

# South County Integrated Mobility Solutions and Investment Strategy: Phase 1

Summary Report

Prepared For  
Hillsborough County, Florida

Prepared By  
USF Center for Urban Transportation Research

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# Accommodation Statement

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**Disclaimer**

The contents of this report reflect the views of the authors, who are responsible for the facts and the accuracy of the information presented herein. The opinions, findings, and conclusions expressed in this report are those of the authors and not necessarily those of Hillsborough County.

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# I. Introduction

This report summarizes findings from an assessment of transportation and land use conditions in South Hillsborough County. The purpose of this study is to identify baseline conditions for the development of an integrated mobility strategy for South County. The study area is generally bounded by the Alafia River to the north, Tampa Bay to the west, and the Urban Service Area (USA) to the south and east, including those land uses categorized as Residential Planned-2 (RP-2). It includes seven community plans that contain the unincorporated communities of Gibsonton, Riverview, Apollo Beach, Ruskin, Sun City Center, Wimauma, and Balm (Figure 1).

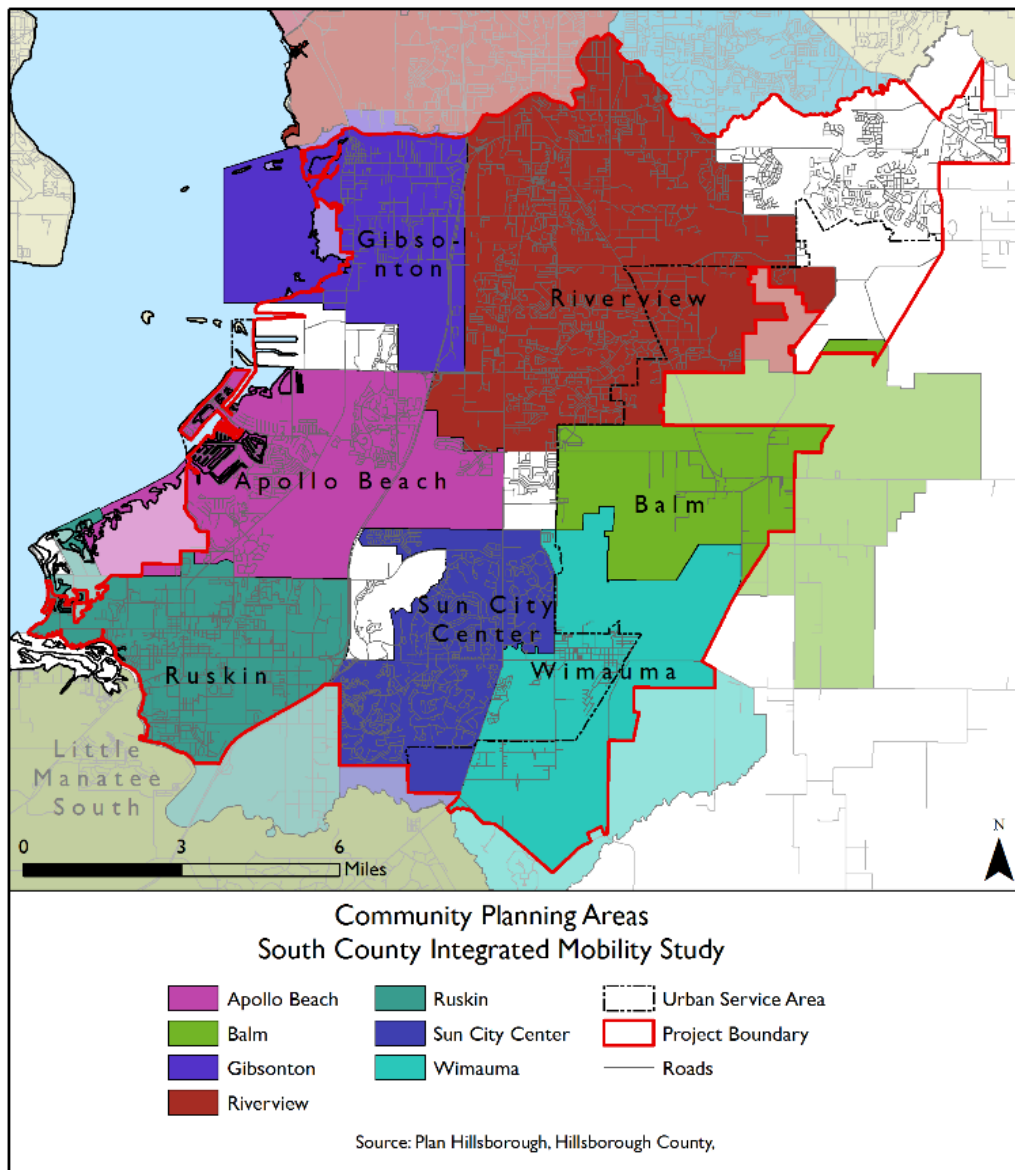


Figure 1. South County project study area

The assessment was documented in three technical memoranda:

- *Technical Memorandum 1: Review of Plans and Studies* established the status of current planning activities and identified similarities, conflicts, and common themes. Data were obtained from more than 30 documents from numerous agencies, including Hillsborough County City-County Planning Commission, Hillsborough Metropolitan Planning Organization (MPO), the Florida Department of Transportation (FDOT), Port Tampa Bay, Tampa Bay Area Regional Transit Authority (TBARTA), and Hillsborough Area Regional Transit Authority (HART). This data was supplemented by agency interviews to verify the accuracy of findings and determine the status of planning activities.
- *Technical Memorandum 2: Land Use and Transportation Conditions* assessed baseline transportation and land use conditions in the South County region of unincorporated Hillsborough County as a foundation for developing integrated land use and transportation mobility solutions. Activity areas were identified and categorized and an origin-destination (OD) analysis was conducted using Streetlight Data.
- *Technical Memorandum 3: Travel Patterns and Conditions* evaluated multimodal accessibility in South County as it relates to walking, biking, and transit use. Various accessibility measures were estimated. In-depth inventories of safety issues and multimodal gaps and barriers of selected communities were also evaluated. The report assessed County access management and corridor management policies.

Each technical memoranda detail the data, methods, and complete findings summarized in this document. These documents are referenced throughout this report to support the information contained herein.

The analysis identified several key findings relevant to transportation and land use conditions in the study area. These findings are grouped into four categories: growth and development, common themes, travel time and congestion, and accessibility and mode choice. The conclusions and recommendations address the overarching needs and provide the impetus for an integrated mobility strategy in South County. The integrated mobility strategy will ultimately be used to create a set of financially feasible development scenarios for South Hillsborough County.

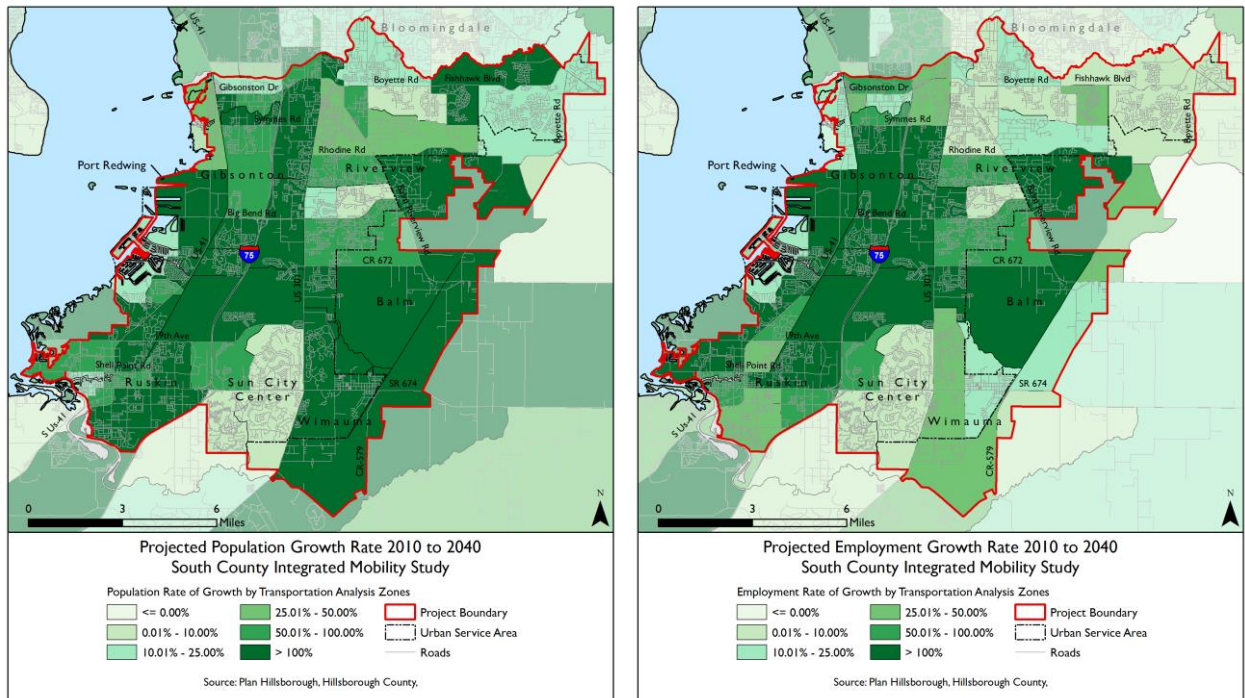
## II. Growth and Development

South County, the southern part of unincorporated Hillsborough County, is the fastest growing area in the County. Population and employment growth in South County is expected to continue well into the future. Table 1 includes population and employment projections for the study area from Plan Hillsborough traffic analysis zone (TAZ) data retrieved in 2018. The projections indicate that total jobs in the study area will increase from 43,185 to 106,757 (147% increase) between 2010 and 2040 and that the 2010 population of 182,893 will increase to 347,698 by 2040. This projected increase is comparable to the 2017 population of the entire city of Tampa (385,430). Figure 2 shows the forecasted rate of population and employment growth by TAZ in the study area from 2010 to 2040.

**Table 1. South County Population and Employment (2010 – 2040)**

South County Study Area	Projected Totals							Total Change
	2010	2015	2020	2025	2030	2035	2040	
<b>Population</b>	182,893	209,581	247,117	279,637	300,592	324,266	347,698	164,805
<b>Employment</b>	43,185	51,174	64,863	70,273	78,346	85,929	106,757	63,572

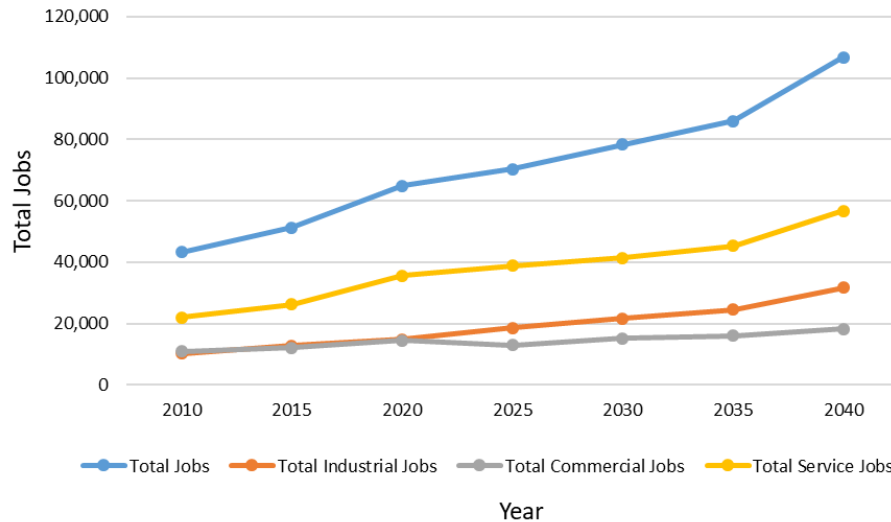
Source: Plan Hillsborough, TAZ data



**Figure 2. South County projected population and employment growth 2010-2040**



Figure 3 shows growth by job sector as identified by Plan Hillsborough. Service jobs, which include educational, medical, and professional services, accounted for 51 percent of total jobs in 2010 and are expected to account for 53 percent of total jobs by 2040. Additionally, in 2010 the number of commercial jobs (10,950) (retail, restaurants, and other similar jobs) only slightly surpassed the number of industrial jobs (10,285). By 2020, it is projected that there will be more industrial jobs than commercial jobs.

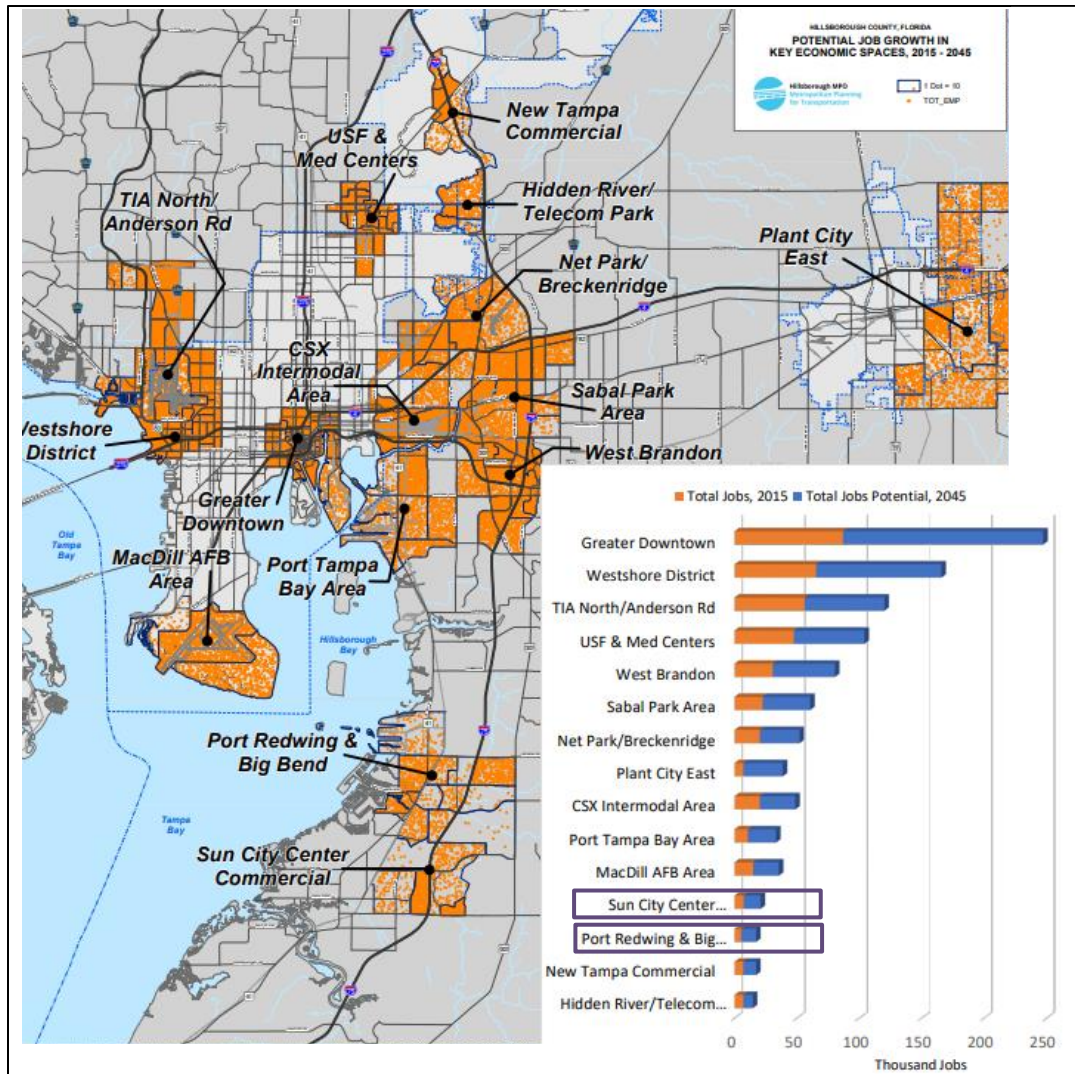


**Figure 3. Job growth by sector in the South County study area**

Source: Plan Hillsborough

Employment clusters and other activity centers are being established in South County to accommodate the needs of the growing population. It is expected that these employment clusters/activity centers will reduce the need for residents to travel long distances outside of South County for employment.

Existing plans and studies consistently show that Sun City Center/Ruskin and the Apollo Beach/Port Redwing areas are key economic spaces that will experience the most growth in jobs (see Figure 4, Figure 5, and Figure 6). For example, the area in the vicinity of the Amazon Fulfillment Center has industrial entitlements offering the potential for expansion. Furthermore, Port Redwing has initiated an \$18-million expansion plan estimated to provide 5,765 jobs and avoid 59 million truck miles once completed.



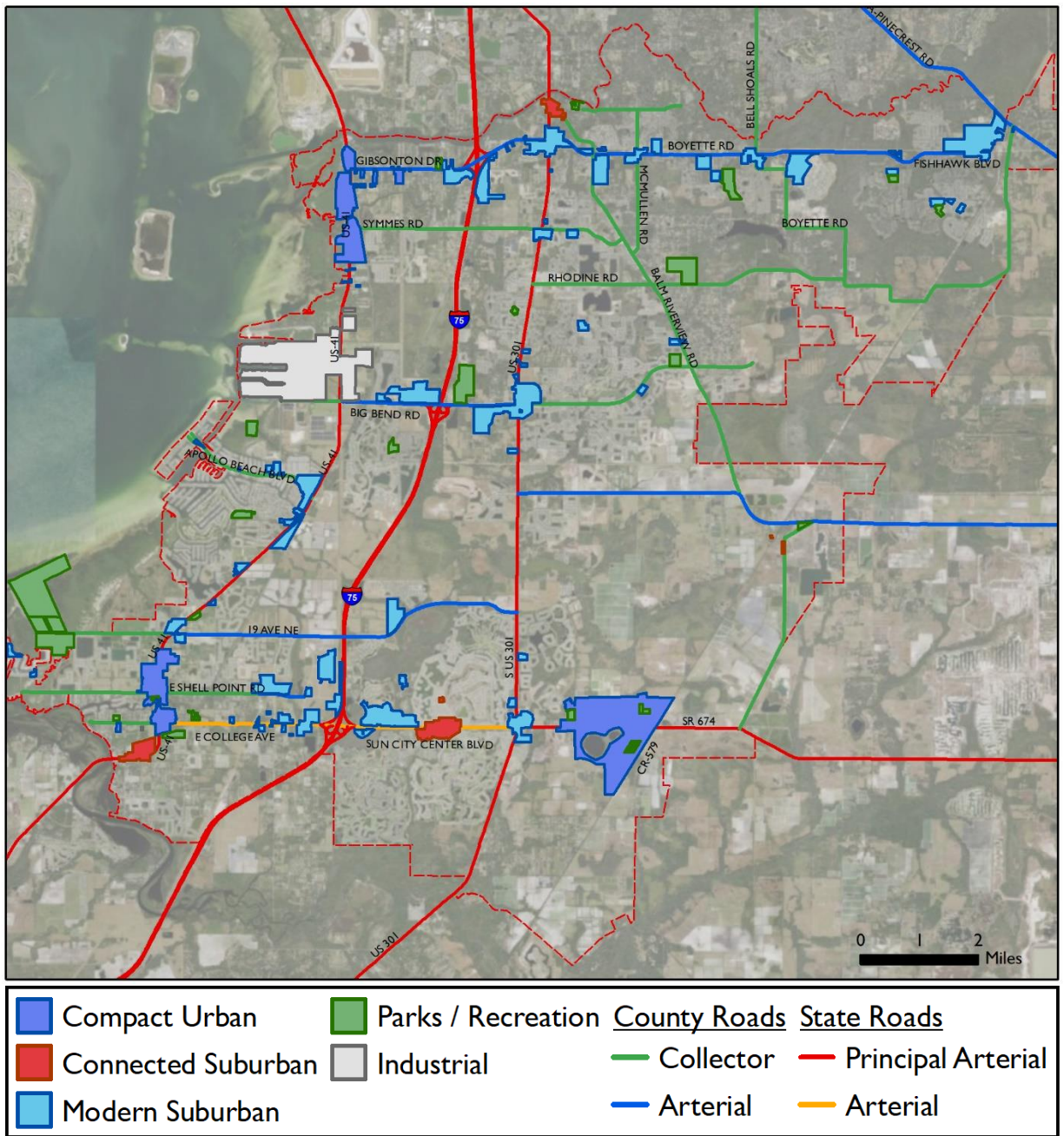
**Figure 4. Potential job growth in key economic spaces**

Source: Hillsborough MPO, State of the System (2019)



- Compact Urban: A physical pattern of towns and cities where public streets form an interconnected network that surrounds traditional city blocks.
- Connected Suburban: A post-war physical pattern that replaces traditional gridded city blocks with irregular blocks while maintaining a connected network of public streets that are spaced at quarter-mile intervals.
- Modern Suburban: A late 20<sup>th</sup>-century suburban pattern that groups large superblocks and single-purpose pods into master-planned communities that are physically separated from adjoining communities. Most jobs, shopping, and entertainment can be reached on wide arterial roads or expressways.
- Industrial: Major industrial areas that impact corridors.
- Parks/Recreation: Destinations including parks and state parks.

The dominant land use pattern for these areas of activity in the study area is Modern Suburban, which emphasizes large superblocks or single-purpose destinations that are physically separated from adjoining residential areas. These destinations are primarily auto-oriented and challenging for pedestrians, bicyclists, and transit users to navigate. Most of these destinations are located near the I-75 interchanges or at the intersection of major roadways in the study area, such as US 41, US 301, Big Bend Road, Boyette Road, Gibsonton Drive, and SR 674/Sun City Center Boulevard/College Avenue. Figure 7 shows an overview map of the destinations and connecting corridors.



**Figure 7. Destinations and connecting corridors**  
 Source: Hillsborough County, U.S. Census Bureau

Although these areas of activity provide localized employment opportunities for residents, land use in South County continues to be dominated by single-family residential development. Additionally, the Future Land Use (FLU) Element of the Hillsborough County Comprehensive Plan designates a large percentage of the study area for low- to medium-density single-family residential uses. These land-use characteristics are indicators of high levels of automobile dependence – a finding that is further reinforced by traffic analysis in subsequent sections of this report.

The FLU Element designates approximately 16 percent of land for mixed-use development. The mixed-use development areas are predominantly located on the western side of the study area along I-75 (Figure 8). Two developments of regional impact (DRIs), Waterset and Southbend, are located in this area, just south of Big Bend Road. These DRIs are described as mixed-use and while the Master Development Plans for these projects designate some areas for mixed-use development, they contain larger areas for other single-use development types. Due to their predominantly single-use composition, these DRIs are better described as multi-use development projects with designated areas for mixed-use development.

**Most permits issued between 2011 and 2018 were single-family residential (98%) with 86 percent of all permits issued being for single-family detached residences.**

Even with mechanisms to diversify land use and encourage mixed-use development, there has been an increase in single-family dwelling units over time. A total of 4,570 single-family permits were issued in 2018 – more than triple the number of single-family permits (1,294) issued in 2011. Most permits issued between 2011 and 2018 were single-family (98%) with 86 percent of all permits issued being for single-family detached residences (see Figure 9).

Despite the amount of existing or approved development, there remains a considerable amount of development and redevelopment potential. A total of 6,686 parcels (14,346 acres) have development potential and 1,498 parcels (6,594 acres) have redevelopment potential (see Technical Memo 2 for methodology). These parcels, particularly those designated as mixed-use in the FLU Element, provide opportunities to develop mixed-use centers that encourage economic development and support mobility.

