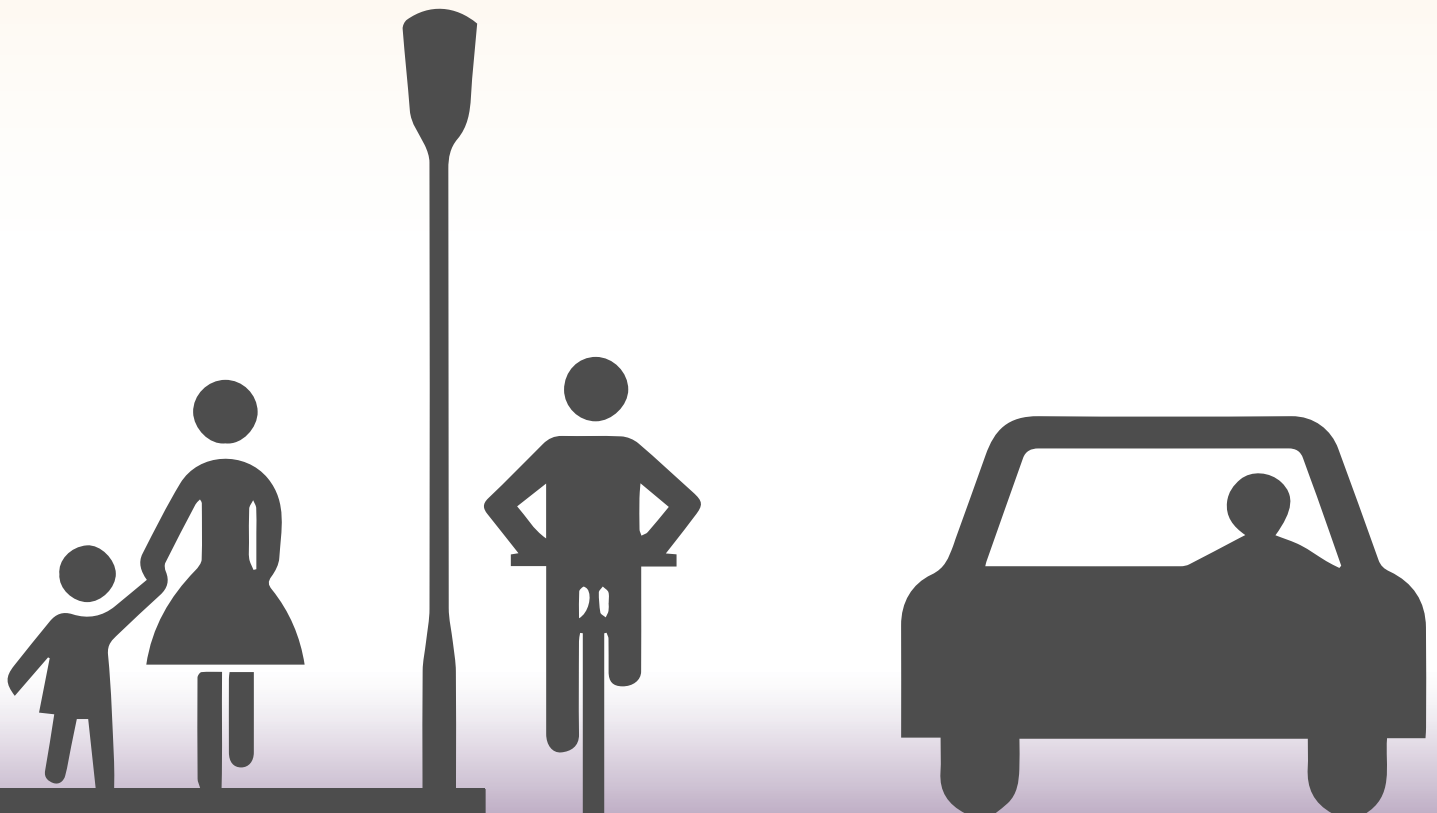


《《Big Bend Road》》 *PLAT STUDY*

Preliminary Land Use Assessment and Transportation Study


FINAL REPORT | OCTOBER 2019





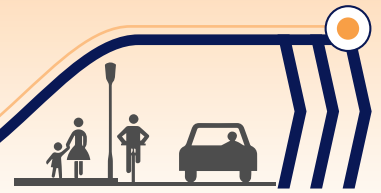
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Big Bend Road *PLAT STUDY*

Preliminary Land Use Assessment and Transportation Process



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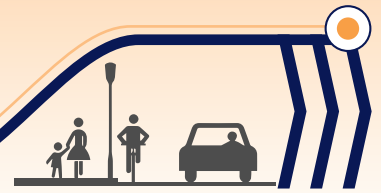
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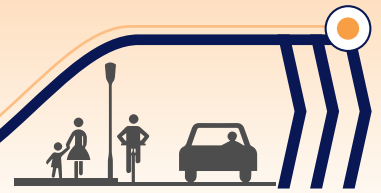
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Big Bend Road *PLAT STUDY*

Preliminary Land Use Assessment and Transportation Process



Understanding Baseline Conditions

1. Introduction and Purpose

The purpose of the study is to better understand the baseline factors (existing conditions), balance development pattern and form, and improve infrastructure along the Big Bend Road corridor as consistent with Hillsborough County's Framework for Preliminary Land-use Assessment and Transportation. Hillsborough County's Framework for the Preliminary Land Use Assessment and Transportation Process (PLAT Process) is an initiative to examine land use characteristics and economic, social, demographic and market trends along corridors that are planned for transportation improvements. It provides a bridge between the long-range planning phase and the mid-range engineering phase of a transportation project and allows an opportunity to examine the corridor in depth to identify opportunities for shaping/improving development, land use and infrastructure, prior to the Project Development and Environmental (PD&E) phase of a transportation project. This framework aims to examine a corridor or region in a proactive way to achieve optimal land use and community outcomes in accordance with transportation projects that may be taking place.

1.1 PLAT Process Components

The PLAT process has three components:

1. Understanding the baseline factors or existing conditions, of land use, transportation, demographics, travel modes, and origin-destination patterns
2. Creating optimal land use by leveraging planned/proposed transportation improvements
3. Integrating land use changes concurrent with transportation improvements

This section of the report will detail the existing conditions along Big Bend Road (the corridor) and within a 1-mile area adjacent to the roadway (study area). The results from this report, along with a public involvement process that will engage and seek input from stakeholders regarding their vision for the area, will help formulate ideas for development and infrastructure in the study area.



1.2 Study Objectives

Within the framework of the PLAT process, the specific objectives for the Big Bend Road study are:

- › **Identify context** of the Big Bend Road corridor and its immediate vicinity
- › **Build upon the community's vision** as included in previous planning efforts, analyses, and decisions such as the Comprehensive Plan and Community Plans
- › Engage the community and stakeholders through a variety of public participation methods in the **development of the optimum transportation investment** for the corridor
- › Ensure consistency with PD&E and other improvements for the I-75 interchange and surrounding area
- › Inform land use policy decisions surrounding the corridor to **add value to the community**
- › **Improve pedestrian and bicycle accessibility/safety and connectivity** within the study limits

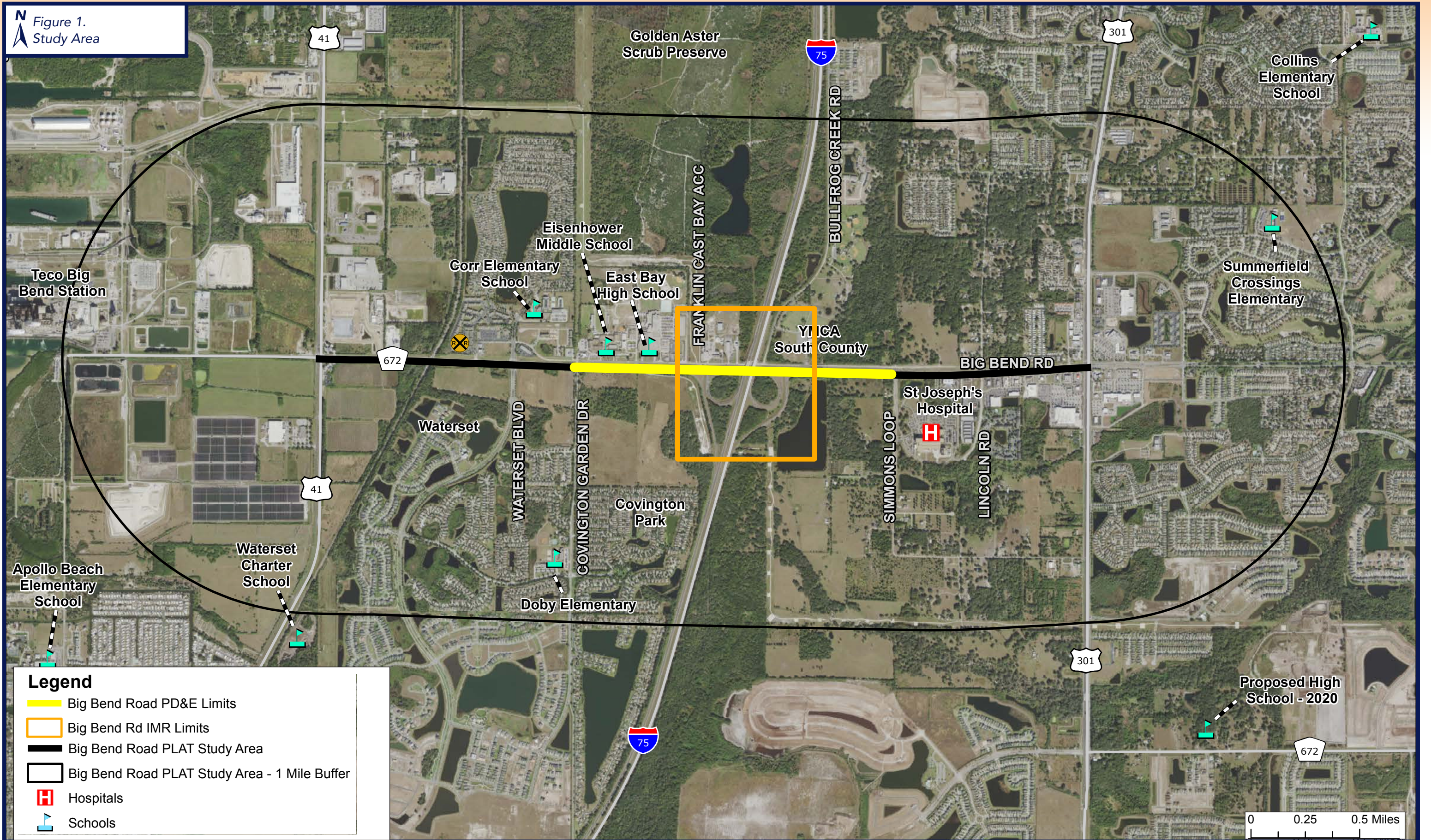
2. Study Area

The study area encompasses approximately a 3-mile segment of Big Bend Road from US 41 to US 301, the properties and land parcels bordering the corridor, as well as a 1-mile buffer around the corridor to include a sufficient area for studying community interaction, land use, and access management.

The study area falls within the communities of Gibsonton (north of Big Bend Road and west of I-75), Riverview (north and south of Big Bend Road, on the east side of I-75), and Apollo Beach (south of Big Bend Road, west of I-75). Figure 1 depicts the study area, including the key points of interest.



Figure 1.
Study Area



Legend

- Big Bend Road PD&E Limits
- Big Bend Rd IMR Limits
- Big Bend Road PLAT Study Area
- Big Bend Road PLAT Study Area - 1 Mile Buffer
- H Hospitals
- Schools

3. Previous Initiatives and Studies

Other previous plans, studies, and initiatives were reviewed to better understand the current conditions within the study area include:

- Southshore Areawide Systems Plan (2005)
- South Shore Transit Circulator Study (2014)
- Strip Commercial and Mixed-Use Development in Hillsborough County (2014)
- Tampa Hillsborough Greenways and Trails Master Plan Update (2016)
- South Coast Greenway Connector Trail Alignment Study (2018)
- Hillsborough County Metropolitan Planning Organization (MPO) Transportation Improvement Program
- Imagine 2040 Long Range Transportation Plan (LRTP)
- Comprehensive Plan for Unincorporated Hillsborough County
- Map – Transit Right-of-way Preservation Corridors

Map – Hillsborough County Corridor Preservation Plan The entire Big Bend Road study area falls within the Southshore Areawide Systems Plan area. This plan provides an overarching vision for the south Hillsborough County region with wide ranging objectives for Transportation, Environmental, Cultural, Historic, and Economic Development, as well as a concept plan map that identifies specific attributes.

There are also individual Community Plans for several communities within the Southshore area, providing insight into their perspectives and priorities. The Big Bend Road Study area falls within three of those communities: Apollo Beach, Riverview, and Gibsonton, as well as the general Southshore Area. Big Bend Road transects these community planning areas and serves as a border between these communities.

Apollo Beach Community Plan (2005): This plan covers the study area south of Big Bend Road and west of I-75, and provides vision and specific strategies for the US 41 and Big Bend Road corridors, development, and transportation infrastructure.

Riverview Community Plan (2005): The Riverview Community Plan includes the portion of the study area north and south of Big Bend Road east of I-75, excluding the portion west of Bullfrog Creek. In addition to a concept map that delineates unique districts, the plan contains goals and strategies for the community which includes the US 301 corridor and the US 301 and Big Bend Road intersection, and Summerfield area.

Gibsonton Community Plan (2007): A small portion of the Gibsonton Community Plan planning area overlaps with the Big Bend Road Study area, in the region north of Big Bend Road on the east and west side of I-75, approximately bounded by Bullfrog Creek on the east, including the area along I-75, and the East Bay High School and Eisenhower Middle School. Although the Gibsonton Community Plan does not discuss the study area specifically, its planning area does encompass a portion of the Big Bend Road study area, including the I-75 interchange area and a portion of Old Big Bend Road.

Although previous efforts studied different geographical boundaries and focus on different types of subject matter, there are common themes which run throughout these plans and reports:

- Improve safety for all modes by analyzing crash data and making improvements to specifically address causes for high crash locations
- Minimize traffic congestion by developing multi-modal alternatives and using technology to maximize the current roadway



- › Provide transportation choices for users improving sidewalk connections and filling gaps, adding bicycle facilities and offering more public transit options
- › Making connections for trails to provide better access and fill in gaps to create contiguous paths for recreational and non-recreational users
- › Enhancing or maintaining a “sense of place” for communities as the growth in southern Hillsborough County continues by adding gateway signage, landscaping, recreational and public spaces, as well as type and form of buildings future development
- › Support and encourage economic development by analyzing lands and sites available for economic development

An important part of the PLAT process is balancing these wide-reaching goals and objectives for the overall improvement at the corridor level within these geographic zones.

4. Community/Corridor Characteristics

Big Bend Road between US 41 and US 301 is a 4-lane divided roadway in southern Hillsborough County. There are commercial, residential, industrial, educational, and institutional (schools, medical/hospital) uses along the corridor, but also large areas of undeveloped parcels. The roadway is intersected by the following main crossings:

- › US 41 at the western limit of the study area
- › a CSX rail line with an at-grade crossing
- › Waterset Boulevard (entrance to the Waterset residential community)/Kings Lake Drive
- › Covington Gardens Drive
- › I-75
- › Simmons Loop
- › Lincoln Road
- › US 301 at the eastern limit of the study area
- › Sidepath trail along US 301
- › SouthCoast Greenway

4.1 Existing Socioeconomic and Demographic Conditions

4.1.1 Population Growth and Trends

Southern Hillsborough County has been experiencing high growth in population and an increase in development, with accompanying increase in traffic congestion over recent years. According to the Bureau of Economic and Business Research (BEBR) at the University of Florida, the April 2017 estimated population for Hillsborough County was 1,379,302. The 2017 estimate represented an increase of 150,076, or 12.2% over the 2010 census count of 1,229,226. BEBR’s 2040 projection for Hillsborough County population is 1,901,400, which is nearly the population of the state of Nebraska. For unincorporated Hillsborough County the population estimate for April 2017 was 941,536, an increase of 107,281 or 12.9% over the 2010 census count of 834,255 (Florida Estimates of Population, 2017, University of Florida, Bureau of Economic and Business Research). The study area has an estimated population of 16,553 people which is 1.25% of the total population in Hillsborough County. The population density of the study area is 2,117 people per square mile, or 3.3 people per acre, and is higher than the overall density in the county of 1,297 per square mile, or 2.02 people per acre.



According to the Hillsborough County City-County Planning Commission the census tracts in the southern part of the county are among the fastest growing areas of unincorporated Hillsborough County. While Hillsborough County overall grew approximately 12% from 2010 to 2017, census tracts in the Big Bend Road study area grew between 22% to 334%.

4.1.2 Wealth and Income

Within the study area, the per capita income level is \$24,900, which is about \$3,800 less than the average per capita income in Hillsborough County. Census tract data indicates an average of 8.9% of households in the study area are estimated to be below the poverty level (2016 American Community Survey, US Census). According to the Imagine 2040 Plan (Hillsborough MPO) 34% of the population in Hillsborough County has the potential to be transportation disadvantaged. The plan defines the transportation disadvantaged population as those with disabilities and/or who fall into low income categories and includes people 65 years of age and older. The Transportation Disadvantaged Program seeks to enhance mobility of residents for life sustaining trips, such as medical appointments, employment, and educational opportunities.

4.2 Existing Land Uses

There are multiple points of interest along the corridor and within the study area with various uses: residential, schools, recreational, commercial, medical, industrial, and environmental lands. There are three Developments of Regional Impact (DRI) in the study area: Waterset, South Bend, and Summerfield Crossings. The Big Bend Road Study area lies within the Urban Service Area Boundary and Figure 2 details the existing land use within the study area. Figure 3 depicts the land uses. Although under existing conditions there is a sizeable proportion of agricultural land, the planned future use of much of the existing agricultural land will be mixed use or industrial. This is discussed further in the Future Land Use Section.

Figure 2: Big Bend Road Study Area – Existing Land Use

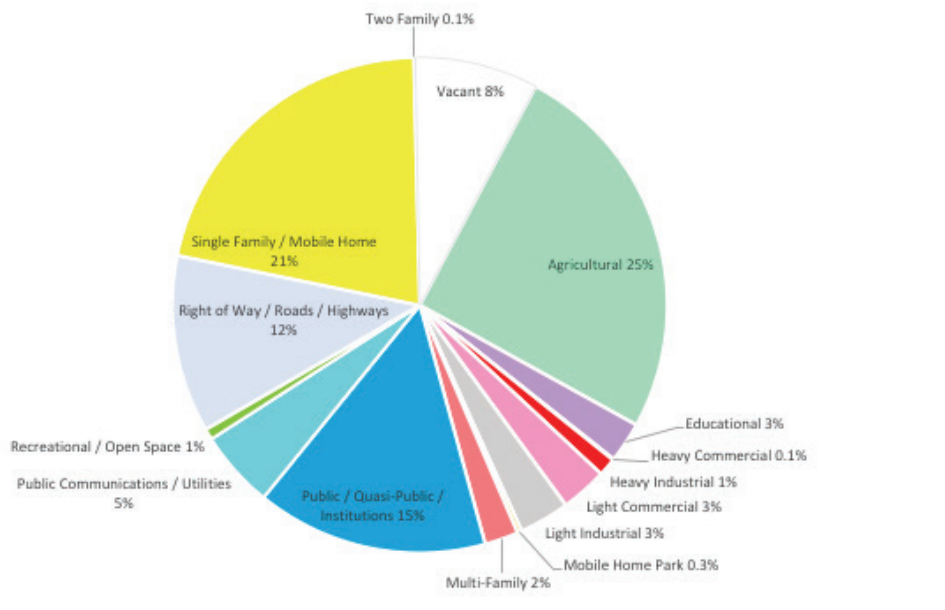
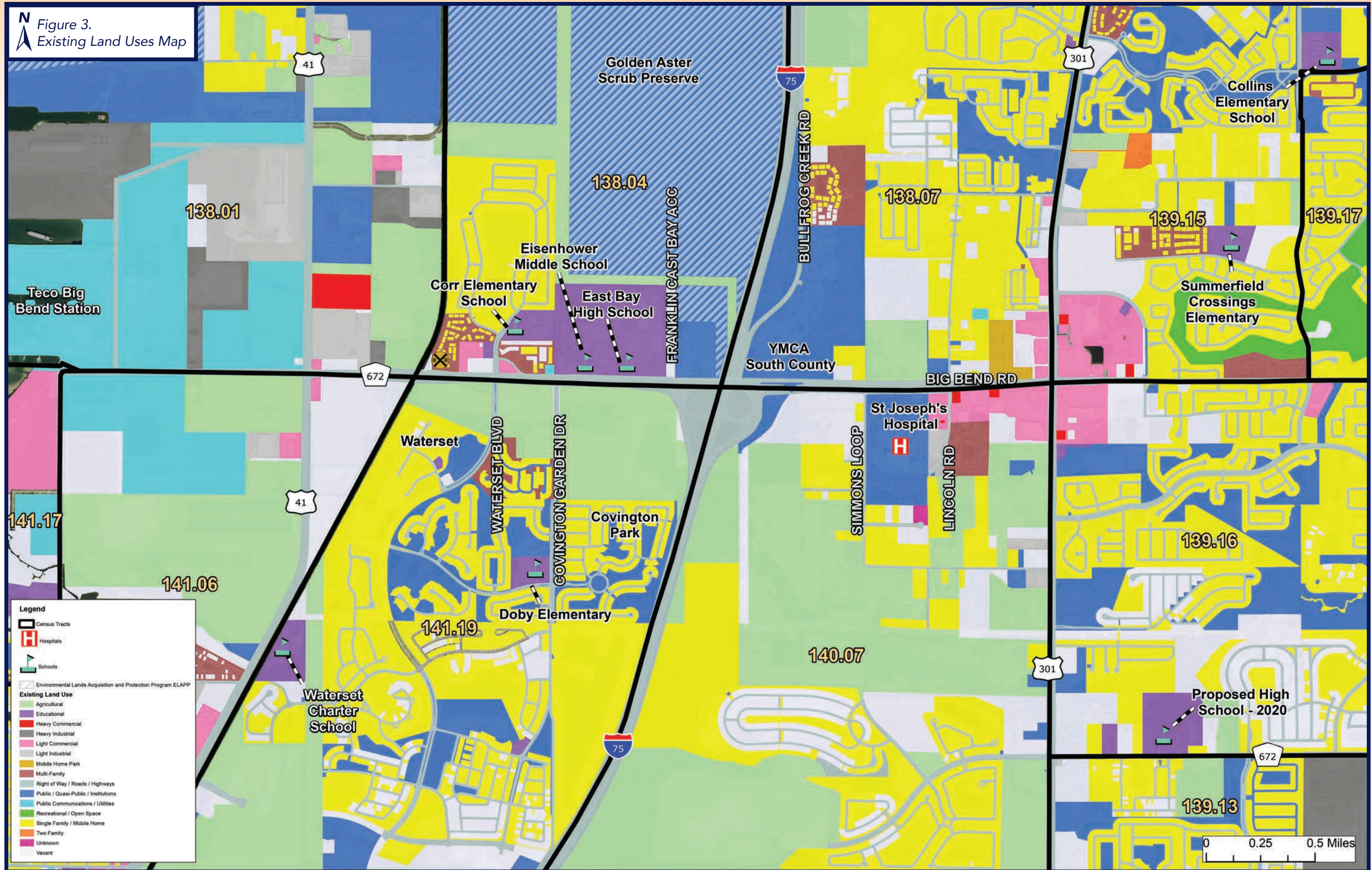


Figure 3.
Existing Land Uses Map



4.2.1 Residential

South of Big Bend Road on the western side of the study area lie the residential areas of Waterset and Covington Park. The Covington Park Community Development District was established in 1999. Waterset opened in 2012, after the development of the 2005 Apollo Beach Community Plan. The residential development of Waterset is part of a Development of Regional Impact (DRI) on the southern side of the western portion of the corridor, which is anticipated to extend to the south towards 19th Avenue in the future. Hillsborough County expects the Waterset development to complete buildout plans in 2027 with a total of approximately 6,400 dwelling units (single family and multi-family), approximately 478,000 square feet of commercial space, and 198,000 square feet of office space.

