APPENDIX A
BACKGROUND REPORT

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Contents

Table of Maps

Table of Figures

CURRY FORD VISION PLAN
BACKGROUND REPORT

I. Existing Conditions

A. Population & Housing

The focus of this study is the Curry Ford corridor, which includes a commercial component and several multi-family developments along the roadway, but also established residential neighborhoods to the north and south. This section analyzes the socioeconomics and demographics within that study area boundary. The market study, addressed later in the report, addresses a larger study (market) area.

1. Population

According to the US Census, the Orlando-Kissimmee-Sanford Metropolitan Statistical Area (MSA) reached a population of over 2.5 million in 2017 and estimated a population of 280,257 for the City of Orlando in 2018. As noted by the Orlando Economic Partnership, the Orlando MSA is adding 1,000 new residents a week. From 2016 to 2017, the four-county region that makes up the Orlando MSA – Lake, Orange, Osceola and Seminole Counties – grew by 2.3 percent, more than double the rate of growth of the United States, and the fastest growth rate of the 30 largest cities in America. Contrary to popular belief, people moving to the area are not just snowbirds and retirees. Approximately 45% of new Orlando residents who moved from outside the region within the last year are prime working age (between the ages of 25 and 54) and only 9% are over the age of 65. Orlando has one of the youngest median ages in the state at just below 37, while the state average is 42.[1]

In order to analyze the sociodemographic composition of the study area alone, the ESRI Business Analysis Online program was used. Based on the study area boundaries (1.23 square miles), the ESRI BAO identified a total of 7,583 residents, 3,049 households and 3,461 dwelling units. The following graphics represent the sociodemographic composition of the study area residents.

[1] Orlando Economic Partnership

Figure 1. Curry Ford Area Key Facts (2018)

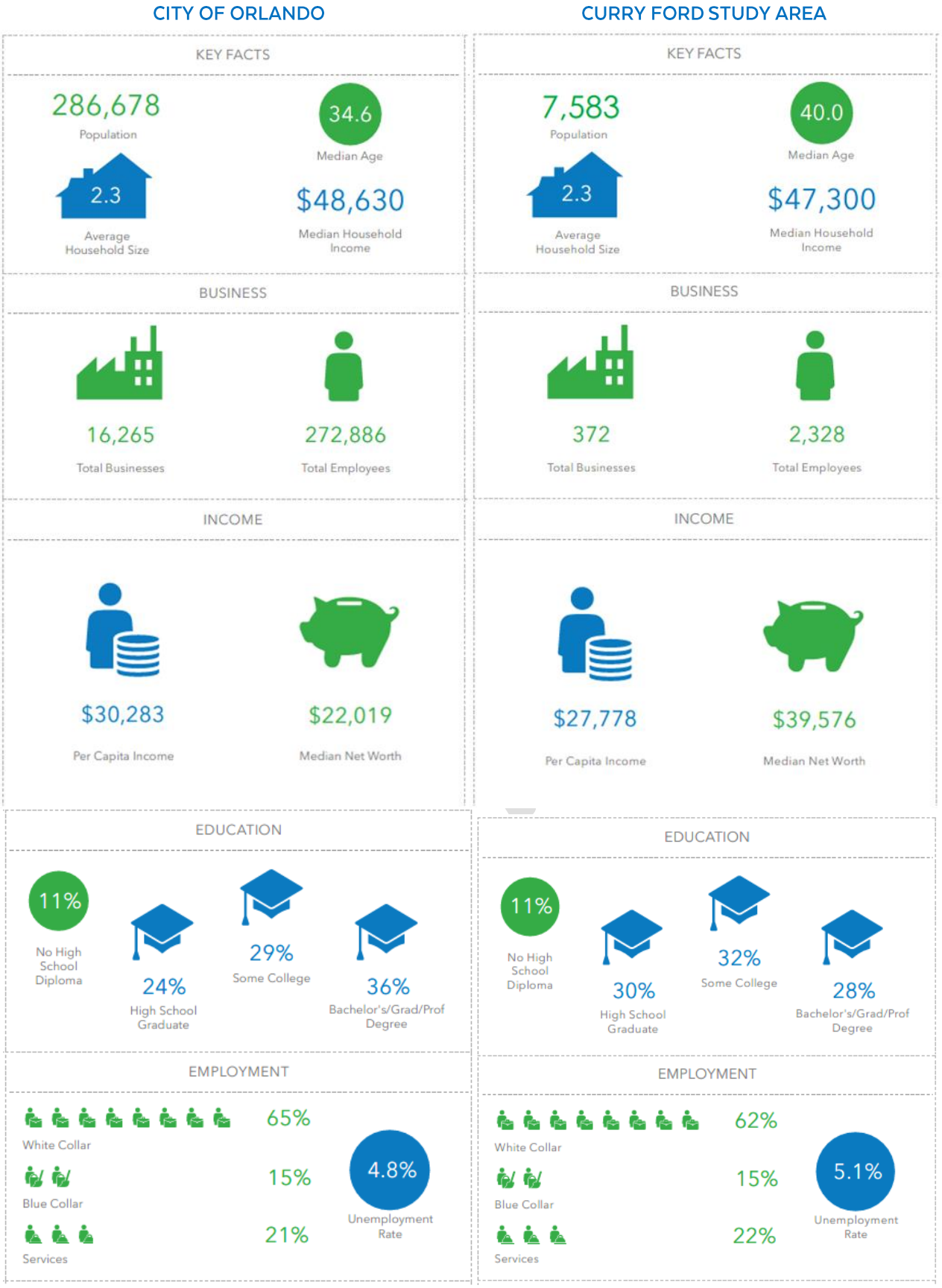


Figure 2. Race and Ethnicity

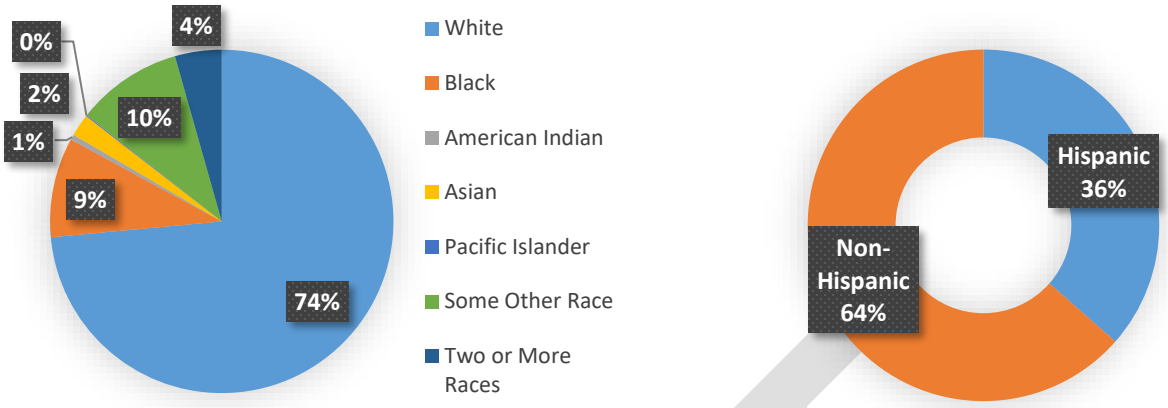


Figure 3. Population by Age

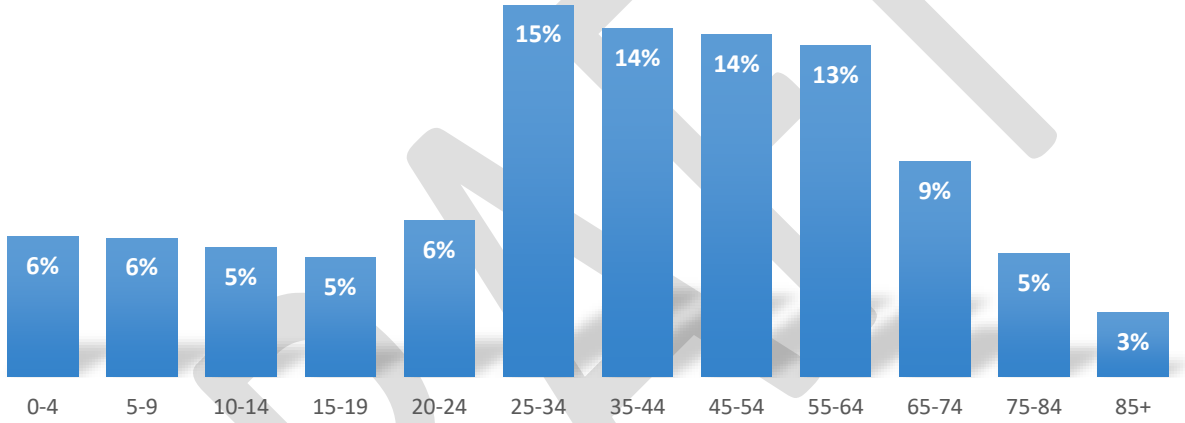
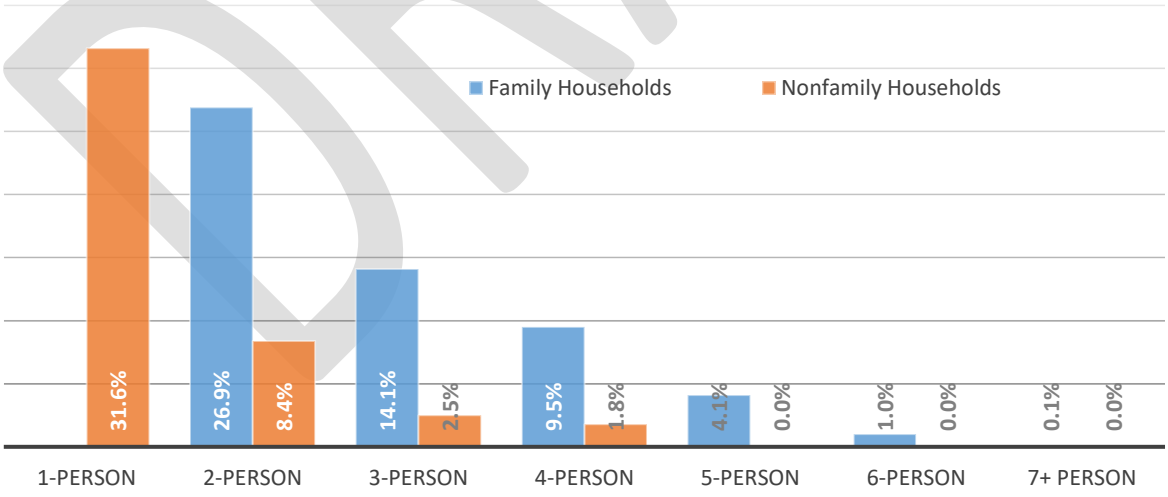


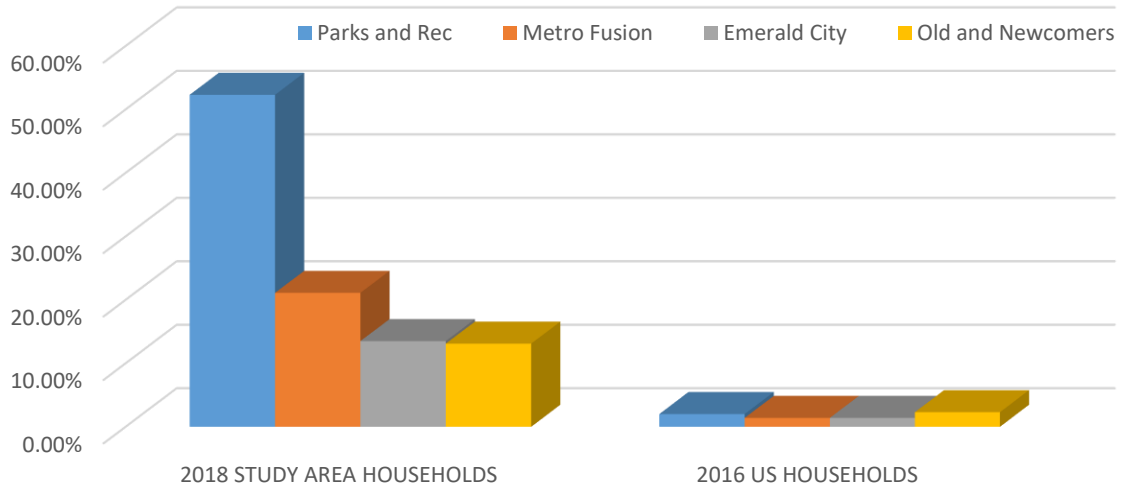
Figure 4. Households by Type and Size



2. Tapestry Segmentation

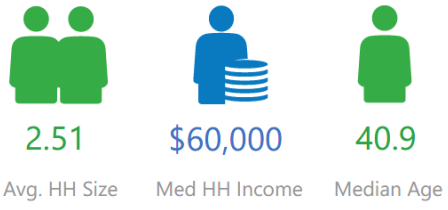
One means of analyzing population data and trends is by using Tapestry Segmentation. Tapestry Segmentation is a tool used by Esri Business Analyst Online to provide an accurate description of who lives in America's neighborhoods. Understanding customers' lifestyle choices, what they buy, and how they spend their free time helps identify the market conditions of an area. U.S. residential areas are divided into 67 distinctive segments based on their socioeconomic and demographic composition. The four Tapestry Segments in the Curry Ford Study Area are Parks and Rec, Metro Fusion, Emerald City, and Old and Newcomers. While Florida is historically known as a State comprised of a primarily older demographic, the median ages for the four Tapestry Segments present in the Study Area are all 40 years of age and below. The distribution of these Tapestry Segments, according to Esri BAO, are shown below.

Figure 5. Curry Ford Study Area Top 4 Tapestry Segments



Parks and Rec 52.3%

These practical suburbanites have achieved the dream of home ownership. They have purchased homes that are within their means. Their homes are older, and town homes and duplexes are not uncommon. Many of these families are dual-income married couples approaching retirement age; they are comfortable in their jobs and their homes, budget wisely, but do not plan on retiring anytime soon or moving. Neighborhoods are well established, as are the amenities and programs that supported their now independent children through school and college. The appeal of these kid-friendly neighborhoods is now attracting a new generation of young couples.



Metro Fusion 21.1%

Metro Fusion is a young, diverse market segment. Many residents do not speak English fluently and have moved into their homes recently. They are highly mobile and over three quarters of households are occupied by renters. Many households have young children; a quarter are single-parent families. The majority of residents live in midsize apartment buildings. Metro Fusion is a hard-working market with residents that are dedicated to climbing the ladders of their professional and social lives. This is particularly difficult for the single parents due to median incomes that are 36% lower than the US level.

2.65
Avg. HH Size

$35,700
Med HH Income

29.3
Median Ag

Emerald City 13.5%

Emerald City's residents live in lower-density neighborhoods of urban areas throughout the country. Young and mobile, they are more likely to rent. Well-educated and employed, half have a college degree and a professional occupation. Incomes close to the US median come primarily from wages, investments, and self-employment. This group is highly connected, using the internet for entertainment and making environmentally friendly purchases. Long hours on the internet are balanced with time at the gym. Many embrace the "foodie" culture and enjoy cooking adventurous meals using local and organic foods. Music and art are major sources of enjoyment. They travel frequently, both abroad and domestically.

2.06
Avg. HH Size

$59,200
Med HH Income

37.4
Median Age

Old and Newcomers

This market features singles' lifestyles, on a budget. The focus is more on convenience than consumerism, economy over acquisition. Old and Newcomers is composed of neighborhoods in transition, populated by renters who are just beginning their careers or retiring. Some are still in college; some are taking adult education classes. They support environmental causes and Starbucks. Age is not always obvious from their choices.

2.12
Avg. HH Size

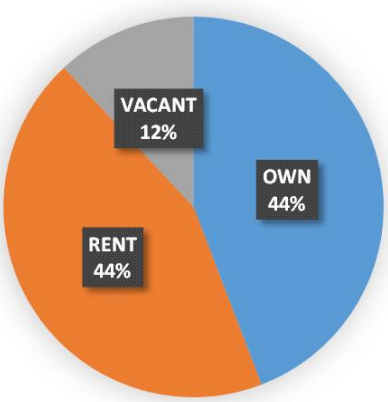
$44,900
Med HH Income

39.4
Median Age

3. Housing

The Curry Ford Road corridor is flanked by single family home neighborhoods to the north and south, and includes several multi-family developments, most of which front on the roadway. The ESRI BAO estimated a total of 3,049 households and 3,461 dwelling units within the study area. The following graphics show patterns of ownership, household size and age of housing units.

Figure 6. Housing Tenure and Number of Units per Building



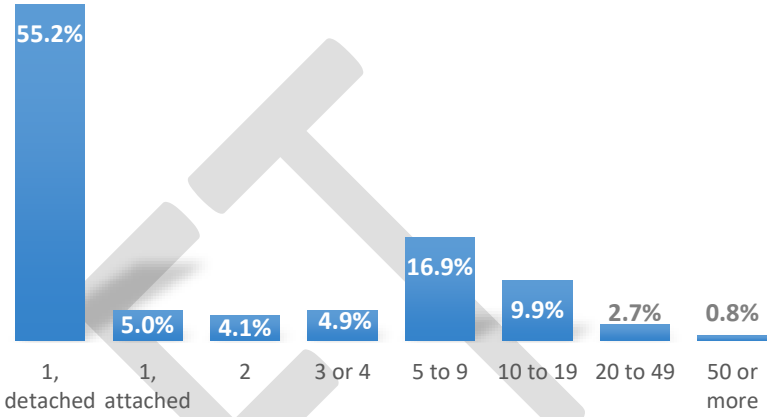
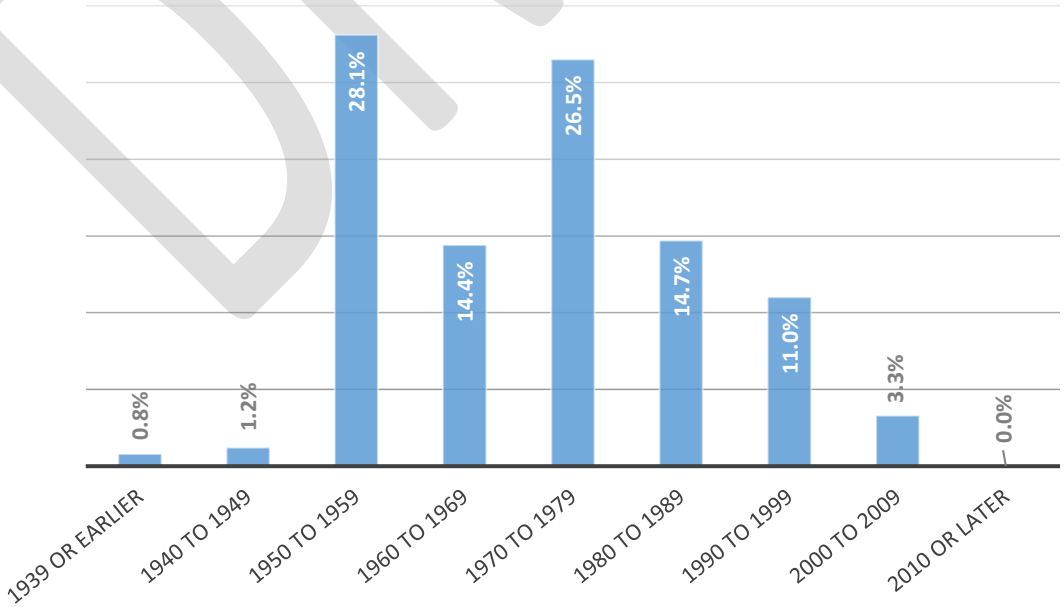


Figure 7. Age of Housing Units



B. Land Use

1. Existing Land Use

Maps 1 and 2 shows the existing land use composition in the study area. The existing uses in the Curry Ford study area consists of a mix of uses along the main roadway, three major commercial nodes (Bumby Avenue, Crystal Lake Drive and Conway Road) and single-family neighborhoods to the north and south of the corridor. The three nodes have very different character and scale, but in general consist of retail shops, drug stores, grocery stores, restaurants, and some personal services (exercise studios, music instruction, electronics repair). The corridor in between the nodes consists of a mix of multi-family residential, offices, churches, a school, a rehabilitation center and, in some areas, commercial ventures (restaurants, auto repair, and gas stations).

Existing Land Use	Acres	Percent
Commercial	71.32	11.82%
Industrial	6.46	1.07%
MFR	91.51	15.16%
Office	16.03	2.66%
Public/Institutional	61.67	10.22%
SFR	344.09	57.01%
Vacant	12.49	2.07%
Total	603.57	100.00%

There are not many vacant sites in the study area, and the few that are vacant are relatively small, ranging from 0.07 to 1.12 acres. They typically consist of residential sized lots sprinkled through the western side of the study area.

Another land use that is almost absent from the area, but not noticeable in the numbers above is public parks. Parks are typically accounted for within the Public/Institutional category, which in this case shows a robust 61 acres (10% of the study area). However, looking for just park facilities in the area, there is only one: The Dover Shores Community Center. This is an 8.28-acre site at the corner of Gaston Foster Road and Curry Ford Road. It is owned and operated by the City of Orlando. It offers a fitness center, a gymnasium, computer lab, baseball field, swimming pool, playground, pavilion, putting green, tennis courts, racquetball courts, and handball courts, in addition to a myriad of structured programs and activities for all ages.

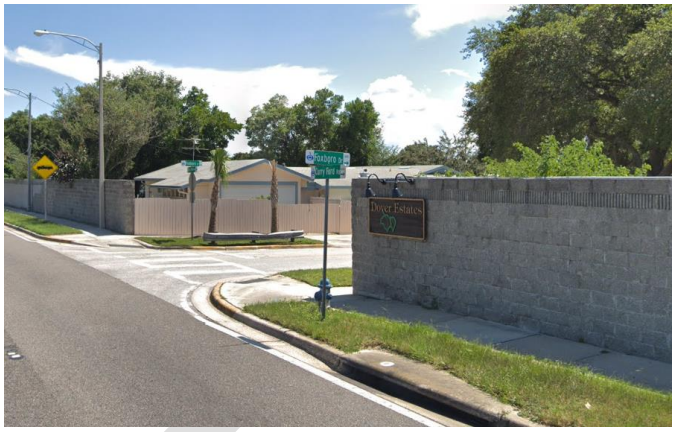
There is another park, which is not within the boundary of the study area but within ½ mile north of the corridor, between Gaston Foster Road and Semoran Boulevard: Demetree Park. It is a 24.6-acre park that encompasses three lakes linked by a system of walks and boardwalks. It also includes a fishing pier, playground, picnic areas, tennis court and basketball court.

Figure 8. Existing Land Use – Commercial Nodes

Commercial node at Conway Road and Curry Ford Road

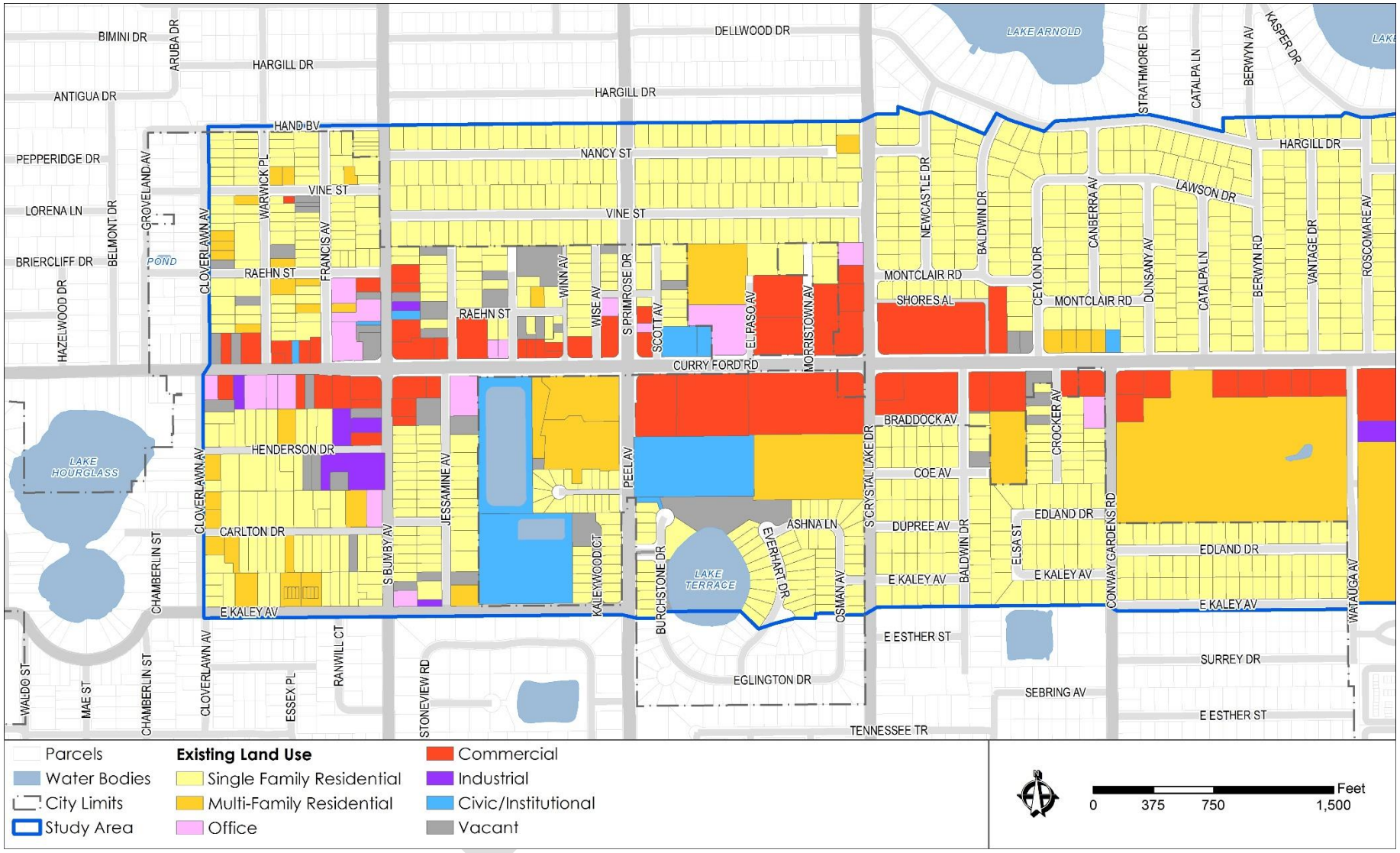
Nodes at Crystal Lake Drive (left) and Bumby Avenue (right)

Figure 9. Existing Land Use – Mixed-Use Corridors

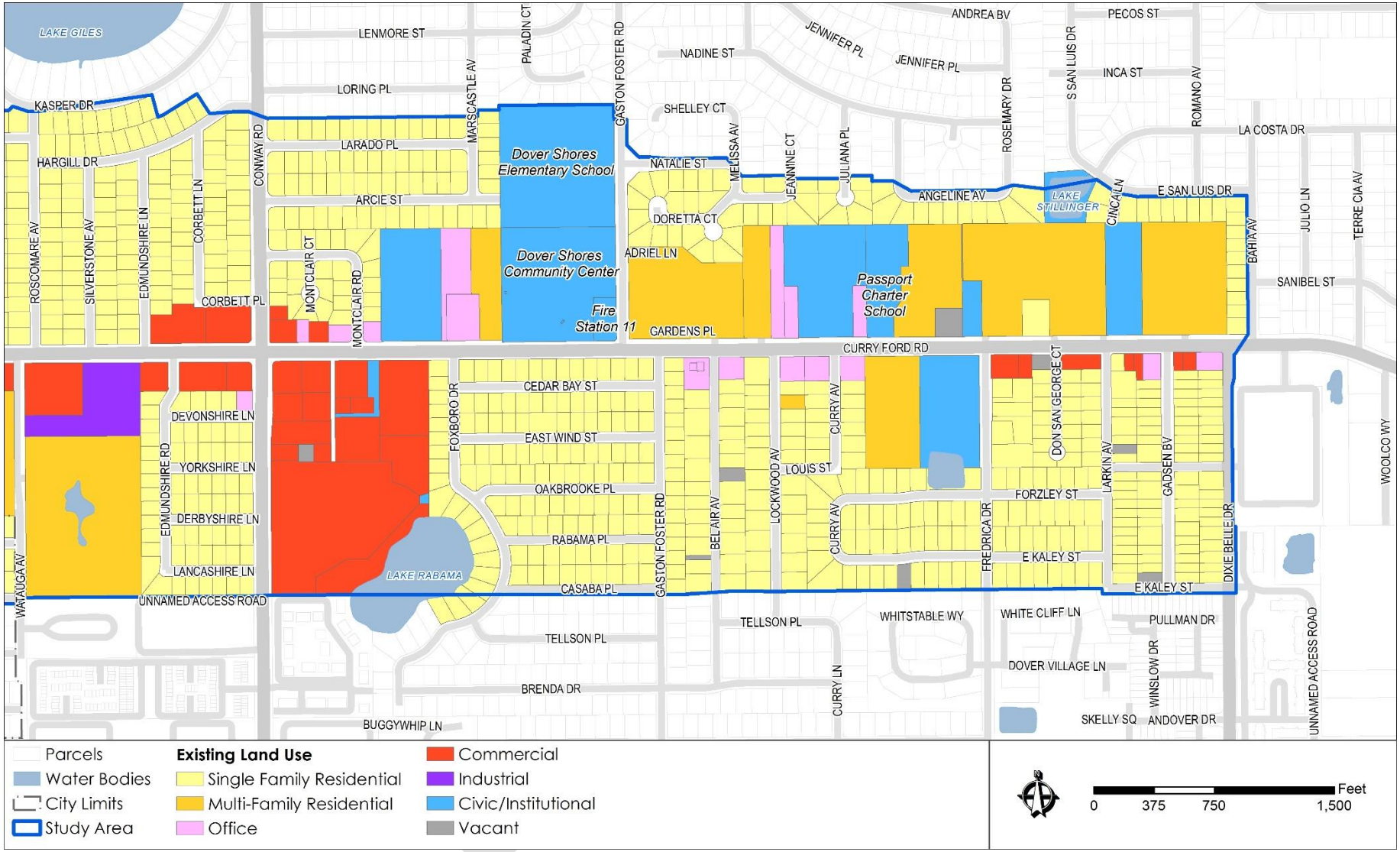

Dover Estates


Dover Gardens

Map 1. Existing Land Use - West



Map 2. Existing Land Use - East



2. Future Land Use

Before a proposed development is reviewed for consistency with the zoning map and code, it is reviewed for consistency with the City's Growth Management Plan and Future Land Use Map (FLUM). These documents present a blueprint for growth and are more general in nature than the zoning tools. The City's FLUM shows a variety of future land use categories within the study area including Residential Low & Medium, Commercial Activity Center, Conservation, Mixed-Use Center, Office Low Density, and Public/Recreational/ Institutional. The area around Bumby Avenue, which is unincorporated is designated as Orange County Commercial, Office and Low Density and Low/Medium Density Residential. If those unincorporated sites are annexed into the City, the City FLUM shows that area as Mixed-Use Corridor and Low and Medium Intensity Residential. **Table 1**, below, shows the acreage for each of the aforementioned categories in the study area and also shows the density, intensity and uses permitted within each category. **Maps 3, 4** and **5** depict the future land use categories in the study area.