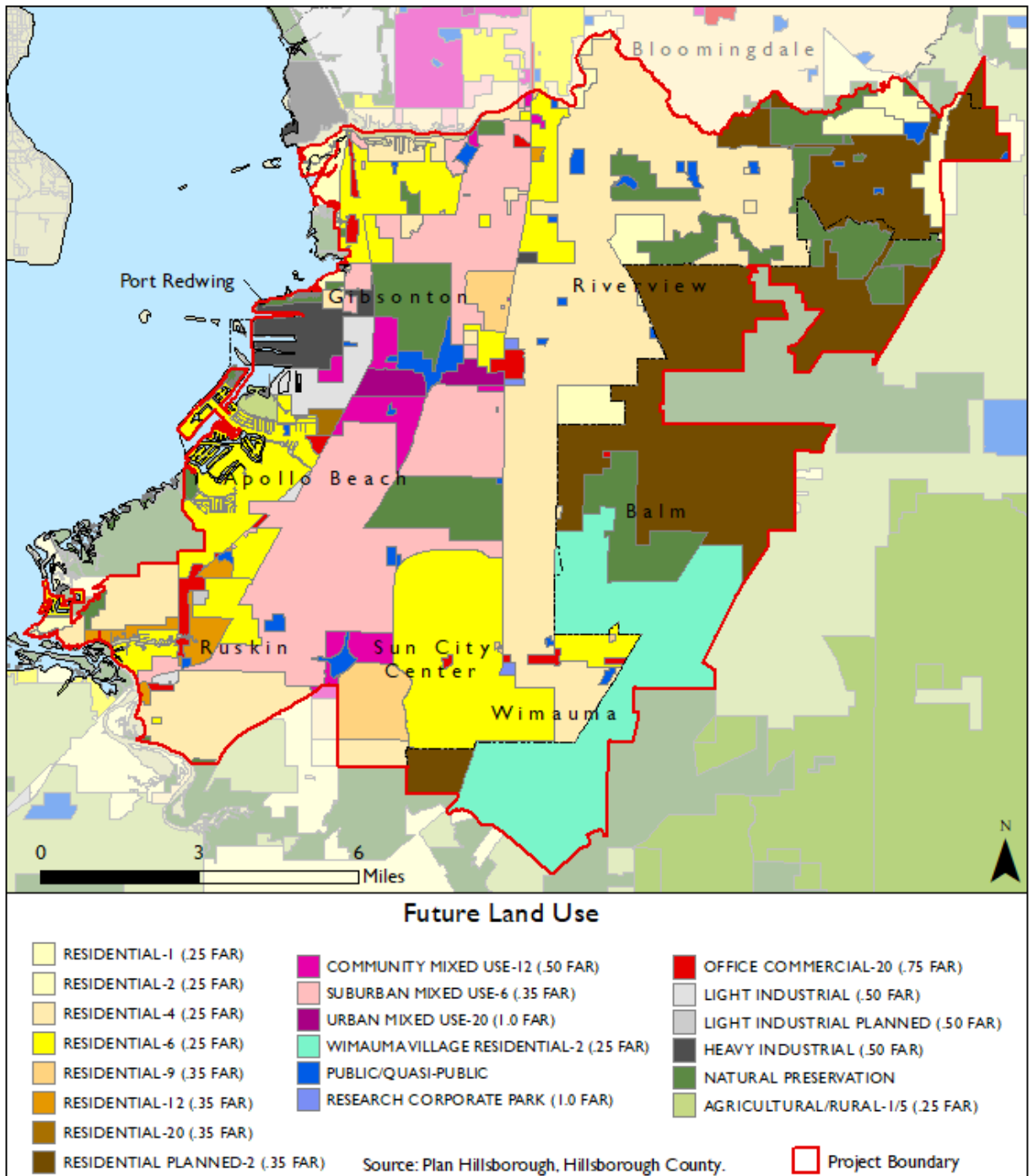
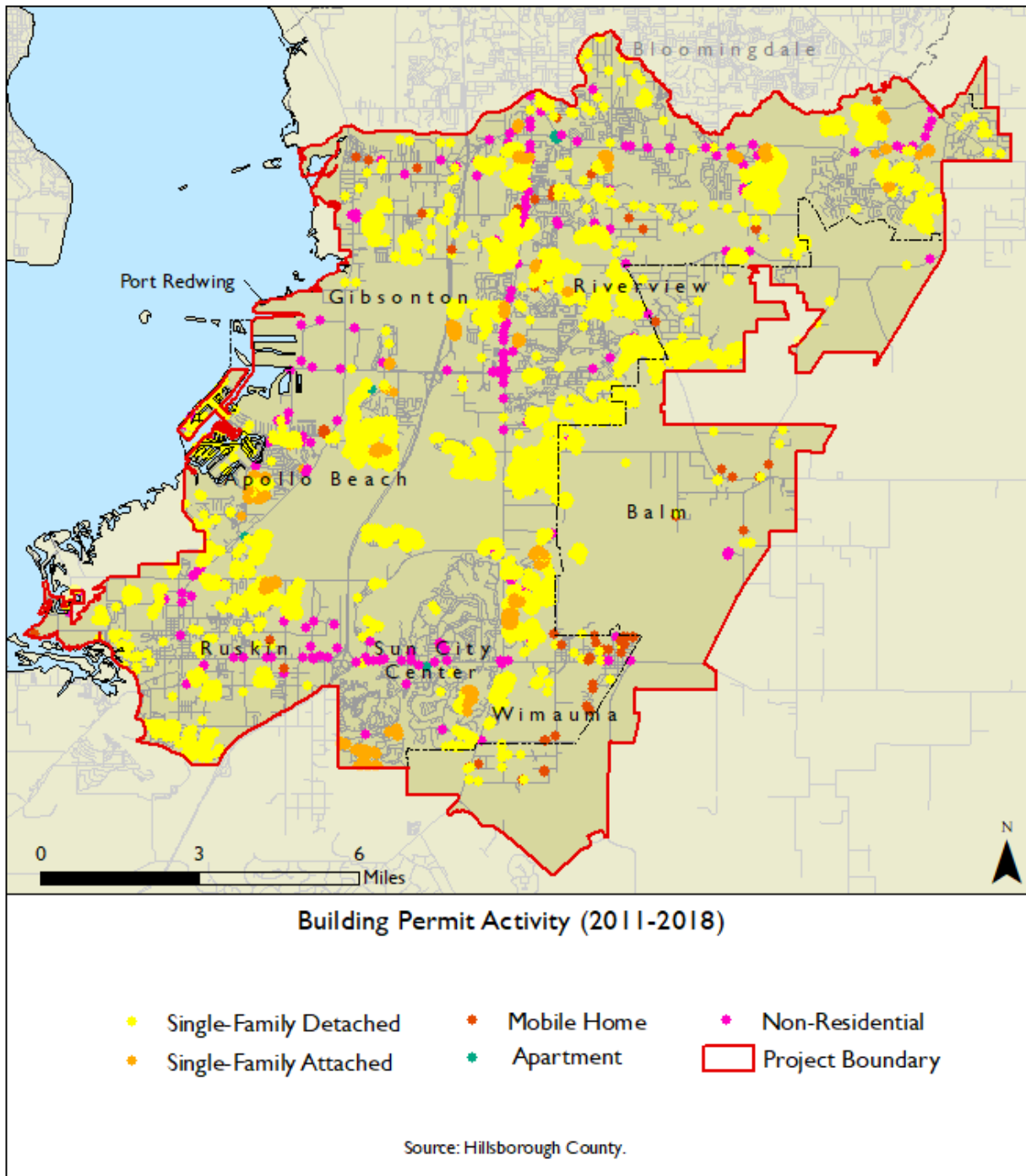


Figure 8. South County future land use map



**Figure 9. South County building permit activity 2011-2018**



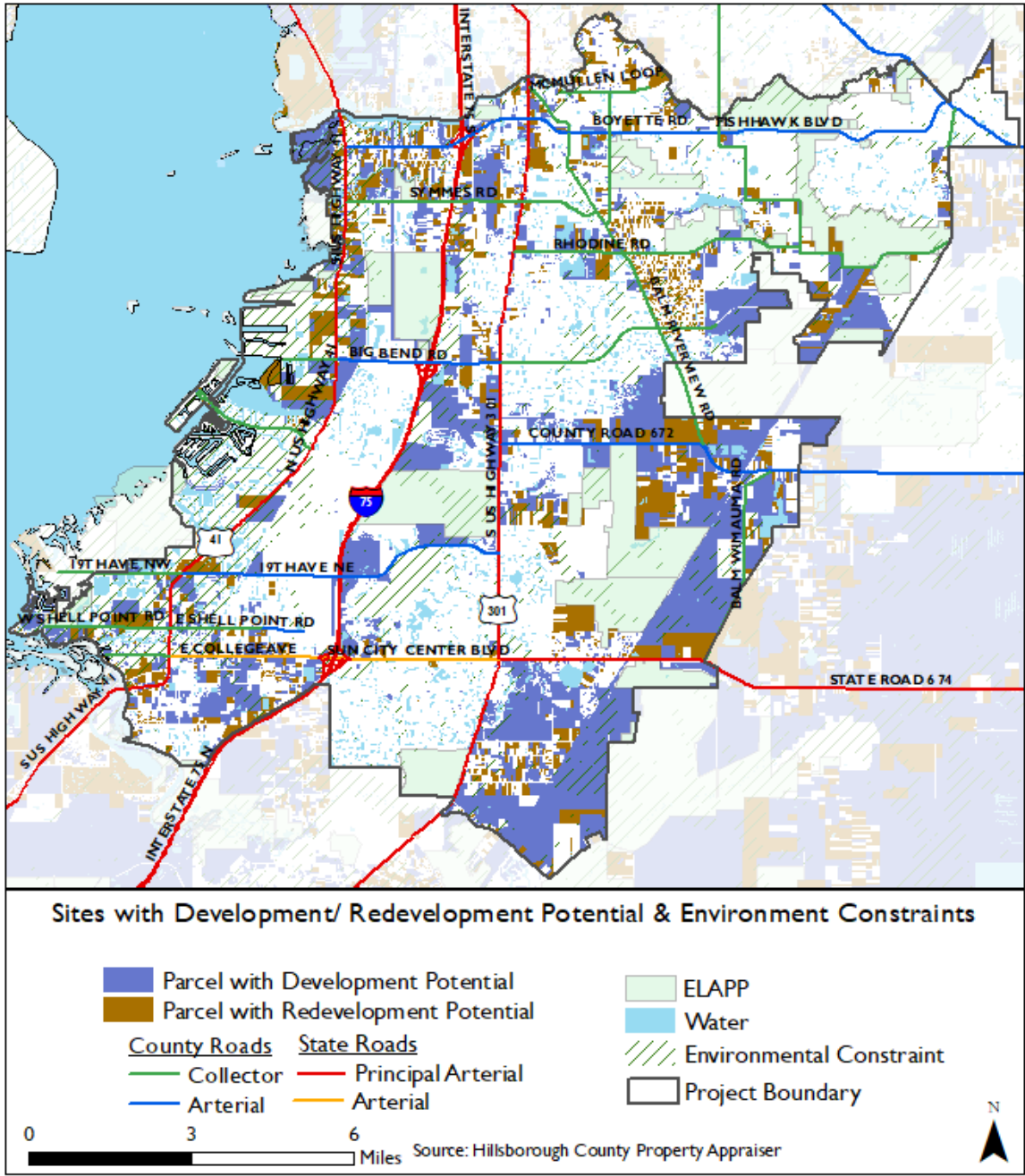


Figure 10. Sites with development and redevelopment potential

### III. Common Themes

A variety of efforts are underway in South County to address transportation needs, support economic development, and expand modal options. These efforts are summarized in Technical Memorandum 1: Review of Plans and Studies, which details relevant plans and studies of numerous agencies, including Hillsborough County, the Hillsborough County City-County Planning Commission, Hillsborough Metropolitan Planning Organization (MPO), the Florida Department of Transportation (FDOT), Port Tampa Bay, Tampa Bay Area Regional Transit Authority (TBARTA), and Hillsborough Area Regional Transit Authority (HART).

Hillsborough County began preparing community plans in 1998 for more specific planning relative to the growing needs of unincorporated communities in the County. Community plans in the study area include those for Ruskin, Riverview, Apollo Beach, Wimauma, Gibsonton, Sun City Center, and Balm. Each of the communities have distinct identities, visions, and transportation needs outlined in their plans.

**Many of the community plans identified a desire for a more pedestrian- and bicycle-friendly environment, a town center, and improved transit service.**

The similarities, conflicts, and common themes identified in the community plans and other relevant documents include:

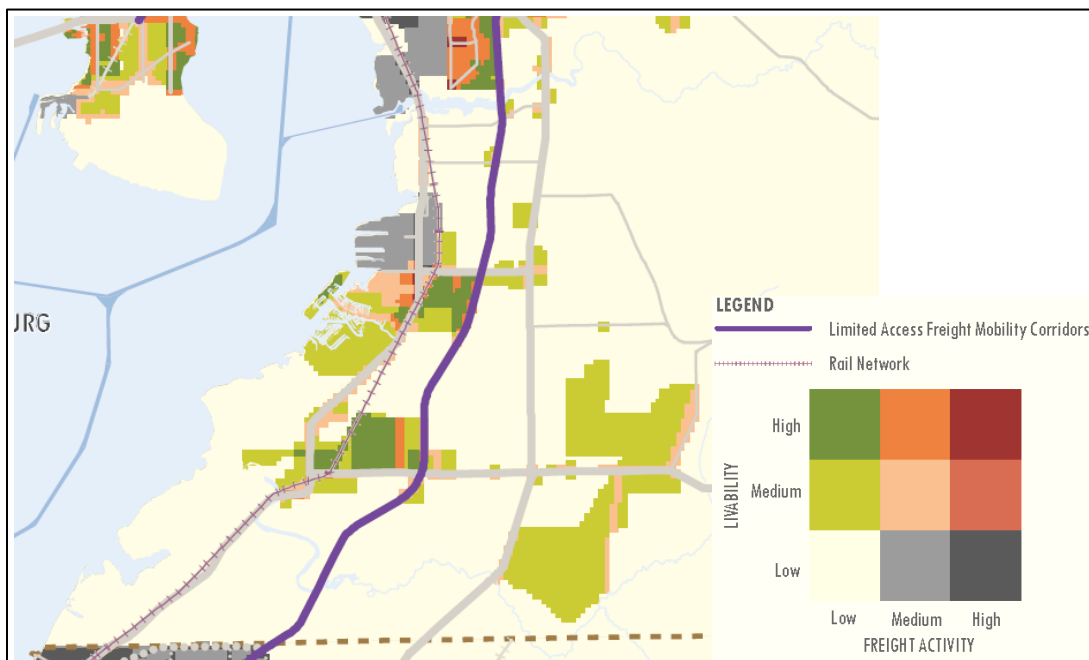
1. Many of the community plans identified a desire for a more pedestrian- and bicycle-friendly environment, a town center, and improved transit service.

#### Potential Conflicts:

- Some roadways included in town center visions are major regional through traffic routes not conducive to town center and Main Street treatments with high levels of pedestrian and bicycle activity. Examples are US 301 and Big Bend Road (Riverview) and US 41 (Ruskin).
  - “Complete streets” designs that accommodate pedestrians, cyclists, and transit users were not evident among the roadway studies reviewed.
  - Existing areas of activity, street network configurations, and planned densities are auto-oriented and generally not currently aligned with the type and location of town centers that are expressed in community plans and visions. Additional master planning and form-based codes are an opportunity to advance these visions.
2. Several community plans noted growth in truck traffic on major routes as an area of concern.

#### Potential Conflicts:

- The expansion of Port Redwing, construction of the Amazon Fulfillment Center, and designation of a freight logistics zone in the study area indicate a potential for growth in truck volumes in the study area. This growth corresponds with projections for significant job growth in the industrial sector in South County. The population in South County is also projected to grow rapidly; therefore, measures may be needed to balance the increasing demand for goods movement and the desire for livable and walkable town centers as expressed in the community plans.
- Designated truck routes (other than I-75) include US 41, US 301, SR 674, Big Bend Road, Gibsonton Drive, Symmes Road, Rhodine Road, Balm Riverview Road, Balm Wimauma Road, and CR 672. These routes traverse some of the town centers and pedestrian villages identified in the community plans (e.g., Gibsonton, Ruskin, Wimauma, Riverview, Balm).
- A freight and land use compatibility analysis was conducted by FDOT District 7 as a part of the Tampa Bay Regional Strategic Freight Plan to examine potential conflicts between freight movement and livability in the Tampa Bay Area. South County neighborhoods were generally identified as having moderate to low conflicts between freight and livable community areas. The segment of US 41 south of Port Redwing in Apollo Beach had the most potential for such conflicts (Figure 12). Options identified in the analysis include shifting town center expansion off of US 41 or other major truck routes and onto interior or lower volume roadways.



**Figure 11. Freight and land use compatibility analysis**

Source: FDOT D7 - Tampa Bay Regional Strategic Freight Plan: An Investment Strategy for Freight Mobility and Economic Prosperity in Tampa Bay, 2012

3. Several plans and studies identify growing congestion as a significant concern in South County. Extensive investments are being made to address roadway capacity issues, including several new roadways, widening of existing roadways, and intersection and interchange projects. The MPO is also currently collaborating with HART on a major transit study (SouthShore Transit Study) to expand transit service in South County.

Potential Conflicts:

- Existing and proposed development in the study area is relatively low density and characterized by a limited network of east-west and north-south roadways and low levels of street network connectivity – conditions that exacerbate vehicular congestion and delay and reduce the efficiency of transit service.
- The lack of alternate routes funnels the majority of vehicular trips onto only a few major roadways, leading to congestion and delay at intersections and interchanges and reducing overall travel time reliability. Commuters and buses must travel in congested conditions on a limited number of roadways. Incidents, such as crashes or poor weather, can easily cause the system to fail and result in long delays.

## IV. Travel Time and Congestion

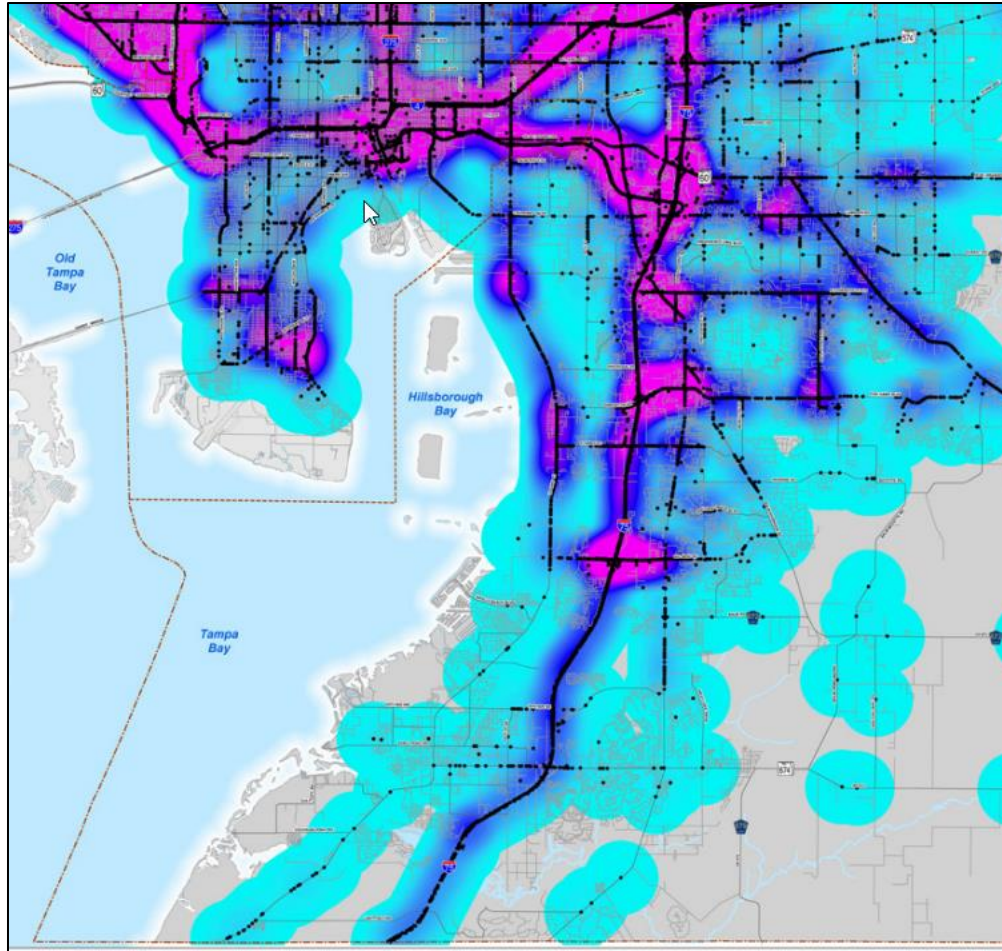
The study area is intersected by eight major roadways that form the primary roadway network serving the South County area. Major east-west corridors in the study area are Gibsonton Drive/Boyette Road, Symmes Road, Big Bend Road/Old Big Bend Road, 19<sup>th</sup> Avenue NE, and State Road 674/College Boulevard/Sun City Center Boulevard. Major north-south corridors in the study area are US-41, I-75, and US-301.

Single occupancy vehicle dependence is evident in South County where, according to 2013-2017 American Community Survey (ACS) estimates, more than 80 percent of commuters drive to work alone. Wimauma is the only exception to this trend; approximately 70% of Wimauma commuters drive alone and more than 20% carpool. Wimauma also has the highest proportions

**Single occupancy vehicle dependence is evident in South County, where more than 80 percent of commuters drive to work alone. Only 1.5% or fewer use public transportation.**

of households with income below poverty level (50% or more). Generally, the median income in the study area is between \$50,000 and \$74,999. Residents of Apollo Beach (10%) and Sun City Center (9.4%) were most likely to work at home, and also have the highest median age in South County of 45 years and 72 years respectively. Much of the trip making in these areas was also internal to the community.

The Hillsborough MPO 2018 State of the System Report uses a map of user-reported traffic congestion to show congestion hotspots during the morning peak hours for commuters (between 6 am – 9 am) (Figure 12). Hotspots (shown in purple) in the study area are most visible along US 41, I-75, Gibsonton Drive/Boyette Road, and Big Bend Road. The limited number of alternative north/south and east/west routes contributes to peak hour congestion at the intersections and interchanges with these major thoroughfares.

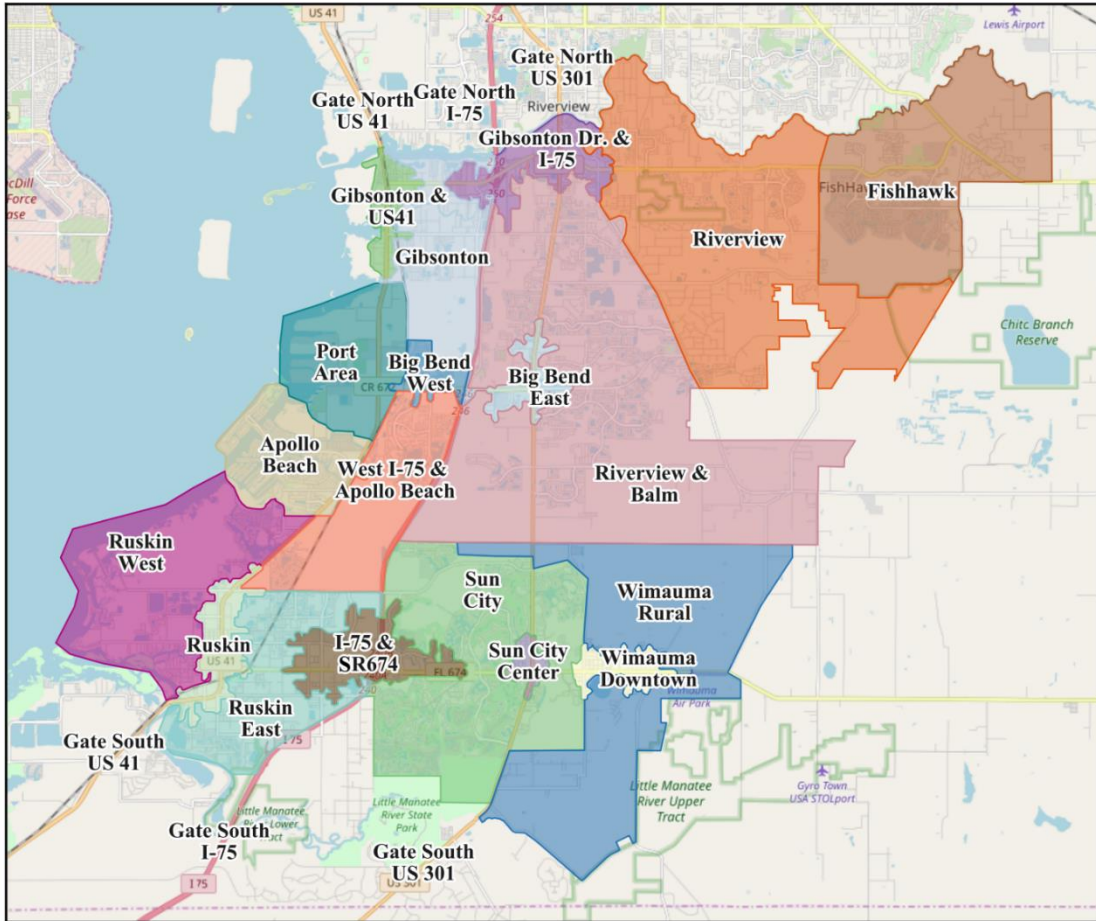


**Figure 12. User-reported traffic congestion**

Source: Hillsborough MPO, State of the System (2019)

Despite peak hour congestion, most trip making occurs within the study area. An origin-destination (OD) analysis of South County (see Figure 13) reveals that 77 percent of all trips in the study area are internal to South County and more than 25 percent of these trips start and end in the same zone. Much of the trip making activity (36%) occurs between 10 am and 3 pm. Within this timeframe, travel at 10 am accounts for a little more than 6 percent of all trips, lunch (generally at 11 am, 12 pm or 1 pm) accounts for approximately 7 percent of all trips. Travel at 3 pm accounts for almost 8 percent of all trip making activity – the highest percentage of trips in a given time period.

**Most trips in the study area are internal (77%) and more than 25 percent of these trips start and end in the same zone.**



**Figure 13. Location map for zones**

Source: Hillsborough County, U.S. Census Bureau

Table 2 shows the distribution of trips by trip purpose. About 47 percent of all trips within the study area involve commuting between home and non-work destinations, 35 percent of trips involve travel between non-work destinations, and 17 percent involve commuting between home and work. About 43 percent of trips leaving the study area involve travel between home and non-work locations, 32 percent involve trips between non-work destinations, and about 25 percent involve commuting between home and work. During the morning peak travel period (6 am to 10 am) work-related trips leaving the study area increase, accounting for up to 35 percent of these trips.

**Table 2. Trip Distribution by Trip Purpose**

Trips	Home-Based-Work	Home-Based-Other	Not Home-Based
All Trips	20%	45%	35%
All Trips Within	17%	47%	37%
All Trips Leaving	25%	43%	32%

Source: StreetlightData, Inc.

ACS data shows that the average travel time for commuters in South County exceeds the Hillsborough County average of 27.3 minutes. The Riverview and Fishhawk zones have the highest percentage of residents with a commute time between 30 and 59 minutes (60% - 80%). Small areas of Sun City, Wimauma (Rural), and Gibsonton have a high proportion of persons with commute times less than 30 minutes (60% to 80%). This difference in commute times may be attributable to a community's proximity to major north-south routes, such as US 41, I-75, and US 301, and overall trip length for commuters. The number of individuals telecommuting versus commuting and the number of people carpooling versus driving alone may also contribute to these differences.

Although more than a quarter of personal trips start and end in the same zone, the average travel time compared to average trip length is relatively high. Figure 14 shows the average travel time and average trip length for the study area. In Apollo Beach, for example, the average trip length is 1.9 miles and takes approximately 18 minutes. Another example is the Fishhawk area, which has longer trip lengths and higher travel times than the rest of the study area. Average trips from Fishhawk to surrounding zones or gates are between 5.5 miles and 26 miles and take between 25 and 50 minutes. Circuitry of the local network and a lack of alternate routes are likely contributing factors to longer trips lengths in these areas. More information about data and methods for the OD analysis and final results for all study area zones can be found in Technical Memorandum 2: Land Use and Transportation Conditions.