New multi-family housing in the form of an apartment complex is under construction on the south side of Big Bend Road and on the west side of Simmons Loop adjacent to St. Joseph's Hospital – South.

4.2.2 Schools

The study area includes five Hillsborough County public schools: Eisenhower Middle School, East Bay High School, Corr Elementary School, Doby Elementary, and Summerfield Crossings Elementary School. Additionally, a new high school is proposed to open in fall of 2020 on the north side of Balm Road about half a mile east of US 301 and 1.5 miles south of Big Bend Road, or approximately half a mile from the study area. The location of this new high school is outside the study area; however, students currently attending East Bay High School may be rezoned to the new high school and this could change traffic patterns in the area. The Waterset Charter School, a public charter school with an enrollment of approximately 800 students is located on the southeast side of US 41 and is just outside the boundary of the study area.

New school start and end times implemented at the beginning of the 2018 school year could also influence traffic patterns. The schools dismiss one hour early on Mondays.

Hillsborough County Schools schedule:

- Corr, Summerfield Crossings, and Doby Elementary: 7:40 – 1:55
- East Bay High School: 8:30 – 3:25
- Eisenhower Middle: 9:25 – 4:20

4.2.3 Recreational

To the east of I-75 on the north side of Big Bend Road there are recreational picnic areas and sports fields. Additionally, the Spurlino Family YMCA is located east of I-75 on Old Big Bend Road and is expected to be completed in 2018. This facility anticipates annual membership of approximately 2,900. It will draw families and individuals seeking to use the facility for fitness, aquatics, and community events and activities. It is expected to have more than 32,000 square feet of indoor space as well as an outdoor aquatic facility.

4.2.4 Commercial

Between Lincoln Road and US 301 is a commercial area with a variety of stores including: big-box retail, services, offices, and restaurants. These land uses occur on both sides of the roadway, and there are good internal connections provided between the properties to help traffic circulation.

A strip style commercial building with parking in front is located west of I-75 at the northeast corner of



the Big Bend Road and Kings Lake Drive intersection containing several retail, service, and restaurant businesses. On the west side of Kings Lake Drive and Old Big Bend Road, there is a complex with a daycare center, medical and service offices, as well as a gas station and convenience stores.

The intersection at US 41 has two gas stations with convenience stores and a landscape nursery. Future land use of light industrial and higher density mixed use, as well as Competitive Sites in the vicinity of this intersection may offer the opportunity for additional commercial growth here.

A proposed mixed-use retail, hotel, office, and restaurant complex known as Southshore Commons has been proposed for the 612 -acre South Bend DRI property on the southwest corner of the I-75 and Big Bend Road interchange, including up to approximately 1.6 million square feet of retail, almost 900,000 square feet of office space, 750 hotel rooms, and approximately 1,800 dwelling units.

4.2.5 Hospital

East of Simmons Loop on the south side of the corridor is St. Joseph's Hospital – South, a 114-bed hospital. St. Joseph's – South is undergoing expansion and renovation in two-phases; Phase 1 includes a new five-story building with an expansion to the emergency department with a completion date of April 2019, and Phase 2 which includes an addition of medical/surgical floors a neonatal intensive care unit (NICU), pediatric care rooms, and other spaces expected to be completed in December 2020. A Veterans Administration (VA) Outpatient Clinic off US 301 north of Big Bend Road is expected to open in 2019.

4.2.6 Industrial

There are several industrial facilities within the study area and around the study area boundaries that have an influence on traffic in the corridor:

- The TECO Big Bend Power Station is located on 1,500 acres at the western end of Big Bend Road.
- The Cemex Big Bend plant is located at 6002 Big Bend Road, on the north side of Big Bend Road, on the western side of the study area. This location is a ready-mix concrete facility.
- National Gypsum has a gypsum board plant within the study area. The facility uses solid waste byproduct gypsum from the TECO power plant to produce wallboard.
- BETER Mix Concrete Plant is located on 401 Big Bend Road, near the corner of Big Bend Road and US 41. This plant is a ready-mix concrete batching center.

Port Redwing is located north of the study area, on the western end of a peninsula on Pembroke Road. In September 2017, the Tampa Port Authority approved a bid to build a road on the peninsula. The road and infrastructure are expected to be completed in three years and may draw additional industrial and manufacturing uses to the area. There are four competitive sites on the Port Redwing peninsula which are outside the study area. These competitive sites may also serve to draw industrial and manufacturing uses to the area.

The Port Redwing/Big Bend Business District has been identified in the LRTP as a Key Economic Space; categorized as an activity center that has a high concentration of jobs and/or commercial development, typically at least 5,000 jobs as of 2010.



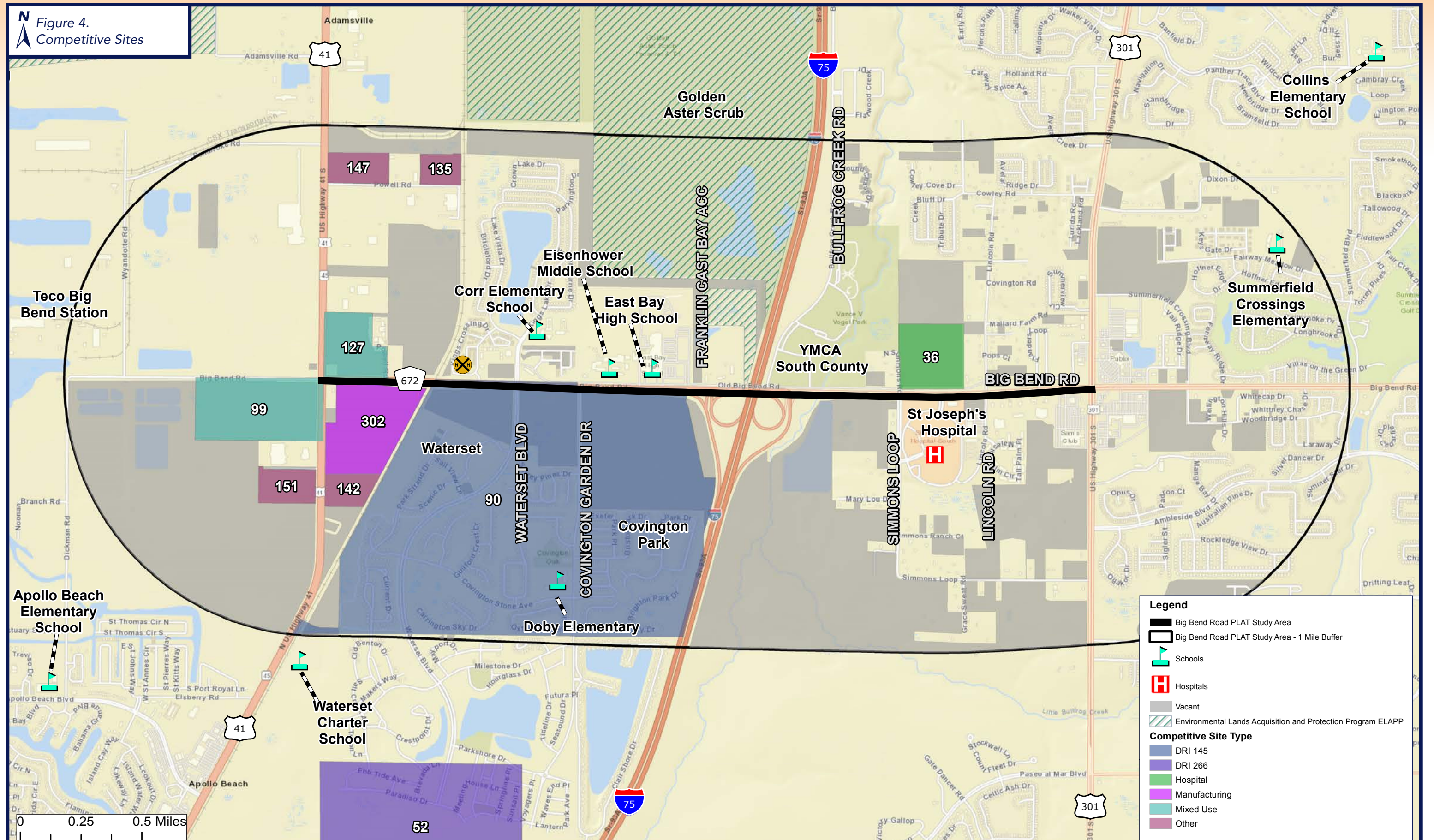
4.2.7 Planned Development and Competitive Sites

Planned Development (PD) districts are areas within the unincorporated county which can be rezoned for unified, large-scale, mixed uses. A Competitive Site (CS) is a location that the County has identified as having specific real estate attributes attractive to sizable industrial or office development. These attributes include size, zoning, land use, development entitlements, development complexity, and supporting infrastructure. The program is an initiative that not only identifies these potential sites but also crafts policies that encourage industry, investment and development of these locations. Figure 4 depicts these competitive sites.

- 36 Approximately 39 acres on north side of Big Bend Road north of St. Joseph's Hospital South
- 99 Boca Bahia Business Park, approximately 69 acres, located at southwest corner of US 41 and Big Bend Road
- 90 South Bend– approximately 618 acres, including residential areas of Waterset (approximately 32% of area), Covington Park (50% of area), and proposed South Shore Commons mall site (18% of area)
- 142 Approximately 15 acres between US 41 and the CSX rail line in southwest portion of study area
- 127 Approximately 33 acres on the northeast corner of US 41 and Big Bend Road intersection
- 151 Approximately 19 acres west of US 41, on the southwest end of the study area
- 147 Approximately 19 acres east of US 41, on the northwest side of study area
- 135 Approximately 12 acres near Powell Road and CSX rail line
- 302 Approximately 66 acres south of Big Bend Road between US 41 and CSX rail line



Figure 4.
Competitive Sites



Legend

- Big Bend Road PLAT Study Area
- Big Bend Road PLAT Study Area - 1 Mile Buffer
- Schools
- Hospitals
- Vacant
- Environmental Lands Acquisition and Protection Program ELAPP

Competitive Site Type

- DRI 145
- DRI 266
- Hospital
- Manufacturing
- Mixed Use
- Other

0 0.25 0.5 Miles

4.3 Environmental

A desktop analysis using available online GIS data was utilized in the assessment of the existing environmental conditions of the study area. Figure 5 depicts the environmental conditions of the study area. The Florida Natural Areas Inventory (FNAI) Rare Animals and Rare Plants field guides, United States Fish and Wildlife Service (USFWS) South Florida Ecological Services website, USFWS wood stork nesting colony database, USFWS National Wetland Inventory (NWI), Florida Fish and Wildlife Conservation Commission (FWC) May 2017 Florida's Endangered and Threatened Species List, FWC bald eagle nest locator database, FWC Florida Shorebird Database (FSD), Cornell University eBird database, Hillsborough County Current and Future Land Use, and FDOT Florida Land Use, Cover and Forms Classification System (FLUCFCS) were reviewed for protected species, and their habitat, that have been documented or have a potential to occur within or adjacent to the project limits.

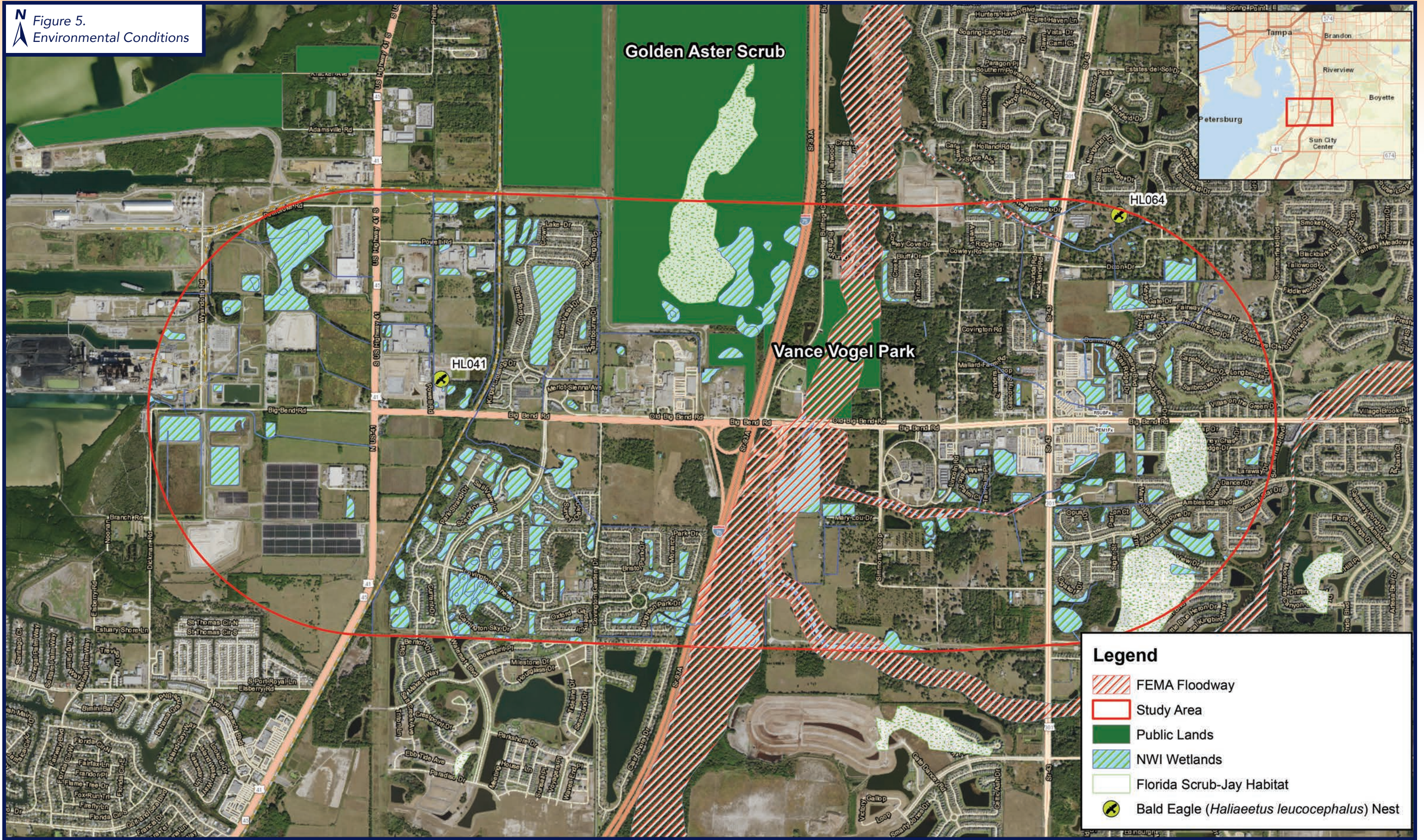
On June 7th, 2018, a field review was conducted to verify existing land uses and land cover within the project footprint, and to conduct a presence-absence survey for any listed species within the project study limits.

Nearby wetlands consist primarily of riverine and lacustrine systems, and there are minimal amounts of freshwater marshes located on the northern and western portion of the project. There are two public lands: Vance V. Vogel Park and Golden Aster Scrub Preserve ELAPP located within and adjacent to the northern portion of the study area, which provide outdoor recreational opportunities and wildlife viewing. According to the most recent FEMA data published in 2018, the study area contains 384 acres of floodplains.

Two state-listed species were observed indirectly interacting with the site during the time of the survey. A male southeastern American kestrel (*Falco sparverius paulus*) was observed perched on a powerline and hunting in the ecotone of nearby pine flatwoods. An adult Florida sandhill crane (*Antigone canadensis pratensis*) was observed foraging with a hatch-year juvenile in a grassy patch along the roadside. There is one active bald eagle (*Haliaeetus leucocephalus*) nest (HL064) and one inactive nest located within one mile of the study area. The project is within the USFWS consultation area for the Florida scrub-jay and the Florida grasshopper sparrow (*Ammodramus savannarum floridanus*). Golden Aster Scrub Preserve ELAPP contains suitable habitat and the verified presence of state and federally-listed species such as the Florida scrub-jay (*Aphelocoma coerulescens*) and Florida golden aster (*Chrysopsis floridana*). Habitat for the Florida grasshopper sparrow also exists within the project study limits; however, there have been no recent verified occurrences of this subspecies near Hillsborough County. The project falls entirely within the core foraging area for one wood stork (*Mycteria americana*) colony. It is not anticipated that any listed species will be negatively impacted because of the project.



Figure 5.
Environmental Conditions



Legend

-  FEMA Floodway
-  Study Area
-  Public Lands
-  NWI Wetlands
-  Florida Scrub-Jay Habitat
-  Bald Eagle (*Haliaeetus leucocephalus*) Nest

5. Transportation

A prominent transportation feature in the corridor is the I-75 interchange. Presently a PD&E study is underway to modify the interchange and the on/off ramps. The improvements also include modifications of turn lanes at Covington Gardens and the schools' access road, remains contiguous. The connection between Old Big Bend Road and Bullfrog Creek Road is proposed to be modified to a roundabout. Figure 6 depicts the proposed ultimate interchange improvements. The proposed modifications also include a 10-foot sidewalk along the south side of Big Bend Road, a 6-foot sidewalk to the north of Big Bend Road, and on-road bicycle lanes in both directions of the roadway. Figures 7 and 8 depict the typical sections for Big Bend Road. The PD&E cross sections serve as existing conditions for this part of the Big Bend Road study area.

Another major transportation feature along the corridor is Old Big Bend Road. This roadway stretches from Waterset Boulevard to Lincoln Road. Old Big Bend Road serves as a frontage road on the north side of the corridor and provides access to some of the residential and commercial uses, schools, and Hillsborough County's Operations and Maintenance center to the west of I-75. It provides an alternate link under I-75 and a connection to Bullfrog Creek Road. Additionally, access to properties on the east side of I-75 such as the YMCA, are supplied by Old Big Bend Road. Old Big Bend Road is a 2-lane undivided road. It has a rural typical section, with open drainage, and no bike lanes, no sidewalks, no lighting and no shoulders except under the I-75 overpass. It includes turning lanes approaching the schools.

