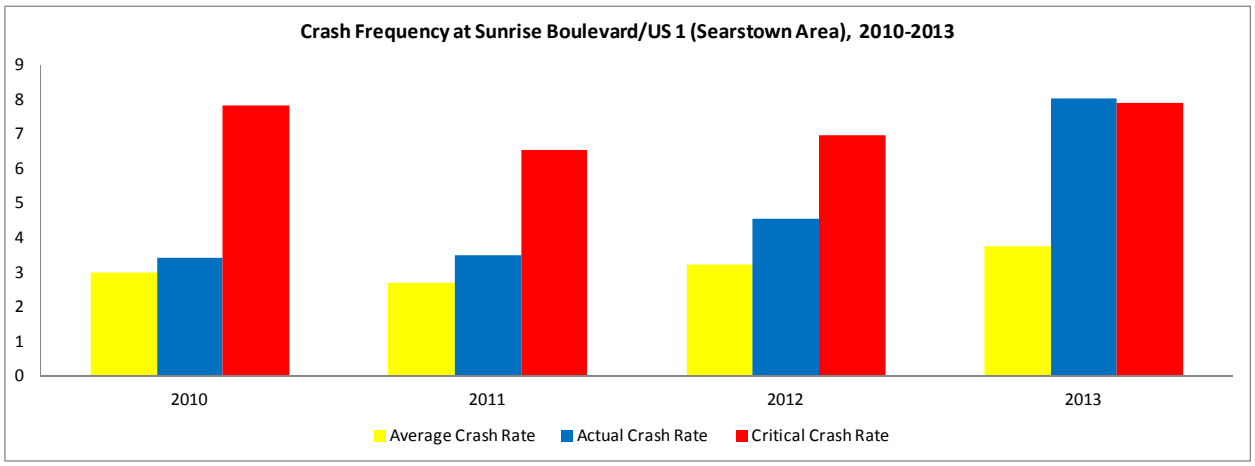
LAKE RIDGE NEIGHBORHOOD MOBILITY MASTER PLAN

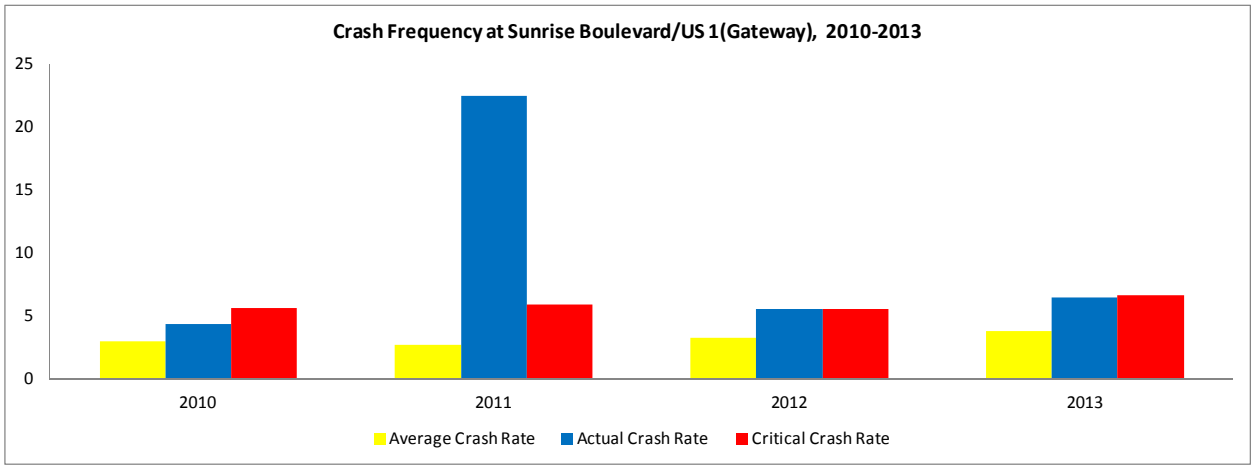
FIGURE 2-10

BIKE/PED CRASHES 2010-2013

Figure 2-11: Crash Frequency Analysis (All Modes), 2010-2013







As shown in **Figure 2-11**, the actual crash rate[1] in 2011 at the Sunrise Boulevard/US 1 (Gateway) intersection is higher than the critical crash rate[2], while the while critical crash rate in the year 2013 for the entire segment of Sunrise Boulevard/US 1 and Sunrise Boulevard/US 1 (Searstown) is higher than the actual or observed crash rates. This analysis indicates a need for improvements to enhance the safety for all users; particularly for bicyclists and pedestrians. It should be noted that the average crash rate indicates crashes for similar type of facilities with similar land use characteristics.

[1] The frequency of crashes relative to the exposure of traffic on a roadway segment or intersection is called its crash rate. Actual crash rate is defined as the total number of crashes per million vehicle miles in any given year.
[2] A critical crash rate or threshold value is calculated for each site and compared to the observed or actual crash rate. Sites with an observed or actual crash rate greater than their critical crash rate are flagged for further investigation.

2.5.2 Speed Count Analysis

As described in Section 2.4, 24-hour speed counts were conducted on a weekday, September 17, 2014 and a weekend, September 20, 2014 at nine different locations in the neighborhood along NE 11th Avenue, NE 15th Avenue, NE 11th Street, NE 12th Street, and NE 13th Street (Figure 2.9). **Table 2-11** provides a summary of the speed count data. Raw speed data is included **Appendix A**.

Table 2-11: Speed Count Summary, September 2014

Station Name: 990146 - Section 1 - Posted Speed Limit is 35 mph

Description: NE 15th Avenue North of NE 11th Street

Direction	Lane(s)	Average Speed (mph)		Total Vehicles		85th Percentile (mph)		% of vehicles > 35 mph
		Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	
NB	**2**	37	36	6,700	5,700	42	42	61%
SB	**2**	40	39	7,100	5,800	45	46	78%

Station Name: 990142 - Section 2 - Posted Speed Limit is 35 mph

Description: NE 15th Avenue South of NE 13th Street

Direction	Lane(s)	Average Speed (mph)		Total Vehicles		85th Percentile (mph)		% of vehicles > 35 mph
		Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	
NB	**2**	29	29	6,200	5,500	36	35	15%
SB	**2**	33	32	6,600	5,300	38	37	26%

Station Name: 990141 - Section 3 - Posted Speed Limit is 35 mph

Description: NE 13th Street East of NE 15th Avenue

Direction	Lane(s)	Average Speed (mph)		Total Vehicles		85th Percentile (mph)		% of vehicles > 35 mph
		Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	
EB	**2**	30	29	5,800	5,000	35	35	10%
WB	**2**	27	30	5,900	4,800	34	36	10%

Station Name: 990140 - Section 4 - Posted Speed Limit is 35 mph

Description: NE 13th Street East of NE 17th Terrace

Direction	Lane(s)	Average Speed (mph)		Total Vehicles		85th Percentile (mph)		% of vehicles > 35 mph
		Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	
EB	**2**	31	35	4,800	4,500	40	41	34%
WB	**2**	35	38	5,100	4,700	44	44	62%

Table *2-11: Speed Count Summary, September 2014, continued*

Station Name: 990143 - Section 5 - Posted Speed Limit is 25 mph

Description: NE 12th Street West of NE 15th Avenue

Direction	Lane(s)	Average Speed (mph)		Total Vehicles		85th Percentile (mph)		% of vehicles > 25 mph
		Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	
EB	**1**	20	20	280	250	25	25	13%
WB	**1**	20	21	250	200	25	25	8%

Station Name: 990145 - Section 6 - Posted Speed Limit is 25 mph

Description: NE 12th Street East of NE 17th Avenue

Direction	Lane(s)	Average Speed (mph)		Total Vehicles		85th Percentile (mph)		% of vehicles > 25 mph
		Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	
EB	**1**	20	19	240	220	25	25	12%
WB	**1**	20	19	250	280	25	25	10%

Station Name: 990138 - Section 7 - Posted Speed Limit is 25 mph

Description: NE 11th Street East of NE 14th Avenue

Direction	Lane(s)	Average Speed (mph)		Total Vehicles		85th Percentile (mph)		% of vehicles > 25 mph
		Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	
EB	**1**	21	20	500	530	25	25	14%
WB	**1**	20	20	540	520	25	25	10%

Station Name: 990144 - Section 8 - Posted Speed Limit is 25 mph

Description: NE 11th Street West of NE 17th Terrace

Direction	Lane(s)	Average Speed (mph)		Total Vehicles		85th Percentile (mph)		% of vehicles > 25 mph
		Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	
EB	**1**	20	20	410	360	25	25	8%
WB	**1**	19	19	390	370	24	23	5%

Station Name: 990139 - Section 9 - Posted Speed Limit is 25 mph

Description: NE 11th Avenue south of NE 13 Street (at Flagler)

Direction	Lane(s)	Average Speed (mph)		Total Vehicles		85th Percentile (mph)		% of vehicles > 25 mph
		Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	
NB	**1**	19	20	140	140	25	25	11%
SB	**1**	19	20	180	140	25	25	8%

Key Findings

Below is a summary description of key findings from the analysis of the speed count data described above.

- Overall, the measured 85th percentile speed limit on NE 15th Avenue is 7 to 11 mph over the posted speed limit for the segment north of NE 11th Street while it is 0 to 3 mph over the posted speed limit south of NE 13th Street. At the corridor level, 15 to 78 percent of all vehicular traffic travels at a higher speed than the posted speed limit. The combination of high vehicle speeds along NE 15th Avenue and the pedestrian/bicycle activity in the vicinity of the Publix/Walgreens plaza suggests a need for implementation of traffic calming and safety improvements.

- Overall, the measured 85th percentile speed limit on NE 13th Street is 0 to 1 mph over the posted speed limit for the segment east of NE 15th Avenue while it is 5 to 9 mph over the posted speed limit east of NE 17th Terrace. At the corridor level, 10 to 62 percent of all vehicular traffic travels at a higher speed than the posted speed limit. The location of the Sunrise Middle School immediately north of NE 13th Street creates potential safety issues.

- For residential streets (such as NE 11th Street, NE 12th Street, and NE 11th Avenue), the 85th percentile speed limit is 25 mph, which is the same as the posted speed limit; however, approximately 5 to 14 percent of vehicles travel at a higher speed relative to the posted speed limit.

<THIS PAGE INTENTIONALLY LEFT BLANK>

3. Future Conditions

3.1 Population & Jobs

The population of the Lake Ridge neighborhood declined between the years 2000 and 2010. This decline can be attributed to the housing bust and Great Recession (2008-2009). However, the Lake Ridge neighborhood is forecast to grow at a substantially greater population growth rate than that expected for the City of Fort Lauderdale and Broward County over the next 30 years. Similarly, Lake Ridge's employment growth rate over the same 30-year period is slightly greater than Fort Lauderdale and Broward County. **Table 3-1** depicts the future population and employment.

Table 3-1: Population and Jobs Growth

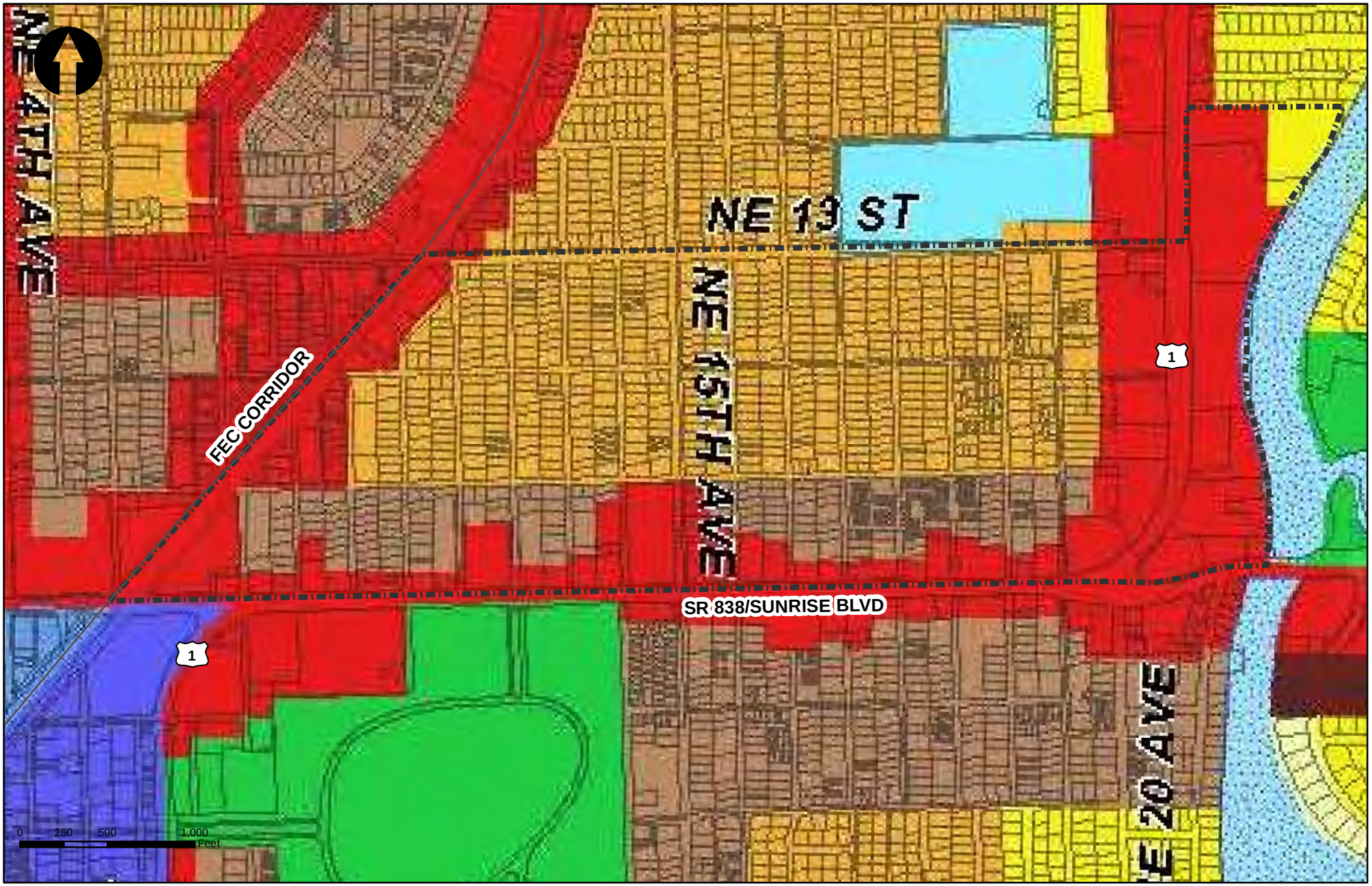
Category	2010			2040			% Change (2010-2040)		
	Lake Ridge	Fort Lauderdale	Broward County	Lake Ridge	Fort Lauderdale	Broward County	Lake Ridge	Fort Lauderdale	Broward County
Population	3,034	158,894	1,682,892	5,290	212,408	2,004,390	74.4%	33.7%	19.1%
Employment	1,517	166,873	861,521	1,633	175,173	910,263	7.7%	5.0%	5.7%

Source: Southeast Florida Regional Planning Model (SERPM) 7.0

3.2 Future Land Use

Figure 3-1 depicts the future land use for the Lake Ridge neighborhood. As compared with the existing land use, the future land use is not likely to change, however, the Central City Community Redevelopment Agency (CRA) is considering transit oriented development (TOD) on the west side of the Florida East Coast (FEC) railroad tracks at NE 13th Street, which could result in increased density and allowance for taller structures. Depending on the type of TOD, trip generation and traffic circulation could vary significantly. Empirical data shows that mixed-use and TOD in conjunction with multimodal infrastructure improvements increase the walking, biking, transit, car/bike share mode splits as the preferred mode of transportation for some trips over driving.

There are other larger developments being planning in the vicinity of the Lake Ridge neighborhood that could potentially impact traffic operations in the community. Residents of the Lake Ridge neighborhood should be engaged during the early planning phase of these development projects to fully understand the impacts and mitigation measures.



CITY OF FORT LAUDERDALE VENICE OF AMERICA

LAKE RIDGE CIVIC ASSOCIATION

Legend

- Park/Open Space
- Commercial
- Medium 15 DU/acre
- Medium 25 DU/acre
- Lake Ridge Boundary
- Downtown Regional Activity Center
- NW Regional Activity Center
- Low-Medium 8 DU/acre
- Community Facilities
- Railroad
- High 60 DU/acre
- Low 4.4 DU/acre
- Water

Source: City of Fort Lauderdale, Oct. 2012

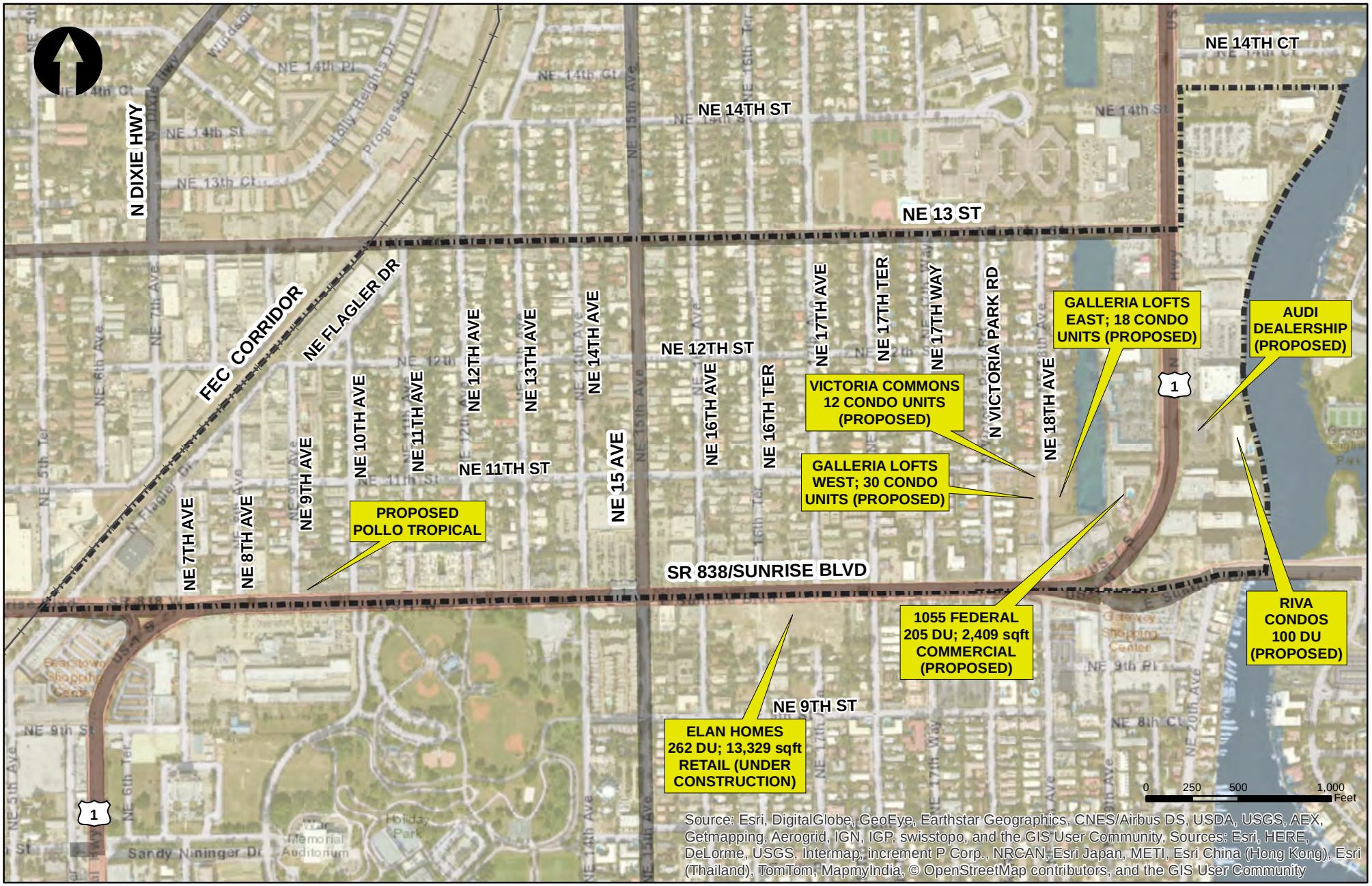
LAKE RIDGE NEIGHBORHOOD MOBILITY MASTER PLAN

FIGURE 3-1

FUTURE LAND USE

3.3 Development Projects in the Vicinity

As shown in **Figure 3-2**, there are seven upcoming residential, commercial, and/or mixed-use projects in different stages of the project approval process within the Lake Ridge neighborhood. In addition, in the vicinity of the neighborhood is the proposed Galleria Mall Expansion project – a major mixed-use development project anticipated to open in near future – and the recently completed Elan Homes.



Legend

- Lake Ridge Boundary
- Railroad
- Major Road

Source: City of Fort Lauderdale, Nov. 2014

LAKE RIDGE NEIGHBORHOOD MOBILITY MASTER PLAN

FIGURE 3-2

DEVELOPMENT PROJECTS

The following is a brief overview of the various development projects and their potential traffic impacts based on traffic impact statements and/or studies submitted by the developer to the City.

3.3.1 Pollo Tropical

Per the trip generation analysis submitted by the applicant to the City, the proposed redevelopment is located on a 1.689-acre site at 901-925 East Sunrise Boulevard, bounded by NE 9th Avenue on the west, NE 10th Avenue on the east, and Sunrise Boulevard on the south. It is expected to generate 56 net new trips during the evening peak hour and 829 net new daily trips. A detailed traffic impact analysis for this project was not conducted since the daily and hourly trips generated by the proposed development were under the City's threshold of 1,000 trips/day and/or the peak hour traffic impacts not exceeding 20 percent of the total daily trips in a one-hour period. The queuing analysis performed for the proposed project indicated that the approved site plan provided enough storage capacity (to accommodate 11 cars in the drive through lane). More on-site parking was provided than required by the code and the site has good connectivity (off of NE 9th Avenue and NE 10th Avenue) from an access/egress standpoint.

3.3.2 Galleria Lofts East and West

The combined trip generation potential from the Galleria Lofts East (18 condo units) and West (30 condo units) developments along NE 18th Avenue is 403 net external daily trips, 35 net new external morning peak hour trips, and 40 net new external evening peak hour trips. Since the daily and hourly trip rates for the proposed development are below the City's requirement for conducting a detailed traffic impact study, a trip generation analysis was conducted using the Institute of Transportation Engineers' (ITE) Trip Generation, 9th Edition methodology. The developer has voluntarily agreed to provide on-street parking, sidewalks and other pedestrian facilities along NE 18th Avenue. In addition, electronic gates are to be installed at vehicular access points in the development to divert unwanted traffic from the property.

3.3.3 Victoria Commons

Twelve condo units are proposed at 1040 Victoria Park Road as part of the Victor Commons development project. Per the approved site plan, future residents will be able to access/egress the proposed development from NE 11th Street and Victoria Park Road. A detailed traffic impact analysis was not required by the City for this project.

3.3.4 1055 Federal

This proposed project is planned to be located on the west side of US 1 just north of Sunrise Boulevard. The proposed project site will be redeveloped with 205 residential units and approximately 2,409 square feet of retail to replace the existing 148-room hotel with an ancillary restaurant. The current access provided by three right-turn-in/right-turn-out driveways off of US 1 will be consolidated into one main ingress/egress access driveway. The single point of ingress/egress will be restricted to right turns only.

The net new project trips anticipated to be generated by 1055 Federal is approximately 487 daily trips. A detailed traffic impact analysis was conducted to understand the operational impacts of the proposed development at the Sunrise Boulevard/US 1 (Gateway) intersection, which found that the Sunrise Boulevard/US 1 (Gateway) intersection was operating at an acceptable level of service (LOS) under existing conditions and was anticipated to operate at LOS 'D' during both the morning and evening peak hours in the year 2015 with the proposed project in place, while the project driveway would operate at LOS 'C'.

3.3.5 RIVA

Based on the trip generation analysis performed for the RIVA (formerly called Galleria Landings), the proposed mixed use project (232 high rise condos/townhome, office building, specialty retail) was estimated to generate 955 trips/day, 105 trips during the morning peak hour, and 121 trips during the evening peak hour. The proposed site's sole access would be via a right-turn-in/right-turn-out driveway connection to US 1. A detailed traffic analysis was not performed consistent with City's requirements.

3.3.6 AUDI Dealership

Access/egress to the proposed project is identical to the existing right-in/right-out driveway at the south end of the site and a right-in/right-out/left-in driveway at the north end of the site. The proposed development was anticipated to generate 121 evening peak hour trips. No additional vehicular traffic conflicts were anticipated with the proposed redevelopment of the site.

3.3.7 Galleria Expansion Project

The Galleria Expansion Project is undergoing the City's Development Review Committee (DRC) approval process. This project is a mixed-use development that includes condominiums, townhomes, restaurants, and retail. The developer has conducted several meetings with the communities in the vicinity of the project to understand their issues and to potentially modify the site program to incorporate and address them. The developer is scheduled to conduct a detailed traffic analysis study to define the multimodal impacts of the proposed site program and provide for mitigating adverse impacts and/or enhance bicycle/pedestrian safety in the corridor.

3.4 Future Conditions Traffic Operations Analysis Year, 2015

This section summarizes the future (Year 2025) traffic conditions and operational characteristics and establishes a traffic baseline to evaluate and compare the impacts of recommended improvements in the study area.

3.4.1 Traffic Volume Forecast, Year 2025

Three different approaches were considered for forecasting future year traffic: 1) *Trend analysis* based on historical AADT; 2) Using *growth rates* based on SERPM (version 6.54); and 3) A combination of these two techniques. Since the *Activity Based Model* SERPM 7.0 was not adopted at the time of this analysis, it was used a reference to compare land use data at the traffic analysis zone (TAZ) level. Future year (2025) traffic was forecast based on a 0.5 percent annual growth rate,

which is consistent with FDOT's (September 2011) methodology for the SR 5/US 1 milling and resurfacing project from SR 842/Broward Boulevard (MP 0.00) to NE 17th Way (MP 1.83). In addition, traffic generated from the committed developments in the study area was included in the future year traffic forecast to account for background traffic to the extent possible. Appendix C includes future year traffic forecast.