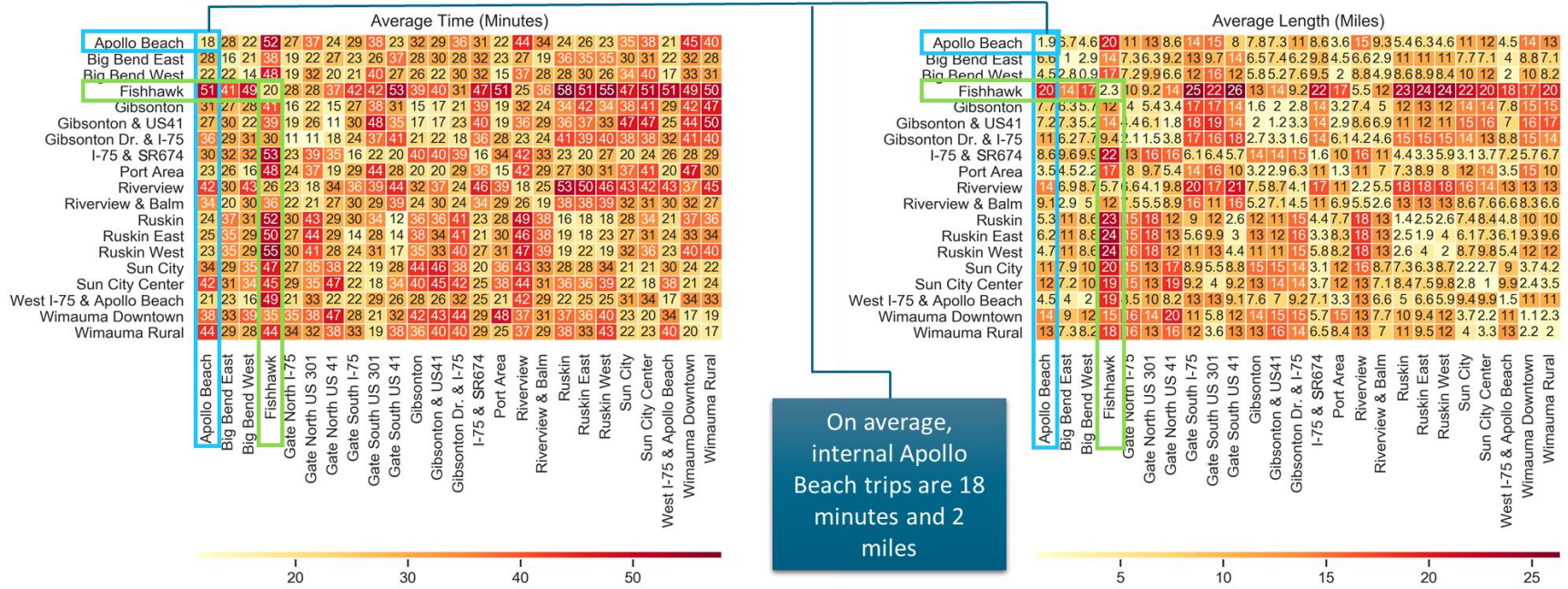


Figure 14. Average trip time and length

## V. Accessibility and Mode Choice

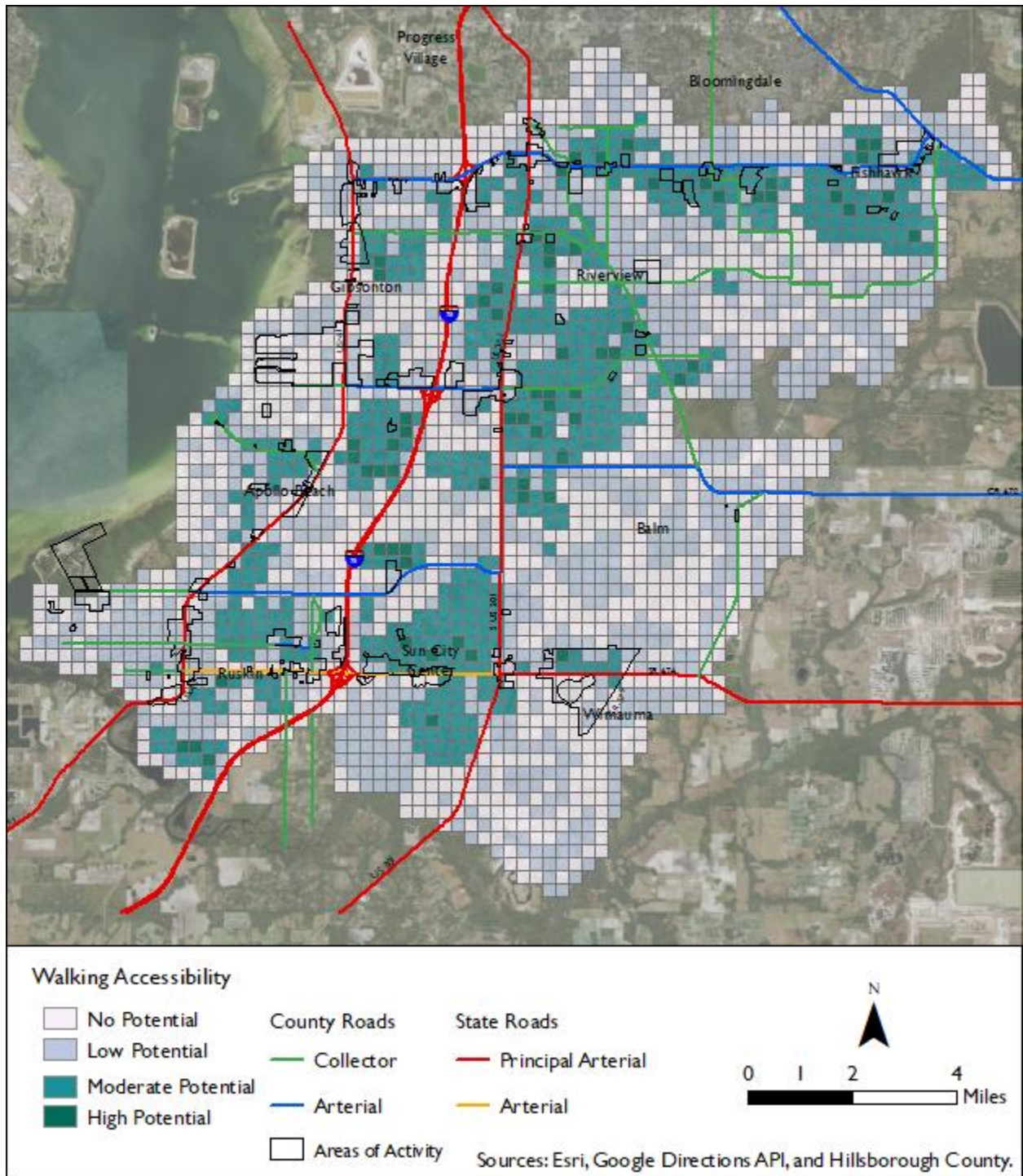
Accessibility of South County neighborhoods and destinations for walking, cycling, and transit modes was evaluated in the study area using indices of accessibility relative to conditions within the region and in-depth inventories of selected areas. The complete accessibility analysis and inventories for Apollo Beach, Gibsonton, Sun City Center, and Riverview can be found in Technical Memorandum 3: Travel Patterns and Conditions. The indices represent both accessibility and potential, which are defined as follows:

- Accessibility accounts for the availability of existing infrastructure to support these transportation modes and is addressed by incorporating factors such as sidewalk length, bicycle lane length, roadway network density, travel times, and barriers (e.g., major high-speed roadways, water, etc.)
- Potential is a function of both the relative population in an area and the number of services that can be reached within a reasonable distance using the identified transportation mode.

Barriers to walking and cycling were widespread and included water coverage, major roadways, railroads, gaps in the pedestrian and bicycle network, and deficiencies in existing sidewalks, bike lanes, and crosswalks. Poor access to nearby sidewalks, long walking distances to bus stops, long travel times when using transit, and limited amenities at transit stops (e.g., lack of bus shelters, paved landings, or seating) were common conditions in the study area. These conditions adversely impact a transit user's experience, limit accessibility for persons with disabilities, and discourage transit use by individuals who have the option to travel by car.

**Barriers to walking and cycling were widespread. Poor access to nearby sidewalks, long walking distances to bus stops, long travel times when using transit, and limited amenities at transit stops were common conditions.**

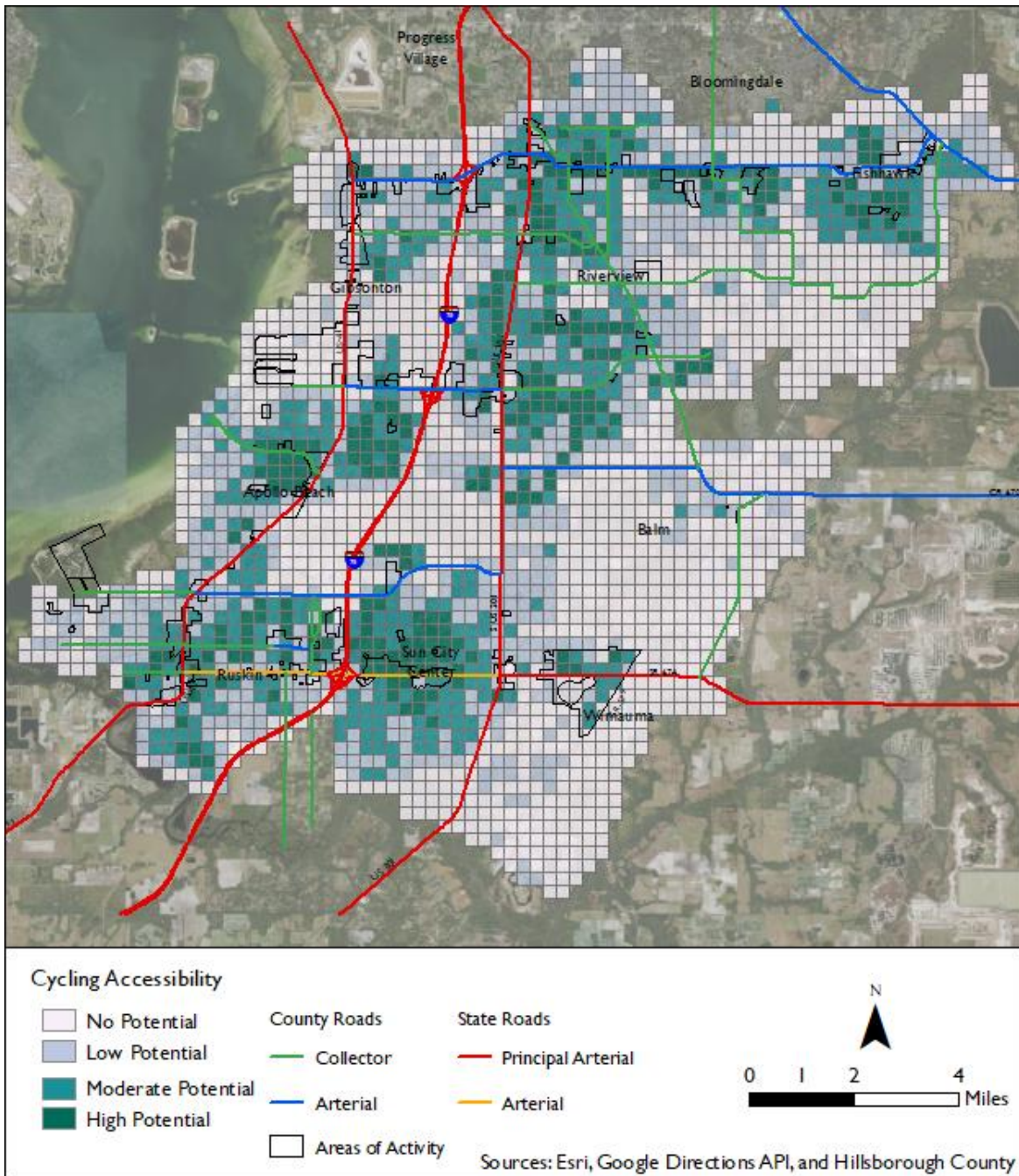
Many areas of South County exhibited a sparse, circuitous and/or disconnected local street network, and lack adequate infrastructure to support walking and biking. Figure 15 presents walking accessibility potential in the study area. Neighborhoods such as Fishhawk, Riverview, and Sun City Center show a higher potential for walking, cycling, and transit use than other areas of South County. The older neighborhoods of Gibsonton, Ruskin, and Wimauma are more represented in the moderate category. Balm is most represented in the low category, as is much of the study area beyond the areas of activity. Most of the study area has only low to moderate walking potential.



**Figure 15. Walking accessibility and potential index.**

The range of cycling accessibility is presented in Figure 16. Pockets of high cycling accessibility are identified in the north portion of the study area. More rural areas, including most of Balm and a large portion of Wimauma, are represented in the low category. Some cells with high cycling accessibility are scattered throughout the study area, although Fishhawk and Sun City Center have the largest contiguous areas. Most of the study area has low to moderate cycling

potential. This is likely because of a lack of bike lanes in many locations and/or an absence of any services that connect to those bike lanes and sidewalks. The addition of local roads for cycling improves accessibility in areas such as Ruskin and Apollo Beach. Sun City Center has the highest potential because of its higher network density, sidewalks, and services within a mile of these areas.



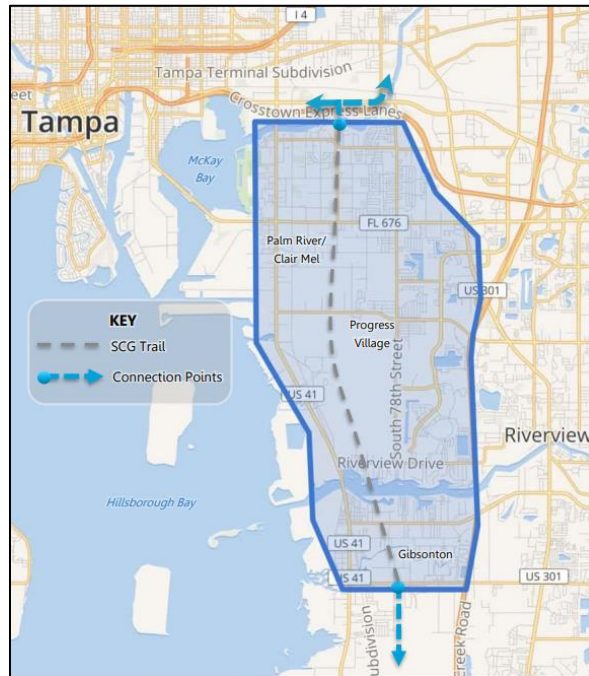
**Figure 16. Cycling accessibility and potential index.**

The multimodal accessibility analysis revealed that areas with the highest walking and cycling potential tended to be disconnected. This limits the potential for longer distance cycling trips.

US 41, US 301, and I-75 split the study area into thirds along the north and south and are significant barriers to east-west travel. Major barriers to north-south travel are Sun City Center Boulevard/East College Avenue in the southern part of the study area, and Gibsonton Drive between US 41 and US 301 in the northern part of the study area.

**Areas with higher cycling accessibility tend to be disconnected. This limits the potential for longer distance cycling trips.**

A new shared-use trail connecting the South Coast Greenway Trail with the Tampa Bypass Canal Trail has been prioritized by Hillsborough County and Hillsborough MPO. The connector is expected to provide additional mobility for the communities it intersects, including Gibsonton (Figure 17). The southern sector will extend from Symmes Road to Riverview Drive and includes Gibsonton, Bullfrog Creek, and the Alafia River.



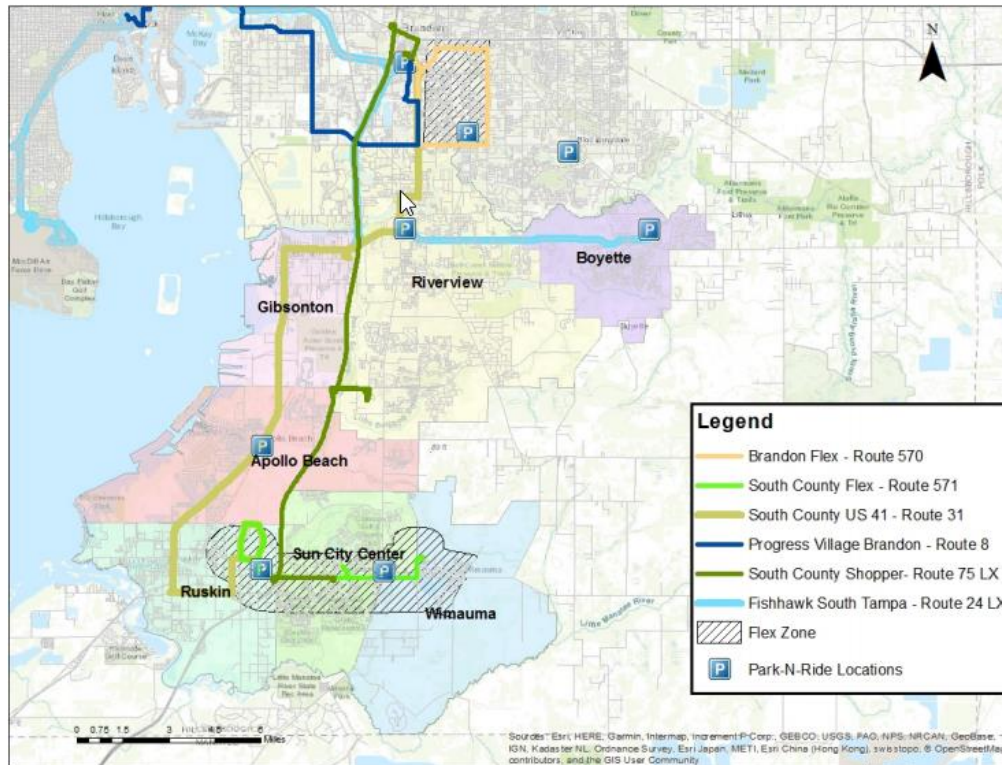
**Figure 17. South Coast Greenway trail alignment project area**

Source: Hillsborough MPO & Hillsborough County - South Coast Greenway Trail Alignment Study, 2018

HART has four routes that serve South County (Figure 18):

- 1) Local bus Route 31 operates on weekdays and has starting and ending points at the Amazon Warehouse in Ruskin and the Westfield Brandon Mall in Brandon.
- 2) Limited express bus route 75LX operates on Tuesdays and Thursdays and has starting and ending points at Kings Point in Sun City Center and the Westfield Brandon Mall in Brandon.

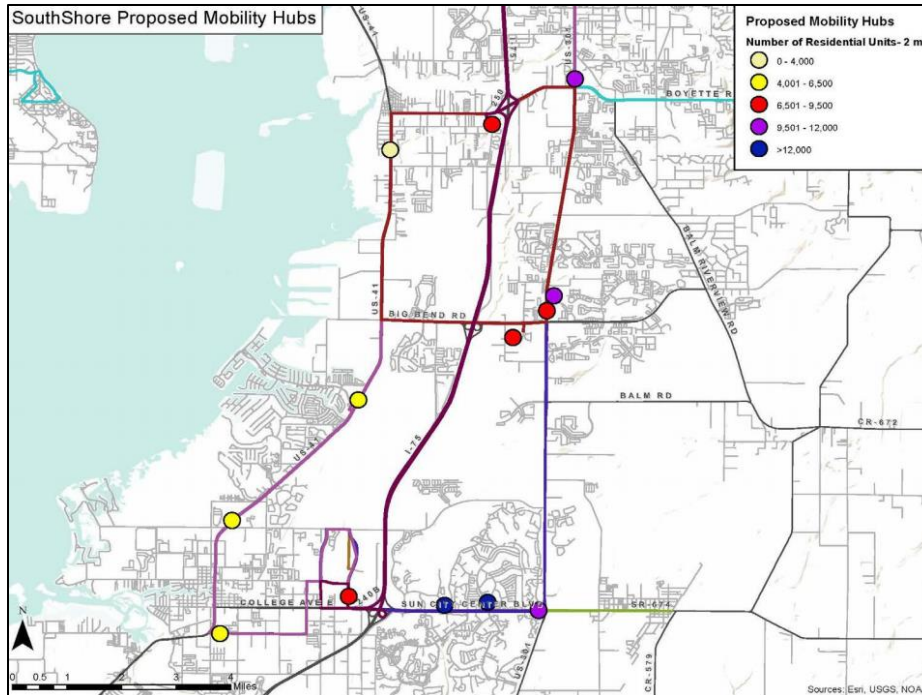
- 3) South County FLEX route 571 is available on weekdays and provides both door-to-door service and regular circulator bus service, with designated stops near SR 674 in South Hillsborough County. Door-to-door service is available for customers who pre-book on the phone.
- 4) Route 24 LX serves Boyette Road and provides weekday express service to Downtown Tampa and South Tampa from the Fishhawk Sports Complex Park-N-Ride to Florida Keys Avenue.



**Figure 18. Existing transit network**

Source: HART & Hillsborough MPO - SouthShore Transit Study Reevaluation, 2018

The 2018 SouthShore Transit Study Reevaluation covers six communities in the study area (Gibsonton, Riverview, Apollo Beach, Ruskin, Sun City Center, and Wimauma). Figure 19 identifies mobility hubs that will serve as focal points for transit connections. Planners are also exploring the potential to provide on-demand service (e.g. Uber, Lyft) for a subsidized fare for first/last-mile connections to a mobility hub. Park and ride lot locations are being identified, as well, including one at Gibsonton Drive and I-75 that ties into Fishhawk and the downtown route.



**Figure 19: Proposed mobility hubs for SouthShore transit study.**

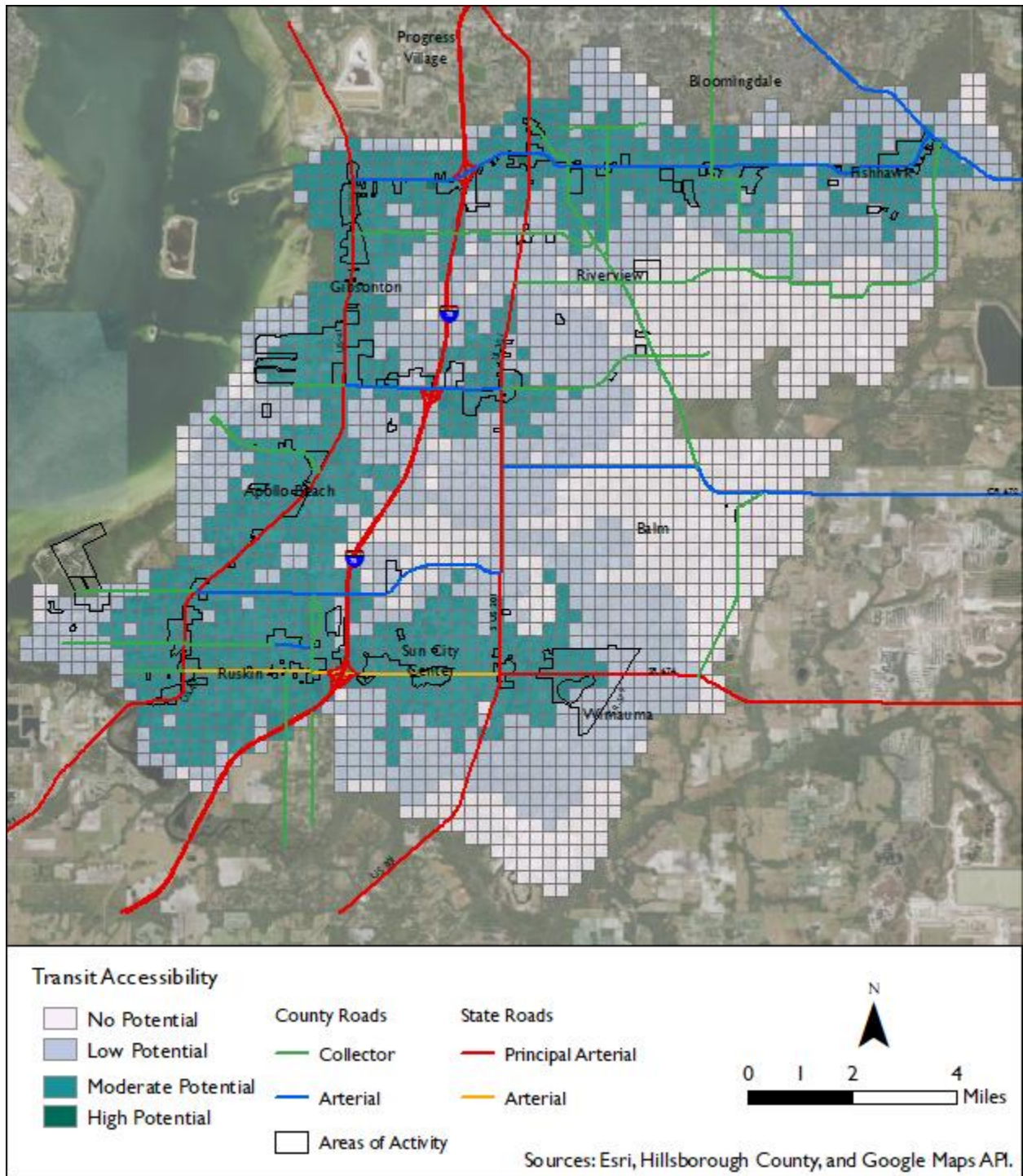
Source: HART & Hillsborough MPO - SouthShore Transit Study Reevaluation, 2018

Accessibility of areas with transit service is presented in Figure 20. This figure should be considered in conjunction with walking and transit times. The areas of high potential represent areas with existing HART bus stops and relatively dense residential population and services within less than a 30-minute walking distance of these stops. Only 30 percent of the study area is within a 30-minute walking distance of a bus stop.

**Only 30 percent of the study area is within a 30-minute walking distance of a bus stop, only about 1.4 percent of the study area could reach the Marion Transit Center (MTC) within 1 hour and about one-third of the study area can reach MTC within 2 hours.**

The moderate potential category represents areas with the potential to be serviced by transit in light of the existing residential and service density and walking time to the nearest transit stop. They have a high residential density but are more than 30-minutes walking distance from existing stops and services. The low to no potential categories represent regions with very limited or no potential to be served by transit due to long walking times to the nearest transit stop, or relatively low residential and service densities. These categories are predominantly east of the study area.

Considering the estimated walking time to the nearest HART stop, only about 1.4 percent of the study area could reach the Marion Transit Center (MTC) in downtown Tampa within 1 hour (including walking to the bus stop), and about one-third of the study area can reach MTC within 2 hours.



**Figure 20. Transit coverage and accessibility index.**

More in-depth inventories were conducted for Apollo Beach, Gibsonton, Sun City Center, and Riverview to assess typical safety and mobility issues for multimodal transportation in South County. Common issues identified include a disconnected and circuitous network that increases trip lengths for all modes and discourages walking and biking. Gaps in the pedestrian and bicycle network, and deficiencies in existing sidewalks, bike lanes, and crosswalks do not foster



a safe and comfortable environment for non-motorized travel. Poor access to sidewalks and limited amenities at transit stops including bus shelters, paved landings, and seating have a negative effect on transit users' experience, limit accessibility for persons with disabilities, and discourage transit use for individuals who have the option to travel using other modes.

## VI. Conclusions and Recommendations

This research was commissioned to provide a comprehensive understanding of mobility needs in South County. The analysis confirmed some known information about the area: it is experiencing rapid growth, is largely characterized by residential development, and single-occupancy vehicles are the primary mode of travel. Although the County Future Land Use Map designates large areas of South County for mixed-use development, approved development in these areas continues to be predominantly low- to medium-density single-family residential uses. The community plans identified a clear desire for livable communities, with town centers and a more bicycle- and pedestrian-friendly environment and improved public transportation. Traffic congestion is a key concern, as are concerns about the potential for growth in truck traffic in certain areas.

The analysis also provided some additional findings that fill several gaps in the understanding of mobility needs in South County. The origin-destination (OD) analysis indicates that most trips originating in South County are internal to the area, with residents circulating to and from nearby activity areas. The accessibility analysis identified numerous deficiencies and discontinuity in the bicycle and pedestrian network and revealed that most residents are more than a 30-minute walking distance from a transit stop. Travel time to the Marion Transit Center (MTC) in Downtown Tampa is typically 1 to 2 hours (including walking distances) in areas along the transit routes and up to 3 hours or more in areas outside of the transit routes. The inventory of multimodal infrastructure identified that the local street network is circuitous and disconnected in many areas, further compounding accessibility issues for all modes and increasing the number and length of trips.