There are several planned improvements to the transportation infrastructure in the study area:

1. Simmons Loop Road:
 - a. Hillsborough County plans to extend north of Big Bend Road with a jug-handle loop back to Old Big Bend Road
 - b. The Imagine 2040 Transportation Plan Cost Feasible Projects for New Capacity, based on development needs, identifies an extension of Simmons Loop Road as a developer funded project and a 2-lane undivided roadway which would connect to the proposed extension of Apollo Beach Boulevard. This improvement is part of zoning conditions for this development.
2. Big Bend Road is planned to be widened to 6 lanes
3. Old Big Bend Road may be realigned
4. Although outside of the study area, the Apollo Beach Boulevard extension from US 41 to US 301 is also identified in the Imagine 2040 Plan as a development based needs project. It is important to note as it would contribute to connectivity to the Big Bend corridor



Figure 6.
Ultimate Interchange Concept

LEGEND

- BIG BEND RD PD&E STUDY LIMITS
- PROPOSED BRIDGE OR WIDENING BY OTHERS
- PROPOSED LA RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- WETLANDS
- EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING LA RIGHT OF WAY

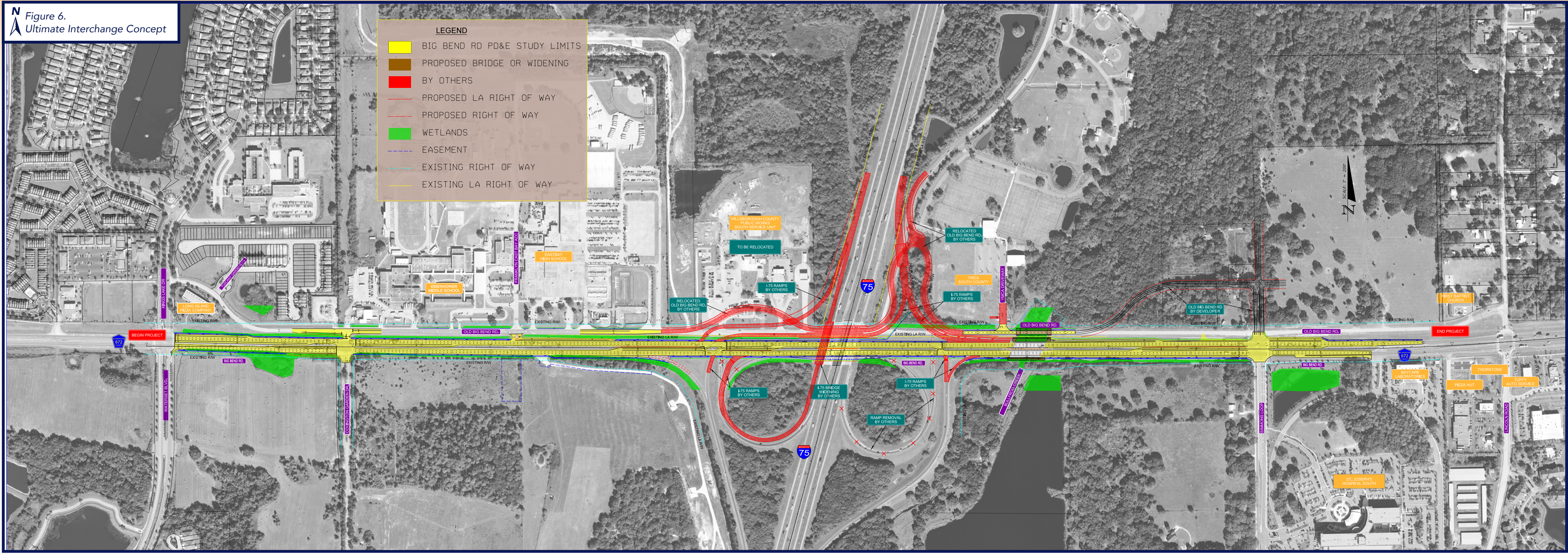


Figure 7. Proposed Typical Section – Big Bend Road: Franklin Cast Bay ACC to West of I-75 Ramps

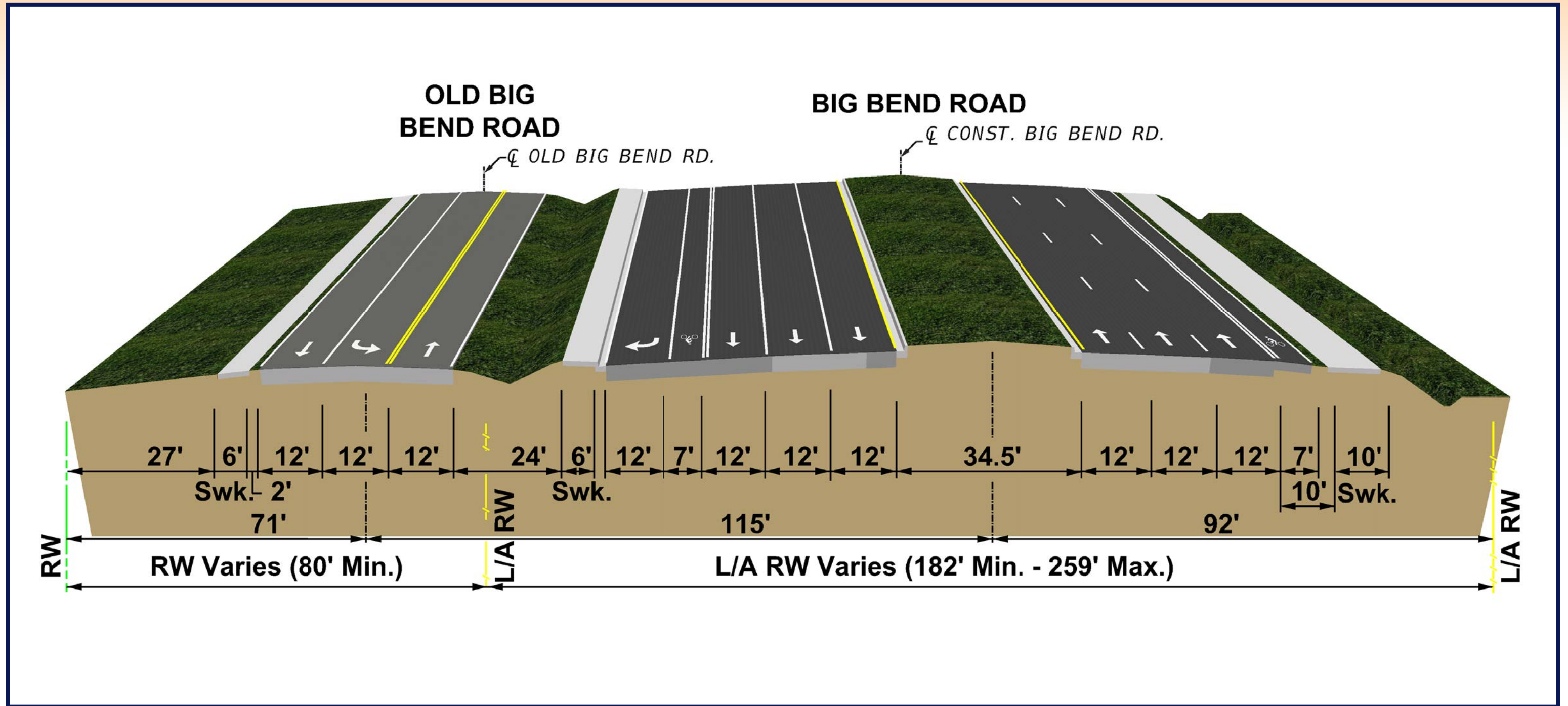
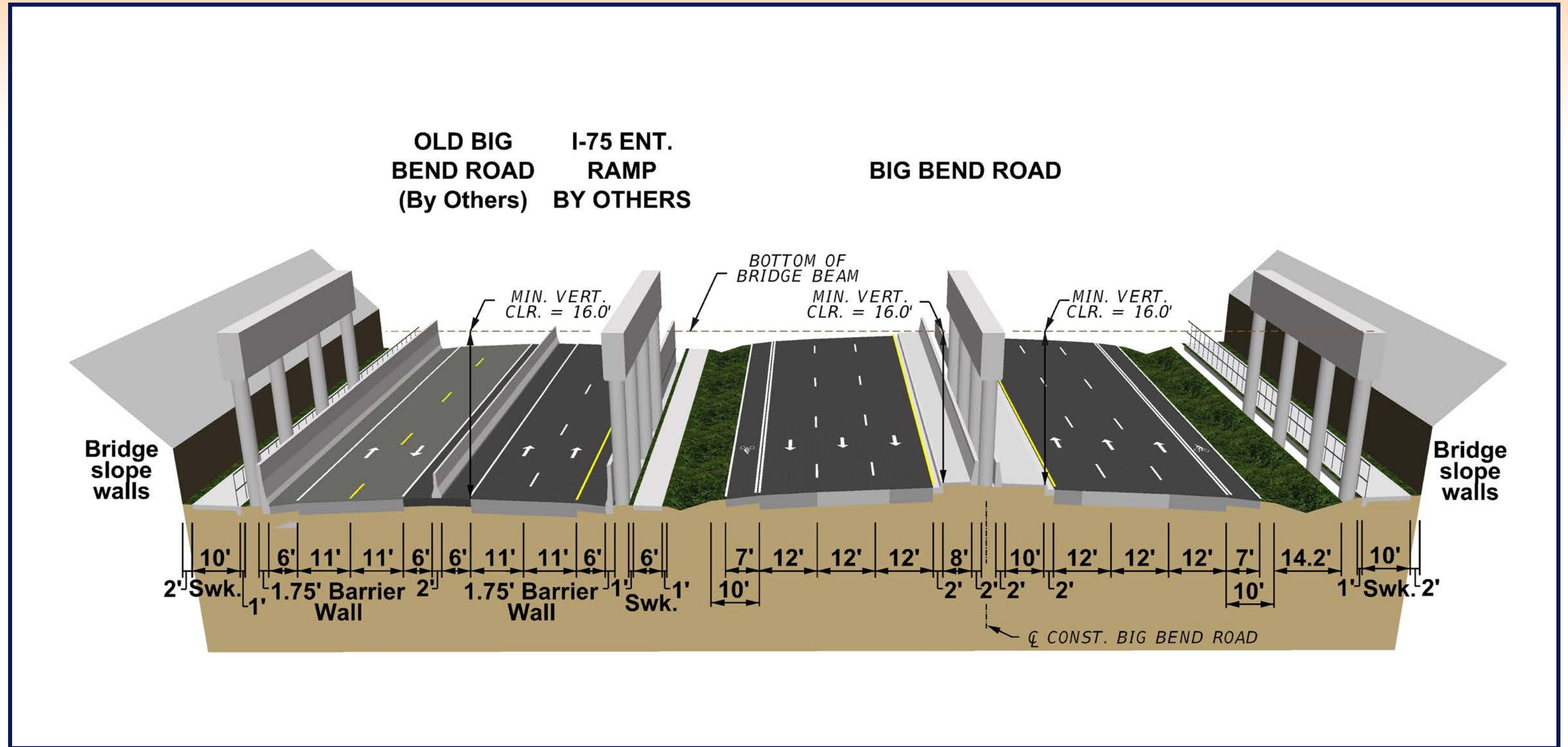


Figure 8. Proposed Typical Section – Big Bend Road: At I-75 (SR 93A) Overpass



5.1 Existing Traffic Characteristics

Existing traffic characteristics for the study area were estimated based on traffic count data and information from FDOT Traffic Online (2017). Annual average daily traffic (AADT) were collected in the field. Table 1 summarizes the existing AADT characteristics for the study corridor.

Table 1. Existing Roadway Characteristics

	CORRIDOR FROM	TO	Existing Adjusted AADT ¹			AM Peak		PM Peak	
			EB	WB	BOTH	EB	WB	EB	WB
BIG BEND ROAD	US 41	Waterset Boulevard	16,700	15,300	32,000	1,230	1,410	1,420	1,130
	Waterset Boulevard	Covington Garden Drive	15,000	15,800	30,800	1,400	1,100	1,290	1,150
	Covington Garden Drive	I-75 Southbound Off-Ramp	18,100	17,800	35,900	1,410	1,160	1,200	1,480
	I-75 Southbound Off-Ramp	I-75 Northbound On-Ramp	30,900	15,300	46,200	1,960	1,010	2,340	950
	I-75 Northbound On-Ramp	Simmons Loop	25,800	19,500	45,300	1,540	2,230	2,410	1,270
	Simmons Loop	Lincoln Road	24,800	21,200	46,000	1,500	1,970	2,230	1,380
	Lincoln Road	US 301	25,800	22,200	48,000	1,330	2,050	2,090	1,440

Source:

¹AADT based on field collected data, HNTB 2018

²K, D, & T factors based on FDOT's Florida Traffic Online, 2017

5.2 Travel Times

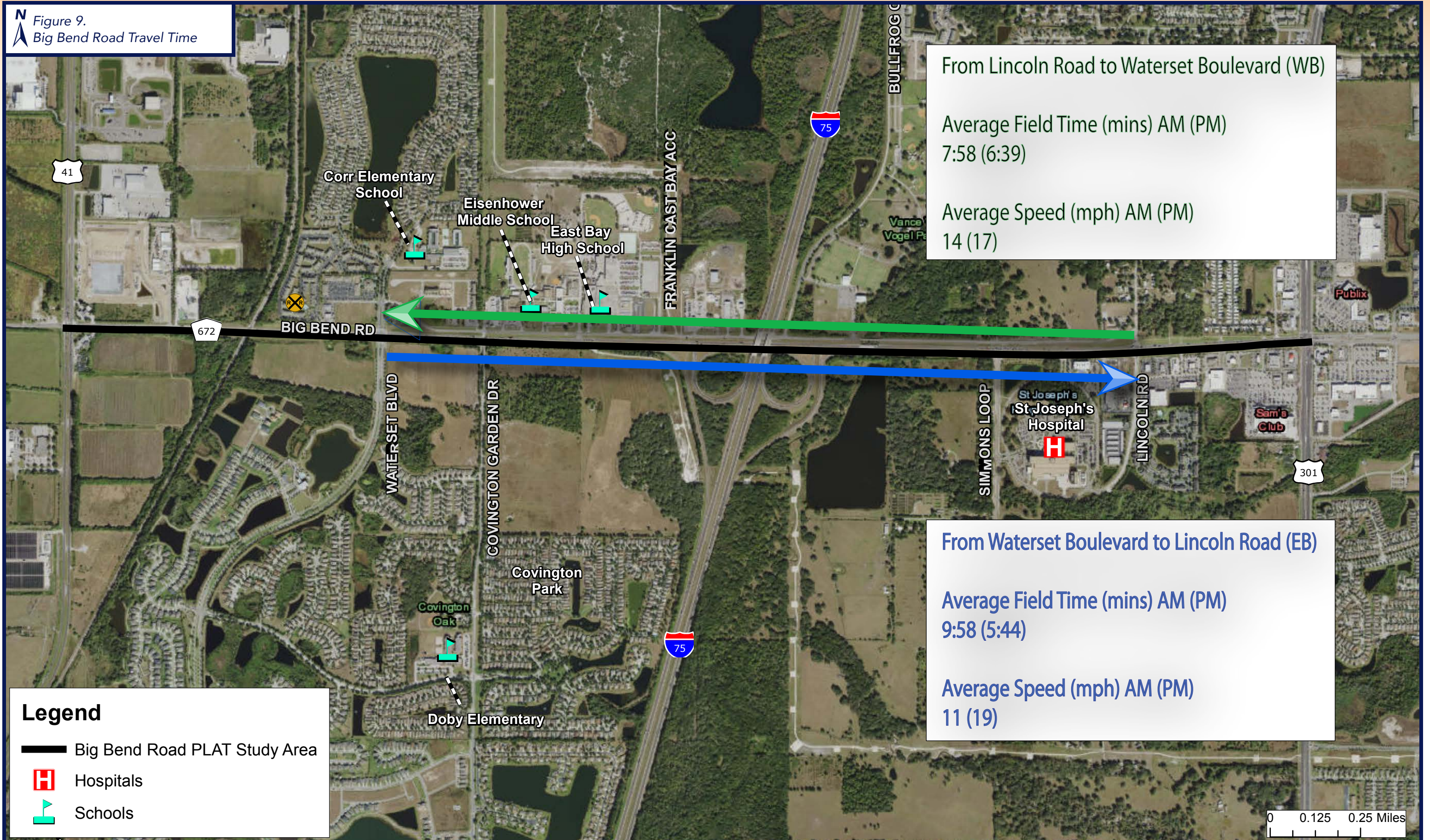
Travel times were collected along the corridor during the AM and PM peak periods from West of Waterset Boulevard to East of Lincoln Road (Table 2). Ten passes made eastbound and westbound on Big Bend Road were collected and averaged. In the AM peak period most of traffic is moving toward the I-75 northbound and southbound on-ramps. On average it took about 10 minutes to drive from Waterset Boulevard to Lincoln Road in the eastbound direction and about 8 minutes in the westbound direction (Figure 9). There are lengthy queues at intersections prior to the I-75 on-ramps due to traffic not able to clear the intersections in one traffic signal cycle, especially in the westbound direction (Table 3). During the PM peak period most of traffic is exiting I-75 in the northbound and southbound directions and entering Big Bend Road via the off-ramps. There is a lengthy queue on the I-75 southbound off-ramp that extends onto the mainline of southbound I-75 as far as 8,800 feet (Table 4). Figure 10 depicts the queue length.

Table 2. Travel Times

Roadway	Average Field Time (mins) - AM	Average Field Time (mins) - PM
Big Bend Road from Waterset Boulevard to Lincoln Road (EB)	9:58	5:44
Big Bend Road from Lincoln Road to Waterset Boulevard (WB)	7:58	6:39



Figure 9.
Big Bend Road Travel Time



From Lincoln Road to Wateraset Boulevard (WB)

Average Field Time (mins) AM (PM)
7:58 (6:39)




Average Speed (mph) AM (PM)
14 (17)

From Wateraset Boulevard to Lincoln Road (EB)

Average Field Time (mins) AM (PM)
9:58 (5:44)

Average Speed (mph) AM (PM)
11 (19)

Legend

-  Big Bend Road PLAT Study Area
-  Hospitals
-  Schools

0 0.125 0.25 Miles

Table 3. AM Peak Period Queue Length

Intersection	Queue Length (ft)							
	Time	EB	Time	WB	Time	NB	Time	SB
Covington Garden	6:30 AM	135	6:45 AM	525				
	6:40 AM	220	6:50 AM	200				
Franklin Cast Bay Acc	6:55 AM	1,175	7:10 AM	275				
	7:05 AM	1,175	7:15 AM	785				
SB I-75	7:20 AM	645	7:25 AM	115	7:25 AM	430		
	7:25 AM	535	7:30 AM	180	7:30 AM	280		
NB I-75	7:40 AM	1,550	8:00 AM	2,250	7:40 AM	150		
	7:50 AM	1,550	8:10 AM	2,250	7:50 AM	225		
Simmons Loop	8:10 AM	275	8:10 AM	1,725	8:10 AM	80		
	8:20 AM	175	8:20 AM	1,725	8:20 AM	145		

Table 4. PM Peak Period Queue Length

Intersection	Queue Length (ft)							
	Time	EB	Time	WB	Time	NB	Time	SB
Covington Garden	4:00 PM	290	4:15 PM	400				
	4:10 PM	200	4:20 PM	575				
Franklin Cast Bay Acc	4:30 PM	1,175	4:30 PM	1,400				
	4:40 PM	1,175	4:40 PM	1,400				
SB I-75	5:00 PM	550	5:00 PM	135	5:00 PM	345	5:30 PM	5,200
	5:10 PM	590	5:10 PM	180	5:10 PM	760	5:43 PM	8,800
NB I-75	5:25 PM	1,550	5:25 PM	2,250	5:25 PM	150		
	5:45 PM	1,550	5:45 PM	2,250	5:45 PM	180		
Simmons Loop	6:00 PM	2,235	6:00 PM	250	6:00 PM	80		
	6:15 PM	1,150	6:15 PM	30	6:15 PM	80		



Figure 10.
Queue Length



5.3 Bi-directional Traffic Volume Counts

To understand peak hour traffic conditions 24-hour, bi-directional traffic volume counts were collected along Big Bend Road and the I-75 northbound and southbound on and off-ramps. The counts were collected on regular weekdays when schools were in session.

Locations:

- Big Bend Road, West of Waterset Boulevard
- Big Bend Road, West of Covington Garden Drive
- Big Bend Road, West of I-75 Southbound On-Ramp
- Big Bend Road, West of I-75 Northbound On-Ramp
- Big Bend Road, West of Simmons Loop
- Big Bend Road, West of Lincoln Road
- Big Bend Road, West of US 301 (SR 43)
- I-75, Northbound Off-Ramp to Eastbound Big Bend Road
- I-75, Northbound Off-Ramp to Westbound Big Bend Road
- I-75, Northbound On-Ramp from Eastbound Big Bend Road
- I-75, Northbound On-Ramp from Westbound Big Bend Road
- I-75, Southbound Off-Ramp to Eastbound Big Bend Road
- I-75, Southbound Off-Ramp to Westbound Big Bend Road
- I-75, Southbound On-Ramp from Eastbound Big Bend Road
- I-75, Southbound On-Ramp from Westbound Big Bend Road

No special events or traffic incidents were identified in the general vicinity of the data collection locations during the count periods.

5.4 Turning Movement Counts (TMCs)

Based on the information collected from the bi-directional counts, and to account for any significant changes in traffic performance, peak eight-hour counts were identified. The peak eight-hour turning movement counts were then collected during the weeks of April 23rd and April 30th, 2018 from 7 AM to 10 AM, 11 AM to 1 PM, and 3 PM to 6 PM at major intersections along the corridor.