Table 1: Future Land Use

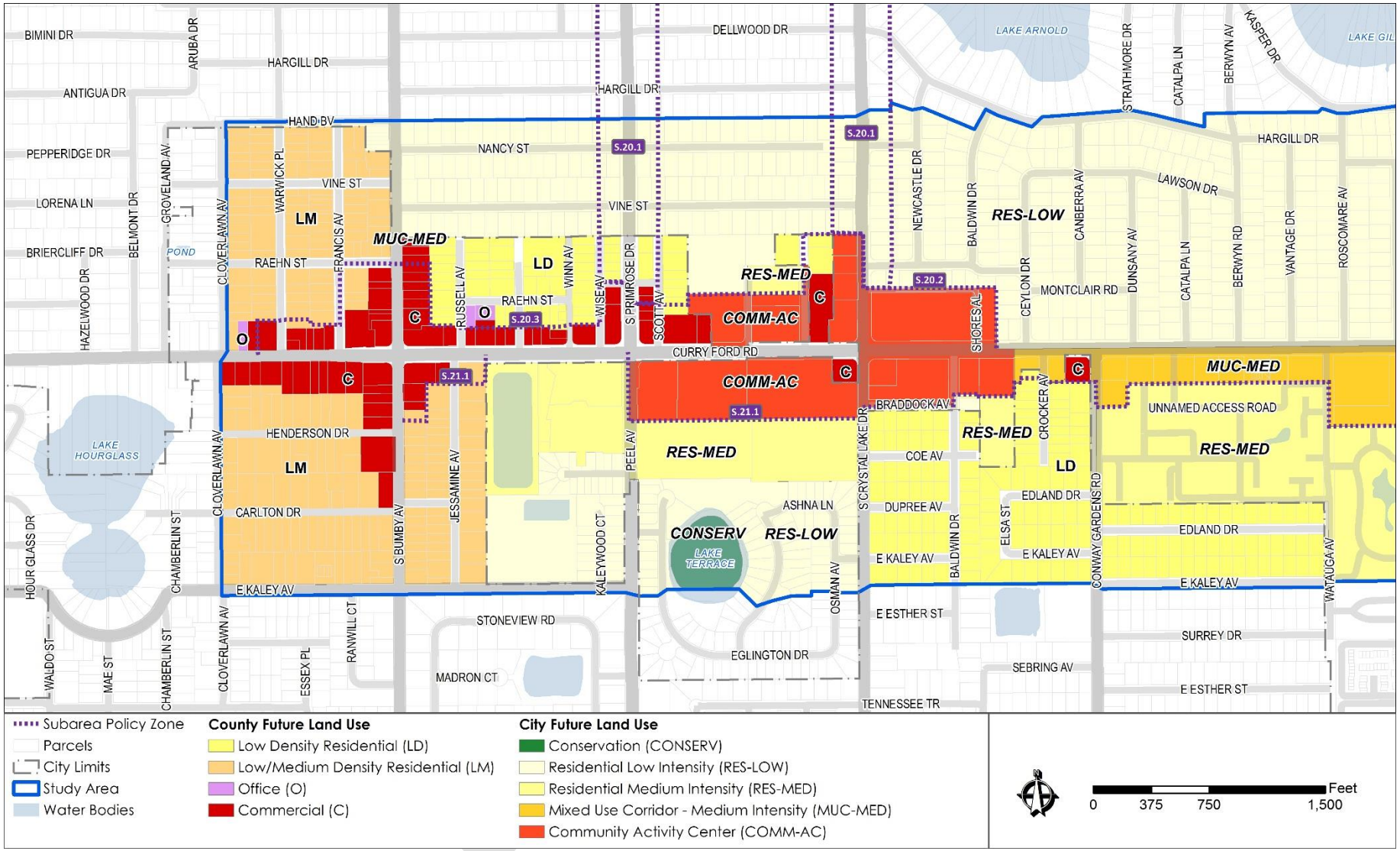
	ACRES	%	MAX. INTENSITY	MIN. INTENSITY	ALLOWABLE USES
CITY FUTURE LAND USE CATEGORIES:					
RES-LOW	369.85	51%	12 un/ac. 0.30 F.A.R*	None None	Residential, Pub, Rec & Inst
RES-MED	98.41	14%	30 un/ac. 0.30 F.A.R.	12 units/ac.** None	Residential, Pub, Rec & Inst
OFFICE-LOW	37.55	5%	21 un/ac. 0.40 F.A.R.	None None	Residential, Office, Pub Rec & Inst
MUC-MED	14.99	2%	30 un/ac. 0.5 F.A.R.	15 units/ac. None	Residential, Office, Commercial, Pub, Rec & Inst
COMM-AC	62.8	9%	40 un/ac. 0.7 F.A.R	20 un/ac. None	Residential, Office, Commercial, Pub, Rec & Inst
PUB-REC-INST	20.13	3%	NA	NA	Pub, Rec & Inst
CONSERV	3.11	0%	1 un/5 ac. 0.05 F.A.R	None	Conservation, Rec. (Passive Parks and Trails Only)
COUNTY FUTURE LAND USE CATEGORIES:					
LDR	45.84	6%	4 du/ac	NA	Single family residential.
LMDR	48.96	7%	10 du/ac	NA	Single family and multi-family residential
OFF	0.6	0%	1.25 FAR	NA	Office
COM	19.24	3%	1.50 FAR	NA	Neighborhood and community-scale commercial and office
TOTAL	**721.48**	**100%**			

** 16 un/ac for duplex and townhomes ** No minimum in R-2B*

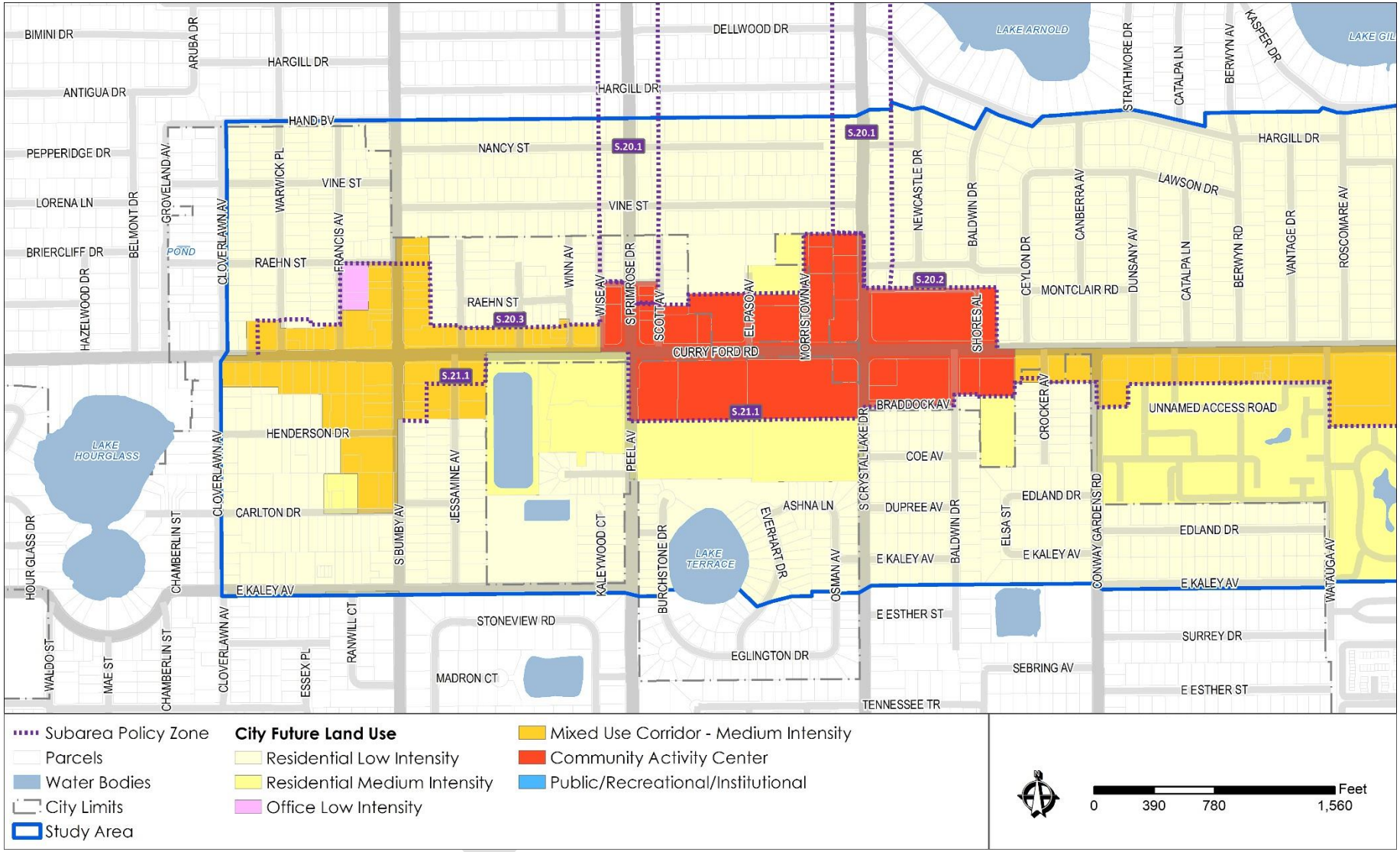
Source: City of Orlando, GIS Department, 2019

The Future Land Use Element and Map of the City's Growth Management Plan contains subarea policies intended to protect the residential areas around the Curry Ford Road corridor. Subarea policies 20.1, for example restricts the uses along Primrose Road and Crystal Lake Drive north of the current commercial area to residential. Subarea policies 20.2, 20.3, 21.1, 22.1 and 23.2 prohibit the expansion of the activity centers, mixed-use corridors and office areas into the residential neighborhoods. **Maps 3, 4** and **5** depict the subarea policies.

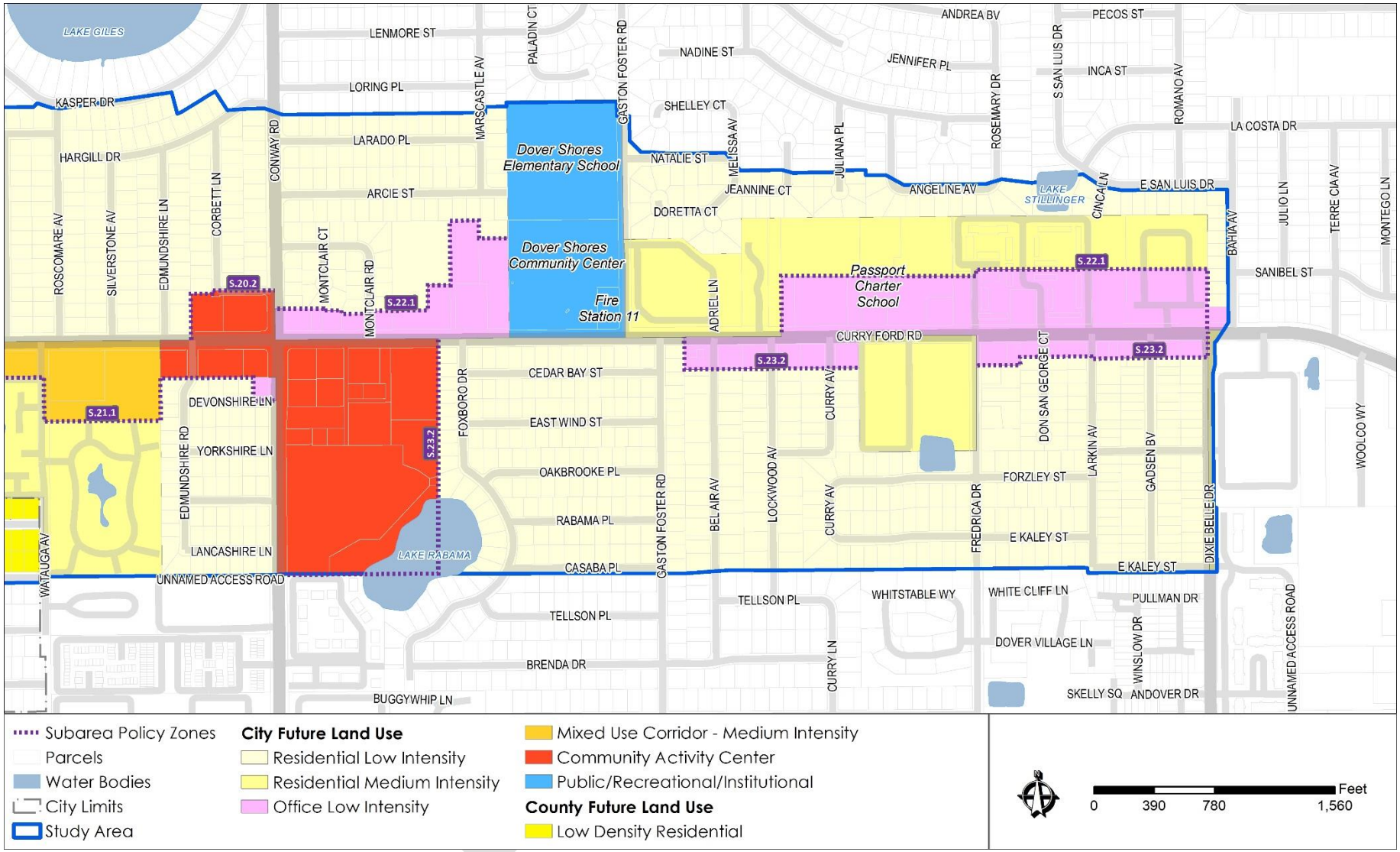
Map 3. Future Land Use Map – West, City and County Designations



Map 4. Future Land Use Map – West, City Designations



Map 5. Future Land Use Map - East



3. Zoning

There are both City and County zoning districts in the study area. There are approximately 610 acres of City zoned land and nearly 128 acres of County zoned land. The predominant zoning districts in both City and County are residential (R-1, R-1A, R-1N, R-2, R-2A, R-3, R-3A, R-3B) and account for 582 acres of the study area or nearly 80 percent. **Tables 2** and **3**, below, show the distribution of land by City and County zoning districts.

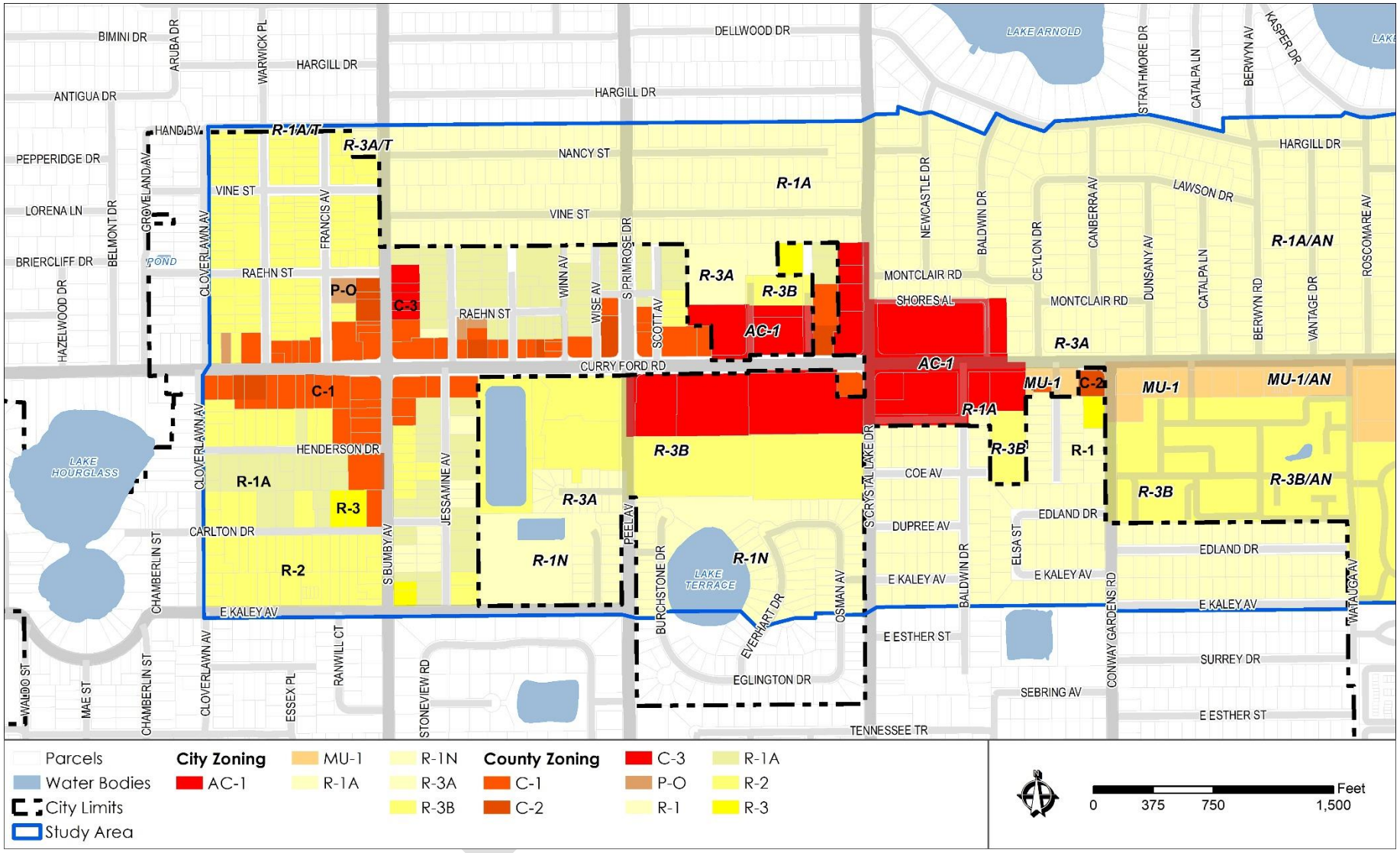
Table 2: Zoning Districts

DISTRICTS	ACRES	%	DENSITY (UN/AC) (min/max/bonus)	INTENSITY (FAR) (min/max/bonus)	FRONT SETBACK	BUILDING HEIGHT
CITY ZONING DISTRICTS:						
AC-1	64.2	8.70%	20/40/80	0.35/.7/1.0	0'	75'
MU-1	14.6	1.98%	15/30/60	NA/0.5/1.0	0'	35'/75' *
O-1	36.7	4.97%	21 max.	0.4 max.	25'	35'
P	20.1	2.72%	Standards established during Conditional Use process.			
PD	0.5	0.07%	Standards established during rezoning process			
R-1	17.8	2.41%	7 max.	0.3 max.	25'	35'
R-1A	321.1	43.51%	5.7 max.	0.25 max.	25'	35'
R-1N	27.5	3.73%	8 max.	0.3 max.	25'	35'
R-2A	0.2	0.03%	12 max.	0.3 max.	25'	35'
R-3A	8.1	1.10%	12 max.	0.3 max.	25'	35'
R-3B	99.4	13.47%	12/21/NA	0.3 max.	20'	40'/55' *
COUNTY ZONING DISTRICTS:						
C-1	15.7	2.13%	NA	0.3 max.	25'	50' **
C-2	3.1	0.42%	NA	3.0 max.	25'	50' **
C-3	1.1	0.15%	NA	3.0 max.	25'	75' **
P-O	1.0	0.14%	NA	3.0 max.	25'	35'
R-1	35.6	4.82%	Varies per use (single family, duplex, etc.). See Chapter 38, Article XII of the Orange County Code			
R-1A	25.6	3.47%				
R-2	43.3	5.87%				
R-3	2.4	0.33%				
TOTAL	**738**	**100.0%**				

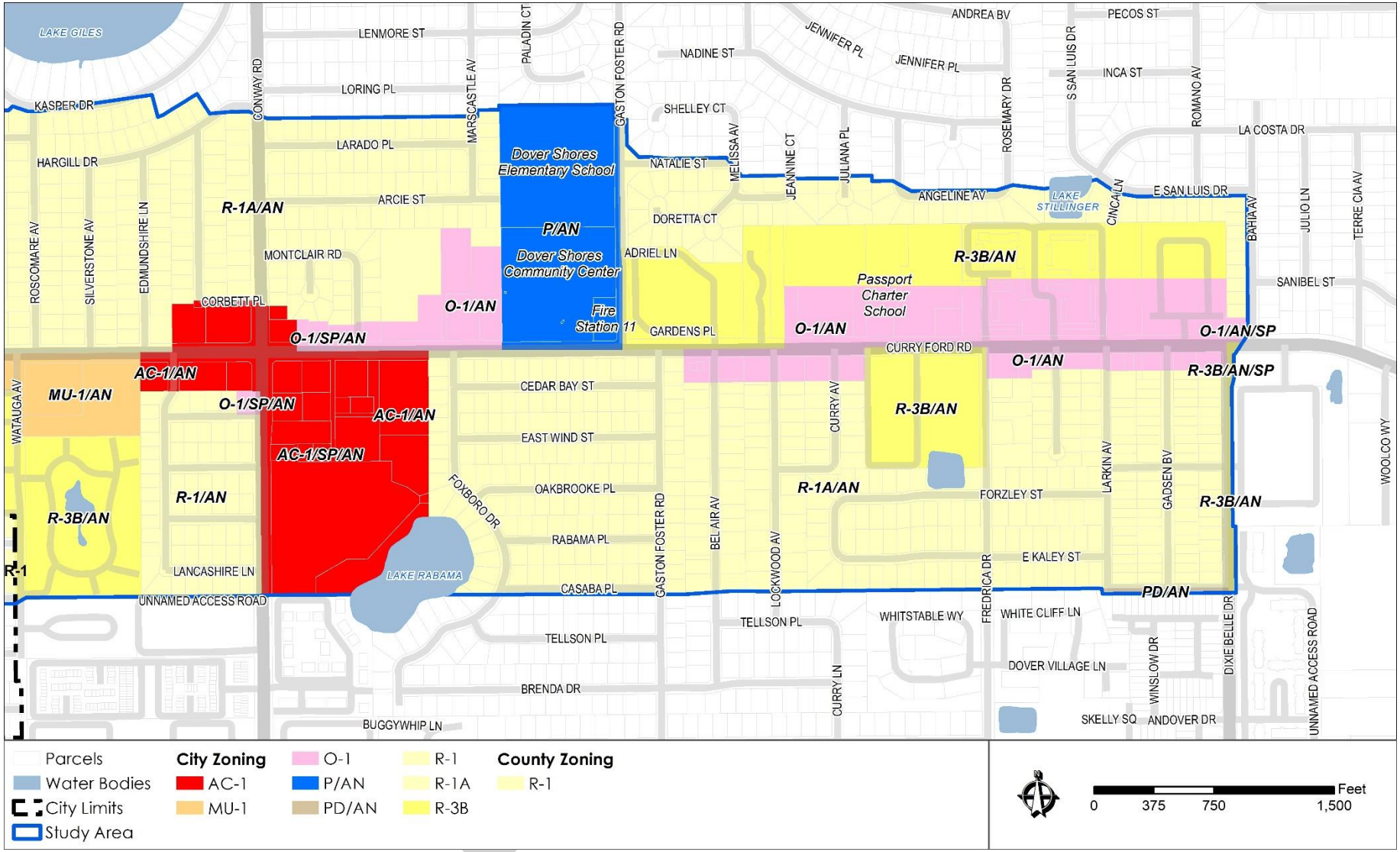
** Through Conditional Use*
*** 35' within 100' of residential*
Source: City of Orlando, GIS Department, 2019

Chapter 58 of the City's Land Development Code, and Chapter 38 of the Orange County Code list the uses permitted in each district, but in general, the AC-1 district is intended to "provide for concentrated areas of community-serving commercial, office, residential, recreational and cultural facilities, at higher intensities than in surrounding neighborhoods." The MU-1 district, in turn, is intended to provide for "areas of mixed residential and office uses extending along and oriented to arterial and 4-lane collectors, at intensities compatible with adjacent neighborhoods.