Nonresidential development in South County is largely suburban in nature and has occurred incrementally at intersections, near interchanges and along major routes, and except for a few planned communities, lacks integration with surrounding residential neighborhoods. Residents of the region would benefit greatly from more modal options and destinations for employment, shopping, socializing, and community services. Strong coordination between transportation and land use planning and decision-making is needed to accomplish this goal.

### Recommendations

In light of these findings, several recommendations and complementary strategies have been identified for consideration by the County with regard to an integrated mobility strategy for South County. Generally, the recommendations call for establishing centers and mixed-use development, placemaking and livability strategies, updated and coordinated plans and studies, thoroughfare planning with complete streets strategies, and mobility hubs, as well as strategic public-private partnerships for transit. Improved coordination of land use and transportation in South Hillsborough County will require integration of internal and intergovernmental planning activities. A policy and regulatory framework that includes the following mobility planning concepts will provide a platform through which that integration can be achieved.

- 1) Designate town centers, Main Street areas, regional activity centers, neighborhood centers, and rural centers in the comprehensive plan. Build upon places identified for this purpose in community plans, as updated.
- 2) Adopt placemaking strategies and codes for each activity center typology. Set minimum densities and vertical mixed-use requirements for town center areas.
- 3) Implement incentives, such as waiving or reducing mobility fees in larger centers under certain conditions and tax increment financing to reinvest in needed infrastructure. Consider the feasibility of a transfer of development rights program to preserve rural areas and direct density into designated centers.
- 4) Adopt a thoroughfare plan with complete streets design guidelines and cross-sections to connect the region and its places. Establish design guidance based upon land use context, roadway function, and modal priority. Differentiate placemaking corridors and from corridors intended for through traffic movement.
- 5) Connect activity centers with surrounding neighborhoods via local street access, bike lanes, sidewalks, and transit service. Emphasize local street network connectivity in the development and subdivision review process, and require bicycle, pedestrian, and local street connections from areas of activity to surrounding residential areas.
- 6) Integrate mobility hubs into major centers that provide intermodal connections with the public transportation system and other non-auto modes, such as golf cart parking, bicycle parking or bikeshare, TNC drop off/pick-up locations (e.g., Uber, Lyft), and vanpools or local circulators.

### **Improve Quality of Life with Placemaking**

Community plans in South County identify a desire for a sense of place in the form of town centers, Main Streets, and other focal community destinations. Although some of these destinations are identified, they could be further solidified by designating activity center locations on the future land use map. This approach may also improve community plan implementation and enhance the integration of community planning efforts into decision-making processes.

Placemaking strategies such as complete streets, multi-use destinations, and form-based codes can create these destinations in South County communities. Placemaking strategies can be incorporated into the corridor preservation plan, ensuring a transportation network that supports existing and future development needs. Areas of activity and other identified destinations can be used to form the basis for activity center plans and develop strong regional and local activity centers.

Strategic placemaking strategies have been found to support economic sustainability by encouraging reinvestment in existing communities. Using these strategies for town centers, Main Streets, activity centers, and other destinations increases the potential for job growth and diverse employment opportunities within each community. An increase in local employment density fortifies congestion mitigation efforts and other transportation investments. An improved jobs/housing balance helps to shorten commute lengths and better supports mobility options and network improvements.

The community plans, with varying levels of detail, identify where the communities envision these destinations. For example:

- Apollo Beach proposes mixed-use town centers at Apollo Beach Boulevard and US 41, between US 41 and I-75, and other locations where appropriate.
- Riverview’s community plan identifies a downtown district at US 301 and Riverview Drive, although the area is currently developed with suburban commercial uses.
- Sun City Center proposes to create a town center in Sun City Center Plaza at SR 674.
- In Ruskin, Shell Point Road and US 41 are designated as Main Streets.
- The Gibsonton Community Plan indicates a desire to designate Gibsonton Drive as the community’s “Signature Corridor” and Main Street to encourage small scale business development.
- Plans for Wimauma identify SR 674 as the Community Main Street and key transportation corridor.

Some of the proposed locations for town centers and Main Streets may need to be reconsidered, particularly where truck routes or major roadways create potential conflicts. In some instances, areas of activity have been identified in locations where town centers and Main Streets are proposed. In many of these areas existing land uses, street network configurations, and planned densities are not currently aligned with the type and location of town centers that are expressed in community plans and visions. Additional master planning and form-based codes are an opportunity to advance these visions.

Many of the community plans were developed and updated between 2005 and 2013. Community plan updates are needed to address changes catalyzed by population growth and development, reflect the current needs and desires of community members, and leverage contemporary planning practice and emerging technology. The update process will require extensive community involvement, analysis, and planning. The updated plans should identify community visions and provide feasible strategies that are implementable in coordination with broader planning efforts.

### **Continue to Develop Mobility Hubs**

The mobility hubs proposed in the SouthShore Transit Study relate to placemaking strategies by supporting existing/emerging areas of activity or serving as activity generators. Shared mobility services and other innovative technologies are proposed to address first-mile/last-mile connections that support transit use. Mobility hub strategies proposed by the SouthShore Transit Study should be explored further and implemented once feasible. They can also reinforce and connect with services offered by non-profit organizations, such as Enterprising Latina’s, private vanpool services, and other options that address the individualized needs of communities.

Measures that increase transit ridership in South County should also be considered. Improvements may include increasing transit frequency and extending transit routes to areas with low coverage. As the population in South County continues to grow, and the desire for

mobility options increases, these transit improvements not only become increasingly necessary, but they also become more feasible.

### **Implement Network and Complete Streets Strategies**

Most of the planned projects identified in the TIP, CIP, and 5-year work program address roadway capacity needs in the study area. These capacity projects have the potential to temporarily ease congestion, but additional efforts are needed to improve network connectivity, particularly for major east-west connections, and develop areas that support multimodal transportation. In addition, enhanced complete streets design concepts were not observed in the projects reviewed.

As the County continues to update its corridor plan, a more detailed thoroughfare plan is suggested to guide future thoroughfare planning and design. The plan should identify alternative complete streets cross-section designs based on roadway function and land use context (e.g., placemaking corridors versus through movement corridors), and integrate modal priority to emphasize design elements specific to the targeted modes. Access management standards should also be applied to implement block or connection spacing objectives. Update and assign the County access classifications to County arterial and collector roadways to reinforce the thoroughfare plan.

The sparsity of the arterial and collector network in areas of South County is a concern in light of the extensive development already planned and approved in the area. Incorporate network spacing guidelines into the corridor plan. One-half mile spacings of 4-lane continuous streets ensure that residents can access a thoroughfare within ¼ mile. This spacing helps reduce congestion by distributing trips across the network and also supports walking, cycling, and transit use. Although an ideal grid is not feasible, due to waterways and other barriers, flexible application of network spacing guidelines forms an essential foundation for an effective thoroughfare plan.

Examples of network improvements and complete streets strategies include, but are not limited to the following:

- Where possible, connect the local street network to provide more direct routes, shorten trip lengths, and encourage non-motorized travel.
- Construct sidewalks and bike lanes where gaps exist to provide a complete and interconnected network.
- Identify locations for protected bike lanes and protected bike intersections to encourage less experienced cyclists to use this mode for certain trips.
- Reduce trip length for non-motorized travel by providing direct access to services from residential areas at logical locations.
- Add buffers or additional space between sidewalks and the roadway, particularly on roadways with a high posted speed limit and high traffic volumes.
- In areas such as town centers, decrease the number or width of lanes and lower speed limits to control vehicular speeds and increase bicycle and pedestrian safety.

- Reconfigure and repaint crosswalks where the existing conditions are not ideal and consider bulb-outs to shorten crossing distances at intersections.
- Provide safe mid-block crossing opportunities (e.g., pedestrian islands, RRFBs, etc.) at logical locations, such as transit stops, schools, or shopping centers.
- Provide continuous pedestrian access to transit stops.
- Provide amenities at transit stops that improve the experience of using transit, these amenities can include shelter or shade trees, seating, a paved or level landing area.
- Add shade trees along the walkways to protect pedestrians from the sun.

The Greenways and Trails Plan Update provides opportunities to improve bicycle and pedestrian transportation in South County. Continue to expand and connect the greenways and trails network throughout the area. Identify opportunities for complete streets projects to connect to greenways and multiuse trails.

### **Coordinate Plans and Studies**

The large geographic area of South County, coupled with the many agencies and departments that impact land use and transportation decisions, makes coordination a continuing challenge. The research team reviewed more than 30 plans and extensive capital improvement programs for the study, even as plan updates and new studies were initiated. Yet coordination of agency plans and studies, including the updates of the seven community plans, is essential to effectively address land use and mobility needs in South County.

For example, several designated truck routes in freight plans traverse some of the town centers and pedestrian villages identified in the community plans (e.g., Gibsonton, Ruskin, Wimauma, Riverview, Balm). Many of the community plans identified the conflicts caused by these routes and stress the need to reduce or minimize the potential for conflict. Measures to balance the increasing demand for goods movement and the desire for more livable and walkable communities are needed. Examples include locating town centers and Main Streets away from current truck routes, using other modes or networks to move goods, or some combination.

A clearly articulated policy and regulatory structure can form the basis for improved interagency coordination. More detailed mobility planning, with the components identified above, can then proceed with a focus on coordination of land use and transportation. Without coordination, community needs may not be met, projects may need to be reevaluated or redesigned, and policies may fail to reinforce the desired outcomes.

## References

- FDOT District 7. (2012). Tampa bay regional strategic freight plan: an investment strategy for freight mobility and economic prosperity in Tampa bay. Retrieved from [https://tampabayfreight.com/wp-content/uploads/StrategicFreightPlan\\_FinalOnlineVersion.pdf](https://tampabayfreight.com/wp-content/uploads/StrategicFreightPlan_FinalOnlineVersion.pdf)
- HART & Hillsborough MPO. (2018). SouthShore transit study reevaluation. Retrieved from <http://www.planhillsborough.org/wp-content/uploads/2018/05/SouthShore-Transit-Study-Meeting-Presentation-20180913-1.pdf>
- Hillsborough County City-County Planning Commission. (2007). Evaluation and appraisal report amendments to the comprehensive plan first cycle of 2007: balance of land uses within the urban service area. Retrieved from <https://www.hillsboroughcounty.org/library/hillsborough/media-center/documents/emergency-management/19--pdrp-activity-centers-report.pdf>
- Hillsborough County. (2018c). Investment considerations for future growth. [PowerPoint slides]
- Hillsborough MPO & Hillsborough County. (2018). South coast greenway trail alignment study. Retrieved from [http://www.planhillsborough.org/wp-content/uploads/2018/08/scg\\_final\\_082418.pdf](http://www.planhillsborough.org/wp-content/uploads/2018/08/scg_final_082418.pdf)
- Hillsborough MPO. (2019). State of the system report. Retrieved from [http://www.planhillsborough.org/wp-content/uploads/2019/04/Attach-2018-State-of-the-System-report\\_FINAL.pdf](http://www.planhillsborough.org/wp-content/uploads/2019/04/Attach-2018-State-of-the-System-report_FINAL.pdf)
- TBARTA. (2015). Regional transportation master plan: activity centers and travel markets technical memorandum. Retrieved from [http://tbarta.com/files/TM\\_ActivityCentersTravelMarkets.pdf](http://tbarta.com/files/TM_ActivityCentersTravelMarkets.pdf)

# South County Integrated Mobility Solutions and Investment Strategy: Phase 1

**Technical Memorandum 1: Review of Plans and Studies**

Prepared For  
**Hillsborough County, Florida**

Prepared By  
**USF Center for Urban Transportation Research**

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**Disclaimer**

The contents of this report reflect the views of the authors, who are responsible for the facts and the accuracy of the information presented herein. The opinions, findings, and conclusions expressed in this report are those of the authors and not necessarily those of Hillsborough County.

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## Executive Summary

The purpose of this study is to identify baseline conditions for the development of an integrated mobility strategy for South County. This memorandum summarizes key needs, challenges, and visions affecting mobility needs in the South County area of Hillsborough County as reflected in agency plans, studies, and improvement programs. The objective of the review is to determine the status of current planning activities and to identify any similarities, common themes, and potential conflicts. Data were obtained from more than 30 documents affecting the study area and supplemented by agency interviews to verify accuracy of findings and determine current status of planning activities.

The analysis included a review of relevant plans and studies from Hillsborough County, the Hillsborough County City-County Planning Commission, Hillsborough Metropolitan Planning Organization (MPO), the Florida Department of Transportation (FDOT), Port Tampa Bay, Tampa Bay Area Regional Transit Authority (TBARTA) and Hillsborough Area Regional Transit Authority (HART). A complete list of plans and studies reviewed can be found in Appendix A. A list of agencies and personnel interviewed can be found in Appendix B.

Below are key findings by topic.

### Land Use

- The area along I-75 and US 41 is currently envisioned for High Intensity Suburban uses in the future land use plan. Areas further south, along SR 60 near the intersection with SR 674, are categorized as Suburban. A small area near the intersection of Big Bend Road and I-75 is classified as Urban.
- Community activity centers designated in the future land use plan are US 41 at Big Bend Road and US 41 at College Avenue Corridor.
- Two Tier 2 regional activity centers are identified by TBARTA in the study area – one around Port Redwing and the other west of Sun City Center and I-75.
- More employment clusters and activity centers are planned in an effort to bring more jobs into the region and reduce the need for residents to travel long distances for employment outside of South County.
- The County is preparing for growth by planning six (6) new fire stations by 2030, and from 20 to 32 new schools by 2032.
- The southern portion of South County is identified as having a deficit in available school capacity (-599 to 0). Ruskin elementary schools have available capacity from 0-200.
- The community plan for Wimauma proposes creating an overlay district or special zoning category to implement the Wimauma Village Downtown Plan on SR 674.
- Apollo Beach proposes mixed-use town centers at Apollo Beach Boulevard and US 41, between US 41 and I-75, and other locations where appropriate.
- Riverview's community plan identifies a downtown district at US 301 and Riverview Drive, although the area is currently developed with suburban commercial uses.

- Ruskin plans to focus commercial development away from SR 674 and into their downtown, which is intersected by US 41.
- Sun City Center proposes to create a Town Center in Sun City Center Plaza at SR 674.

### Major Roadways

- Most of the planned projects identified in the TIP, CIP, and 5-year work program address roadway capacity needs in the study area.
- An interchange modification at I-75 and Big Bend Road is identified in the FDOT Strategic Intermodal System (SIS) first five-year plan for FY18/19 through FY22/23. Several roadway projects, including road widening, and interchange modifications have been identified as SIS unfunded projects.
- As an alternative to the initially proposed widening of US 41 in Ruskin from four to six lanes, a PD&E study is underway for a multi-use trail to facilitate bicycle and pedestrian movement.
- Gibsonton Drive/Boyette Road and Big Bend Road were identified in the 2017 Vision Zero Action Plan list of the top 20 severe crash corridors in the County.
- The interchange at I-75 and Gibsonton Drive was identified as unsafe in the Gibsonton community plan. Improvements to that interchange were identified for funding in the MPO Transportation Improvement Program (TIP) for design and construction in FY20.
- Ruskin and Greater Sun City Center envision 19<sup>th</sup> Avenue to be more walkable. 19<sup>th</sup> Avenue NE is programmed in the County Capital Improvement Program (CIP) for widening and inclusion of enhanced pedestrian, bicycle, and transit facilities by 2019.
- In Ruskin, Shell Point Road and US 41 are designated as “Main Streets”.
- The Gibsonton Community Plan indicates a desire to designate Gibsonton Drive as the community’s “Signature Corridor” and “Main Street” to encourage small scale business development; the corridor is currently not a town center.
- Plans for Wimauma identify SR 674 as the Community Main Street and key transportation corridor.
- The Riverview community plan defines US 301 as a corridor that allows building types that promote pedestrian activity and benefit from pedestrian and transit access. It calls for side paths, bike lanes, the greenway connector, a transit connection, and techniques to provide safe pedestrian crossing.

### Bicycle & Pedestrian

- The Community Plans in the study area all desire improved non-motorized transportation.
- Hillsborough MPO has identified bicycle facilities in the area, which include shared-use trails, side paths, and painted on-street bike lanes.
- The MPO has identified sidewalk gaps and unfunded priority corridors in the study area with high levels of pedestrian demand that are missing sidewalks.
- A greenway trail alignment study is being conducted for the South Coast Greenway Trail.

- The South Coast Greenway Trail is SUNTrail eligible.

### Public Transportation

- Hart is working to expand service coverage to weekends and increase weekday service frequency through improvements to Route 31.
- Unfunded planned improvements in the study area include two new local bus routes in South Hillsborough County, two more FLEX routes, and a South County Transit Center.
- The Sun City Center community plan identifies a desire for improved access to public transportation.

### Freight

- Port Redwing has initiated an \$18-million expansion plan estimated to provide 5,765 jobs and avoid 59 million truck miles once complete. The port currently has 145 acres of industrially zoned land.
- The Amazon Fulfillment Center adjacent to I-75 between 19<sup>th</sup> Avenue NE and SR 674 was identified in County economic development plans as a competitive site with industrial entitlements offering the potential for expansion.
- Hillsborough County identified several designated truck routes that intersect the study area. County designated truck routes include Gibsonton Drive, Symmes Road, Big Bend Road, Rhodine Road, Balm Riverview Road, County Road 672, Balm Wimauma Road, and Lithia Pinecrest Road. State designated truck routes include US 14, I-75, US 301, and SR 674.
- US 301 and SR 674 are designated as regional freight facilities and truck routes in the Hillsborough+Polk Freight Logistics Zone Strategic Plan (2017). The plan identified the segments of US 41, I-75, and US 301 between Big Bend Road and the Selmon Expressway as freight corridors having low travel reliability. The US 41 segment was identified as having extremely low travel time reliability and is a heavily used truck route due to its proximity to all the port facilities.
- A freight and land use compatibility analysis was conducted by FDOT District 7 to examine potential conflicts between freight movement and livability in the Tampa Bay Area. South County neighborhoods were generally identified as having only moderate to few conflicts between freight and livable communities areas, with the most potential for such conflicts along US 41 south of Port Redwing in Apollo Beach.
- The Ruskin community plan seeks to ensure that 19<sup>th</sup> Avenue NE is not designated as a truck route and the Greater Sun City Center community plan calls for reduced truck traffic on 19<sup>th</sup> Avenue and providing for a more pedestrian- friendly environment.
- SR 674 intersects Ruskin, Sun City Center, and Wimauma whose communities would like to have improved non-motorized transportation and controlled truck traffic.



### Similarities, Conflicts, and Common Themes:

1. Many of the community plans identified a desire for a more pedestrian and bicycle friendly environment, a town center, and improved transit service.

#### Potential Conflicts:

- Some roadways included in town center visions are major regional through traffic and evacuation routes not conducive to town center “Main Street” treatments with high levels of pedestrian and bicycle activity. Examples are US 301 and Big Bend Road (Riverview) and US 41 (Ruskin).
  - Complete streets designs were not evident among the roadway studies reviewed.
  - Existing land uses, street network configurations, and planned densities are generally not currently aligned with the type and location of town center that is expressed in community plans and visions. Additional master planning and form based codes are an opportunity to advance these visions.
2. Several community plans noted growth in truck traffic on major routes as an area of concern.

#### Potential Conflicts:

- The expansion of Port Redwing, construction of the Amazon Fulfillment Center, and designation of a freight logistic zone in the study area indicate a potential for growth in truck volumes in the study area. This growth corresponds with projections for significant job growth in the industrial sector in South County. The population in South County is also projected to grow rapidly; therefore, measures may be needed to balance increasing demand for goods movement and the desire for more livable and walkable communities as expressed in the community plans.
  - Designated truck routes (other than I-75) include US 41 (State designated truck route), US 301 (State designated truck route), SR 674 (State designated truck route), Big Bend Road (County designated truck route), Gibsonton Drive (County designated truck route), Symmes Road (County designated truck route), Rhodine Road (County designated truck route), Balm Riverview Road (County designated truck route), Balm Wimauma Road (County designated truck route), and CR 672 (County designated truck route). These routes traverse some of the town centers and pedestrian villages identified in the community plans (e.g., Gibsonton, Ruskin, Wimauma, Riverview, Balm).
3. Several plans and studies identify growing congestion as a significant concern in South County. Extensive investments are being made to address roadway capacity issues and the MPO is currently collaborating with HART on undertaking a major transit study (SouthShore Transit Study) to expand transit service in South County.

#### Potential Conflicts:

- Existing and proposed development in the study area is relatively low density and characterized by low levels of network connectivity – conditions that exacerbate vehicular congestion and delay and reduce the efficiency of transit service.
- The lack of alternate routes funnels the majority of vehicular trips onto only a few major routes. Commuters and buses must travel in congested conditions on a limited number of roadways. Incidents, such as crashes or poor weather, can easily cause the system to fail and result in long delays.

The next tasks of this project are to examine current land use and transportation conditions of the study area in more detail. Technical Memorandum 2 will include identification of land use and development entitlements, development and redevelopment opportunities, identification of existing nodes and connections, and an origin-destination analysis. Technical Memorandum 3 will further inventory transportation conditions, including roadway safety and operational conditions and examine multimodal accessibility (connectivity) in relation to key nodes and activity areas.



# 1 Introduction

This memorandum inventories and summarizes key needs, challenges, and visions in plans, studies, and programs affecting mobility needs in the South County area of Hillsborough County. The purpose of the review is to determine the status of current planning activities and identify similarities, conflicts, and common themes. Data were obtained from more than 30 documents affecting the study area and supplemented by agency interviews to verify accuracy of findings and determine current status of planning activities.

The analysis included a review of relevant plans and studies from Hillsborough County, the Hillsborough County City-County Planning Commission, Hillsborough Metropolitan Planning Organization (MPO), the Florida Department of Transportation (FDOT), Port Tampa Bay, Tampa Bay Area Regional Transit Authority (TBARTA) and Hillsborough Area Regional Transit (HART) Authority. A complete list of plans and studies reviewed can be found in Appendix A. A list of agencies and personnel interviewed can be found in Appendix B.

## 1.1 Overview of Study Area

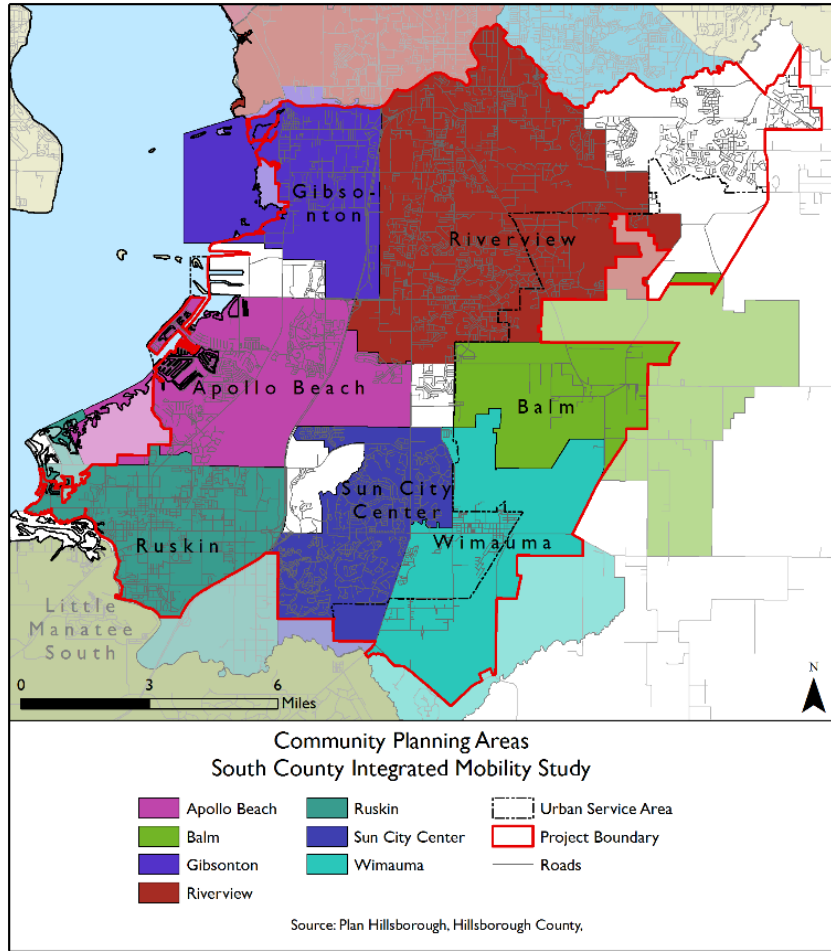
South County, the southern part of unincorporated Hillsborough County, is the fastest growing area in the County. The South County study area is generally bounded by the Alafia River to the north, the Urban Service Area (USA) to the east and south, including those land uses categorized as Residential Planned-2 (RP-2), and Tampa Bay to the west. It includes seven community plans that contain the unincorporated communities of Gibsonton, Riverview, Apollo Beach, Ruskin, Sun City Center, Wimauma, and Balm (Figure 1).

Population and employment growth in this area is expected to continue well into the future. Table 1 includes population and employment projections for the study area from Plan Hillsborough traffic analysis zone data. The projections indicate that total jobs in the study area will increase from 43,185 to 106,757 (147% increase) between 2010 and 2040 and that the 2010 population of 182,893 will increase to 347,698 by 2040. This projected increase is comparable to the 2017 population of the entire city of Tampa (385,430).