3.4.2 Intersection Performance Evaluation, Year 2025

Intersection performance in the future year (2025) was evaluated to understand and evaluate operational conditions due to the increase in traffic resulting from organic growth as well as new development. This future year analysis provides a baseline for comparing impacts resulting from implementing proposed improvements. As explained in Section 3.4.1, future year (2025) TMC for performing microsimulation using the Synchro and Highway Capacity Software (HCS 2010™) software was obtained by multiplying the existing (adjusted) traffic count data with an annual growth rate of 0.5 percent. **Tables 3-2** and **3-3** provide a snapshot of intersection performance in the year 2025.

Table 3-2: Signalized Intersection Multimodal Level of Service (MMLOS), Peak Hour, Year 2025

Signalized Intersection	Existing Level of Service, AM [PM]			
	Auto	Bicycle[1]	Pedestrian[2]	Transit
Sunrise Boulevard/Flagler Drive	D [C]	-	-	LOS **'A'** *on Sunrise Boulevard and US 1*; LOS **'E'** *on NE 15th Avenue*
Sunrise Boulevard/US 1 (Searstown)	D [D]	D [D]	C [C]	
Sunrise Boulevard/NE 10th Avenue	A [A]	-	-	
Sunrise Boulevard/NE 15th Avenue	F [F]	C [D]	C [C]	
Sunrise Boulevard/NE 17th Way	D [C]	B [C]	B [C]	
Sunrise Boulevard/US 1 (Gateway)	D [E]	-	-	
NE 13th Street/NE 15th Avenue	C [D]	C [C]	B [B]	
NE 13th Street/US 1	B [C]	B [C]	B [C]	

Source: TYLI, March 2014

[1] Bicycle LOS includes factors such as, traffic volumes, lane configuration, crossing distance, bicycle lane or outside lane width

[2] Pedestrian LOS includes factors such as, traffic volumes, turn movement counts, signal phasing, crossing distance, intersection configuration.

Table 3-3: Unsignalized Intersection Level of Service (LOS), Peak Hour, Year 2025

Unsignalized Intersection	Existing Level of Service, AM [PM]			
	Northbound	Southbound	Eastbound	Westbound
NE 11th Street/NE 15th Avenue	B [A]	A [A]	C [F]	E [F]
Publix/Walgreens at NE 15th Avenue	A [A]	A [A]	E [F]	E [F]
NE 12th Street/NE 15th Avenue	A [A]	A [A]	C [C]	E [D]
NE 13th Street/NE 11th Avenue	A [A]	-	C [C]	A [A]

Source: TYLI, March 2014

Key Findings

Below are key findings from the future conditions (Year 2025) traffic operational analysis. Detailed outputs from the Synchro and HCS 2010™ software showing approach delay, queue length, intersection delay, and bicycle/pedestrian level of service by direction, is included in **Appendix C**.

- Overall intersection LOS degrades from 'D' to 'E' at the Sunrise Boulevard/US 1 (Gateway) intersection in the future during evening rush hour.
- The majority of the intersections along Sunrise Boulevard experience marginal approach delay in some direction during morning or evening rush hours in the future.
- Unsignalized intersections at NE 11th Street and NE 12th Street along NE 15th Avenue show degradation in level of service for the westbound approach in the future during morning peak hours.
- Increased traffic adversely impacts the eastbound approach at the Publix/Walgreens (driveway) on NE 15th Avenue during morning peak hours.
- Bicycle/pedestrian LOS is anticipated to remain stable over the next 10 years.
- Transit LOS in the Sunrise Boulevard and US 1 corridor is anticipated to improve given the improvements identified in the County's 10-Year Transit Development Plan (TDP).

3.4.3 Florida East Coast (FEC) Railroad Crossing Impact Analysis

Intersection performance was evaluated along roadways and intersections nearest to the FEC railroad crossings at NE 13th Street and at US 1 to assess the impact of future increased train volume and railroad crossing gate closures on traffic flow. A level of service (LOS) and vehicle queuing analysis was conducted using microsimulation models (Synchro and SimTraffic software) to assess traffic impacts during the weekday morning and evening peak hours.

To estimate the impact of increased train traffic on the transportation network, existing Tri-Rail Coastal Link (TRCL) train crossing data was obtained from the FDOT, as well as assumptions for the TRCL project and the All Aboard Florida project (AAF). The following data was used to estimate the train crossing time during the morning and evening peak hours for the future year 2025 traffic conditions:

- *Railroad Crossing Delay Analysis Final Report, FDOT 2013* – Duration of gate closing events at Hollywood Boulevard (includes CSX freight and SFRC passenger type rail). No data was available at the railroad crossings in the *Lake Ridge Neighborhood Mobility Masterplan* study area.
    - 30 seconds minimum, 78 seconds median, 247 seconds maximum
- Existing Train Occupation Output Data File

- Longest TRCL crossing time was 38 seconds (does not include lead/trailing times for gates)
- Gate lead time – Approximately 20 seconds from when the gate goes up till the train arrives
- Gate trailing time – Approximately zero seconds

- Three trains per hour are estimated per peak hour (one train every 20 minutes)

Based on the data listed above, 78 seconds was used as the train crossing time in this analysis. Effectively, this is the time it takes for the gates to go down, the train to cross, and the gates to go back up. This analysis is representative of a train crossing approximately every five minutes instead of every 20 minutes as anticipated in the future due to the modeling options available. It should be noted that this analysis was conducted to reflect the traffic conditions during the morning and evening rush hour and does not include freight trains.

Table 3-4 shows a comparison of the 95th percentile queue during both the morning and evening peak hours for the following three scenarios:

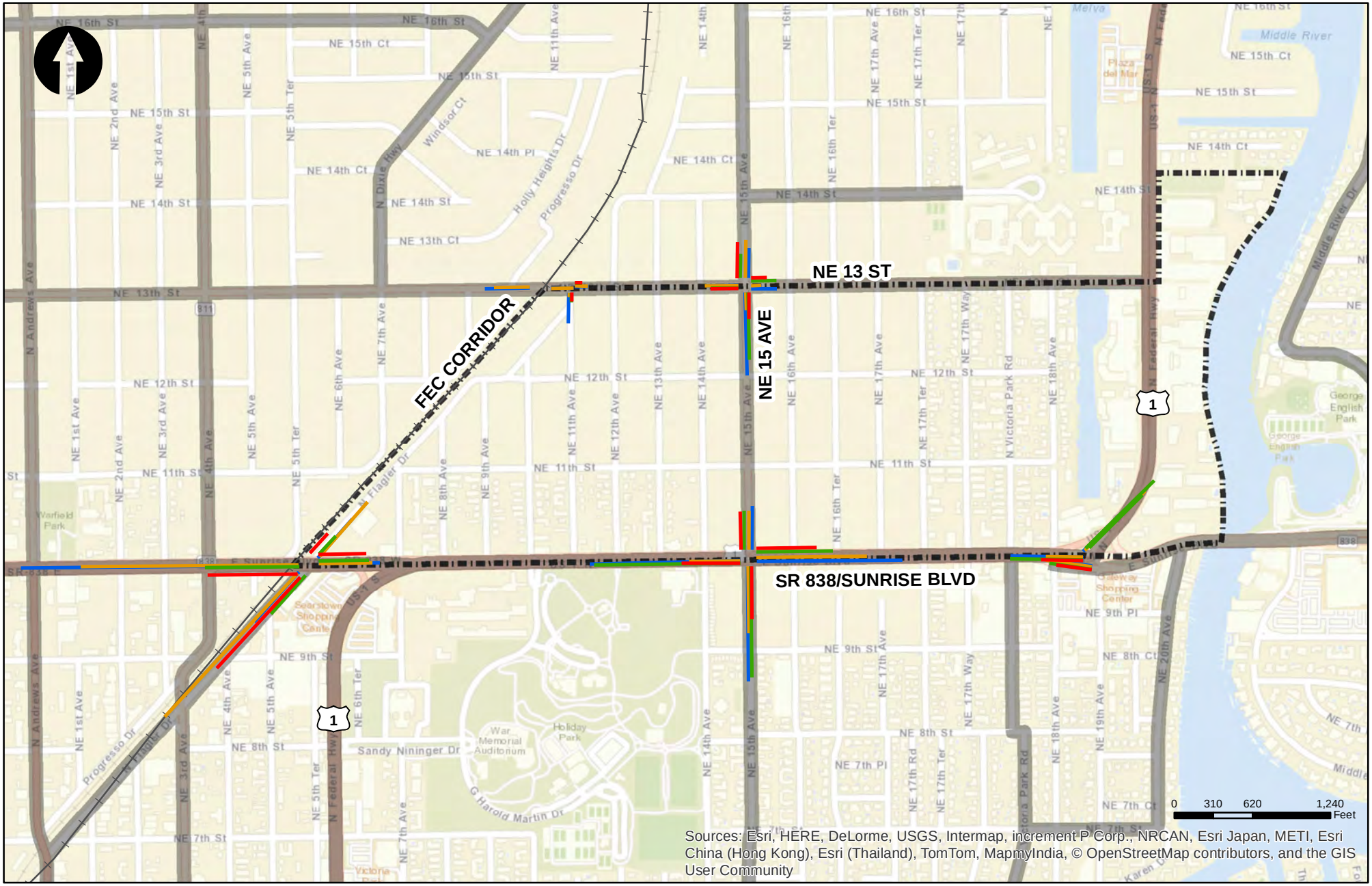
- Year 2014
- Year 2025 without additional trains (Tri-Rail Coastal Service, All Aboard Florida, and Freight Service)
- Year 2025 with additional trains

Table 3-4: 95th Percentile Queue Summary, Year 2014 vs. Year 2025

Intersection	Existing Year 2014 No Trains (A)		Future Year 2025 No Trains (B)		Future Year 2025 With Trains (C)		Increase in Queue Length [D = (C) - (B)] (Feet / # of Vehicles)			
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak (Δ)		PM Peak (Δ)	
Sunrise Blvd (SR 838) @ Flagler Dr	Feet	Feet	Feet	Feet	Feet	Feet	Increase Feet	Increase Vehicles	Increase Feet	Increase Vehicles
EB	502	783	643	675	1,555	1,978	*912*	*36*	*1,303*	*52*
WB	289	400	342	360	383	440	*41*	*2*	*80*	*3*
NB	935	436	879	366	1,391	476	*512*	*20*	*110*	*4*
SB	116	175	189	175	369	177	*180*	*7*	*2*	*0*
Sunrise Blvd (SR 838) @ NE 15th Ave										
EB	518	1,110	421	1,045	365	1,072	*-56*	*-2*	*27*	*1*
WB	605	883	431	545	790	1,040	*359*	*14*	*495*	*20*
NB	501	849	375	787	474	813	*99*	*4*	*26*	*1*
SB	274	290	271	275	275	308	*4*	*0*	*33*	*1*
Sunrise Blvd (SR 838) @ US 1										
EB	296	314	254	305	330	299	*76*	*3*	*-6*	*0*
NB	325	444	297	521	264	519	*-33*	*-1*	*-2*	*0*
SB	477	590	537	686	601	518	*64*	*3*	*-168*	*-7*
NE 13th Street @ Railroad Crossing										
EB	-	-	-	-	256	323	*256*	*10*	*323*	*13*
WB	-	-	-	-	158	160	*158*	*6*	*160*	*6*
NE 13th Street @ NE 11th Ave (unsignalized)										
EB	0	0	15	0	15	0	*0*	*0*	*0*	*0*
WB Left	44	50	55	50	92	95	*37*	*1*	*45*	*2*
NB	51	127	63	69	31	217	*-32*	*-1*	*148*	*6*
NE 13th Street @ NE 15th Ave										
EB	197	201	200	196	240	223	*40*	*2*	*27*	*1*
WB	110	188	113	181	72	184	*-41*	*-2*	*3*	*0*
NB	190	402	190	476	127	590	*-63*	*-3*	*114*	*5*
SB	186	221	256	172	270	211	*14*	*1*	*39*	*2*

Source: TYLI, March 2014

Figure 3-3 illustrates queuing during AM and PM peak hours with and without the additional trains while **Table 3-5** shows a comparison of existing year (2014) intersection level of service with future year (2025) with and without additional trains.



Legend

Queue Length

- Future AM
- Future PM
- Future AM with RR
- Future PM with RR
- Lake Ridge Boundary
- Railroad
- Major Road

Source: TYLIN, 2014

LAKE RIDGE NEIGHBORHOOD MOBILITY MASTER PLAN

FIGURE 3-3

FEC RAILROAD CROSSING IMPACT ANALYSIS

Table 3-5: Comparison of Intersection Level of Service (LOS), Year 2014 vs. Year 2025

Intersection	Existing Year 2014 No Trains (A)		Future Year 2025 No Trains (B)		Future Year 2025 With Trains (C)		Increase in Delay [D = (C) - (B)]	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak (Δ)	PM Peak (Δ)
Sunrise Blvd (SR 838) @ Flagler Dr								
EB	C (34)	D (52)	D (35)	E (57)	F (168)	F (368)	*133*	*311*
WB	C (26)	D (48)	C (29)	D (47)	F (89)	F (173)	*60*	*126*
NB	F (216)	E (64)	F (253)	E (67)	F (642)	F (209)	*389*	*142*
SB	F (96)	F (92)	F (99)	F (93)	F (174)	F (142)	*75*	*49*
OVERALL	D (44)	C (32)	D (45)	C (32)	F (154)	F (229)	*109*	*197*
Sunrise Blvd (SR 838) @ NE 15th Ave								
EB	E (80)	E (79)	F (85)	F (89)	F (85)	F (89)	*0*	*0*
WB	E (73)	E (67)	E (78)	F (91)	E (78)	F (91)	*0*	*0*
NB	F (105)	F (240)	F (117)	F (267)	F (117)	F (267)	*0*	*0*
SB	F (217)	F (110)	F (237)	F (120)	F (237)	F (120)	*0*	*0*
OVERALL	F (103)	F (97)	F (111)	F (112)	F (111)	F (112)	*0*	*0*
Sunrise Blvd (SR 838) @ US 1								
EB	A (0)	A (0)	A (0)	A (0)	A (0)	A (0)	*0*	*0*
NB	C (32)	D (47)	C (22)	D (45)	C (22)	D (45)	*0*	*0*
SB	E (60)	B (20)	E (64)	D (40)	E (64)	D (40)	*0*	*0*
OVERALL	D (47)	D (35)	D (50)	D (43)	D (50)	D (43)	*0*	*0*
NE 13th Street @ Railroad Crossing								
EB	-	-	-	-	B (16)	B (15)	-	-
WB	-	-	-	-	B (14)	B (15)	-	-
OVERALL	-	-	-	-	B (15)	B (16)	-	-
NE 13th Street @ NE 11th Ave (unsignalized)								
EB	A (0)	A (0)	A (0)	A (0)	A (0)	A (0)	0	0
WB Left	A (10)	A (9)	B (10)	A (9)	B (10)	A (9)	0	0
NB	C (18)	C (19)	C (20)	C (21)	C (20)	C (21)	0	0
NE 13th Street @ NE 15th Ave								
EB	C (22)	C (30)	C (23)	C (31)	C (26)	C (31)	*3*	*0*
WB	B (20)	C (28)	C (21)	C (29)	C (21)	C (29)	*0*	*0*
NB	C (21)	E (77)	C (21)	F (98)	C (21)	F (98)	*0*	*0*
SB	C (25)	C (24)	C (26)	C (25)	C (26)	C (25)	*0*	*0*
OVERALL	C (22)	D (44)	C (23)	D (52)	C (23)	D (52)	*0*	*0*

Source: TYLI, March 2014

Key Findings

Below are key findings from the FEC railroad traffic impact analysis (Year 2014) traffic operational analysis. Detailed outputs from the Synchro and SimTraffic software showing approach delay, queue length, intersection delay, and overall level of service by direction are included in **Appendix D**.

- With additional passenger trains in the FEC Corridor, significant queuing and delay is anticipated at the following locations:
    - Sunrise Boulevard (eastbound and westbound) at Flagler Drive and NE 15th Avenue in the morning and evening peak hours.
    - Flagler Drive (northbound) at Sunrise Boulevard in the evening peak hour.
    - Overall intersection level of service at Sunrise Boulevard/Flagler Drive intersection is anticipated to degrade significantly due to additional trains, while the delay at the NE 15th Avenue intersection is expected to be marginal.
- Queue length and traffic impacts at intersections on NE 13th Street are forecast to be negligible, even though there would be some queuing at the FEC railroad crossing in the eastbound and westbound direction compared to the existing or future conditions without additional trains.
- Additional analysis should be completed for these intersections to include freight train traffic, which is comprised of longer trains traveling at slower speeds that require gate closure for a longer duration, resulting in more delay. With the completion of the Port Everglades dredging project, it is highly likely that frequency of freight trains in the FEC corridor will increase. All of the partner agencies (Broward County, Broward MPO, FDOT, and cities/municipalities) will need to work closely to evaluate the traffic impacts on cross streets and identify appropriate mitigation strategies.

<THIS PAGE INTENTIONALLY LEFT BLANK>

4. Public Participation

A comprehensive and transparent public engagement process is essential to understanding which specific improvements have public support and should be considered for further technical evaluation. Engaging the public early in the planning process not only serves as a means for gathering input and defining problems but also for how to frame solutions to address those problems, confirm the analyses, and ultimately to develop the plan recommendations.

The public engagement process conducted for the *Lake Ridge Neighborhood Mobility Masterplan* began with the development of a *Public Participation Plan* (PPP) in September 2014. The PPP developed specifically for the *Lake Ridge Neighborhood Mobility Masterplan* is consistent with the City's overall public outreach and involvement effort. The PPP identified all of the stakeholders, community groups, and agencies that were believed to have interest in this *Mobility Masterplan* and outlined the techniques and strategies to engage them throughout the planning process. A description of the different public involvement activities conducted since the planning process was initiated in September 2014 to date follows.

4.1 Stakeholder Meetings

To better understand the community's desire and vision for the role of the neighborhood *Mobility Masterplan*, the Consultant Team conducted in-person meetings with the Lake Ridge Civic Association (LRCA) board members and key agency personnel from the City of Fort Lauderdale on a regular basis (**Table 4-1**).

Table 4-1: Stakeholder Meetings

Date	Location	Topic
September 18, 2014	290 NW 3rd Avenue Fort Lauderdale, Florida 33301	Project kick-off meeting with City staff
October 9, 2014		Core Team (LRCA board members) – Transportations Issues/Concerns
November 14, 2014		Core Team (LRCA board members) – Draft Vision, goals, objectives & Preparation for Public Meeting #1
December 19, 2014		Existing Conditions Traffic Analysis and Evaluation & Prioritization Methodologies
February 13, 2015		Existing Conditions Traffic Analysis and FEC Railroad Crossing Impact Analysis
March 5, 2015		Core Team (LRCA board members) – Preliminary Recommendations

Source: TYLI, April 2014

4.2 Public Meetings

Three public workshops were held between November 2014 to April 2015 to share project information and receive input from the community throughout the planning process as well as at specific milestones (see **Table 4-2**).

Table 4-2: Public Meeting Log

Date & Tine	Location	Topic
November 20, 2014 7:00 pm to 8:30 pm	ArtServe 1350 East Sunrise Boulevard, Fort Lauderdale, Florida 33304	**Phase 1: Project Initiation** • Project introduction • Feedback on draft Vision Statement and Goals • Solicit input related to ➢ transportation issues; and ➢ potential strategies or ideas to address mobility, accessibility, and safety problems in the neighborhood
March 19, 2015 7:00 pm to 8:30 pm		**Phase 2: Technical Analysis** • Discuss key technical analysis findings • Obtain feedback on initial recommendations and • Discuss project prioritization criteria
April 15, 2015 7:00 pm to 8:30 pm		**Phase 3: Plan Recommendations** • Discuss proposed short-, mid-, and long-term recommendations

Source: TYLI, April 2014

A variety of communication techniques were used to notify Lake Ridge neighborhood residents about the three workshops, including online communication via the LRCA and City web sites; social media postings (Facebook and Twitter); flyers; and an email blast. A combined total of 65 residents and/or property owners attended these three workshops and provided more than 100 written comments to identify transportation issues and concerns as well as potential solutions. A summary of the public input received is included in Chapter 5 as well as documented in detail in the *Public Participation Memorandum, April 2015*.

4.3 Consensus Building

Preliminary recommendations were discussed at the second public meeting on March 19, 2015, to gather feedback and input from the community. Thirty-seven preliminary recommendations were grouped into three improvement packages corresponding to commercial avenues (arterials), residential avenues (collectors), and residential streets (local streets). The proposed improvements

along NE 15th Avenue at the Publix/Walgreens plaza were discussed at length. The community was concerned with the adverse impact resulting from the proposed elimination of left-turn (northbound turning vehicles) out of the Publix parking lot. Various stakeholders acknowledged that the NE 15th Avenue concept plan would be refined to address this concern during the design and engineering phase.

In general, the meeting attendees and the LRCA board agreed with the preliminary recommendations that improve bicycle and pedestrian connectivity, provide mobility and accessibility as well as enhance safety for all users. The community understood that this *Mobility Masterplan* is a living document which establishes the community's vision and identifies several improvements to accomplish it. Some of these improvements could be implemented relatively quickly, while some of the more complex solutions would need to be better defined before programming them for implementation. The LRCA board adopted the *Lake Ridge Mobility Masterplan* on September 28, 2015.

<THIS PAGE INTENTIONALLY LEFT BLANK>

5. Transportation Issues/Concerns and Potential Solutions

Understanding the existing and future conditions in combination with community concerns related to transportation is necessary to identify the most appropriate solutions. To that end, a detailed assessment of the existing and future traffic operations was conducted, and community input was gathered through an extensive public engagement effort. A summary of the transportation issues/concerns and potential solutions identified based on public input and findings from various technical analysis as well as field observations follows.

5.1 Public Input Related to Transportation

More than 100 comments were received through the public outreach effort, including the November 20, 2014, public meeting to identify transportation issues, concerns, and needs in the Lake Ridge neighborhood. These comments were mapped and then stratified in to seven different groups described below:

1. Bicycle and pedestrian safety and connectivity issues on US 1 and Sunrise Boulevard.
2. Speeding and safety issues in the Lake Ridge neighborhood.
   - 2.1 Cut-through traffic on NE 18th Avenue and NE 11th Street, in addition to traffic from the Villa Medici development, leads to speeding and safety issues.
   - 2.2 Speeding and safety issues on NE 11th Street, NE 13th Street, and Flagler Drive.
3. Additional traffic from higher density residential development projects at NE 18th Avenue and NE 11th Street would exacerbate the problems identified in item 2.1 above.
4. Spillover parking from Villa Medici results in safety, maintenance, and accessibility issues for motorists and residents along NE 17th Way, NE 17th Avenue, and Victoria Park Road.
5. Traffic circulation and bicycle/pedestrian safety issues at the Publix and Walgreens plazas on NE 15th Avenue.
6. Traffic congestion on Sunrise Boulevard.
7. General mobility and accessibility issues and needs in the neighborhood.
   - 7.1 Trees blocking stop signs on 12th Street and 17th Avenue. Some stop signs are not visible.

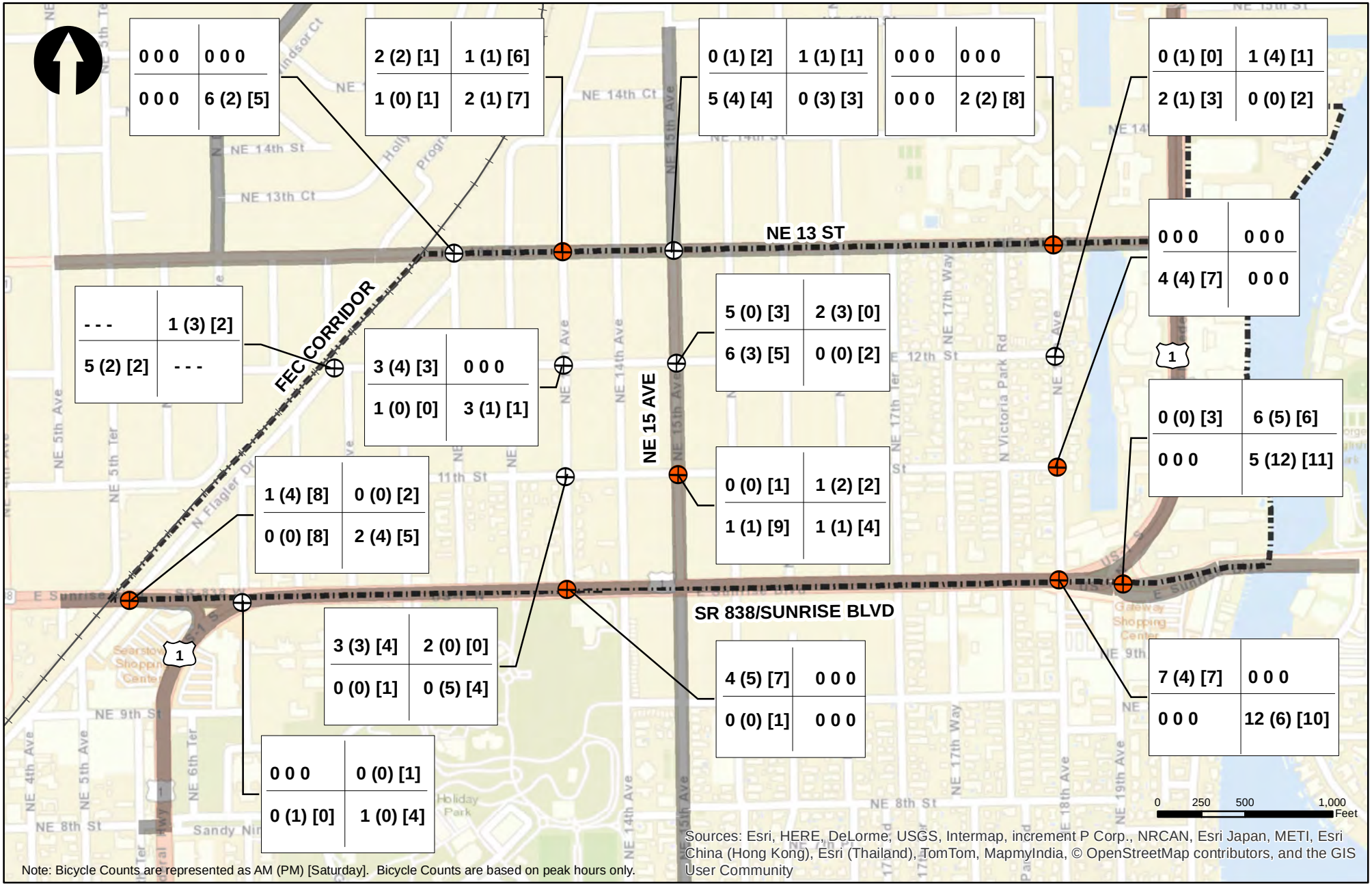
5.2 Field Observations & Technical Analysis

Project team members conducted windshield surveys, obtained field measurements, and observed traffic conditions as well as performed technical analyses described in Chapters 2 and 3 to assess and validate various transportation issues/ concerns identified by the community.