Map 6. Zoning Map - West



Map 7. Zoning Map - East



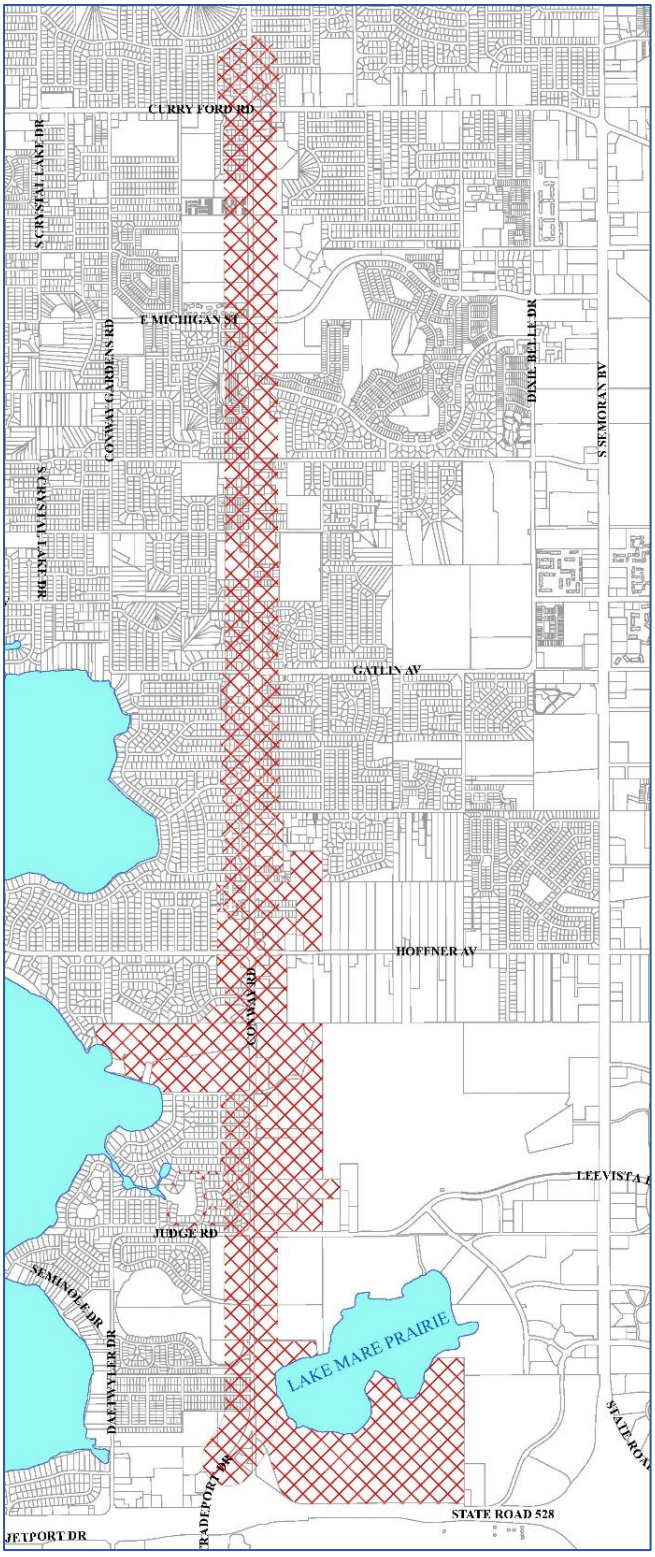
A-18

4. Conway Road/Hoffner Avenue Corridor Overlay District

In December 2003, Orange County adopted the *Conway Road Corridor overlay district* to promote an enhanced corridor for properties on Conway Road between Curry Ford Road and the Beachline Expressway. In 2015, the County extended the district to include unincorporated parcels and lots along Hoffner Avenue between Conway Road and Semoran Boulevard. In March 2005, the City adopted the Conway Road Special Plan overlay district to cover the incorporated portions of the county overlay in order to protect the character of the properties along the Conway Road corridor. The district extends to parcels whole or in part for a distance of 500 feet from the edge of the right-of-way for Conway Road and Hoffner Avenue. See **Map 8**.

Section 62.498 of the City's Land Development Code prohibits the establishment of certain retail uses in the district that are typically associated with blighted or deteriorated urban areas: temporary labor facilities; bail bond agencies; tattoo, body art or body piercing establishments; fortune telling, tarot card reading, palm reading and psychic services establishments; flea markets; bottle clubs; car-title loan facilities; and check cashing facilities. Additionally, it prohibits the use of pole signs and chain link fencing of any kind in the front yards adjacent to the rights-of-way of Conway Road and Hoffner Avenue.

Map 8. Conway Road Corridor Overlay District



Source: Orange County, 2019

C. Transportation Facilities

1. Roads

Major roadways in the study area include: Curry Ford Road, S. Bumby Avenue, Primrose Drive/Peel Avenue, S. Crystal Lake Drive, Conway Gardens Road, S. Conway Road, Gaston Foster Road, and Dixie Belle Drive. **Table 4** shows the functional class, lane count, lane divider condition, maintenance responsibility, and approximate total width of the aforementioned roadways.

Right-of-way (ROW) widths in the study area range from 50 to 100 feet. Curry Ford Road has a 60' ROW in the west part of the study area (Cloverlawn Avenue to Francis Avenue) and expands to 100' ROW at Bumby Avenue where it expands to four lanes. Travel lanes on this road are 11 to 11.5 feet in width, though the center two-way left turn lane (TWLTL) is 17' wide. On the north part of Conway Road, the outer lanes are 13', which is a foot wider than the inner lanes, and the center TWLTL is 14'. Travel lanes on other major streets in the study area are typically 11' and are not delineated on the smaller residential streets. **Appendix B** shows dimensioned cross-sections of major roadways in the study area as they exist today.

Road surface conditions of the major streets are generally adequate. The side of Curry Ford Road west of Conway Road appears to have aged more than the east side, as seen with asphalt color and line painting deterioration, but the pavement appears to remain smooth. Worn pavement appears to be present on Gaston Foster Road and the north part of Crystal Lake Drive, where left turn arrows are fading. The pavement conditions of smaller residential streets appear to be significantly worse, such as on Nancy Street east of Bumby Ave, as pavement cracks are present throughout.

No designated on-street parking spaces are present in the study area.

2. Easements

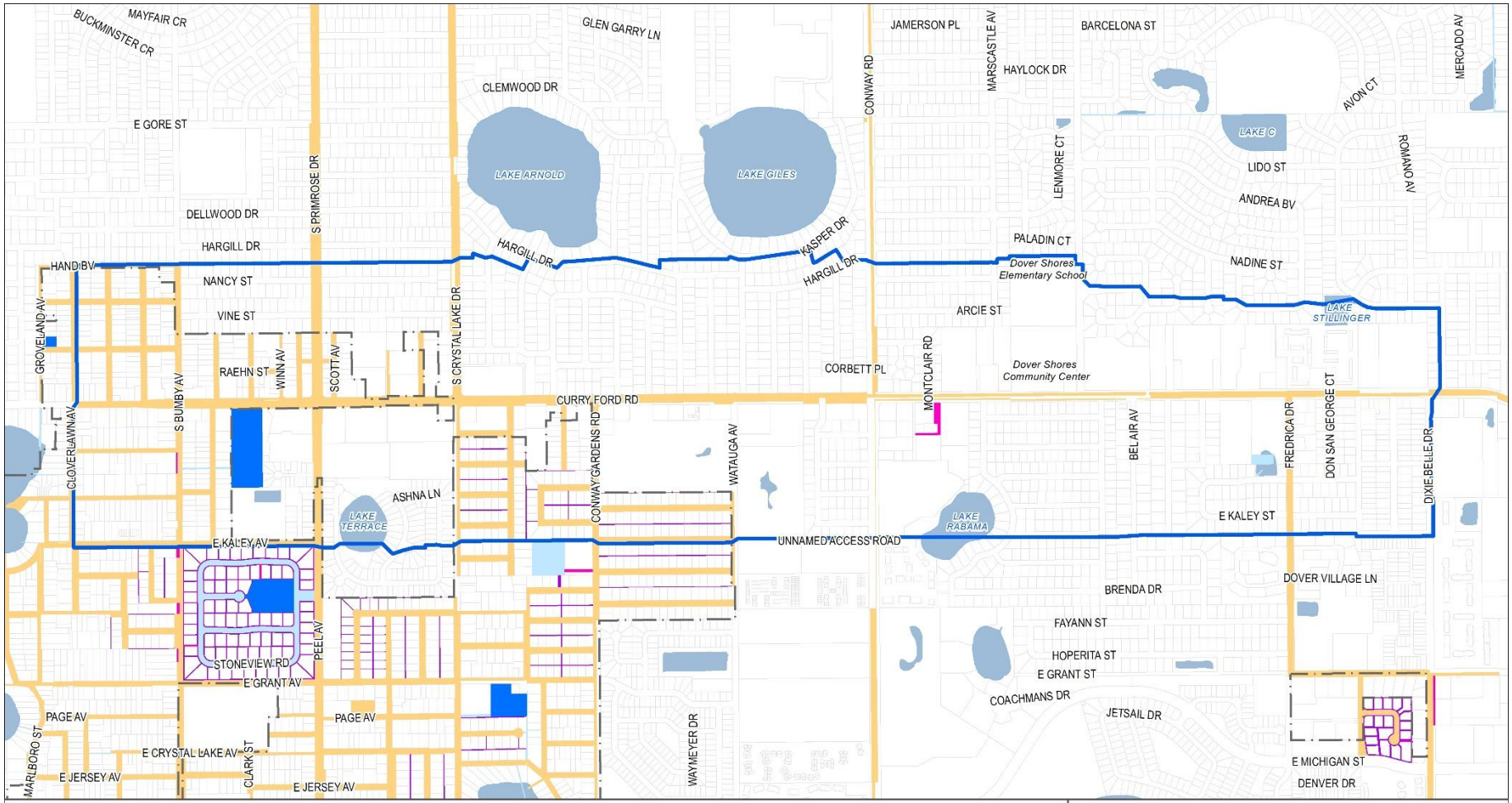
Map 9 shows the easements that are present in the study area. There are two access easements – one along Bumby Ave in front of a former gas station at Henderson Drive; and the other is in the Conway Plaza shopping center. The parking lots in the large shopping centers (e.g. Crystal Lake Plaza, Dover Shopping Center and Conway Plaza) are typically connected to lots on other sites.

Table 3: Curry Ford Study Area Roadway Information

Name	From Limit	To Limit	Functional Class	Number of lanes	Center	Maintenance Responsibility	ROW Width (ft.)
Curry Ford Rd.	Cloverlawn Ave	100 ft. E of Warwick Pl	Collector	2	Undivided	City	60
Curry Ford Rd.	100 ft. E of Warwick Pl.	120 ft. E of Francis Ave	Collector	2	Undivided	County	60-80
Curry Ford Rd.	120 ft. E of Francis Av.	Bumby Ave	Collector	4	Undivided	County	80-100
Curry Ford Rd.	Bumby Av.	Conway Rd	Minor arterial	4	TWLTL	County	95-110
Curry Ford Rd.	Conway Rd.	72 ft. E of Dixie Belle Dr.	Minor arterial	4	Median	State	95-105
Dixie Belle Dr.	Curry Ford Rd.	Miriada condos	Collector	2	TWLTL	County	50-65
Conway Rd.	Kasper Dr.	Devonshire Ln	Minor arterial	4	TWLTL	State	100-110
Conway Rd.	Devonshire Ln.	Conway Club Apts.	Minor arterial	4	TWLTL	State	100-105
Bumby Av.	Hand Blvd.	Curry Ford Rd	Collector	2	Undivided	County	60
Bumby Av.	Curry Ford Rd.	Kaley Ave	Collector	2	Undivided	County	40-60
Crystal Lake Dr.	Between Nancy St & Hargill Dr.	Curry Ford Rd	Minor arterial	2	Undivided	County	75-100
Crystal Lake Dr.	Curry Ford Rd.	Dupree Ave	Collector	2	Undivided	County	60-70
Crystal Lake Dr.	Dupree Av.	Between Esther St & Kaley Ave	Collector	2	Undivided	County	60-65
Conway Gardens Rd.	Curry Ford Rd.	Kaley Ave (east segment)	Collector	2	Undivided	County	60
Primrose Dr.	Between. Nancy St & Hargill Dr.	Curry Ford Rd	Collector	2	Undivided	County	100
Peel Av.	Curry Ford Rd.	50 ft. S of Kaley Ave	Collector	2	Undivided	County	80-95
Gaston Foster Rd.	270 ft. N of Natalie St.	Curry Ford Rd	Collector	2	Undivided	City	70

SHS = State Highway System
TWLTL = Two-way left turn lane
Source: S&ME, 2019

Map 9. Easements



A-22

3. Accidents

Maps 10 and 11 depict the locations of accidents within the study area by type of crash and whether the crash involved a pedestrian or bicyclist. The data was collected between 2014 and 2018. **Table 4** lists the number of accidents by type of mode and whether the crash resulted in fatalities. The majority of vehicle accidents were rear end and angle crashes, which are typical of urban intersections and are normally due to distracted driving, the frequency of driveways intersecting the road. The bicycle accidents, in this area, are mainly due to the fact that there are no bicycle facilities. Pedestrian accidents are most likely due to jaywalking. Failure to stop is another reason for accidents.

Table 4. Crashes Along Curry Ford Road- 2014-2018

	Crashes	Serious Non-Fatal Injuries	Fatalities
Vehicles	477	4	27
Bicycle	11	9	0
Pedestrian	12	12	0

Source: S&ME, 2019

It is a well-known fact that the higher the automobile speed, the higher incidence of fatalities (see **Figure 11**). The posted speeds in the Curry Ford area range from 25 to 40 mph as follows (see **Map 12**):

- Most roads north of Curry Ford Road – 25 mph
- Most roads south of Curry Ford Road - 30 mph
- Conway Road – 40 mph
- Curry Ford Road west of Cloverlawn Avenue – 25 mph
- Curry Ford Road from Cloverlawn Avenue to Bumby Avenue– 30 mph
- Curry Ford Road from Bumby Avenue to Foxboro Drive – 35 mph
- Curry Ford east of Foxboro Drive - 40 mph.

Figure 10. Effect of Vehicular Speed on Pedestrians

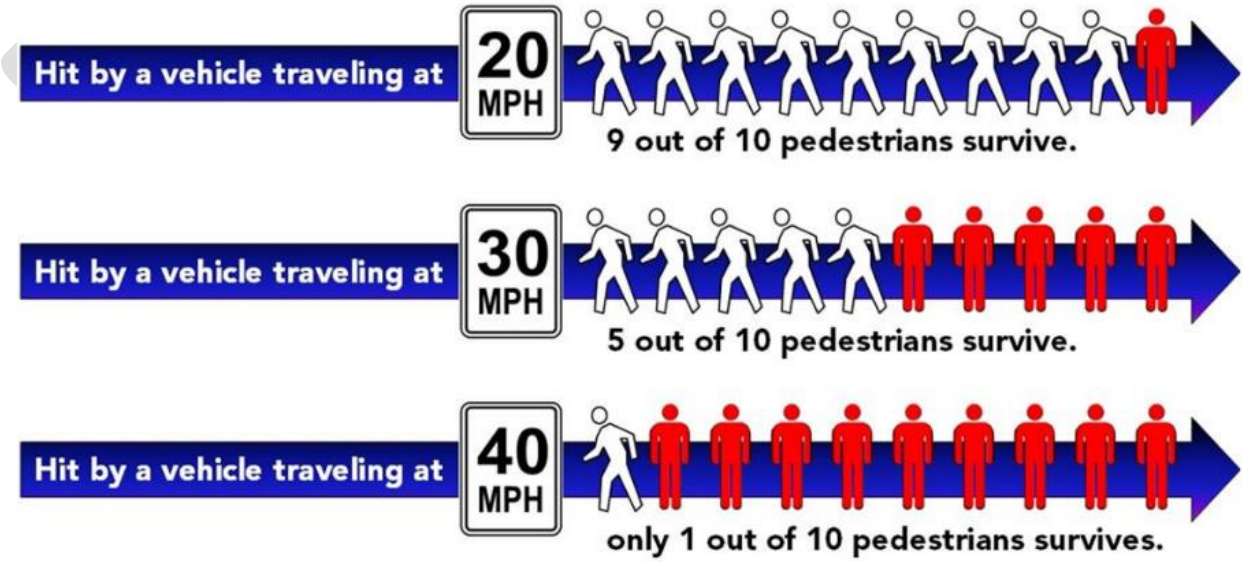
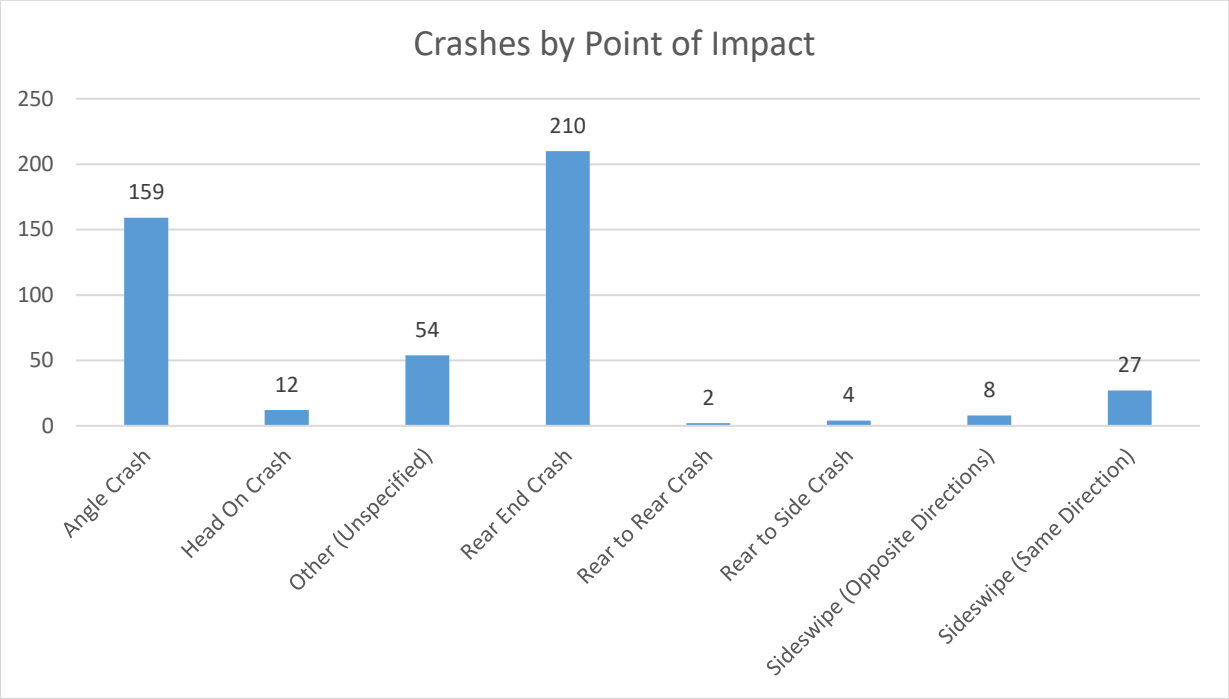


Figure 11. Comparison of Crashes by Manner of Collision

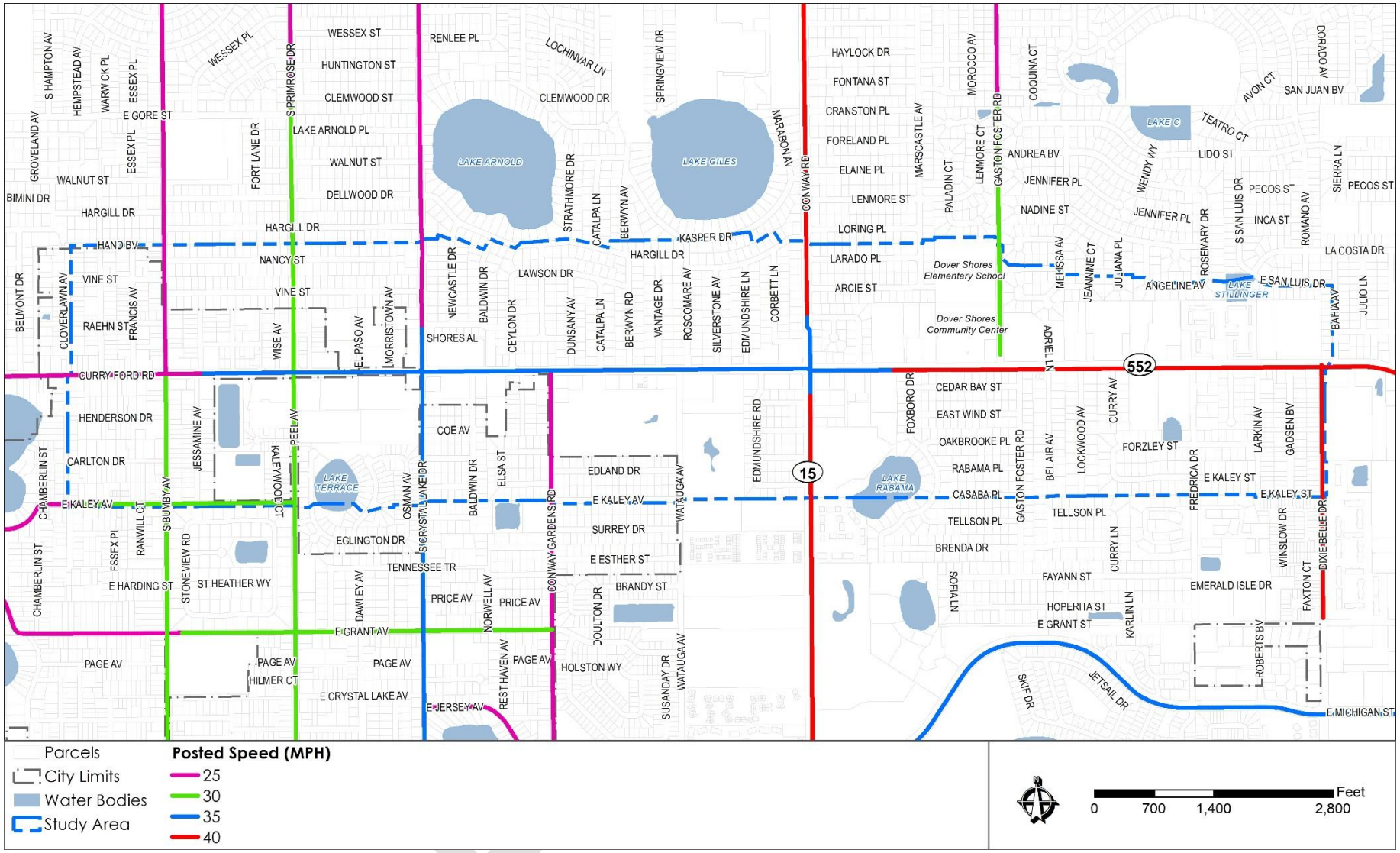


Source: S&ME, Inc.

Map 10. Accidents - West

Map 11. Accidents – East

Map 12. Posted Vehicular Speeds



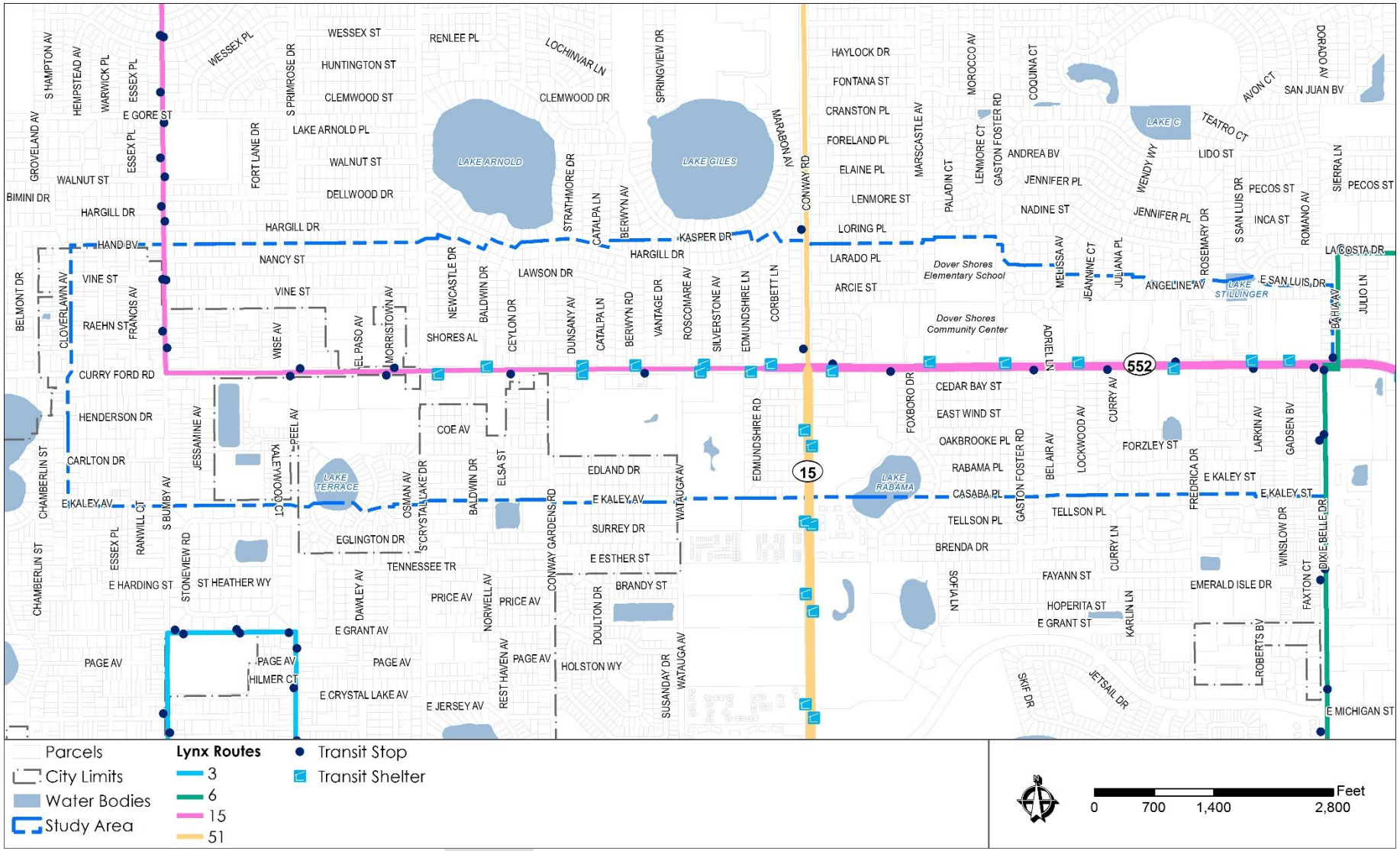
4. Public Transportation

The study area is served by fixed-route bus service operated by Lynx (see **Map 13**). Route 15 runs down Curry Ford Road (30-munite headways), Route 51 operates along Conway Rd (1-hour headways), and Route 6 operates down Dixie Belle Dr (1-hour headways). Adjacent to the study area are Routes 28 which runs along Semoran Blvd and Route 3 which operates along Peel Ave and Grant Ave but does not reach the Curry Ford Study Area. The majority of transit stops in the area, especially along Curry Ford Road and Conway Road have shelters with benches and trash receptacles (**Figure 12**), but there are still a few that do not have such amenities, as seen in **Figure 13**.

Figure 12: Bus Stops East of Conway Rd

Figure 13: Bus Stops West of Conway Rd

Map 13. Transit Routes and Facilities



5. Bicycle Facilities

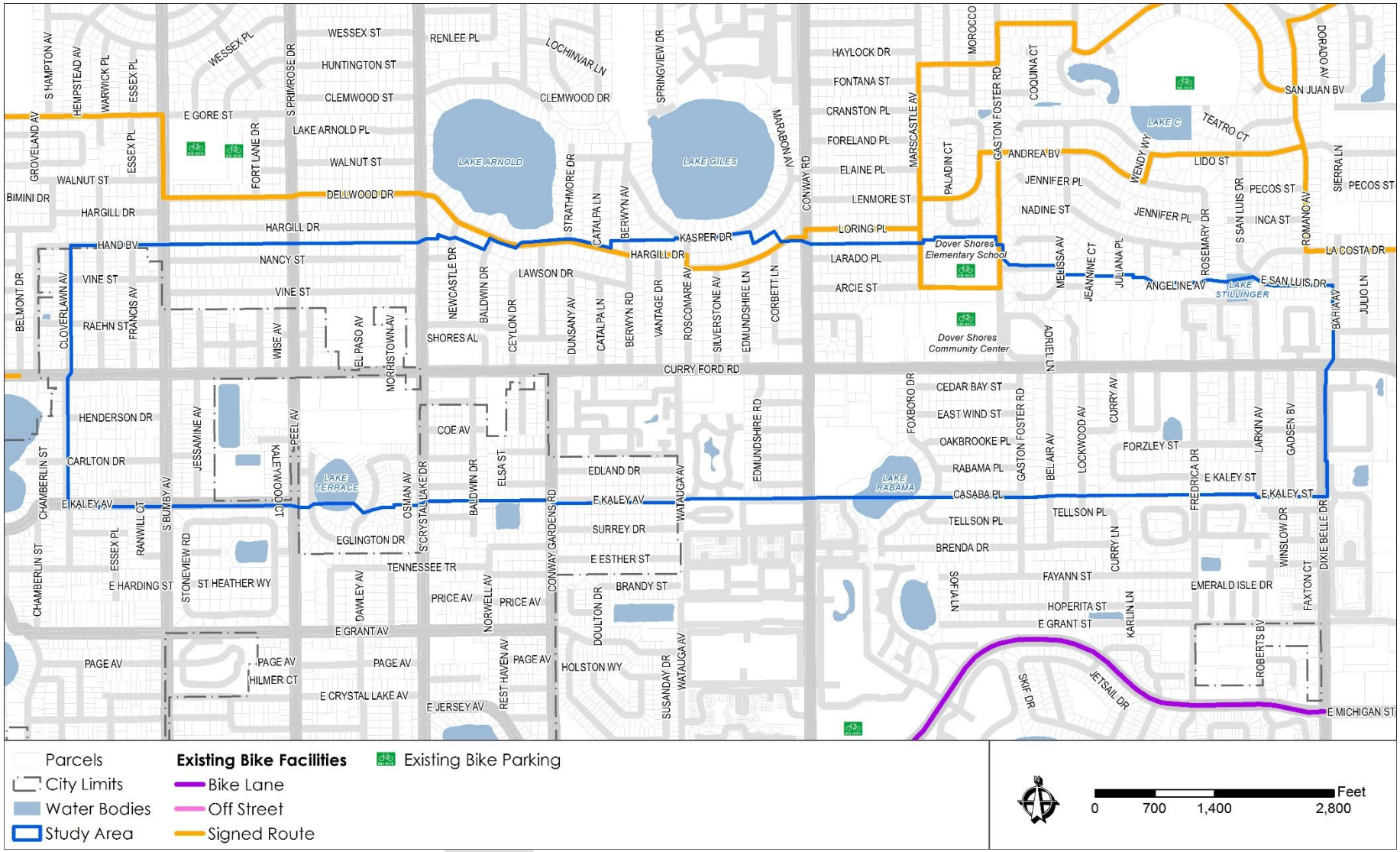
Bicycle facilities are limited within the study area. The sidewalk which runs on the north side of Curry Ford Rd is designated as a bicycle facility by signage, as seen in **Figure 14**. However, the south-side of the road does not have any bicycle infrastructure and features a narrow sidewalk. As seen in **Figure 15**, cyclists were observed using the southern sidewalk despite its constricted width.