**Table 1. South County Population and Employment (2010 – 2040)**

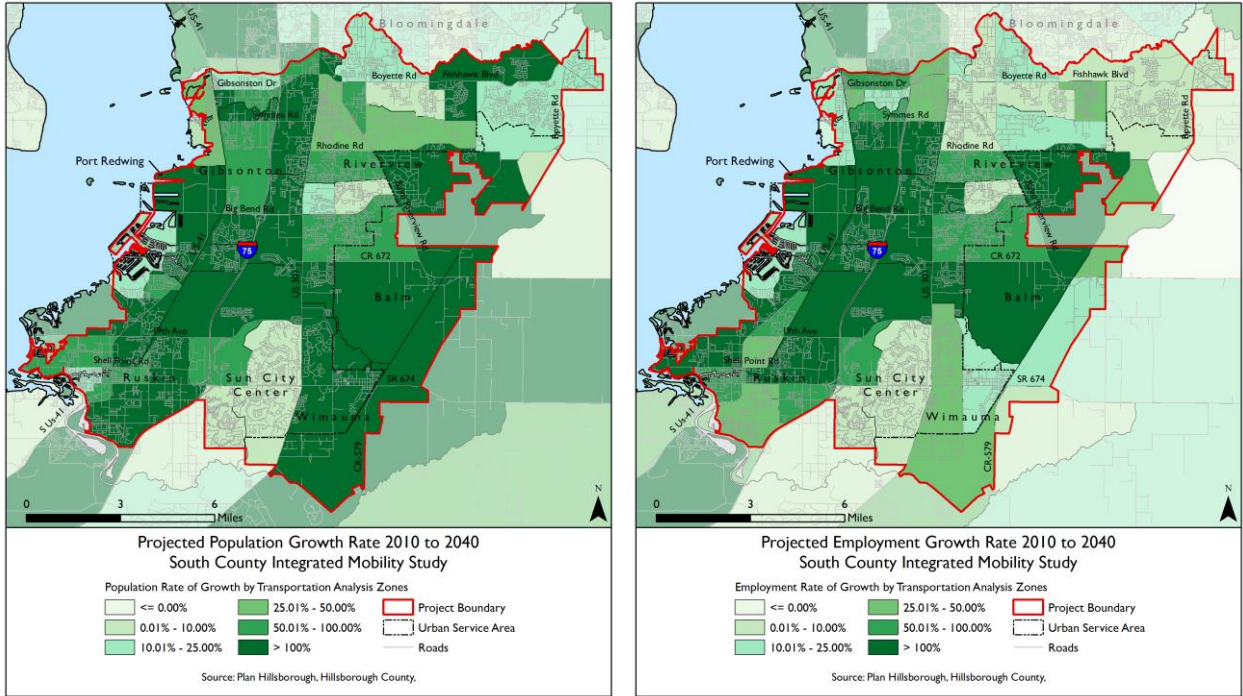
South County Study Area	Projected Totals							Total Change
	2010	2015	2020	2025	2030	2035	2040	2010-2040
Population	182,893	209,581	247,117	279,637	300,592	324,266	347,698	164,805
Employment	43,185	51,174	64,863	70,273	78,346	85,929	106,757	63,572

Source: Plan Hillsborough, TAZ data

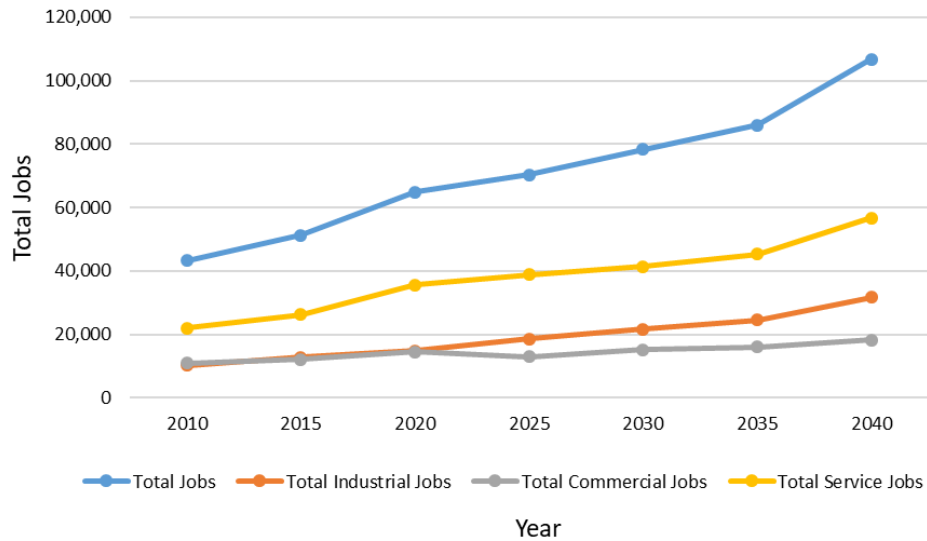


**Figure 1. South County project study area**

Figure 2 illustrates the forecast rate of population and employment growth in the study area between 2010 and 2040. Figure 3 illustrates growth by job sector as identified by Plan Hillsborough. Service jobs, which include educational, medical, and professional services accounted for 51 percent of total jobs in 2010 and are expected to account for 53 percent of total jobs by 2040. Additionally, in 2010 the number of commercial jobs (10,950) (retail, restaurants, and other similar jobs) exceeded the number of industrial jobs (10,285). By 2020, it is projected that there will be more industrial jobs than commercial jobs.



**Figure 2. South County projected population and employment growth 2010-2040**



**Figure 3. Job growth by sector in the South County study area**

Source: Plan Hillsborough

## 2 Land Use

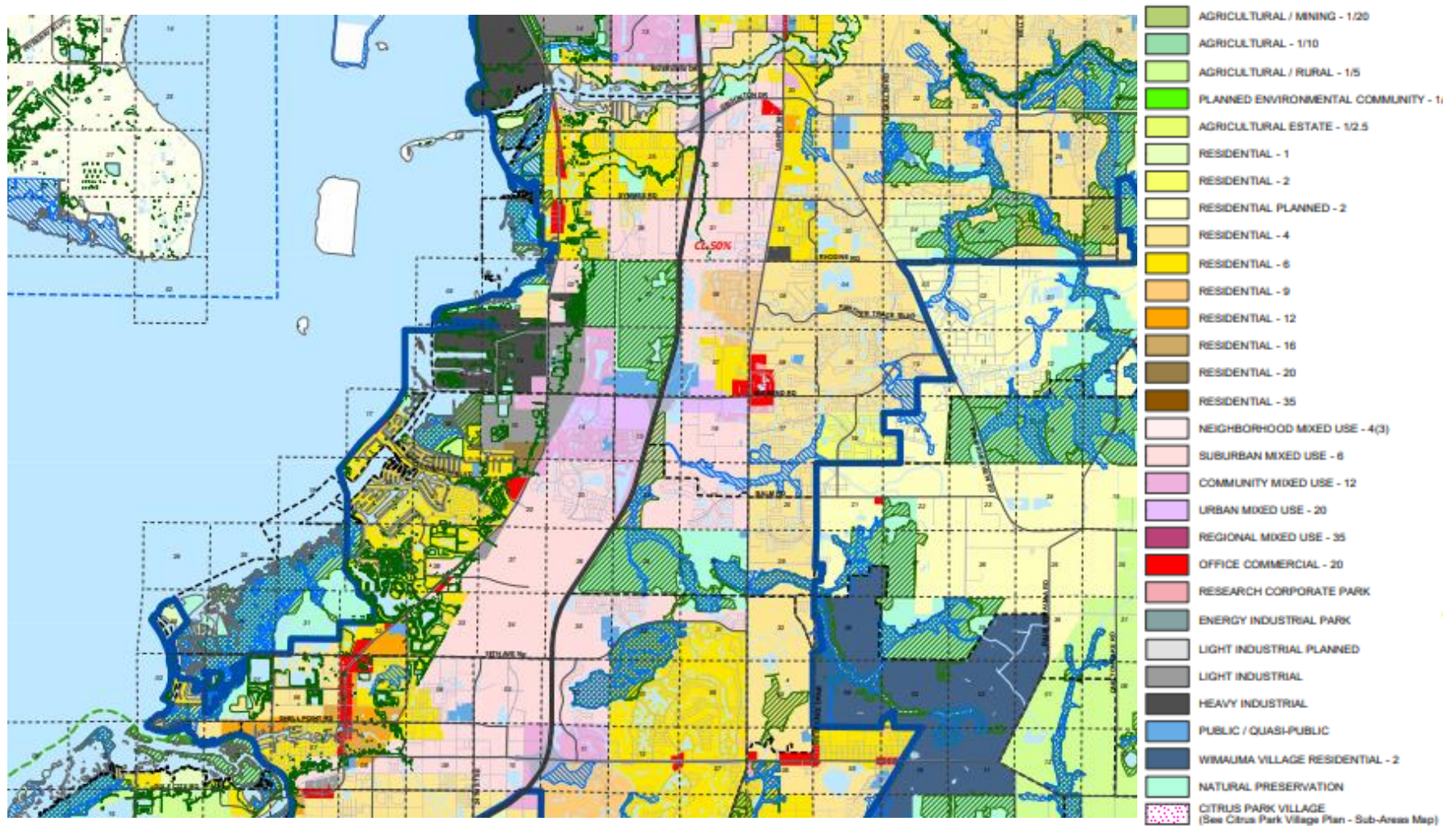
### 2.1 Future Land Use

The Future Land Use (FLU) element of the comprehensive plan includes a growth management strategy to control development and the timing of growth. The Urban Service Area (USA) is a component of the growth management strategy that designates the location for urban level development. The project study area is bounded by the USA, and includes those areas outside of the USA categorized as RP-2.

The FLU Map of the Hillsborough County Comprehensive Plan identifies a large amount of land parallel to I-75 as mixed use (Figure 4). The map identifies pockets of commercial uses along US 41 (Gibsonton, Apollo Beach, and Ruskin), along US 301 (Riverview), along SR 674 (Wimauma and Sun City Center), and on Balm Road (Balm). These commercial uses indicate the emergence of activity centers or commercial nodes in the study area.

The RP-2 Future Land Use Category (FLUC) is applied where the potential for sprawl exists. The comprehensive plan states that the RP-2 FLUC is intended to promote self-sustainable development. When development occurs outside the USA limits, the developer is responsible for the capital costs associated with the provision of needed infrastructure; infrastructure is required to be provided concurrent with development.

To meet maximum densities and intensities, the RP-2 FLUC requires clustering and mixed use development, and an appropriate proportion of community and neighborhood commercial uses (specified in Policy 33.5 of the FLU element). Commercial uses are required to be appropriately timed with residential development, with half of the commercial development required to be completed when 75% of the residential units are constructed.



**Figure 4. Hillsborough County Future Land Use Map**  
 Source: Hillsborough County Comprehensive Plan, 2018



## 2.2 Vision for Future Growth

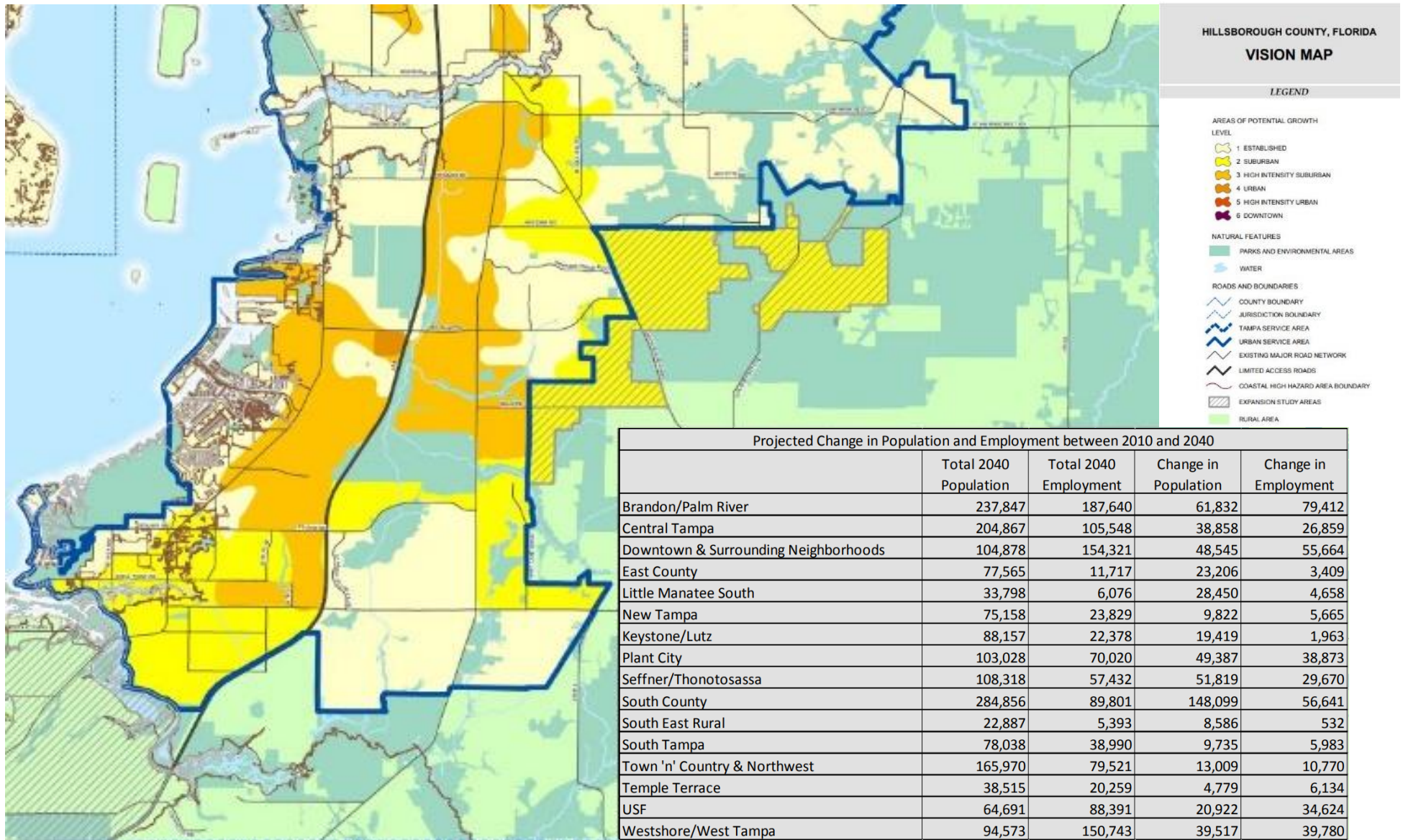
Job concentration areas are identified by the Imagine 2040 plan as being key economic spaces that have great potential for growth based on 2010 jobs and 2040 job estimates (Figure 5). These areas include the Port Redwing & Big Bend Road Corridor, and the SR 674 Corridor.



**Figure 5. Key economic spaces and potential growth (2010 and 2040 job estimates)**

Source: Hillsborough MPO - Imagine 2040: Long Range Transportation Plan, 2018

As part of the Imagine 2040 planning effort, the Planning Commission prepared the Hillsborough County Areawide Vision Map (Figure 6). The vision map is a composite of data that depicts the general plan for future growth throughout Hillsborough County. The vision map incorporates proposed major capacity projects and transit improvements from the long-range transportation plan, as well as annexations or changes to the USA.



**Figure 6. Hillsborough County proposed areawide vision map**

Source: Plan Hillsborough Website

The vision map includes six areas of opportunity for potential growth (Figure 7): Downtown (Level 6); High Intensity Urban (Level 5); Urban (Level 4); High Intensity Suburban (Level 3); Suburban (Level 2); and Established Areas (Base Level). The areas that are not envisioned for future growth (i.e., Rural Areas and Parks and Environmental Areas) are also highlighted.

### Focus Hillsborough’s Vision for Future Growth

The Planning Commission got feedback on how participants would like to see the community grow and develop over the next 25 years. The draft vision map on the following page indicates where citizens and planners believe additional growth and higher density should occur and where neighborhoods should remain unchanged and stable. The “heat map” uses 6 colors to indicate where that development should be focused and how intense it should be. The darker the color the higher the intensity and density. The photos and descriptions below indicate the type of development for each intensity level (1-6).



**Figure 7. Focus Hillsborough’s vision for future growth**

Source: Plan Hillsborough Website

Within the South County study area, the area along I-75 and US 41 is envisioned for High Intensity Suburban uses. Areas further south, along SR 60 near the intersection with SR 674, are categorized as Suburban. A small area near the intersection of Big Bend Road and I-75 is classified as Urban. The remaining area within the study area is classified as Established.

A preferred hybrid growth scenario, which captures a mix of housing and job centers, was developed by the Hillsborough MPO as a part of Imagine 2040. To develop the growth pattern in this scenario, “dwelling units were added to areas around potential transit centers and jobs were added to areas of economic emphasis” (Hillsborough MPO, 2018c). Hillsborough MPO highlights that the Preferred Hybrid Scenario is intended to create higher density growth areas that will preserve natural and agricultural land.



**Figure 8. 2040 Population and Employment Centers with Preferred Hybrid Scenario**

Source: Hillsborough MPO - Imagine 2040: Long Range Transportation Plan, 2018

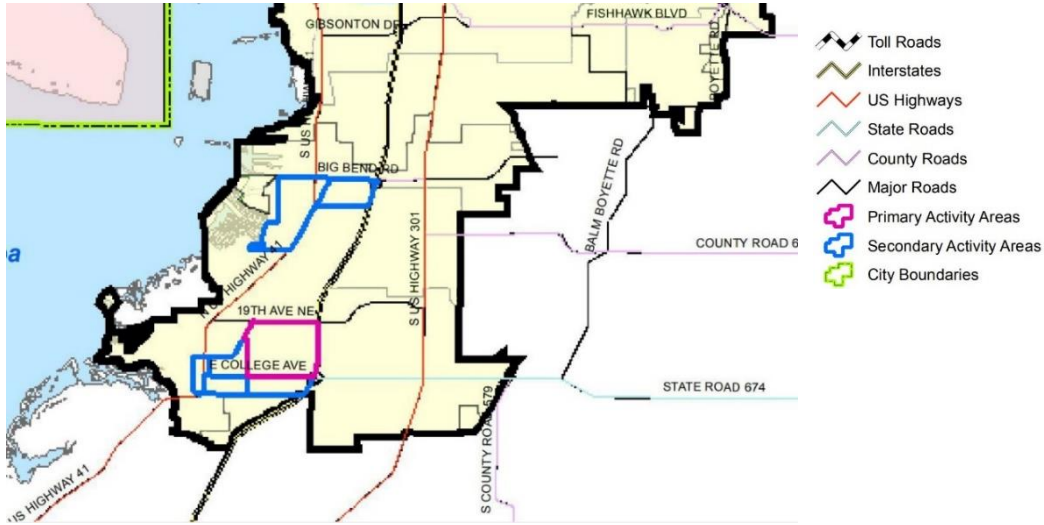
### 2.3 Activity Centers

The Hillsborough County Comprehensive Plan defines and identifies two types of activity centers – regional activity centers and community activity centers. Regional activity centers are high concentrations of government centers, high intensity commercial uses, and high density residential development. Community activity centers are TAZ locations with “existing and future major regional employment clusters that have more than 1,000 regional commercial or service employees and/or locations around fixed guideway transit stations” (Hillsborough County, 2008a). Community activity centers are to be located along potential transit emphasis corridors or near existing or planned major intersections, located where public infrastructure investments are planned to exist at the time of designation, have a mixture of land use and compatibility of character, and reflect the character and intensity of the surrounding area.

No regional activity centers have been identified in the study area. Proposed community activity centers identified by the Comprehensive Plan in the South County study area include (Figure 9):

- US 41 and Big Bend Road
- US 41 and College Avenue Corridor

*The Evaluation and Appraisal Report: Amendments to the Comprehensive Plan First Cycle of 2007* identified primary activity centers as existing activity concentration in 2005 that had more than 1,000 regional commercial or service employees per TAZ. Secondary activity centers were identified as areas susceptible to change that were anticipated to have more than 1,000 regional commercial or service employees per TAZ.



**Figure 9. Hillsborough County proposed activity centers**

Source: Hillsborough County City-County Planning Commission - Evaluation & Appraisal Report Amendments to the Comprehensive Plan, 2007

TBARTA designated three tiers of regional activity centers based on employment density, residential density, number of hotel rooms, special uses, recent development proposals, and incentivized development. Two (2) Tier 2 regional activity centers (projected to reach a net employment density of 20-50 jobs per acre and a residential density of 6-10 people per acre by 2040) have been identified in the project study area: South Shore/SR 674 Corridor and Port Redwing/Apollo Beach/Big Bend Road Corridor (Figure 10).



**Figure 10. Activity centers in Hillsborough County**

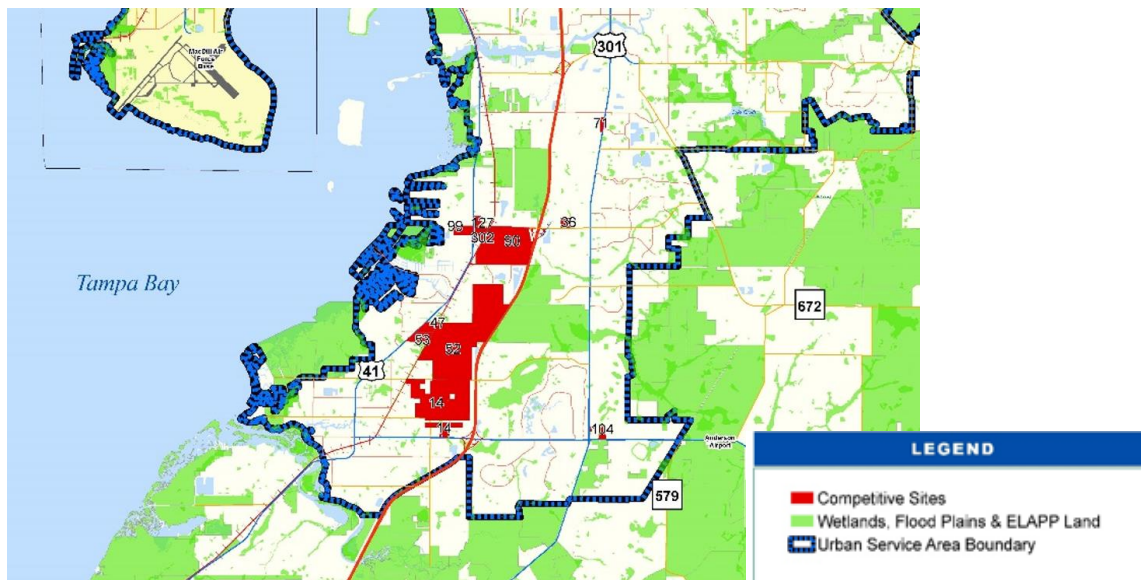
Source: TBARTA Regional Transportation Master Plan: Activity Centers and Travel Markets Technical Memorandum, 2015

## 2.4 Competitive Sites

The Hillsborough County Competitive Sites Program (Figure 11) is an initiative of the Hillsborough County Economic Development Department to attract industrial or office development to meet the County's economic development objectives. Site selection includes an attribute analysis of Planned Developments (PD), Developments of Regional Impact (DRI) and land zoned for manufacturing. Development of Regional Impact (DRI) in the study area that coincide with Competitive Sites include DRI #145 Southbend, DRI #194 DG Farms, DR #249 South Shore Corporate Park, and DRI #266 Waterset.

Factors for designation of Competitive Sites include:

- Land use
- Zoning
- Site acreage
- Development entitlements
- Supporting infrastructure



**Figure 11. Competitive sites map**

Source: Hillsborough County - Investment Considerations for Future Growth, 2018

## 2.5 Schools

The Hillsborough County Public Schools Long Range School Planning Study identifies school capacity that is available for South County and how that capacity is distributed (Appendix D). The study South County as having the largest need for school capacity. The study evaluated two scenarios, minimum and reasonable, to forecast the number of new schools needed based on a set of identified assumptions, current available capacity, and projected students. Under the minimum scenario (schools at 200% capacity, heavy portable usage, frequent redistricting, potential concurrency mitigation, and operational changes), South County needed 20 new

schools by 2032. Under the reasonable scenario (schools are 150% capacity, limited available capacity in surrounding schools, use of fewer portables, limited redistricting, and some operational changes), the area is projected to need 31 new schools by 2032. New capacity projects to be constructed are shown in Table 2.

**Table 2. Hillsborough County New School Capacity Projects to be Constructed**

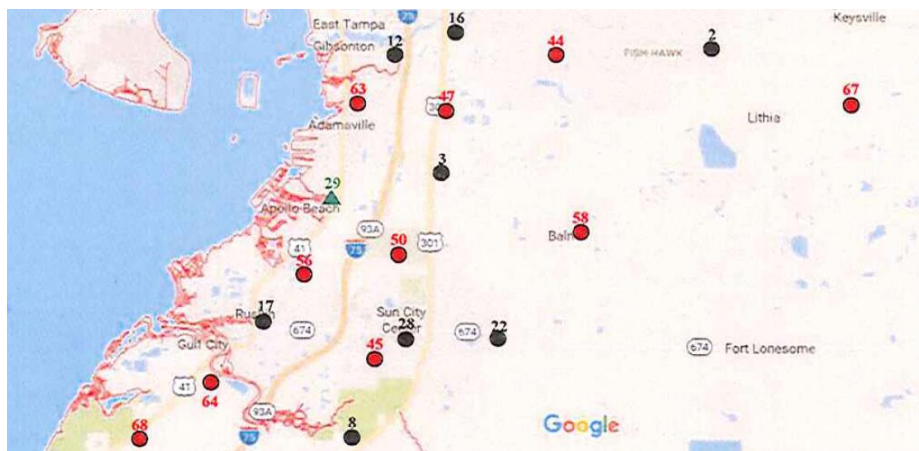
School Name	Description	Proposed Year
New High School "TTT"	2430 Student Stations in South County (North side of County Road 672 (Balm Road), East of US Highway 301)	2020-2021
New Elementary School "D"	950 Student Stations in South County (Belmont)	2020-2021
New K-8 School	1200 Student Stations in South County (no site selected)	2021-2022
New Elementary School "E"	950 Student Station in South County (no site selected)	2022-2023

Source: Hillsborough County Public Schools Annual Growth Management Report, 2018

## 2.6 Fire Rescue

South County has several existing fire stations, with a station (Station #44) in Fishhawk slated for funding in FY17 of the Capital Improvements Program (CIP). Six new fire stations and the redesign/relocation of one existing fire station are proposed in the study area between FY18 and FY30, as seen in Figure 12:

- FY18 & FY19: New Station #45 & #47
- FY20 & FY21: New Station #50 & Relocate Station #29
- FY22 & FY23: New Station #56
- FY24 & FY25: New Station #58
- FY 30: New Station #68



**Figure 12. Existing and proposed fire stations**

Source: Hillsborough County Fire Rescue Master Plan, 2017

## 3 Community Plans

Hillsborough County began preparing community plans in 1998 for more specific planning relative to the needs of the many distinct and growing unincorporated communities in the County. Community Plans in the project study area include Ruskin, Riverview, Apollo Beach, Wimauma, Gibsonton, Sun City Center, and Balm. Community Plans were adopted into the Comprehensive Plan Livable Communities Element in 2008. The Livable Communities Element compiles community and special area studies for Community Plans that identify each community's character, vision, goals, and proposed strategies.

Each plan was examined for the purpose of identifying nodes (town centers, main streets, downtowns, and community facilities), overlay districts, and multimodal transportation needs. Many of the community plans identified a desire for town centers, which have generally been described as community gathering areas that are walkable, mixed-use, and support a variety of community activities and employment generators. Below is a summary of the community and special area studies in the project study area. A draft conceptual map showing a visual representation of the community visions can be found in Appendix C.