5.2.1 High Bike/Pedestrian Activity Locations

Bicycle and pedestrian count data was collected during the morning (7 to 9 AM) and evening (4 to 6 PM) peak hours between September 18, 2014 and October 7, 2014. **Figures 5-1** and **5-2** show the locations having high bicycle and pedestrian activity, respectively. It is evident that high bicycle

activity locations are spread throughout the neighborhood while high pedestrian activity locations tend to be along Sunrise Boulevard.



Note: Bicycle Counts are represented as AM (PM) [Saturday]. Bicycle Counts are based on peak hours only.

Legend

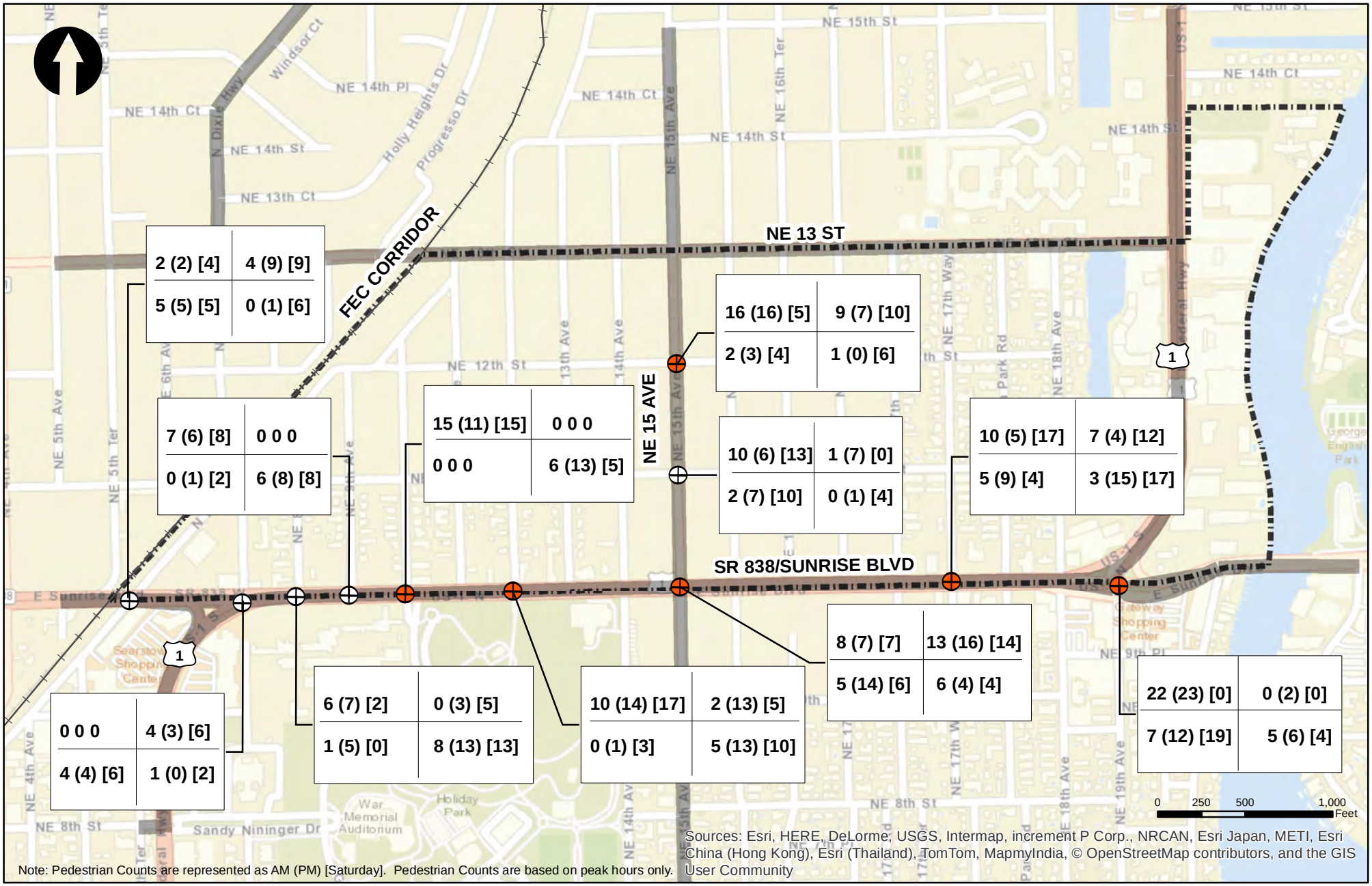
- Bicycle Activity AM (PM) [MD]
- High Bicycle Activity AM (PM) [MD]
- Lake Ridge Boundary
- Railroad
- Major Road

Source: TYLIN, Oct. 2014

LAKE RIDGE NEIGHBORHOOD MOBILITY MASTER PLAN

FIGURE 5-1

HIGH BICYCLE ACTIVITY LOCATIONS



Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Note: Pedestrian Counts are represented as AM (PM) [Saturday]. Pedestrian Counts are based on peak hours only.

CITY OF FORT LAUDERDALE — VENICE OF AMERICA

LAKE RIDGE CIVIC ASSOCIATION

Legend

- Pedestrian Activity AM (PM) [MD]
- High Pedestrian Activity AM (PM) [MD]
- Lake Ridge Boundary
- Railroad
- Major Road

Source: TYLIN, Oct. 2014

LAKE RIDGE NEIGHBORHOOD MOBILITY MASTER PLAN

FIGURE 5-2

HIGH PEDESTRIAN ACTIVITY LOCATIONS

5.2.2 Bus Stop Access/Egress Pattern

Bus stop access and egress patterns were observed during peak hours on November 18, 2014 and November 20, 2014 at locations that had more than 40 to 50 daily riders. The mode of access to and from the bus stop, the direction of travel, and the time of day were recorded for transit patrons at these bus stops. These locations included NE 12th Street, NE 15th Street, NE 17th Way and US 1 (Gateway) along Sunrise Boulevard, and at a midblock (undesignated) location between the US 1 at the IHOP restaurant and the Audi dealership. The majority of transit riders arrived on foot in the general direction from adjacent developments such as the Satori Apartments, Villa Medici, and the Publix/Walgreens Plaza. A few riders were observed crossing US 1 in the vicinity of the IHOP restaurant and the Audi dealership.

5.3 Technical Analysis

The technical analyses and field observations conducted by the project team confirmed and validated nearly all of the mobility and accessibility issues identified by the community through the public outreach effort. Except for comments about speeding on local residential streets within the neighborhood, all of the other issues were found to be supported by data and/or field observations.

5.4 Potential Solutions/Ideas

Table 5-1 includes the potential solutions and ideas based on the community input received during the November 20, 2014 public meeting to address the mobility and accessibility concerns and issues identified in Section 5.1. Approximately 61 unique potential solutions/ideas listed below correspond to the seven transportation issues and needs categories included in Section 5.1.

<THIS PAGE INTENTIONALLY LEFT BLANK>

Table 5-1: Potential Solutions/Ideas, Public Meeting #1 – November 2014

Transportation Issues & Needs	Street	Potential Solutions/ Ideas	Description
1. Bicycle and pedestrian safety and connectivity issues on US 1 and Sunrise Boulevard.	US 1/Federal Highway	1-A	Provide pedestrian overpass across connecting the Audi dealership with the PMG Plaza.
		1-B	Install crosswalk connecting East Point Towers or the bank with the Plaza (Red Cow Restaurant) across US 1; could possibly be elevated.
		1-C	Install signalized, midblock crossing across US 1 from the Audi dealership at 1200 N Federal Hwy to the PMG Plaza; pedestrian signal should be actuated control and traffic signal should be synchronized with the one at the Gateway intersection.
		1-D	Install full signal along northbound and southbound US 1 at the PMG Plaza entrance. This will also address vehicular conflicts between auto/trucks making U-turns to go south on US 1, entering and existing PMG Plaza, fast moving traffic in the southbound lanes on US 1 or provide a left/U-turn light midblock (similar to those on US 1 at J Alexanders or Best Buy).
		1-E	On demand pedestrian signals and crosswalks at all four legs of an intersection as well as bike crossing in the Gateway area.
	Sunrise Boulevard	1-F	Evaluate and identify improvements at the FEC/Sunrise Boulevard railroad crossing for ADA compliance.
		1-G	On demand pedestrian signals and crosswalks at all four legs of Sunrise Boulevard and Flagler Drive intersection as well as bike crossing in the Searstown area.
		1-H	Provide enhanced crosswalk (painted or with flashing lights in street) to enter Holiday Park.
		1-I	Provide bike/pedestrian connectivity west of NE 15th Avenue. Provide a bike crossing at NE 12th Avenue from Holiday Park through Satori Apartments.
		1-J	Provide pedestrian crossing at NE 18th Avenue.
		1-K	Pedestrian crossing at NE 16th Terrace as proposed by FDOT.
		1-L	Install lit signs and fluorescent painted curbs for enhanced visibility at night time and in inclement weather.
		1-M	Need walkway for residents through Villa Medici to access Sunrise Boulevard.
		1-N	Sidewalk obstructions along Sunrise Boulevard should be relocated or walkway widened to provide safe passage.
2. Speeding and safety issues in Lake Ridge neighborhood. 2.1. Cut-through traffic on NE 18th Avenue and NE 11th Street in addition to traffic from Villa Medici creating speeding and safety issues. 2.2 Speeding and safety issues on NE 11th Street, NE 13th Street, and Flagler Drive	NE 18th Avenue	2-A	Install mini roundabout at the NE 18th Avenue and NE 11th Street intersection.
		2-B	Install 4-way stop signs all the way along NE 18th Avenue and NE 11th Street between NE 12th Street and NE 17th Avenue.
		2-C	Install speed humps on NE 18th Avenue.
		2-D	Provide traffic calming measures such as installing large trees on NE 11th Street between NE 17th Avenue and NE 18th Avenue.
		2-E	Provide sidewalks on NE 18th Avenue and NE 11th Street
	NE 11th Street	2-F	Install additional 4-way stop signs including one at the NE 11th Street & NE 10th Avenue intersection for improving safety.
		2-G	Provide sidewalks on NE 11th Street west and east of NE 15th Avenue.
		2-H	Additional traffic calming measures as appropriate.
	NE 13th Street	2-I	Need traffic calming measures, traffic control, and law enforcement.
		2-J	Evaluate sight distance issue at NE 13th Street and NE 11th Avenue possibly created by landscaping.
		2-K	Evaluate sight distance issue at NE 13th Street and NE 17th Avenue.
		2-L	Evaluate parking access and egress at NE 13th Street and NE 11th Avenue.
		2-M	Analyze traffic signal on NE 13th Street and NE 17th Terrace.
	Flagler Drive	2-N	Evaluate Flagler Drive and Sunrise Boulevard intersection for signal timing (southbound turn lane signal experience long wait times).
		2-O	Improve signage, lane markings or possibly a median for northbound traffic.
		2-P	Evaluate sight distance issues at Flagler Drive and NE 7th Avenue; Flagler Drive and NE 9th Avenue.
3. Additional traffic from higher density residential development projects at NE 18th Avenue and NE 11th Street would exacerbate the problems identified in item #2.1.	Sunrise Boulevard	3-A	Provide entry and exit for future residents of Galleria Lofts and Victoria Commons on Sunrise Boulevard.
	NE 11th Street	3-B	Provide entry or exit for future residents of Galleria Lofts and Victoria Commons on NE 11th Street as opposed to entry and exit on NE 11th Street.
	NE 11th Street and Sunrise Boulevard	3-C	Allow traffic to enter only from 11th Street and exit on to Sunrise Boulevard. Roadway design similar to Elan homes - extend Sunrise Boulevard & US1 median to allow for adjusted signal and stop bar and possible turn lane.
	NE 17th Way and NE 17th Terrace	3-D	Re-route traffic by making NE 17th Way one-way northbound between NE 13th Street & NE 11th Street, while NE 17th Terrace one-way southbound. An alternative route to NE 17th Way for accommodating northbound traffic flow could be NE 18th Avenue.
	NE 18th Avenue and NE 11th Street	3-E	Allow future residents of Galleria Lofts and Victoria Commons to use NE 18th Avenue and NE 11th Street for access and egress purposes.
	Victoria Park Road and NE 11th Street	3-F	Move gate on Victoria Park NB to NE 11th Street.

Table 5-1: Potential Solutions/Ideas, Public Meeting #1 – November 2014 *continued*

Transportation Issues & Needs	Street	Potential Solutions/ Ideas	Description
4. Spillover parking from Villa Medici creating safety, maintenance, and accessibility issues for motorists and residents along NE 17th Way, NE 17th Avenue, and Victoria Park Road.	NE 11th Street	4-A	Provide designated on-street parking along south side of NE 11th Street.
	NE 17th Way	4-B	Permit on street parking on NE 17th Way between NE 11th Street and NE 12th Street.
		4-C	Create loading and unloading zones at gated locations for Villa Medici residents.
		4-D	Install signage – 'No Parking/Tow Zones' in swales and improve parking enforcement.
		4-E	Increase number of parking spaces for the Villas Medici residents.
		4-F	Enforce parking and code requirements to address aesthetics and maintenance issues.
5. Traffic circulation and bicycle/pedestrian safety issues at Publix and Walgreens plazas on NE 15th Avenue.	NE 14th Avenue	5-A	Use NE 14th Avenue to NE 11th Street to exit Publix instead of NE 15th Avenue. Move road closures on NE 14th Avenue to the south end of the Publix building.
	NE 15th Avenue	5-B	Painted crosswalks, flashing lights in the streets, stop sign; median on NE 15th Avenue from NE 13th Street to Sunrise Boulevard with turn lanes, bicycle lanes and other traffic calming measures including roundabouts.
	NE 15th Avenue	5-C	Extend median/bike lane cross section that currently exists north of NE 13th Street, south to NE 11th Street.
	Walgreens Driveway	5-D	To improve traffic circulation, relocate one driveway so that Walgreens and Publix driveways are not directly opposite each other. Move the driveway for Walgreens north.
6. Traffic congestion on Sunrise Boulevard.	at US 1	6-A	Traffic signal timing/.phasing should be evaluated along Sunrise Boulevard and US 1.
	at NE 18th Avenue	6-B	Traffic study to evaluate line of sight issues and signal timing at Sunrise Boulevard and NE 18th Avenue intersection.
	at NE 17th Way	6-C	Provide "Don't Block the Box" signs at NE 17th Way.
	Sunrise Boulevard	6-D	Bottleneck at the Gateway intersection in the eastbound direction could be addressed by providing four lanes – additional dedicated right turn lane, pedestrian crossing, and adjusted signal timing.
	Sunrise Boulevard	6-E	Better signal timing on Sunrise Boulevard to improve traffic flow issues in the west bound direction created by change in lane configuration and railroad crossing.
7. General mobility and accessibility issues and needs in the neighborhood. 7.1 Trees blocking stop signs on 12th Street and 17th Avenue. Some stop signs are not visible.		7-A	Need larger and more identifiable community entrance signs when you are entering the community and to slow traffic.
	NE 17th Way	7-B	Need for bike lanes west of the lake – possibly on NE 17th Way and bike lane connections between the future Flagler Greenway and NE 15th Avenue.
		7-C	Tree trimming needed at stop signs.
		7-D	Need "Children at Play" or "Slow down" type signs.
		7-E	Designated places for buses to pull in for pick-ups and drop-offs, better shelters, and bicycle parking.
7. General mobility and accessibility issues and needs in the neighborhood. 7.1 Trees blocking stop signs on 12th Street and 17th Avenue. Some stop signs are not visible.		7-F	Need sidewalks throughout the neighborhood or at least some internal neighborhood streets to create safe routes to schools, bus stops, and shopping centers. Identify streets or routes and provide typical cross section for local streets with a 40-foot right-of-way (narrow lanes, on-street parking, improved landscaping, signage, pavement marking, and bike lanes) to help create a coherent internal streetscape and help calm traffic.
		7-G	Speed bumps needed on all streets, especially east of NE 15th Avenue and north of NE 11th Street.
		7-H	Evaluate traffic impact due to increase in railroad traffic.
		7-I	Need for "non-planning solutions" – traffic enforcement, parking enforcement, a "Don't Block the Box" ordinance, updates to City code re: sidewalk installation and minimum parking requirements.
		7-J	Need for evaluating relocation of Walgreens plaza entry/exits and its impact to changes to private property for improving traffic circulation in the neighborhood.

6. Vision, Goals and Objectives

6.1 Vision Statement

Based on the input received through public meetings and stakeholder coordination, as well as from technical analysis findings, the following vision statement was developed for the *Lake Ridge Neighborhood Mobility Masterplan* by the project team and presented to the community and project stakeholders.

"*Enhance the quality of life by providing safe multimodal transportation options that improve mobility and accessibility for all Lake Ridge Neighborhood residents while preserving the neighborhood's character and increasing its economic vitality.*"

6.2 Goals and Objectives

The *Lake Ridge Neighborhood Mobility Masterplan* goals and objectives were established by the project team in coordination with the neighborhood residents and project stakeholders to accomplish the neighborhood's vision for a multimodal transportation system in the Lake Ridge neighborhood. The *Lake Ridge Neighborhood Mobility Masterplan* goals and objectives provide a general framework for evaluating and selecting appropriate improvements and projects for the neighborhood. A description of the three goals and eight objectives corresponding to these goals follows:

Mobility Goal: To create a transportation network within the Lake Ridge neighborhood that makes it easier for all users to connect with their neighbors, nearby destinations, and other neighborhoods by whichever modes of transportation they choose to use.

Objectives

- Increase bicycle and pedestrian accessibility options between the Lake Ridge neighborhood and key activity centers in the vicinity.
- Improve traffic circulation within the neighborhood.

Safety Goal: To design a transportation network within Lake Ridge that focuses on the safety of all users regardless of how they choose to travel.

Objectives

- Increase bicycle and pedestrian safety at intersections and midblock locations both within the Lake Ridge neighborhood and its vicinity.
- Implement traffic calming measures throughout the neighborhood.
- Identify and address parking violation issues that create safety problems in the neighborhood.

- Identify and address roadway geometrics and/or site design issues.

Quality of Life Goal: To provide a transportation system that allows all Lake Ridge residents to enjoy their homes, enhances property values, fosters improved business opportunities in the area, and retains the neighborhood's character while adapting to changing conditions.

Objectives

- Address neighborhood parking concerns to lessen the impact of higher density housing on the character and integrity of the Lake Ridge neighborhood.
- Incorporate Complete Streets concepts in all of the transportation improvement projects to the extent possible.

The neighborhood's vision, goals and objectives for this *Mobility Masterplan* are consistent with the City's overall goal of creating a connected community as envisioned in the *Fast Forward Fort Lauderdale, Our City, Our Vision 2035,* as well as the air quality and transportation goals and included in the *2011 Sustainability Action Plan (SAP)*. The City's vision is being implemented through the *Connecting the Blocks Program (CTB).*

Fast Forward Fort Lauderdale
Our City, Our Vision 2035

VISION STATEMENT

WE ARE CONNECTED
We move seamlessly and easily through a safe transportation system where the pedestrian is first.

WE ARE READY
We are a resilient and safe costal community.

WE ARE COMMUNITY
We are a neighborhood of neighborhoods.

WE ARE HERE
We are an urban center and a vacationland in the heart of South Florida.

WE ARE PROSPEROUS
We are a subtropical City, an urban laboratory for education and business.

WE ARE UNITED
We are a strong and vibrant kaleidoscope of multi-generational cultures, ethnicities, and community partners.

7. Technical Analysis & Project Evaluation

7.1 Project Evaluation

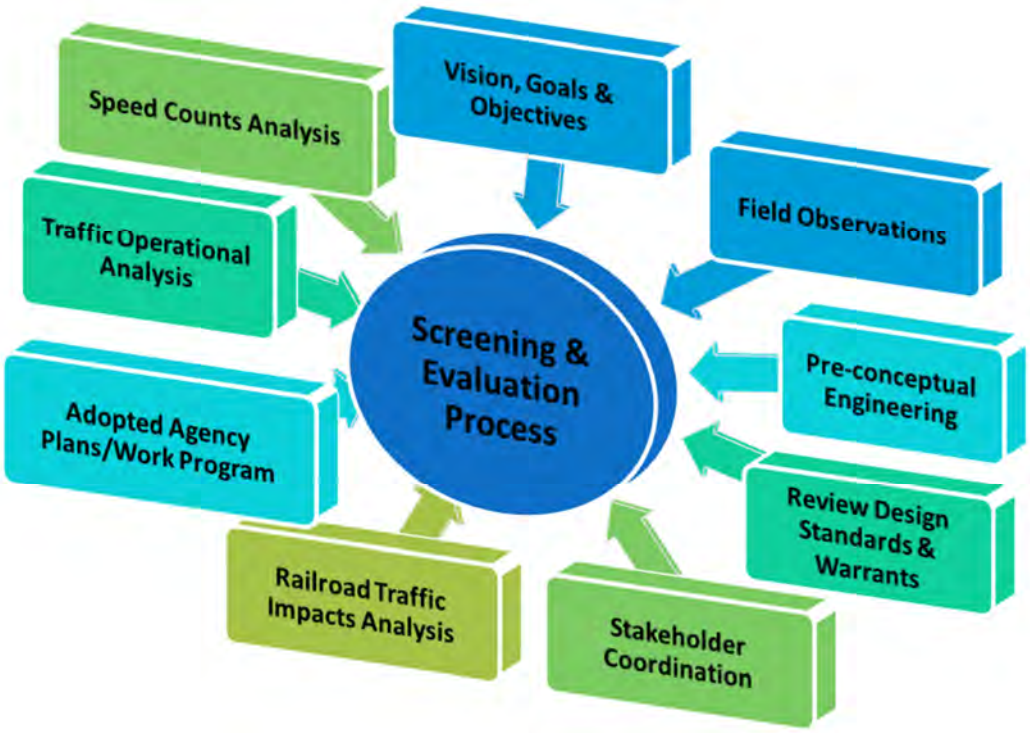
As illustrated in **Table 7-1**, the project evaluation methodology utilized a five-step screening process to assess the merits of potential solutions and ideas suggested by the community and identified through technical analysis and City staff input to solve mobility, accessibility, and safety issues in the Lake Ridge neighborhood. This five-step screening process also evaluated projects based on 18 different evaluation criteria relative to eight objectives, which in turn correspond to three goals. It should be noted that steps 4 and 5 were not used for evaluating projects per se but were used to develop recommendations and to some extent for project prioritization purposes. Sixty-one potential solutions suggested by the residents of the Lake Ridge neighborhood were evaluated using this five-step screening process.

Table 7-1: Screening Process and Evaluation Criteria

Screening Process	Evaluation Criteria
Step 1 – Fatal Flaw Assessment	Eliminate potential solutions/ ideas that are fatally flawed because: • It creates safety conflict(s) • It adversely impacts traffic on other neighborhood streets • It creates significant adverse impacts to emergency services • Results in significant loss of property access
Step 2 – Meets Community Vision: *Lake Ridge Neighborhood Mobility Masterplan Vision*	Eliminate potential solutions/ideas that do not meet Lake Ridge Neighborhood objectives or are rejected by the community: • Increases bicycle/pedestrian access and safety • Reduce speeds on neighborhood streets • Eliminate cut-through traffic on neighborhood streets • Address parking concerns • Enhance the character and integrity of the neighborhood by implementing traffic calming measures and improving street aesthetics
Step 3 – Meets Agency Requirements: *City of Fort Lauderdale, Broward County, or Florida Department of Transportation (FDOT) Design Guidelines/Warrants/Policies*	Identify alternatives for solutions that do not meet agency guidelines: • Minimum design standards for specific improvements • Roadway level of service impacts • Right-of-way needs • Local policy or ordinance
Step 4 – Funding Opportunities	For consideration in developing projects and identifying implementation opportunities • Opportunity for sharing project costs with partner agency • Public Private Partnership (PPP) • Potentially available state or federal grants
Step 5 – Capital and Maintenance Costs	For consideration in developing projects • Capital Cost – Low (under $100,000), Medium (between $100,000 to $500,000), High (over $500,000) • Maintenance Cost – Requires additional and/or special maintenance

As shown in **Figure 7-1**, nine different components comprised the technical analysis that informed the screening and evaluation process.