- Big Bend Road at US 41 (SR 45)
- Big Bend Road at Waterset Boulevard
- Big Bend Road at Covington Garden Drive
- Big Bend Road at Franklin Cast Bay Acc
- Big Bend Road at Simmons Loop
- Big Bend Road at Lincoln Road

5.5 Access Management

Per the Big Bend Road PD&E Study and proposed ultimate improvements, two median openings along the study corridor will be closed. At the signalized intersection of Big Bend Road and Franklin Cast Bay Acc, the median separating Big Bend Road and Old Big Bend Road will be closed. Those traveling from Franklin Cast Bay Acc and Old Big Bend Road will have to utilize the access at Covington Gardens



Drive or Lincoln Road. Closing these access points will influence traffic movements to and from East Bay High School, Eisenhower Middle School, and the Hillsborough County Public Works building. The other median opening proposed to close is west of Simmons Loop. Currently this median opening only serves eastbound and westbound U-turn movements. Per the Big Bend Road PD&E Study and the proposed ultimate improvements, the left turn lane from Big Bend Road to the northbound I-75 on-ramp will be extended to provide more vehicle storage. This turn lane will extend through the existing median opening.

5.6 Transit

Existing transit in the study area is depicted in Figure 9 and includes two Hillsborough Area Regional Transit (HART) transit routes and seven bus stops. HART Route 31 runs through the study area along US 41. Headways are between 1 hour and 1.5 hours. There are six bus stops for this route along US 41 within the study area. HART transit route 75X, "South County Shopper," was added in 2018 and runs only on Tuesday and Thursday from Kings Point in Sun City along I-75 to Big Bend Road and east to St. Joseph's Hospital – South. The route then loops back to I-75 and runs north to Westfield Brandon Mall. Within the study area this route only stops once at St. Joseph's Hospital – South. Headways are approximately 2 hours.

The Apollo Beach Park-n-Ride is an important transit feature located south and outside of the study area boundary.

The MPO's South Shore Transit Circulator Study (2014) and Southshore Transit Study Reevaluation (underway in 2018) both assess the transit conditions, and alternatives and opportunities in the South Shore area, including the Big Bend Road study area. The 2014 study assessed four transit alternatives to service the South Shore area and made recommendations. Since then, HART overhauled their system under the Mission MAX program. In 2018, the MPO began a reevaluation of the transit needs of South Shore, including the Big Bend Road area. Improvements will focus on opportunities such as on-demand service, public-private partnerships, the efforts of non-profit organizations and others to provide a phased implementation plan and associated costs. Included in the reevaluation are proposed mobility hubs within the Big Bend Road Study area: one hub near St. Joseph's Hospital South, and two hubs in the vicinity of US 301 near Summerfield Crossings, north of Big Bend Road. Although the details have not been finalized, these hubs could serve to mobilize riders from neighborhoods/activity centers within the Big Bend Road study area to and from major transit stops.

A future transit feature in the southern Hillsborough County which is important to note since the discussion has been taking place over the last few years, is the potential for high-speed ferry service between MacDill Air Force Base and an undetermined location in southern Hillsborough County; potentially Port Redwing.

5.7 Trails

Existing trails in the study area include the sidepath along US 301 and the South Coast Greenway (Phase 2) trail which is partially located within the Waterset development in the form of a sidepath. The South Coast Greenway is part of the State of Florida SunTrail system and is proposed to extend south to Manatee County and ultimately points further south as a regional and trail facility. To the north, it will connect to the Tampa Bypass Canal Trail.

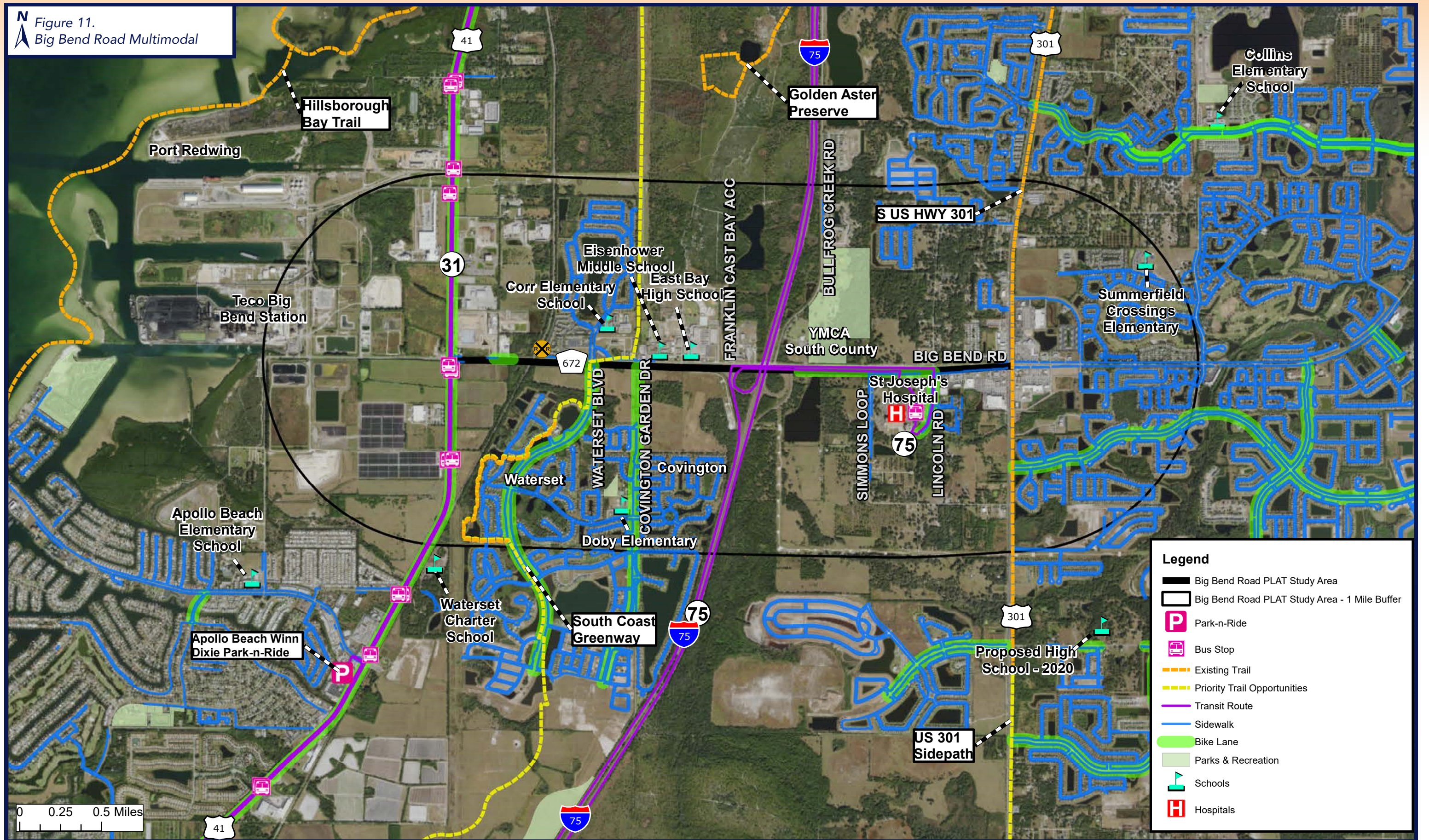


5.8 Bicycle and Pedestrian Facilities

Within the study area, there are bicycle lanes along US 41, Covington Garden Drive, Waterset Boulevard, and Ambleside Boulevard. There is a paved shoulder along the east bound lanes of Big Bend Road between the I-75 interchange and the entrance to Saint Joseph’s Hospital with keyhole features at Simmons Loop Road and the entrance to the hospital, however, there are drainage features present in the shoulder that would be potentially hazardous to bicyclists. There is also a keyhole bike lane feature on the west bound lanes of Big Bend Road in front of the Cemex facility, but the paved shoulder prior to this feature is inadequate for bicyclists. Sidewalks are present within several residential areas within the study area and on the south side of Big Bend Road between Simmons Loop and US 301. Other small sections of sidewalk exist on the north side of Big Bend Road between US 41 and Covington Garden Drive. Figure 11 depicts multimodal features such as bicycle lanes, sidewalks, trails and transit locations.



Figure 11.
Big Bend Road Multimodal



Legend

- Big Bend Road PLAT Study Area
- Big Bend Road PLAT Study Area - 1 Mile Buffer
- Park-n-Ride
- Bus Stop
- Existing Trail
- Priority Trail Opportunities
- Transit Route
- Sidewalk
- Bike Lane
- Parks & Recreation
- Schools
- Hospitals

5.9 Major Parking Areas

While there are no Park-n-Ride locations within the study area the Apollo Beach Park-n-Ride is situated off US 41 to the south of the Study Area and along the HART Transit Route 31.

5.10 Travel Patterns

An origin-destination (O-D) analysis was performed utilizing data captured by Streetlight Analytics to understand how traffic is moving to and from the study area. Destinations were chosen to be high trip generators such as Downtown Tampa, Brandon, USF, Pinellas County, Polk County and the Manatee/Sarasota area. The time of day was utilized as a filter to help visualize the movement of people to major employment centers in the morning, and then back home again in the afternoon and evening. Overall, 47% of trips in the AM peak hours show as internal and 52% in the PM peak hours. This high number of internal trips can be attributed to the schools and types of employment centers in the area, like St. Joseph's hospital and the TECO power plant, which typically accommodate second and third shifts for workers. Trips which involve more than one purpose, such as drop off/pick up school children, then a stop to refuel a vehicle, and possibly a trip to a fast food restaurant, are counted as multiple trips within the data collected. Figures 12 and 13 only show incoming and outgoing trips to and from the study area.

Figure 12 shows the travel patterns from the areas surrounding Big Bend Road to employment centers in the AM peak period. Most trips in the AM peak period travel in the northbound direction which supports the high volumes and lengthy queue times at the northbound I-75 on-ramps on Big Bend Road. Approximately 53% of trips in the AM peak period are people traveling from home to work, 28% of trips are traveling from home to other destinations like an errand to a store or medical appointment, and the remaining 19% are trips that do not originate from a home location, meaning trips from store to store, or school to store, etc.

Figure 13 shows the travel patterns in the PM Peak period. Many of these trips come into the study area from the north which supports the lengthy queue at the southbound I-75 off-ramp intersection with Big Bend Road. Approximately 36% of trips in the PM peak period are from work to home trips, 36% are traveling from work to other destinations as described above, and the remaining 28% of trips do not originate at a work location such as trips from a stop at a commercial establishment along the corridor before returning home.

Figure 12. Travel Patterns from Study Area During AM Peak Period

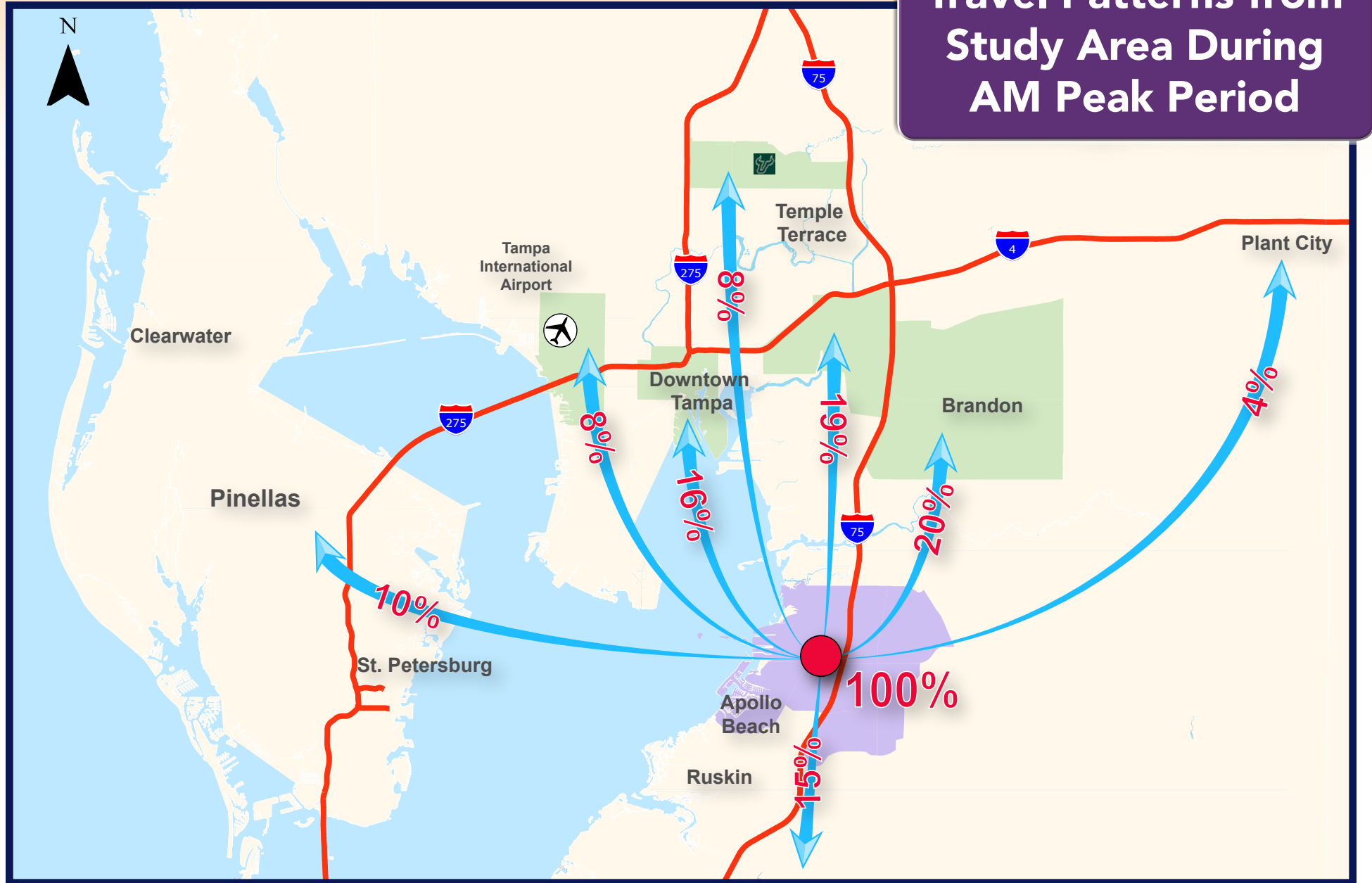
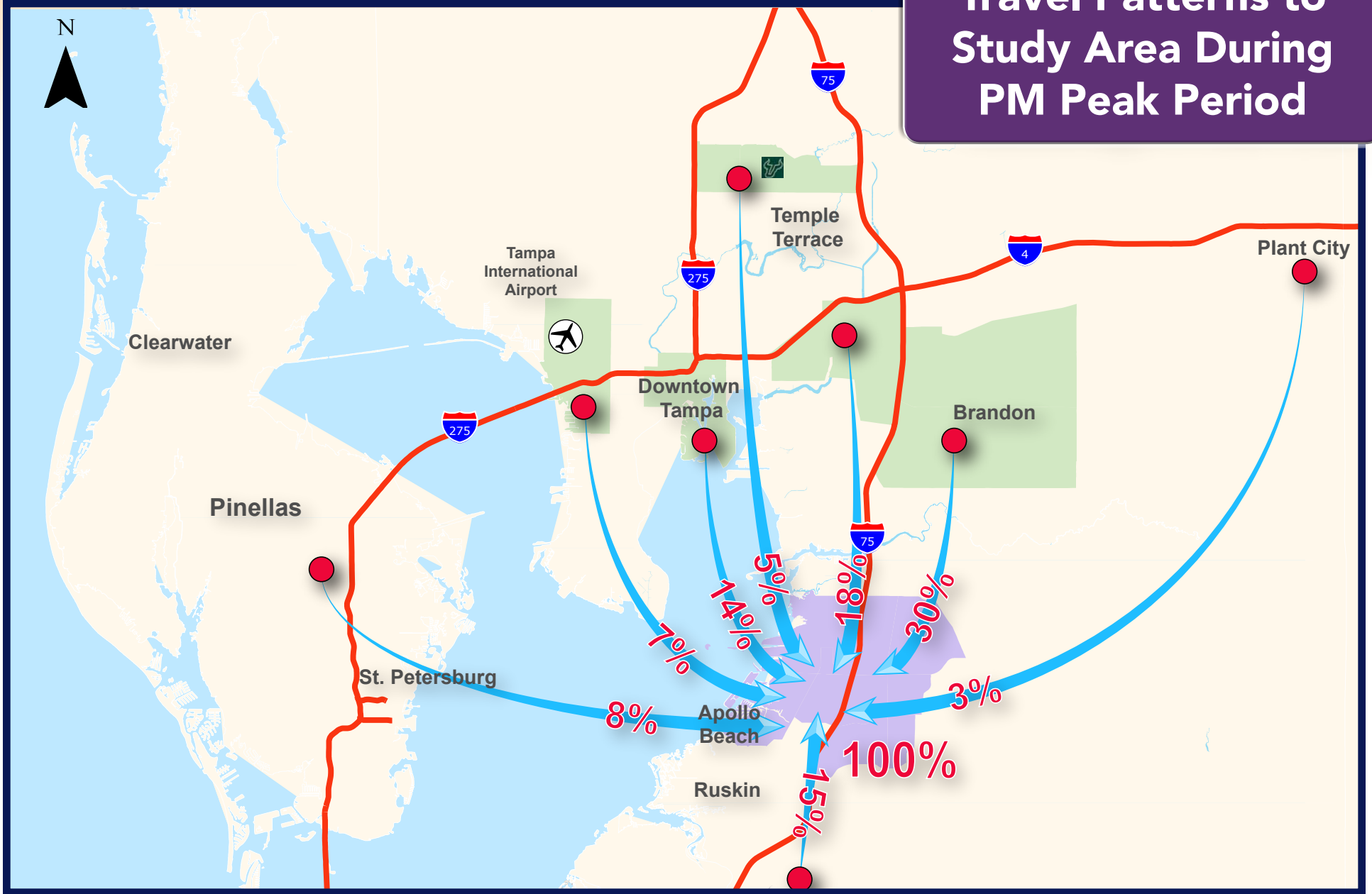


Figure 13. Travel Patterns to Study Area During PM Peak Period



5.11 Crash Analysis

Three-year crash data between 2013 and 2015 were analyzed for the corridor. Crash data were downloaded from FDOT District 7's Crash Data Management and Analysis System (CDMS) database and the most recent certified data was used.

Between the years 2013 and 2015 there were a total of 468 crashes. There was an increase in crashes along Big Bend Road each year. Crash totals from 2014 to 2015 rose by 36% as shown in Figure 14. Of the 468 crashes there was 1 (0.2%) fatal crash, 212 (45.3%) injury crashes and 255 property damage only crashes (54.5%) as shown in Figure 15. There was a total of 4 pedestrian crashes and zero bicycle crashes, with zero pedestrian or bicycle related fatalities.

Figure 14. Number of Crashes – Big Bend Road

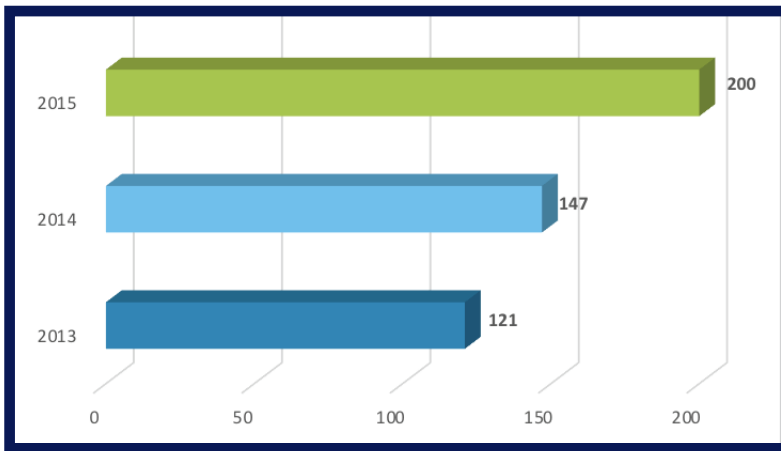
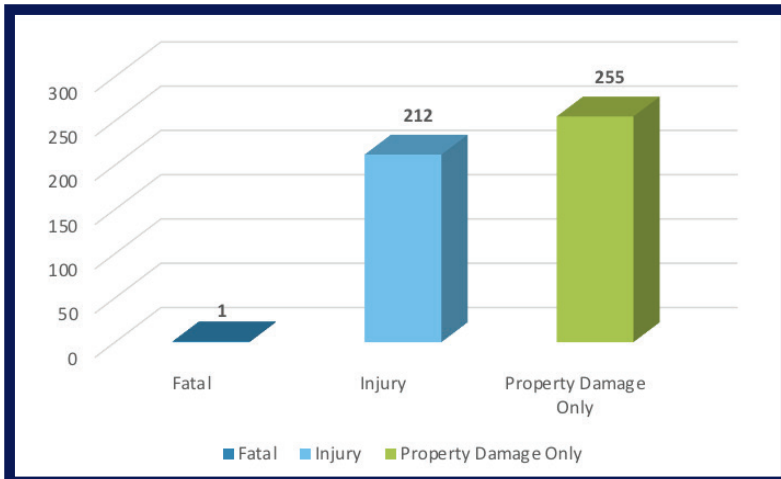
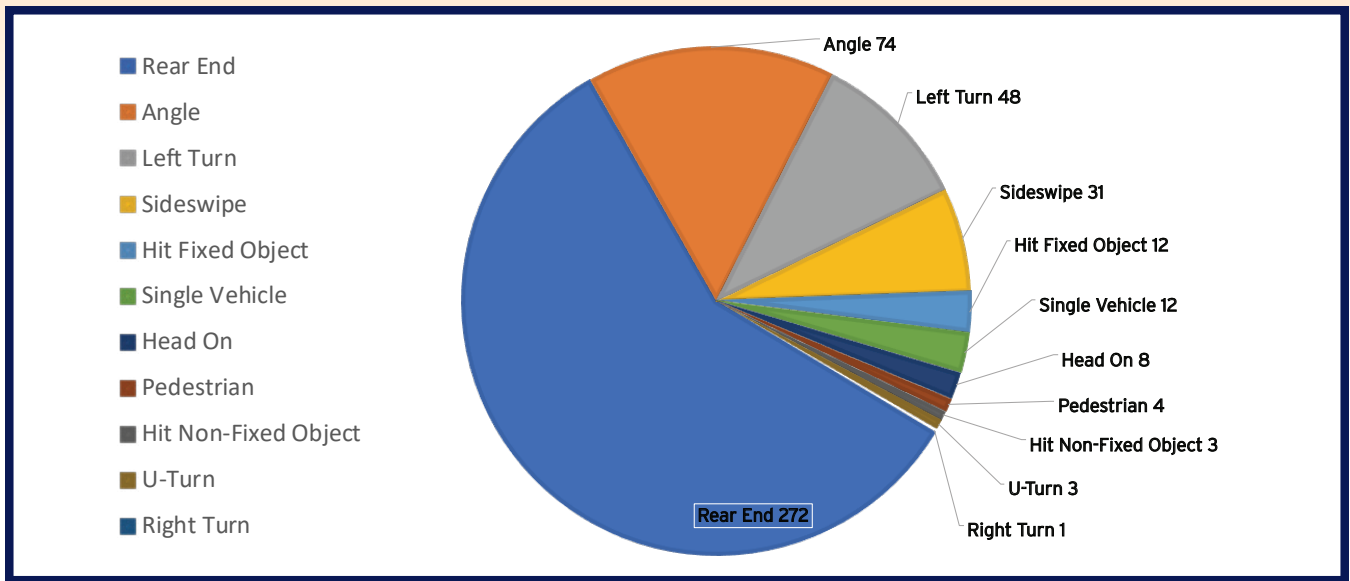


Figure 15. Severity Crash Summary



During the three-year period of the classified specific crash events, the highest were rear end collisions (272 crashes), angle (74 crashes), left turn (48 crashes), and sideswipe collisions (31 crashes) as shown in Figure 16.