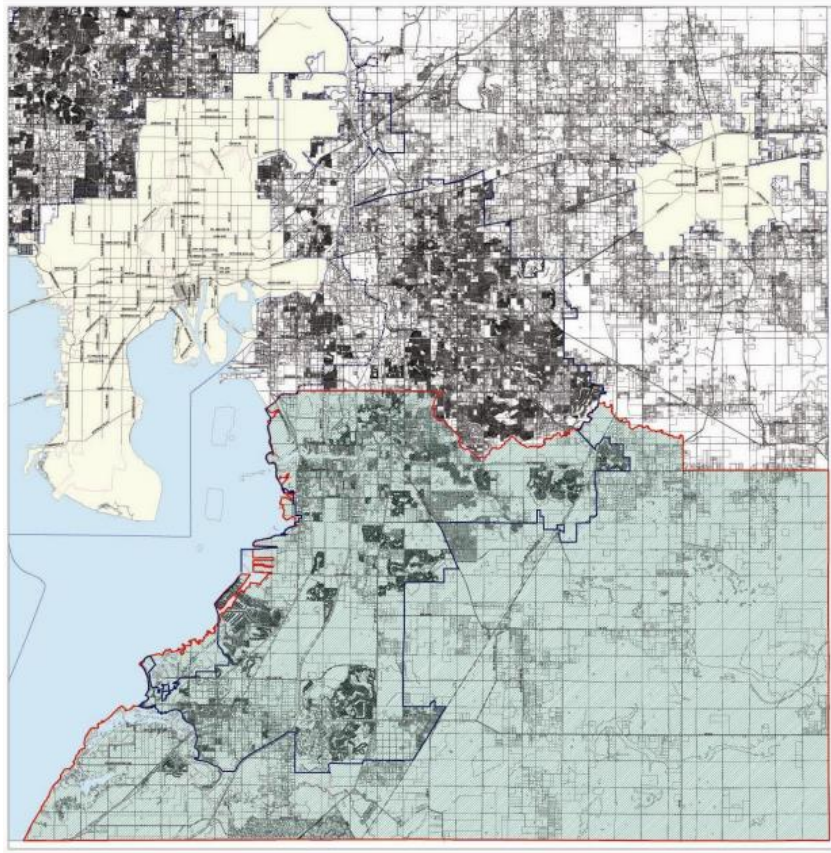
### 3.1 SouthShore Areawide Systems Plan

The SouthShore Areawide Systems Plan developed in 2003 (Figure 13) was updated in 2015, and is on the Planning Commission's community based plan work program. The plan emphasizes balancing growth with conservation and preservation, and ensuring a balanced transportation system that is well integrated into communities. The desired transportation system will accommodate existing automobile traffic, support activity centers, is connected to an efficient transit system, and is designed to connect to a rapid transit system.

The plan identifies a desire for mobility choices including walking, biking, driving, and bus or rail transit. To expand on these community desires, the plan indicates that the community wants to identify areas where greenways and corridors can co-exist, preserve current and future rights-of way to accommodate current and future transportation needs including pedestrian traffic, support ferry connections between St. Petersburg, Tampa, and Sarasota, and support existing emergency management plans.

The plan calls for scheduling improvements identified in the SouthShore Areawide System Plan in the Capital Improvements Program (CIP). It emphasizes the importance of coordinating future development with the need for adequate space for alternative modes of transportation along appropriate corridors, and consideration of additional buffering and wildlife undercrossing(s) for Rhodine Road Extension and Big Bend Road Extension.





**Figure 13. SouthShore Areawide systems map**

Source: Hillsborough County Comprehensive Plan, 2008

The plan also proposes “livable roadways” with improved roadway corridors that are designed to reflect the character, neighborhood, historical and environmental features of the surrounding area. Strategies proposed to accomplish these “livable roadways” include designing roadways at an appropriate scale, discouraging roadway design that encroaches on environmentally sensitive lands, designing roadways to minimize neighborhood traffic intrusion, providing for neighborhood ties as development occurs, and supporting “Adopt a Road” programs. Additionally, the plan indicates that certain routes not be designated as truck routes including 19<sup>th</sup> Avenue N.E. from US 41 to US 301, 24<sup>th</sup> Street extended from SR 674 to Big Bend Road, and Big Bend Road from US 301 to its eastern terminus. The plan notes a desire to increase public transportation to include transit, rail, and water borne transportation. Other desires noted were to continue evaluating bus ridership including the potential for evening transit service and light rail.

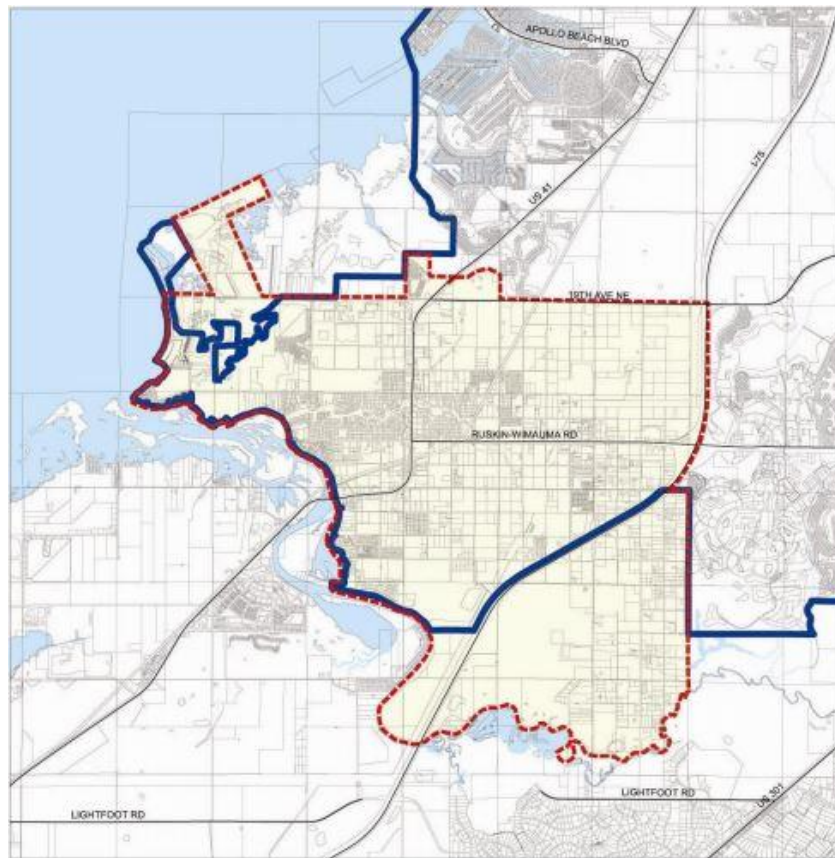
To encourage a walkable environment, the plan proposes linking and expanding the network of greenway trails, sidewalks, bikeways, golf cart paths, and other pedestrian pathways. They propose to implement the following plans to improve the non-motorized network:

- Hillsborough County MPO Pedestrian System Needs Assessment.

- The Hillsborough County Master Sidewalk Plan.
- The Hillsborough County Greenways Master Plan.
- The adopted Scenic Corridor Map and associated regulations.

### 3.2 Ruskin

The Ruskin Community Plan was effective August 8, 2005. Major roadways in the Ruskin community (Figure 14) are US 41, I-75, College Avenue, Shell Point Road, and 19<sup>th</sup> Avenue . The greatest amount of commercial uses are along US 41 and College Avenue. The Bahia Beach resort is at the western end of the community, and South Shore Corporate Park is at the eastern end adjacent to the I-75/College Avenue interchange.



**Figure 14. Ruskin community plan boundary map**

Source: Hillsborough County Comprehensive Plan, 2008

The community vision identifies a need for low traffic volume, minimized speed, and a safe enjoyable community for walking and bicycling that is accessible to the disabled. The downtown, which is intersected by US 41, is proposed as pedestrian friendly with a mix of uses and small businesses. The community plan seeks to promote additional commercial development in the downtown area instead of along SR 674 and Shell Point Road.

The Ruskin Town Center is intended to revitalize Ruskin's business center along US 41, enhance the appearance of Ruskin's historic business district, and establish a mixed-use, walkable and pedestrian friendly Town Center (Figure 15). Ruskin Town Center 1 (RTC-1) allows mixed-use development, multi-family residential, and commercial uses; Ruskin Town Center 2 (RTC-2) allows mixed-use developments, business professional office, and multi-family residential. Shell Point Road and US 41 are designated as Main Streets; all other streets in the town center boundary are designated as Ruskin Town Center Streets. New and reconstructed Ruskin Town Center Streets must conform to the design standards of the cross section in Figure 16.

A colorful brochure characterizing the Ruskin Community Plan was developed in June 2005 by Hillsborough County, the Hillsborough City-County Planning Commission, and the Ruskin Community Plan Working Committee (Figure 17). Ten goals and strategies were included, along with a graphical concept map. Examples of some goals and strategies related to mobility were:

Goal 1: Revitalize Ruskin's business center along US 41, enhance the appearance of the district, and promote business growth that is compatible with our small town community:

- Establish a mixed-use, walkable and pedestrian friendly Town Center.
- Develop 2<sup>nd</sup> and 3<sup>rd</sup> Streets as local alternatives to US 41.

Goal 7: Ensure development along College Avenue enhances the appearance of Ruskin, avoids strip commercial patterns, and is compatible with the revitalization of downtown Ruskin.

- Implement the College Avenue Retail development Guidelines
  - Concentrate retail development near I-75.

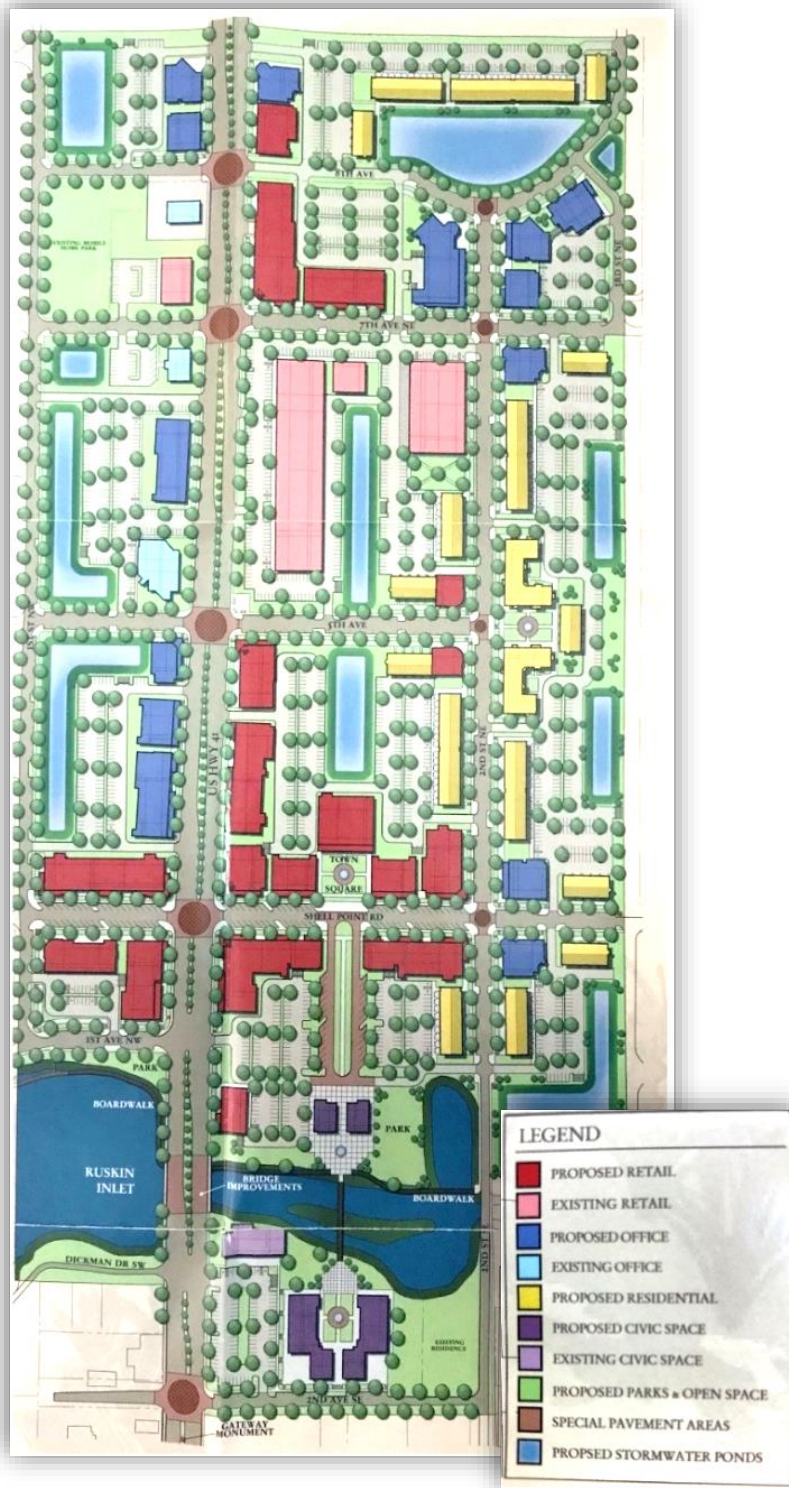
Goal 8: Ensure a balanced transportation system that reflects the community's character and provides for options including walking, bicycling and transit.

- Ensure roadways are designed to preserve the community character of Ruskin. Replace culverts at US 41 and 2<sup>nd</sup> St to improve creek flow and pedestrian access.
- Support implementation of the Scenic Corridor designation and design considerations for 19<sup>th</sup> Avenue N.S. and S.R. 674.

Goal 9: Provide adequate and quality recreational opportunities.

- Retain corridors for the Greenway and trail loop outlined on the Master Plan map (see Appendix H).



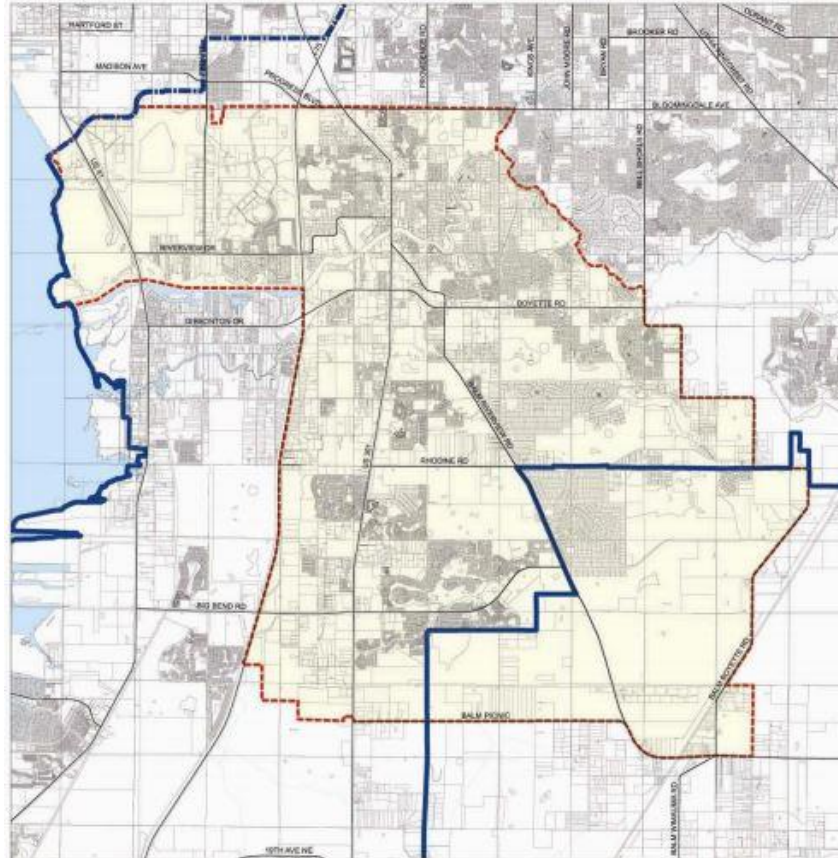


**Figure 17. Downtown Ruskin concept plan**

Source: Ruskin Community Plan Brochure, 2005

### 3.3 Riverview

The Riverview Community Plan was effective August 8, 2005. Riverview is described as a small town with a peaceful, family-oriented, and pedestrian friendly town center (Figure 18). The Civic Center and Camp Christina Schools are identified in the vision as public places with concepts for walkability.



**Figure 18. Riverview community plan boundary map**

Source: Hillsborough County Comprehensive Plan, 2008

Districts in Riverview include the Riverfront, Downtown, Highway 301, Residential, Industrial, Open Space, and Mixed Use districts. The Riverview Community Plan identifies the vision for the districts, which are identified in Figure 19 and summarized below.

The community plan proposes preparing and adopting “a US Highway 301 Corridor Plan Overlay that designates mixed-use town centers” (Hillsborough County, 2008b). The Highway 301 District vision is for a mixed-use area with high densities and streets with well-maintained landscaping, bike lanes, sidewalks, crosswalks, adequate lighting, and traffic signals.

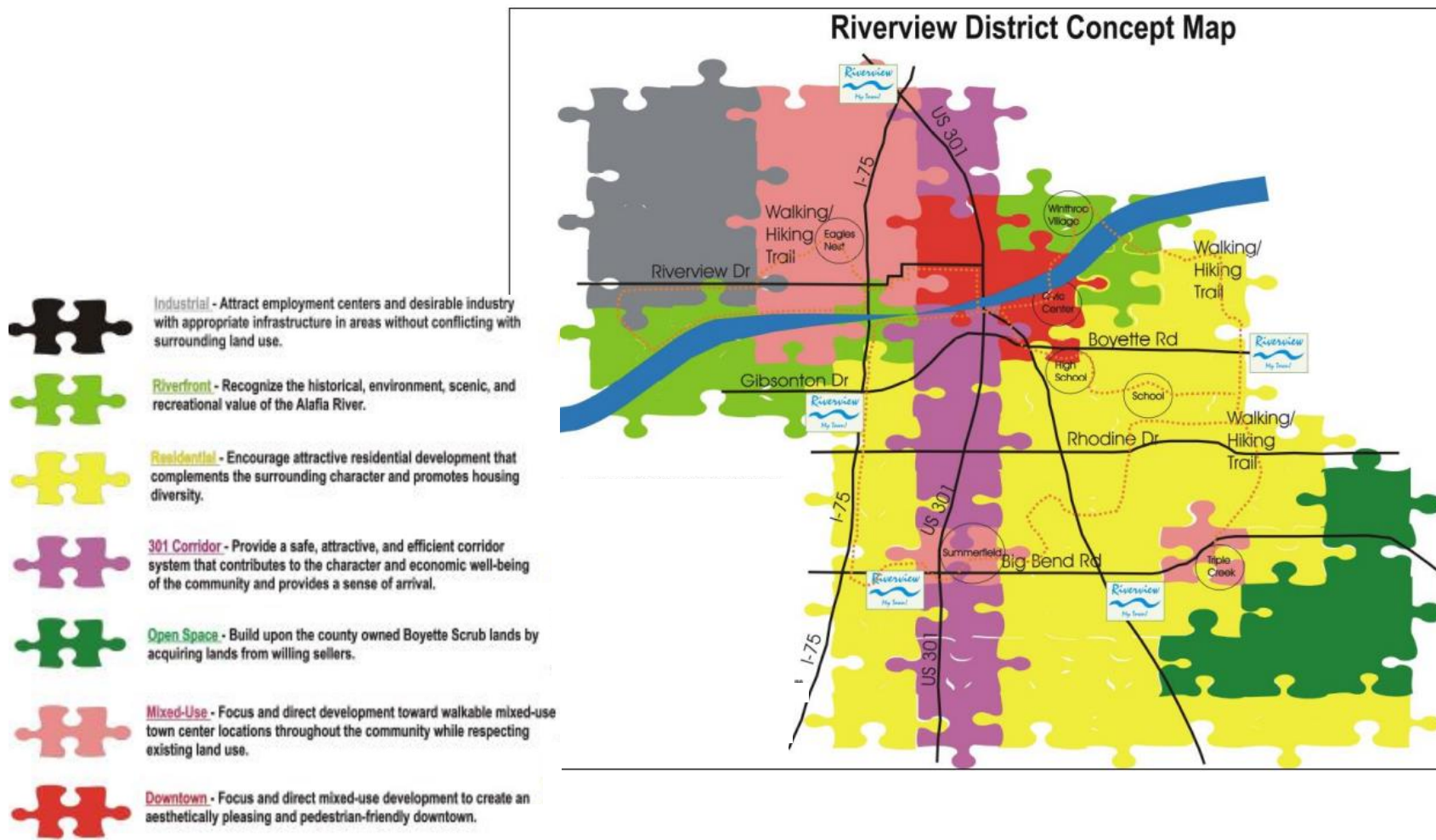


Figure 19. Riverview district concept map

Source: Hillsborough County Comprehensive Plan, 2008

The Downtown District vision (Figure 20) identifies downtown as the hub of the community with convenient transportation links to the area’s variety of commercial, service, community, and recreational uses. “A” street designations within the Riverview Downtown District are intended for building types that promote pedestrian activity that benefit from pedestrian and/or transit access. US 301, Riverview Drive, Commerce Street, and Balm Riverview Road are designated as “A” Streets. Streets that are designated as “B” streets are intended primarily for automobile and truck traffic.



**Figure 20. Riverview Downtown District zoning districts map**

Source: Hillsborough County Land Development Code, 2018

The Riverfront District vision recommends taking advantage of opportunities for river-walks, recreational watercraft, and the network of paths connecting to downtown. As seen in Figure 20, the Downtown District is north of the Riverfront District, intersected by US 301 and Riverview Drive.

The Mixed-use District proposes to incorporate commerce, education, agriculture and residential subdivisions, upgrading infrastructure in older neighborhoods. Additionally, the plan

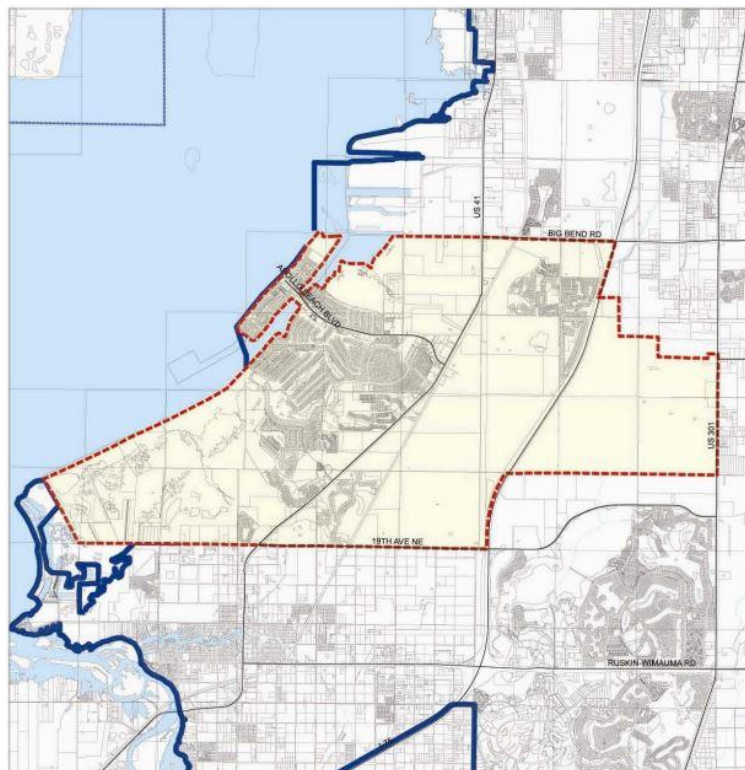


identifies a vision for improved sidewalks, pedestrian friendly crosswalks, adequate lighting and signage, convenient access to other areas in Riverview through the transit system, pedestrian-friendly streets and bike trails, thoughtful planning that controls traffic, and an intelligent highway system to efficiently move residents to and from their destinations.

The vision for the Industrial District includes improved infrastructure and ease of access by foot, bike, transit, or vehicle. The Open Space District identifies a vision that promotes active and passive open areas with a system of new parks and open space incorporated into the Hillsborough County Greenway and Trails Master Plan that connects the entire community.

### 3.4 Apollo Beach

The Apollo Beach Community Plan was effective August 8, 2005 (Figure 21). US 41 is characterized by suburban shopping strips and franchise establishments with older development west of US 41 and vacant land east of US 41. No town centers are currently identified in the Apollo Beach community plan, but the plan proposes mixed-use town centers at Apollo Beach Boulevard and US 41, between US 41 and I-75, and other locations where appropriate. Additionally, the community plan proposes creating a special district for the Apollo Beach Boulevard corridor west of the commercial node at US 41 which will promote the town center concept. Community-serving facilities include Apollo Beach Elementary School, a fire station on Golf and Sea Boulevard, and a community post office.



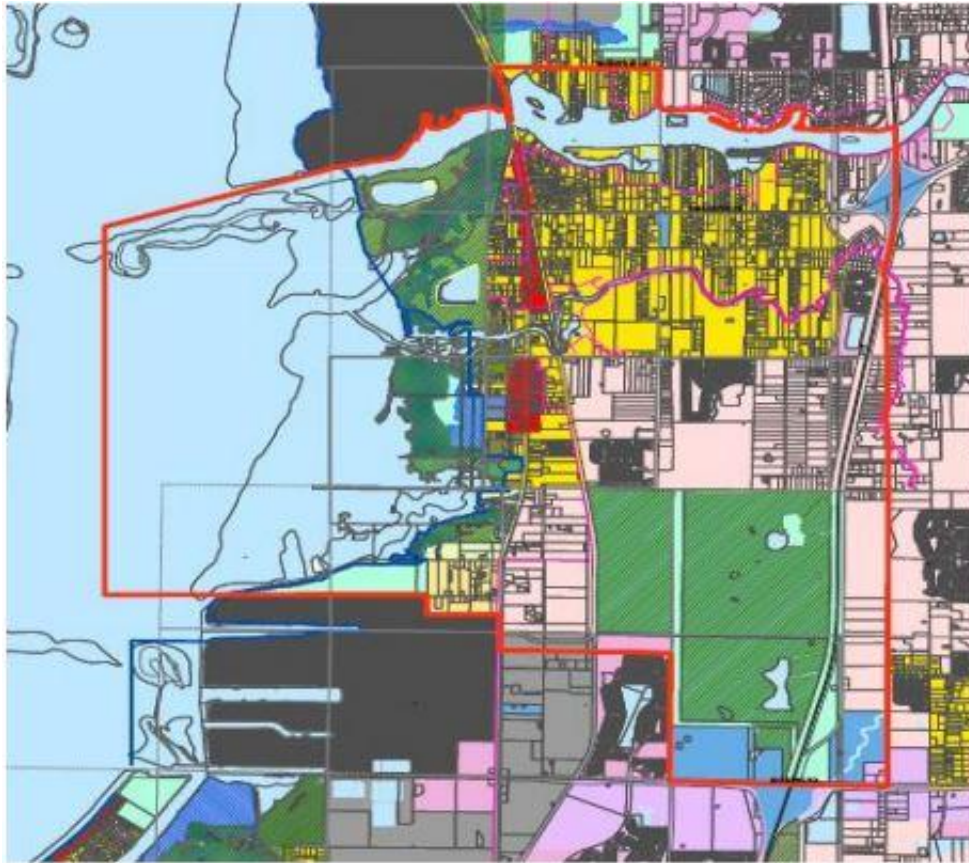
**Figure 21. Apollo Beach community plan boundary map**

Source: Hillsborough County Comprehensive Plan, 2008

Goals identified in the community plan related to transportation include improving transportation, and establishing/improving sidewalk, bicycle lane and trail connectivity. Some identified strategies include: a) improving sidewalks and providing bicycle lanes where needed; b) providing gateways or markers along major roadways, including US 41, Big Bend Road, and the Apollo Beach Boulevard extension; c) requiring connectivity with new development and between adjacent development; d) supporting multi-modal mass transit opportunities; e) reserving areas for commuter rail access; f) improving and employing traffic calming; and g) identifying and providing additional hurricane evacuation routes.