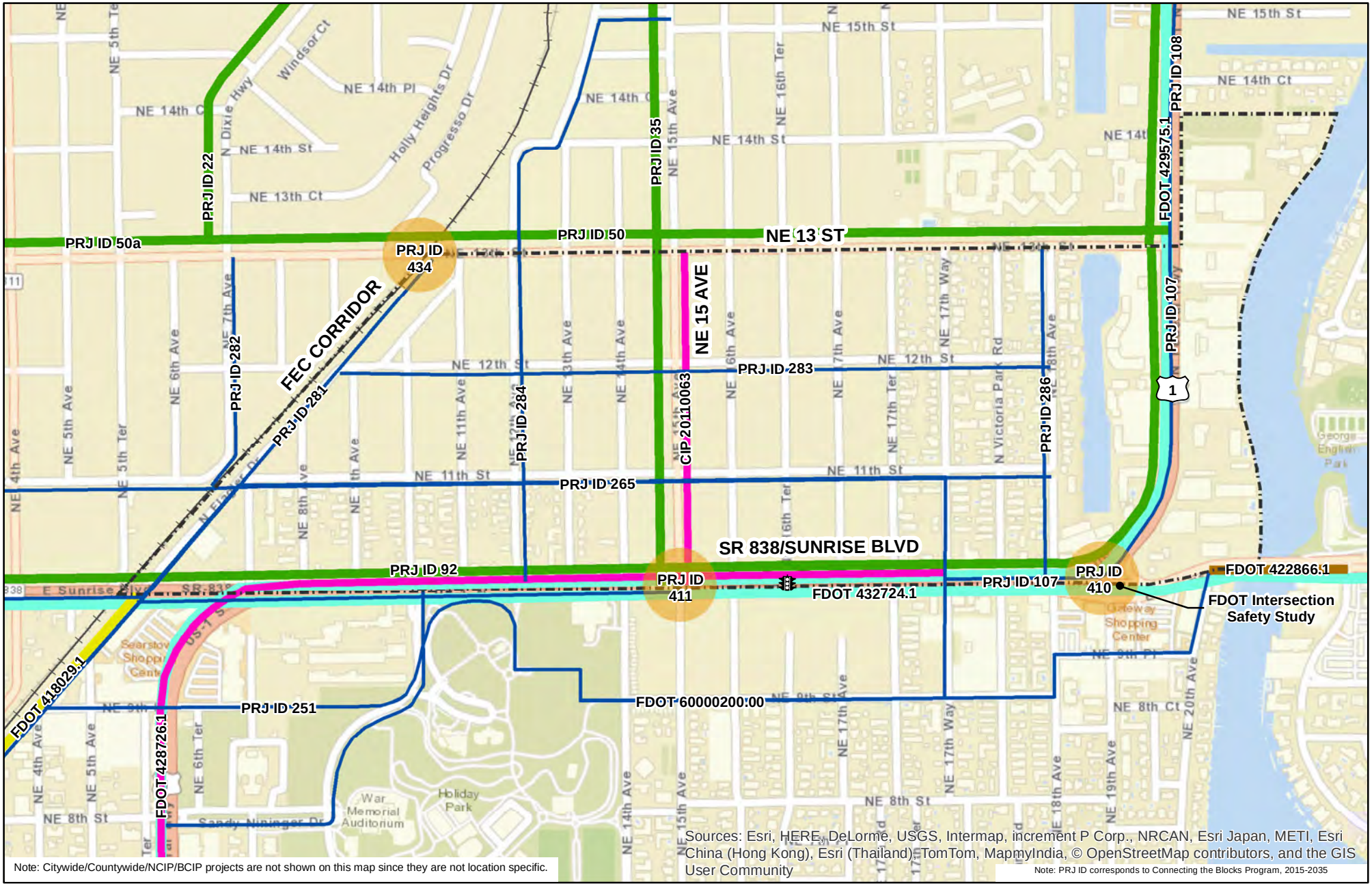
Figure 7-1: Technical Analysis Components



Some potential solutions/ideas were subjected to warrants tests to determine their eligibility for certain improvements, while in other cases, federal, state, and/or local design standards were reviewed to ensure that solutions met agency requirements. Field observations and measurements were recorded to evaluate right-of-way constraints for implementing these potential solutions. In addition, traffic operational analysis was conducted using microsimulation models (Synchro, HCS 2010™, and SimTraffic software) to assess traffic impacts. It should be noted that some of the potential solutions did not warrant a detailed traffic impact analyses nor did they require additional data collection; rather, professional engineering judgment and sketch planning methods were used to understand the traffic and safety impacts of implementing them. Section 7.2 explains the how the findings from these analyses were incorporated in the screening and evaluation process.

7.2 Screening and Evaluation Results

In addition to the technical analyses (traffic operational analysis, railroad traffic impact analysis, speed count analysis, pre-conceptual engineering), field observations, and agency requirements (design standards/warrants/guidelines), an integral part of this assessment included the review of the adopted plans and work programs of different agencies (City of Fort Lauderdale; FDOT, Broward County, and Broward MPO). The projects identified in various agencies' plans/programs are shown in **Figure 7-2** and **Table 7-2**. These plan/program documents were reviewed to identify synergies between improvements being recommended through the *Mobility Masterplan* and adopted projects to ensure overall consistency as well as expediting projects for implementation purposes.



Legend

Planned Improvements

- Bike/Ped
- Complete Streets
- Roadway
- Safety/Lighting
- Bridge
- Transit
- Community Hub
- Trafic Signal
- Lake Ridge Boundary
- Railroad

Source: Community Investment Plan 2014-2018, Ft. Lauderdale; Connecting the Blocks Program 2015-2035, Aug. 2014; FDOT Five-Year Work Program (FY 2014-FY2019)

LAKE RIDGE NEIGHBORHOOD MOBILITY MASTER PLAN

FIGURE 7-2

ADOPTED PLAN/ PROGRAM PROJECTS

Table 7-2: Adopted Plan/Program Projects

Project ID	Roadway	From	To	Project Description	Timeframe	Plan/Program
FDOT 418029.1	Flagler Drive	N Andrews Avenue	Sunrise Boulevard	Lighting	FY 2013- FY 2014	FDOT
PRJID 282	NE 7th Avenue	NE 13th Street	NE 11th Street	Secondary bike accommodations	2030-2035	CTB
PRJ ID 22	Old Dixie Highway	NE 13th Street	NE 18th Court	Add enhanced crosswalks, pedestrian-oriented lighting, shade, raised table intersections; narrow auto lanes and widen paved area to create bike lanes, add sharrows and shared-lane signage on bridge and approaches	2015-2019	CTB
PRJID 281	Flagler Drive	N Andrews Avenue	NE 13th Street	Secondary bike accommodations	2025-2029	CTB
PRJ ID 434	NE 13th Street	FEC	FEC	Community hub – add wide sidewalks, shade, pedestrian crossings, pedestrian lighting; Add connecting bike lanes to major corridors, bicycle racks; bus shelter, lighted waiting area	2025-2029	CTB
FDOT 428726.1	US 1/SR 5	Broward Boulevard	NE 17th Way	Resurfacing, Rehabilitation, and Reconstruction (3R)	2013-2015	FDOT
PRJID 284	NE 12th Avenue & Flagler Drive & NE 15th Street	Sunrise Boulevard	NE 15th Avenue	Secondary bike accommodations	2030-2035	CTB
PRJ ID 35	NE 15th Avenue	Sunrise Boulevard		Narrow median and lane diet north of NE 13th Street to create sidewalks buffers, add sidewalk buffers south of NE 13th Street, add pedestrian oriented lighting, add shade, enhance pedestrian crossings; extend bike lanes south of NE 13th Street as part of median narrowing and road diet; modification of signals, create northbound to eastbound dedicated right turn lane, extend the northbound to westbound left turn lane, mill and resurface intersection; on-street parking	2020-2024	CTB
CIP 20110063	NE 15th Avenue	Sunrise Boulevard	NE 13th Street	Includes reassignment of the right-of-way for lane reduction, addition of bicycle lanes and on-street parking; medication of the signal heads, creation of northbound to eastbound dedicated right turn lane, extension of the northbound to westbound left turn lane, milling and resurfacing the intersection	FY 2018	City CIP
PRJID 411	Sunrise Boulevard	NE 15th Avenue	NE 15th Avenue	Community hub – add wide sidewalks, shade, pedestrian crossings, pedestrian lighting; add connecting bike lanes to major corridors, bicycle racks; bus shelter, lighted waiting area	2030-2035	CTB
PRJID 286	NE 18th Avenue	Sunrise Boulevard	NE 13th Street	Secondary bike accommodations	2030-2035	CTB
PRJID 410	Sunrise Boulevard	Gateway	Gateway	Community hub – add wide sidewalks, shade, pedestrian crossings, pedestrian lighting; add connecting bike lanes to major corridors, bicycle racks; bus shelter, lighted waiting area	2025-2029	CTB
PRJ 107	US 1/SR 5	NE 15th Avenue	NE 13th Street	Implement lane/road diet to create sidewalk buffers, add pedestrian-oriented lighting, add shade, enhance pedestrian crossings; LPIS; and implement lane/road diet to create bike lanes	2020-2024	CTB
PRJ 108	US 1/SR 5	NE 13th Street	McNab Road	Implement lane/road diet to create sidewalk buffers, add pedestrian-oriented lighting, add shade, enhance pedestrian crossings; LPIS; and implement lane/road diet to create buffered bike lanes	2020-2024	CTB
FDOT 429575.1	US 1/SR 5	Miami-Dade County Line	Broward Boulevard	PTO Studies	FY 2015- FY 2016	FDOT
FDOT 60000200.00	NE 9th Street & NE 11th Street	US 1/SR 5	Flagler Drive	Add sharrows and bike route signage	FY 2014 – FY 2015	FDOT
FDOT 432724.1	Sunrise Boulevard	Sawgrass Expressway	SR A1A	Transit/Urban Core Improvements	FY 2014- FY 2016	FDOT
FDOT 422866.1	Sunrise Boulevard	Middle River Bridge	-	Bridge replacement		FDOT
PRJ 251	NE 8th Avenue & NE 10th Avenue	US 1/SR 5	US 1/SR 5	Sidewalks; secondary bike accommodations	2020-2024	CTB
PRJID92	Sunrise Boulevard	NW 24th Avenue	US 1/SR 5	Narrow auto lanes/median and implement lane/road diet to create sidewalk buffers, add pedestrian-oriented lighting, add shade, enhance pedestrian crossings; narrow auto lanes/median and implement lane/road diet to transform bike shoulders into bike lanes, extend bike lanes east, and create buffers for bike lanes; roundabout at Searstown; create space for bus shelter pads	2020-2024	CTB
PRJID265	NE 11th Street	Powerline Road	NE 18th Avenue	Secondary bike accommodations	2030-2035	CTB
PRJID283	NE 12th Street	Flagler Drive	NE 18th Avenue	Secondary bike accommodations	2030-2035	CTB
PRJID 50	NW/NE 13th Street	Powerline Road	US 1/SR 5	Enhanced crosswalks, street lights, in-ground LED lighted crosswalk, tree canopy, ADA improvements; bike lanes; on-street parking.	2025-2029	CTB
PRJID 50a	NW/NE 13th Street	NE 4th Avenue	NE 9th Avenue	Enhanced crosswalks, street lights, in-ground LED lighted crosswalk, tree canopy, ADA improvements; bike lanes; on-street parking.	2015-2019	CTB

Note: City/Countywide/Neighborhood Community Investment Program (NCIP)/Broward County CIP projects that are not location specific are not included in this table.

<THIS PAGE INTENTIONALLY LEFT BLANK>

As explained in Sections 5.1 and 5.4, each of the 61 potential solutions/ideas were coded corresponding to their geographic location (where applicable) and relative to the transportation issues/needs. Since the potential solutions/ideas being evaluated had significant variation in terms of complexity, a qualitative rating system was established to illustrate and communicate these findings. For instance, some of the potential solutions on the lower end of the spectrum included installation of a four-way stop sign while on the higher end of the spectrum required re-construction of the entire roadway cross section. To accommodate this variation and the complex nature of suggested improvements while being consistent in evaluating them, a "color-band" based qualitative rating system was adopted. Colors were assigned for each step of the screening process using the following general logic as well as the technical analyses and comments including in **Table 7-3**:

- **Green Color** – Advance in to Project Development: Improvements that were appropriate for the transportation problem at hand, met all agency requirements, passed the fatal flaw test, and could be implemented "as is."
- **Yellow Color** – Continue Assessment: Improvements that seemed reasonably appropriate but did not meet all of the agency requirements and could have potentially adverse impacts.
- **Orange Color** – Identify Alternative Potential Solution: Improvements that were not effective and/or efficient in solving the transportation problem and/or did not meet agency requirements. These improvements required significant modification.

It should be noted that the intent of using a systematic evaluation methodology was not needed to identify specific solutions but rather to conduct initial due diligence and advance improvements that had merit for detailed investigated as appropriate. **Table 7-3** shows evaluation results for each of the 61 potential solutions/ideas based on the qualitative rating system described above.

<THIS PAGE INTENTIONALLY LEFT BLANK>

Table 7-3: Project Evaluation

Key: Green Color Band: Advance into Project Development; Yellow Color Band: Continue Assessment; Orange Color Band: Identify Potential Alternative Solution

Transportation Issues & Needs	Street	Potential Solutions/Ideas	Screening Projects and Evaluation Criteria					Observations/Technical Findings	Comments
			Step 1	Step 2	Step 3	Step 4	Step 5		
			Fatal Flaw Assessment	Meets Community Vision	Meets Agency Requirements	Funding Opportunities	Capital & Maintenance Costs		
1. Bicycle and pedestrian safety and connectivity issues on US 1 and Sunrise Boulevard.	US 1/Federal Highway	1-A						Typical pedestrian overpass/bridge is not a cost effective solution; may create visual pollution or impact aesthetics if improperly designed	Continue to coordinate with FDOT to provide at-grade midblock crossing between US 1/Sunrise Boulevard and NE 13th Street. City/FDOT to evaluate the potential of reversing circulation in the Gateway Shopping Plaza parking lot. Coordinate with FDOT re: adding barriers to the turn lanes in the median north of US 1 to prevent illegal turns northbound.
		1-B						At-grade midblock crosswalk does not meet MUTCD Warrants	
		1-C						Existing traffic signal along US 1 at /Sunrise Boulevard and NE 13th Street are approximately 1700 feet apart	
		1-D						Designated as 'Access Class 5' (posted speed limit 45 mph, restrictive median) per Assessment Management Standards, signal spacing and full median opening standard is 1,320 feet	
		1-E						Actuated pedestrian signals can only be provided at signalized intersections or marked crosswalks where the pedestrian signal can be synchronized with the nearest traffic signal. However, a midblock pedestrian crossing would be justified based on origins (residential and light industrial) and destinations (retail) to the east and west of US 1; distance between nearest crosswalks is approximately 2,800 (NE 17th Way and NE 13th Street) since existing crosswalks at US 1 and Sunrise Boulevard do not facilitate pedestrian movement across US 1; existing bus stops at 1200 N. Federal Highway (US 1) are heavily used with X daily ons/offs; US 1 and Sunrise Boulevard in the Lake Ridge neighborhood is identified as a "Commercial Avenue" per the City's Multimodal Connectivity Program; crash history (2010-2014) shows bike/ped crashes at US 1 and Sunrise Boulevard intersection including fatalities as well as at midblock locations on US 1 between Sunrise Boulevard and NE 13th Street, actual crash rate is higher than average and critical crash rates.	
	Sunrise Boulevard	1-F						SW Corner W.of RR - needs ADA ramp but existing ramp is on 2 traffic signal manholes. Could move ramp to the away from the signal cabinet with a ped pole. SW Corner Flagler - needs ADA ramp SE Corner Flagler - needs ADA ramp over 3 manholes. Flagler N. Leg - needs ped indications including in the median. - Adding a crosswalk on the east leg does not look feasible due to the intersection skew and channelized right turns.	Coordinate with FDOT to conduct a detailed assessment of the structural environment for pedestrian accessibility and develop an inventory of deficiencies. FDOT to prioritize needed improvements based on technical evaluation and public input and identify a plan to address ADA accessibility issues at Sunrise Boulevard and Flagler Drive. Provide detectable warning surface on each side of the rail crossing so that the edge nearest the rail crossing is 6' minimum and 15' maximum from the centerline of the nearest rail. City/FDOT to coordinate with FECI to implement pedestrian accessibility improvements within FEC railroad right of way through the All Aboard Florida (AAF) Quiet Zones project.
		1-G						- Potential to use median on Sunrise Boulevard from Flagler Drive for a sidewalk and then add ped crossing north & south at US 1. - Short term, could use wayfinding signs to direct peds to cross at RR and proposed crossing at 10th. - Explore a multilane roundabout with pedestrian actuated signals at create ped crossings as a potential long term solution.	
		1-H						Partial signal at NE 10th Avenue. Nearest full traffic control signal at NE 12th Avenue (600 ft. east) and partial traffic signal at NE 9th (approximately 300 ft. west).	Coordinate with FDOT to remove traffic signal in the westbound direction at NE 9th Avenue, install full signal at NE 10th Avenue and provide bike/ped crossing.
		1-I						Enhanced pedestrian crossing available at NE 15th Avenue that can be used by bicyclists. Bike/ped crossing through Satori Apartments requires negotiations with one or more property owners that requires resources and involves risk and uncertainty with regard to positive outcomes.	LRCA to coordinate with the property owners to explore opportunities for accommodating a bike/ped crossing through Satori Gardens subdivision.
		1-J						Crosswalks can only be provided at signalized intersections. Marked crosswalk is available at NE 17th Way, approximately 600 ft. west of NE 18th Avenue.	Bike/ped crossing improvements in the Gateway area (US 1 and Sunrise Boulevard intersection) can potentially address the need for crosswalks at NE 18th Avenue.

		1-K						FDOT has programmed this project for implementation.	Install traffic signal at NE 16th Terrace.
		1-L						FDOT follows the signage and pavement markings standards included in their Plan Preparation Manual.	None
		1-M						Pedestrian crossing through Villa Medici requires negotiations with several property owners that requires resources and involves risk and uncertainty with regard to positive outcomes.	LRCA to coordinate with Villas Medici property owners to explore opportunities for accommodating a pedestrian crossing through Villa Medici Condo subdivision.
1. Bicycle and pedestrian safety and connectivity issues on US 1 and Sunrise Boulevard.	Sunrise Boulevard	1-N						Checked ROW for sidewalk widening; obstructions could be utilities or regulatory signage <u>Sunrise South Side East to West:</u> SW corner RR - signal pole & cabinet (constrained ROW); SE corner Flagler - utility poles (no ROW). Could put sidewalk next to building and relocate some trees; W of US1 - Truss (constrained ROW); SE corner US1 - utility pole, cabinet, light pole (constrained ROW); W of 8th - signal pole (constrained ROW) SW corner 8th Ave - truss (constrained ROW); E.of 8th Ave - light pole (constrained ROW); SE corner 9th Ave - utility pole, cabinet, light pole (constrained ROW); E.of 9th Ave - Truss, cabinet (constrained ROW); E. of Holiday Park - light pole (constrained ROW); SW corner 12th Ave - light pole (constrained ROW) E.of 12th Ave - light pole (constrained ROW); W.of 14th Ave - light pole (constrained ROW); SE corner 14th Ave - light pole & cabinet (constrained ROW) SW corner 15th - signal pole, cabinet, light pole (constrained ROW); SE corner 15th - signal pole (constrained ROW); SW corner 16th Ave - light pole (constrained ROW); SE corner 17th Terr - cabinet (constrained ROW); E.of 17th Terr - truss (constrained ROW); SW corner 17th Way - signal pole & Cabinet (constrained ROW); W.of 18th Ave - sign, light pole, truss (no ROW) <u>Sunrise North Side East to West:</u> E.of RR - signal pole & light pole (constrained ROW); NE corner Flagler - garbage can (constrained ROW); E.of Flagler - light pole (constrained ROW) W.of US1 - light pole (constrained ROW); NE corner 7th Ave - signal pole (no ROW); E.of 7th Ave - pole base (no ROW); NW corner 8th Ave - truss & light pole (constrained ROW); W.of 9th Ave - light pole (constrained ROW); NW corner 9th Ave - signal pole (constrained ROW); W.of 10th Ave - truss, light pole, signal pole (constrained ROW); NW corner 13th Ave - light pole (constrained ROW); W.of 14th Ave - light pole (constrained ROW); W.of 15th Ave - light pole (constrained ROW); NW corner 15th Ave - signal pole (constrained ROW); E.of 16th Ave - light pole (constrained ROW); E.of 16th Terr - light pole (constrained ROW); E.of 17th Ave - DMS pole (constrained ROW); W.of 17th Way - Truss, light pole, signal pole (constrained ROW); E.of 17th Way - signal pole, light pole, garbage can (constrained ROW); W.of Victoria pk - light pole (constrained ROW)	Coordinate with FDOT to conduct a detailed assessment of the structural environment for pedestrian accessibility and develop an inventory of deficiencies. FDOT to prioritize needed improvements along with public input and identify a plan to address accessibility issues along Sunrise Boulevard. Implementation of appropriate improvements could be coordinated with maintenance projects or proposed transit and lane diet projects.
2. Speeding and safety issues in Lake Ridge neighborhood. 2.1. Cut-through traffic on NE 18th Avenue and NE 11th Street in addition to traffic from Villa Medici creating speeding and safety issues. 2.2 Speeding and safety issues on NE 11th Street, NE 13th Street, and Flagler Drive	NE 18th Avenue	2-A						Existing 40-foot right of way on NE 11th Street and NE 18th Avenue and future Galleria Lofts East condo development's proposed exit/driveway at NE 11th Street/NE 18th Avenue intersection constraints design and construction of a traffic circle that would be effective in reducing vehicle speeds.	Install stops signs on NE 11 Street (EB) and NE 18th Avenue (SB) at NE 11th Street/NE 18th Street intersection as well as at the proposed Galleria Loft East driveway (exit).
		2-B						NE 18th Ave will have 4way stops at both intersections once Galleria Lofts is built. - NE 11th Street has stop signs every other intersection. Since there is not accident, sight distance, or speeding issues additional stop signs are not recommended. Stop signs should not be used to reduce speeds.	Proposed traffic calming measures on NE 11th Street will help reduce speeds and enhance ped/bike mobility.
		2-C						Approximately 400 vpd (two-way traffic volume on weekday), approximately 13% to 14% vehicles are above posted speed limit but 85th percentile speed limit is the same as posted speed limit.	City and LRCA to coordinate to identify appropriate traffic calming strategy based on 4E's concept (Engineering, Enforcement, Education, and Emergency Medical Services) that is mutually acceptable to both parties.
		2-D						Marked bike lane (sharrows) project on NE 11th Street currently in engineering design phase; Bicycle improvements (secondary bike accommodations) identified on NE 11th Street (CIP #265); based on visual assessment and BCPA's parcel data - on-street parking and sidewalks can be accommodated within the existing 40 ft ROW, installing trees requires a 6 ft. wide median at minimum	Implement the proposed bike route on NE 11th Street with appropriate pavement markings and signage to reduce vehicle speeds.
		2-E						Bicycle improvements (secondary bike accommodations) identified on NE 18th Avenue (CIP #286); sidewalks can be accommodated within the existing 40 ft ROW but physical constraints given utility easement on the west side of the street south of NE 12th Street and on the east side of the street north of NE 12th Street should be evaluated during the design phase	Develop alternative design concepts to accommodate sidewalks and sharrows, reduce pavement width (travel lanes) and install signage to designate NE 18th Avenue as a bike route.
	NE 11th Street	2-F						A 4-way stop at 11th St & 10th Ave would be consistent with the neighborhood. It meets the criteria as the sight distance is limited.	Install 4-way stop sign at NE 11th St and NE 10th Ave.

		2-G						Integrate Complete Streets concepts for residential/neighborhood streets.	Prepare typical section for 40 ft. ROW for residential streets.
		2-H						City is the drafting its comprehensive policy and identifying strategies and thresholds for implementing specific traffic calming solutions. Marked bicycle lanes (sharrows and bike route signage) on NE 11th Street is anticipated to slow traffic and increase safety.	City and LRCA to coordinate to identify appropriate traffic calming strategy based on 4E's concept (Engineering, Enforcement, Education, and Emergency Medical Services) that is mutually acceptable to both parties.
	NE 13th Street	2-I						Approximately 11,000 vpd (two-way traffic volume on weekdays), approximately 35% vehicles are above posted speed limit but 85th percentile speed limit is the same as posted speed limit. Corridor is a candidate *"road diet"* project (CIP # 50a).	Develop alternative road diet concepts based on public input, conduct detailed transportation impact analysis before implementing the preferred road diet concept on NE 13th Street.
		2-J						Limited sight distance looking west due to building. As part of the road diet consider moving curb to north, narrowing lanes, or put in bump outs.	Coordinate with proposed lane diet project on NE 13th Street, increase with of sidewalk and move curb to the north, so stop bar can be moved further north.
		2-K						Limited sight distance looking west due to building & pole. As part of the road diet consider moving curb to north, narrowing lanes, or put in bump outs.	
2. Speeding and safety issues in Lake Ridge neighborhood. 2.1. Cut-through traffic on NE 18th Avenue and NE 11th Street in addition to traffic from Villa Medici creating speeding and safety issues. 2.2 Speeding and safety issues on NE 11th Street, NE 13th Street, and Flagler Drive	NE 13th Street	2-L						Laboy parking in front of their building has very limited sight distance looking north & south. Vehicles coming from NE 13th Street cannot see a vehicle backing out of the parking spaces. Eliminate these 3 spaces and share parking with lot to the west on Flagler. Curbing and curb cuts are needed on Flagler Drive and additional parking spaces can be created in front of the plaza. Or on-street parking could be provided on Flagler Drive. - Long term reconstruct intersection to a standard T at Flagler & 11th Ave. Move Flagler Drive slightly to the south where it meets NE 11th Ave.	Short Term: - Add island to channelize SB right turn. All-way stops signs so vehicles can safely back out of spaces on Flagler Drive. - Remove three (3) spaces in front of building. - Incorporate on-street parking on NE 13th Street as part of the road diet project Long Term: realign Flagler Drive & NE 11th Ave to a T-intersection.
		2-M						NE 17th Terrace at NE 13th Street is not signalized	NA
	Flagler Drive	2-N						No room to future adjust existing signal timings to reduce long wait times for SB vehicles. N/S has to be split phases because the offset reduces visibility. The ped phase also has to run by itself otherwise N/S traffic heading west will back up & block N/S through traffic b/c there is only one N/S lane. - Traffic adaptive may be able to improve delays at this location.	Coordinate with FDOT to analyze the effectiveness of traffic adaptive signal along Sunrise Boulevard.
		2-O						North of Sunrise Blvd., Flagler Dr. needs striping (center & edge lines) and possible curbs. At Sunrise Blvd. median could extend north, widen the slip right lane on Flagler Drive and extend curb north on east side. It should be noted that at NE 12th St sidewalk on north side ends abruptly.	Restripe Flagler Drive to provide clear center and edge lines as well as curbs. At Sunrise Blvd. median could extend north, widen the slip right lane on Flagler Drive and extend curb north on east side.
		2-P						Sight distance issues Flagler Drive & NE 7th Ave - stop bars needed. There is enough room to pull forward past building to see to the north. Flagler Drive & NE 9th Ave - stop sign NB on Flagler is block by a bush. There is a stop ahead sign, but not very visible, possibly add one on the other side of the road too. Trimming of the palm trees is also need in advance of stop sign. Install a stop sign before bend in road so there is better sight distance.	Provide stop bars at Flagler Drive and NE 7th Avenue intersection. Landscape maintenance (trimming of the palm trees at Flagler Drive and NE 9th Avenue). Install additional "Stop Ahead" sign before bend in road so there is better sight distance.
3. Additional traffic from higher density residential development projects at NE 18th Avenue and NE 11th Street would exacerbate the problems identified in item #2.1.	Sunrise Boulevard	3-A						Current site plan allows for future residents of Galleria Lofts (approximately 100 parking spaces) to entry via NE 18th Ave and exit on NE 11th St. or NE 18th Ave (northbound only). Future residents of Victoria Commons (approximately 24 parking spaces) would enter/ exit using either NE 11th Street or Victoria Pk Road.	Allow entry and exit along NE 18th Ave and NE 11th St to spread traffic out on these two roads and not limit access. Implement traffic calming strategies and spread out traffic circulation to the extent possible.
	NE 11th Street	3-B						Current Galleria Lofts East site plan allows future residents to only exit on NE 11th Street while entry/exit for the Galleria Lofts West and Victoria Commons is provided via NE 11th St, Victoria Park Road and NE 18th Ave. Provide drivers the most options to spread out traffic in neighborhood.	
	NE 11th Street and Sunrise Boulevard	3-C						Adding another signal phase at NE 18th Ave will degrade already failing LOS at Gateway.	
	NE 17th Way and NE 17th Terrace	3-D						One-way pairs in this area would not be very effective solution and will create more internal circulation.	
	NE 18th Avenue and NE 11th Street	3-E						Current site plans for call for future Galleria Lofts and Victoria Commons' residents to use NE 18th Ave and NE 11th St for access and egress. This helps spread out the traffic so one street does not get the bulk of the volume.	