Map 14 shows existing and proposed (prior to this vision plan) bicycle facilities. Signed bike routes on neighborhood streets run briefly through the northern part of the study area. Otherwise, there are no existing bicycle facilities, though bike lanes are planned for most of the major streets in the study area. **Map 15** depicts bicycle facilities at a regional scale, which pose the potential for connections to and from the study area.

Figure 14: Bicycle Signs

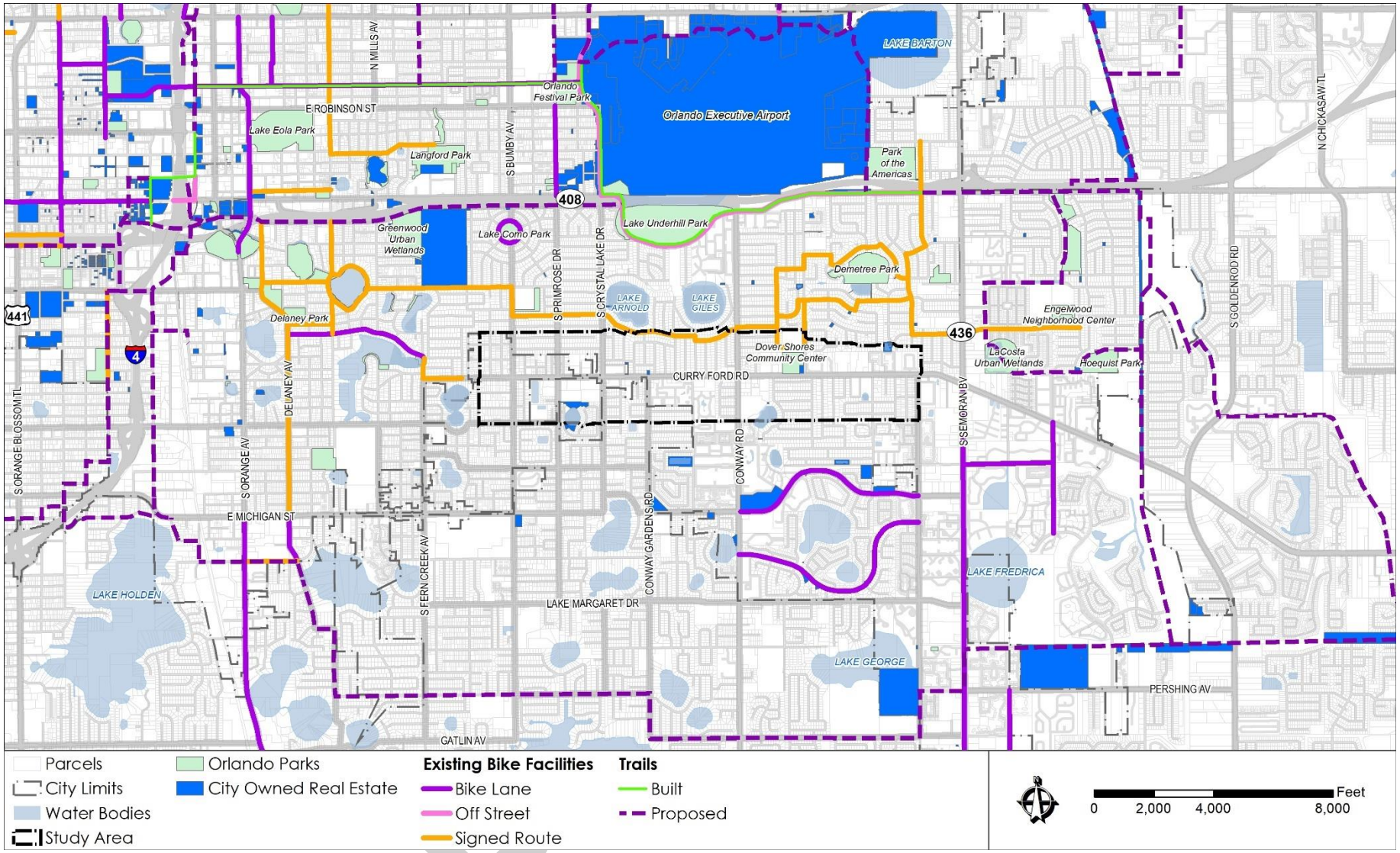
Figure 15: Cyclists on Curry Ford Using Narrow Southern Sidewalk

Map 14. Bicycle Facilities



Source; City of Orlando, 2019

Map 15. Regional Existing and Proposed Multi-Use Trails



Source; City of Orlando, 2019

6. Sidewalks

Curry Ford Road has sidewalks on both sides of the street for the entire four-lane section in the study area. They are generally buffered from the travel lanes by a landscape strip, and range in width from five to eight feet. West of Francis Ave, though, where Curry Ford Road narrows to two lanes, a sidewalk is only present along the north side of the street, as seen in **Figure 16**.

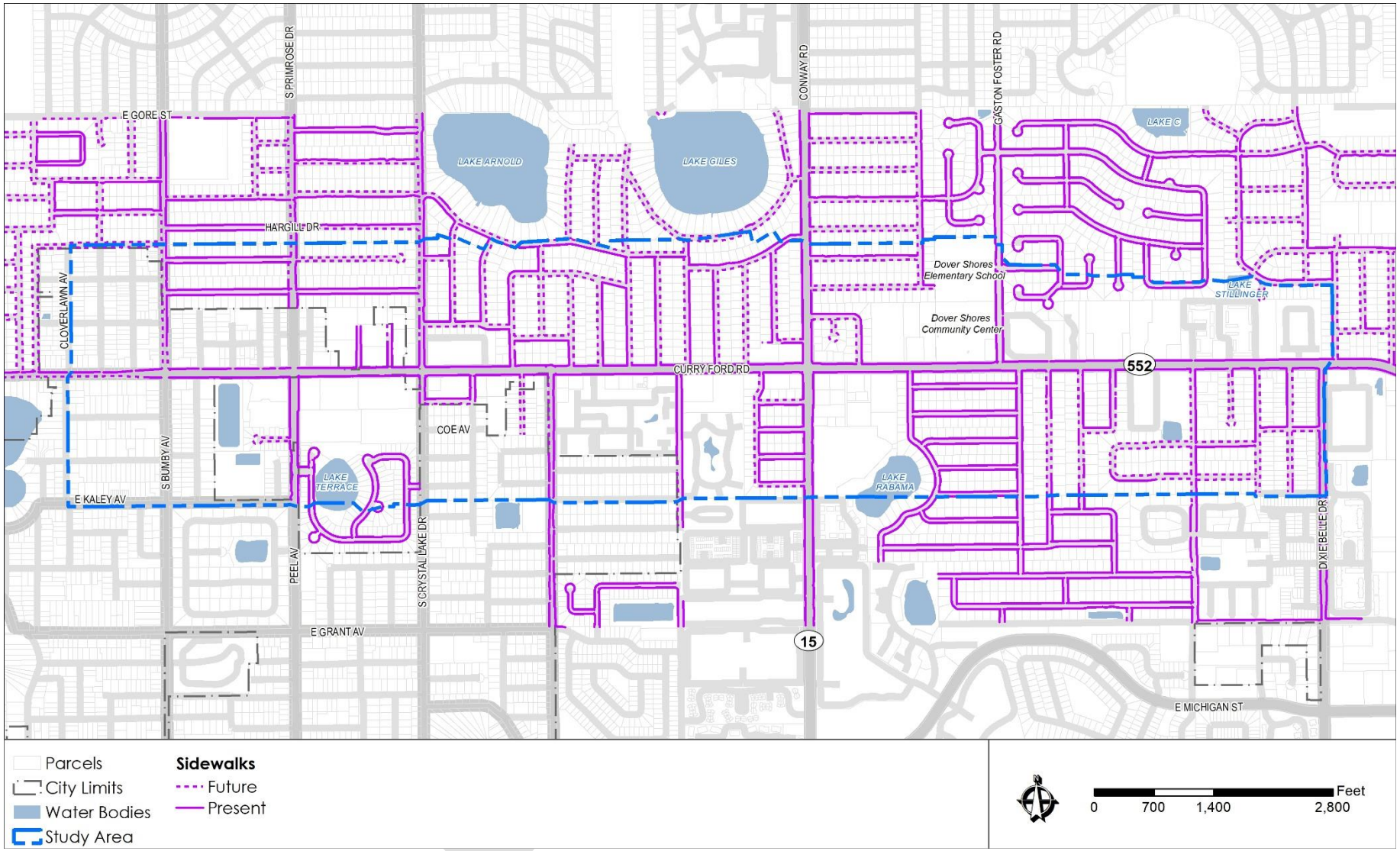
The other major streets in the study area also have sidewalks, though they are limited. Conway Road has 6-8' sidewalks on both sides of the road. The two major streets east of Conway Road, Gaston Foster Road and Dixie Belle Drive, as well as Bumby Ave, each have 5' sidewalks on both sides of the street. The buffered sidewalk on the west side of Dixie Belle Drive, though, is not within the street's 50' right-of-way. For the major streets between Bumby Ave and Conway Road, a sidewalk is only continuously present on one side of the street. These sidewalk widths are also five feet.

For neighborhood streets in the study area, sidewalk presence is inconsistent. While some streets have them on both sides, others only have them on one side or have none at all. Sidewalk presence can vary by segment, such as with Nancy Street between Bumby Ave and Primrose Dr. These sidewalks are generally five feet in width.

Map 16 shows existing and proposed sidewalks in the study area.

Figure 16: Curry Ford, west of Bumby Ave

Map 16. Sidewalks



7. Streetscape

While ***sidewalks*** are often present, in a myriad of ways, their design and condition create an unfriendly pedestrian environment, which especially is a concern for those who are elderly or disabled. Tactile pads to aid the blind in crossing the street are often improperly installed (**Figure 17**), worn out, obstructed (**Figure 18**), or non-existent. Along the sidewalk itself, utility poles, transit shelters, and vegetation often obstruct it (**Figure 19**).

Five-foot grass ***parkways*** typically exist between the sidewalk and the street, though given the typical traffic speeds on Curry Ford Road, the pedestrian safety benefit is limited. There are also locations where there is no buffer, such as the south side of Curry Ford where it meets Gaston Foster Rd, and also on the east side of Dixie Belle Drive.

Street trees (**Figure 20**) are present in the median and grass buffers of Curry Ford Road, though their presence is not continuous. Similar conditions exist for the other streets in the area, both major and small residential streets, which a stronger presence of street trees in the west part of the study area. Like with Curry Ford Road, though, coverage tends to vary by parcel.

Street lights (**Figure 21**) are continually present throughout the Curry Ford Road corridor and most of the other major streets in the study area. On Primrose Drive and smaller residential streets, they are spaced farther apart, such that they are simply at intersections, but they are nonetheless present. These lights are auto-oriented. There are no pedestrian scale lights in the study area.

Street furniture tends to be limited to bus shelters on Curry Ford Road and Conway Road. Shelters are equipped with benches, trash cans, and a bus stop sign.

Crosswalks (**Map 17**) are only present at signalized intersections, and distances between those can result in long detours for pedestrians who elect to cross without jaywalking. The distance on Curry Ford Road between Gaston Foster Road and Dixie Belle Drive, for example, is approximately 3,300 feet, which is more than half of a mile. Low frequency of crosswalk combined with high corridor speeds create dangerous pedestrian conditions.

Figure 17: Improperly Installed Tactile Pads

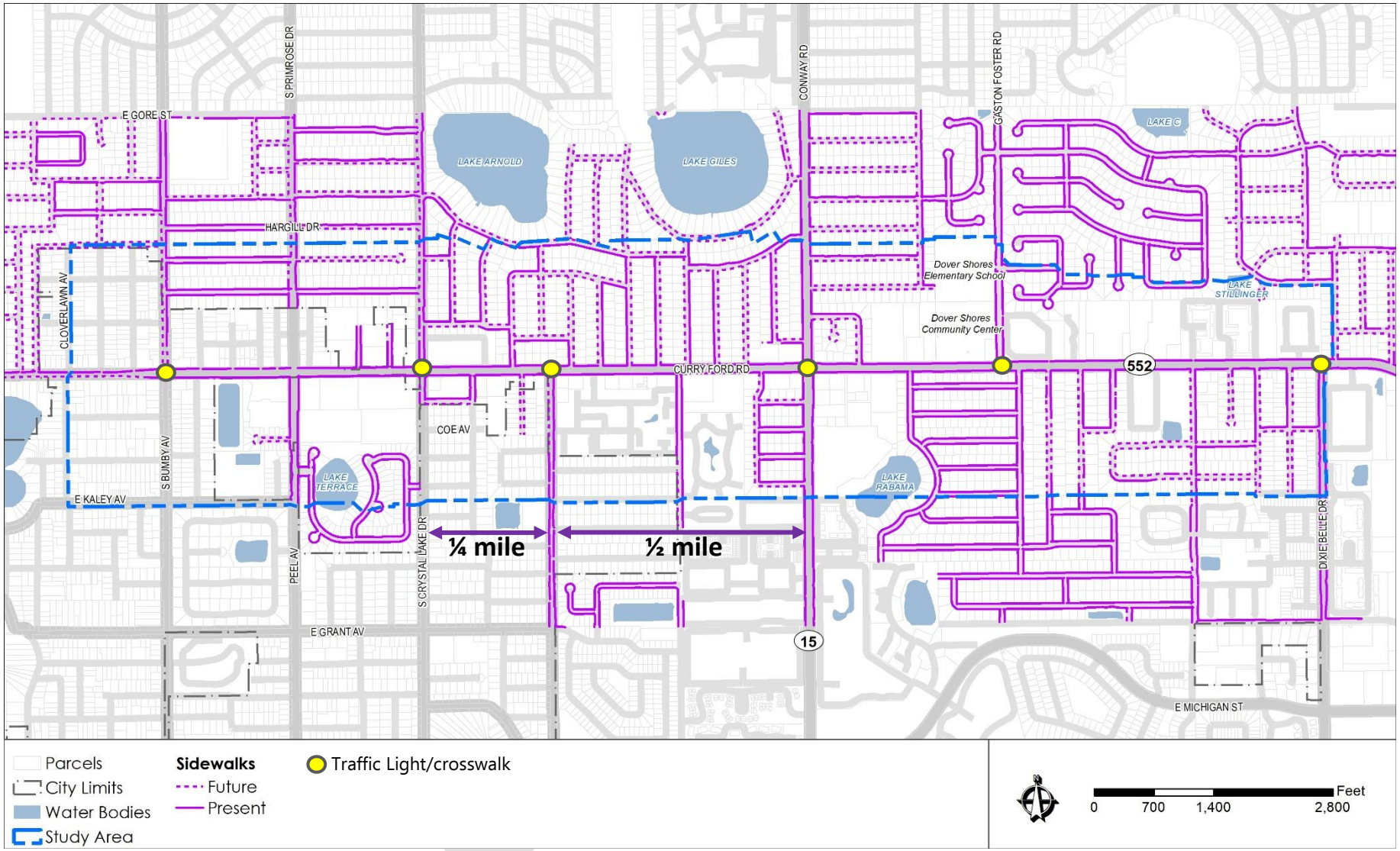
Figure 18: Worn Out/Obstructed Tactile Pads

Figure 19: Sidewalk Obstructions

Figure 20. Street Trees

Figure 21. Street Lights

Map 17. Crosswalks



8. Orlando Safe Streets Initiative

In 2017, through the Safe Streets Academy, a technical assistance program funded by the Road to Zero Coalition, the National Complete Streets Coalition selected three cities in the country (Lexington, KY; South Bend, IN; and Orlando, FL) to help them *build skills* in safer street design, tactical urbanism, and community engagement. The teams from each city applied these skills with on-the-ground demonstration projects that *test techniques* to make their streets safer places for people. The demonstration project in Orlando was implemented along Curry Ford Road, from Bumby Avenue to Crystal Lake Drive, in the spring of 2018. The project tested features such as bike lanes and a new mid-block crossing with a refuge island for pedestrians, which are used to make streets safer and more accommodating for all modes of travel.

During the demonstration project, commuters generally expressed frustration with losing a travel lane to bicyclists and with increased delays for motorists at intersections. Residents within nearby neighborhoods provided a mixture of input—much of the feedback was positive (creating a better sense of place, increasing safety for people trying to walk and ride their bikes, slowing down vehicles), while some expressed concerns about cut-through traffic and increased travel delays.

Although some local business owners and nearby residents supported the demonstration project, people who commute through the neighborhood were resistant to the changes, which raised important questions about the necessary trade-offs between safety and speed when designing safer streets for people.

Figure 22. Demonstration Project

Source: *City of Orlando*

D. Existing Transportation Network Assessment

Infrastructure systems operate based within a set of physical limitations that determine their extent, performance, and efficiency. To understand the transportation network connecting residential and business land uses along the Curry Ford Road corridor, an assessment of network performance has been completed for this study. This section provides summary data used for the performance assessment of the roadway network and an existing description of travel characteristics for the study area.

The study required detailed data collection to assess the existing roadway network and its travel characteristics. In addition to collecting data via field investigations, the following data was collected:

- Roadway volume counts, vehicle classifications, and speed data
- Intersection turning movement counts for all travel modes
- Origin and destination data

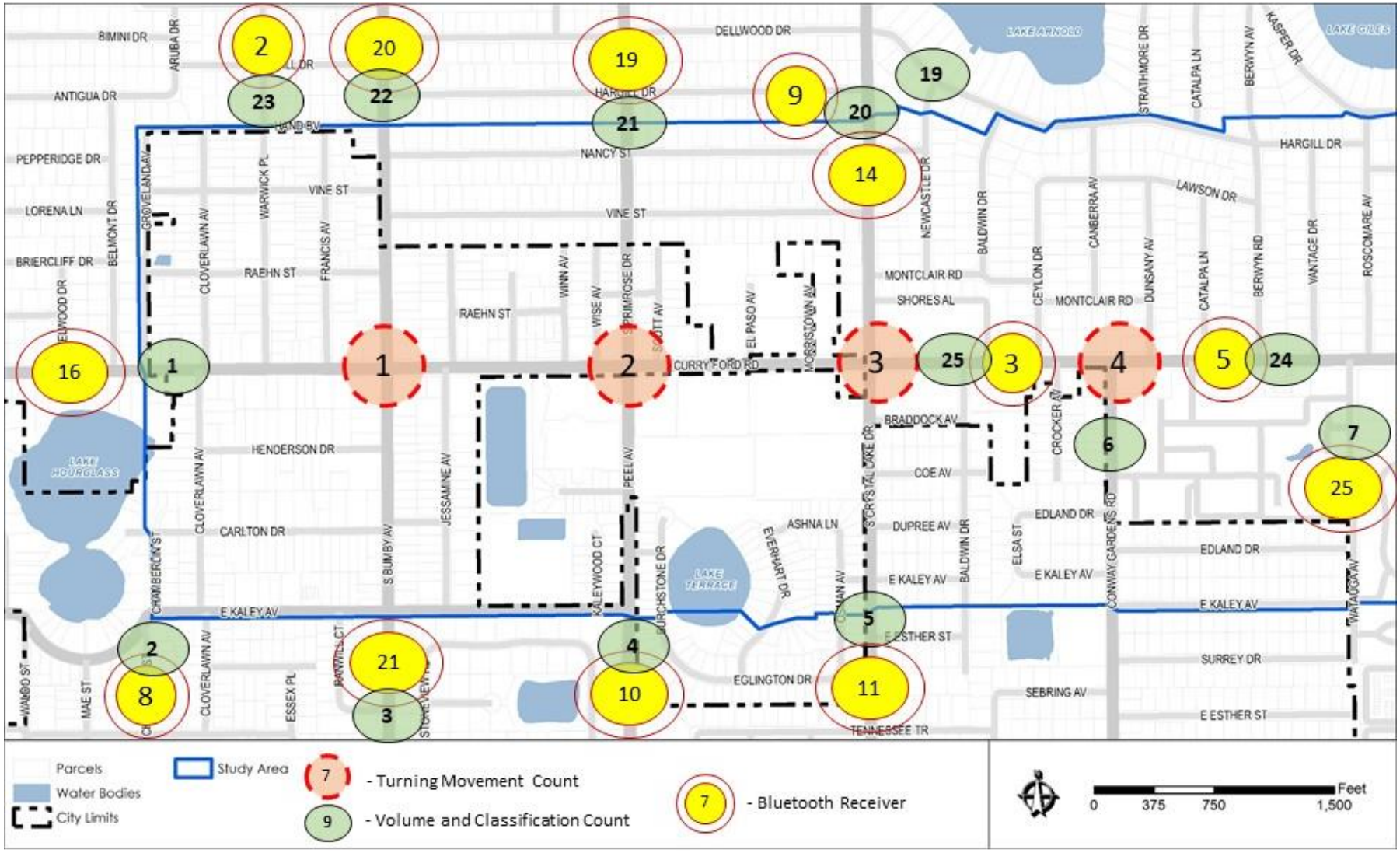
The location for each data collection node is illustrated in **Maps 18** and **19** and is separated by the type of data collection method. The roadway volume and vehicle classification counts were collected mechanically using counter tubes. Speed data was also calculated utilizing the volume counters. The counts were collected for seven days, between January 12 and 25, 2019. **Appendix C** contains the details of the data collected per day and location. Volume counts are used to determine existing roadway capacity utilization and are utilized in the assessment of the development scenarios.

The intersection turning movement counts were collected manually for an hour during each AM, PM, and midday peak, on January 17, 2019 (see **Appendix D**). The turning movement counts allow for a back check on the volume counts, are utilized in the assessment of the development scenarios, and collect important pedestrian and bicycle volumes.

The origin and destination (OD) data were collected using Bluetooth receivers. Bluetooth receivers collect the media access control (MAC) address from every Bluetooth device that passes within a given range of the receiver. Bluetooth devices include cell phones and vehicle GPS systems. These MAC addresses are timestamped and are compared to other MAC addresses collected by other Bluetooth receivers. When the same MAC address is reported on more than one receiver, the determination of the vehicles route and speed can be calculated using the location of two or more receivers and a simple calculation using the associated timestamps. The receivers were deployed between January 13 and January 27, 2019. See **Appendix E**. The OD data is used to determine where traffic enters and exits the corridor, the direction traffic originating inside the study area travels, and is used in calibrating the base condition in future alternative assessments.

Based on the collected data, the performance and travel characteristics of the roadway network were derived. **Table 5** details several travel data attributes. Columns under the 'Traffic' header in the table detail the daily traffic volumes on each roadway link, and the AM and PM peak hour traffic volumes. The columns under the 'Classification' header in the table detail the type and mix of vehicles on each roadway link. As shown, the predominant vehicle type is a passenger vehicle, with two axle trucks (delivery vans, UPS, FedEx, rental trucks) representing the second highest vehicle type. Large multi axle trucks are only 2.9 percent to 4.4 percent of the total traffic mix on Curry Ford Road. The only cross street with a higher percentage of trucks than Curry Ford Road was Conway Road with a range of 4.5 percent to 6.5 percent. Therefore, it can be surmised that the study area is not a critical trucking route or truck shortcut. The data columns under the 'Speed' heading show speeds in the 85th percentile and the overall average speed. This data shows that many of the 85 percentile speeds are above or just below the posted speed for many roadway links. This indicated that any congestion experienced is short in duration and not systemic. The Daily, AM peak, and PM peak volumes are detailed on **Maps 20** and **21**.