### 3.5 Gibsonton

The Gibsonton Community Plan was effective February 19, 2007. Major roadways in Gibsonton include US 41, East Bay Road, Gibsonton Drive, Symmes Road, and Rhodine Road (Figure 22). The plan identifies a need for a more walkable community, safer intersections, and affordable public transportation. The plan calls for designating Gibsonton Drive as the community's "Signature Corridor" and "Main Street" to encourage small scale business development.



**Figure 22. Gibsonton community plan boundary map**

Source: Hillsborough County Comprehensive Plan, 2008

Community facilities include Gibsonton Elementary, East Bay High School, Eisenhower Middle School, Gardenville Recreation Center, International Independent Showmen's Association (IISA) headquarters and museum, Williams-Cargill Alafia-Vance Vogel Parks, and Alafia River marinas.

The Residential Show Business (RSB) zoning and overlay limits Show Business uses to a designated area in Gibsonton (Figure 23). Show business uses are defined as those land uses designated for carnivals, circuses, fairs, or similar commercial activities. These uses include group living facilities, equipment and vehicle repair, construction, storage, and maintenance. The Comprehensive Plan calls for a future study of Gibsonton to determine if the boundary can be expanded or if additional areas can be added.

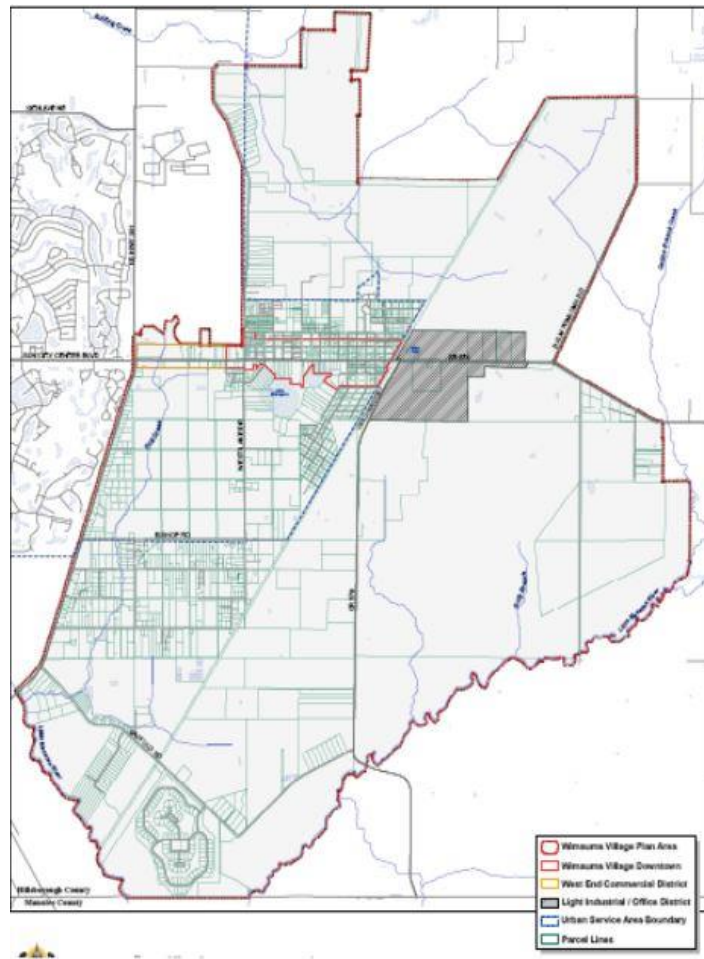


**Figure 23. Residential show business use map**

Source: Hillsborough County Comprehensive Plan, 2008

### 3.6 Wimauma Village

The Wimauma Village Plan was effective November 10, 2007. Wimauma Village is described as a rural community in the Wimauma Village Residential-2 (WVR-2) FLUC (Figure 24). Uses include agriculture, residential uses, multi-purpose, and clustered projects. SR 674 is the community’s “Main Street and key transportation corridor” (Hillsborough County, 2008); the roadway is proposed to be pedestrian friendly and the area is proposed to be designed to create a sense of place.

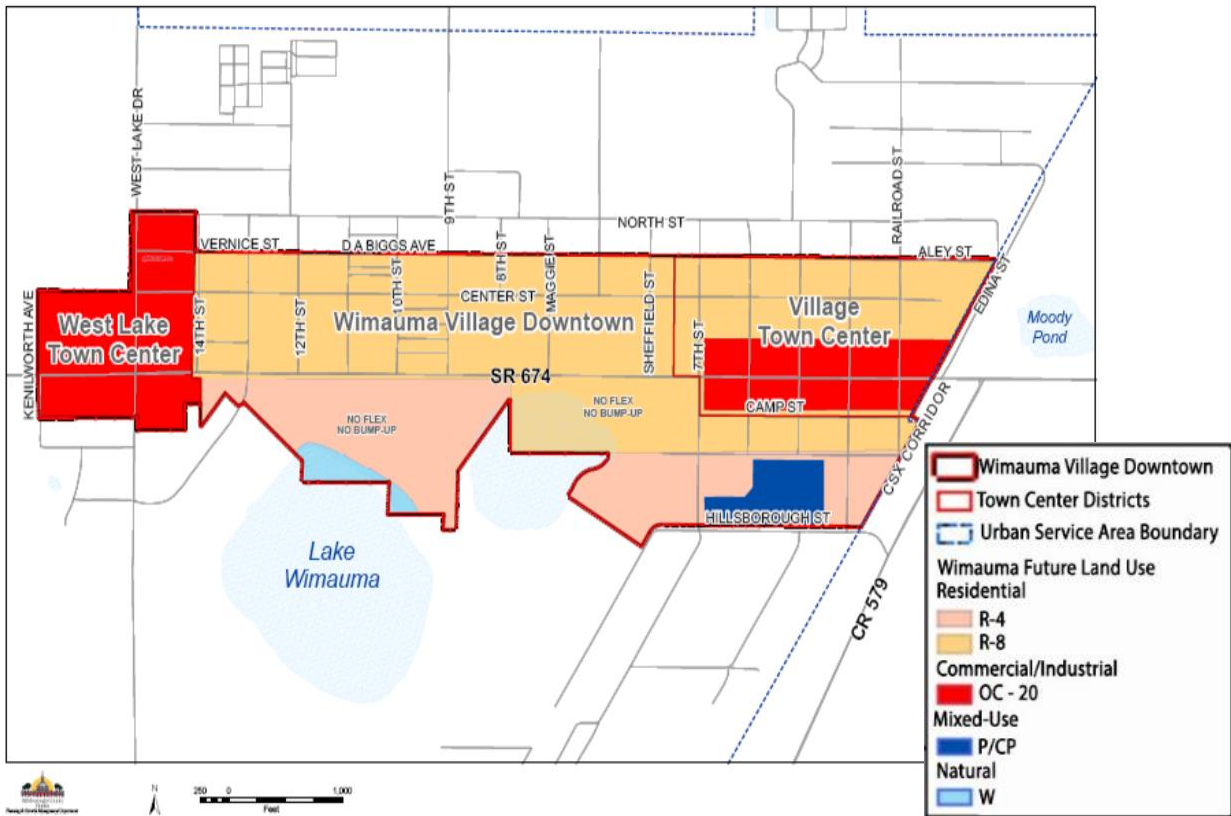


**Figure 24. Wimauma Village plan boundary map**

Source: Hillsborough County Comprehensive Plan, 2008

The community plan proposes creating an overlay district or special zoning category to implement the Wimauma Village plan (Figure 25). Non-residential uses are required to be contained, where possible, in the Wimauma Village Downtown, the Light-Industrial/Office area, and the West End Commercial Area.

## WIMAUMA VILLAGE PLAN Downtown Boundary

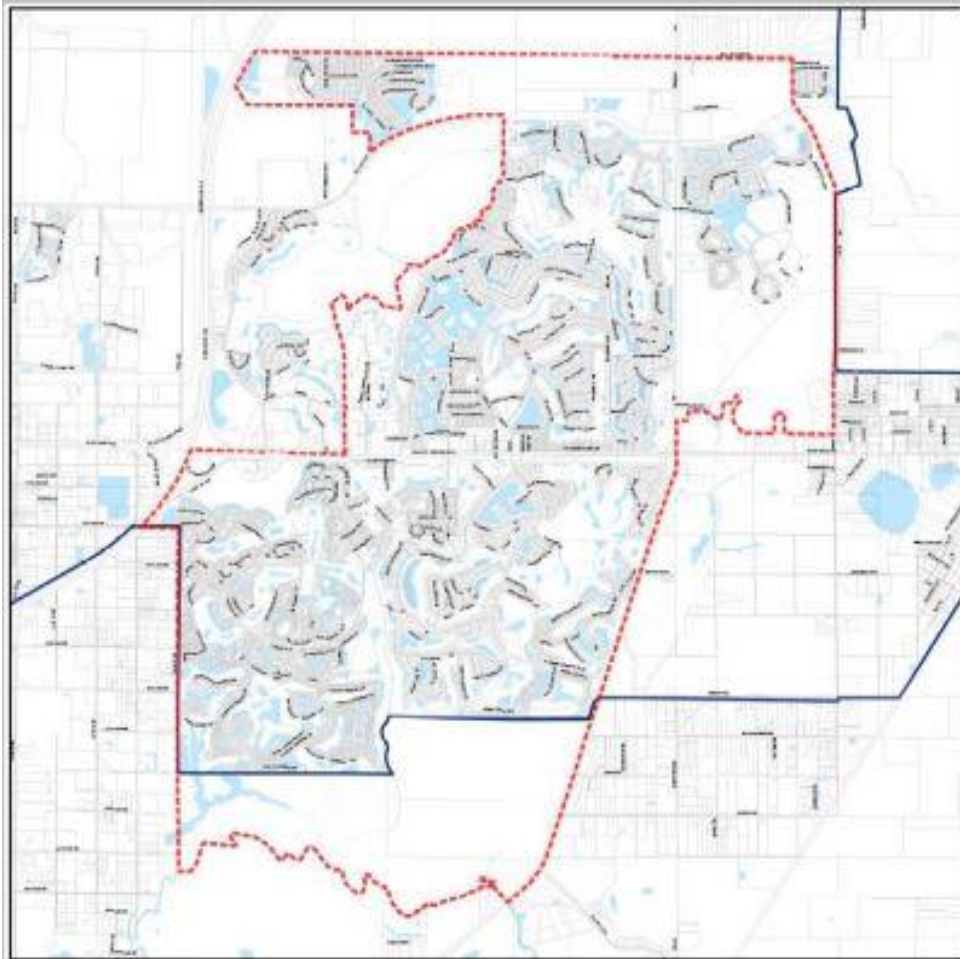


**Figure 25. Wimauma Village Plan Downtown**

Source: Hillsborough County Comprehensive Plan, 2008

### 3.7 Greater Sun City Center

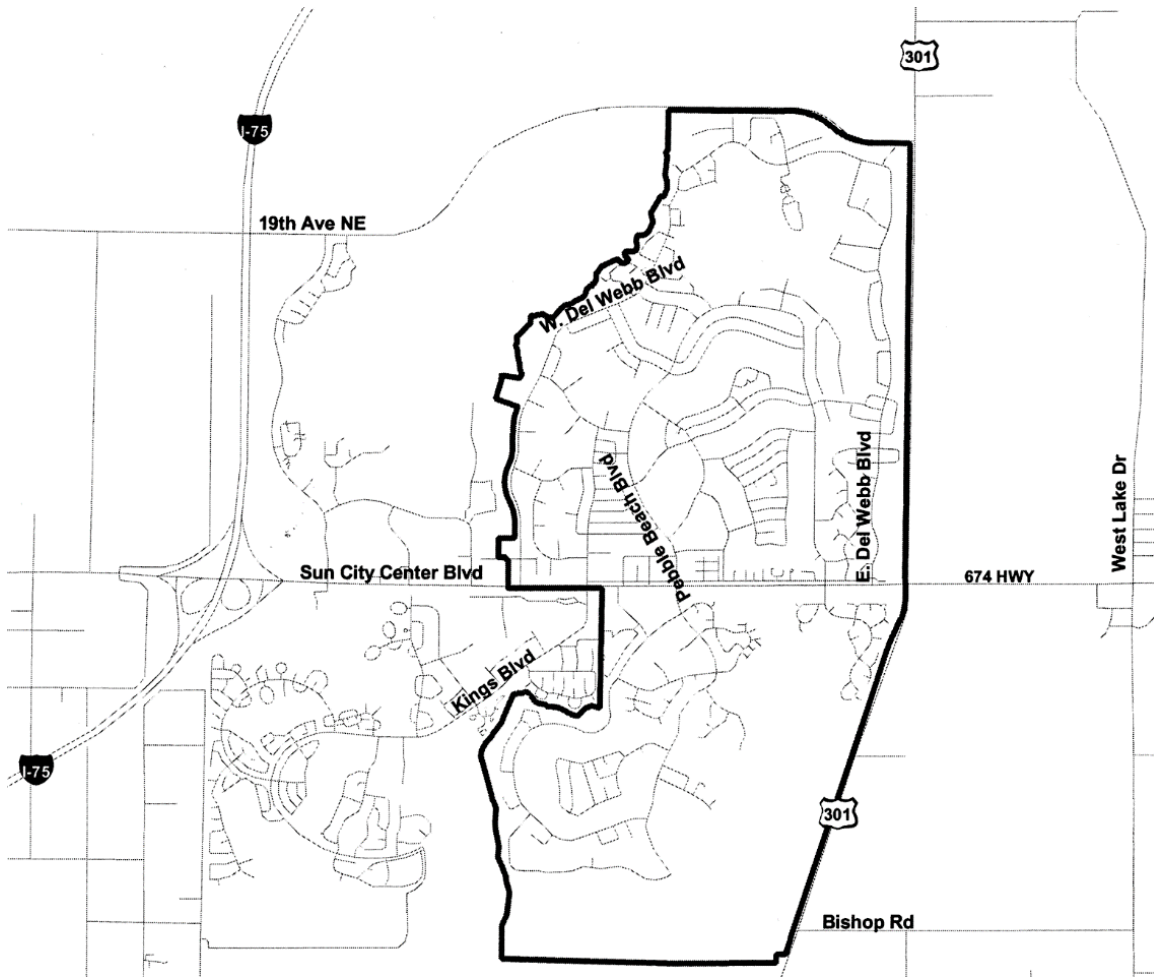
The Greater Sun City Center Community Plan was effective November 18, 2010. The Sun City Center community vision proposes public transportation that provides access to community-serving facilities and adjacent communities (Figure 26). It also proposes bus and/or light rail service to farther destinations including Tampa, Brandon, Bradenton, and Sarasota. Golf courses, green spaces, and pathways for pedestrians and environmentally friendly vehicles are also of high importance to the community. Additionally, improved public health through accessible health care facilities, senior service centers, lighting, access for emergency vehicles, egress during times of emergency, and disaster recovery is important to the residents of Sun City Center.



**Figure 26. Greater Sun City Center plan boundary map**

Source: Hillsborough County Comprehensive Plan, 2008

The community wants to reduce truck conflicts along SR 674 and 19<sup>th</sup> Avenue and provide additional pedestrian and golf cart pathways along SR 674 and across US 301. Sun City Center also includes an age restricted overlay district, which restricts occupancy within the boundaries based on age (Figure 27). The community plan proposes creating a town center at Sun City Center Plaza, which is in the general proximity of the age restricted overlay district.



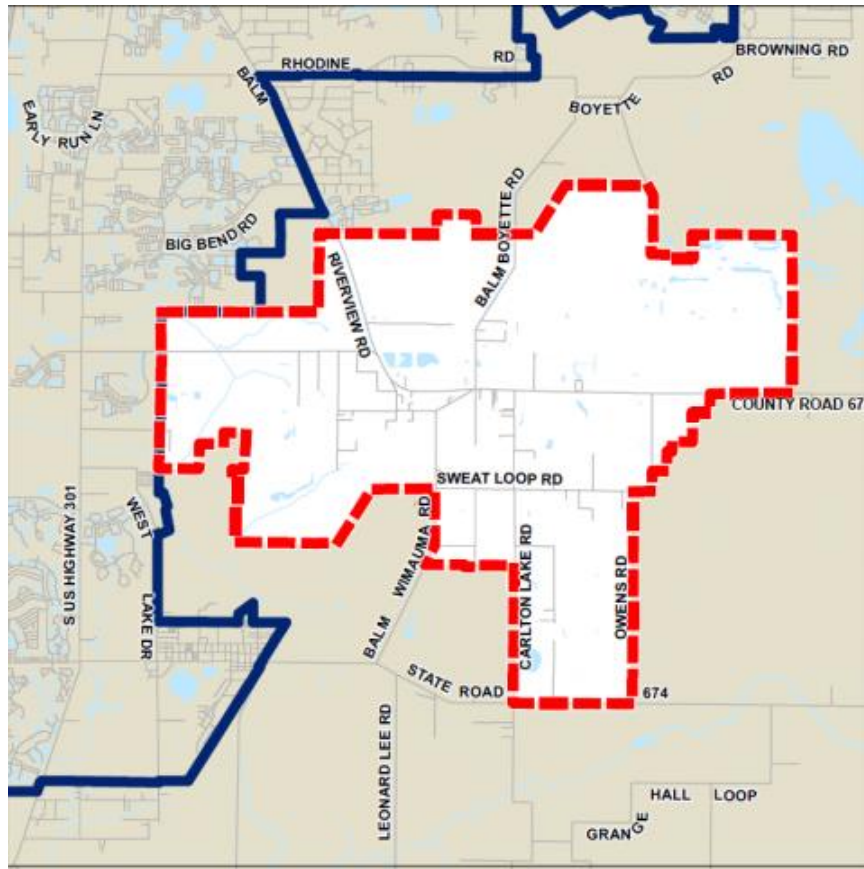
**Figure 27. Sun City age restricted overlay**

Source: Hillsborough County Land Development Code, 2018

### 3.8 Balm

The Balm Community Plan was effective June 28, 2013. The community vision proposes improved mobility by widening shoulders and/or bicycle paths and lanes, resurfacing roads, adding multimodal trails that increase connectivity between neighborhoods and recreational facilities, and adding numerous equestrian trails (Figure 28).

Road maintenance is a priority in the Balm community plan. They want to encourage infrastructure improvements along major collectors and arterials, such as Sweet Loop Road. Balm wishes to promote connectivity with multimodal trails that prioritize connections to Balm Civic Center/Park and surrounding communities and development.



**Figure 28. Balm community plan boundary map**

Source: Hillsborough County Comprehensive Plan, 2008

Pedestrian friendly Village(s) that will provide a diverse mix of “commercial neighborhood” serving uses are proposed by the Balm community. Preferred village locations identified in the plan include the intersection of Balm Road and Balm Wimauma Road, and the intersection of Balm Boyette Road, CR 672, and Shelley Lane. Pedestrian links between these proposed Villages and adjacent uses are recommended in the plan. Figure 29 shows the Balm Community plan concept map that identifies the locations of the proposed trail, Villages, roadway improvements, bike path, and other components of the community’s vision.

Balm’s downtown village is identified as having a mix of neighborhood serving commercial/retail uses and is labeled a rural activity center by the community plan. The community wishes to maintain its rural densities by restricting Residential Planned-2 (RP-2) to split land uses on one parcel. The Balm plan calls to only designate new RP-2 in areas where one parcel has split land uses (presumably where one of those parcels in the split is RP-2). The Balm Community plan also identify that they do not want additional Residential Show Business uses in the community plan boundary, but will continue to apply the Residential Show Business Uses locational criteria until the LDC is amended.





Figure 29. Balm community plan concept map

Source: Hillsborough County Comprehensive Plan, 2008

### 3.9 Community Strategies

Each community plan identified strategies to accomplish their community vision. Those strategies outlined in the community plans related to transportation are identified in Table 3.

**Table 3. Transportation Strategies Identified in Community Plans**

Community	Strategy
SouthShore Areawide Systems Plan	<ul style="list-style-type: none"> <li>• Implement the system plan with recognition of local values and conditions.</li> <li>• Implement intelligent transportation systems (ITS) that are consistent with adopted County ITS plans and regional architecture to better utilize existing and proposed corridors.</li> <li>• Implement the SouthShore Corridor Plan<sup>1</sup> as shown on Map 25 of the Transportation Element.</li> <li>• Provide adequate space for alternative modes of transportation such as bikeways, and sidewalks along appropriate transportation corridors.</li> <li>• Review new development to determine if the development is within or adjacent to rights-of-way identified on the map to ensure adequate space is available for alternative modes.</li> <li>• Assure that the integrity of established communities is protected through accepted techniques and principles of land use transition expressed in the Comprehensive Plan.</li> <li>• Ensure additional buffering and wildlife undercrossing(s) are considered for the following roadways:             <ul style="list-style-type: none"> <li>○ Rhodine Road Extension</li> <li>○ Big Bend Road Extension.</li> </ul> </li> <li>• Design roadways of appropriate scale to preserve the scenic characteristics of the surrounding area, such as neighborhood identity, historic or environmental features, points of interest, and other aspects of community character.</li> <li>• Discourage roadway design that encroaches upon or adversely affects environmentally sensitive areas or publicly owned natural preserves.</li> <li>• Develop roadway corridor landscape guidelines that represent the visual identity the community desires to achieve for specific road segments.</li> <li>• Encourage appropriate roadway design and/or traffic calming methods to minimize neighborhood traffic intrusion and to protect neighborhoods from adverse impacts of through-traffic. Such designs may include, but</li> </ul>

<sup>1</sup> The SouthShore Corridor Plan was developed as part of the SouthShore Areawide Systems Plan. The SouthShore Corridor Plan has been incorporated into the SouthShore Corridor Preservation Plan. The Hillsborough County Corridor Preservation Plan (Map 25), adopted as part of the Comprehensive Plan in Appendix J, identifies right-of-way requirements, general alignments, and standards for transportation corridors in the Urban Service Area.

	<p>are not limited to rotaries, roundabouts, signage, traffic diverters, on-street parking, bulb-outs, and medians.</p> <ul style="list-style-type: none"> <li>• Implement the Neighborhood Traffic Calming Program, when needed.</li> <li>• Provide for, as development occurs and where possible, the interconnection of internal neighborhood streets, and interconnection to the surrounding transportation network by establishing a basic grid network of access and open space.</li> <li>• All currently designated truck routes and proposed new collectors and arterials shall be available for consideration to continue as or as potential new truck routes with the exception of the following roads: <ul style="list-style-type: none"> <li>○ 19<sup>th</sup> Ave. N.E. from US 41 to US 301</li> <li>○ 21<sup>st</sup> St. extended from SR 674 to Big Bend Rd.</li> <li>○ Big Bend Rd. from US 301 to its eastern terminus.</li> </ul> </li> <li>• To achieve a balance between the need for future road capacity and the need to preserve the community character and environmental resources, the following corridors will be subject to a more detailed examination of alternatives to expansion as community-based planning occurs: <ul style="list-style-type: none"> <li>○ SR 674 between I-75 and Westlake Dr. (Sun City Center, Wimauma and Ruskin)</li> <li>○ US 41 between 19<sup>th</sup> Ave. N.E. and SR 674 (Ruskin)</li> <li>○ US 41 between Elsberry Rd. and Leisey Rd. (Apollo Beach).</li> </ul> </li> <li>• Evaluate bus ridership demand within parts of SouthShore that can be efficiently and effectively served by transit, as development occurs and population increases. This includes the potential need for evening or late shift transit service.</li> <li>• Evaluate the effectiveness of a potential light rail ridership serving SouthShore.</li> <li>• Study the potential of water borne craft connections between SouthShore and neighboring places of interest such as St. Petersburg, Tampa, and Sarasota.</li> <li>• Participate in and monitor updates to the Hillsborough County Master Sidewalk Plan to establish an interconnected system of sidewalks throughout the area.</li> <li>• Implement the Hillsborough County Greenways Master Plan within SouthShore.</li> <li>• Ensure the implementation of the adopted Scenic Corridor Map and associated regulations.</li> </ul>
<p style="text-align: center;"><b>Ruskin</b></p>	<ul style="list-style-type: none"> <li>• Establish a mixed-use, walkable and pedestrian friendly Town-Center.</li> <li>• Ensure that improvements to US 41 are compatible with the revitalization of Ruskin’s historic business center.</li> <li>• Identify alternatives to the expansion of US 41 by limiting US 41 to two through lanes in each direction and developing 2<sup>nd</sup> and 3<sup>rd</sup> Streets as a local alternative to US 41 with direct connection to US 41.</li> </ul>

	<ul style="list-style-type: none"> <li>• Direct commercial development away from Shell Point Road West and 19<sup>th</sup> Avenue N.W.</li> <li>• Encourage locally owned businesses to locate within Ruskin’s historic business corridor and Town Center.</li> <li>• Support and implement the SouthShore Corridor Plan.<sup>1</sup></li> <li>• Ensure that roadways are designed to preserve the community character of Ruskin.</li> <li>• Preserve and enhance the traditional “grid” pattern of roadways.</li> <li>• Support the implementation of the “Scenic Corridor” designation and design considerations for 19<sup>th</sup> Avenue N.E., SR 674 and roadways in the SouthShore Corridor Plan with the “Scenic Corridor” designation.</li> <li>• Ensure that 19<sup>th</sup> Avenue N.E. from US 41 to US 301 is not designated as a truck route.</li> <li>• Retain Shell Point Road as a 2-lane roadway, allowing only intersection and site-related improvements.</li> <li>• Complete sidewalks along Shell Point Road West.</li> <li>• Support mass transit opportunities.</li> <li>• Expand and enhance opportunities for biking and walking.</li> <li>• Retain corridors for the Greenways and trails loop outlined on the Master Plan map.</li> </ul>
<b>Riverview</b>	<ul style="list-style-type: none"> <li>• Create a new Mixed Use District that provides state of the art, livable Town Centers.</li> <li>• Direct mixed-use development to appropriate Town Center locations</li> <li>• Roadway design standards that: <ul style="list-style-type: none"> <li>○ Enhance the ability to walk or bike between adjoining commercial areas.</li> <li>○ Develop distinctive roadway design and landscape standards.</li> <li>○ Use standards for new and redeveloped projects that incorporate transit-friendly street design along bus routes.</li> </ul> </li> <li>• Explore opportunities for constructing a bridge across the Alafia as an alternative to north-south transportation route.</li> <li>• Prioritize and improve major connector roadways and intersections to improve safety and efficiency concurrently as the community grows.</li> <li>• Provide sidewalks, pedestrian crossings, bike lanes, and connections to the Hillsborough County Greenways and Trails Master Plan, and extend crossing signal times and use traffic calming techniques along major thoroughfares.</li> <li>• Expand mass transit, such as more bus stops and routes and park and ride facilities.</li> <li>• Diligently enforce traffic speed laws.</li> <li>• Provide safe and efficient emergency evacuation routes.</li> <li>• Continue to implement the <i>Livable Roadways</i> strategies and <i>Guidelines for Landscaping Hillsborough County Roadways</i> (or updated replacement</li> </ul>