	Victoria Park Road and NE 11th Street	3-F						Moving gate NB will take some traffic off NE 11th St. Approximately 60 parking spaces on Victoria Park Road between the existing road closure and NE 11th St. May provide opportunity to accommodate access/egress for the proposed Victoria Commons development (12 condo units).	
4. Spillover parking from Villa Medici creating safety, maintenance, and accessibility issues for motorists and residents along NE 17th Way, NE 17th Avenue, and Victoria Park Road.	NE 11th Street	4-A						Marked bike lane (sharrows) project on NE 11th Street currently in engineering design phase; Bicycle improvements (secondary bike accommodations) identified on NE 11th Street (CIP #265); check if on-street parking and sidewalks can be accommodated within the existing 40 ft ROW	Evaluate right of way and operational constraints to provide on-street (parallel) parking based on demand on a block-by-block basis.
	NE 17th Way	4-B						Field observations demonstrate the need for parking demand on NE 17th Way between NE 11th Street and NE 13th Street	Restripe NE 17th Way to accommodate on-street parking.
		4-C						No parking fire lane signs exist. Not much right away exists, but if road is reconstructed should be able to fit on street parking, sidewalk on one side and curbing. Don't see the benefit of loading area as this will bring larger vehicles into the neighborhood. It is preferred to keep delivery trucks enter Villa Medici via Sunrise Boulevard at NE 17th Way, which is a signalized intersection.	Avoid providing loading zones on NE 11th St to deter large delivery trucks from circulating on residential streets.
		4-D						The City's parking department is not authorized to patrol neighborhood streets and enforce parking regulations.	LRCA to coordinate with Fort Lauderdale police department and set up an enforcement strategy. LRCA to develop and implement maintenance schedule requiring property owners/businesses to up keep property and penalize violators. LRCA to coordinate with City to enforce code enforcement as appropriate.
		4-E						see 4-D	
		4-F						see 4-D	
5. Traffic circulation and bicycle/pedestrian safety issues at Publix and Walgreens plazas on NE 15th Avenue.	NE 14th Avenue	5-A						Publix truck access; Enters NB on 14th, exits onto 15th. Refer to sketch: 1. Add closure at south end of Publix building on 14th. For NB truck access use a electric gate. 2. Add a lane exiting public onto 14th (1 enter, 1 LT exit, 1 RT exit). Channelize RT enter & exit lanes. 3. 14th one-way NB north of closure and behind Publix. Make dwy onto 15th at north end of Publix exit only. 4. North end of Publix maintain existing SB closure, open NB. 5. Channelize EBRT exiting onto 15th, prohibit lefts exiting.	Explore other alternatives since this solution only eliminates one (1) of four (4) vehicular movement and potentially creates bike/ped safety issues. Accommodating truck access may be difficult.
	NE 15th Avenue	5-B						Options: 1. Does not meet warrants for striped crosswalks, flashing lights in the road, or stop signs. 2. FDOT bike route is on NE 11th, so could stop here. Not enough room to continue to Sunrise Blvd. 3. Can not put a median from NE 11th to Sunrise Blvd. with negative off set of driveways. 4. Constrained ROW and roadway geometry does not allow for roundabout at this location. Will be more expensive than moving Walgreens driveway to the north. 5. Prohibit left turns except for SB left to WG. Can add a median or tubular markers. NE 15th Ave would be one lane NB or reduce lanes from 11' to 10'. Creates difficulty entering/exiting sites.	Develop and evaluate alternative concepts for road diet project on NE 15th Avenue from NE 11th Street to NE 13 Street. Evaluate installing pedestrian actuated signals at NE 11th Street and NE 12th Street.
	NE 15th Avenue	5-C						Conceptual Layout: 1. Add median & buffered bike lanes on NE 15th Ave from NE 11th St. to NE 13th St. 2. One thru lane NB & SB on NE 15th Ave. 3. Add u-turns at NE 12th Street and NE 11th Street.	
	Walgreens Driveway	5-D						Conceptual Layout: 1. Move Walgreens driveway to the north. 2. Add median on NE 15th Ave between Sunrise Blvd. and NE 11th Ave. to allow left turn in to Publix and Walgreens. 3. Eliminate left turns out of Publix and Walgreens.	Move Walgreens driveway to the north and eliminate left turn movement exiting from Publix and Walgreens by providing median to improve channelization and reduce conflicting vehicular movements and enhance safety while maintaining major access points.
6. Traffic congestion on Sunrise Boulevard.	at US 1	6-A						Searstown area: see 6E - Even in off peak hours WB traffic backs up to Holiday Park. - No room to reduce signal phases or cycle lengths along Sunrise Boulevard. - Traffic adaptive signals may improve traffic flow along Sunrise Boulevard.	Short Term - Sign and restripe to provide "don't block the intersection' at NE 17th Way. Fourth leg of NE 17th Way/Sunrise Boulevard intersection to be installed as part of the resurfacing project in spring 2015. FDOT is in the process of implementing Active Arterial Management System on Sunrise Boulevard and US 1 as well as Broward Boulevard and Oakland Park Boulevard within the City of Fort Lauderdale.
	at NE 18th Avenue	6-B						Sight distance limited to the east. Possibly add in a signal phase for vehicles exiting NE 18th Ave, but this will degrade the already failing signal at Gateway (Sunrise Blvd. and US 1 intersection). FDOT evaluating various strategies from a roundabout to traffic adaptive signals as well as ped/bike signals.	

	at NE 17th Way	6-C						A "don't block the box" sign would be appropriate here.	Mid Term - FDOT has a project programmed (FM# 432724-1) for 2016 through the Congestion Management program to look at Sunrise Boulevard for its entire length. Gateway Area Intersection Safety Study: FDOT to evaluate alternatives including, roundabout, traffic adaptive signals with ped/bike signals, and a hybrid alternative through its intersection safety study. City's Complete Streets project to be coordinated with FDOT's projects and initiatives in this corridor. Long Term - Based on recommendations from FDOT's studies.
	Sunrise Boulevard	6-D						Restripe to one EB lane & 2 NB lanes. Extend 3rd NB lane, but median would have to be moved to the south. Anticipate marginal improvement in traffic operations.	
	Sunrise Boulevard	6-E						Searstown area: see 6A - extend 2nd through lane from Flagler to US1 using existing median. Create two WB through lanes as long as possible for additional WB storage to shorten WB queue lengths. - possible roundabout at US1 could help with long queue lengths and ped/bike accommodations.	
7. General mobility and accessibility issues and needs in the neighborhood. 7.1 Trees blocking stop signs on 12th Street and 17th Avenue. Some stop signs are not visible.		7-A						Project identified in the NCIP	LRCA to coordinate with the City.
	NE 17th Way	7-B						Proposed bike lanes on NE 11th Street provide an east-west connection with future bike lanes on NE 15th Avenue and future Flagler Greenway; Bicycle improvements (secondary bike accommodations) identified on NE 18th Avenue (CIP #286)	Shared bike lane (sharrows) on NE 18th Avenue as identified in the City's *Connecting the Block*s program.
		7-C						Overgrown trees obstructing stop signs at some locations were verified based on site visit	LCRA to develop and enforce routine landscape maintenance tasks to enhance aesthetics and improve safety.
		7-D						Non regulatory signs are not effective based on research. Adding sidewalks and complete streets and other traffic calming measures will help slow down traffic.	-
		7-E						None of the 23 bus stops that serve Lake Ridge neighborhood have bus bays. Providing bus bays is a function of available right of way, lane geometry, and operations. In addition to right of way constrains, bus bays on Sunrise Boulevard and US 1 have a potential to negatively impact transit operations since traffic volume on these facilities is significantly high.	Bus buys are not recommended at this time. However, transit studies on Sunrise Boulevard and US 1 may determine the need for specific bus stop improvements and/or enhancements.
7. General mobility and accessibility issues and needs in the neighborhood. 7.1 Trees blocking stop signs on 12th Street and 17th Avenue. Some stop signs are not visible.		7-F						Consultant to develop a typical cross section for residential street with 40-foot right-of-way. Per Broward Complete Streets Guidelines (Chapter if traffic volumes are less than 1,200 per day and speeds are 25 MPH or less then sidewalks may not be needed on local residential streets	Conceptual typical section for 40 ft. ROW for residential streets to accommodate parking, pedestrians and bicyclists.
		7-G						City is the drafting its comprehensive policy and identifying strategies and thresholds for implementing specific traffic calming solutions.	City staff and LRCA to coordinate to identify appropriate traffic calming strategy based on 4E's concept (Engineering, Enforcement, Education, and Emergency Medical Services) that is mutually acceptable to both parties.
		7-H						Report findings from traffic impact analysis resulting from additional trains in the FEC corridor at Sunrise Boulevard and NE 13th Street.	Consider traffic adaptive to handle RR crossings. Traffic adaptive signal does not use cycle lengths, so intersections would stay coordinated better when the RR is active. FDOT will be evaluating this strategy through its US 1/Sunrise Blvd. (Gateway) intersection safety study.
		7-I						All of the planning efforts undertaken by the City include an education, outreach, and if appropriate an enforcement component.	City to develop a comprehensive traffic calming policy and identify thresholds corresponding to different traffic calming strategies based on the 4E's concept.
		7-J						Network functionality could be improved by strategically locating road closures or gated streets. Typical block size in Lake Ridge is 600 ft. x 300 ft. which has the potential to provide robust connectivity.	Residents and LRCA to identify specific entry/exits for potential relocation and conduct detailed traffic impact study to understand positive and negative impacts to access, egress, and traffic circulation.

<THIS PAGE INTENTIONALLY LEFT BLANK>

Proposed Improvements

Based on the evaluation of potential solutions/ideas, the following 39 improvement projects were identified to enhance transportation safety, increase bicycle/pedestrian connectivity and accessibility, improve traffic circulation, and provide on-street parking in the Lake Ridge neighborhood. These improvements have been grouped together to correspond to the seven "improvement" categories as well as to specific corridors and/or locations. Some of the improvements have been consolidated since they need to be implemented in conjunction to be effective and efficient from a capital cost and engineering standpoint.

Group 1& 6: Bicycle and Pedestrian Connectivity/Traffic Congestion

US 1

1. Continue to coordinate with FDOT to provide an at-grade midblock crossing between US 1/Sunrise Boulevard and NE 13th Street.

2. City/FDOT to evaluate the potential of reversing circulation in the Gateway Shopping Plaza parking lot.

3. Coordinate with FDOT regarding the addition of barriers to the turn lanes in the median north of the Gateway intersection to prevent illegal turns northbound.

Sunrise Boulevard

4. Coordinate with FDOT to conduct a detailed assessment of pedestrian accessibility and develop an inventory of deficiencies in the Sunrise Boulevard / US 1 corridor. FDOT to prioritize needed improvements based on a technical evaluation as well as through public input and incorporate this information in their "Transition Plan" to address ADA accessibility issues on the north side of Sunrise Boulevard east and west of Flagler Drive and throughout the corridor.

5. Provide detectable warning surface on each side of the FEC rail crossing so that the edge nearest the rail crossing is 6 feet minimum and 15 feet maximum from the centerline of the nearest rail. City/FDOT to coordinate with FECI to implement pedestrian accessibility improvements within the FEC railroad right-of-way through the All Aboard Florida (AAF) Quiet Zones project.

6. Coordinate with FDOT to remove the traffic signal in the westbound direction at NE 9th Avenue and to install a full signal at NE 10th Avenue with a bike/pedestrian crossing.

7. LRCA to coordinate with the property owners to explore opportunities for accommodating a bike/pedestrian crossing through the Satori Gardens subdivision NE 12th Avenue.

8. Install traffic signal at NE 16th Terrace.

9. LRCA to coordinate with the Villa Medici property owners to explore opportunities for accommodating a pedestrian crossing through the Villa Medici Condo subdivision at NE 17th Way.

10. Short-Term –

    - Sign and restripe to provide "Don't Block the Box" at NE 17th Way. The fourth leg of the NE 17th Way/Sunrise Boulevard intersection to be installed as part of the resurfacing project in the spring of 2015.

    - FDOT is in the process of implementing an Active Arterial Management System on Sunrise Boulevard and US 1 as well as on Broward Boulevard and Oakland Park Boulevard within the City of Fort Lauderdale.

    - Gateway Area Intersection Safety Study: FDOT to evaluate alternatives including a roundabout, traffic adaptive signals with pedestrian/bike signals, and a hybrid alternative through its intersection safety study.

11. Mid-Term – FDOT has a project programmed (FM# 432724-1) for 2016 through the Congestion Management program to look at Sunrise Boulevard for its entire length.

12. Long-Term – Based on recommendations from FDOT's studies. City's Complete Streets project to be coordinated with FDOT's projects and initiatives in this corridor.

Group 2, 3, 4 & 7: Traffic Calming/Traffic Circulation/Parking & Quality of Life

Flagler Drive

13. Restripe Flagler Drive to provide clear center and edge lines as well as curbs. Extend the Sunrise Boulevard median to the north, widen the slip right lane on Flagler Drive and extend curb north on the east side.

14. Provide stop bars at the Flagler Drive and NE 7th Avenue intersection. Landscape maintenance (trim palm trees at Flagler Drive and NE 9th Avenue). Install additional "Stop Ahead" sign before bend in road so there is better sight distance.

15. Provide secondary bike accommodations (sharrows) to enhance bicycle connectivity and reduce vehicle speeds.

NE 18th Avenue

16. Short-Term – Install stops signs on NE 11th Street (EB/NB) and NE 18th Avenue (SB/WB) at the NE 11th Street/NE 18th Street intersection as well as at the proposed Galleria Loft East driveway (exit).

17. Mid-Term – City and LRCA to identify appropriate traffic calming strategy based on the 4Es concept (Engineering, Enforcement, Education, and Emergency Medical Services) that are mutually acceptable to both parties.

18. Long-Term – Develop alternative design concepts to accommodate sidewalks and bike lanes (sharrows), reduce pavement width (travel lanes), and install signage to designate NE 18th Avenue as a bike route.

NE 11th Street

19. Install four-way stop sign at NE 11th Street and NE 10th Avenue intersection.

20. Coordinate with FDOT project to implement bike lanes (sharrows) and designate NE 11th Street as a bike route with appropriate regulatory signage.

21. Evaluate right-of-way and operational constraints to provide on-street (parallel) parking based on demand on a block-by-block basis.

22. Do not provide loading zones on NE 11th Street to deter large delivery trucks from circulating on residential streets.

23. Allow vehicular traffic (from Victoria Commons and Galleria Lofts) to enter/exit via NE 18th Avenue and NE 11th Street and spread traffic out onto these two roads. Implement traffic calming strategies and maintain potential alternative access/egress points for improved traffic circulation to the extent possible.

NE 12th Street

24. Provide secondary bike accommodations (sharrows) to enhance bicycle connectivity and reduce vehicle speeds.

NE 12th Avenue

25. Provide secondary bike accommodations (sharrows) to enhance bicycle connectivity and reduce vehicle speeds.

NE 17th Way

26. Restripe NE 17th Way to accommodate on-street parking and/or wider sidewalks. **Figures 7-3** and **7-4** illustrate generalized conceptual typical sections for residential streets having a 40-foot right-of-way.

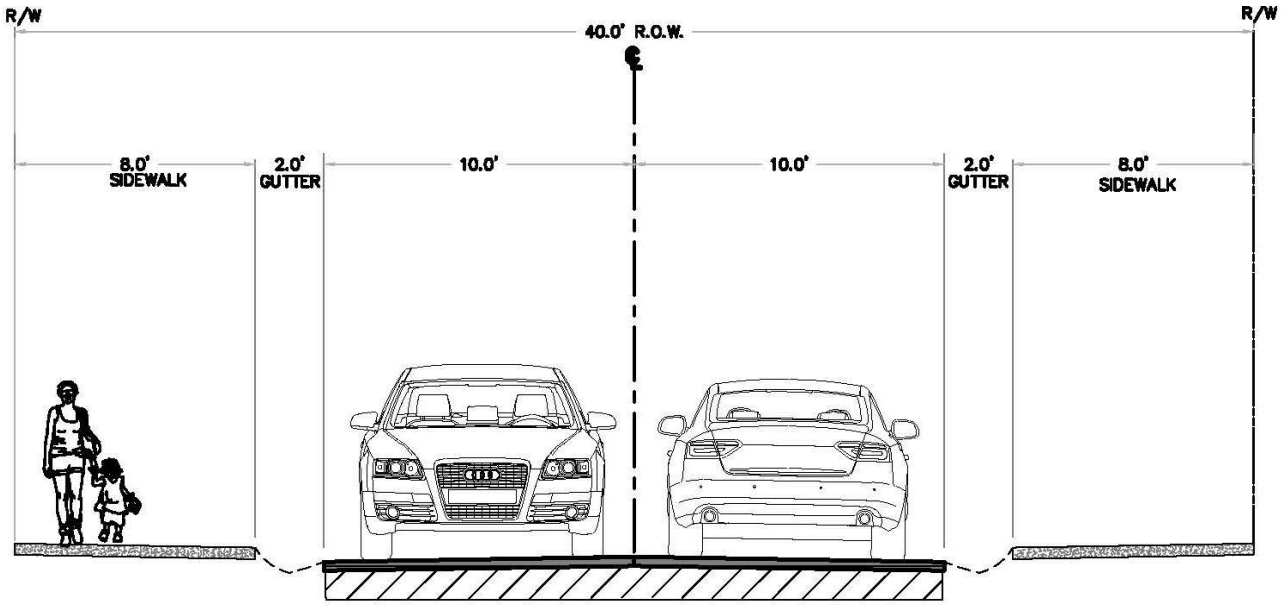


Figure7-3: Proposed Conceptual Typical Section, 40' Right-of-way – Wider Sidewalks or On-Street Parking

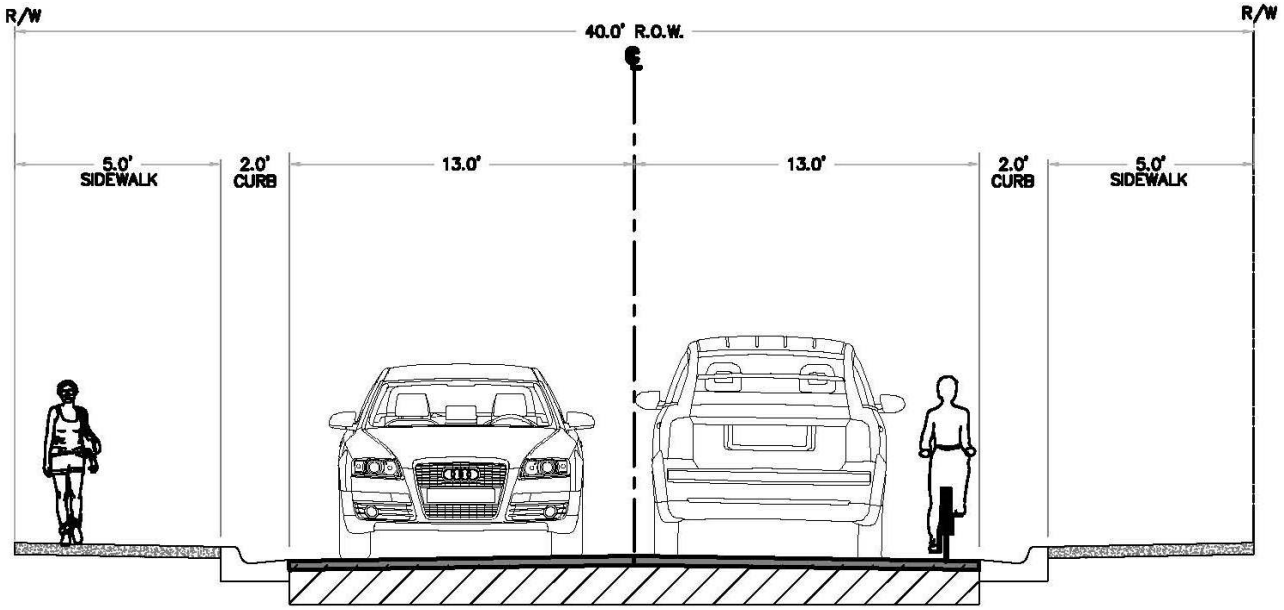


Figure 7-4: Proposed Conceptual Typical Section, 40' Right-of-way – Sharrows

General

27. LRCA to coordinate with the City to design and install neighborhood entrance signs.

28. LRCA to coordinate with the Fort Lauderdale police department to develop an enforcement strategy. LRCA to develop and implement maintenance schedule to require property owners/businesses to maintain property and penalize violators. LRCA to coordinate with City for code enforcement needs.

29. City to develop a comprehensive traffic calming policy and identify thresholds corresponding to different traffic calming strategies based on the 4Es concept.

30. City staff and LRCA to identify appropriate traffic calming strategy for specific neighborhood streets based on the 4Es concept that is mutually acceptable to both parties.

31. Neighborhood residents and the LRCA to identify specific road closures for potential relocation and to conduct detailed traffic impact studies to understand positive and negative impacts to access, egress, and traffic circulation.

32. Consider traffic adaptive signal to reduce traffic delay at railroad crossings. Traffic adaptive signals do not use cycle lengths, so intersections would remain coordinated when the railroad is active. FDOT will be evaluating this strategy through its Gateway intersection safety study.

33. Bus bays are not recommended at this time; however, transit studies on Sunrise Boulevard and US 1 may determine the need for specific bus stop improvements and/or enhancements.

NE 13th Street

34. Develop alternative "road diet" concepts based on public input, conduct detailed transportation impact analysis before implementing the preferred road diet concept on NE 13th Street. **Figure 7-5** shows existing typical section and proposed conceptual typical section for NE 13th Street.

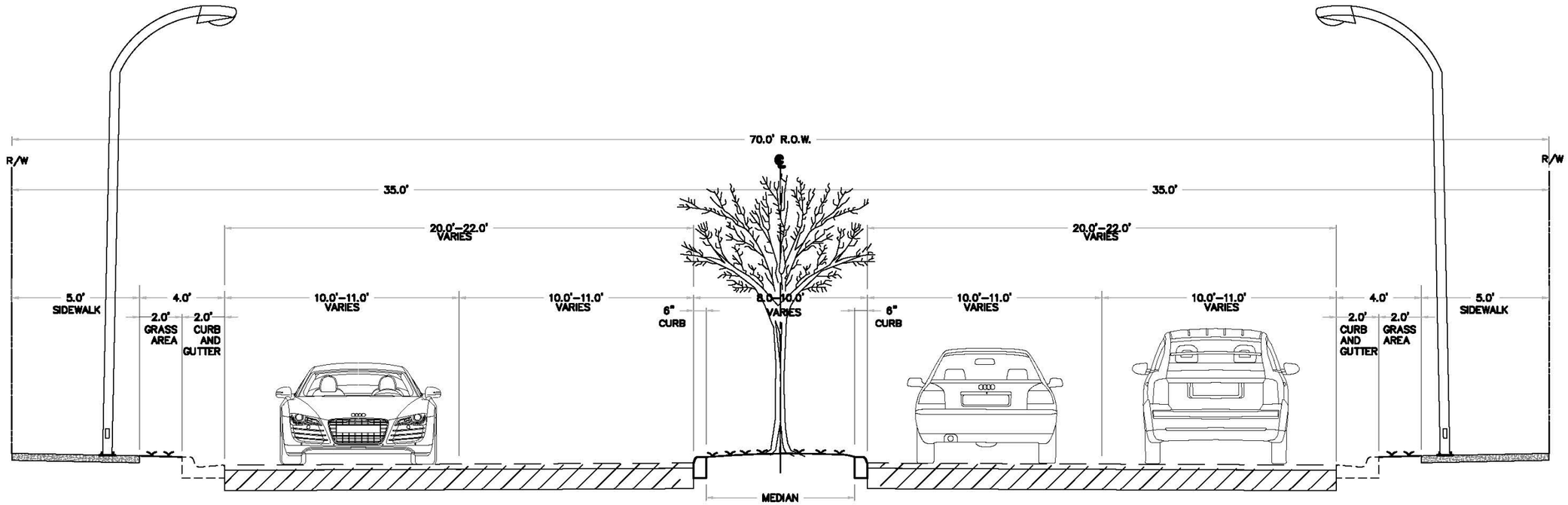
35. At NE 11th Avenue:

    - Remove two spaces in front of building and incorporate on-street parking on NE 13th Street and roadway geometry improvements to accommodate increased width of sidewalk in conjunction with landscape maintenance to improve line of sight at NE 17th Avenue and NE 11th Avenue as part of the road diet project.