Map 18. Data Collection Locations - West



Map 19. Data Collection Locations - East

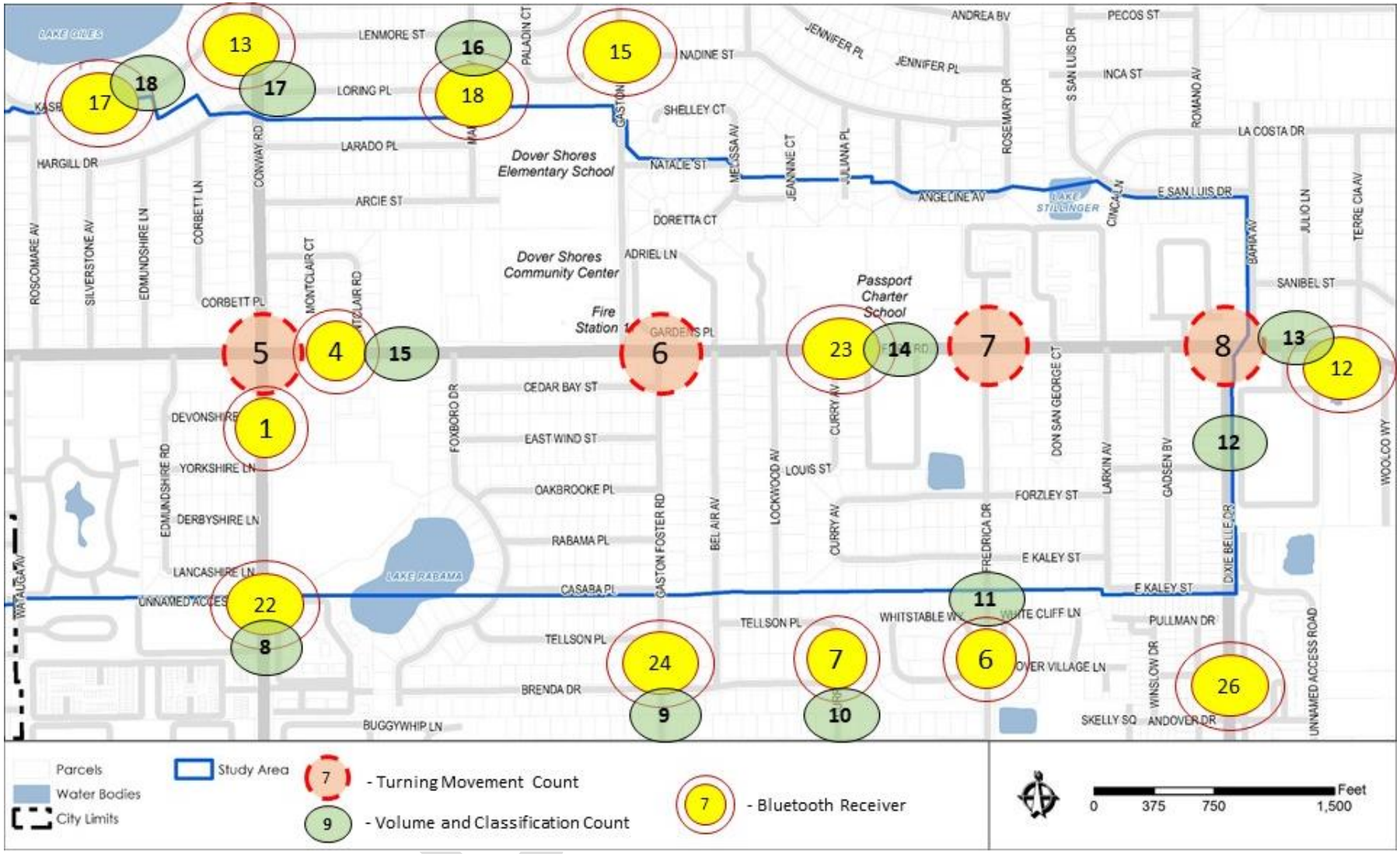


Table 5. Traffic, Vehicle Classification, and Speed Data from Counts

Count #	Count Location	Posted Speed (mph)	Traffic			Classification				Speed (mph)	
			ADT	AM Peak Hour	PM Peak Hour	Passenger Vehicles	Buses	2 Axle Trucks	Multi Axle Trucks	Speed (85th Percentile)	Speed (Average)
1	Curry Ford Rd. west of Groveland Av.	25	8,400	660	710	78.5%	0.4%	14.5%	2.9%	29	23
2	Chamberlin St. south of Harding St.	30*	200	20	20	68.4%	0.3%	20.1%	3.7%	25	19
3	Bumby Av. north of Grant St.	30	9,000	630	840	76.9%	0.4%	16.6%	3.3%	38	32
4	Peel Av. south of Kaley Av.	30	5,900	510	650	75.4%	0.2%	18.0%	3.8%	39	33
5	Crystal Lake Dr. south of Esther St.	35	9,100	670	810	76.8%	0.3%	16.5%	3.6%	40	35
6	Conway Gardens Rd. south of Curry Ford Rd.	30	4,500	360	380	74.1%	0.3%	16.8%	4.5%	38	32
7	Watauga Av. south of Curry Ford Rd.	25	2,000	110	160	86.8%	0.8%	8.0%	2.7%	32	25
8	Conway Rd. south of Lancashire Ln.	40	31,400	2,020	2,340	80.2%	0.5%	12.0%	4.8%	44	39
9	Gaston Foster Rd. south of Brenda Dr.	25	500	40	60	79.0%	0.6%	17.6%	2.1%	23	19
10	Curry Ln. south of Brenda Av.	30*	300	20	30	72.8%	0.9%	20.7%	4.5%	24	19
11	Frederica Dr. south of Kaley St.	30	1,900	120	200	78.1%	0.4%	15.9%	4.3%	39	33
12	Dixie Belle Dr. south of Forzely St.	40	6,600	460	610	79.7%	0.2%	13.9%	3.6%	41	35
13	Curry Ford Rd. east of Bahia Av.	40	26,600	1,840	1,720	80.7%	0.6%	12.1%	4.0%	39	33
14	Curry Ford Rd. west of Fredrica Dr.	40	29,000	2,070	2,080	80.3%	0.5%	12.1%	3.6%	45	38
15	Curry Ford Rd. west of Foxboro Dr.	35	30,400	1,830	2,250	80.7%	0.4%	12.4%	3.8%	43	36
16	Marscastle Av. north of Loring lace	25	300	30	30	79.4%	0.7%	14.7%	3.4%	24	19
17	Conway Rd. north of Loring Place	40	27,700	1,790	2,050	71.8%	0.6%	18.7%	6.7%	49	42
18	Kasper Dr. west of Conway Rd.	25	300	20	40	69.6%	0.7%	19.5%	4.9%	14	8
19	Hargill Dr. east of Crystal Lake Dr.	25	1,000	90	120	76.2%	0.1%	16.5%	4.1%	16	9
20	Crystal Lake Dr. north of Nancy St.	25	10,900	820	880	77.0%	0.2%	14.0%	2.9%	36	30
21	Primrose Dr. north of Nancy St.	25	9,500	890	860	79.9%	0.2%	14.0%	2.4%	37	31
22	Bumby Av. north of Hand Blvd	25	9,700	680	940	78.3%	0.9%	14.6%	3.0%	36	31
23	Warwick Place north of Hand Blvd	30*	200	30	20	70.8%	0.1%	15.1%	5.7%	22	17
24	Curry Ford Rd. east of Catalpa Ln.	35	24,600	1,770	1,790	75.7%	0.4%	15.7%	4.4%	45	38
25	Curry Ford Rd. west of Ceylon Dr.	35	30,500	2,060	2,350	81.2%	0.5%	11.6%	3.4%	42	35

** Speed not posted*

Source: S&ME, Inc., 2019

Table 6 lists some of the physical attributes of the Curry Ford Road corridor including the posted speed. It should be noted that there is at least one side of the road with a sidewalk, but there are no designated bike lanes present. Based on this information and the data from **Table 6**, the last column displays the existing Level of Service (LOS) for the Curry Ford Road links. LOS is a capacity utilization designation based on a predetermined maximum roadway capacity. LOS designations are listed from A to F, with A typically designating more than sufficient vehicular traffic capacity (no congestion) and F indicating saturated over capacity conditions (congestion). All Curry Ford Road links in the study area links are LOS C, or better.

Table 6. Roadway Characteristics and Level of Service

Count #	Count Location	Number of Lanes	Divided Roadway	Posted Speed (mph)	Sidewalk	Bike Lanes	LOS
1	Curry Ford Rd. west of Groveland Av.	2	N	25	Y	N	C
13	Curry Ford Rd. east of Bahia Av.	4	Y	40	Y	N	C
14	Curry Ford Rd. west of Fredrica Dr.	4	Y	40	Y	N	C
15	Curry Ford Rd. west of Foxboro Dr.	4	Y	35	Y	N	C
24	Curry Ford Rd. east of Catalpa Ln.	4	Y	35	Y	N	C
25	Curry Ford Rd. west of Ceylon Dr.	4	Y	35	Y	N	C

Source: S&ME, Inc., 2019

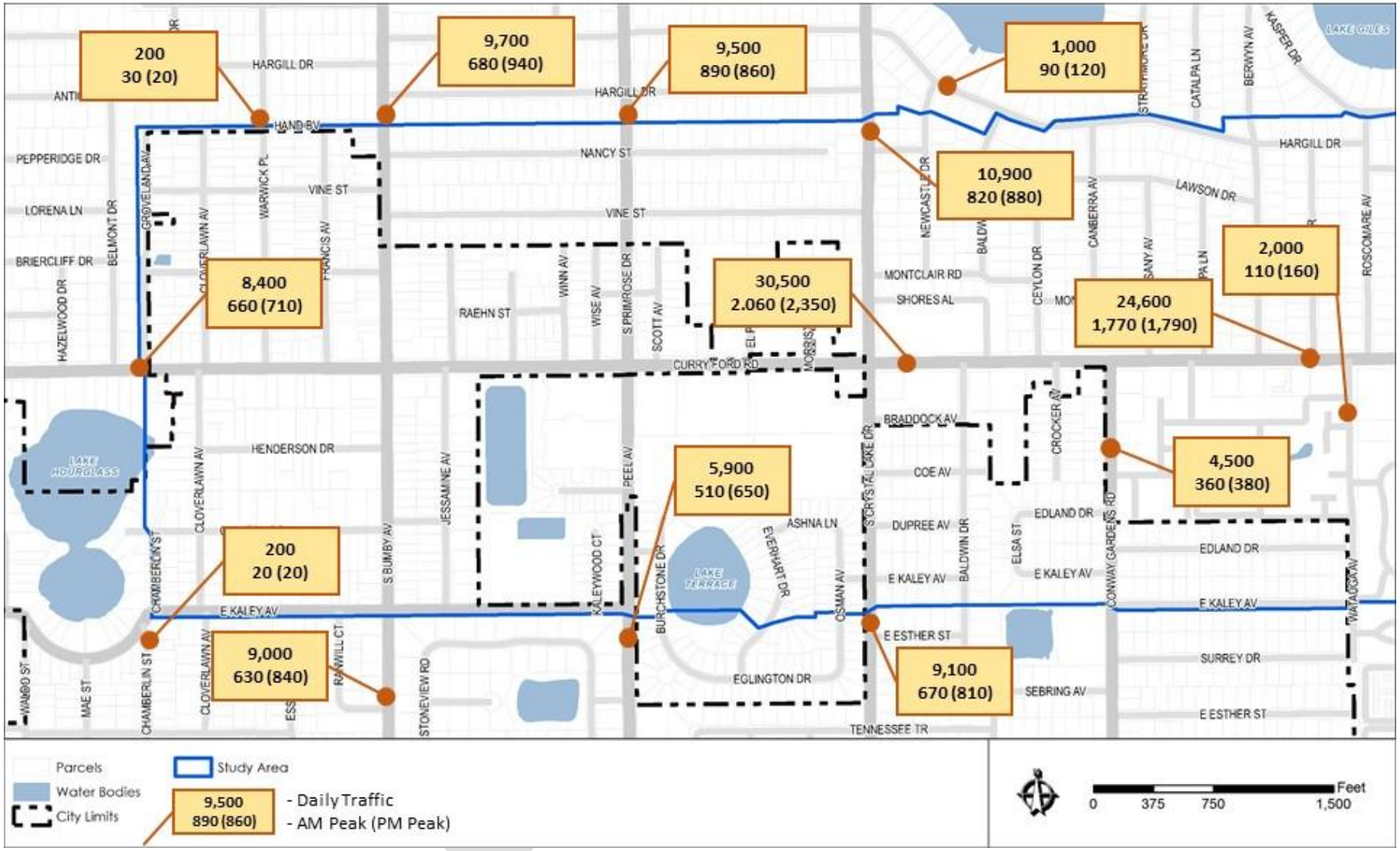
Table 7 tabulates the pedestrians and bicycles counted in the intersection turning movement counts. The pedestrian and bicycle counts indicate the corridor is being used by pedestrians and bicycles today. The Curry Ford intersections at Crystal Lake Drive, Gaston Foster Road, and Dixie Belle Drive show high pedestrian and bike use during the hours counted. With a sidewalk on only one side of the road, and no designated bike lanes, it can be expected that pedestrian and bicycle volumes would trend higher with any additional pedestrian and bike infrastructure. **Maps 20** and **21** provide the counted totals broken out by the AM, PM, and Midday time for each intersection.

Table 7. Pedestrian and Bicycle Peak Hour Counts at Intersections along Curry Ford Rd.

Turning Movement Count #	Cross Street	Morning		Midday		Afternoon		Totals	
		Pedestrian	Bicycle	Pedestrian	Bicycle	Pedestrian	Bicycle	Pedestrian	Bicycle
1	Bumby Av.	4	0	8	2	0	1	12	3
2	Primrose Dr./Peel Av.	0	0	12	0	4	0	16	0
3	Crystal Lake Dr.	12	1	24	1	0	0	36	2
4	Conway Gardens Dr.	0	1	4	3	4	0	8	4
5	Conway Rd.	0	0	8	0	0	1	8	1
6	Gaston Foster Rd.	28	8	16	1	24	4	68	13
7	Fredrica Dr.	12	0	20	1	8	1	40	2
8	Dixie Belle Dr.	48	2	44	0	76	3	168	5
	Totals	**104**	**12**	**136**	**8**	**116**	**10**	**356**	**30**

Source: S&ME, Inc., 2019

Map 20. Daily, AM and PM Peak Traffic, West



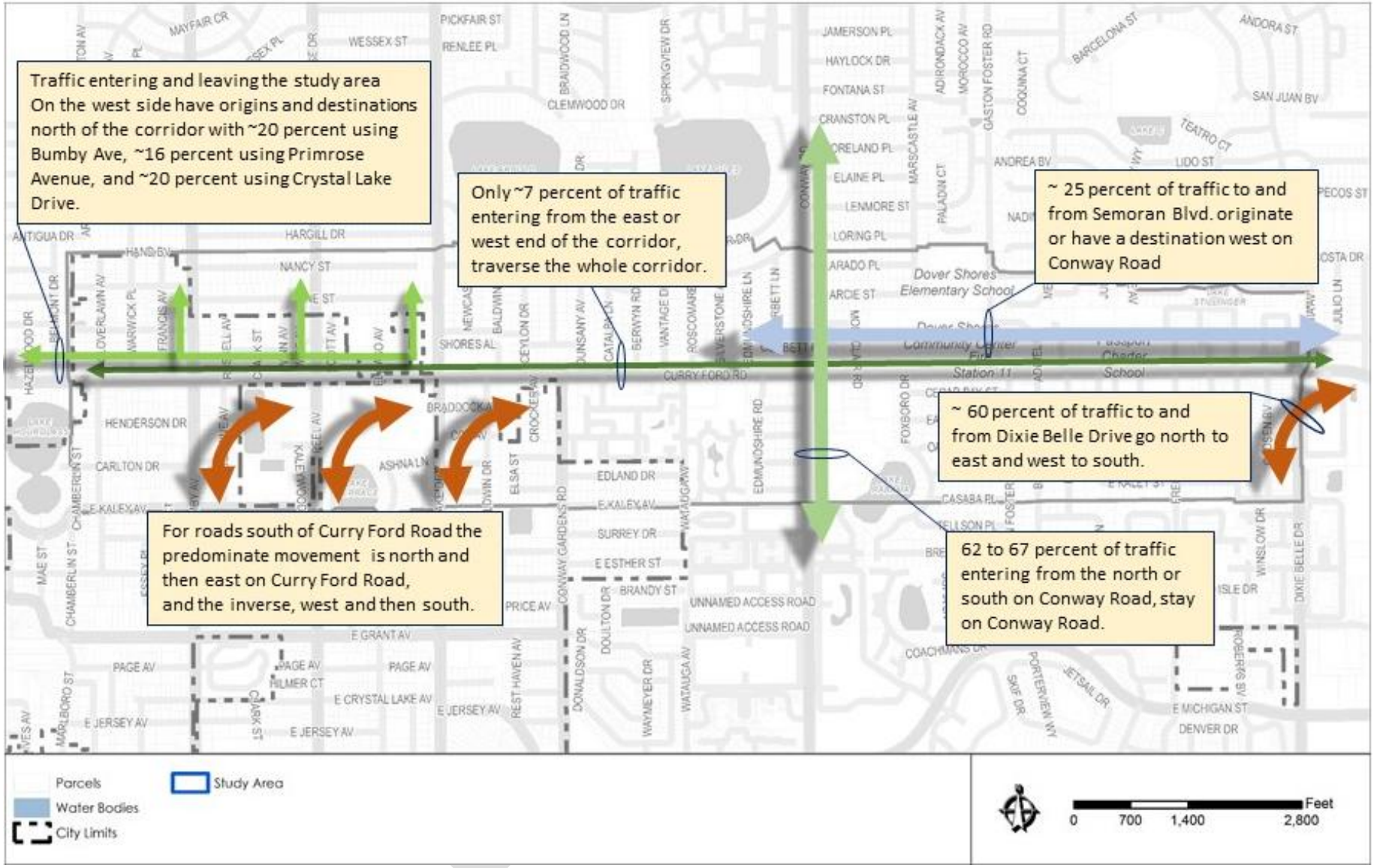
Map 21. Daily, AM and PM Peak Traffic, East

The OD data collected provides insight into the travel patterns of traffic entering, exiting, or passing through the corridor. The OD data is used to understand how the network is currently utilized by identifying traffic passing through the corridor and traffic originating within the study area. **Map 22** details some summary information about travel within the study area. Some of the traffic patterns are listed below:

- Approximately 6-7 percent of traffic entering the study area from the east or west end traverse the entire study area.
- Approximately 62-67 percent of the traffic on Conway Road does not leave Conway Road in the study area.
- Another pattern identified shows that the predominant movement for Bumby Avenue, Peel Avenue, and Crystal Lake Drive south of Curry Ford Road is north and then east on Curry Ford Road, and the inverse, west and then south.

The roadway volume and vehicle classifications are located in **Appendix C**. The intersection turning movement counts are located in **Appendix D**. Supporting origin and destination data can be found in **Appendix E**.

Map 22. Origin and Destination Analysis



E. Infrastructure

1. Potable Water Distribution

A review of the water system map panels provided by Orlando Utilities Commission (OUC), last updated on March 23, 2017, shows a favorable situation in regards to capacity. In a development scenario where density is not greatly increased, there appears to be water largely available to the area, and generally speaking, is conveniently situated in regard to connection. A 24-inch diameter potable water distribution pipe is available at the intersection of Curry Ford Road and S Crystal Lake Drive. A 20-inch diameter potable water distribution pipe is available at Conway Road and Curry Ford Road. These two pipe capacities, along with the additional looping and connections along the roadway connections to Curry Ford Road suggest that potable water supply should be project-dependent, but not generally restrictive for the area from an economic development standpoint. The 12" potable water line that is currently installed along Curry Ford Road near the South Bumby Avenue intersection should be able to provide potable water to most commercial and residential developments without any issue.

2. Wastewater Collection

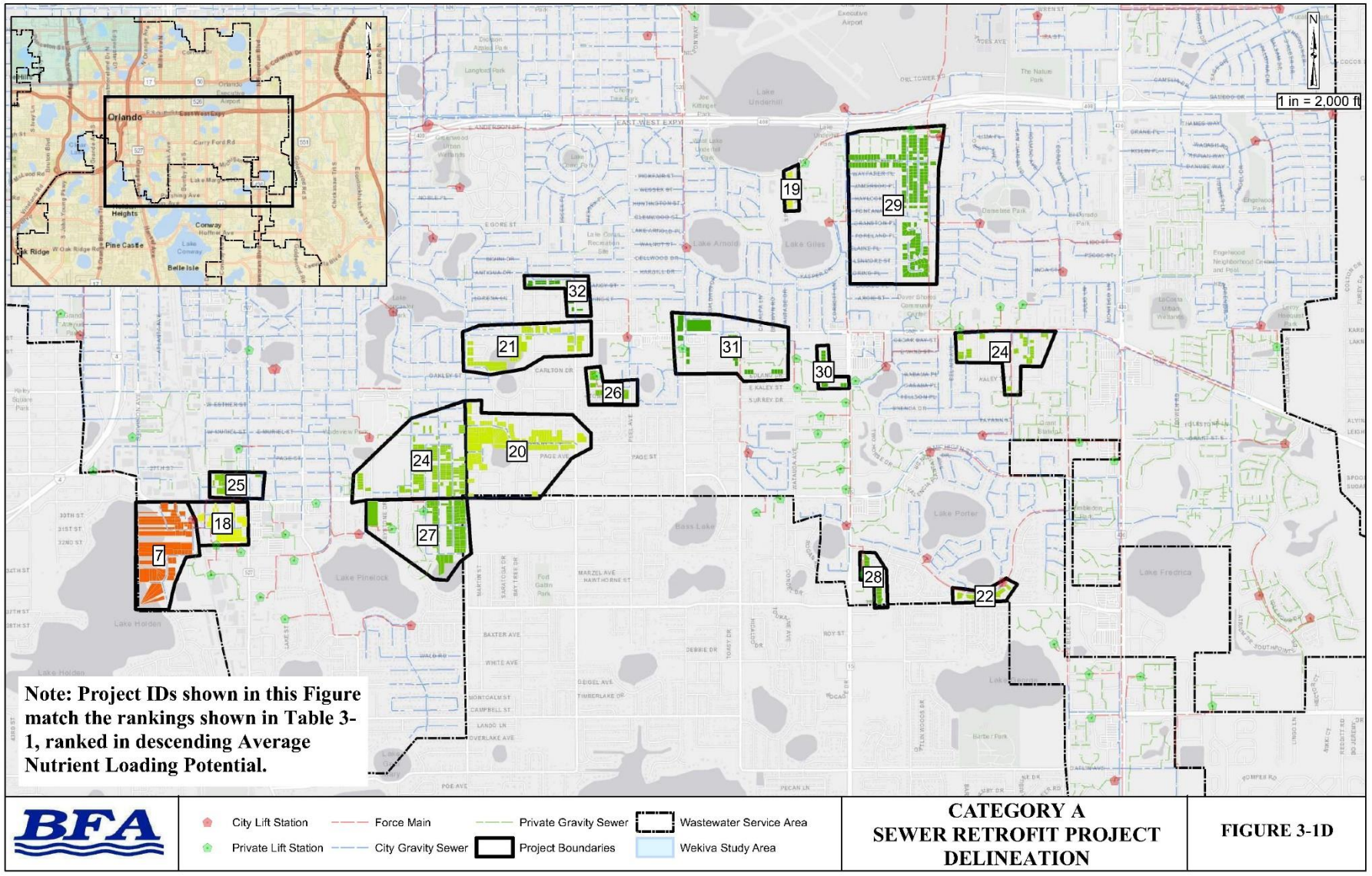
Upon a review of the "Onsite Sewage Treatment and Disposal System Identification, Assessment and Alternatives Development Study," prepared for the City of Orlando Public Works Department Wastewater Division on May 14, 2018, the entire area for this study lies within the City of Orlando Wastewater Service Area. GIS data provided by the City of Orlando Public Works Department, it is evident that sanitary sewer connections are not available along the Curry Ford Road corridor at every point. However, due to the proximity of sanitary connections, sanitary sewer is available throughout the corridor within a reasonable proximity for most properties.

The main area of concern would be on the western portion of the study area. The single-family residential areas, currently zoned for low density residential, such as Vine Street, Raehn Street, Henderson Drive, and Carlton Drive, as examples, would be less feasible for redevelopment due to the lack of public sanitary collection systems in the area. In order to accommodate an increase in density ad intensity, additional sanitary connections and collection piping would need to be constructed.

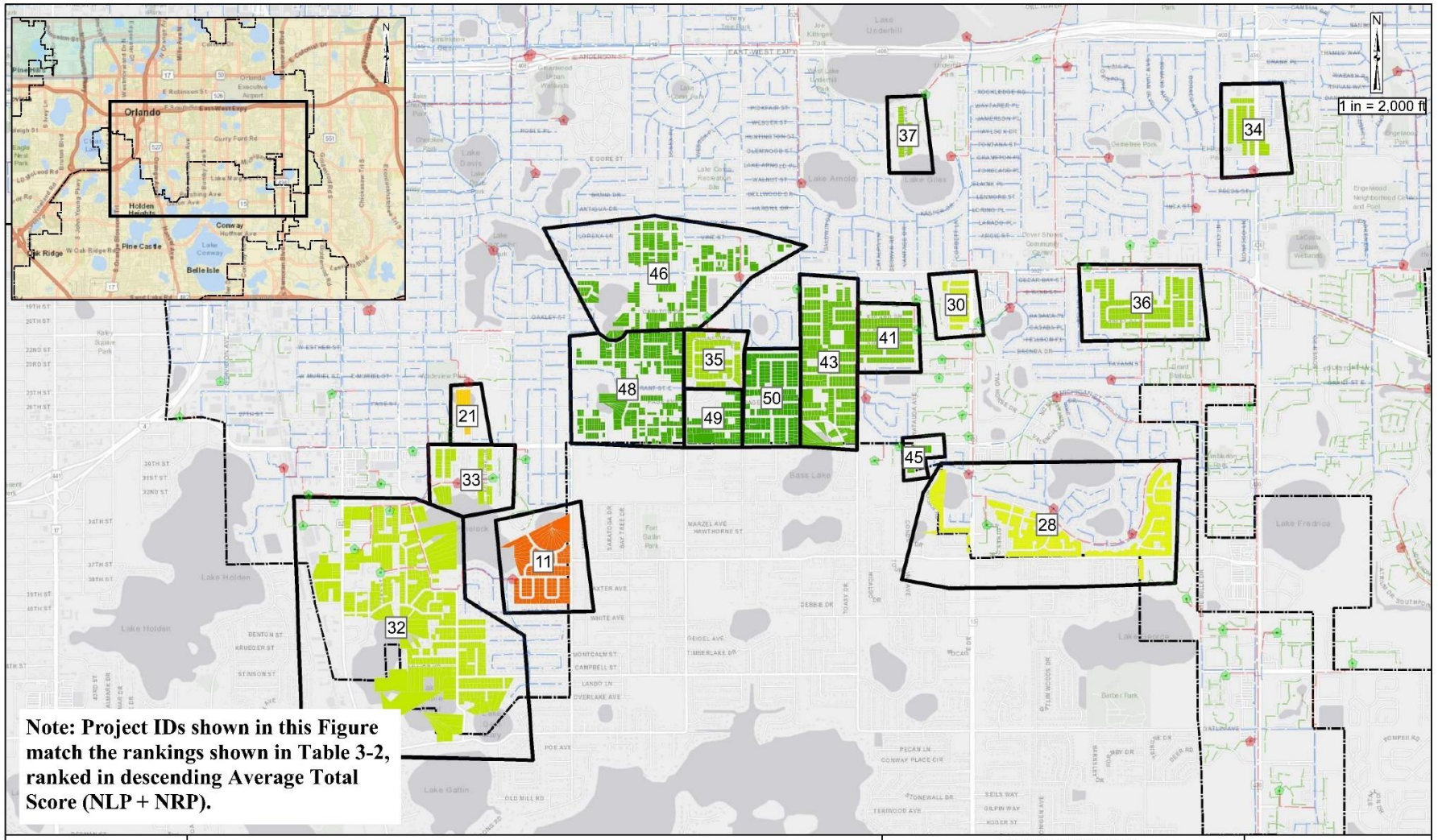
According to the "Onsite Sewage Treatment and Disposal System Identification, Assessment and Alternatives Development Study," Technical Memorandum #2, dated May 14, 2018, by Barnes, Ferland and Associates, Inc. (BFA), there appear to be many septic systems in the study area. The study identified Category A and Category B septic retrofit parcels. Category A projects would only require property owners to connect their on-site plumbing to existing laterals; and Category B projects would require implementation of sewer construction projects by the City. **Map 23** illustrates the Category A potential sewer retrofit project areas adjacent to existing gravity sewer systems, and **Map 24** illustrates the Category B projects. The maps were obtained from the BFA study.

The proposed density and intensity of redevelopment considered in this plan should be handled within the existing capacity, but an in-depth analysis may be needed for higher densities and intensities.

Map 23. Sewer Retrofit Projects – Category A



Map 24. Sewer Retrofit Projects – Category B



3. Stormwater Management

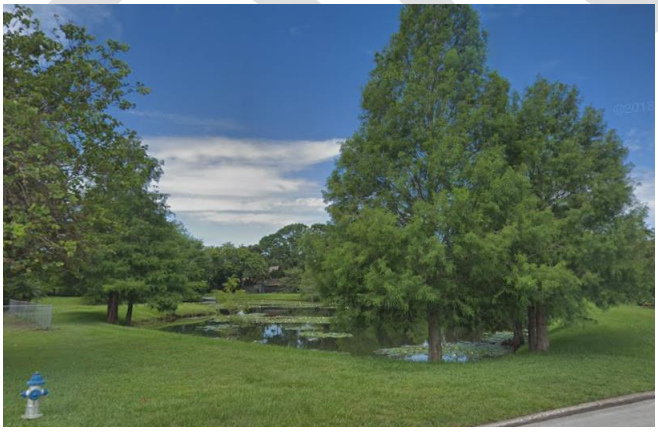
Stormwater management is an ongoing issue within the redeveloping area. There is a general lack of regional stormwater alternatives within this corridor, so the onus of handling stormwater from increased impervious surface falls to the land developers. In the instance that a site is to be redeveloped with stormwater being handled under the current regulations, the existing scenario should remain. In the event that older properties are redeveloped, those will most likely result in a lower impervious area allowance in order to meet current regulations (per EPA "Summary of State Post Construction Stormwater Standards," in July 2016).

There are several stormwater facilities in the study area addressing the drainage needs for specific developments. Some have been designed as public amenities, while others are within private/gated communities. The following are some examples of those that are visible from the public right-of-way and one lake that has a lot of potential public benefit, but is tucked behind Conway Plaza/Publix, and only visible from the loading areas and the adjacent subdivisions.

Figure 23. Stormwater Facilities Visible from the Public ROW

Curry Ford west of Peel Avenue (Orange County BCC)

Lake Terrace (Ashbury Park Subdivision)



Lake Stillinger (San Luis Drive)

Lake Rabama (Mai Kai Apartments)

F. Neighborhood Character

The Curry Ford Road corridor was developed mostly between the 1950s and 1970s, with a few sites dating back to later decades and only a handful built since 2000. The west end of the corridor still features some buildings from the earlier part of the twentieth century (**Figure 24**). Those buildings, however, were originally single-family homes and have undergone extensive modifications to accommodate commercial uses.

Figure 24. Early Twentieth Century Buildings

1920s

1930s

1940s

There are still a few buildings in the corridor displaying elements from the mid-century modern architecture (**Figure 25**). This trend, however, is not as strong as it is in the residential parts of the neighborhood.

Figure 25. Local Examples of Mid-Century Architecture

Buildings dating back to 1960s

Some property owners have started bringing back the flavor of the mid-century architecture as seen in the Bumby Avenue node.