Figure 16. Harmful Event Summary



Crashes were sorted by time of day to determine how many crashes were occurring during peak periods and off-peak periods. Figure 17 shows the number of crashes by time of day. There were 161 (34%) crashes between 6 AM and 10 AM, 101 (22%) crashes between 10 AM and 3 PM, and 136 (29%) crashes between 3 PM and 7 PM. Figure 18 shows the number of crashes by intersections. Figure 19 shows the high crash intersection locations from 2013-2015 along the study corridor.

Figure 17. Crash Time Summary

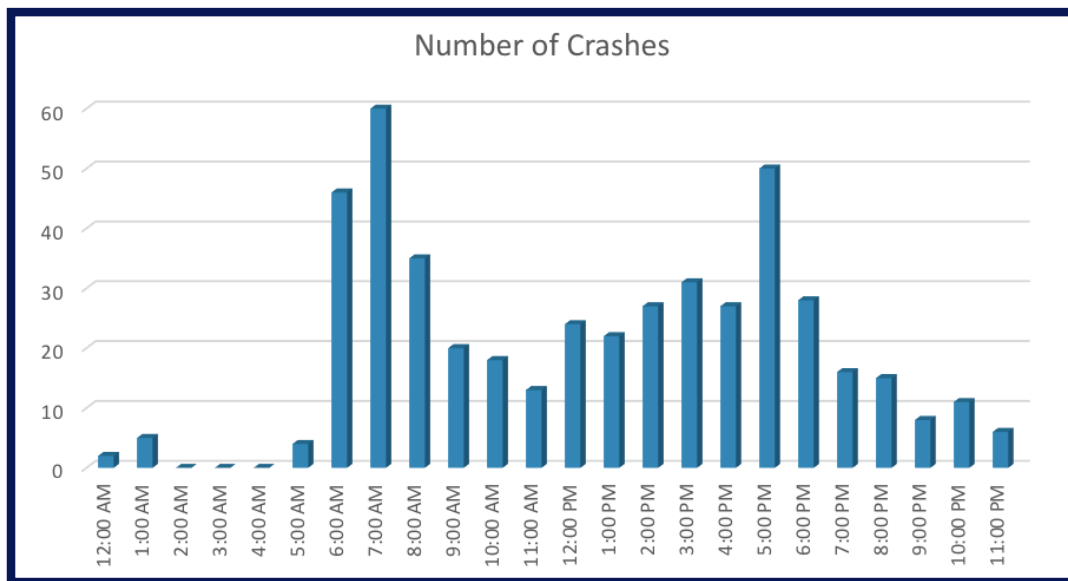


Figure 18. Number of Crashes by Intersection

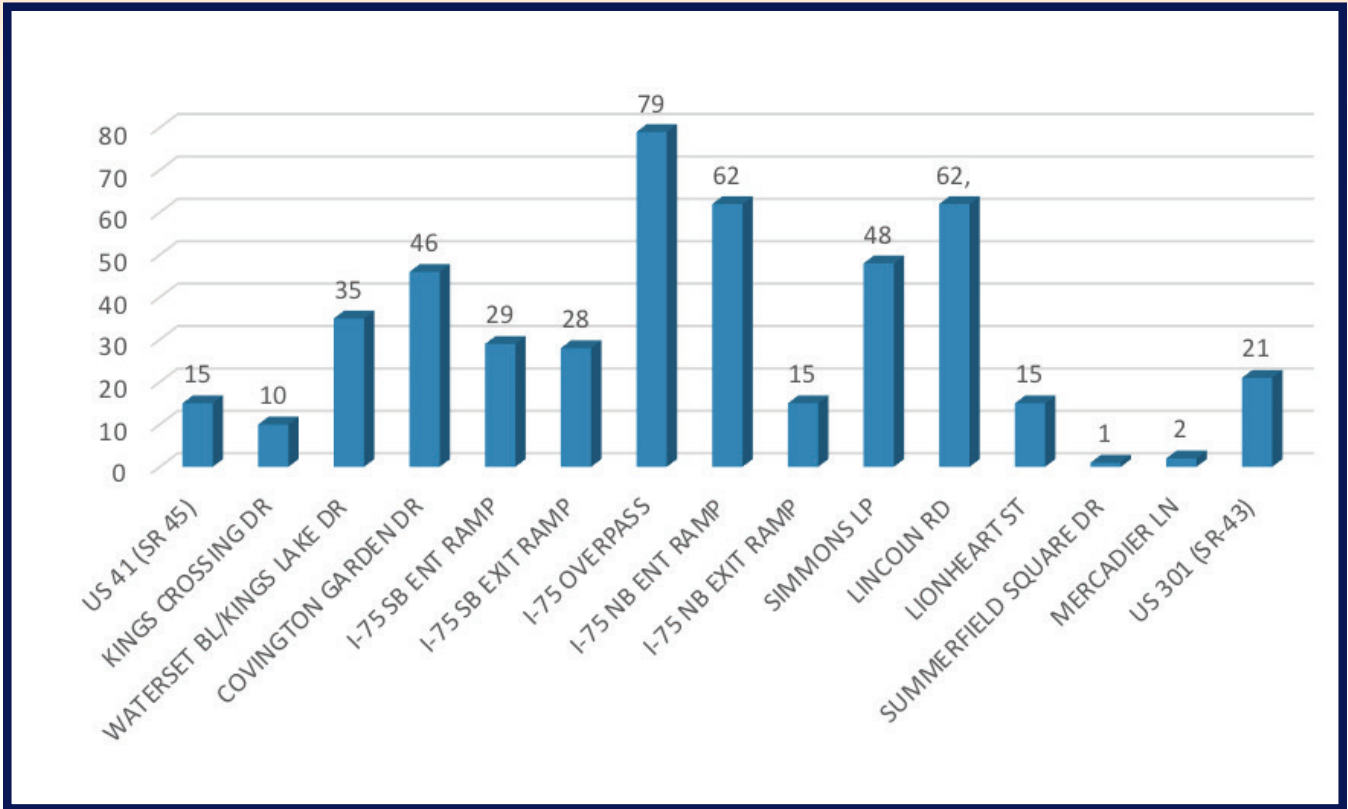
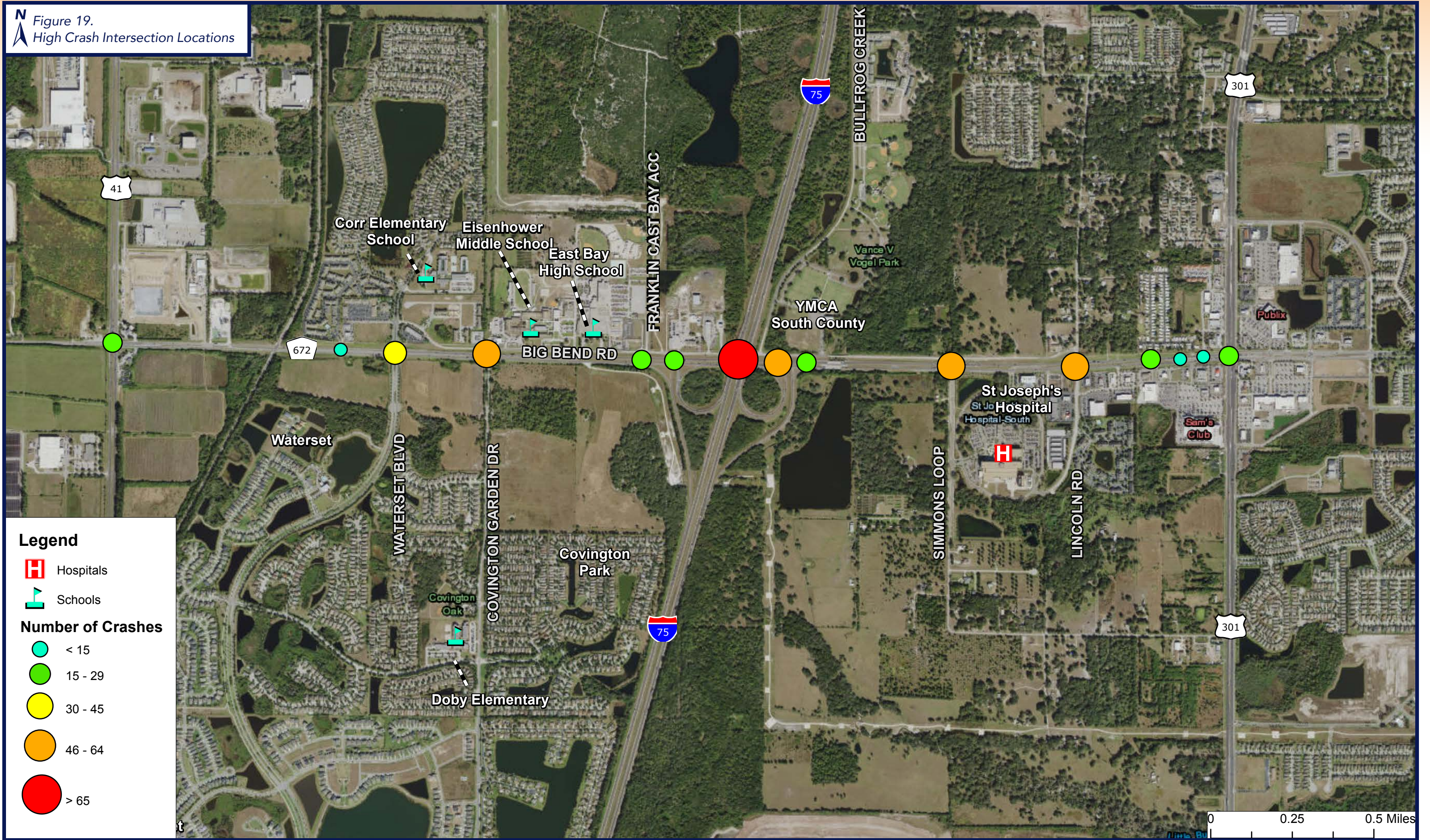


Figure 19.
High Crash Intersection Locations



0 0.25 0.5 Miles



6. Long Range Plans

6.1 Future Land Use and Planned Development

Future land use in the study area is depicted in Figure 20. Table 5 details the percentages of each future land use within the study area. Although the existing and future land use categories do not correspond with each other directly there are some important differences to note. Existing land use includes approximately 25% agricultural, but future land use indicates 0% agricultural. Combined light and heavy industrial is currently 4% and is planned to be 25% in the future. Future land use designations indicate that community mixed use, urban mixed use and suburban mixed use will constitute a larger portion of the study area adjacent to Big Bend Road. These uses, especially Community and Urban Mixed-uses with between 12 and 20 units per acre, will bring higher density than existing conditions. Light and Heavy Industrial will make up much of the study area west of the CSX rail line. Distinct areas of office, commercial, and residential uses will comprise the eastern portion of the study area. Public and natural preservation land uses in the corridor will remain unchanged.

Table 5. Future Land Use

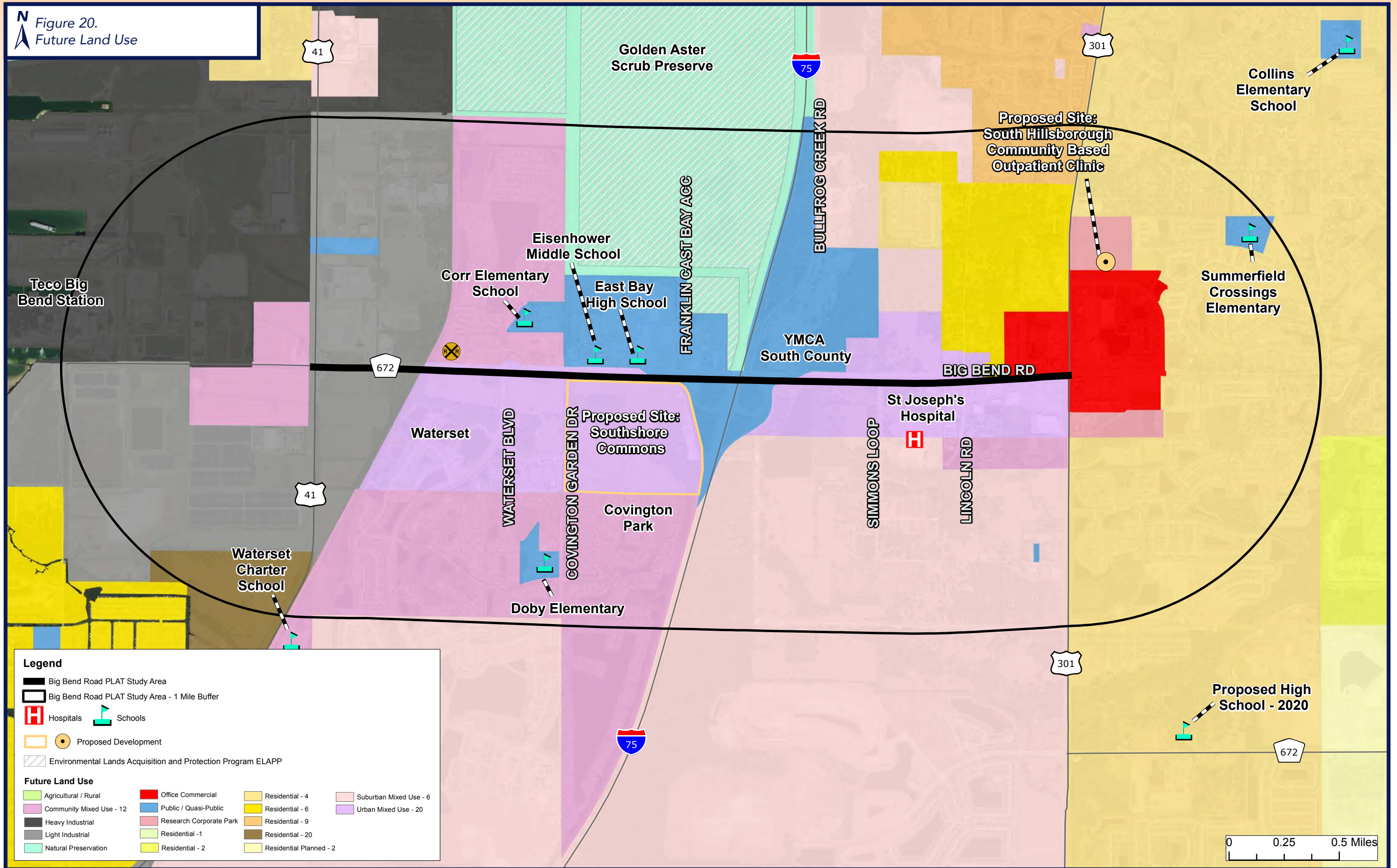
BIG BEND ROAD - FUTURE LAND USE	
Description	Percentage
Agricultural	0%
Community Mixed Use - 12	15%
Heavy Industrial	8%
Light Industrial	14%
Natural Preservation	6%
Office Commercial	3%
Public / Quasi-Public	7%
Research Corporate Park	1%
Residential - 20	1%
Residential - 4	14%
Residential - 6	4%
Residential - 9	1%
Suburban Mixed Use - 6	15%
Urban Mixed Use - 20	11%
TOTAL	100%

The Hillsborough County Transit Right of Way preservation corridor map identifies the CSX railroad corridor, which crosses Big Bend Road, as a Transit Right of Way Preservation Corridor.

The Hillsborough County Corridor Preservation Plan (Hillsborough County Comprehensive Plan) identifies right-of-way requirements, general alignments and standards for all transportation corridors primarily within the Urban Service area to support development patterns as defined in the Future Land Use Element for a 30-year timeframe. Outside of the current PD&E segment, Hillsborough County is considering options to widen Big Bend Road from US41 to Covington Gardens Drive and from Simmons Loop to US301, as consistent with Map 25 of the Corridor Preservation Plan.



Figure 20.
Future Land Use



6.2 Community Vision

The Imagine 2040 Long Range Transportation Plan includes three scenarios for future development; Suburban Dream, Bustling Metro and New Corporate Centers. Public involvement efforts conducted by the MPO during development of the LRTP indicated a desire from residents for a hybrid of the Bustling Metro and New Corporate Centers development styles. This hybrid scenario has been named the Preferred Hybrid Scenario.

The study report continues in the next section with discussion of how development patterns can be balanced using the Preferred Hybrid Scenario.



Balancing Development Patterns

7. Development Patterns and Form

A look at the present development pattern, future land use in the study area, and the adopted Hillsborough MPO Imagine 2040 Long Range Transportation Plan (LRTP), which supports a Hybrid Scenario as the preferred development pattern, has led to managing growth and infrastructure improvements in ways aligned with the vision of the community while improving quality of life.

Goals to achieve a balanced development pattern:

- › Identify connections between centers and transportation corridors within the study area
- › Identify opportunities for development/redevelopment
- › Recommend policies and strategies to reinforce the types of development and redevelopment suited for the vision of the area

7.1 Key Findings

The southern part of Hillsborough County is rapidly expanding, and connectivity to Big Bend Road and I-75 is vital. Key findings within the study area include:

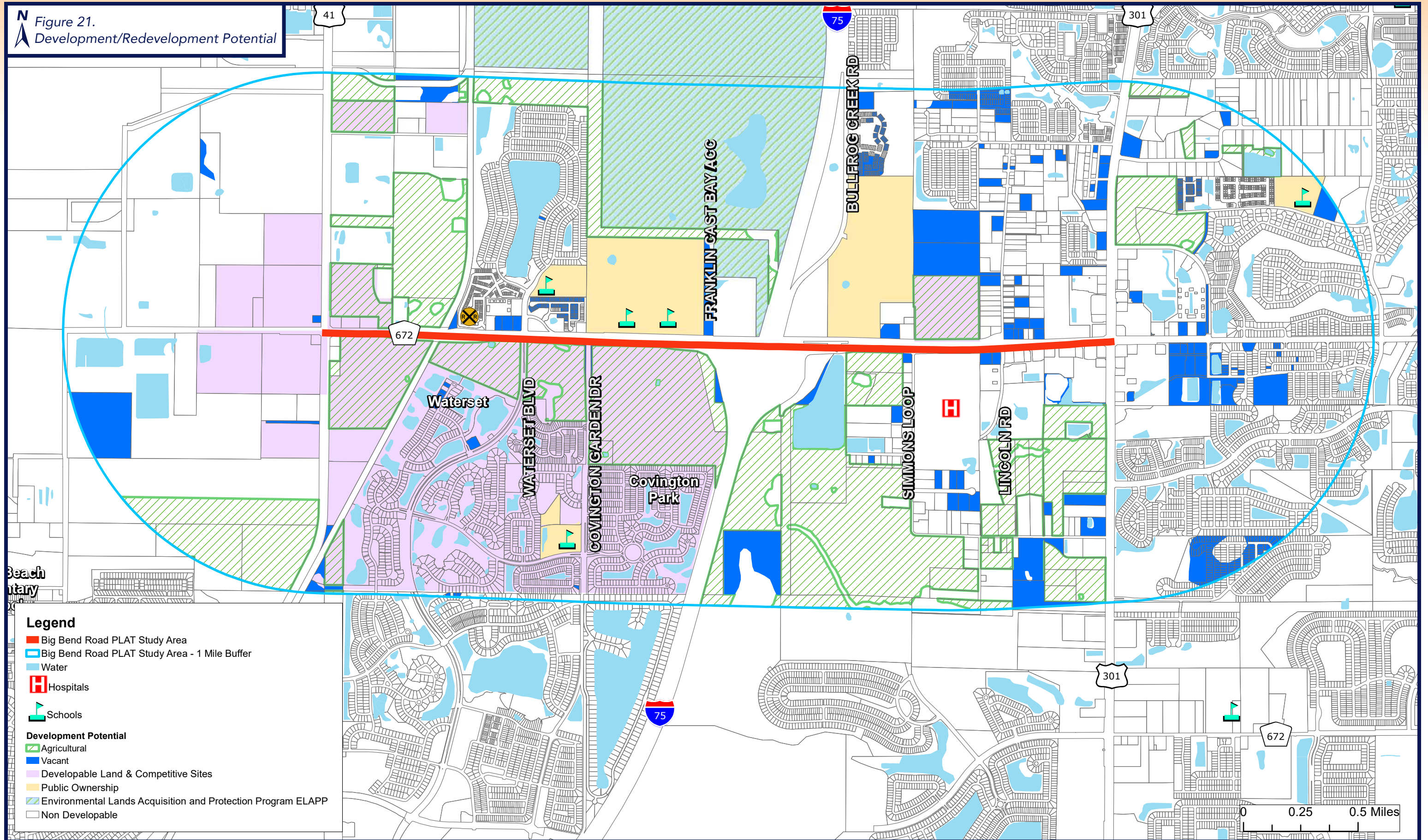
- › Congestion, travel delays, and safety concerns are affecting quality of life
- › Old Big Bend Road is an important parallel, alternate route
- › Providing a well-connected local roadway network is essential to reducing the number of trips on Big Bend Road
- › There is more potential for new mixed-use development rather than redevelopment
- › A high level of growth in population and dwelling units are forecasted

Figure 21 shows parcels within the study area which have potential for development or redevelopment based on future land use. These parcels or areas are discussed in more detail in Section 8 below.