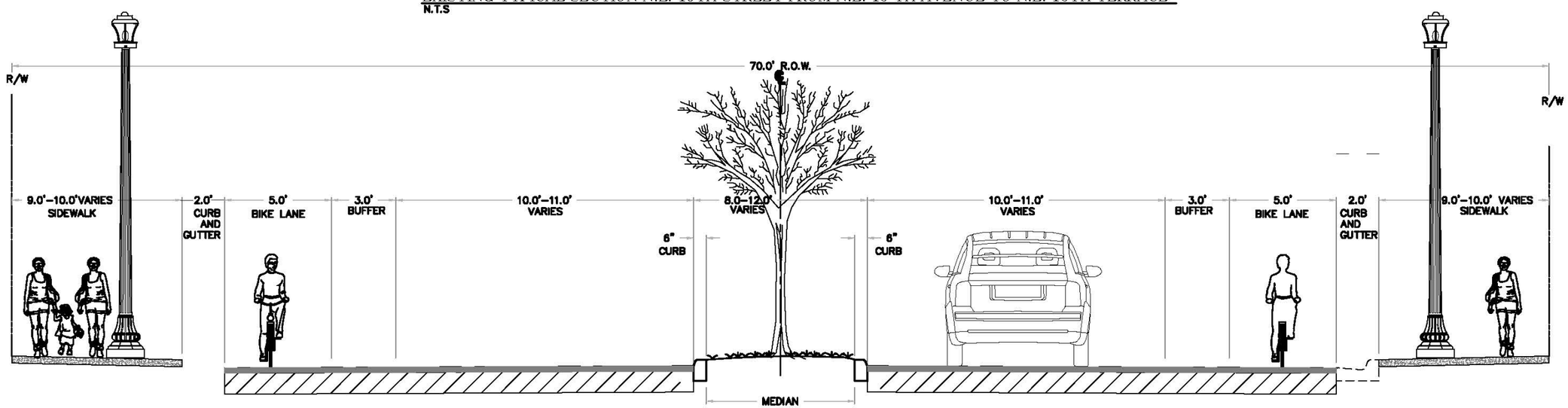
    - Flagler Drive & NE 11th intersection improvement to add island to channelize vehicular movement. All-way stops signs so vehicles can safely back out of spaces on Flagler Drive.

<THIS PAGE INTENTIONALLY LEFT BLANK>

Figure7-5: Existing and Proposed Conceptual Typical Section, NE 13th Street *"Road Diet"* Project



EXISTING TYPICAL SECTION N.E. 13TH STREET FROM N.E. 16 TH AVENUE TO N.E. 16TH TERRACE
N.T.S



PROPOSED CONCEPTUAL TYPICAL SECTION N.E. 13TH STREET FROM N.E. 16 TH AVENUE TO N.E. 16TH TERRACE
N.T.S

<THIS PAGE INTENTIONALLY LEFT BLANK>

NE 15th Avenue

36. Develop and evaluate alternative concepts including traffic circles for "road diet" project on NE 15th Avenue from NE 11th Street to NE 13th Street. Evaluate installing pedestrian actuated signals at NE 11th Street and NE 12th Street. Assess drainage issues at the NE 11th Street/NE 15th Avenue intersection and incorporate appropriate improvements during the design and construction phase.

    Figure 7-6 shows a conceptual layout for the road diet project along NE 15th Avenue while **Figure 7-7** shows existing typical section and proposed conceptual typical section for NE 15th Avenue. It should be noted that the lane configuration in the proposed layout is different for each block along NE 15th Avenue.

<THIS PAGE INTENTIONALLY LEFT BLANK>

Figure7-6: Proposed Conceptual Layout, NE 15th Avenue *"Road Diet"* Project

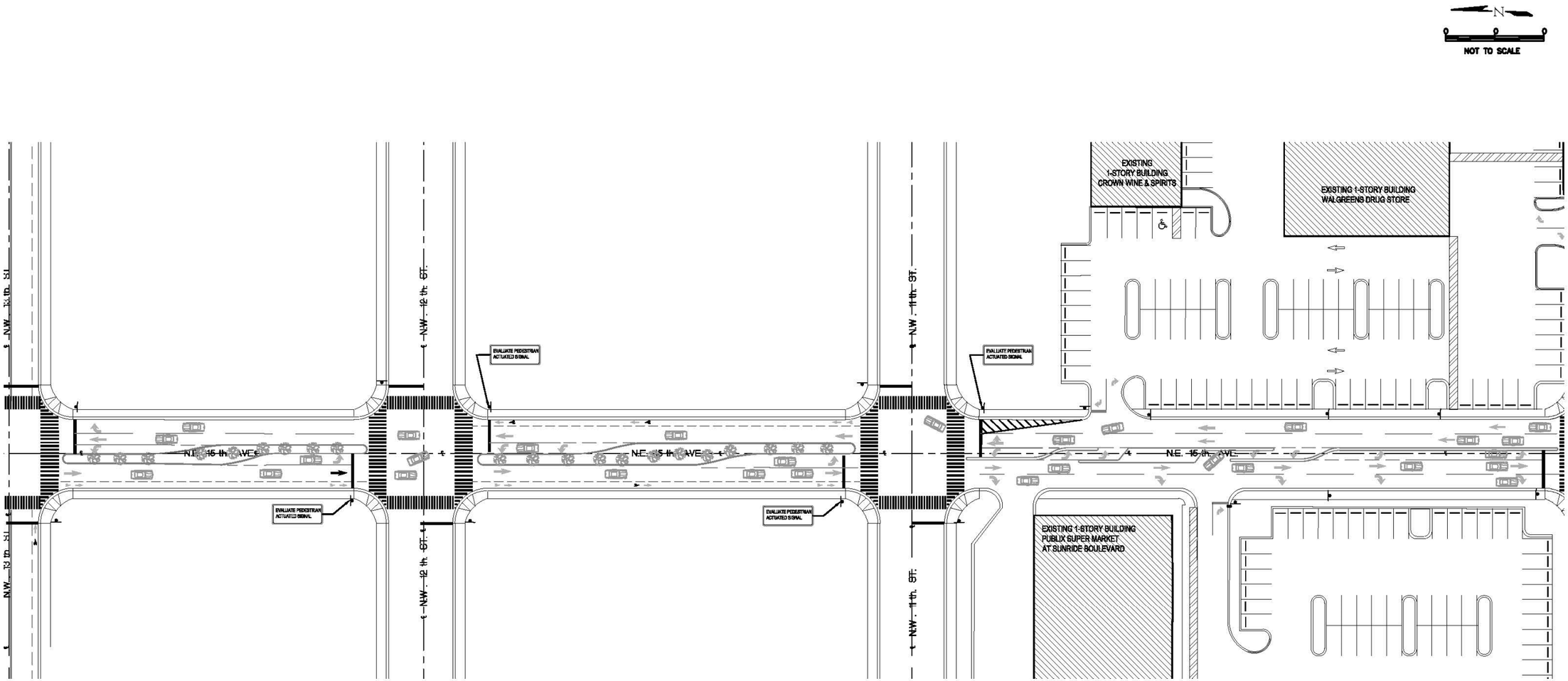
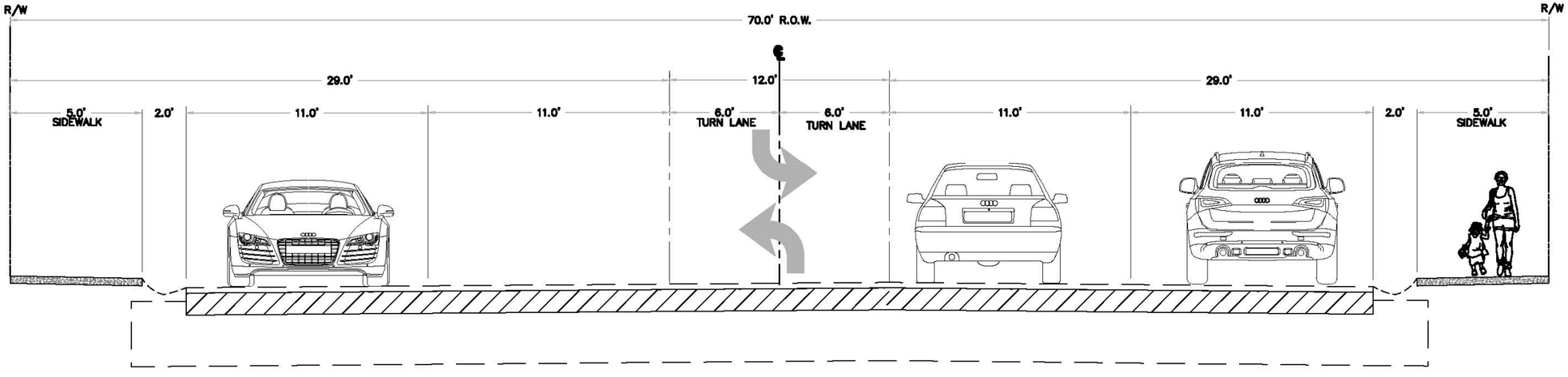
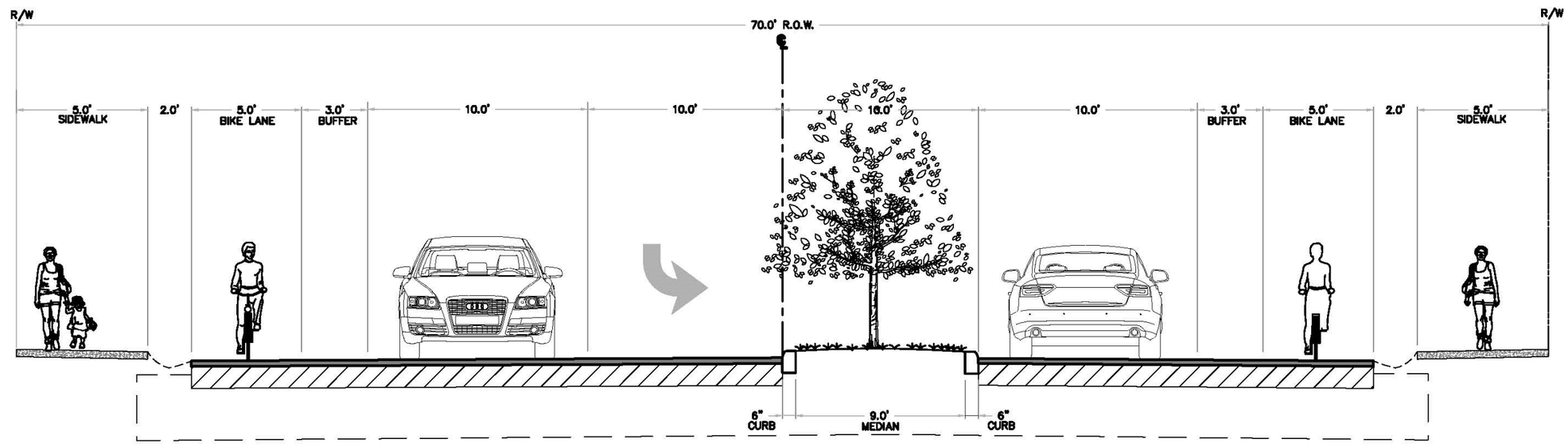


Figure7-7: Existing and Proposed Conceptual Typical Section, NE 15th Avenue *"Road Diet"* Project



EXISTING TYPICAL SECTION N.E. 15TH AVENUE FROM N.E. 11TH STREET TO N.E. 12 TH STREET
N.T.S

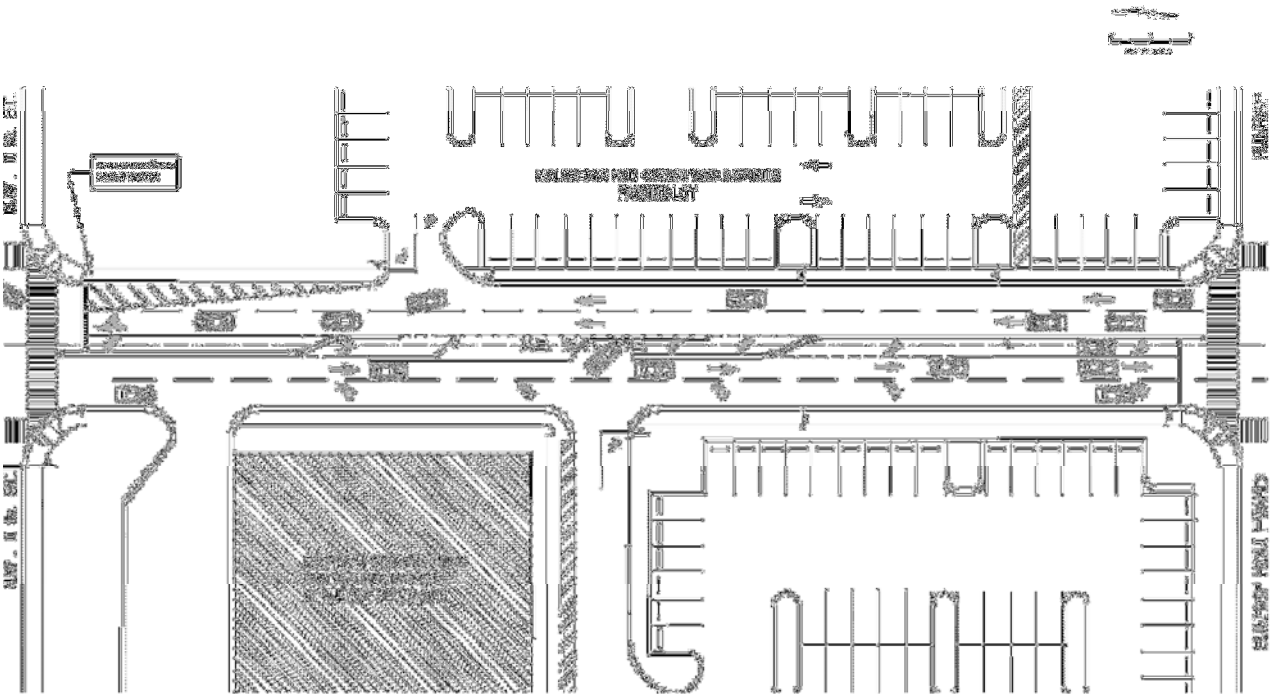


PROPOSED CONCEPTUAL TYPICAL SECTION N.E. 15TH AVENUE FROM N.E. 11TH STREET TO N.E. 12 TH STREET
N.T.S

Publix/Walgreens Plaza

37. Move the Walgreens driveway to the north and eliminate the left-turn movement exiting from Publix and Walgreens by providing a median to improve channelization and reduce conflicting vehicular movements and enhance safety while maintaining major access points. **Figure 7-8** illustrates the conceptual lane and median configuration on NE 15th Avenue between Sunrise Boulevard and NE 11th Street.

Figure7-8: Proposed Conceptual Layout, NE 15th Avenue at Publix/Walgreens Plaza



7.3 Traffic Impacts, Year 2025 with Improvements

To understand the traffic impacts and operational constraints of reducing capacity on NE 15th Avenue and NE 13th Street in conjunction with relocating the signal at Sunrise Boulevard/NE 9th Avenue to Sunrise Boulevard/NE 10th Avenue, a microsimulation analysis was conducted using the Synchro and the Highway Capacity Software (HCS 2010™) software. The possibility of a midblock pedestrian signal on US 1 was also evaluated. Traffic impacts resulting from implementing these improvements were compared to the future year 2025 conditions included in Chapter 3. **Tables 7-4** and **7-5** provide a snapshot of intersection performance in the year 2025 with improvements.

Table 7-4: Signalized Intersection Multimodal Level of Service (MMLOS), Peak Hour, Year 2025 with Improvements

Signalized Intersection	Year 2025 Level of Service, AM [PM]			
	Auto	Bicycle	Pedestrian	Transit
Sunrise Boulevard/Flagler Drive	D [C]	-	-	LOS **'A'** *on Sunrise Boulevard and US 1*; LOS **'E'** *on NE 15th Avenue*
Sunrise Boulevard/US 1 (Searstown)	D [D]	D [D]	C [C]	
Sunrise Boulevard/NE 10th Avenue	A [C]	-	-	
Sunrise Boulevard/NE 15th Avenue	F [F]	C [D]	C [C]	
Sunrise Boulevard/NE 17th Way	D [C]	B [C]	B [C]	
Sunrise Boulevard/US 1 (Gateway)	D [E]	-	-	
NE 13th Street/NE 15th Avenue	C [E]	C [C]	B [B]	
NE 13th Street/US 1	B [C]	B [C]	B [C]	

Source: TYLI, March 2014

Table 7-5: Unsignalized Intersection Level of Service (LOS), Peak Hour, Year 2025 with Improvements

Unsignalized Intersection	Year 2025 Level of Service, AM [PM]			
	Northbound	Southbound	Eastbound	Westbound
NE 11th Street/NE 15th Avenue	B [A]	A [A]	D [F]	F [F]
Publix at NE 15th Avenue	A [A]	A [B]	C [F]	-
Walgreens at NE 15th Avenue	A [A]	A [B]	-	C [C]
NE 12th Street/NE 15th Avenue	A [A]	A [A]	C [C]	F [F]
NE 13th Street/NE 11th Avenue	A [A]	-	D [E]	A [A]

Source: TYLI, March 2014

Key Findings

Below are key traffic operational analysis findings for future conditions (Year 2025) with improvements. Detailed outputs from Synchro and HCS 2010™ software showing approach delay, queue length, intersection delay, and bicycle/pedestrian level of service by direction are included in **Appendix E.**

- Overall intersection LOS degrades at the Sunrise Boulevard/NE 15th Avenue intersection in the future during evening rush hour primarily due to reduction in carrying capacity.
- Some intersections along Sunrise Boulevard and US 1 experience marginal approach delays in some directions during morning or evening rush hours, while a slight reduction in approach delay is expected at the Gateway and NE 13th Avenue intersection.

- Unsignalized intersections along NE 15th Avenue at NE 12th Street and NE 11th Street are anticipated to have longer queues in the eastbound and westbound approaches due to a reduction in capacity along NE 15th Avenue.
- Bicycle and pedestrian improvements on NE 15th Avenue and NE 13th Street will increase safety, reduce vehicle speeds and improve traffic circulation to and from the Publix/Walgreens plaza.

NE 15th Avenue Improvements:

- NE 15th Avenue at NE 11th Street and NE 12th Street, eastbound and westbound left turns degrade by at least one letter grade (from 'C' to 'D', from 'D' to 'F', or 'F' worsens) because of the lane reduction in the northbound and southbound directions.
- NE 15th Avenue at NE 11th Street, the eastbound and westbound queue lengths increase to approximately 350 feet, which is three times longer if the road diet project is not implemented. Without improvements on NE 15th Avenue, the queues would be less than 100 feet.
- The intersection level of service at the NE 15th Avenue/Sunrise Boulevard intersection would be unchanged; however, some queuing issues are anticipated.
- During the 4 to 6 PM period, about 80 left-turning vehicles exiting the Publix parking lot and approximately 50 left-turning vehicles exiting the Walgreens driveway will need an alternative route to reach their destination
- Northbound lane queue into the Publix parking lot is projected to be approximately 55 to 75 feet long.

NE 13th Street Improvements:

- NE 13th Street at NE 15th Avenue, the overall LOS degrades to an 'E' from a 'D' in the evening rush hour, and to 'D' from a 'C' in the morning rush hour.
- Eastbound and westbound approaches degrade to LOS 'E' from a 'C' in the evening rush hour.
- Queue lengths more than double on all approaches except in the northbound approach which would marginally improve.

Sunrise Boulevard at NE 10th Avenue Improvements:

- Overall intersection operation degrades to LOS 'C' from an 'A' in the evening rush hour.

Midblock ped/bike signal north of US1:

- Approximately 170-foot queue length in the southbound direction during the morning peak hour.

- Approximately 100-foot queue lengths north and south directions in the evening rush hour.

7.4 Project Prioritization

Transportation improvements and strategies passed through the screening and evaluation process were prioritized based on a SWOL analysis – Strengths, Weakness, Opportunities, and Limitations. Through the prioritization process, projects and strategies were categorized as short-term (less than five years), mid-term (five to 10 years), or long-term (more than 10 years) solutions. Below is a short description of the characteristics that contribute to a project's strengths, weakness, opportunities, and limitations.

- ***Strengths:*** Low-cost improvements that do not require right-of-way; improvements that would increase safety for all users of the transportation system; improvements that provide multimodal network connectivity; projects programmed for implementation through the City's FY 2015 Community Investment Program (CIP), Broward MPO's Transportation Improvement Program (TIP), and/or FDOT's Five Year Work Program.

- ***Weakness:*** Projects that lack community support; improvements that are not cost-effective in addressing transportation issues at hand.

- ***Opportunities:*** Projects that could be implemented jointly by partner agencies; improvements funded by private developers; potential for implementing the project through public private partnership (PPP); projects that may be eligible for discretionary federal, state, or local grants. In addition to funding, some of these projects could be implemented to meet new state or federal design standards.

- ***Limitations:*** Projects with high capital costs or unfunded projects; implementing the project requires extensive permitting/environmental clearance and coordination with multiple agencies; project viability is closely linked with financial and/or real estate markets.

Projects that fully support all of the characteristics considered in the SWOL analysis are classified as short-term projects to be implemented within the next five years. The short-term projects are not anticipated to have any *weaknesses* or *limitations*. Further, there are several *opportunities* to implement the short-term projects through available funding mechanisms or innovative funding arrangements.

The mid-term projects to be implemented within five to 10 years may have some of the *weaknesses* or *limitations* discussed above. Potential *weaknesses* or *limitations* could be overcome through further technical analysis or public engagement efforts. In terms of *opportunities*, these projects can be implemented as maintenance projects and would incorporate the latest state and federal design guidelines for accommodating bicycle lanes and pedestrians. Such projects may need refinement

before they can be programmed in the Broward MPO's TIP, City's CIP, and/or FDOT's Work Program.

Long-term projects with an implementation timeframe of more than 10 years comprise a package of improvements that are not fully defined and may have known *weaknesses* or *limitations* as described above. Such projects need to be further developed and better defined before they are programmed for implementation.

Table 7-6 provides a comprehensive evaluation of each project based on the SWOL analysis. It should be noted that the green color band in all four columns (*strengths, weakness, opportunities*, and *limitations*) in **Table 7-6** indicates a short-term project, while a yellow color band in the *limitations* column signifies a mid-term project, and the *orange color* and *yellow* color bands in the *weaknesses* and *limitations column* suggest a long-term project. Projects are stratified as short-, mid- and long-term *Chapter 8: Recommendations* based on this rationale.

<THIS PAGE INTENTIONALLY LEFT BLANK>

Table 7-6: Project Prioritization

Project ID & Type		Roadway	From	To	Project Description	Strengths	Weaknesses	Opportunities	Limitations
1	*Bicycle/ Pedestrian*	US 1/Federal Highway	US 1/Sunrise Boulevard	NE 13th Street	Continue to coordinate with FDOT to provide an at-grade midblock crossing between US 1/Sunrise Boulevard and NE 13th Street.				
2	*Traffic Operations*	US 1/Federal Highway	at Gateway Shopping Plaza		City/FDOT to evaluate the potential of reversing circulation in the Gateway Shopping Plaza parking lot.				
3	*Traffic Operations*	US 1/Federal Highway	US 1/Sunrise Boulevard	NE 13th Street	Coordinate with FDOT regarding the addition of barriers to the turn lanes in the median north of the Gateway intersection to prevent illegal turns northbound.				
4	*Pedestrian Accessibility*	Sunrise Boulevard	50-FeetWest of FEC Railroad Crossing	US 1/Sunrise Boulevard (Gateway)	Coordinate with FDOT to conduct a detailed assessment of pedestrian accessibility and develop an inventory of deficiencies in the Sunrise Boulevard / US 1 corridor. FDOT to prioritize needed improvements based on a technical evaluation as well as through public input; and incorporate this information in their "Transition Plan" to address ADA accessibility issues on the north side of Sunrise Boulevard east and west of Flagler Drive and throughout the corridor.				
5	*Pedestrian Accessibility*	Sunrise Boulevard	at FEC Railroad Crossing		Provide detectable warning surface on each side of the rail crossing so that the edge nearest the rail crossing is 6' minimum and 15' maximum from the centerline of the nearest rail. City/FDOT to coordinate with FECI to implement pedestrian accessibility improvements within the FEC railroad right of way through the All Aboard Florida (AAF) Quiet Zones project.				
6	*Bicycle/ Pedestrian*	Sunrise Boulevard	NE 9th Avenue	NE 10th Avenue	Coordinate with FDOT to remove the traffic signal in the westbound direction at NE 9th Avenue, and to install a full signal at NE 10th Avenue with a bike/pedestrian crossing.				
7	*Bicycle/ Pedestrian*	Sunrise Boulevard	at NE 12th Avenue (Satori Gardens)		LRCA to coordinate with the property owners to explore opportunities for accommodating a bike/pedestrian crossing through the Satori Gardens subdivision NE 12th Avenue.				
8	*Traffic Operations*	Sunrise Boulevard	at NE 16th Terrace		Install traffic signal at NE 16th Terrace.				
9	*Pedestrian*	Sunrise Boulevard	at NE 17th Way (Villa Medici)		LRCA to coordinate with the Villas Medici property owners to explore opportunities for accommodating a pedestrian crossing through the Villa Medici Condo subdivision at NE 17th Way.				
10	*Traffic Operations*	Sunrise Boulevard	at NE 17th Way (Villa Medici)		Sign and restripe to provide "Don't Block the Box" at NE 17th Way. The fourth leg of the NE 17th Way/Sunrise Boulevard intersection to be installed as part of the resurfacing project in the spring of 2015.				
			Corridor-wide		FDOT is in the process of implementing an Active Arterial Management System on Sunrise Boulevard and US 1 as well as on Broward Boulevard and Oakland Park Boulevard within the City of Fort Lauderdale.				
			at US 1/Sunrise Boulevard (Gateway)		Gateway Area Intersection Safety Study: FDOT to evaluate alternatives including a roundabout, traffic adaptive signals with pedestrian/bike signals, and a hybrid alternative through its intersection safety study.				
11	*Traffic Operations*	Sunrise Boulevard	Corridor-wide		FDOT has a project programmed (FM# 432724-1) for 2016 through the Congestion Management program to look at Sunrise Boulevard for its entire length.				
12	*Complete Streets*	Sunrise Boulevard	Corridor-wide		Based on recommendations from FDOT's studies. City's Complete Streets project to be coordinated with FDOT's projects and initiatives in this corridor.				
13	*Traffic Operations*	Flagler Drive	at Sunrise Boulevard		Restripe Flagler Drive to provide clear center and edge lines as well as curbs. Extend the Sunrise Blvd. median to the north, widen the slip right lane on Flagler Drive and extend curb north on east side.				
14	*Safety*	Flagler Drive	at NE 7th Avenue & NE 9th Avenue		Provide stop bars at the Flagler Drive and NE 7th Avenue intersection. Landscape maintenance (trim Palm trees at Flagler Drive and NE 9th Avenue). Install additional "Stop Ahead" sign before bend in road so there is better sight distance.				
15	*Bicycle*	Flager Drive	Andrews Avenue	NE 13th Street	Provide secondary bike accommodations (sharrows) to enhance bicycle connectivity and reduce vehicle speeds.				
16	*Traffic Calming*	NE 18th Avenue	at NE 11th Street		Install stops signs on NE 11th Street (EB/NB) and NE 18th Avenue (SB/WB) at the NE 11th Street/NE 18th Street intersection as well as at the proposed Galleria Loft East driveway (exit).				
17	*Traffic Calming*	NE 18th Avenue	Sunrise Boulevard to NE 13th Street		City and LRCA to identify appropriate traffic calming strategy based on 4E's concept (Engineering, Enforcement, Education, and Emergency Medical Services) that are mutually acceptable to both parties.				
18	*Traffic Calming*	NE 18th Avenue	Sunrise Boulevard to NE 13th Street		Develop alternative design concepts to accommodate sidewalks and bike lanes (sharrows), reduce pavement width (travel lanes), and install signage to designate NE 18th Avenue as a bike route.				
19	*Safety*	NE 11th Street	at NE 10th Avenue		Install 4-way stop sign at NE 11th Street and NE 10th Avenue.				
20	*Bicycle/ Pedestrian*	NE 11th Street	Flagler Drive	NE 18th Avenue	Coordinate with FDOT project to implement bike lanes (sharrows) and designate NE 11th Street as a bike route with appropriate regulatory signage.				
21	*Parking*	NE 11th Street	Flagler Drive	NE 18th Avenue	Evaluate right of way and operational constraints to provide on-street (parallel) parking based on demand on a block-by-block basis.				
22	*Safety*	NE 11th Street	NE 17th Avenue	NE 17th Way	Do not provide loading zones on NE 11th Street to deter large delivery trucks from circulating on residential streets.				