Figure 26. Renovations

Before

After

With the exception of just a few buildings placed close to the street, there is little that could qualify as urban form inside the study area. Most buildings in the area are suburban in nature, with expansive front yard setbacks and surface parking visible from the road.

The study area is currently auto-centric and not designed to encourage pedestrian or bicycle traffic. In order to establish a sustainable, livable community with proper facilities for all users, it will be imperative to implement some changes in the way the streets function, and ensure the design and construction of future development put an emphasis on connectivity between developments and accessibility by car, bike, pedestrians, and transit, as well as maintaining a human scale regarding the buildings and street blocks to ensure the safety and comfort of pedestrians.

Figure 27. Auto-Centric Developments

Due in part to the suburban character of the development, the signs in the study area tend to be large and consist of a combination of freestanding signs and signs attached to buildings. The freestanding signs vary from single business signs to multi-tenant signs (see **Figures 28 and 29)**.

Figure 28. Freestanding Signs – Single Tenant

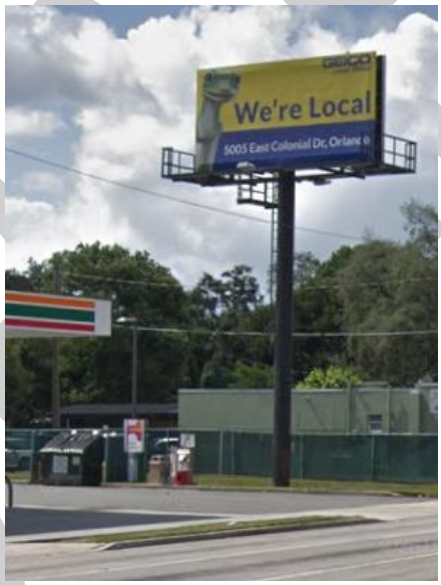
Figure 29. Freestanding Signs– Multi Tenant

Signs on building vary from channel letters to cabinets, and also include window and awning signs. The shopping plazas have somewhat coordinated signage on the buildings, although there may be a business or two at each plaza with a different sign than the rest. **Figure 30** shows a few of the most common types of building signs.

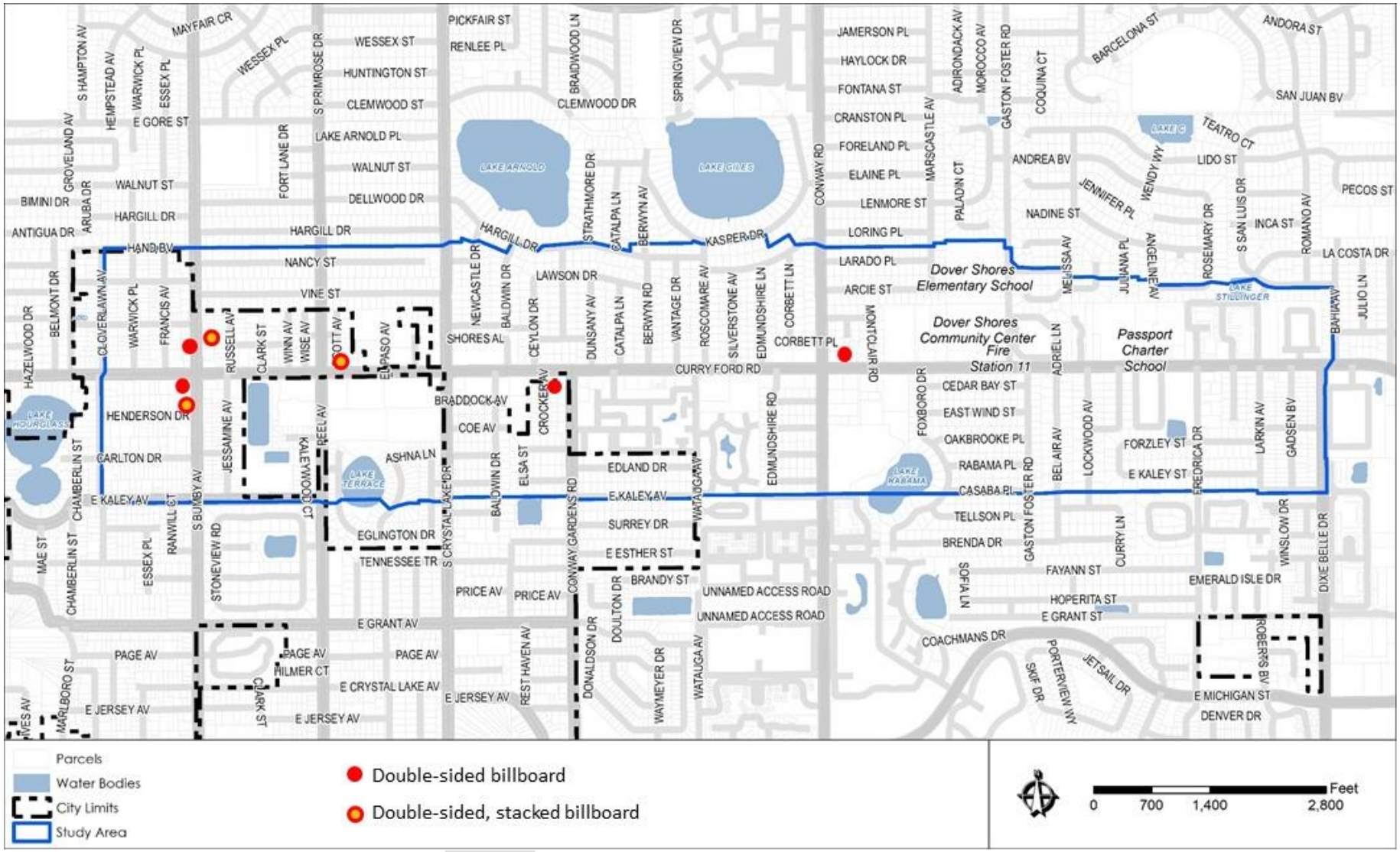
Figure 30. Building Signs

There are also numerous billboards in the study area, especially on the west part of it, in the Bumby Avenue node, which is not within the City limits and one within the City limits near the intersection of Curry Ford Road and Conway Road. See **Figure 31** and **Map 25**.

Figure 31. Billboards



Map 25. Billboards

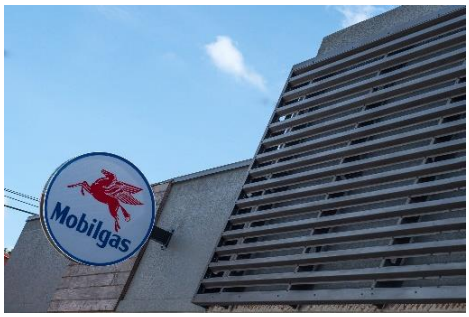


II. Projections

A. Population Projections

The City of Orlando regularly updates its population projections which are used to ensure the Growth Management Plan allows sufficient residential densities to accommodate such growth and to plan for the provision of adequate public facilities and services. Current projections estimate that the City will have 376,110 residents by the year 2045. The projections are done on a citywide basis, but distributed by Traffic Analysis Zone (small geographical areas typically used for traffic modeling) based on observed development trends. **Map 26** shows the TAZs in the study area and **Table 8** shows current and projected population for the study area.

The projections by TAZ, which were last updated in 2016, assume that the study area is not going to see much growth between now and 2045. The projections only show an increase of 435 residents in the area. While the citywide residential growth rates have not been replicated in the Curry Ford corridor and surrounding neighborhoods, in more recent years there has been an influx of younger residents to the neighborhood. These residents are purchasing and renovating the homes (typically built in the 1950s or earlier), which are still relatively inexpensive considering the sizes of the lots and homes, proximity to the Downtown, and easy access to transportation routes such as SR 408 and I-4. There has also been infill development consisting mainly of townhomes. With the influx of younger residents, a resurgence of the commercial area, the relative affordability of the district, and the fact that the downtown is reaching capacity, it is safe to assume that the low growth rates in the neighborhood may be changing. This phenomenon has been experienced in recent years in other nodes around downtown: SODO, College Park, and the Mills/Virginia neighborhoods. **Section D** (Redevelopment Potential) addresses the potential for change in the study area.



Map 26. Traffic Analysis Zones

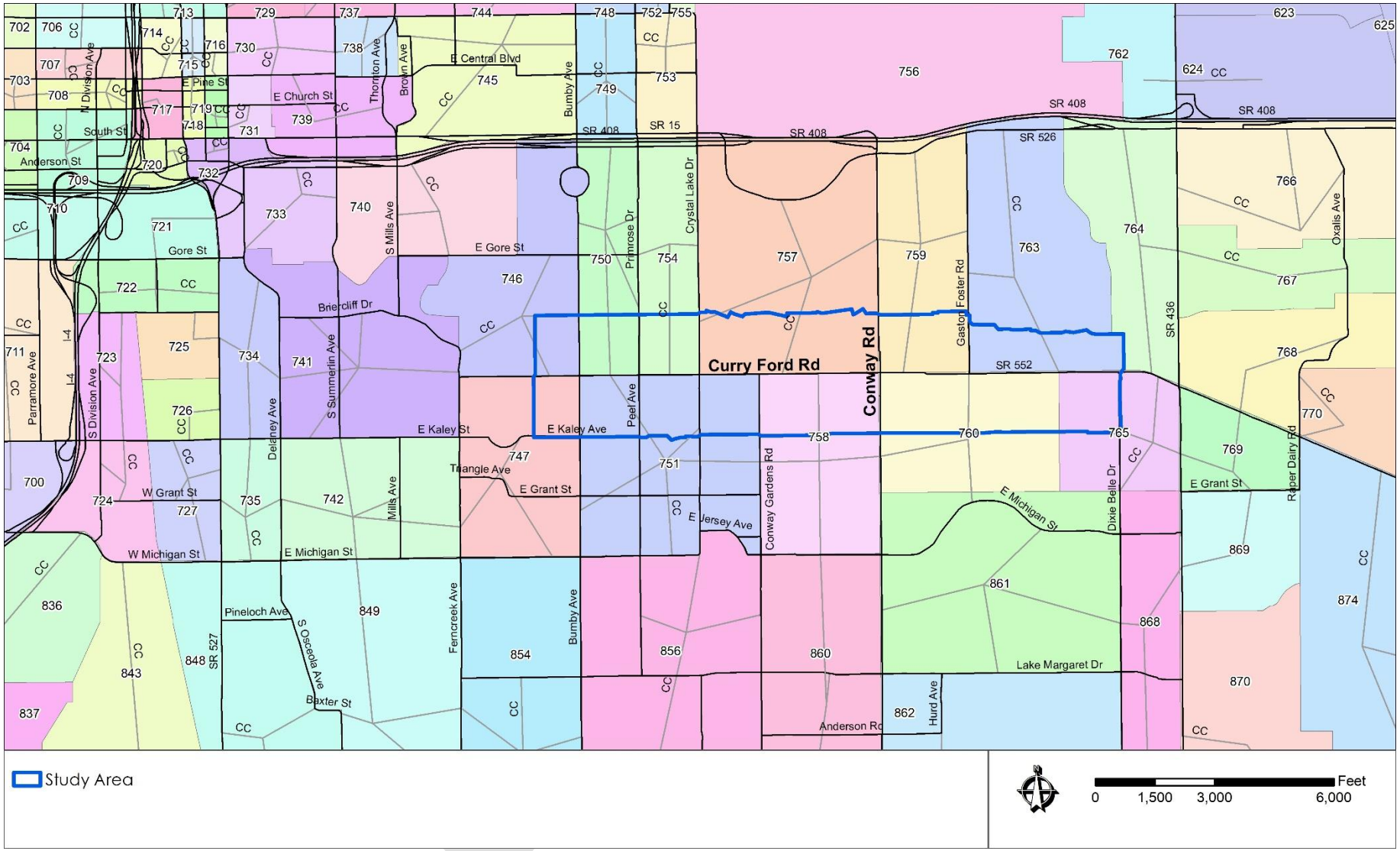
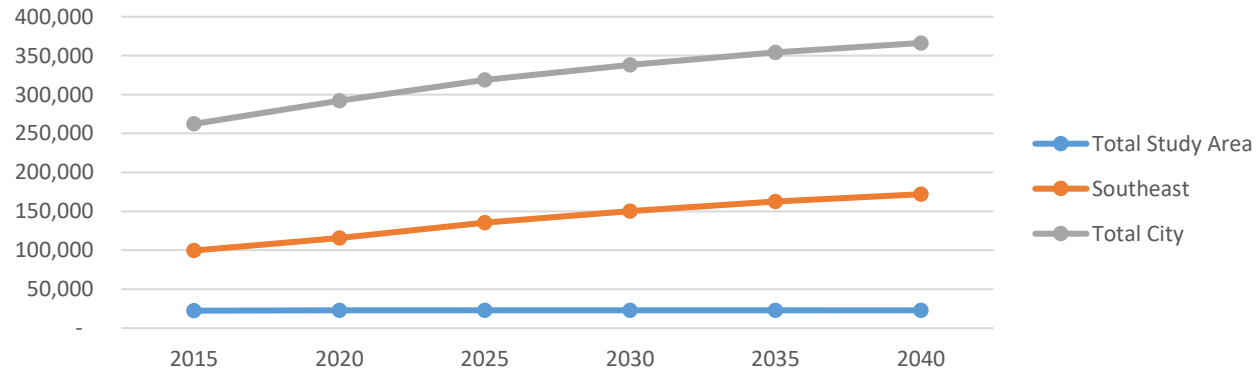


Table 8. Population Projections by TAZ

TAZ	Sub-Area	2015	2020	2025	2030	2035	2040	Increase	% Increase
746	S.E.	1,277	1,289	1,289	1,289	1,289	1,289	12	0.9%
747	S.E.	93	101	101	109	115	115	22	23.7%
750	S.E.	778	778	778	778	781	781	3	0.4%
751	S.E.	1,148	1,148	1,148	1,148	1,148	1,148	0	0.0%
754	S.E.	1,031	1,031	1,031	1,031	1,031	1,031	0	0.0%
757	S.E.	3,126	3,144	3,153	3,163	3,163	3,163	37	1.2%
758	S.E.	4,425	4,425	4,425	4,425	4,425	4,425	0	0.0%
759	S.E.	1,988	1,988	1,988	1,988	1,988	1,988	0	0.0%
760	S.E.	1,894	1,896	1,896	1,896	1,899	1,899	5	0.3%
763	S.E.	2,974	2,983	2,988	2,993	3,020	3,023	49	1.6%
764	S.E.	1,791	1,793	1,793	1,822	1,822	1,822	31	1.7%
765	S.E.	1,829	2,100	2,100	2,102	2,105	2,105	276	15.1%
Total Study Area		**22,354**	**22,676**	**22,690**	**22,744**	**22,786**	**22,789**	**435**	**1.9%**
	Northwest	33,816	34,007	34,579	34,952	35,401	35,946	2,130	6.3%
	Northeast	25,253	29,851	31,187	31,673	31,939	31,952	6,699	26.5%
	Downtown	20,152	24,521	27,536	29,632	31,317	32,394	12,242	60.7%
	Southwest	83,489	88,192	90,067	91,547	93,202	94,075	10,586	12.7%
	Southeast	99,662	115,591	135,342	150,186	162,462	171,975	72,313	72.6%
	Total City	**262,372**	**292,162**	**318,711**	**337,990**	**354,321**	**366,342**	**103,970**	**39.6%**

Source: *City of Orlando Growth Management Plan, 2016*



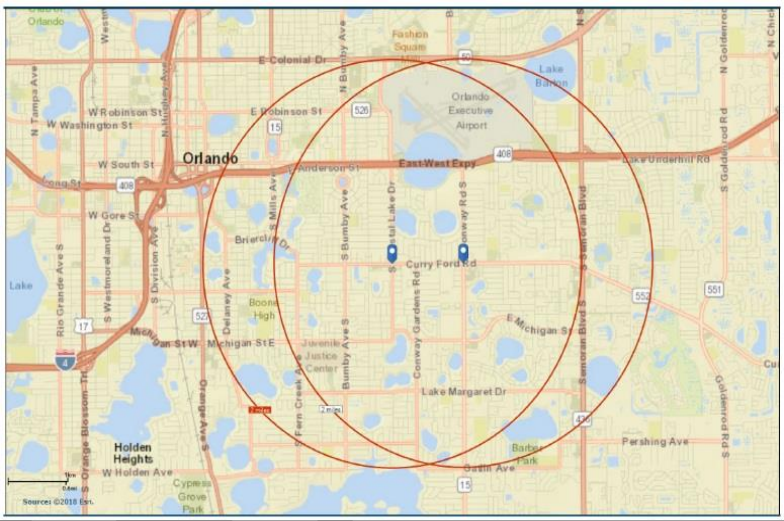
B. Employment Projections

Similar to the population projections discussed above, the City is not projecting much growth for non-residential uses, and therefore employment. These conservative projections, however, assume that current development will not be changing in the next few decades. Although some buildings have been renovated recently, the age of the buildings and property values are getting to a point where renovations will no longer be feasible or make financial sense.

C. Market Study

1. Retail

Due to the unique physical (linear) characteristics of the retail environment and population distribution in the study area, the primary retail market area was defined as two 2-mile radii, one at the center of the intersection of Crystal Lake Drive and Curry Ford Road and the other at the center of the intersection of Conway Road and Curry Ford Road. This section addresses retail market demand based on population totals and disposable income within the retail market area as derived from ESRI Business Analyst Online (BAO).



The above map shows the two 2-mile radii market area around the Curry Ford study area.

Retail demand is directly correlated with the consumers' market potential in a given market area. According to the ESRI BAO data, the Crystal Lake Drive 2-mile radius market area has a population of 54,718 with a median household income of $51,353. The Conway Road 2-mile radius market area has a population of 63,231 with a median household income of $44,593.

Table 9 shows a summary of the retail marketplace profile for the Crystal Lake Drive intersection 2-mile trade area. For the purposes of this study, the marketplace profile summary includes the industry groups of most significance based on their leakage/surplus values. A positive value represents 'leakage' of retail opportunity outside the trade area (or individuals having to leave the trade area to fulfill their retail needs). A negative value represents a surplus of retail sales, a market where customers are drawn in from outside the trade area. In total, this trade area is experiencing approximately a $222M leakage, which means that there is a heavy residential component within the 2-mile radius and there are very limited regional retail establishments (e.g. shopping malls, auto dealers, large retailers, etc.). The industry group with the largest leakage amount is Motor Vehicle and Parts Dealers at $137M. Of the top five retail industries experiencing leakage, three are auto oriented. The retail industry with the largest surplus in the trade area is Food & Beverage Stores, which accounts for -$48M surplus of supply over demand. This means many individuals travel to the trade area to purchase groceries or other similar goods. This is mainly due to the fact that there are two major grocery stores in the 2-mile trade area (Winn Dixie and Publix).

Table 9. Crystal Lake Drive 2-Mile Retail Marketplace Summary

Industry Group	Demand	Supply	Leakage/Surplus
Total Retail Trade and Food & Drink	$835,649,869	$613,455,815	$222,194,054
Motor Vehicle & Parts Dealers	$160,083,603	$22,105,240	$137,978,363
Automobile Dealers	$127,559,810	$12,276,891	$115,282,919
Gasoline Stations	$78,077,504	$36,190,791	$41,886,713
General Merchandise	$125,235,321	$58,355,152	$66,880,169
Department Stores	$87,937,595	$37,890,652	$50,046,943
Food & Beverage Stores	$134,927,401	$183,004,059	-$48,076,658

Source: Esri Business Analyst, 2019.

Table 10 shows a summary of the retail marketplace profile for the Conway Road intersection 2-mile trade area. The data reads very similar to the Crystal Lake Drive intersection trade area. The total retail and food & drink leakage is $254M, which is approximately $30M larger than the Crystal Lake Drive retail leakage. This is due to the larger population in this trade area as compared to the Crystal Lake Drive trade area. The industry group with the largest leakage amount is Motor Vehicle and Parts Dealers at $123M. As with the Crystal Lake Drive analysis, of the top five retail industries experiencing leakage, three are auto oriented. The retail industry with the largest surplus in the trade area is Food & Beverage Stores, which accounts for -$20M. Although there is still more supply of Food & Beverage store within this trade are than demand, this is approximately $28M less of a surplus gap as the Crystal Lake Drive trade area.

Table 10. Conway Road 2-Mile Retail Marketplace Summary

Industry Group	Demand	Supply	Leakage/Surplus
Total Retail Trade and Food & Drink	$795,273,209	$540,681,575	$254,591,634
Motor Vehicle & Parts Dealers	$153,096,905	$29,410,219	$123,686,686
Automobile Dealers	$122,177,315	$13,031,087	$109,146,228
Gasoline Stations	$75,325,760	$31,514,233	$43,811,527
General Merchandise	$119,296,572	$68,756,959	$50,539,613
Department Stores	$83,565,575	$47,036,131	$36,529,444
Food & Beverage Stores	$129,054,804	$149,938,203	-$20,883,399

Source: ESRI Business Analyst, 2019.

The demand for retail goods and services is strong in the two trade areas, which is supported by the average household incomes, disposable incomes and the population figures. Although the disposable income is higher in the Crystal Lake Drive trade area, the Conway Road retail demand is stronger due to its larger population. Nothing in this analysis suggests that the future economic viability of the corridor is in peril. The data does suggest that the Curry Ford Road corridor provides significant retail opportunities today and into the future. It also suggests that there is a greater demand for future brick and mortar retail than what recent trends show. Although much of the retail experience has been replaced by online shopping, there is still a need for experiential retail and unique destination retail. In other words, the demand for clothing stores, auto dealers, shoe stores, and other establishments that require short term trials or fittings will still exist. Additionally, spaces that allow for congregation as well as destinations that draw people in to try or experience their unique settings like breweries and restaurants will continue to be in demand.

Trends that are occurring elsewhere in the City and in similar locales are important factors that require further attention. There is a growing trend for food truck pods throughout the nation. Pods allow for a dedicated space for food trucks and allow for a rotation of trucks for a certain period of time (e.g. À La

Cart). Another trend that has not quite made it to the Curry Ford area is the indoor neighborhood market (e.g. East End Market) that focuses on local goods and produce. These markets are gaining in popularity and are popping up throughout the region. Makerspaces and galleries are other uses that are in demand in this region. Makerspaces are collaborative work spaces inside public or private facilities that allow for making, learning, art, music, exploring and sharing ideas that uses high tech to no tech tools at all. The converging demographic composition and the existing retail market serving the Curry Ford study area provides a fertile market for the continued development and growth of niche retail, services and entertainment venues.

2. Multifamily Residential

There are 1,467 multifamily units within the study area, which includes apartments, condominiums and townhomes. This does not include duplexes which account for an additional 80 units. **Table 11** provides a list of the largest multifamily complexes (apartments and condominiums). The majority of the units were built between the 1950s and 1970s. The only newly constructed multifamily products have been the townhomes on Francis Avenue and Kaley Avenue west of Bumby Avenue. The townhomes were completed in 2017.

Table 11. Largest Multifamily Complexes

Apartments/Condos	Units
Village Palms	335
Watauga Woods	216
Grove Park	184
Hollowbrook	144
Dover Gardens	128
Whitney Groves	124
Hacienda Del Sol	72
Orange Tree Village	60

Source: Orange County Property Appraisers Office, 2019.

Based on the age and condition of the current multifamily complexes, the multifamily product in the study area considered Class C, which is two steps below the top of the multifamily product rating system. Class C multifamily units are generally around 30 years old, the majority of the units tend to have original appliances, improvements show age and deferred maintenance, dated interiors and exteriors, limited amenities offered, and rents command below Class B rates. The average monthly rent for multifamily units in the study area for 1-bedroom units ranges from $836.00 to $1,260; for 2-bedroom units ranges from $1,082 to $1,475; and from $1,147 to $1,640 for 3-bedroom units. In contrast the average monthly rent for a 1-bedroom unit in the City of Orlando is $1,302.00[2].

The outlook for the multifamily residential market is favorable in the Orlando metro area. Employment gains are expected to outpace the national rate (by a factor of 3), associated employee migration into the Orlando metro area will continue to generate surging housing demand. Approximately 65,900 new residents are forecast to move into the Orlando market in 2019, significantly increasing the multifamily housing demand. Demand for multifamily units is outpacing inventory, as evidenced by the tightening vacancy rate (3.7%), which is one of the lowest in the country. Vacancies rates are tightening and demand is outpacing supply, which will likely increase average rents for the third consecutive year.

[2] Real Data, Inc., 2019.

With the increased demand in the metro area and the limited multifamily offerings in the Curry Ford study area, there is a continued demand for Class C products with a growing demand for Class A and Class B multifamily residential products.

3. Residential Demand [3]

As discussed above, based on the City's population projections, the Curry Ford study area is not expected to be a high growth area over the next 20 years. However, with the renewed attention to the area and the catalyst development occurring at the Bumby Avenue intersection, this area is positioning to become the next Virginia Drive or SODO district. In light of this transformation, the demand for additional residential units will likely outpace the City's population projections.

Where this will occur will depend on the availability of land. Much of the study area is built out and there are limited infill opportunities. A large portion of the study area is single family residential, which will likely remain in perpetuity due to the stability of those neighborhoods and in part by the City's current subarea policies that restrict expansion of more intensive land uses. The exception to this being the small portion of single-family residential sites that may convert to include attached residential units. These sites are primarily located along the primary north south connectors feeding into the study area. The conversion from single-family sites to multifamily, such as duplexes or townhomes, is currently occurring in the study area on Francis Avenue and Kaley Avenue. This is a trend that has been observed in the study area and in other similar neighborhoods in the City. This will be very limited and will not accommodate a large amount of the resident population growth within the study area.

Population growth in the study area will be the result of the redevelopment of currently underutilized sites at or near the major nodes (Bumby Avenue, Crystal Lake Drive, Peel Avenue, and Conway Road). The specific location of these opportunity sites is discussed in further detail in **Section III** (Development Scenarios). Due to the strong retail demand in this area and success of existing multifamily, redevelopment at the nodes discussed above could support the appropriately scaled vertical mixed-use projects. Although the historical trends for the Curry Ford area show relatively stagnated growth since the 1970s, the City of Orlando is growing and much of the renewal that is taking place is happening in the periphery of Downtown in neighborhoods that have unique urban characteristics and comparative real estate price/value positions. As the study area begins to generate momentum and more attention is brought to the corridor, there is the possibility that additional units will be needed in the near term.

D. Redevelopment Potential

As noted in previous sections, not much has happened in terms of development in the Curry Ford Road Study Area in the past, and City projections indicate that no change is expected in the near future. However, as discussed in the market analysis section, things could take a turn in terms of redevelopment if the conditions are favorable. This section addresses some of the factors that play a key role in triggering changes in an area: the age of the buildings, underutilized sites, parcel size and ownership (potential for site aggregation), and property values.

1. Age of Buildings

Maps 27 and **28** show the age of buildings in the Curry Ford corridor. As discussed earlier, some of the buildings date back to the beginning of the twentieth century, most date back to the 1960s and 1970s, and there are only 4 buildings directly on Curry Ford Road that are less than 10 years old (Wawa at 3025

[3] Fannie Mae Multifamily Market Commentary, January 2019.

Curry Ford Rd, Dollar General at 3081 Curry Ford Rd, and A Dramatic Change Hair & Nails at 2801 Curry Ford Rd, and Walgreens at 4300 Curry Ford Rd).

While most buildings have been renovated and are maintained, it comes to the point where the renovations become more expensive and it is more difficult to keep up with safety and fire codes and with changes in technology. Unless a building is historically significant, the value of the building depreciates to the point where it is no longer feasible to keep fixing it.

2. Underutilized Parcels

City regulations allow a potential maximum residential density of 40 units per acre (80 with a bonus) and a non-residential development intensity of 0.7 floor area ratio (1.0 with a bonus) in Activity Center (AC-1) areas (Primrose, Crystal Lake and Conway nodes). The potential maximum density and intensity at the Bumby node and the sites along the south side of Curry Ford from the Crystal Lake node to the Conway node (MU-1), are 30 units per acre (60 with a bonus) and a non-residential development intensity of 0.5 floor area ratio (1.0 with a bonus).

Based on a sampling of the number of multi-family units in the area (see **Table 12**), it can be observed that the residential density on multi-family sites averages 17 units per acre (upa). The highest density was found at Whitney Groves (25 upa), followed by Hollowbrook (22 upa), and the lowest density was found at Conway Townhomes (3.88 upa). As shown on **Map 29**, most sites within those nodes present an FAR of 0.2 or less. A handful of sites along Curry Ford have an FAR between 0.2 and 0.4 and only three are over 0.5 FAR.