Figure 22 represents the forecasted increase in each Traffic Analysis Zone (TAZ) for new dwelling units and employment by sector; industrial, commercial, and service. These forecasts were developed by the Planning Commission and Hillsborough County MPO for the 2040 LRTP. Industrial employment includes light and heavy industrial types of jobs ranging from warehousing and distribution centers to fabrication and manufacturing. Commercial employment means retail, hospitality, restaurant, hotel, and office jobs. Service sector includes government, education, healthcare, and other institutional employment.

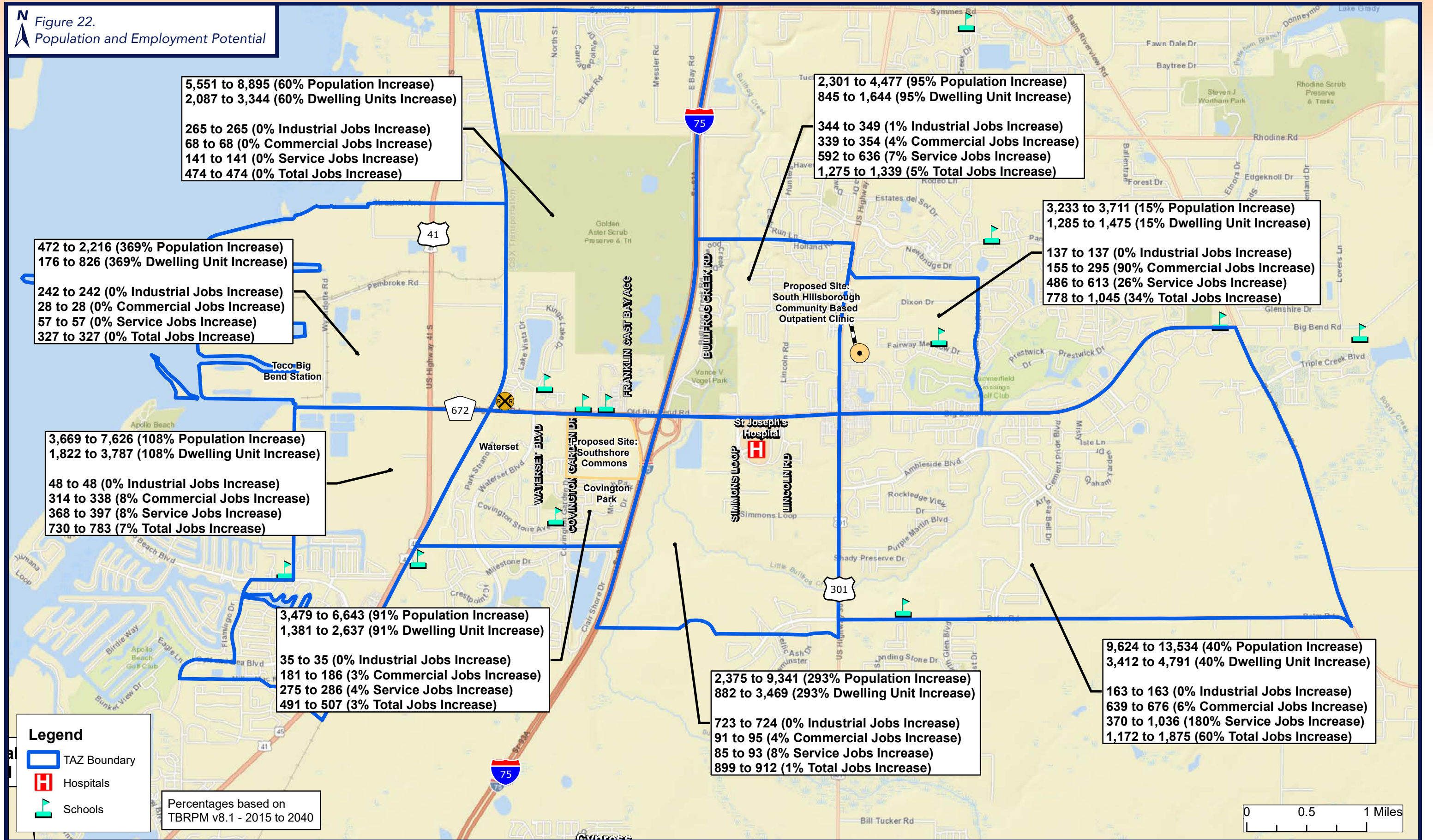


Figure 21.
Development/Redevelopment Potential



- Legend**
- █ Big Bend Road PLAT Study Area
 - Big Bend Road PLAT Study Area - 1 Mile Buffer
 - █ Water
 - H Hospitals
 - █ Schools
 - Development Potential**
 - █ Agricultural
 - █ Vacant
 - █ Developable Land & Competitive Sites
 - █ Public Ownership
 - █ Environmental Lands Acquisition and Protection Program ELAPP
 - █ Non Developable

Figure 22.
Population and Employment Potential



The highest expected percentage of growth by 2040 is for new dwelling units. The increase in housing for the study area is exponential and will dominate the area through the foreseeable future.

According to the 2040 projections, an increase in industrial employment is not expected for this area. Current industrial land uses and employment are mainly located near the intersection of Big Bend Road and US 41. They include a TECO Big Bend Power Station and Big Bend Solar array as well as the Hillsborough Solid Waste Department. Although 2040 projections do not anticipate additional industrial employment in this area, the Future Land Use (*Figure 20*) and development/redevelopment potential (*Figure 21*) indicate that a significant amount of land with future land uses that allow industrial development have development potential.

Within the study area itself, a moderate increase in both the commercial and service sectors is anticipated. A concentration of commercial employment is indicated east of Lincoln Road based on future land use. Jobs in the service sector are expected to increase on the south side of the Big Bend Road corridor mainly due to a planned high school slated to open on the north side of Balm Road and east of US 301 in August 2020. The school will be the first new high school to open in Hillsborough County in 10 years.

Competitive sites discussed in the Baseline Conditions section of this report have been identified by Hillsborough County Economic Development and will make up additional employment growth in the study area based on the type of development that will occur and how development is directed.

In addition, as discussed in the Baseline Conditions section, the planned future use of much of the existing agricultural land will be mixed use or industrial.

7.2 Development Scenarios

In 2014 Hillsborough County commissioned a study on the effects of strip commercial and mixed-use development strategies. This report provides guidance and policy recommendations to support more mixed-use development and suggests the county and its cities take steps to refine comprehensive plans and land development codes to achieve a more desirable development pattern.

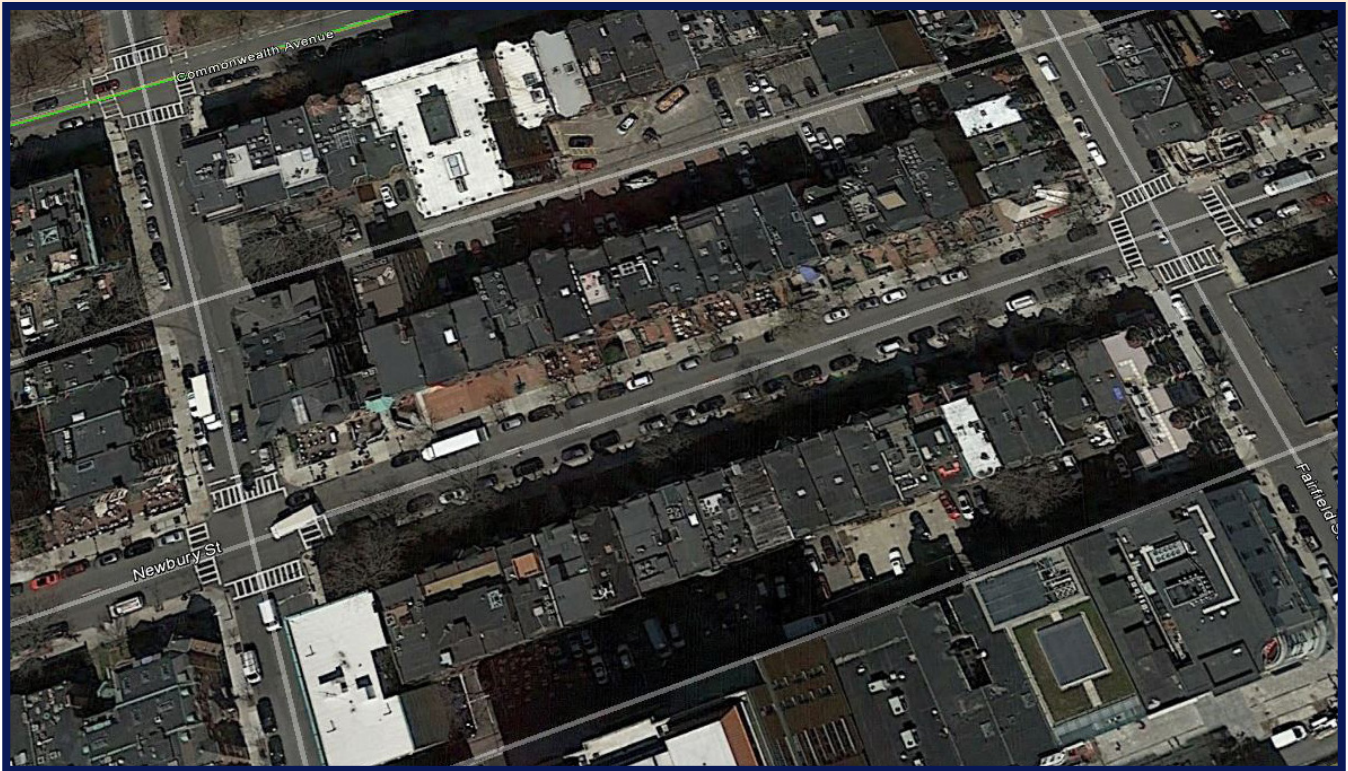
Based on recommendations from the report, Hillsborough County is implementing three categories of development scenarios:

- Compact Urban
- Connected Suburban
- Modern Suburban

7.2.1 Compact Urban

This traditional development pattern supports an interconnected network that is found in most downtown areas and pre-World War II neighborhoods and cities. A connected street grid offers users several routes to one or more destination points in a single trip. Commercial building fronts are typically at the edge of the sidewalk, with parking on the street or at the rear to support easy pedestrian access. A mix of land uses are present, including residential, with the highest density and intensity of uses. *Figure 23* depicts an example of what Compact Urban development looks like in the built environment.

Figure 23. Compact Urban



Source: Google Earth (Newberry Street, Boston, MA)

7.2.2 Connected Suburban

This pattern of development supports a connected road network to access activity centers, community amenities, and offers neighborhood to neighborhood connections for all modes. A good local roadway network alleviates congestion on principal arterial roads by offering alternative corridors and routes to destinations which can be safely accessed by all users and modes. Mixed-use is encouraged in this development scenario, and a medium level of density is most prominent with some high-density commercial nodes. Access and traffic circulation within an activity center should be interconnected and support safe bicycle and pedestrian movements. *Figures 24 and 25* show how a Connected Suburban development pattern uses a local roadway network to link neighborhoods to activity centers and how mixed-use development can fit into the context of suburban design.

Figure 24. Connected Suburban



Source: Google Earth (Belmar Shore Neighborhood, Tampa, FL)

Figure 25. Connected Suburban Development Pattern



Source: Google Earth (Winthrop Town Center, Riverview, FL)



7.2.3 Modern Suburban

This development pattern became popular in the late 20th century and supports suburban development patterns that group large superblocks and single purpose pods into master planned communities physically separated from adjoining communities. Cul-de sac, gated community designs foster a single entry/exit point to each subdivision. Employment, shopping, and entertainment is reached by automobile using wide arterial roads or expressways which are not conducive to bicycle and pedestrian use. Most commercial uses have individual access from a main arterial roadway and do not offer connections within a development. *Figure 26* illustrates both modern suburban residential and commercial development. It shows a lack of connectivity within the local road network and physical separations from adjacent neighborhoods, which is typical with this development pattern. Safe access for non-motorized transportation modes are rarely considered.

Figure 26. Modern Suburban Residential and Commercial



Source: Google Earth (Carrollwood Village, Hillsborough County, FL)

The type of development pattern planned within the study area is defined by the Hillsborough County Planning Commission as high intensity suburban, except for the parcels in the southwest quadrant of the interchange at I-75 and Big Bend Road. This quadrant is expected to have higher urban densities based on planned mixed-use growth suitable to a connected suburban land use scenario.

Improving Infrastructure

8. Activity Centers

Directing growth to activity centers or nodes supports a development scenario which guides intensity and density of growth and activity to specific areas. Four activity centers within the study area and along Big Bend Road have been identified:

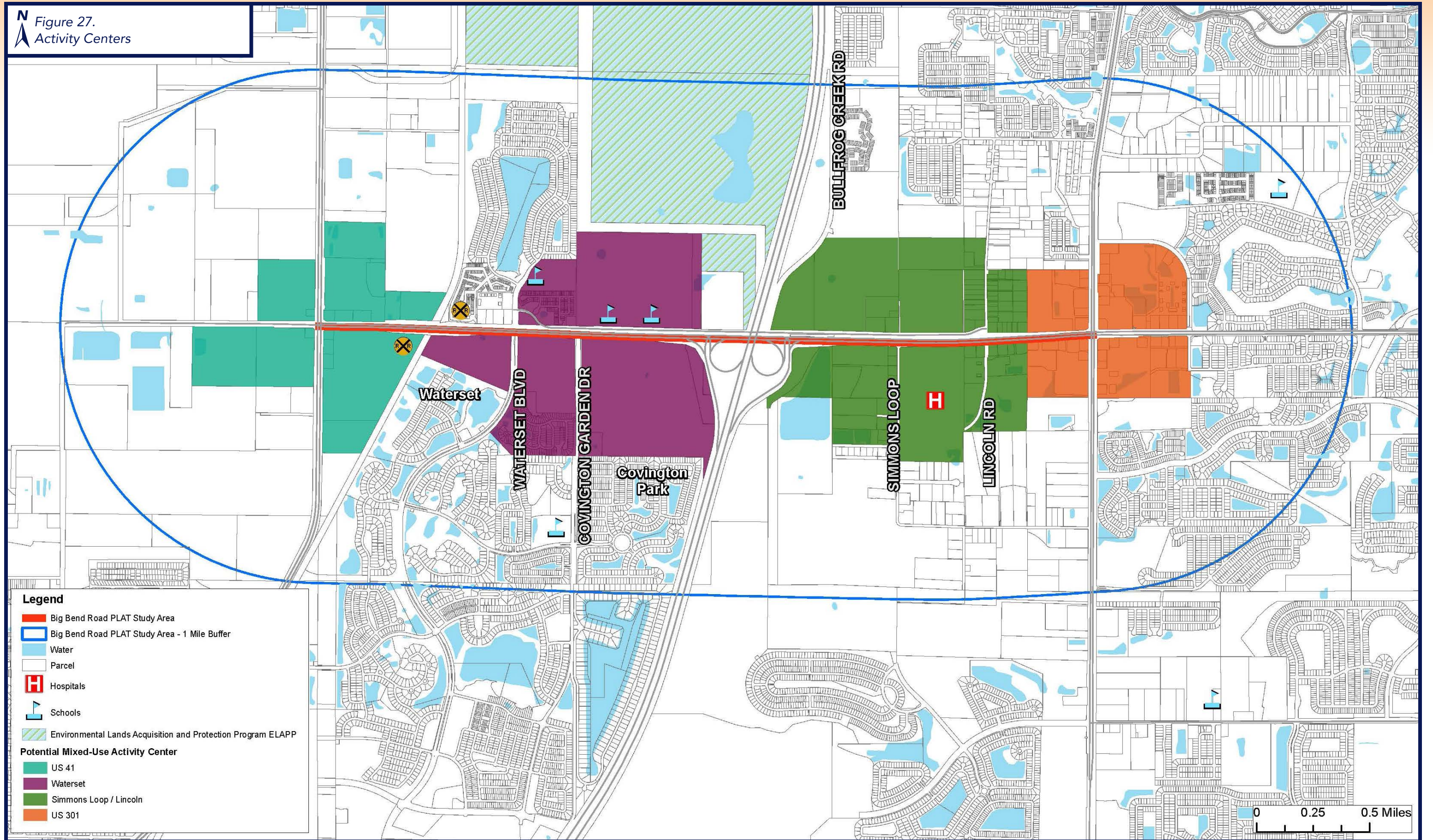
1. US 41
2. Waterset Boulevard - Covington Gardens Drive
3. Simmons Loop - Lincoln Road
4. US 301

These activity centers have been selected based on existing development, future land use, identified competitive sites, and development/redevelopment potential. *Figure 27* identifies the location of each activity center. They are summarized in the following sections.

The type of activity centers within the study area are shown in *Figure 28*. Established areas, shown in white, have a low potential for redevelopment and the density of other areas are displayed by darkness of the color scale. Two types are identified within the study area by the Imagine 2040 plan; high intensity suburban and urban.