Note: **Green Color Band**: Known Strengths and Opportunities, No Weakness or Limitations; **Yellow Color Bank**: Some Weakness and/or Limitations; **Orange Color Band**: Known Weakness and/or Limitations

Table 7-6: Project Prioritization *continued*

Project ID & Type		Roadway	From	To	Project Description	Strengths	Weaknesses	Opportunities	Limitations
23	*Traffic Calming*	NE 11th Street	East of NE 15th Avenue		Allow vehicular traffic (from Victoria Commons and Galleria Lofts) to enter/exit via NE 18th Avenue and NE 11th Street and spread traffic out on these two roads. Implement traffic calming strategies and maintain potential alternative access/egress points for improved traffic circulation to the extent possible.				
24	*Bicycle*	NE 12th Street	Flagler Drive	NE 18th Avenue	Provide secondary bike accommodations (sharrows) to enhance bicycle connectivity and reduce vehicle speeds.				
25	*Bicycle*	NE 12th Avenue &	Sunrise Boulevard	NE 15th Avenue	Provide secondary bike accommodations (sharrows) to enhance bicycle connectivity and reduce vehicle speeds.				
26	*Parking*	NE 17th Way	NE 11th Street	NE 13th Street	Restripe NE 17th Way to accommodate on-street parking and/or wider sidewalks.				
27	*Public Art*	General	Neighborhood-wide		LRCA to coordinate with the City to design and install neighborhood entrance signs.				
28	*Aesthetics*				LRCA to coordinate with the Fort Lauderdale police department to develop an enforcement strategy. LRCA to develop and implement maintenance schedule to require property owners/businesses to maintain property and penalize violators. LRCA to coordinate with City for code enforcement needs.				
29	*Traffic Calming*				City to develop a comprehensive traffic calming policy and identify thresholds corresponding to different traffic calming strategies based on the 4E's concept.				
30	*Traffic Calming*				City staff and LRCA to identify appropriate traffic calming strategy for specific neighborhood streets based on 4E concept that is mutually acceptable to both parties.				
31	*Traffic Operations*				Neighborhood residents and the LRCA to identify specific road closures for potential relocation, and to conduct detailed traffic impact studies to understand positive and negative impacts to access, egress, and traffic circulation.				
32	*Traffic Operations*	Sunrise Boulevard	at FEC Railroad Crossing		Consider traffic adaptive signal to reduce traffic delay at railroad crossings. Traffic adaptive signals do not use cycle lengths, so intersections would stay coordinated better when the railroad is active. FDOT will be evaluating this strategy through its Gateway intersection safety study.				
33	*Transit*	General	Neighborhood-wide		Bus bays are not recommended at this time; however, transit studies on Sunrise Boulevard and US 1 may determine the need for specific bus stop improvements and/or enhancements.				
34	*Complete Streets*	NE 13th Street	FEC Railroad Crossing	US 1/Federal Highway	Develop alternative road diet concepts based on public input, conduct detailed transportation impact analysis before implementing the preferred road diet concept on NE 13th Street.				
		NE 13th Street	at NE 11th Avenue		Remove two (2) spaces in front of building; and incorporate on-street parking on NE 13th Street and roadway geometry improvements to accommodate increased width of sidewalk in conjunction with landscape maintenance to improve line of sight at NE 17th Avenue and NE 11th Avenue as part of the road diet project.				
35	*Safety*	Flagler Drive	at NE 11th Avenue		Intersection improvement- add islands to channelize vehicular movements. All-way stops signs so vehicles can safely back out of spaces on Flagler Drive. This project should be implemented in coordination with the public art (monument) installation project.				
36	*Complete Streets*	NE 15th Avenue	NE 11th Street	NE 13th Street	Develop and evaluate alternative concepts including traffic circles for "road diet" project on NE 15th Avenue from NE 11th Street to NE 13th Street. Evaluate installing pedestrian actuated signals at NE 11th Street and NE 12th Street. Assess drainage issues at the NE 11th Street/NE 15th Avenue intersections and incorporate appropriate improvements during the design and construction phase.				
37	*Safety*	NE 15th Avenue	at Publix/Walgreens Plaza		Move Walgreens driveway to the north and eliminate left turn movement exiting from Publix and Walgreens by providing median to improve channelization and reduce conflicting vehicular movements and enhance safety while maintaining major access points. Evaluate alternative concepts during design phase to mitigate and/or accommodate left-turn (northbound) movement out of Publix including but not limited to the following: o Provide a median opening on NE 15th Avenue at NE 11th Street to allow for left turn out of Publix o Move the road closure on NE 14th Avenue further north and channelize traffic to allow for right turn only on NE 11th Street o Allow U-turns at Sunrise Boulevard/NE 15th Avenue intersection o Install appropriate signage to allow vehicles to use the service area behind Publix to exit on NE 15th Avenue and use the proposed left turn pocket at Walgreens to make U-turns. Residents in the neighborhood could be provided information so that they are aware of this route.				

Note: **Green Color Band**: Known Strengths and Opportunities, No Weakness or Limitations; **Yellow Color Bank**: Some Weakness and/or Limitations; **Orange Color Band**: Known Weakness and/or Limitations

8. Plan Recommendations

This chapter provides a description of plan recommendations and corresponding planning level order of magnitude cost estimates, broad funding needs, as well as a description of project implementation strategy and next steps. It includes a general discussion about agency responsibilities with regard to project funding, implementation and coordination.

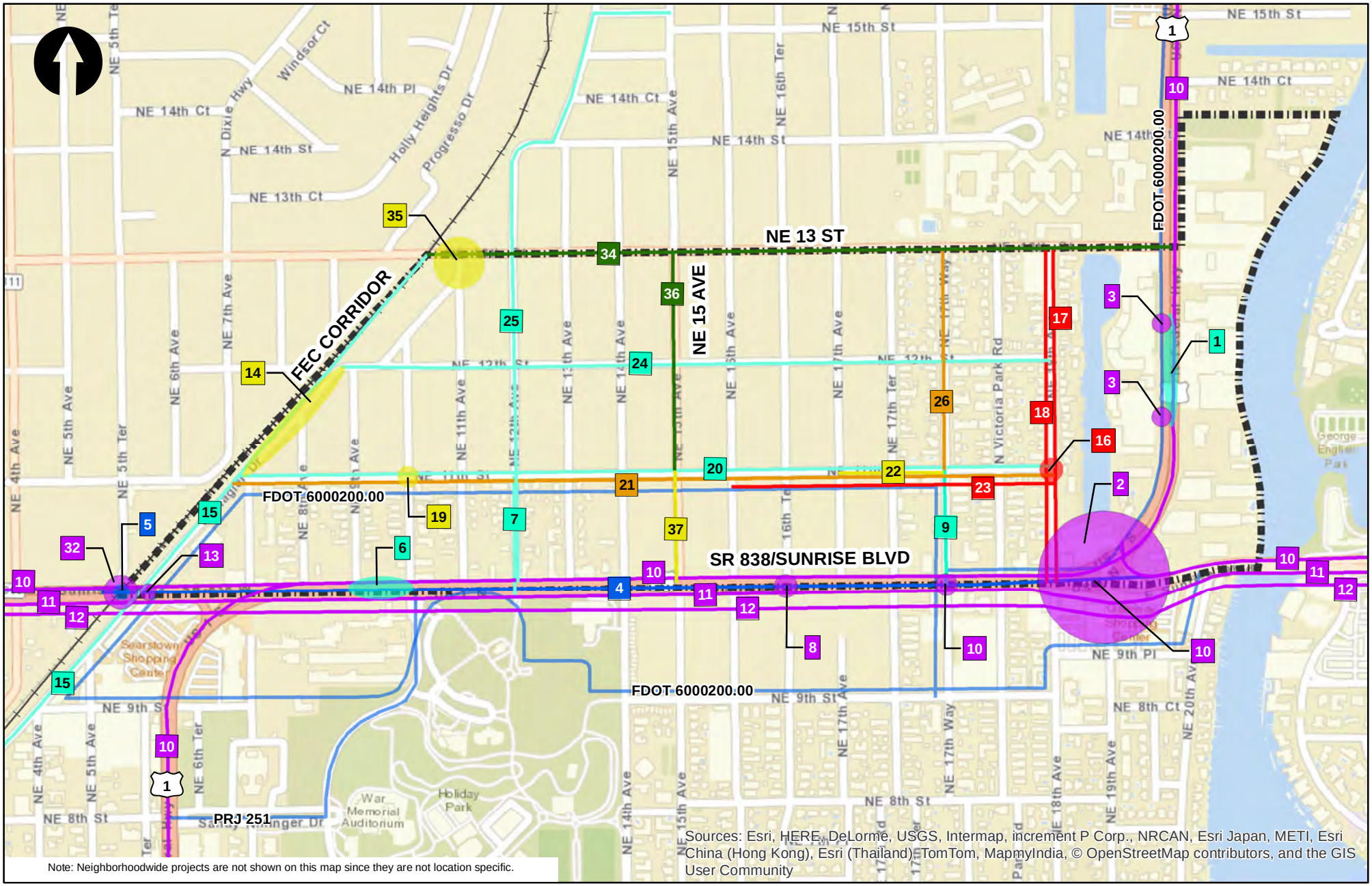
This *Lake Ridge Neighborhood Mobility Masterplan* identifies 39 separate projects – a total investment of approximately $25.5 million, including some system-wide improvement projects over the next 20 years. A majority of the projects identified by this *Mobility Masterplan* are short-term projects ($15 million) that could be implemented within the next five years, as many of them are already identified in the FDOT District Four work program with funding appropriated in the next five years or are otherwise low-cost smaller projects that can be implemented without significant cost or effort. Also included in the *Mobility Masterplan* are mid-term projects ($2.6 million) to be implemented in the subsequent five to 10 years, and long-term projects ($7.9 million) that would be built over a longer timeframe (more than 10 years).

8.1 Project Cost Estimation Methodology

The cost estimates for the projects presented in this section reflect planning-level construction costs utilizing the unit costs included in the FDOT *Long Range Estimation (LRE) System.* The *LRE System* uses a "bottom-up" approach, where unit costs are aggregated to develop parametric unit costs as applicable to a given work item. A parametric unit cost is an estimate developed for all of the elements included in a "typical section" of a work item for a unit of measurement (e.g., square feet, linear feet). The parametric unit cost is based on a conceptual scope developed for each specific work item and includes mobilization and maintenance of traffic (MOT) factors. After the unit costs were developed, quantities were derived using GIS (to calculate linear distance). Both the quantities and unit costs were placed in a cost stream format in a Microsoft Excel spreadsheet to compute construction costs for various projects.

To account for uncertainties and limitations in developing cost estimates given the level of engineering detail, the project team added scope contingency (25 percent); design contingency (15 percent); and construction, engineering, and inspection (CEI) (15 percent) factors. For projects in planning and project development phases, costs were obtained from the sponsor agency.

Figure 8-1 show recommended projects, while **Table 8-1** shows project cost estimates and a general implementation timeframe as well as agency responsibility. The recommendations for Project IDs 35 and 37 were modified to incorporate and address community input received at the March 19, 2015 meeting.



Note: Neighborhoodwide projects are not shown on this map since they are not location specific.

Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

CITY OF FORT LAUDERDALE — VENICE OF AMERICA

LAKE RIDGE CIVIC ASSOCIATION

Legend

Recommended Projects
- Bicycle / Pedestrian
- Complete Streets
- Parking
- Pedestrian Accessibility
- Safety
- Traffic Calming
- Traffic Operations

Adopted Plan/Program Project
- Bicycle
- Lake Ridge Boundary
- Railroad

Source: T.Y. Lin International, March 2015

LAKE RIDGE NEIGHBORHOOD MOBILITY MASTER PLAN

FIGURE 8-1

RECOMMENDED PROJECTS

Table 8-1: Recommended Projects vs. Cost Estimates and Agency Responsibility

Project ID & Type		Roadway	From	To	Project Description	Project Cost	Priority	Lead Entity	Coordinating Entity(ies)
1	*Bicycle/ Pedestrian*	US 1/Federal Highway	US 1/Sunrise Boulevard	NE 13th Street	Continue to coordinate with FDOT to provide an at-grade midblock crossing between US 1/Sunrise Boulevard and NE 13th Street.	$322,000[1]	Short-Term	FDOT	City/County
2	*Traffic Operations*	US 1/Federal Highway	at Gateway Shopping Plaza		City/FDOT to evaluate the potential of reversing circulation in the Gateway Shopping Plaza parking lot.	Not Applicable	Mid-Term	City	FDOT/Private Property
3	*Traffic Operations*	US 1/Federal Highway	US 1/Sunrise Boulevard	NE 13th Street	Coordinate with FDOT regarding the addition of barriers to the turn lanes in the median north of the Gateway intersection to prevent illegal turns northbound.	$1,000[1]	Short-Term	FDOT	City/County
4	*Pedestrian Accessibility*	Sunrise Boulevard	50-FeetWest of FEC Railroad Crossing	US 1/Sunrise Boulevard (Gateway)	Coordinate with FDOT to conduct a detailed assessment of pedestrian accessibility and develop an inventory of deficiencies in the Sunrise Boulevard / US 1 corridor. FDOT to prioritize needed improvements based on a technical evaluation as well as through public input; and incorporate this information in their "Transition Plan" to address ADA accessibility issues on the north side of Sunrise Boulevard east and west of Flagler Drive and throughout the corridor.	Not Applicable	Short-Term	FDOT	City/County /Utility Owners
5	*Pedestrian Accessibility*	Sunrise Boulevard	at FEC Railroad Crossing		Provide detectable warning surface on each side of the rail crossing so that the edge nearest the rail crossing is 6' minimum and 15' maximum from the centerline of the nearest rail. City/FDOT to coordinate with FECI to implement pedestrian accessibility improvements within the FEC railroad right-of-way through the All Aboard Florida (AAF) Quiet Zones project.	$3,000[1]	Short-Term	FDOT	City/County
6	*Bicycle/ Pedestrian*	Sunrise Boulevard	NE 9th Avenue	NE 10th Avenue	Coordinate with FDOT to remove the traffic signal in the westbound direction at NE 9th Avenue, and to install a full signal at NE 10th Avenue with a bike/pedestrian crossing.	$330,000[1]	Mid-Term	FDOT	City/County
7	*Bicycle/ Pedestrian*	Sunrise Boulevard	at NE 12th Avenue (Satori Gardens)		LRCA to coordinate with the property owners to explore opportunities for accommodating a bike/pedestrian crossing through the Satori Gardens subdivision NE 12th Avenue.	Not Applicable	Long-Term	LRCA	City
8	*Traffic Operations*	Sunrise Boulevard	at NE 16th Terrace		Install traffic signal at NE 16th Terrace.	$4,604,123[2]	Short-Term	FDOT	City/County
9	*Pedestrian*	Sunrise Boulevard	at NE 17th Way (Villa Medici)		LRCA to coordinate with the Villas Medici property owners to explore opportunities for accommodating a pedestrian crossing through the Villa Medici Condo subdivision at NE 17th Way.	Not Applicable	Long-Term	LRCA	City
10	*Traffic Operations*	Sunrise Boulevard	at NE 17th Way (Villa Medici)		Sign and restripe to provide "Don't Block the Box" at NE 17th Way. The fourth leg of the NE 17th Way/Sunrise Boulevard intersection to be installed as part of the resurfacing project in the spring of 2015.	$4,000[1]	Short-Term	FDOT	City
			Corridor-wide		FDOT is in the process of implementing an Active Arterial Management System on Sunrise Boulevard and US 1 as well as on Broward Boulevard and Oakland Park Boulevard within the City of Fort Lauderdale.	$9,149,833[2]	Short-Term	FDOT	City/County
			at US 1/Sunrise Boulevard (Gateway)		Gateway Area Intersection Safety Study: FDOT to evaluate alternatives including a roundabout, traffic adaptive signals with pedestrian/bike signals, and a hybrid alternative through its intersection safety study.	$30,000[1]	Short-Term	FDOT	City/County
11	*Traffic Operations*	Sunrise Boulevard	Corridor-wide		FDOT has a project programmed (FM# 432724-1) for 2016 through the Congestion Management program to look at Sunrise Boulevard for its entire length.	$2,171,223[2]	Mid-Term	FDOT	City/County
12	*Complete Streets*	Sunrise Boulevard	Corridor-wide		Based on recommendations from FDOT's studies. City's Complete Streets project to be coordinated with FDOT's projects and initiatives in this corridor.	$4,072,000[3]	Long-Term	FDOT	City/County
13	*Traffic Operations*	Flagler Drive	at Sunrise Boulevard		Restripe Flagler Drive to provide clear center and edge lines as well as curbs. Extend the Sunrise Blvd. median to the north, widen the slip right lane on Flagler Drive and extend curb north on east side.	$17,000[1]	Mid-Term	City	County/FDOT
14	*Safety*	Flagler Drive	at NE 7th Avenue & NE 9th Avenue		Provide stop bars at the Flagler Drive and NE 7th Avenue intersection. Landscape maintenance (trim Palm trees at Flagler Drive and NE 9th Avenue). Install additional "Stop Ahead" sign before bend in road so there is better sight distance.	$1,000[1]	Short-Term	City	LRCA
15	*Bicycle*	Flagler Drive	Andrews Avenue	NE 13th Street	Provide secondary bike accommodations (sharrows) to enhance bicycle connectivity and reduce vehicle speeds.	$348,480[3]	Long-Term	City	LRCA/Other HOAs
16	*Traffic Calming*	NE 18th Avenue	at NE 11th Street		Install stops signs on NE 11th Street (EB/NB) and NE 18th Avenue (SB/WB) at the NE 11th Street/NE 18th Street intersection as well as at the proposed Galleria Loft East driveway (exit).	$1,000[3]	Short-Term	City	LRCA
17	*Traffic Calming*	NE 18th Avenue	Sunrise Boulevard to NE 13th Street		City and LRCA to identify appropriate traffic calming strategy based on 4E's concept (Engineering, Enforcement, Education, and Emergency Medical Services) that are mutually acceptable to both parties.	Not Applicable	Mid-Term	LRCA	City
18	*Traffic Calming*	NE 18th Avenue	Sunrise Boulevard to NE 13th Street		Develop alternative design concepts to accommodate sidewalks and bike lanes (sharrows), reduce pavement width (travel lanes), and install signage to designate NE 18th Avenue as a bike route.	$2,495,000[1]	Long-Term	City	LRCA
19	*Safety*	NE 11th Street	at NE 10th Avenue		Install 4-way stop sign at NE 11th Street and NE 10th Avenue.	$3,000[1]	Short-Term	City	LRCA
20	*Bicycle/ Pedestrian*	NE 11th Street	Flagler Drive	NE 18th Avenue	Coordinate with FDOT project to implement bike lanes (sharrows) and designate NE 11th Street as a bike route with appropriate regulatory signage.	$66,390[2]	Short-Term	FDOT	City
21	*Parking*	NE 11th Street	Flagler Drive	NE 18th Avenue	Evaluate right-of-way and operational constraints to provide on-street (parallel) parking based on demand on a block-by-block basis.	Not Applicable	Short-Term	City	LRCA
22	*Safety*	NE 11th Street	NE 17th Avenue	NE 17th Way	Do not provide loading zones on NE 11th Street to deter large delivery trucks from circulating on residential streets.	Not Applicable	Short-Term	LRCA	-

[1]Planning Level Cost Estimates, TYLI;[2]FDOT Five-Year Work Program (2014-2019) or Actual Project Cost, FDOT District IV; [3]Connecting the Blocks Program 2015-2035, August 2014; [4]Neighborhood Community Investment Program, (NCIP), September 2014; [5]Safety Benefits of Implementing Adaptive Signal Control Technology: Survey Results, January 2013, USDOT

Table 8-1: Recommended Projects vs. Cost Estimates and Agency Responsibility *continued*

Project ID & Type		Roadway	From	To	Project Description	Project Cost	Priority	Lead Entity	Coordinating Entity(ies)
23	*Traffic Calming*	NE 11th Street	East of NE 15th Avenue		Allow vehicular traffic (from Victoria Commons and Galleria Lofts) to enter/exit via NE 18th Avenue and NE 11th Street and spread traffic out on these two roads. Implement traffic calming strategies and maintain potential alternative access/egress points for improved traffic circulation to	Not Applicable	Short-Term	LRCA	City
24	*Bicycle*	NE 12th Street	Flagler Drive	NE 18th Avenue	Provide secondary bike accommodations (sharrows) to enhance bicycle connectivity and reduce vehicle speeds.	$221,760[3]	Long-Term	City	LRCA
25	*Bicycle*	NE 12th Avenue &	Sunrise Boulevard	NE 15th Avenue	Provide secondary bike accommodations (sharrows) to enhance bicycle connectivity and reduce vehicle speeds.	$221,760[3]	Long-Term	City	LRCA/Other HOAs
26	*Parking*	NE 17th Way	NE 11th Street	NE 13th Street	Restripe NE 17th Way to accommodate on-street parking and/or wider sidewalks.	$2,000[1]	Short-Term	City	LRCA
27	*Public Art*	General	Neighborhood-wide		LRCA to coordinate with the City to design and install neighborhood entrance signs.	$35,000[4]	Short-Term	City	LRCA
28	*Aesthetics*				LRCA to coordinate with the Fort Lauderdale police department to develop an enforcement strategy. LRCA to develop and implement maintenance schedule to require property owners/businesses to maintain property and penalize violators. LRCA to coordinate with City for code	Not Applicable	Mid-Term	LRCA	City
29	*Traffic Calming*				City to develop a comprehensive traffic calming policy and identify thresholds corresponding to different traffic calming strategies based on the 4E's concept.	Not Applicable	Short-Term	City	-
30	*Traffic Calming*				City staff and LRCA to identify appropriate traffic calming strategy for specific neighborhood streets based on 4E concept that is mutually acceptable to both parties.	Not Applicable	Short-Term	LRCA	City
31	*Traffic Operations*				Neighborhood residents and the LRCA to identify specific road closures for potential relocation, and to conduct detailed traffic impact studies to understand positive and negative impacts to access, egress, and traffic circulation.	Not Applicable	Long-Term	LRCA	City
32	*Traffic Operations*	Sunrise Boulevard	at FEC Railroad Crossing		Consider traffic adaptive signal to reduce traffic delay at railroad crossings. Traffic adaptive signals do not use cycle lengths, so intersections would stay coordinated better when the railroad is active. FDOT will be evaluating this strategy through its Gateway intersection safety study.	$60,000[5]	Mid-Term	County	FDOT/City
33	*Transit*	General	Neighborhood-wide		Bus bays are not recommended at this time; however, transit studies on Sunrise Boulevard and US 1 may determine the need for specific bus stop improvements and/or enhancements.	Not Applicable	Short-Term	County	FDOT/City
34	*Complete Streets*	NE 13th Street	FEC Railroad Crossing	US 1/Federal Highway	Develop alternative road diet concepts based on public input, conduct detailed transportation impact analysis before implementing the preferred road diet concept on NE 13th Street.	$502,000[1]	Long-Term	City	County/ FDOT/LRCA /Private Property Owner
		NE 13th Street	at NE 11th Avenue		Remove two (2) spaces in front of building; and incorporate on-street parking on NE 13th Street and roadway geometry improvements to accommodate increased width of sidewalk in conjunction with landscape maintenance to improve line of sight at NE 17th Avenue and NE 11th Avenue as part of the road diet project.				
35	*Safety*	Flagler Drive	at NE 11th Avenue		Intersection improvement- add islands to channelize vehicular movements. All-way stops signs so vehicles can safely back out of spaces on Flagler Drive. This project should be implemented in coordination with the public art (monument) installation project.	$17,000[1]	Short-Term	City	LRCA
36	*Complete Streets*	NE 15th Avenue	NE 11th Street	NE 13th Street	Develop and evaluate alternative concepts including traffic circles for "road diet" project on NE 15th Avenue from NE 11th Street to NE 13th Street. Evaluate installing pedestrian actuated signals at NE 11th Street and NE 12th Street. Assess drainage issues at the NE 11th Street/NE 15th Avenue intersections and incorporate appropriate improvements during the design and construction phase.	$508,000[1]	Short-Term	City	County/ FDOT/LRCA /Private Property Owner
37	*Safety*	NE 15th Avenue	at Publix/Walgreens Plaza		Move Walgreens driveway to the north and eliminate left turn movement exiting from Publix and Walgreens by providing median to improve channelization and reduce conflicting vehicular movements and enhance safety while maintaining major access points. Evaluate alternative concepts during design phase to mitigate and/or accommodate left-turn (northbound) movement out of Publix including but not limited to the following: o Provide a median opening on NE 15th Avenue at NE 11th Street to allow for left turn out of Publix o Move the road closure on NE 14th Avenue further north and channelize traffic to allow for right turn only on NE 11th Street o Allow U-turns at Sunrise Boulevard/NE 15th Avenue intersection o Install appropriate signage to allow vehicles to use the service area behind Publix to exit on NE 15th Avenue and use the proposed left turn pocket at Walgreens to make U-turns. Residents in the neighborhood could be provided information so that they are aware of this route.	$293,000[1]	Short-Term	City	LRCA /Private Property Owner

[1]Planning Level Cost Estimates, TYLI; [2]FDOT Five-Year Work Program (2014-2019) or Actual Project Cost, FDOT District IV; [3]Connecting the Blocks Program 2015-2035, August 2014; [4]Neighborhood Community Investment Program, (NCIP), September 2014; [5]Safety Benefits of Implementing Adaptive Signal Control Technology: Survey Results, January 2013, USDOT

8.2 Implementation Strategy and Next Steps

The *Lake Ridge Neighborhood Mobility Masterplan* establishes the community's vision for its transportation system and provides a blueprint for implementing a variety of projects that address the mobility, accessibility, and safety needs of residents and businesses. In total, 39 separate projects are recommended with an estimated cost of $25.5 million, and their implementation will require the leadership and/or participation of the City, Broward County, FDOT District Four, the Lake Ridge Neighborhood Association, private property owners, and local HOAs. The recommended projects include markings, signage, traffic control devices, roadway and access design, crosswalks, and more detailed studies of state highway facilities; some of which should be implemented in the short term (zero to five years), mid-term (five to 10 years), and long-term (+10 years) horizons.