Table 12. Multi-Family Developments (sampling)

Apartments/Condos	Units	Acres	Density
Village Palms	335	20.14	16.63
Watauga Woods	216	12.77	16.91
Grove Park	184	9.65	19.07
Hollowbrook	144	6.55	21.98
Dover Gardens	128	6.65	19.25
Whitney Groves	124	4.95	25.05
Hacienda Del Sol	72	4.21	17.10
Orange Tree Village	60	5.59	10.73
Raintree	38	1.81	20.99
Hampton Terrace	41	2.49	16.47
Apartments	5	0.54	9.26
Housing Authority	40	2.09	19.14
Henley Park	44	2.1	20.95
Conway Townhomes	16	4.12	3.88
TOTAL / AVERAGE DENSITY	1,447	83.66	17.30

3. Parcel Size and Land Ownership

One of the most challenging issues facing the Curry Ford corridor for redevelopment is the fact that most sites are very small. Trying to fit a building, parking, open space, landscaping and stormwater facilities can be very challenging. For a mixed-use development to happen in this area, lot aggregation would be neccesary. As shown on **Map 30**, the largest sites in the study area (>5 acres) are all developed and include mostly multi-family developments, the Dover Shores Community Center and Elementary School sites, and the Conway Plaza (Publix) property. There are several sites between 1 and

5 acres, including the Crystal Lake Plaza (Winn Dixie) and adjacent shopping center (the two sites appear as two separate properties on the Property Appraisers website), the Dover shopping center (Clemons Produce, Charlie's Bakery), and the church ar the corner of Curry Ford Road and Fredrica Drive. Many of these sites are adjacent to each other, but under different ownership.

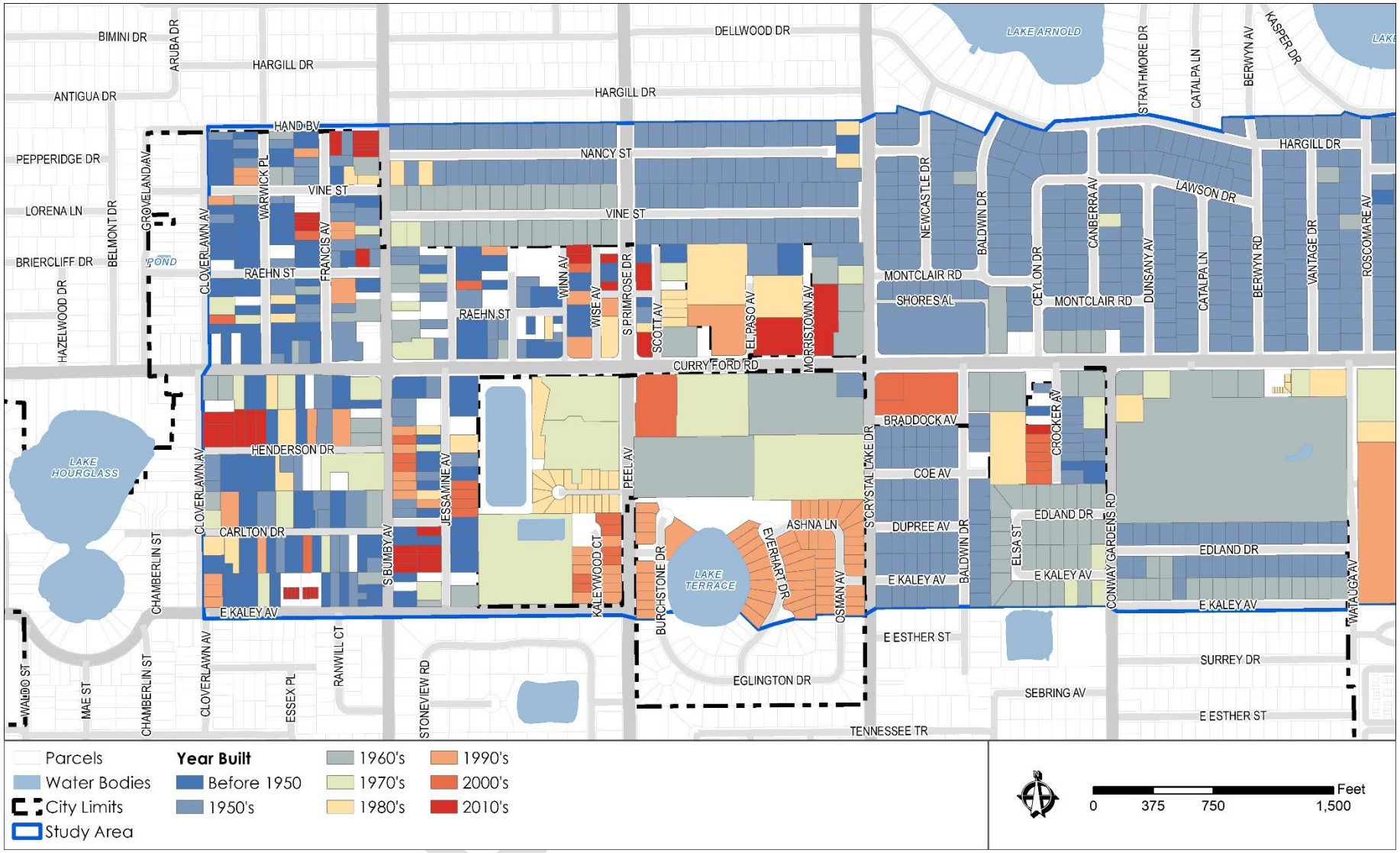
Map 31 shows the ownership of the largest sites in the study area. The only known situation in the area where adjacent parcels are owned by the same person/company is the Conway Plaza (Publix) property. There are 5 adjacent sites owned by New Market Conway LLC. Although not shown in the Property Appraiser records, the Crystal Lake Plaza (Winn Dixie) and adjacent shopping center are also owned by the same company.

4. Property Values

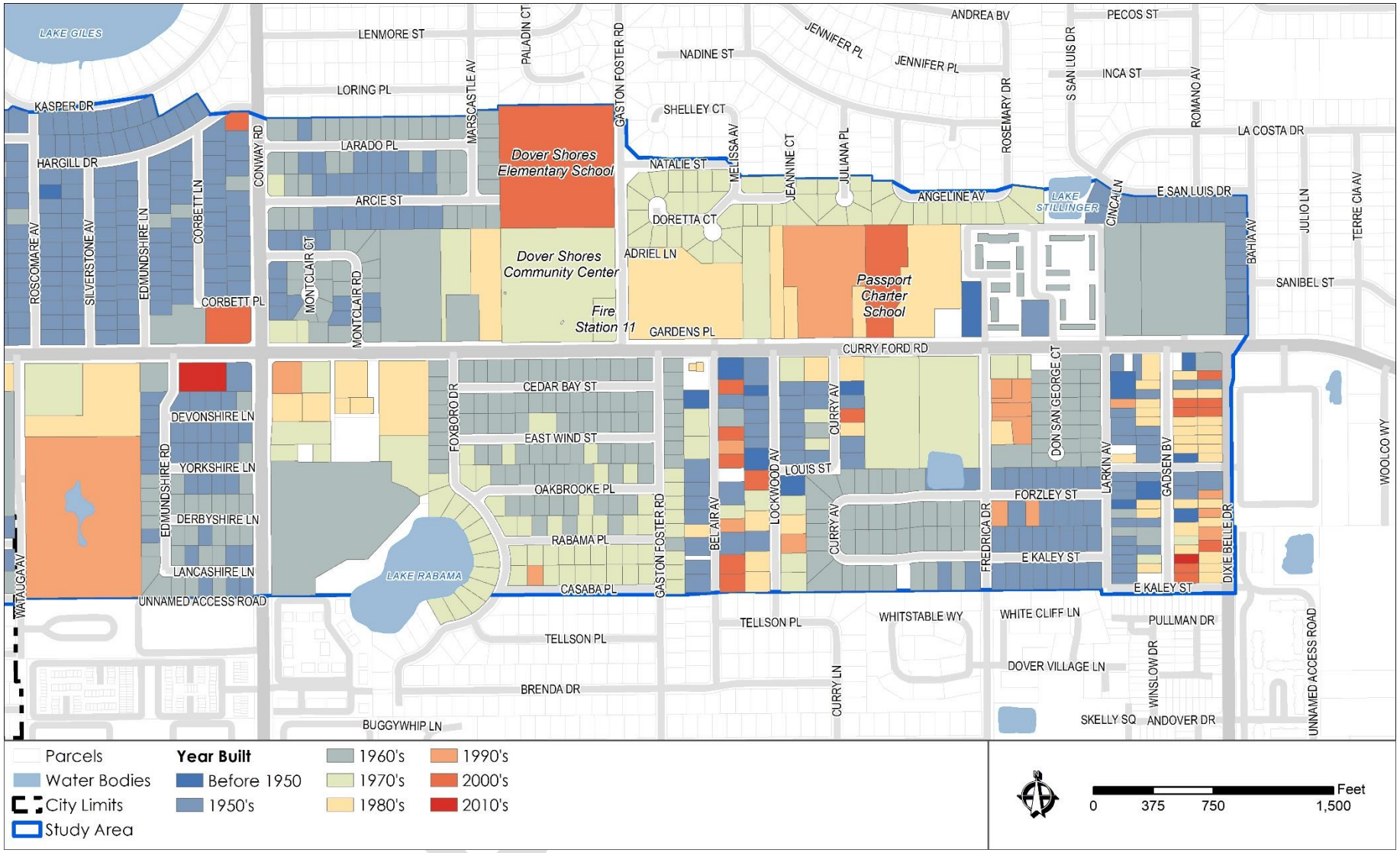
Property values were also reviewed to identify those parcels with a property value (per square foot) that falls within the bottom 20 percent of all nonresidential parcels in the study area. Numerous parcels within the study area are in this category. Some of the most visible parcels that do fall within this category include the Dover Shopping Center (Clemons, Charlies' Bakery) and the Conway Plaza (Publix) and surrounding sites (see **Map 32**).

Another factor taken into consideration for reviewing the potential for redevelopment is the land-to-building value ratio. When the land gets to be more valuable than the building, the potential for replacing the building grows stronger. Based on the age of the buildings in the area, it is no surprise that there are numerous sites with a ratio over 1 (see **Map 33**). The largest site in this category is a church site at the corner of Fredrica Drive and Curry Ford Road. This is a 4.59-acre site housing two buildings, a church building built in 1971 and a secondary building used for school in the past, built in 1982. The buildings are connected by a breezeway. It has been under the same ownership since 1992.

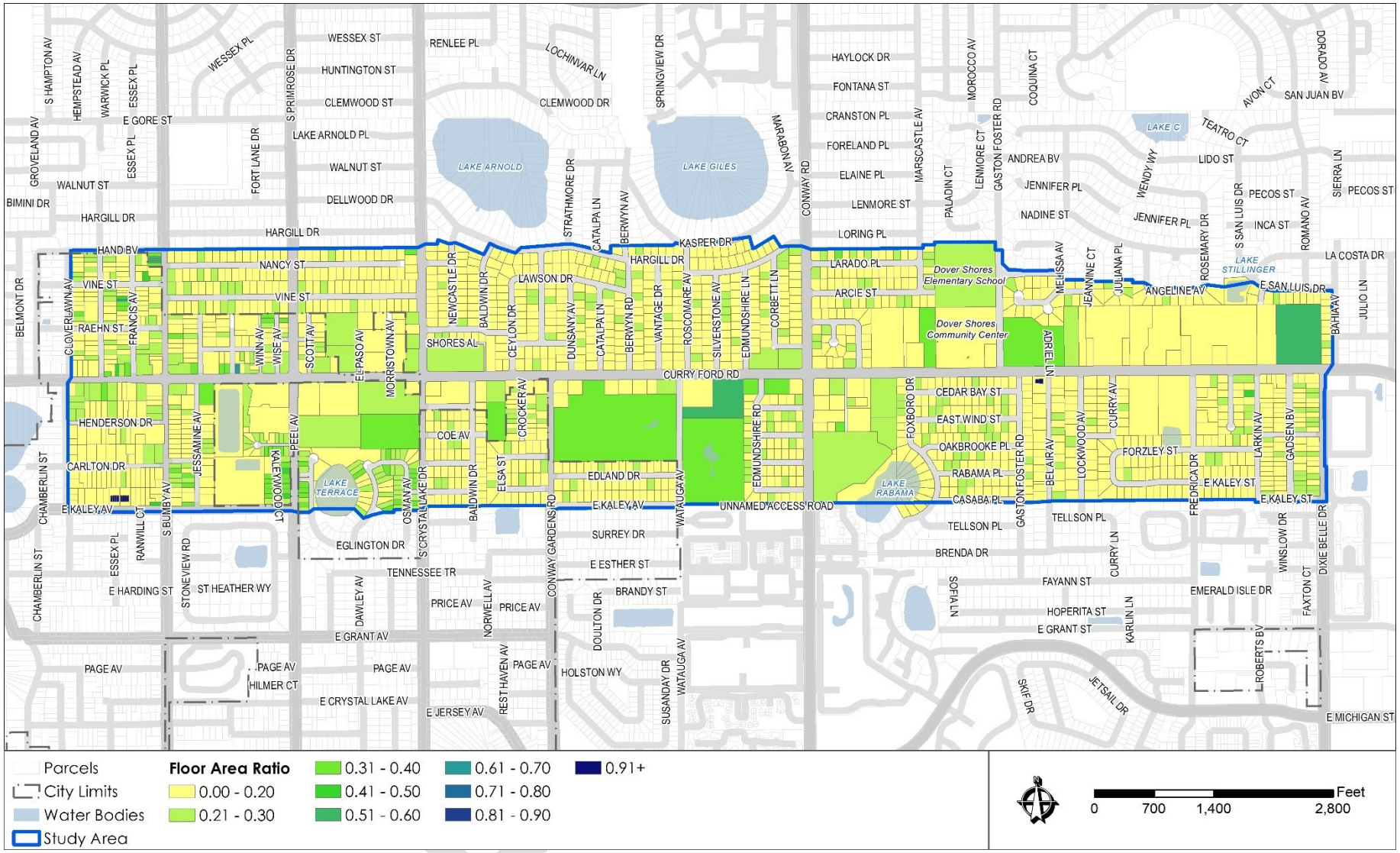
Map 27. Age of Buildings - West



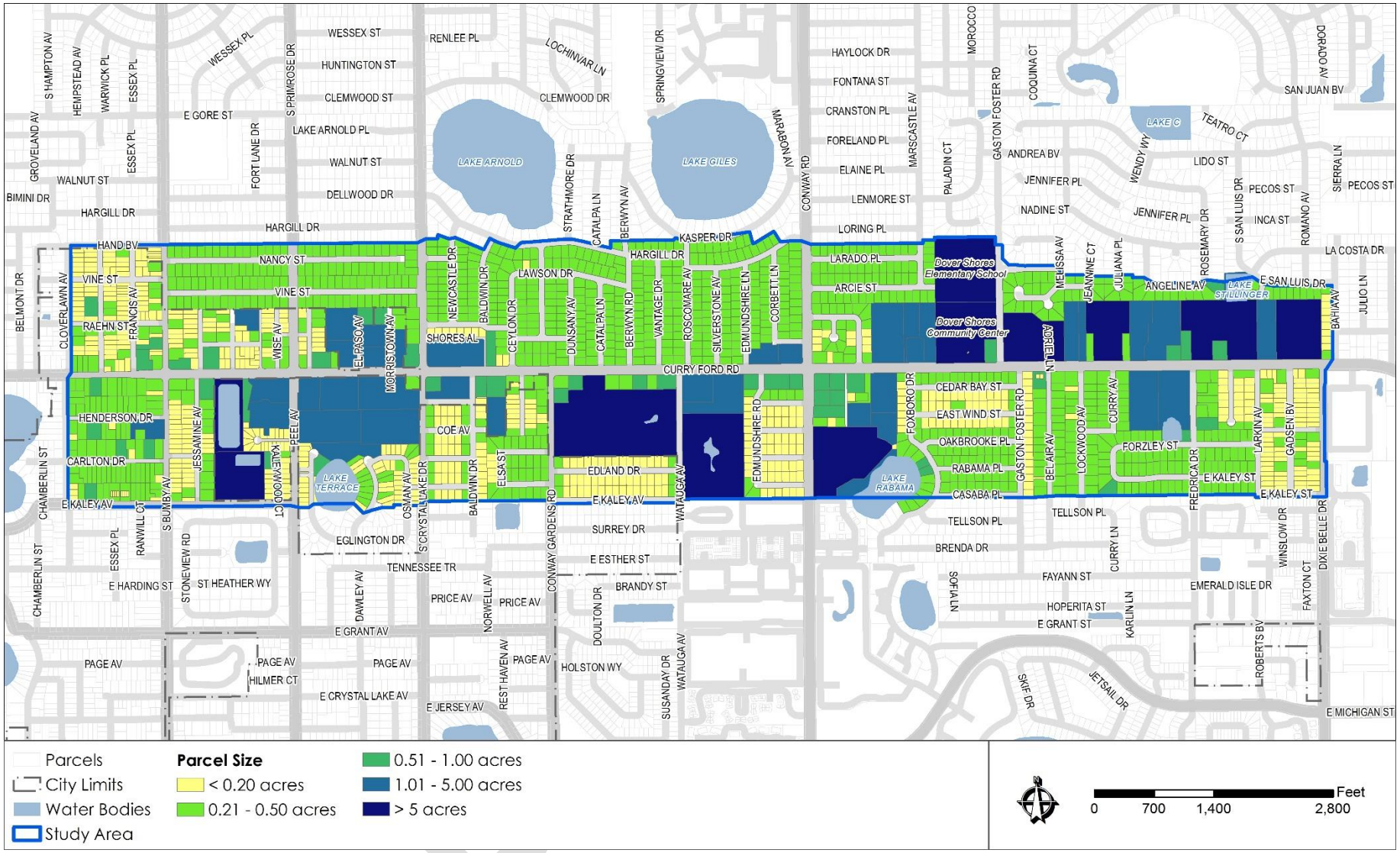
Map 28. Age of Buildings - East



Map 29. Development Intensity



Map 30. Parcel Size

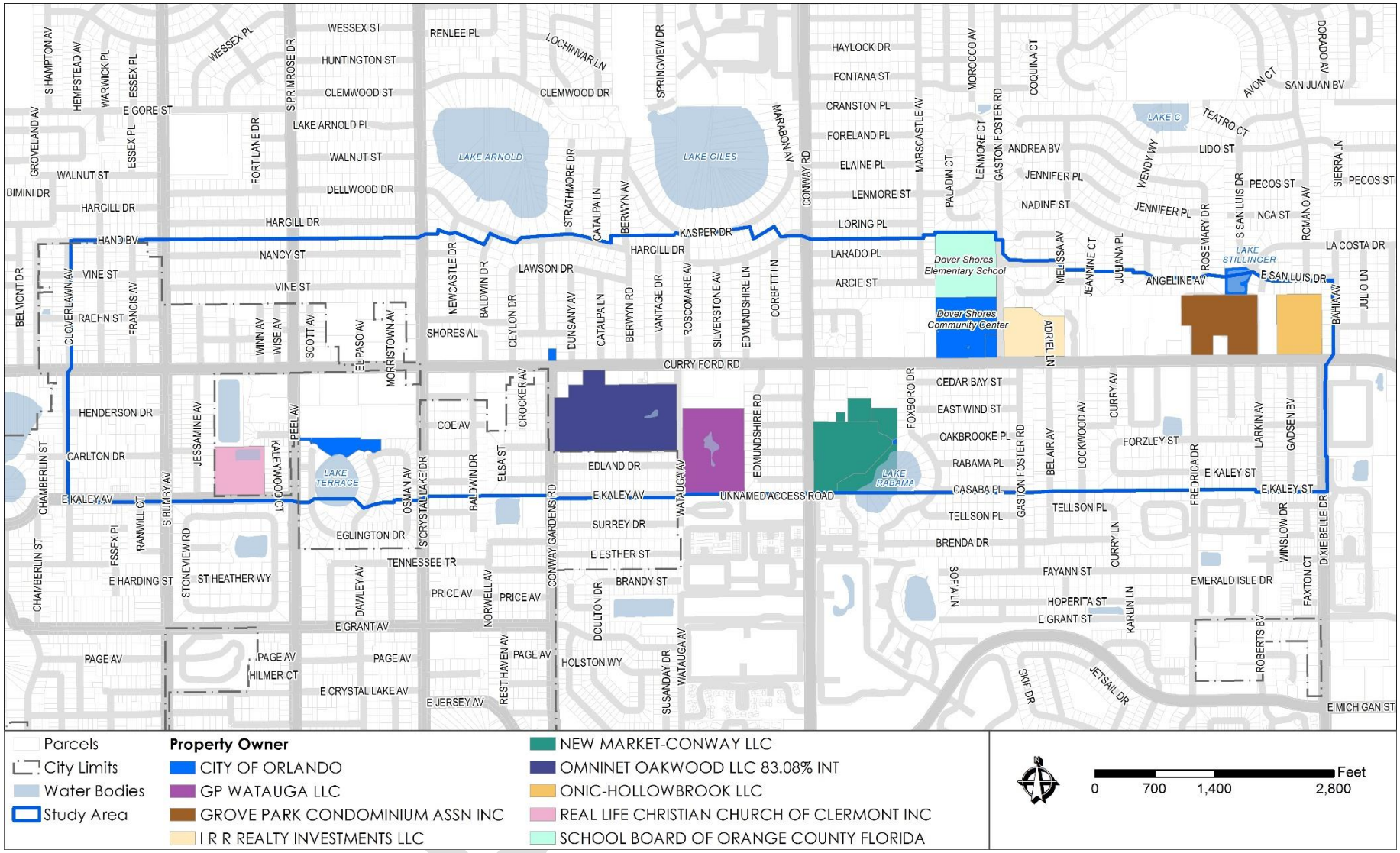


Parcels
City Limits
Water Bodies
Study Area

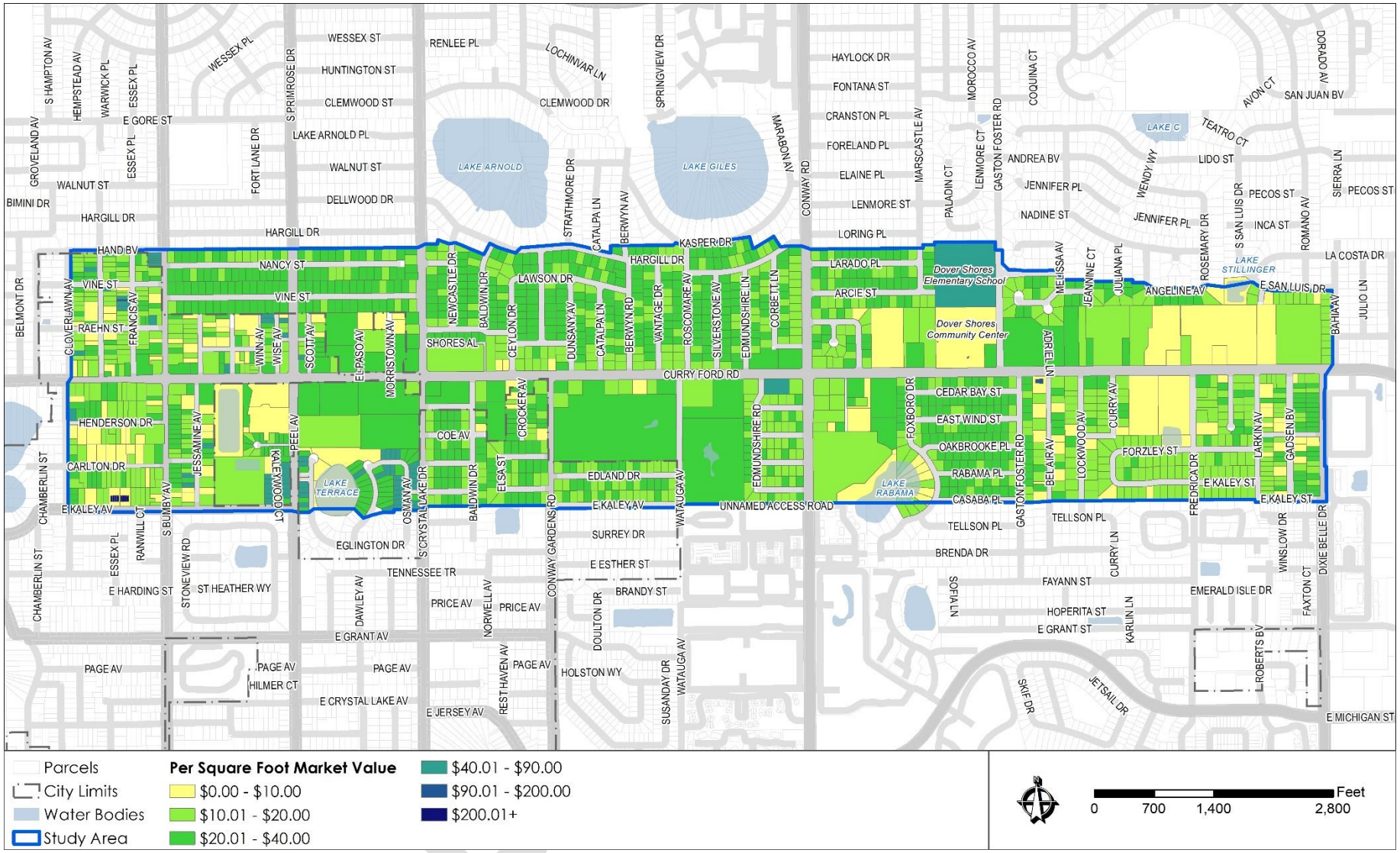
Parcel Size
< 0.20 acres
0.21 - 0.50 acres
0.51 - 1.00 acres
1.01 - 5.00 acres
> 5 acres

0 700 1,400 2,800 Feet

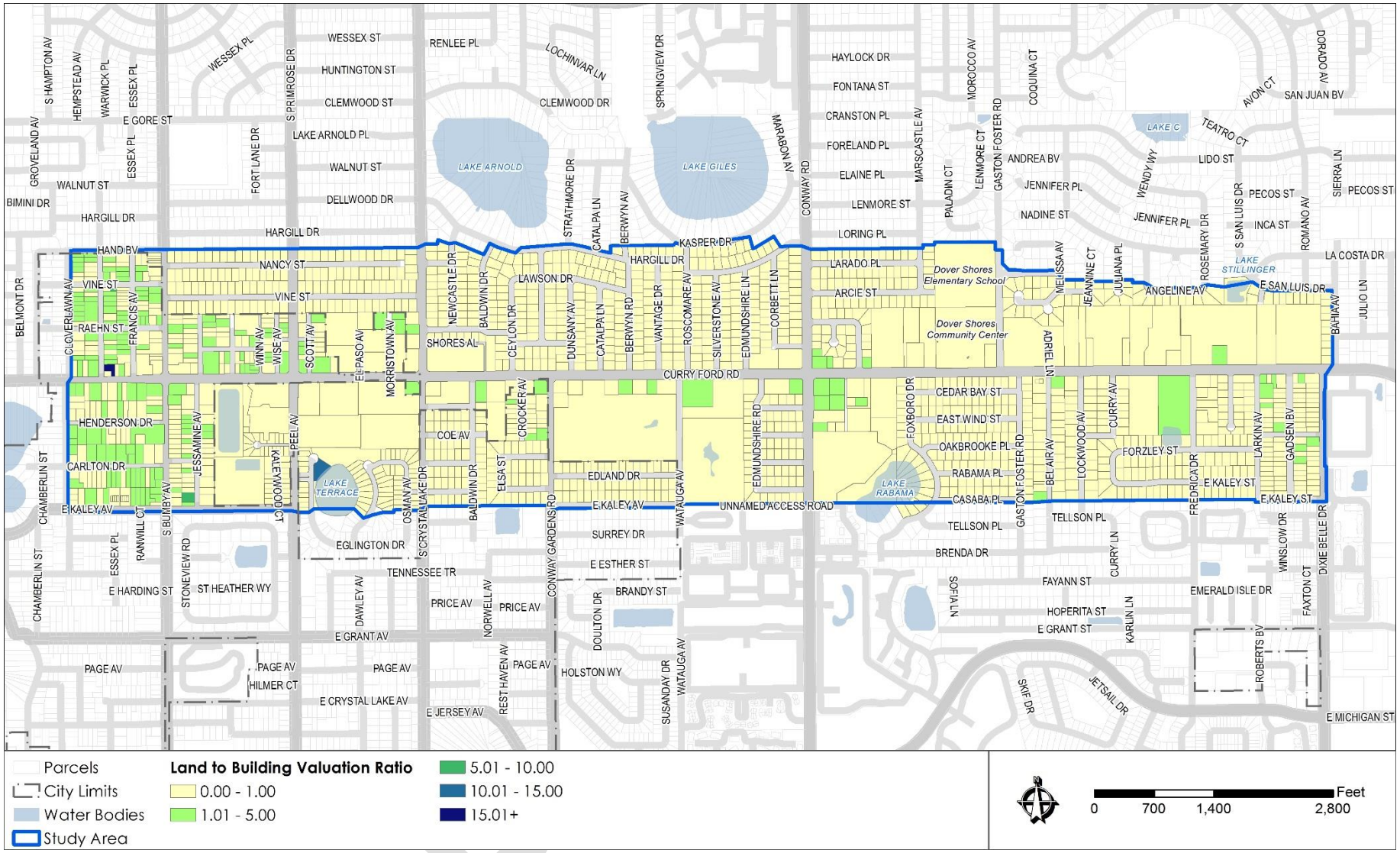
Map 31. Property Ownership of Largest Sites



Map 32. Property Values



Map 33. Land-to-Building Value Ratio



III. Development Scenarios & Associated Transportation Impacts

A. Development Scenarios

Two development scenarios were analyzed for the Curry Ford Study Area. This section outlines the assumptions used for each. The two development scenarios are as follows:

Scenario 1: Moderate growth, using the densities and intensities currently allowed in AC-1 (major nodes), MU-1 (corridors between nodes) and County C-1 (Bumby node) taking into consideration the wastewater infrastructure in the Bumby area.