Figure 27.
Activity Centers



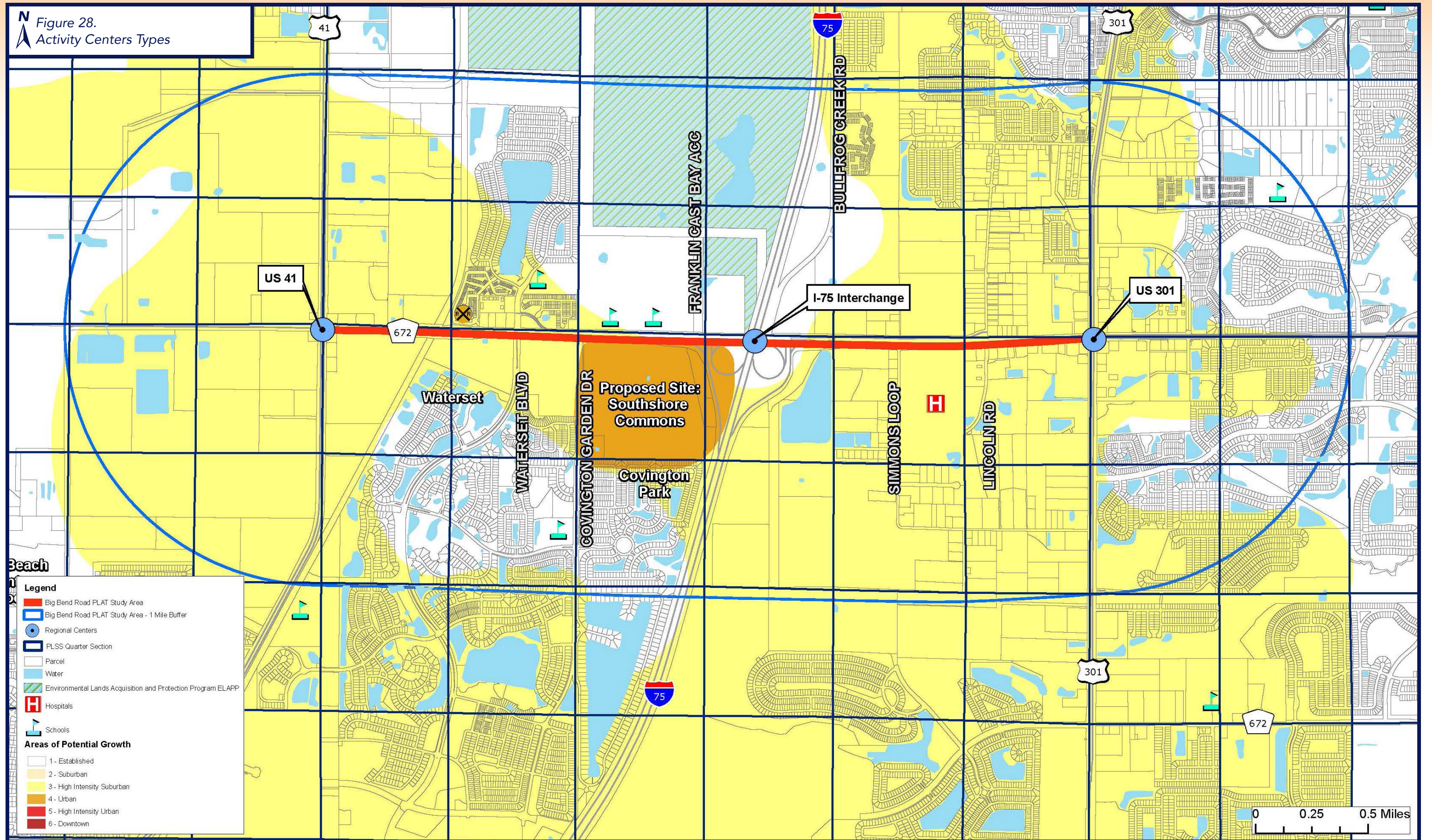
Legend

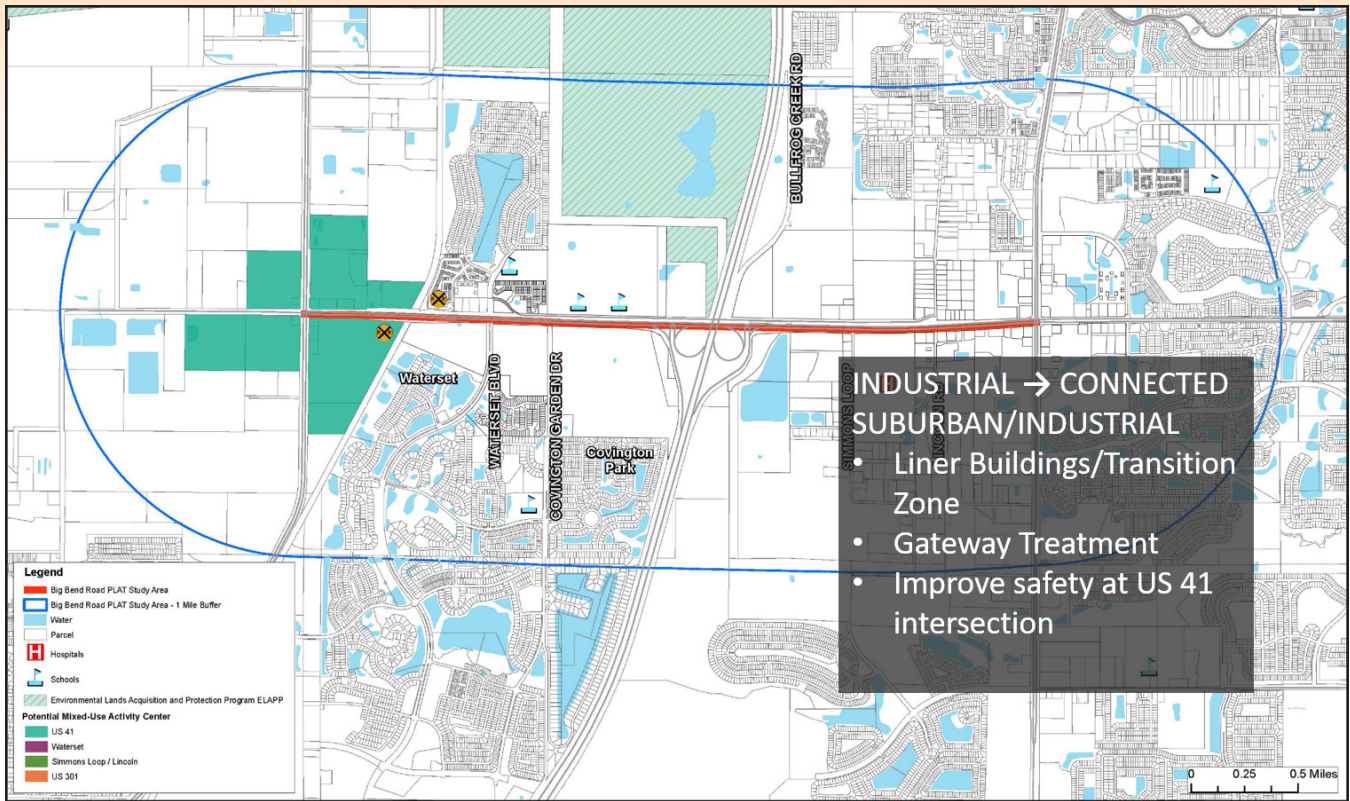
- Big Bend Road PLAT Study Area
- Big Bend Road PLAT Study Area - 1 Mile Buffer
- Water
- Parcel
- Hospitals
- Schools
- Environmental Lands Acquisition and Protection Program ELAPP
- Potential Mixed-Use Activity Center**
- US 41
- Waterset
- Simmons Loop / Lincoln
- US 301

0 0.25 0.5 Miles



Figure 28.
Activity Centers Types





8.1 US 41

8.1.1 Existing Development Context

8.1.1.1 Land Use

Future land use for the node around the US 41/Big Bend Road intersection is mainly Industrial on the west side with Urban Mixed-Use-20 and Community Mixed-Use-12 on the east side. Typical and allowable land uses for the Urban Mixed-Use 20 category include up to 20 dwelling units per gross acre, commercial uses such as a shopping mall, office, business park, research or corporate park, light industrial, and mixed-use and multi-purpose projects. The Community Mixed-Use 12 category allows up to 12 dwelling units per gross acre and community sized retail stores, office uses, research corporate park, parks, light industrial, and mixed-use and multi-purpose projects compatible with residential uses.

Port Redwing lies immediately west of this node. A deeper and wider Big Bend Channel was completed a year ahead of schedule, in April 2019, to allow larger vessels to call at the port's 270-acre terminals. These terminals are expected to become a new hub of manufacturing, warehousing, and ship-to-shore cargo distribution. The Big Bend Channel connects to the main channel in Tampa's harbor, creating a link for the movement of goods between the I-4 corridor and world markets.

Competitive Sites identified in this activity center are projected to develop as light industrial, office, or mixed-use in the future. Current employment density for this center is high based on current land use and 2040 TAZ projections used by the Hillsborough MPO to develop the Imagine 2040 Plan, and future forecasting suggests a large increase in dwelling units. However, the area is likely to develop as an employment center, with future land use suggesting the increase will be in industrial employment.

In addition to Port Redwing, the Manatee Viewing Center is also located immediately west of this node and is a seasonal (November through April) as well as local tourism hot spot. The Viewing Center is located between the I-4 corridor and world markets, and this discharge canal is a state and federally designated manatee sanctuary that provides critical protection from the cold for these unique and gentle animals.

8.1.1.2 Transportation

The roadway cross section on Big Bend Road and US 41 is rural and doesn't provide safe, non-motorized facilities for users. Sidewalks are only present in front of existing business on each corner and bicyclists are forced to use the unmarked, paved shoulder. Railroad tracks and lack of sidewalks present difficulties to connecting the Waterset development to US 41.

8.1.2 Potential Development Form

8.1.2.1 Land Use

Additional residential and mixed-use development at this node would transform it to a high-density Connected Suburban scenario and employment center. This location would benefit from progressive architectural design policies and use of liner buildings in front of the heavier industrial uses to provide a buffer or transition zone between the distinctively different uses. Policies should place emphasis on aesthetically pleasing features to offer an appealing destination or place. An example of such design and land use transition is shown in *Figure 29*. Placing office buildings or street buffers directly adjacent to heavy industrial uses, like the TECO power plant, would provide future residents a more attractive sense of place which protects land values while stimulating the economy.

Figure 29. Land Use Transition



Source: Google Free Images

8.1.2.2 Transportation

Big Bend Road from US 41 to Covington Gardens Drive has been programmed by Hillsborough County for a PD&E study to widen from four to six lanes. The intersection at US 41 and Big Bend Road itself could be improved for additional capacity by adding double left turn lanes and bringing right turn movements under signal control to improve traffic flow and enhance pedestrian crossings to improve safety as development occurs, as illustrated in *Figure 30*. These will likely be some of the identified improvements from the PD&E analysis.

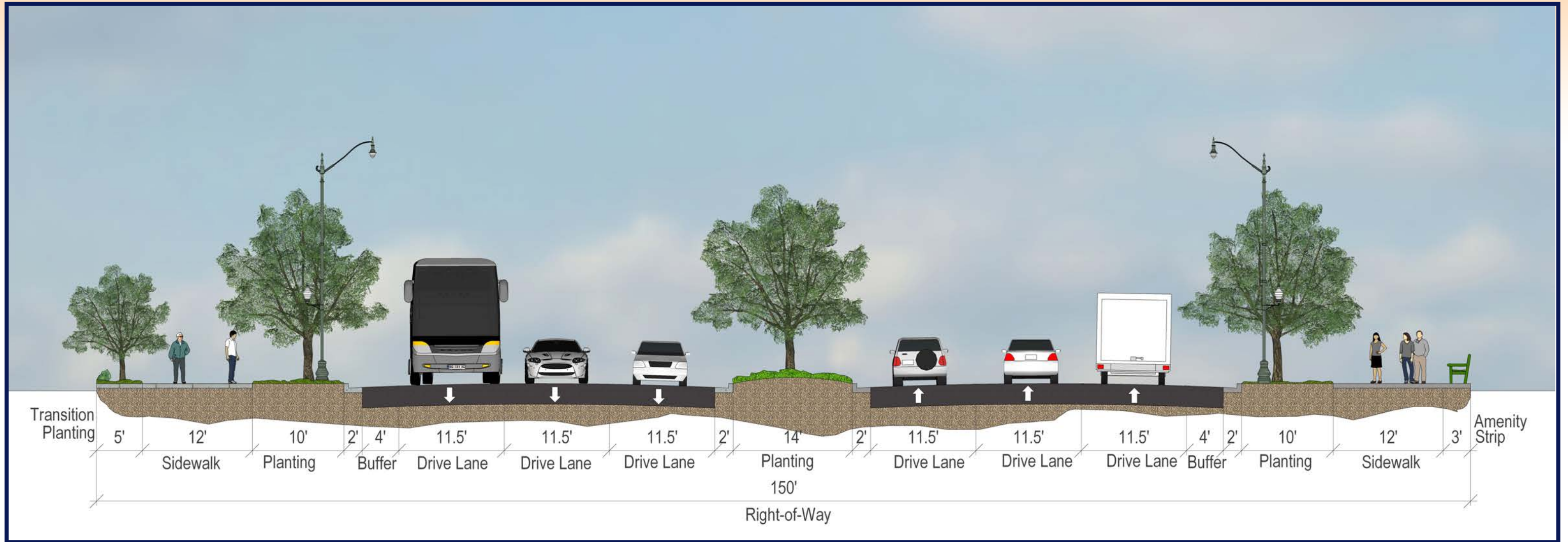
Gateways were a common theme in public comments and community plans collected during previous studies in the south Hillsborough County area. This node could serve as a gateway between the industrial development along US 41 and the planned mixed use development on Big Bend Road, as shown in *Figure 31*. This indicates a shift in the look and feel of the corridor through building design and intentional land use policy. Gateway treatments should include wider sidewalks to promote non-motorized traffic and to provide a connection to the planned South Coast Greenway, as well as decorative plantings in the median and/or along the corridor. Transit facilities on US 41 should also be included to meet existing and future transit service outlined in the SouthShore Transit Study. In addition, a plan view of the intersection is featured in *Figure 32*, showing a gateway treatment on all approaches.

Figure 30. Potential Westbound Improvements: US 41 at Big Bend Road



Source: Hillsborough County

Figure 31. Big Bend Road Gateway Concept (Cross Section)

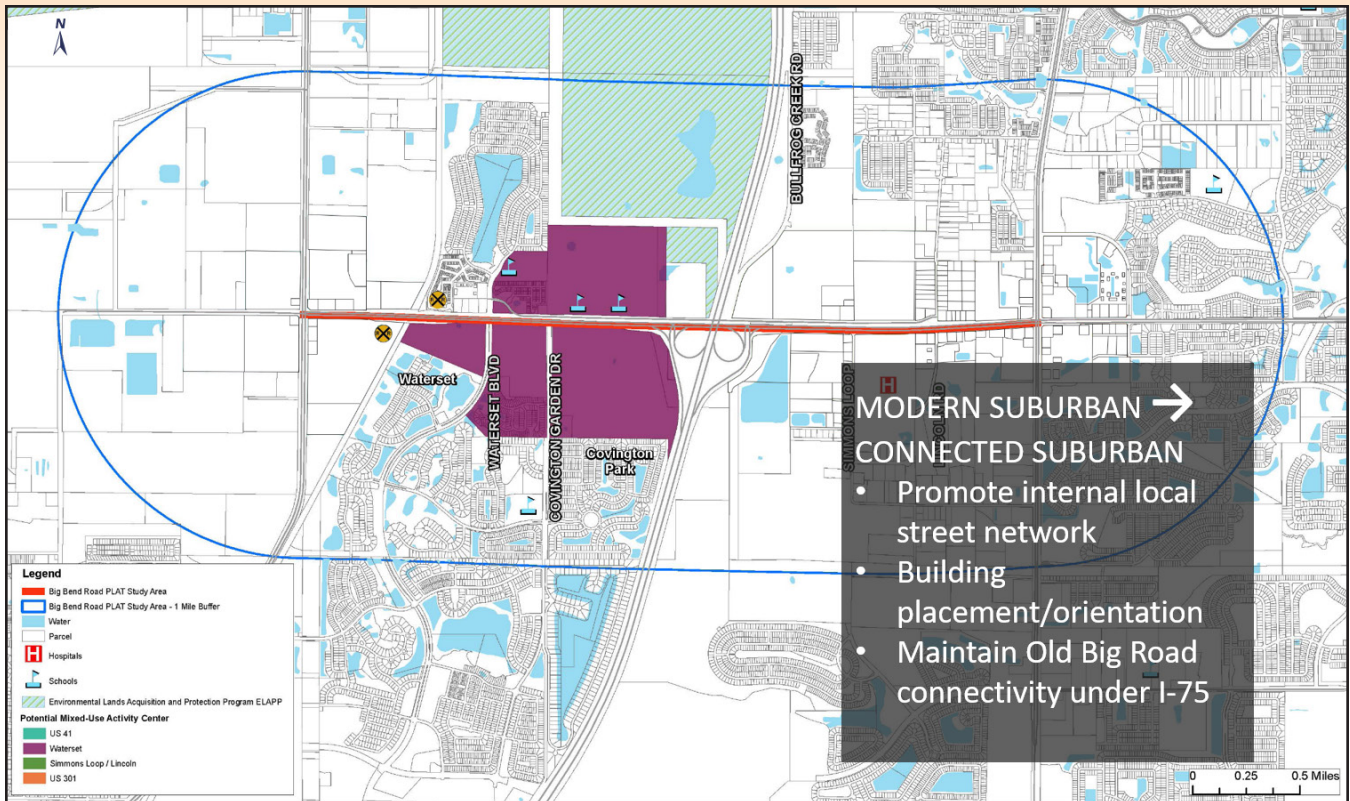


Source: Hillsborough County

Figure 32. US 41 Gateway Concept (Plan View)



Source: Hillsborough County



8.2 Waterset Boulevard – Covington Gardens Drive

8.2.1 Existing Development Context

8.2.1.1 Land Use

The future land use for the area along Big Bend Road from Waterset Boulevard to the I-75 interchange is Urban Mixed Use-20. The Waterset Community is planned for a higher density of mixed uses on the south side. Community Mixed Use-12 exists on the north side along with Eisenhower Middle and East Bay High schools. The site proposed as South Shore Commons is in the southwest quadrant of the interchange at I-75 and is identified as Urban Mixed Use-20. This site, as part of the Southbend Development of Regional Impact (DRI), is approved for nearly 1.6 million square feet of commercial, office, and hotel use on 129 acres.

Typical and allowable land uses for the Urban Mixed-Use 20 category include up to 20 dwelling units per gross acre, commercial uses such as a shopping mall, office, business park, research or corporate park, light industrial, and mixed-use and multi-purpose projects. The Community Mixed-Use 12 category allows up to 12 dwelling units per gross acre and community sized retail stores, office uses, research corporate park, parks, light industrial, and mixed-use and multi-purpose projects compatible with residential uses.

The Waterset DRI proposes final build out by the end of 2025. Maximum entitlements, as shown in *Table 6*, include:

Table 6. Waterset DRI Maximum Entitlements

DWELLING UNITS:	Max. @ buildout	Built/Approved
Single family detached	4,705	3,619
Single family attached	1,247	959
Apartments	1,755	1,350
Senior adult detached	520	400
Senior adult attached	130	100

RETAIL/OFFICE:	Max. @ buildout	Built/Approved
Shopping Center	622,024 sq. ft.	478,480 sq. ft.
Specialty	26,000 sq. ft.	
Office	258,570 sq. ft.	198,900 sq. ft.

8.2.1.2 Transportation

The roadway cross section of Big Bend Road in this center is proposed as a six-lane facility with additional left turn lanes added in the westbound direction at Waterset Boulevard and Covington Garden Drive. Full access to Old Big Bend Road will be closed at Covington Garden Drive but remain at Franklin Cast Bay for the schools.

The SouthShore Transit Study proposes a park-n-ride lot for the parcel presently owned by Hillsborough County in the northwest quadrant of the I-75 interchange. Maintaining access to Old Big Bend Road through the interchange would support this option for commuters by offering another way to enter the lot without getting caught in the congestion on Big Bend Road.

Based on the current recommendations from the ongoing PD&E study, seven-foot buffered bike lanes will be added in both directions and a 10-foot side path will be constructed on the south side of Big Bend Road. Old Big Bend Road will be reconstructed to include a six-foot sidewalk on the north side and four-foot paved shoulders in both directions. This will provide needed non-motorized connectivity between the land uses in the area. Additional improvements to the ramps at the I-75 interchange will also be completed.

8.2.2 Potential Development Form

8.2.2.1 Land Use

Although the Waterset Community is primarily built and will remain residential, the site previously identified as Southshore Commons holds tremendous opportunity to guide the type of development and built environment desired and envisioned by the community and Hillsborough County. Rather than develop as a shopping center, this parcel could offer more employment opportunities in the area with policies that encourage a mix of uses to primarily include office space and multi-family dwelling units which would serve as a transitioning land use buffer to the single-family units of the Waterset development. Increasing employment opportunities in this study area would provide a better balance of employment and housing by increasing opportunities for residents to live and work within a shorter distance. Commercial and retail options are already well represented along the corridor.



Policy should concentrate on careful placement of specific commercial uses, such as restaurants and shops on the first floor of an office building that would give easy and accessible options for daily patrons employed in the center and additional choices for adjacent residents. The currently approved development for the site could deliver a lower intensity modern suburban pattern relative to its size. Building placement and orientation coupled with street design and spacing could be established through form-based code to deliver a connected suburban pattern with the potential to evolve into a compact urban development pattern for this activity center should the DRI's range of uses permit this evolution in the future.

This potential Compact Urban Center could resemble something like the rendering in *Figure 33*, offering a central space where residents, workers, visitors, and tourists can socialize, work, live, shop, dine, exercise, or even see an outdoor concert. Buildings would be oriented outward to the streets; public spaces would be internal to the site while parking would be located to the rear or side of the buildings.