This section describes the recommendations, their suggested timeframes, estimated costs, and funding status (i.e., whether or not funding has been programmed and/or identified), and the lead and coordinating entities. This information is summarized below in **Table 8-2**. **Figure 8-1** provides a map of the recommended projects, which references the project ID numbers provided in **Tables 8-3**, **8-4** and **8-5**.

Table 8-2: Summary of *Lake Ridge Neighborhood Masterplan* Recommended Projects

	No. of Projects	Total Estimated Costs	Total Funding Identified	Total Funding Needed	City Funding Needed*
Short-term Horizon Projects	23	$15,040,346	$13,850,346	$1,190,000	$860,000
Mid-term Horizon Projects	7	$2,578,223	$2,171,223	$407,000	$17,000
Long-term Horizon Projects	9	$7,861,000	0	$7,861,000	$3,789,000
Total	**39**	**$25,479,569**	**$16,021,569**	**$9,458,000**	**$4,666,000**

*To be refined with more detailed analysis and discussion with agency and neighborhood partners.

8.2.1 Recommended Short-term Projects

As shown in **Table 8-3**, 23 short-term projects are recommended with a total cost of $15,040,346. Over 90 percent of the estimated cost of these short-term projects is dedicated to three projects on US 1/Sunrise Boulevard, all of which are programmed for funding in FDOT District Four's Five-Year Work Program (2014-2019).

- Installation of a traffic signal at NE 16th Terrace, which is part FDOT's 3R (Resurface, Restore, and Rehabilitate) project on Federal Highway from Broward Boulevard to NE 17th Way;
- Signage and markings at the intersection of Sunrise Boulevard and NE 17th Way; and
- Installation of a traffic signal on Sunrise Boulevard at NE 16th Terrace.

Other projects that would fall under FDOT's responsibility include a mid-block crossing of Sunrise Boulevard between NE 13th Street and the Gateway intersection, establishing a better means of eliminating the right-turn movement of westbound traffic on Sunrise Boulevard through the PNC Bank parking lot at the Gateway intersection, installation of a detectable warning device on Sunrise

Boulevard at the FEC crossing, initiation of a pedestrian safety study of the Gateway intersection, and designation of NE 11th Street as a bicycle lane (using sharrows).

Ten recommended short-term projects fall under the City's jurisdiction and include a range of markings and traffic control devices on local streets, as well as conceptual engineering of the road diet proposed for NE 15th Avenue, and the reconfiguration of access on NE 15th Avenue to and from the Publix and Walgreen's shopping centers.

The estimated cost of the City led short-term projects is approximately $860,000, while FDOT funded projects would need an investment of nearly $14 million. The majority of the FDOT projects *(Project IDs8, 10B, 10C* and *20)* are funded and included in FDOT District Four's Five-Year Work Program (2014-2019). However, FDOT's funding for the Gateway Area Intersection Safety Study *(Project ID 10C)* only includes the financial resources required to complete the study. Additional funds would be needed for design and construction of transportation improvements that may be recommended in this study.

Some of the low cost short-term improvements on the roadways under the City's jurisdiction will have available funding within the next five years, while projects that need significant investment, such as the NE 15th Avenue Complete Streets and safety improvements at Publix/Walgreens plaza *(Project IDs 36* and *37)* would require the City to explore different funding sources, including discretionary grants as well as partnership arrangements with the County, FDOT, and private property owners. In addition to identifying funds for completing the design and construction of the NE 15th Avenue improvements *(Project ID 36* and *37)*, a challenge for the City will be in negotiating access management concessions with private property owners as well as getting community consensus for mitigating access impacts to residents living east of NE 15th Avenue.

The low-cost, short-term improvement projects would be prioritized by the Lake Ridge Civic Association (LRCA) leadership in collaboration with the City. At this time, the City has approximately $70,000 available to fund some of these short-term projects. The City and the community are coordinating to incorporate on-street parking on NE 17th Way as part of the roadway restriping job *(Project ID 26)* as well as designing and implementing a neighborhood entrance sign *(Project ID 27)* – a public art project. There is an opportunity to integrate the safety improvements identified at Flagler Drive at NE 11th Avenue *(Project ID 35)* as part of this public art project. No financial responsibility has been identified for LRCA per se, but their role is to provide leadership on behalf of the community and coordinate with the various agencies.

Table 8-3: Recommended Short-Term Projects

Project ID & Type		Roadway	From	To	Project Description	Project Cost	Funding Status	Lead Entity	Coordinating Entity(ies)
14	*Safety*	Flagler Drive	at NE 7th Avenue & NE 9th Avenue		Provide stop bars at the Flagler Drive and NE 7th Avenue intersection. Landscape maintenance (trim Palm trees at Flagler Drive and NE 9th Avenue). Install additional "Stop Ahead" sign before bend in road so there is better sight distance.	$1,000[1]	Unfunded	City	LRCA
16	*Traffic Calming*	NE 18th Avenue	at NE 11th Street		Install stops signs on NE 11th Street (EB/NB) and NE 18th Avenue (SB/WB) at the NE 11th Street/NE 18th Street intersection as well as at the proposed Galleria Loft East driveway (exit).	$1,000[1]	Unfunded	City	LRCA
19	*Safety*	NE 11th Street	at NE 10th Avenue		Install 4-way stop sign at NE 11th Street and NE 10th Avenue.	$3,000[1]	Unfunded	City	LRCA
21	*Parking*	NE 11th Street	Flagler Drive	NE 18th Avenue	Evaluate right-of-way and operational constraints to provide on-street (parallel) parking based on demand on a block-by-block basis.	Not Applicable	Not Applicable	City	LCRA
26	*Parking*	NE 17th Way	NE 11th Street	NE 13th Street	Restripe NE 17th Way to accommodate on-street parking and/or wider sidewalks.	$2,000[1]	Unfunded	City	LRCA
27	*Public Art*	General	Neighborhood-wide		LRCA to coordinate with the City to design and install neighborhood entrance signs.	$35,000[4]	Unfunded	City	LRCA
29	*Traffic Calming*	General	Neighborhood-wide		City to develop a comprehensive traffic calming policy and identify thresholds corresponding to different traffic calming strategies based on the 4E's concept.	-na-	-na-	City	-
35	*Safety*	Flagler Drive	at NE 11th Avenue		Intersection improvement- add islands to channelize vehicular movements. All-way stops signs so vehicles can safely back out of spaces on Flagler Drive. This project should be implemented in coordination with the public art (monument) installation project.	$17,000[1]	Unfunded	City	LRCA
36	*Complete Streets*	NE 15th Avenue	NE 11th Street	NE 13th Street	Develop and evaluate alternative concepts including traffic circles for "road diet" project on NE 15th Avenue from NE 11th Street to NE 13th Street. Evaluate installing pedestrian actuated signals at NE 11th Street and NE 12th Street. Assess drainage issues at the NE 11th Street/NE 15th Avenue intersections and incorporate appropriate improvements during the design and construction phase.	$508,000[1]	Unfunded	City	County/ FDOT/LRCA /Private Property Owner
37	*Safety*	NE 15th Avenue	at Publix/Walgreens Plaza		Move Walgreens driveway to the north and eliminate left turn movement exiting from Publix and Walgreens by providing median to improve channelization and reduce conflicting vehicular movements and enhance safety while maintaining major access points. Evaluate alternative concepts during design phase to mitigate and/or accommodate left-turn (northbound) movement out of Publix including but not limited to the following: o Provide a median opening on NE 15th Avenue at NE 11th Street to allow for left turn out of Publix o Move the road closure on NE 14th Avenue further north and channelize traffic to allow for right turn only on NE 11th Street o Allow U-turns at Sunrise Boulevard/NE 15th Avenue intersection o Install appropriate signage to allow vehicles to use the service area behind Publix to exit on NE 15th Avenue and use the proposed left turn pocket at Walgreens to make U-turns. Residents in the neighborhood could be provided information so that they are aware of this route.	$293,000[1]	Unfunded	City	LRCA/Private Property Owner
					Total (City Projects)	**$860,000**			
33	*Transit*	General	Neighborhood-wide		Bus bays are not recommended at this time; however, transit studies on Sunrise Boulevard and US 1 may determine the need for specific bus stop improvements and/or enhancements.	Not Applicable	Not Applicable	County	FDOT/City
					Total (County Projects)	Not Applicable			
1	*Bicycle/ Pedestrian*	US 1/Federal Highway	US 1/Sunrise Boulevard (Gateway)	NE 13th Street	Continue to coordinate with FDOT to provide an at-grade midblock crossing between US 1/Sunrise Boulevard and NE 13th Street.	$322,000[1]	Unfunded	FDOT	City/County
3	*Traffic Operations*	US 1/Federal Highway	US 1/Sunrise Boulevard (Gateway)	NE 13th Street	Coordinate with FDOT regarding the addition of barriers to the turn lanes in the median north of the Gateway intersection to prevent illegal turns northbound.	$1,000[1]	Unfunded	FDOT	City/County
4	*Pedestrian Accessibility*	Sunrise Boulevard	50-FeetWest of FEC Railroad Crossing	US 1/Sunrise Boulevard (Gateway)	Coordinate with FDOT to conduct a detailed assessment of pedestrian accessibility and develop an inventory of deficiencies in the Sunrise Boulevard / US 1 corridor. FDOT to prioritize needed improvements based on a technical evaluation as well as through public input; and incorporate this information in their "Transition Plan" to address ADA accessibility issues on the north side of Sunrise Boulevard east and west of Flagler Drive and throughout the corridor.	Not Applicable	Not Applicable	FDOT	City/County /Utility Owners
5	*Pedestrian Accessibility*	Sunrise Boulevard	at FEC Railroad Crossing		Provide detectable warning surface on each side of the rail crossing so that the edge nearest the rail crossing is 6' minimum and 15' maximum from the centerline of the nearest rail. City/FDOT to coordinate with FECI to implement pedestrian accessibility improvements within the FEC railroad right-of-way through the All Aboard Florida (AAF) Quiet Zones project.	$3,000[1]	Unfunded	FDOT	City/County
8	*Traffic Operations*	Sunrise Boulevard	at NE 16th Terrace		Install traffic signal at NE 16th Terrace.	$4,604,123[2]	Funded	FDOT	City/County

[1]Planning Level Cost Estimates, TYLI; [2]FDOT Five-Year Work Program (2014-2019) or Actual Project Cost, FDOT District IV; [4]Neighborhood Community Investment Program, (NCIP), September 2014

Table 8-3: Recommended Short-Term Projects *continued*

Project ID & Type		Roadway	From	To	Project Description	Project Cost	Funding Status	Lead Entity	Coordinating Entity(ies)
10A	*Traffic Operations*	Sunrise Boulevard	at NE 17th Way (Villa Medici)		Sign and restripe to provide "Don't Block the Box" at NE 17th Way. The fourth leg of the NE 17th Way/Sunrise Boulevard intersection to be installed as part of the resurfacing project in the spring of 2015.	$4,000[1]	Unfunded	FDOT	City
10B	*Traffic Operations*	Sunrise Boulevard	Corridor-wide		FDOT is in the process of implementing an Active Arterial Management System on Sunrise Boulevard and US 1 as well as on Broward Boulevard and Oakland Park Boulevard within the City of Fort Lauderdale.	$9,149,833[2]	Funded	FDOT	City/County
10C	*Traffic Operations*	Sunrise Boulevard	at US 1/Sunrise Boulevard (Gateway)		Gateway Area Intersection Safety Study: FDOT to evaluate alternatives including a roundabout, traffic adaptive signals with pedestrian/bike signals, and a hybrid alternative through its intersection safety study.	$30,000[2]	Funded	FDOT	City/County
20	*Bicycle/ Pedestrian*	NE 11th Street	Flagler Drive	NE 18th Avenue	Coordinate with FDOT project to implement bike lanes (sharrows) and designate NE 11th Street as a bike route with appropriate regulatory signage.	$66,390[2]	Funded	FDOT	City
					Total (FDOT Projects)	**$14,180,346**			
22	*Safety*	NE 11th Street	NE 17th Avenue	NE 17th Way	Do not provide loading zones on NE 11th Street to deter large delivery trucks from circulating on residential streets.	Not Applicable	Not Applicable	LRCA	-
23	*Traffic Calming*	NE 11th Street	East of NE 15th Avenue		Allow vehicular traffic (from Victoria Commons and Galleria Lofts) to enter/exit via NE 18th Avenue and NE 11th Street and spread traffic out on these two roads. Implement traffic calming strategies and maintain potential alternative access/egress points for improved traffic circulation to the extent possible.	Not Applicable	Not Applicable	LRCA	City
30	*Traffic Calming*	General	Neighborhood-wide		City staff and LRCA to identify appropriate traffic calming strategy for specific neighborhood streets based on 4E concept that is mutually acceptable to both parties.	Not Applicable	Not Applicable	LRCA	City
					Total (LRCA Projects)	Not Applicable			
					Total (All Short-Term Projects)	**$15,040,346**			

[1]Planning Level Cost Estimates, TYLI; [2]FDOT Five-Year Work Program (2014-2019) or Actual Project Cost, FDOT District IV

8.2.2 Recommended Mid-term Projects

Table 8-4 identifies the seven recommended mid-term projects with corresponding cost estimates, lead agency responsibilities for implementation, and coordinating agencies. An investment of approximately $2.6 million is needed to implement all of the mid-term projects, of which $2.1 million is dedicated to the Sunrise Boulevard Corridor Study from Sawgrass Expressway to SR A1A *(Project ID 11)*. While the planning phase of this corridor study is fully funded through the FDOT District Four 2015-2020 Work Program, recommendations resulting from the study would need to be programmed for future design, right-of-way, and construction phases. Another key project is the bicycle and pedestrian crossing improvement across Sunrise Boulevard, which would enhance connectivity and safety between the Lake Ridge neighborhood and Holiday Park *(Project ID 6)* at the cost of approximately $330,000, or approximately 13 percent of the total mid-term projects investment.

The traffic signal improvements at the FEC railroad crossing *(Project ID 32)* should be evaluated as part of the Sunrise Boulevard Corridor Study *(Project ID 11)* and should be considered a priority implementation project. The City recently completed a restriping project on Flagler Drive at Sunrise Boulevard that addresses some of the traffic operations issues at that FEC crossing. Further improvements could be designed for implementation as part of the City's routine maintenance efforts *(Project ID 13)*.

8.2.3 Recommended Long-term Projects

Table 8-5 identifies all of the recommended long-term projects with their corresponding cost estimates and lead agency implementation responsibilities, as well as coordination roles. A total investment of approximately $7.9 million is estimated for completing the recommended long-term projects. The City led projects are estimated to cost approximately $3.8 million (or 48 percent) of the total long-term project costs, while the remaining $4.1 million (or 52 percent) would be funded through FDOT. At this time, none of the long-term projects are funded. The largest City project would be to complete reconstruction of NE 18th Avenue *(Project ID 18)* followed by the NE 13th Street Complete Streets project *(Project ID 34),* which includes safety and traffic operations improvements at NE 11th Avenue and NE 17th Avenue. There are three other City-led projects *(Project IDs 15, 24, and 25*) involving bicycle improvements (restriping) on local streets that are estimated to cost a total of $792,000. The Complete Streets project on Sunrise Boulevard *(Project ID 12)* should be evaluated through FDOT's Corridor Study *(Project ID 11)* to fully understand the multimodal operations impacts and identify appropriate improvements that benefit all the users and modes.

<THIS PAGE INTENTIONALLY LEFT BLANK>

Table 8-4: Recommended Mid-Term Projects

Project ID & Type		Roadway	From	To	Project Description	Project Cost	Funding Status	Lead Entity	Coordinating Entity(ies)
2	*Traffic Operations*	US 1/Federal Highway	at Gateway Shopping Plaza		City/FDOT to evaluate the potential of reversing circulation in the Gateway Shopping Plaza parking lot.	Not Applicable	Not Applicable	City	FDOT/Private Property Owner
13	*Traffic Operations*	Flagler Drive	at Sunrise Boulevard		Restripe Flagler Drive to provide clear center and edge lines as well as curbs. Extend the Sunrise Blvd. median to the north, widen the slip right lane on Flagler Drive and extend curb north on east side.	$17,000[1]	Unfunded	City	County/FDOT
					Total (City Projects)	**$17,000**			
32	*Traffic Operations*	Sunrise Boulevard	at FEC Railroad Crossing		Consider traffic adaptive signal to reduce traffic delay at railroad crossings. Traffic adaptive signals do not use cycle lengths, so intersections would stay coordinated better when the railroad is active. FDOT will be evaluating this strategy through its Gateway intersection safety study.	$60,000[5]	Unfunded	County	FDOT/City
					Total (County Projects)	**$60,000**			
6	*Bicycle/ Pedestrian*	Sunrise Boulevard	NE 9th Avenue	NE 10th Avenue	Coordinate with FDOT to remove the traffic signal in the westbound direction at NE 9th Avenue, and to install a full signal at NE 10th Avenue with a bike/pedestrian crossing.	$330,000[1]	Unfunded	FDOT	City/County
11	*Traffic Operations*	Sunrise Boulevard	Corridor-wide		FDOT has a project programmed (FM# 432724-1) for 2016 through the Congestion Management program to look at Sunrise Boulevard for its entire length.	$2,171,223[2]	Funded	FDOT	City/County
					Total (FDOT Projects)	**$2,501,223**			
17	*Traffic Calming*	NE 18th Avenue	Sunrise Boulevard to NE 13th Street		City and LRCA to identify appropriate traffic calming strategy based on 4E's concept (Engineering, Enforcement, Education, and Emergency Medical Services) that are mutually acceptable to both parties.	Not Applicable	Not Applicable	LRCA	City
28	*Aesthetics*	General	Neighborhood-wide		LRCA to coordinate with the Fort Lauderdale police department to develop an enforcement strategy. LRCA to develop and implement maintenance schedule to require property owners/businesses to maintain property and penalize violators. LRCA to coordinate with City for code enforcement needs.	Not Applicable	Not Applicable	LRCA	City
					Total (LRCA Projects)	Not Applicable			
					Total (All Mid-Term Projects)	**$2,578,223**			

[1]Planning Level Cost Estimates, TYLI; [2]FDOT Five-Year Work Program (2014-2019) or Actual Project Cost, FDOT District IV; [5]Safety Benefits of Implementing Adaptive Signal Control Technology: Survey Results, January 2013; USDOT

Table 8-5: Recommended Long-Term Projects

Project ID & Type		Roadway	From	To	Project Description	Project Cost	Funding Status	Lead Entity	Coordinating Entity(ies)
15	*Bicycle*	Flagler Drive	Andrews Avenue	NE 13th Street	Provide secondary bike accommodations (sharrows) to enhance bicycle connectivity and reduce vehicle speeds.	$348,480[4]	Unfunded	City	LRCA/Other HOAs
18	*Traffic Calming*	NE 18th Avenue	Sunrise Boulevard to NE 13th Street		Develop alternative design concepts to accommodate sidewalks and bike lanes (sharrows), reduce pavement width (travel lanes), and install signage to designate NE 18th Avenue as a bike route.	$2,495,000[1]	Unfunded	City	LRCA
24	*Bicycle*	NE 12th Street	Flagler Drive	NE 18th Avenue	Provide secondary bike accommodations (sharrows) to enhance bicycle connectivity and reduce vehicle speeds.	$221,760[4]	Unfunded	City	LRCA
25	*Bicycle*	NE 12th Avenue & Flagler Drive & NE 15th Street	Sunrise Boulevard	NE 15th Avenue	Provide secondary bike accommodations (sharrows) to enhance bicycle connectivity and reduce vehicle speeds.	$221,760[4]	Unfunded	City	LRCA/Other HOAs
34	*Complete Streets*	NE 13th Street	FEC Railroad Crossing	US 1/Federal Highway	Develop alternative road diet concepts based on public input, conduct detailed transportation impact analysis before implementing the preferred road diet concept on NE 13th Street.	$502,000[1]	Unfunded	City	County/ FDOT/LRCA /Private Property Owner
		NE 13th Street	at NE 11th Avenue		Remove two (2) spaces in front of building; and incorporate on-street parking on NE 13th Street and roadway geometry improvements to accommodate increased width of sidewalk in conjunction with landscape maintenance to improve line of sight at NE 17th Avenue and NE 11th Avenue as part of the road diet project.				
					Total (City Projects)	**$3,789,,000**			
12	*Complete Streets*	Sunrise Boulevard	Corridor-wide		Based on recommendations from FDOT's studies. City's Complete Streets project to be coordinated with FDOT's projects and initiatives in this corridor.	$4,072,000[4]	Unfunded	FDOT	City/County
					Total (FDOT Projects)	**$4,072,000**			
7	*Bicycle/ Pedestrian*	Sunrise Boulevard	at NE 12th Avenue (Satori Gardens)		LRCA to coordinate with the property owners to explore opportunities for accommodating a bike/pedestrian crossing through the Satori Gardens subdivision NE 12th Avenue.	Not Applicable	Not Applicable	LRCA	City
9	*Pedestrian*	Sunrise Boulevard	at NE 17th Way (Villa Medici)		LRCA to coordinate with the Villas Medici property owners to explore opportunities for accommodating a pedestrian crossing through the Villa Medici Condo subdivision at NE 17th Way.	Not Applicable	Not Applicable	LRCA	City
31	*Traffic Operations*	General	Neighborhood-wide		Neighborhood residents and the LRCA to identify specific road closures for potential relocation, and to conduct detailed traffic impact studies to understand positive and negative impacts to access, egress, and traffic circulation.	Not Applicable	Not Applicable	LRCA	City
					Total (LRCA Projects)	Not Applicable			
					Total (All Mid-Term Projects)	**$7,861,000**			

[1]Planning Level Cost Estimates, TYLI; [4]Connecting the Blocks Program 2015-2035, August 2014

8.2.4 Next Steps

The following is a list of initial action items for the City to advance the recommendations identified in the *Lake Ridge Neighborhood Mobility Masterplan*.

Short-Term Projects

- City staff to continue to coordinate with FDOT on current and future transportation planning/design efforts on Sunrise Boulevard and US 1 to ensure that the Lake Ridge neighborhood's bicycle, pedestrian, and safety needs *(Project IDs 1, 3, 4, and 5)* are incorporated in transportation improvement projects during all the phases of project development.
- City Staff to coordinate with FDOT to provide "Don't Block the Box" signage and restriping at NE 17th Way *(Project ID 10A)*.
- City staff to coordinate with the Lake Ridge Civic Association (LRCA) board to prioritize the low cost short-term projects identified in Table 8-2 for implementation.
- City staff to continue to coordinate with the community to incorporate on-street parking on NE 17th Way as part of the roadway restriping job *(Project ID 26)*.
- City staff to continue to coordinate with the community to design and implement a neighborhood entrance sign *(Project ID 27)* as a public art project, and to integrate the safety improvements identified at Flagler Drive at NE 11th Avenue *(Project ID 35)* as part of this public art project.
- City staff to continue planning and design effort for the NE 15th Avenue improvements *(Project ID 36)* while gathering additional public input and securing funding for construction and implementation.
- City staff to explore the possibility of access management improvements with Walgreens and Publix driveways at NE 15th Avenue and coordinate with the community to refine conceptual alternatives *(Project ID 37)*. City staff to identify funding sources for implementing unfunded short-term projects including exploring funding partnership arrangements with the County, Broward MPO, and FDOT.

Mid-Term Projects

- City staff to coordinate with FDOT to implement traffic signal improvements at the NE 9th Avenue and NE 10th Avenue intersection to accommodate bicycle/pedestrian movements across Sunrise Boulevard *(Project ID 6);* including evaluating whether there is any potential to add the improvements to FDOT's 3R project *(Project ID 8)* for expedited project implementation.
- City staff to evaluate traffic signal improvements at the FEC railroad crossing *(Project ID 32)* as part of the Sunrise Boulevard Corridor Study *(Project ID 11)* and potentially identify it as a relatively low-cost improvement for priority implementation.

- City to further investigate, design, and implement improvements identified at the Flagler Drive and Sunrise Boulevard intersection (Project ID 13) as part of the City's routine maintenance efforts.
- City staff to identify funding sources for implementing unfunded mid-term projects including exploring funding partnership arrangements with Broward County, Broward MPO, and FDOT.

Long-Term Projects

- City staff to work with the Broward MPO and FDOT to prioritize bicycle and pedestrian improvement projects so that they can be programmed for implementation *(Project IDs 15, 24, and 25)*.
- City staff to coordinate with the LRCA leadership to explore alternative design concepts for the reconstruction of NE 18th Avenue *(Project ID 18)*.
- City staff to engage the community in design and implementation of the NE 13th Street Complete Street project (*Project ID 34)*.
- City staff to coordinate with FDOT to include the Complete Streets project on Sunrise Boulevard *(Project ID 12)* as one of the alternatives to be evaluated through FDOT's Corridor Study *(Project ID 11)* to fully understand the multimodal operations impacts and identify appropriate improvements that benefit all users.
- City staff to identify funding sources for implementing unfunded long-term projects and to explore funding partnership arrangements with the County, Broward MPO, and FDOT.

LAKE RIDGE NEIGHBORHOOD MASTERPLAN VISION STATEMENT

"Enhance the quality of life by providing safe multimodal transportation options that improve mobility and accessibility for all Lake Ridge Neighborhood residents while preserving the neighborhood's character and increasing its economic vitality."