Scenario 2: Substantial growth, using the density and intensity of any district(s) necessary to accommodate market demands, and assuming availability of wastewater infrastructure.

The maximum potential for **Scenario 1** was calculated by multiplying the acreage of all AC-1, MU-1 and the County C zoning districts times the maximum density and FAR allowed by each, and applying a "reduction" factor (15%) to account for the fact that not all the sites will redevelop, and those that will, may not redevelop at the maximum density/intensity allowed (see **Table 13**). The FAR in the Bumby area was also lowered from 3.0 to 1.0 (the 3-story building height restriction if within 100 ft. from residential in addition to stormwater and parking requirements make that 3.0 FAR nearly impossible to attain). The City does not include the residential units as part of the FAR, so the acreage was "double-counted" for residential and non-residential. Based on these assumptions, ***Scenario 1 shows 3,890 residential units and a total of 3.1M sq. ft. of commercial and office*** (replacing the development that is there now).

For **Scenario 2** (see **Table 14**), the maximum development potential was calculated assuming that the Bumby node will be rezoned to MU-1 and the other nodes and corridor will keep their current zoning but multiplying the combined acreage times the *bonus* density and FAR. In this scenario, the "reduction" factor is still applied. Based on those assumptions, ***Scenario 2 shows 6,350 residential units and a total of 4.1M sq. ft.*** of commercial and office (replacing the development that is there now).

The population projections prepared for this area by the City are very conservative. They show that the area will only grow by about 400 people by 2040. They are based on proposals for development that have been brought to the attention of the City, and the availability of sites for redevelopment. However, with the recent development activity and the renewed interest in the area, the area's population growth increase in the future, as shown graphically on the development scenarios included in **Appendix F**.

Table 13. Scenario 1 – Moderate Redevelopment

Zoning	Acres	Density	Intensity	Dens/Intensity Factor	Residential Share	Residential Units	Retail Share	Office Share	Retail Sq. Ft.	Office Sq. Ft.	Total Sq. Ft.
AC-1	64.20	40	0.70	0.85	0.70	1,528	70%	30%	1,164,764	499,185	1,663,948
MU-1	14.60	30	0.50	0.85	0.70	261	70%	30%	189,203	81,087	270,290
O-1	36.71	21	0.40	0.85	0.50	328	20%	80%	108,738	434,952	543,690
R-3B	99.39	21	0.30	0.85	1.00	1,774	0%	0%	-	-	-
C-1*	15.70	0	1.00	0.85	0.00	-	70%	30%	406,916	174,392	581,308
C-2*	3.10	0	1.00	0.85	0.00	-	70%	30%	80,346	34,434	114,781
TOTAL	**233.70**					**3,890**			**1,949,967**	**1,224,050**	**3,174,017**

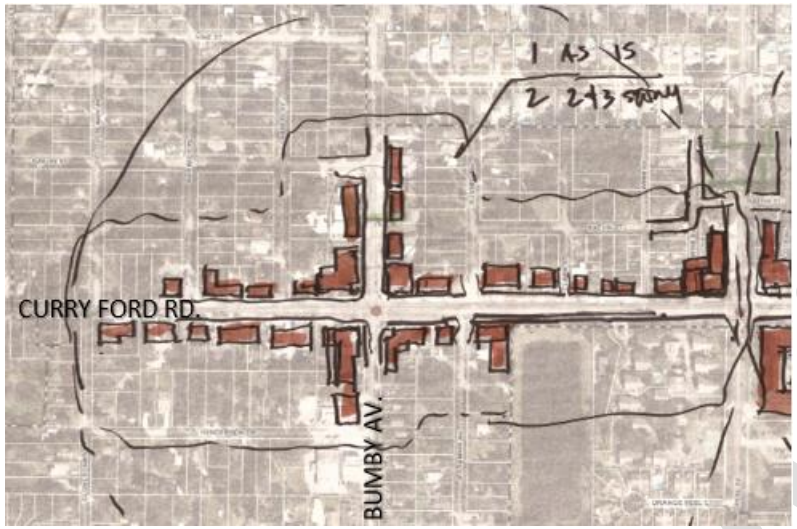
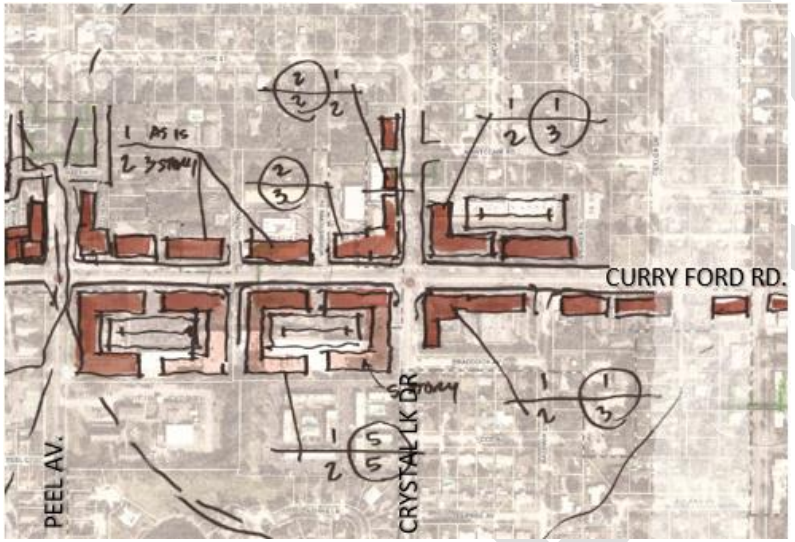
* County Zoning

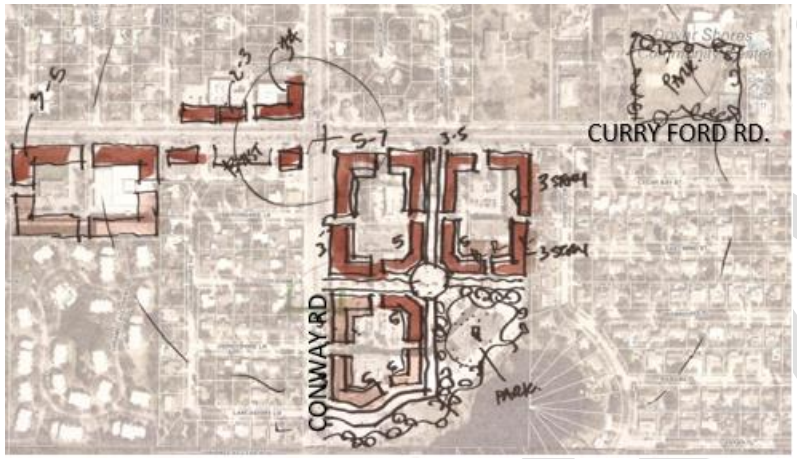
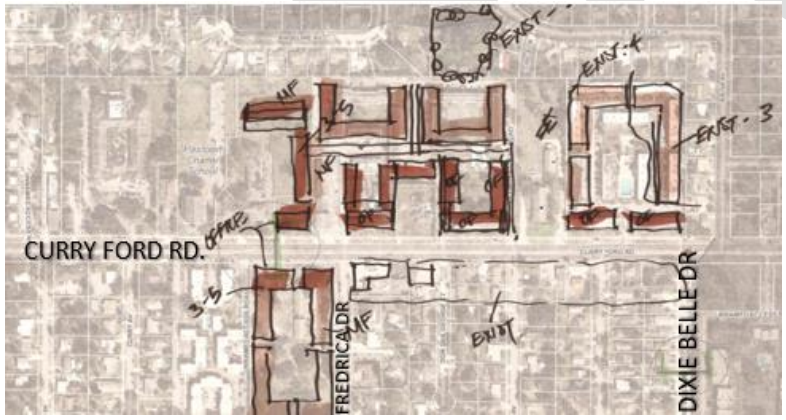
Table 14. Scenario 2 – Aggressive Growth

Zoning	Acres	Density	Intensity	Dens/Intensity Factor	Residential Share	Residential Units	Retail Share	Office Share	Retail Sq. Ft.	Office Sq. Ft.	Total Sq. Ft.
AC-1	64.20	80	1.00	0.85	0.70	3,056	70%	30%	1,663,948	713,121	2,377,069
MU-1	33.40	60	1.00	0.85	0.70	1,192	70%	30%	865,668	371,001	1,236,668
O-1	36.71	21	0.40	0.85	0.50	328	0.20	0.80	108,738	434,952	543,690
R-3B	99.39	21	0.30	0.85	1.00	1,774	0.00	0.00	-	-	-
TOTAL	**233.70**			0.85		**6,350**			**2,638,354**	**1,519,073**	**4,157,427**

* Acreage includes properties currently zoned C-1 and C-2.

SCENARIOS

		Scenario 1	Scenario 2
BUMBY NODE		The area will continue redeveloping the same way it has in the past couple of years. One-story buildings placed close to the street.	The area will be rezoned to AC-1 but will not be able to realize the full development potential allowed as the area is surrounded by single family residential (County code restricts building height of buildings adjacent to residential uses). The area will have 2 and 3 story buildings with retail, office and maybe some mixed-use developments.
CRYSTAL LAKE NODE		**NW Quadrant:** The 2-story office building at El Paso Avenue/Curry Ford Road and Wawa would stay. The rest will redevelop at 2 stories **NE Quad:** Shows the Clemons shopping center redeveloping at 1 story but close to the street (no difference for square footage calculation purposes). **SE Quad:** The CVS site redevelops with 1 story buildings close to the street. **SW Quad:** The Winn Dixie and adjacent shopping centers redevelop with 5 stories mixed-use buildings.	Two and 3 story buildings with retail, office and small mixed-use developments on the north side of Curry Ford Road, 3 stories on the SE quadrant, and 5-story mixed-use buildings on the SW quadrant. Lighter color (south portion of U-shape buildings) represents residential use.

		Scenario 1	Scenario 2
CRYSTAL LK TO CONWAY		**North Side:** No change **South Side:** 2-story buildings, with 3 stories approaching Watauga Avenue, and a mixed-use development where the Wells Fargo bank is today.	Same as Scenario 1, except for additional two stories at the bank site for mixed-use. Lighter color (south L-shape buildings) represents residential use.
CONWAY ROAD		**NW Quadrant:** The CVS and adjacent shopping center would redevelop at 2 stories (adjacent to SF residential). **NE Quad:** No change (sites not large enough) **SE Quad:** The Publix shopping center and adjacent sites shown as the most dense and intensive development in the area. Requires site aggregation but has the best potential to make a difference in the area. Mix of 3 and 5 stories. **SW Quad:** No change for Walgreens, Single building replacing smoke shop.	**NW Quadrant:** Same as scenario 1 with potential for 3 stories (away from SF). **NE Quad:** No change (sites not large enough) **SE Quad:** Mix of 3, 5 and 7 stories with tallest buildings away from residential. Note potential for main street setting and park, **SW Quad:** Same as scenario 1.
DIXIE BELLE		Shows the current apartment complexes redeveloping with a more urban form. Also shows office development. 3 stories for scenario 1. Note existing public park on north side.	Same as scenario 1 with 3 to 5 stories depending on distance from SF.

B. Projected Travel Demand

Based on two development scenarios, Future Development Scenario 1 and Future Development Scenario 2, 2040 travel demand was projected for the additional development and background traffic growth utilizing a 21-year projection.

To develop the 2040 Design Year traffic volumes, annual average traffic-growth percentage along the corridor was determined. Historical annual average daily traffic (AADT) data was collected by Florida Department of Transportation (FDOT)[4] along Curry Ford Road in the City of Orlando in two areas; east of Conway Road and west of Conway Road.

Historical traffic-volume data along the corridor indicate that, on average, traffic volumes have generally decreased approximately 0.7% annually since 2014 west of Conway Road and have generally increased approximately 1.0% annually east of Conway Road. Based on the historical AADT collected, on average, traffic volumes along the corridor have increased approximately 0.1%. This 0.1 percent rate compounded annually was applied as a 2% total over 21 years to the 2019 base year traffic volumes to project future conditions. The annual growth rate calculations utilizing the FDOT historical traffic-volume data are provided in **Appendix G**.

1. Trip Generation

Traffic that may be generated by potential future development was projected for the future design year 2040 for two development scenarios. Details regarding the use and size of the potential redevelopment along Curry Ford Road, between Cloverlawn Avenue and Dixie Belle Drive, are explained above in subsection A. The proposed neighborhood redevelopment land uses, and sizes were then further broken down by street block between the study area intersections.

Based on a review of information and data provided in the Institute of Transportation Engineers (ITE) *Trip Generation Handbook*[5] and the ITE *Trip Generation Manual*[6], land use codes (LUCs) 110 (General Light Industrial), 220 (Multifamily Housing (Low-Rise)), 560 (Church), 710 (General Office Building), and 820 (Shopping Center) were determined to be the most appropriate for estimating future trips within the Curry Ford study area. Trips associated with the development scenarios were projected with these standard ITE LUCs rates and equations and utilizing the "Infill Development" approach from the *Trip Generation Handbook* to calculate person trips and non-motorized trips. This approach relies on the fact that this is a walkable area, has a mix of interacting uses, and assumes a planned bicycle network providing mode alternatives for those traveling to, from, and within the study area.

Not all of the vehicle trips expected to be generated by the proposed neighborhood redevelopment represent *new* trips on the study area roadway system. A substantial portion of the site-generated vehicle trips are already present in the adjacent passing stream of traffic (pass by traffic) or are diverted from another route to the proposed site. Additionally, trips to a site that include multiple purpose land use types, residential, commercial and retail, can 'internally capture' a certain percentage of trips because those trips never leave the site moving from residential to retail, or commercial to retail, etc., all are within the same site. National Cooperative Highway Research Program (NCHRP) 864 Internal Trip

[4] Florida Traffic Information Data Web Application; https://tdaappsprod.dot.state.fl.us/fto/
[5] *Trip Generation Handbook, Third Edition: an ITE Recommended Practice*. Washington, D.C.: Institute of Transportation Engineers, 2017.
[6] *Trip Generation Manual, 10th Edition.* Washington, DC: Institute of Transportation Engineers, 2017.

Capture Estimation Tool spreadsheets were utilized in order to project how many trips to and from the study area will be performed internally within the study area.

Table 15. Trip Generation Summary

		Scenario 1		Scenario 2	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Vehicle Trips[1]	Entering	1,158	615	1,793	1,277
	Exiting	767	749	1,467	1,467
Transit Trips	Entering	152	95	301	250
	Exiting	109	131	282	307
Pedestrian Trips	Entering	53	57	132	177
	Exiting	63	60	201	164
Bicyclist Trips	Entering	53	57	132	177
	Exiting	63	60	201	164
Total Trips		**2,418**	**1,824**	**4,509**	**3,983**

1 Vehicle Trips include single-occupancy vehicle trips and carpool vehicle trips

As shown in **Table 15**, Future Development Scenario 1 is projected to generate approximately 2,200 trips during the weekday morning peak hour period and approximately 1,700 trips during the weekday evening peak hour period. Future Development Scenario 2 is projected to generate approximately 4,200 and 3,700 trips during the weekday morning and weekday evening peak hour periods, respectively.

2. Trip Distribution

The distribution of new site traffic on the area roadways is based on existing travel patterns of vehicles entering and exiting the neighborhood study area. With regards to trips accessing and egressing specific development sites, it was assumed that the individual development site driveways would operate right-in/right-out/left-in to and from Curry Ford Road. Motorized trips egressing the development sites and turning left onto Curry Ford Road, must do so via the intersecting side streets. Based on the traffic generation and distribution estimates for the neighborhood redevelopment project, the traffic volumes associated with the proposed development were assigned to the roadway network.

Table 16. Development Trip Distribution Summary

	Entering Study Area	Exiting Study Area
Curry Ford Road – West	8%	9%
S. Bumby Avenue – North	3%	6%
S. Bumby Avenue – South	3%	6%
Peel Avenue – North	6%	8%
Peel Avenue – South	3%	2%
S. Crystal Lake Drive – North	6%	9%
S. Crystal Lake Drive – South	4%	4%
Conway Gardens Road	7%	5%
Conway Road – North	8%	7%
Conway Road - South	11%	8%
Gaston Foster Road	7%	7%
Frederica Drive	2%	2%
Dixie Belle Drive	4%	5%
Curry Ford Road - East	28%	22%

3. Network Analysis

To analyze network performance, a comparison analysis was performed between the existing condition and Future Development Scenario 1 and Future Development Scenario 2. Six traffic models were created in Synchro, a traffic operations modeling software, and are listed below:

- Existing Condition AM
- Existing Condition PM
- Future Development Scenario 1 AM
- Future Development Scenario 1 PM
- Future Development Scenario 2 AM
- Future Development Scenario 2 PM

The Existing condition model was created using the collected traffic data, counts, and turning movements. The two future development models utilized the existing conditions models and updated traffic volumes based on the trip generation and assignment formulated during the travel demand process previously detailed herein.

A summary of the intersection Level of Service (LOS) for all of the models are shown in **Table 17**. The LOS Measure of Effectiveness (MOE) is based on percent of available capacity and uses a letter grade A-F to denote the perceived performance of the intersection. The designation of LOS A would indicate an intersection operating with little or no delay, while the designation of LOS F would indicate an intersection that may have some movements operating above capacity with longer delay. The Designation of LOS E is near the theoretical capacity of the intersection. The LOS for each movement in each of the intersections is included in **Appendix G**.

Table 17. Preliminary Intersection LOS

	Bumby @ Curry Ford Rd.		Primrose/Peel @ Curry Ford Rd.		Crystal Lake @ Curry Ford Rd.		Conway Gardens @ Curry Ford Rd.		Conway @ Curry Ford Rd.		Gaston @ Curry Ford Rd.		Fredrica @ Curry Ford Rd.		Dixie Belle @ Curry Ford Rd.	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Existing	C	C	D	D	C	D	B	C	D	F	D	C	B	B	B	B
Scenario 1	C	D	E	E	F	E	C	C	F	F	D	C	B	B	C	C
Scenario 2	D	D	F	F	F	F	C	D	F	F	D	C	B	C	D	C

Note: LOS analysis based on HCM 6th Ed methodology.

Table 18. Preliminary Intersection Average Delay

	Bumby @ Curry Ford Rd.		Primrose/Peel @ Curry Ford Rd.		Crystal Lake @ Curry Ford Rd.		Conway Gardens @ Curry Ford Rd.		Conway @ Curry Ford Rd.		Gaston @ Curry Ford Rd.		Fredrica @ Curry Ford Rd.		Dixie Belle @ Curry Ford Rd.		Total Delay		Difference Between Existing and Scenario Delay	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Existing	00:24	00:29	00:42	00:43	00:35	00:46	00:18	00:25	00:47	01:46	00:48	00:23	00:14	00:13	00:15	00:15	04:02	04:59		
Scenario 1	00:26	00:45	00:59	01:01	01:22	01:14	00:33	00:20	01:43	01:50	00:42	00:22	00:08	00:09	00:34	00:33	06:26	06:12	02:25	01:13
Scenario 2	00:45	00:43	01:42	01:24	02:03	03:00	00:33	00:38	02:14	02:21	00:45	00:25	00:10	00:30	00:54	00:23	09:07	09:23	05:05	04:24

Note: Delay analysis based on HCM 6th Ed methodology.
00:00 = Minutes:Seconds

The LOS is directly related to the average delay that any trip may experience. The analysis presented herein represents peak hours of the day, therefore average delay would be less or non-existent in the off-peak hours. **Table 18** lists the average delay for the intersections in the study area for the existing condition and the future development conditions in a 'minute:second' format. The comparative analysis shows the average delay increase between the existing condition and the 2040 future development scenarios. The average time increase to travel the study corridor by scenario is listed below:

- AM – Additional delay between Existing and Future Development Scenario 1 – 2 minutes and 25 seconds.
- AM – Additional delay between Existing and Future Development Scenario 2 – 5 minutes and 5 seconds.
- PM – Additional delay between Existing and Future Development Scenario 1 – 1 minutes and 13 seconds.
- PM – Additional delay between Existing and Future Development Scenario 2 – 4 minutes and 24 seconds.

Based on the analysis, the corridor would not experience saturated conditions that lead to crippling delays in the future scenarios envisioned. The performance for the individual intersections is examined below:

a. Bumby Avenue at Curry Ford Road

The intersection at Bumby Avenue and Curry Ford Road shows acceptable operation in the existing condition and the future year development scenarios.

b. Primrose Drive/Peel Avenue at Curry Ford Road

The intersection at Primrose Drive/Peel Avenue and Curry Ford Road shows acceptable operation in the existing condition and the Future Development Scenario 1. However, the eastbound and westbound movements indicate over capacity conditions in the Future Development Scenario 2. The analysis indicates that this could be managed with coordinated signaling along the corridor.

c. Crystal Lake Drive at Curry Ford Road

The intersection at Crystal Lake Drive and Curry Ford Road shows acceptable operation in the existing condition and borderline operations in the Future Development Scenario 1. Several movements indicate over capacity conditions in the Future Development Scenario 2. The analysis indicates that this could be managed with coordinated signaling along the corridor.

d. Conway Gardens Road at Curry Ford Road

The intersection at Conway Gardens Road and Curry Ford Road shows acceptable operation in the existing condition and the future year development scenarios.

e. Conway Road at Curry Ford Road

The intersection at Conway Road at Curry Ford Road is a large east/west to north/south crossroads and has the highest volumes in the study corridor. The network analysis shows that the intersection is at or near capacity during the peak hours today. Based on this analysis, the intersection delay will increase into 2040. The high number of left turns to and from Curry Ford Road impacts the intersection performance, with the PM peak performing worse than the AM peak. Dual left turn lanes exist today on Conway Road northbound and southbound. It could be possible to extend and

add dual left turn lanes on Curry Ford Road eastbound and westbound. However, the addition of another turn lane would widen the pedestrian crossing area and, as the dual turn lanes on Conway show in the existing analysis, become saturated in the future. Based on the level of average delay, it is not recommended that additional left turn lanes are added as this would detract from the pedestrian and bicycle networks that should be encouraged within this corridor.

Future conditions may provide better operations than the future development scenarios show due to peak hour spreading and mode choice based on enhancements to the corridor travel modes. Peak hour spread occurs as conditions on the network induce longer delays at peak times of the day. Some trips leave a little earlier or later to avoid inherent delay. As the corridor changes and promotes pedestrian and bicycle travel modes, more vehicle trips should become pedestrian, bike, and transit trips.

f. Gaston Foster Road at Curry Ford Road

The intersection at Gaston Foster Road and Curry Ford Road shows acceptable operation in the existing condition and the future year development scenarios.

g. Fredrica Drive at Curry Ford Road

The intersection at Fredrica Drive and Curry Ford Road shows acceptable operation in the existing condition and the future year development scenarios.

h. Dixie Bell Drive at Curry Ford Road

The intersection at Dixie Bell Drive and Curry Ford Road shows acceptable operation in the existing condition and the future year development scenarios.

IV. Community Involvement

A. Online Survey

The Consulting Team developed and distributed a community survey via Survey Monkey that was available on the City's Curry Ford Vision Plan webpage from February 1, 2019, through May 7, 2019. During that time, 545 residents and business owners responded to the survey. See **Appendix H** for a summary of the survey results and the detailed response data.

B. Workshop #1/Walkabout

The first Curry Ford Vision Plan community meeting took place on Saturday February 2, 2019 at the Dover Shores Community Center from 9:30AM until 12:30PM. A total of 50 people signed in, not including commissioners and staff. The breakdown of the Kick-Off and Walkabout were as follows:

9:30 AM to 10:10 AM: Participants were greeted by Jason Burton. Commissioners Sheehan and Uribe also welcomed the participants. S&ME presented a PowerPoint introducing the Curry Ford Vision Plan project scope and schedule, and briefly covered background, City expectations, and future opportunities for public input. Walkabout instructions and safety recommendations were given by S&ME staff.

10:10 AM to 10:20AM: Participants were given the opportunity to choose the route they wished to walk. The participants split into groups and picked up their safety vests. Each route group included a leader/guide and a person in charge of taking notes.

10:20AM to 10:30AM: Traveled by foot or car to the route starting points. The City shuttled participants in the further routes to their starting points.

10:30AM to 11:30AM: Walkabouts took place and participants returned to the Community Center for the map activity portion of the meeting.

11:30 AM to 12:30 PM: Participants sat at one of six tables and with the help of a facilitator discussed their observations of the corridor and their desired improvements. One participant from each table presented their observations of corridor's limitations and potential improvements to the entire group. S&ME took notes on large notepads for all to see. After all the table representatives presented their groups' observations, workshop participants were given the opportunity to ask final questions, but none were posed.

Appendix I contains the details of the meeting and lists the most common issues raised by the attendees.

C. Workshop #2

The second Curry Ford Vision Plan community meeting took place on Tuesday, April 16, 2019 at the Dover Shores Community Center from 6:00 PM to 8:00 PM. A total of 72 people attended, not including commissioners and staff. The Consulting Team went through a PowerPoint presentation addressing the following topics:

1. Purpose of Workshop #2
2. Project Scope & Timeline
3. Workshop #1 Observations
4. Area Overview
5. Redevelopment Potential
6. Roadway Design
7. Public Input/Stations
8. Next Steps

After the presentation, workshop attendees were invited to visit four stations that were set up around the room for obtaining more detailed information regarding the topics discussed during the presentation. The stations were as follows:

- Land use, zoning and development scenarios
- Urban form, architecture and signs
- Roadway cross sections
- Online survey results and workshop #1 comments

After the attendees visited the stations and provided comments, they were invited to place green colored dots on any comments, graphics or maps that they liked the most, and red dots for items they liked the least. There were also markers and large notepads at each station for the public to provide comments. **Appendix I** contains the details of the workshop and lists the most common comments received.

D. Workshop #3

The third Curry Ford Vision Plan community meeting took place on Tuesday, July 2, 2019 at the Dover Shores Community Center from 6:00 PM to 7:30 PM. A total of 50 people attended, not including staff. The Consulting Team went through a PowerPoint presentation covering the following:

1. Purpose of Workshop #3
2. Project Scope & Timeline
3. Workshop Observations
4. Background Report
5. Vision Plan/Recommendations
6. Target Redevelopment Opportunities
8. Next Steps
7. Questions and Comments

The Consulting Team noted that the Vision Plan document will be made available online on July 8, and the public would have until July 22, 2019 to submit comments and questions to staff via mail or email. After the presentation, workshop attendees were invited to go to a member of staff/consulting team to ask questions or express comments about the Vision Plan. Comment sheets and information cards were also made available to all the attendees. **Appendix I** contains the notes and photos of the workshop.