8.2.2.2 Transportation

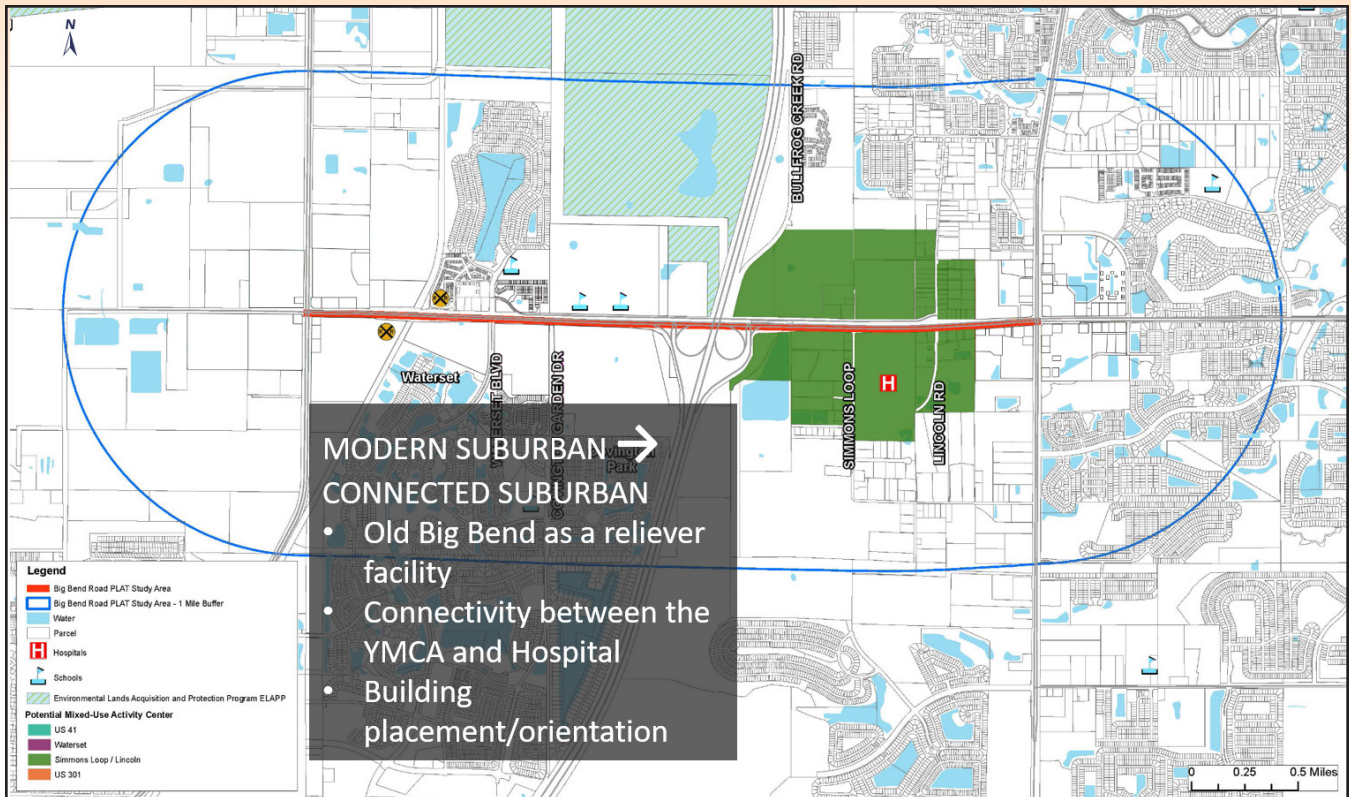
An interconnected network of local streets is needed to support easy to access, non-motorized, multi-modal options, and could provide alternate routes to Big Bend Road, especially for residents living south of the Waterset development. Provisions for enhanced transit service should also be considered. The South Coast Greenway Trail will intersect with Big Bend Road in this area, and a pedestrian overpass is recommended to enhance safety for users of the trail when crossing Big Bend Road. There is an education cluster in this area, consisting of Corr Elementary, Eisenhower Middle, and East Bay High Schools, and the proposed pedestrian overpass will create a safe connection between these schools and the existing and planned residential development of Waterset south of Big Bend Road, in addition to the South Coast Greenway Trail. This linkage to the overall trail network will provide a vital connection to recreational, community, and cultural uses.

For proposed typical sections of Big Bend Road, west and east of I-75, refer back to *Figures 7 and 8*.

Figure 33. Compact Urban Center



Source: *Midtown Commons Rendering, Midtown Tampa*



8.3 Simmons Loop – Lincoln Road

8.3.1 Existing Development Context

8.3.1.1 Land Use

The activity center around Simmons Loop and Lincoln Road includes St. Joseph’s Hospital south of Big Bend Road and the Spurlino Family YMCA to the north. Future land use for parcels directly adjacent to both sides of the Big Bend Road corridor is Mixed Use-20, with Suburban Mixed Use-6 as the main land use surrounding this center.

Typical and allowable land uses for the Urban Mixed-Use 20 category include up to 20 dwelling units per gross acre, commercial uses such as a shopping mall, office, business park, research or corporate park, light industrial, and mixed-use and multi-purpose projects. Allowable uses under the Suburban Mixed-Use 6 category are up to six dwelling units per gross acre, suburban scale neighborhood commercial, office uses, research corporate park, light industrial, and multi-purpose and mixed-use projects which meet appropriate criteria for each location.

With most of this activity center projected to increase in dwelling units and a modest rise in employment attributed to primarily the hospital, the Veterans clinic, the YMCA, and planned new high school, this activity center has low redevelopment potential. The greatest opportunity is to direct additional growth toward higher intensity mixed-use.

8.3.1.2 Transportation

Regional attractors to this activity center like St. Joseph’s hospital, the Veterans clinic, and the YMCA, rely on the connection to I-75 that the Big Bend Road corridor provides.

8.3.2 Potential Development Form

8.3.2.1 Land Use

Policies which support a robustly connected street network to support the new residential growth to the south are essential. A connected suburban pattern will offer additional travel choices to residents to access existing commercial and service sites, like the uses in the US 301 activity center, the hospital, and the YMCA. This pattern allows local trips to rely on the local road network and provide some relief to congestion on the regional road network. Presently, Old Big Bend Road terminates at Lincoln Road, and there is a planned extension of Simmons Loop to connect to Old Big Bend Road. Old Big Bend Road could potentially serve as a main street as part of a connected suburban street network. While Big Bend Road is a truck route and supports high volume, high speed regional traffic, this road will support lower speeds as well as local traffic. Utilizing Old Big Bend Road as a parallel facility to Big Bend Road should be supported through policy incentives that orient building frontages to the local road network in a connected suburban form.

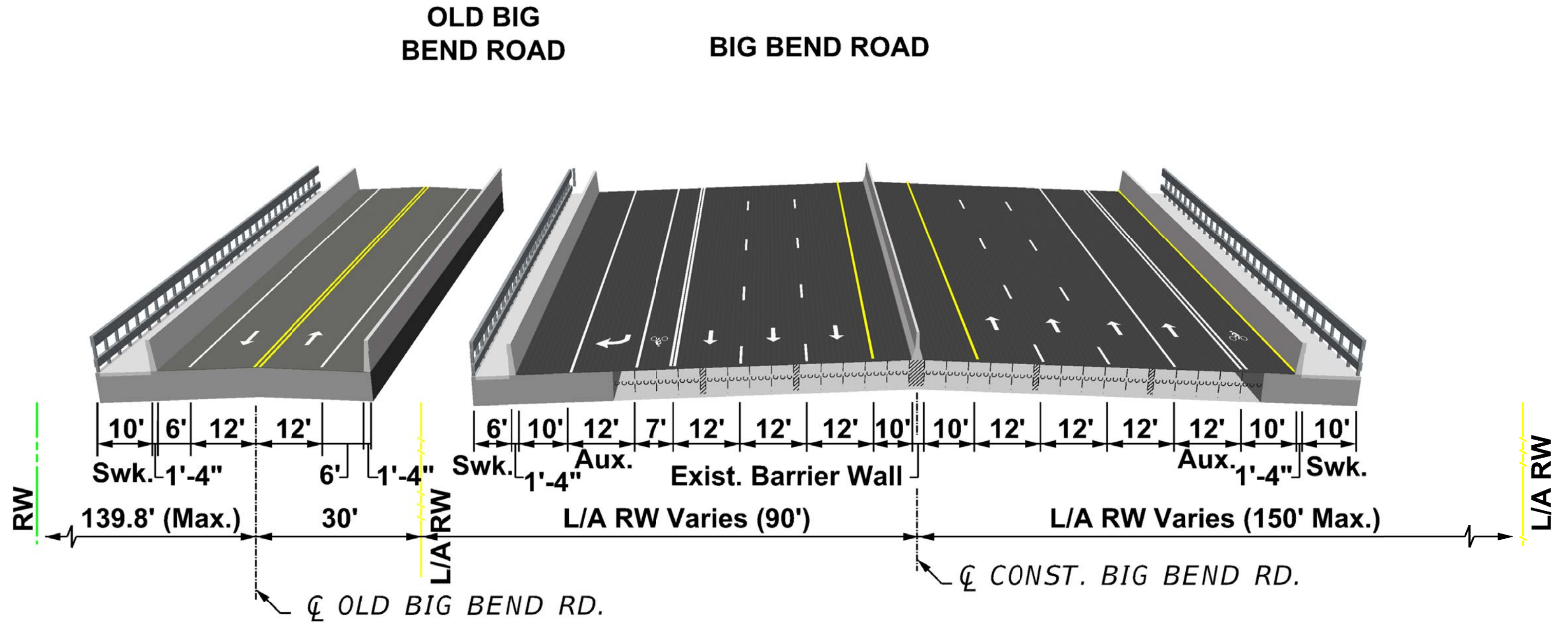
Figure 34 depicts an example of what Connected Suburban development looks like. A Connected Suburban Center would suit the area in the future because it promotes a multi-modal environment with a connected street grid for planned residential development to access a mix of uses while serving the demands of a community so they do not have to rely solely on the regional road network. Buildings are oriented outward to the streets while front parking is limited and/or regulated to the rear of the development.

Figure 34. Connected Suburban Center



Source: Google Earth (West Park Village, Westchase, FL)

Figure 35.
Proposed Typical Section – Big Bend Road at Bullfrog Creek Bridge



8.3.2.2 Transportation

Big Bend Road from Simmons Loop to US 301 has been programmed by Hillsborough County for a PD&E study to widen from four to six lanes. An extension of Simmons Loop to Old Big Bend Road is also planned as a developer funded improvement and will provide important access and a parallel route to the Big Bend Road corridor. Utilizing Old Big Bend Road as a parallel facility to Big Bend Road should be supported through policy incentives. Maintaining the connection of Old Big Bend Road under I-75 is vital in order to provide connectivity between complementary land uses on either side.

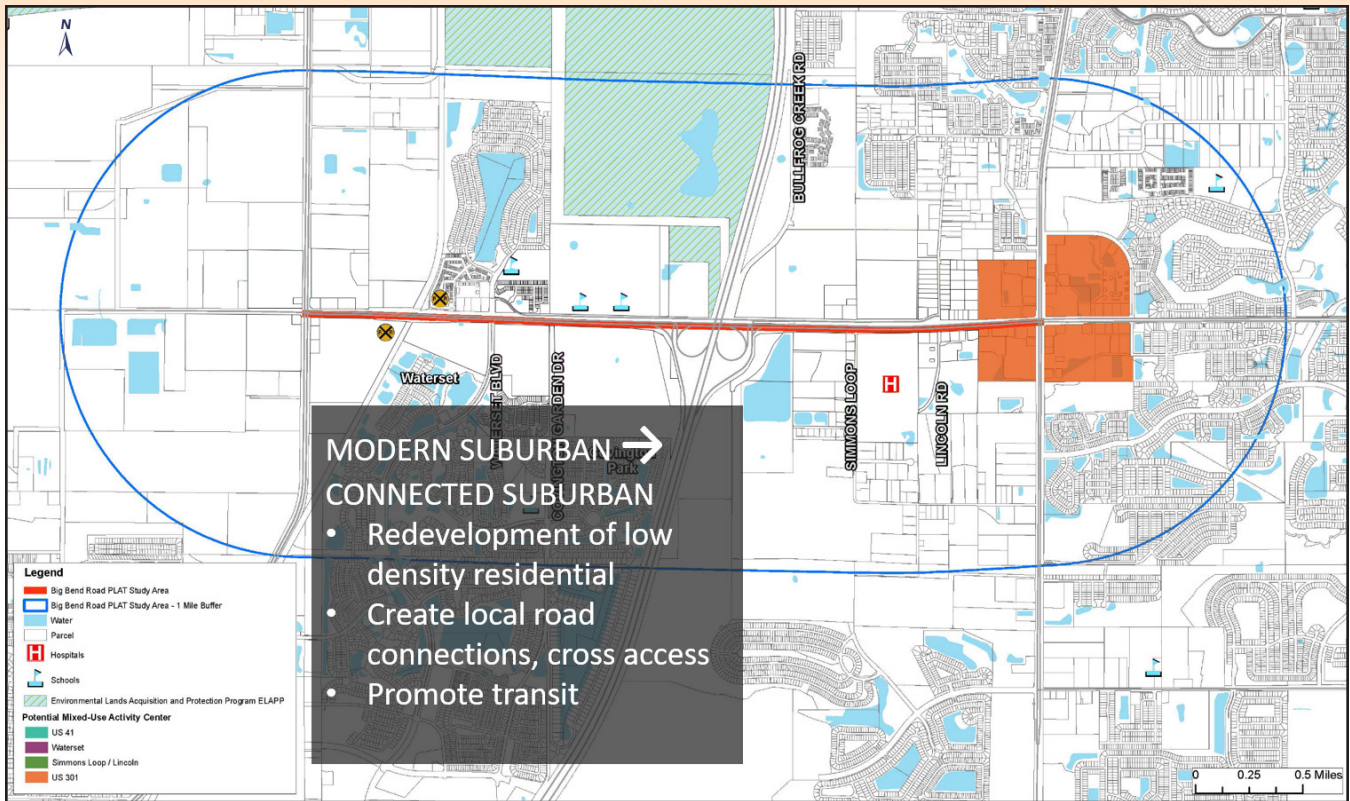
Additionally, the SouthShore Transit Study identifies a proposed mobility hub just south of Big Bend Road near Simmons Loop. This hub would serve as a transfer point for public transit users to access proposed express routes to downtown Tampa and other points north and south of Big Bend Road. The mobility hub would also provide options scaled to the demand for services in the area. The mobility hub could include car and bike share stations and dedicated space for ride-sharing pick-up/drop-off. Most public transportation users are more likely to walk, bicycle, or use other non-motorized forms of transportation to access transit service if a stop is located within ¼ mile of where their trip originates. A hub like this would offer additional travel choices that are not presently available to residents in the area.

To realize future service plans and achieve the desired development pattern for this activity center, land development and transportation policies should:

- Place parking in the rear of buildings
- Consider maximum parking requirements versus minimum which encourages the use of parking structures
- Include bicycle, pedestrian facilities, and transit connections in site design
- Incorporate roadway design standards on surrounding local and collector roads that encourage lower speeds
- Use stub outs to provide regularly spaced connections between parcels

For a proposed typical section of Big Bend Road at Bullfrog Creek Bridge, refer to *Figure 35*.





8.4 US 301

8.4.1 Existing Development Context

8.4.1.1 Land Use

The 2040 Vision identifies the intersection of US 301 and Big Bend Road as High Intensity Suburban. Future land uses include Office Commercial, Urban Mixed-Use-20, Community Mixed-Use-12 and residential uses with densities ranging from four to nine dwelling units per acre. Development to the east of US 301 is primarily residential with low redevelopment potential.

Typical and allowable land uses for the Urban Mixed-Use 20 category include up to 20 dwelling units per gross acre, commercial uses such as a shopping mall, office, business park, research or corporate park, light industrial, and mixed-use and multi-purpose projects. The Community Mixed-Use 12 category allows up to 12 dwelling units per gross acre and community sized retail stores, office uses, research corporate park, parks, light industrial, and mixed-use and multi-purpose projects compatible with residential uses.

8.4.1.2 Transportation

This area has developed with a variety of fast food style restaurants, gas stations, linear strip shopping plazas, and big box stores. Through this center, Big Bend Road is a rural four-lane divided section with turn lanes and US 301 is a curb and gutter six-lane section with turn lanes, a sidewalk on the east side, and a multi-use trail along the west side. Although the development pattern does not follow the typical strip commercial pattern, it is an auto-centric modern suburban commercial pattern. Large parking lots in front of stores and outparcels containing restaurants, banks, and other singular buildings line the corridor. Access points from Big Bend Road are numerous, however, there is some internal connectivity within each quadrant of commercial development.

Two mobility hubs are identified in the SouthShore Transit Study within this activity center.

8.4.2 Potential Development Form

8.4.2.1 Land Use

This activity center has the potential to redevelop as a Connected Suburban center and continue connectivity with the Simmons Loop – Lincoln Road center to the west.

Existing residential in the northwest quadrant of this activity center includes low density residential and a mobile home park. These parcels offer a higher potential for redevelopment in the future than other parts of the study area. One potential redevelopment strategy could be to transform the existing commercial use adjacent to the intersection with the parcel the mobile home park occupies and redesign with an urban feel. *Figures 36 and 37* show an example of how a shopping mall in a sprawling suburban area was redesigned with walkable, low speed streets, and a mix of uses at an appropriate density.

8.4.2.2 Transportation

With existing and future residential development, a well-connected local street network is essential. Enhancements for multimodal travel options and access to the proposed mobility hubs will encourage a connected suburban development pattern.

Big Bend Road from Simmons Loop to US 301 and from US 41 to Covington Garden Drive has been programmed by Hillsborough County for a PD&E study to widen from four to six lanes.

Figure 36. Redesign - Mashpee Commons, MA Before



Source: CNU.org/resources

Figure 37. Redesign - Mashpee Commons, MA After



Source: CNU.org/resources

To achieve the connected suburban development pattern and form envisioned, policy should encourage alternatives to the arterial road network by creating local street connections between destinations, promoting transit and other multi-modal travel options, and implementing safety enhancements. Policy should also encourage a mix of uses with incentives to use liner buildings, or thin buildings that line the edge of streets, shielding public spaces from something less desirable and/or protecting public areas from the noise of a busy street and encourage parking in the rear of businesses. Street design should also support lower speeds.

Residential and office uses placed above shops and restaurants to offer more housing options and employment opportunities within the study area should be permitted in commercial zoning districts. Use of design standards including build to lines and minimum glazing requirements will allow buildings to take on a look suitable for an area with a connected suburban development pattern.

9. Stakeholder Engagement

Recognizing the importance to engage the major employment centers and businesses in the activity centers within the study area, small group meetings were held with the YMCA, St. Joseph's Hospital, Hillsborough County School Board, and TECO. The purpose of the meetings was to inform stakeholders about the study, gain insight and knowledge regarding challenges occupants were experiencing, and identify opportunities they saw within the Big Bend Road corridor.

What we heard:

- › Interchange with I-75 causing back-ups, weaving, crashes
- › Safety is important
- › Support transit and alternative transportation options
- › Maintain connection and access via Old Big Bend Road
- › Support local roadway network connections
- › Partnerships and coordination with each other

Stakeholders expressed concerns regarding the interchange with I-75 with an overwhelming agreement about safety concerns and the high number of crashes occurring as traffic merges on and off the ramps. A summary of information collected from the stakeholders include:

- › St. Joseph's Hospital cited emergency response issues for medical staff due to the congestion at peak times.
- › Hillsborough County School Board places safety at the top of its priorities and agrees with opportunities to make improvements to intersections like Waterset Boulevard and Covington Gardens Drive to provide safer access to school entrances from Old Big Bend Road.
- › The YMCA noted the same safety concerns and placed high importance on having safe access to the facility for families and children. Both the YMCA and School Board support multi-modal transportation options for their customer base and employees, as well as maintaining access and connections to Old Big Bend Road.
- › TECO indicated general support for improvements which would not encroach on their utility corridor.

The hospital, School Board, and the YMCA acknowledge the importance of coordination with each other for programs and services offered between the customer base. Given the connection of serving some of the same population in the area, all agree connections to and continuous access of, Old Big Bend Road through the I-75 interchange is important as it provides an alternate route for travelers by eliminating the need to use Big Bend Road for all trips.



10. General Recommendations

While Section 8 focused on land use and transportation recommendations specific to the four activity centers described above, the following recommendations can be applied to the corridor as a whole.

10.1 Land Use and Policy

The following policies and strategies are recommended for consideration:

- › Consider goals, objectives, and strategies within the Comprehensive Plan to **support and define context classification** for the corridors
- › Create **connected suburban mixed-use typologies** within the Land Development Code or Comprehensive Plan to guide development in the activity centers and establish intensity, density, urban form, and a range of uses for mixed-use designations
- › Consider **development standards that place more emphasis on building form and placement** than on use (form-based codes) for the Land Development Code to guide urban development form through building height and orientation, roadway design and connectivity, etc. as applicable to the activity center and desired development pattern
- › Develop **incentives for development, redevelopment, and /or adaptive reuse of vacant or underutilized buildings** that support the desired development pattern, urban form, and context
 - » Compact Urban Center Scenario: Higher development intensity, parking reductions, and enhanced economic development incentives (such as tax incentives, redevelopment grants and loans, fee reduction, and off-site infrastructure improvements)
 - » Connected Suburban Center Scenario: Higher development intensity, parking reductions, and limited economic development assistance
 - » Modern Suburban Center Scenario: Limited economic development assistance
- › Consider **updating the Land Development Code and/or Comprehensive Plan to provide incentives** to achieve a complementary mix of uses. Potential incentives and regulatory changes could include:
 - » Providing density, building height, and/or floor area ratio bonuses for proposals that have pedestrian-friendly compact urban or connected suburban form
 - » Creating a “scorecard” for proposed developments that are directly tied to goals from the Comprehensive Plan (i.e., building location, density, amount of mixed-use, transit coordination and parking, etc.) and are weighted and ranked. The higher the score, the better the incentive for the proposed development, such as:
 - A waiver or reduction of process fees for the applicant
 - A reduction in taxes
 - A general streamlining of the approval process



10.2 Transportation

Along with the development supportive policy recommendations described for each activity center, recommendations for general improvements to the transportation system within the whole study area include:

- › Continuity of widening Big Bend Road to six lanes and consistency with the typical section utilized as the preferred alternative from the current PD&E (Covington Gardens to Simmons Loop)
- › **Maintain access to and continuity of Old Big Bend Road through the I-75 interchange** for both motorized and non-motorized travel
- › Bicycle and pedestrian facilities and improvements along the corridor and at intersections that will ensure and encourage safe travel for non-motorized vehicles.
- › **Maximize connections to the South Coast Greenway Trail**
- › Improve and add connections to local network to relieve congestion on Big Bend Road and offer alternative travel options
- › **Increase transit options** as indicated in the Southshore Transit Study



HILLSBOROUGH COUNTY
Big Bend Road PLAT Study
OCTOBER 2019