	<p>documents) for enhancing the appearance of major roadways (such as Boyette Road, US 301, Riverview Drive and Balm-Riverview Road).</p> <ul style="list-style-type: none"> <li>• Implement access management standards such as frontage roads, joint access points, rear lot access points, and managed turning movements.</li> <li>• Discourage speeding and cut-through traffic by designing roadways with traffic calming measures and using appropriate design speeds to prevent implementation of reactive traffic calming techniques (i.e. speed humps) after construction).</li> <li>• Prepare and adopt a US 301 Corridor Plan Overlay that also designates mixed-use town centers.</li> <li>• Enhance the appearance of US 301 with attractively landscaped medians, tree plantings, sidewalks and the provision of pedestrian-scale lighting.</li> <li>• Establish east/west pedestrian crossings along US 301 to facilitate access to retail opportunities and other destinations (i.e., library, school, neighborhoods). To this end, consider a pedestrian overpass and traffic calming techniques as options.</li> <li>• Develop a pedestrian, bicycle, and equestrian trail pathways that connects key destinations.</li> <li>• Implement strategies in the MPO Bicycle and Pedestrian Master Plan.</li> <li>• Collaborate with developers, government agencies, and non-profit organizations to provide safe roadway, sidewalk, and pathway connections, biking and equestrian linkages and other pedestrian amenities.</li> <li>• Encourage walk to school trips.</li> <li>• Provide sidewalks, pathways and/or trails wide enough (wider than 5 feet) for people to easily pass each other or travel side-by-side.</li> <li>• Designation of streets in the Riverview Downtown District <ul style="list-style-type: none"> <li>○ "A" Street access is intended for building types and uses that promote pedestrian activity, and that benefit from pedestrian and/or transit access. "B" Street access is intended primarily for automobile or truck access.</li> <li>○ The following existing streets within the Riverview Downtown District zoning and overlay districts have an "A" Street designation in their entirety and shall not be redesignated as "B" Streets: US Highway 301, Riverview Drive, Commerce Street, and Balm-Riverview Road.</li> <li>○ All newly constructed streets, excluding alleys, shall be designated as "A" Street or "B" Street. "A" and "B" Streets must be designated as such on all site and construction plans.</li> </ul> </li> </ul>
<p style="text-align: center;"><b>Apollo Beach</b></p>	<ul style="list-style-type: none"> <li>• The following were proposed in the SouthShore Corridor Plan<sup>1</sup> and identified in the Apollo Beach community plan: <ul style="list-style-type: none"> <li>○ Provide a north/south arterial connecting Big Bend Road with College Avenue in Ruskin.</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>○ Add an arterial between US 41 and I-75.</li> <li>○ Develop an Apollo beach boulevard extension projected to link the roadway with County Road 672 and possibly provide an interchange at I-75.</li> <li>○ Provide an extension of Leisey Road eastwards past US 41 and southward to 19<sup>th</sup> Avenue.</li> <li>● Improve drainage, landscape, and sidewalks and provide bicycle lanes on Miller Mac Road.</li> <li>● Support and implement the SouthShore Corridor Plan.<sup>1</sup></li> <li>● Support an I-75 interchange at or near Apollo Beach Blvd extension.</li> <li>● Require connectivity within new developments and require new developments to connect to one another.</li> <li>● Support multi-modal mass transit opportunities that include buses, light rail, and water shuttles.</li> <li>● Require future development between the CSX rail line and US 41 to reserve areas for commuter rail access.</li> <li>● Improve and employ traffic calming measures where necessary.</li> <li>● Identify and provide additional hurricane evacuation routes.</li> <li>● Establish/improve sidewalk, bicycle lane and trail connectivity.</li> </ul>
<b>Gibsonton</b>	<ul style="list-style-type: none"> <li>● Identify unsafe road intersections and add to the CIP. <ul style="list-style-type: none"> <li>○ Include I-75 interchange with Gibsonton Drive</li> <li>○ Traffic lights at US 41 at Symmes Road and US 41 at Nundy Avenue, and street lights on US 41 from Ohio St to Symmes Rd.</li> </ul> </li> <li>● Improve southbound I-75 (exit #250) to Gibsonton Drive with additional lanes, and add traffic signal for northbound I-75 (exit #250) at Gibsonton Drive.</li> <li>● Develop an access road to the Schultz Property on Tampa Bay.</li> <li>● Develop canoe and kayak launching facilities and a pedestrian bridge at Bullfrog Creek.</li> <li>● Provide a landscaped median along Gibsonton Drive, the community's proposed "Main Street" and "Signature Corridor".</li> <li>● Provide a landscaped median along US 41.</li> <li>● Provide a north-south greenway along the TECO right-of-way.</li> <li>● Establish easement and trail connecting Golden Aster Scrub Nature Preserve and US 41 at Schultz Property (tie).</li> <li>● Gateway street enhancement.</li> <li>● Ensure incorporation of sidewalks in new housing projects, with connections to adjacent greenways by collaborating with County staff, developers and homebuilders.</li> <li>● Provide sidewalks along Symmes Road and along all roadways fronting new developments.</li> <li>● Provide sidewalks before other site construction begins, not at the end of new development projects.</li> </ul>

	<ul style="list-style-type: none"> <li>• Create safer intersections.</li> </ul>
<b>Wimauma</b>	<ul style="list-style-type: none"> <li>• Implement the “Hillsborough County Greenways Master Plan” and encourage connecting existing publicly-owned land to form a greenway system.</li> <li>• Encourage bike paths and pedestrian friendly development in the village downtown plan.</li> <li>• Maintain the existing grid system.</li> <li>• Connect development to the proposed Greenway system.</li> <li>• Promote greater pedestrian interaction and reduce truck conflicts on SR 674.</li> <li>• Encourage the implementation of traffic calming.</li> <li>• Add sidewalks.</li> <li>• Improve SR 674.</li> <li>• Connect new streets to existing streets and rights-of-way.</li> <li>• Establish local bus service and connection to the Ruskin Bus Center.</li> <li>• Require improved internal connectivity for new subdivisions.</li> <li>• Expand local bus service and provide shelters.</li> <li>• Require through streets every 1,320 feet.</li> </ul>
<b>Sun City Center</b>	<ul style="list-style-type: none"> <li>• Expand ingress to Kings Point to relieve congestion and provide safer, more convenient access – improve westbound left turn at SR 674.</li> <li>• Construct a bridge/tunnel over 301 for pedestrians and golf carts.</li> <li>• Promote the use of alternate east-west truck routes, not to include 19<sup>th</sup> Avenue, to minimize heavy truck traffic on SR 674.</li> <li>• Maintain SR 674 as a divided four-lane thoroughfare.</li> <li>• Encourage energy efficient transportation, including electric vehicles such as golf carts, propane-fueled vehicles, trolleys, local motor coach service, and personal transportation options such as Segways.</li> <li>• Encourage Hartline bus service with routes and schedules that encourage usage and work with TBARTA to ensure that mass transit needs are served.</li> <li>• Expand pedestrian walkways and multi-purpose paths. Extend golf cart paths on south side of SR 674 westward to commercial areas at 33<sup>rd</sup> Street. Consider non-motorized modes in road expansion projects.</li> <li>• Add an interchange on I-75 between SR 674 and Big Bend Road to relieve congestion.</li> </ul>
<b>Balm</b>	<ul style="list-style-type: none"> <li>• Identify needed infrastructure improvements including resurfacing and other maintenance needs (specifically on Sweet Loop Road).</li> <li>• Provide safe facilities for long distance cycling including designated bicycle lanes or widened roadway shoulders.</li> <li>• Designate interconnected multimodal trails.</li> </ul>

- Prioritize multimodal trails that connect to Balm Civic Center/Park to surrounding neighborhoods and provide interconnections between existing and new development.
- Create designated pathways that encourage equestrian ridership and establish neighborhood connectivity.
- Create gateway entrance signs.
- Create pedestrian friendly Village(s) at locations including, but not limited to:
  - The intersection of Balm Road and Balm Wimauma Road
  - The intersection of Balm Boyette Road, CR 672 and Shelley Lane.

Source: Hillsborough County Comprehensive Plan, 2008



## 4 Major Roadways

### 4.1 Overview of Major Corridors

The study area is intersected by eight major roadways that form the primary roadway network serving the South County area. Major east-west corridors in the study area are:

- Gibsonton Drive/Boyette Road,
- Symmes Road,
- Big Bend Road/Old Big Bend Road,
- 19<sup>th</sup> Avenue NE, and
- State Road 674/College Blvd/Sun City Center.

Major north-south corridors in the study area are:

- US-41,
- I-75, and
- US-301.

### 4.2 Planned Improvements

Several new roadways are proposed for construction in the South County area, including:

- a new four lane road (24th Street) from 19<sup>th</sup> Ave NE to Big Bend Road,
- a new two lane road along Simmons Loop Road from US-301 to Gibsonton Road,
- a new two-lane road (Big Bend Road) will be extended from Balm-Riverview Road to Balm-Boyette Road,
- a new four-lane road (30th Street) from 19<sup>th</sup> Avenue to Apollo Beach Boulevard,
- a new four-lane road (Apollo Beach Road) from US-41 to US-301, and
- a new two-lane road (South County North-South Road) from Apollo Beach Extension to Big Bend Road.

The County Corridor Plan Listing, adopted into the Comprehensive Plan as Appendix G, identifies existing or committed lanes, future lanes, and improvement types. The County Corridor Preservation Plan (CPP) (Map 25), contained in the Comprehensive Plan as Appendix J (Figure 31), corresponds with Appendix G and identifies right-of-way requirements, general alignments, and standards for all transportation corridors. The CPP identifies new roadways needed to support future transportation needs of the adopted FLU plan and is currently being updated. Some projects identified in the CPP can also be seen in the Hillsborough 2040 Long Range Transportation Plan (LRTP) map of cost affordable capacity projects (Figure 32).

The remainder of this section summarizes the contents of active Project Development & Environment Studies (PD&E), the Capital Improvements Program (CIP) (FY18-FY23), the Transportation Improvement Program (TIP) (FY18/19-FY22/23), the FDOT District 7 Five-Year Work Plan (FY19-FY23), and the Vision Zero Action Plan (2017).

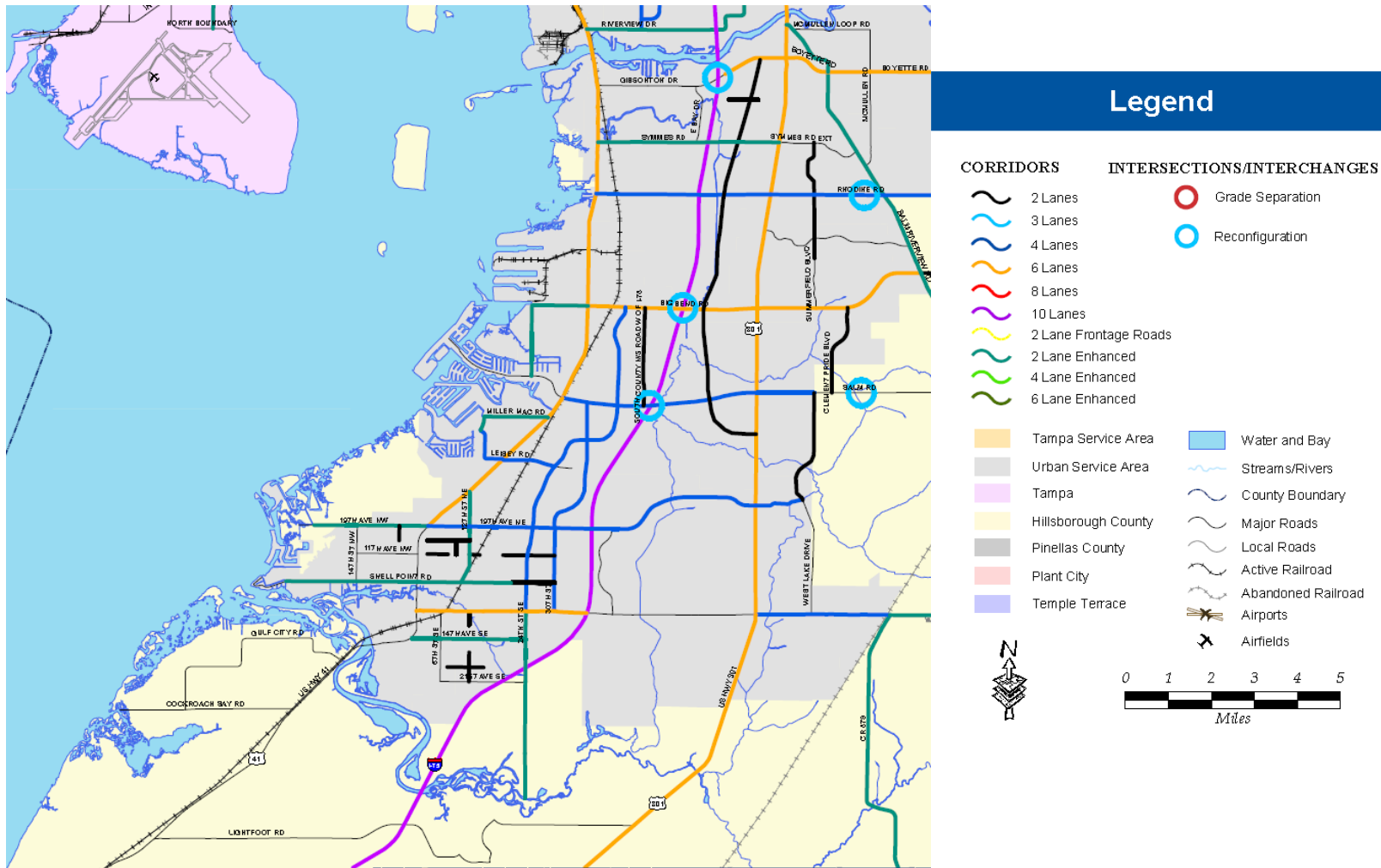
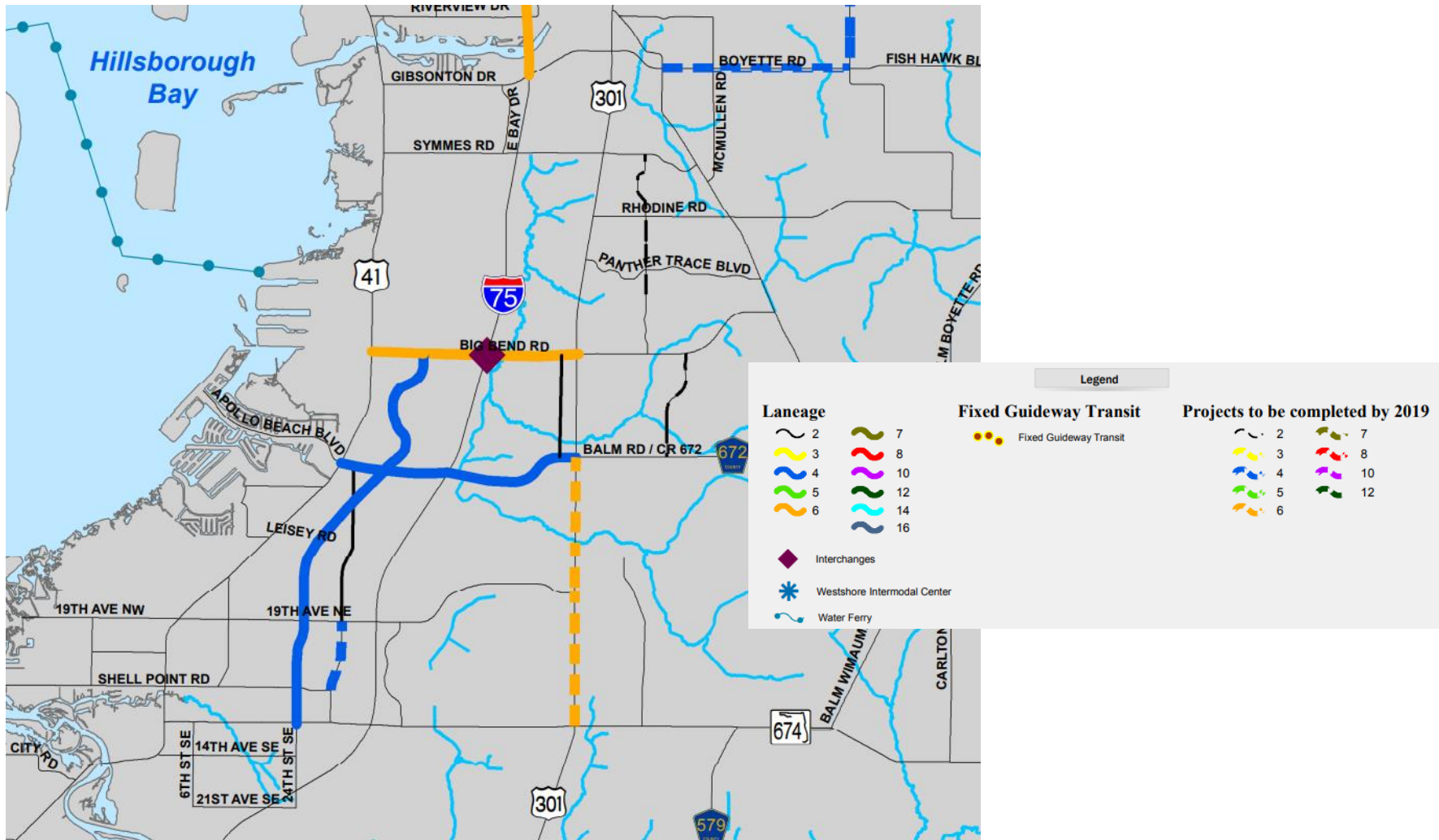


Figure 30. Hillsborough County corridor preservation plan

Source: Hillsborough County Comprehensive Plan, 2015



**Figure 31. 2040 cost affordable capacity improvement projects**

Source: Imagine 2040: Long Range Transportation Plan, 2018

## Preliminary Land Use Assessment and Transportation (PLAT) studies

In addition to the above projects, Preliminary Land Use Assessment and Transportation (PLAT) studies are underway for 19<sup>th</sup> Avenue and Big Bend Road. The PLAT contextualizes corridors that are identified for improvement in the LRTP in terms of their relationship to the community through which they pass prior to commencement of the Project Development and Environment (PD&E) study. The PLAT process includes understanding baseline factors (travel patterns and characteristics, existing infrastructure, community needs, etc.), balancing development pattern and form (develop land use scenarios), and identifying improved infrastructure (develop infrastructure plan that connects the community to the corridor).

## Active Project Development and Environment (PD&E) Studies

Roadway improvements along US 41 are currently being considered between the Manatee County Line and 12<sup>th</sup> Street NE (Figure 32). A PD&E study was started to develop roadway alternatives to widen US 41 from four lanes to six lanes and evaluate the possibility of a one-way pair system of roadways through downtown Ruskin.



**Figure 32. US 41 PD&E study location map**

Source: FDOT District 7 US 41 Project Development & Environment Study, 2016

FDOT has determined that a widening of US 41 between 12<sup>th</sup> Street NE and the Manatee County Line was not compatible with the constrained corridor in Downtown Ruskin. Conceptual plans are being developed to add a multi-use trail on the east side of US 41, and sidewalks where needed. Other improvements proposed with this conceptual plan include intersection improvements at College Avenue and Shell Point Road, turn lanes, and replacing/widening bridges where warranted. A transitional area will be provided north of the roadway segment under evaluation to provide transitions from 6 lanes to 4 lanes.

Capital Improvements Program (FY18-FY23)

The Capital Improvements Program (CIP) lays out the county’s budget for projects over a six-year period. To accomplish the County’s mission for high quality of life and economic vibrancy the plan proposes to “[d]evelop [a] strategy and action plan for transportation including [strategies for] pedestrian & bike”. Nine projects (Table 4) and six master projects (twenty-one sub projects) (Appendix E) are identified in the project study area as scheduled for capital improvements in this fiscal cycle.

**Table 4. CIP Projects in the South County Study Area**

Project Title	Project Number	Project Description
19 <sup>th</sup> Avenue NE Widening - US 41 to US 301	C69640000	Widening of 19 <sup>th</sup> Avenue NE, a 2-lane undivided road, from US 41 to US 301 to 4-lanes including enhanced pedestrian, bicycle and bus facilities.
2 <sup>nd</sup> Street Bridge Replacement	C69633000	This project includes design, permitting, and construction for replacement of the 2 <sup>nd</sup> Street SE bridge #104317 over Ruskin Inlet.
Apollo Beach Blvd I-75 Overpass	C69643000	Completion of a new 4-lane divided County road including an overpass over interstate 75 to provide connectivity between US 41 and US 301.
Big Bend Road Widening (Simmons Loop to US 301)	C61149000	This PD&E study will determine the need to provide two additional lanes of capacity to Big Bend Road (CR 672) by widening the road from 4-lane divided arterial to a 6-lane divided arterial. The project limits are from Covington Garden Drive to Simmons Loop for 1.25 miles. The cost will be split between the developer and Hillsborough County because a portion of the project is outside the limits of the developer's project.
Big Bend Rd Widening (US41 to Covington Garden Dr)	C69647000	Widening of Big Bend Road, a 4-lane divided road, from US 41 to I-75 to 6- lanes including enhanced pedestrian, bicycle and bus facilities.
Big Bend/I-75 Interchange Improvements Phase 1A	C69656000	Improvements to I-75 interchange at Big Bend Road including extending the southbound off-ramp 1,200 feet, adding a left turn lane to make triple lefts, eliminating the free flow ramp for drivers turning right (eastbound) onto Big Bend Road, and adding two signal controlled right turn lanes at the ramp terminus.
Big Bend/I-75 Interchange Improvements Phase 1B	C69657000	Widening of Bid Bend Road, a 4-lane divided road, from Covington Garden Drive to Simmons Loop to 6-lanes including enhanced pedestrian, bicycle and bus facilities.
Big Bend/I-75 Interchange Improvements Phase 2	C69648000	Improvements to I-75 interchange at Big Bend Road including realigning the westbound to northbound on-ramp and southbound to westbound off-ramp.

Sun City Center Pedestrian Mobility Master Plan	C69639000	New and enhanced golf cart paths and pedestrian facilities within Sun City Center
Bridge and Guardrail Rehabilitation and Repair	C62120000	Rehab and repair of several County bridges, and rehab and repair of guardrail within County ROW. Scope includes rehab/repair of substructure, pre-stressed concrete deck spans, pile jackets and scour mitigation efforts, in addition to repairing and replacing guardrail as required.
Community Investment Tax (CIT) Funded Bridge Improvements	C69200000	Provision for CIT funds allocated to the Bridge program that have not yet been allocated to specific bridge projects.
Intersection Improvement Program	C69600000	Funding for a group of Intersection projects throughout Hillsborough County as shown in the annual prioritized Intersection Program Master Plan.
Intersection Operation and Safety Enhancement Program	C69645000	Countywide operation and safety improvements to the roadway system through intersection and access enhancements in high crash and high congestion locations. Projects include new, additional and lengthened turn lanes, new and enhanced medians, new and enhanced traffic signals and signal alternatives, and various other access and vehicle progression improvements.
Pedestrian Safety and Mobility Enhancement Program	C69638000	Countywide pedestrian facility enhancements to improve safety and mobility for pedestrians and bicyclists in high safety and mobility need locations. Projects include sidewalks near schools, school safety circulation enhancements, new sidewalks on county roads, new and enhanced pedestrian crossings, signs and pavement markings.
Roadway Pavement Preservation Program	C69631000	Annual pavement condition inspection, routine repairs, preventive maintenance treatments and road repaving projects necessary to maintain the County's roads in a safe and serviceable condition for the lowest cost to the community

Source: Hillsborough County Capital Improvements Program FY18-FY23

Table 5 identifies Development of Regional Impact (DRI) capital projects managed by private sector on major roadways. Completion dates are estimates because they are subject to the timing of development. The Master Development Plan for the three (3) DRIs listed below can be seen in Appendix F.

**Table 5. DRI Capital Projects on Major Roadways Managed by Private Sector**

<b>DRI Name/#</b>	<b>Project Title</b>	<b>Project Description</b>
<b>Waterset, #266</b>	24th St	Extend 2-lane road from 19 <sup>th</sup> Ave to Big Bend Road
	30th St	Extend 2-lane road from 19 <sup>th</sup> Ave to Waterset Blvd
	Covington Garden	Extend 2-lane road from Ave A to current terminus
	Apollo Beach Blvd	New 4-lane road to east project boundary
	Apollo Beach Blvd	New overpass over I-75
	Avenue A	Extend 2-lane road from 30th St to W boundary
<b>South Shore Corporate, #249</b>	24th Street NE	New 4 lane roadway from SR 674 to Shell Point Rd
<b>Southbend, #145</b>	Big Bend Rd East	Widen to 6-lane rural arterial from US 301 to Eastern Limit of Bull Frog Creek
	Big Bend Rd West	Widen to 6- lane urban arterial from Covington Garden Dr through I-75 NB Ramp
	I-75 Ramp Improvements	Extend I-75 SB Off-Ramp Deceleration Lane Add Exclusive LT Lane @ SB Off-Ramp Intersection Add Exclusive LT Lane @ NB Off-Ramp Intersection Provide EB dual left turn lanes Provide WB dual left turn lanes

Source: Hillsborough County Capital Improvements Program FY18-fy23

Transportation Improvement Program (TIP) (FY18/19-FY22/23)

The TIP identifies, prioritizes and allocates funding for transportation projects identified in the MPO cost feasible plan for each upcoming 5-year period. Projects in the study area programmed for funding in the Fiscal Year 2018-2019 (Hillsborough MPO, 2018a) include:

- 1) US 301 from SR 674 to Balm Rd, widening 2 lanes to 6 lanes divided: Under Construction (Hillsborough MPO, 2018a, p. 17)
- 2) I-75 from Manatee County to Bloomingdale Ave, minimize traffic using an ITS Freeway Management System: Completed (p. 19)

Some of the candidates for new funding (Hillsborough MPO, 2018a), include:

- 1) Gibsonton Drive at I-75, interchange improvements (p. 22),
- 2) US 41 CSX rail corridor, possible new commuter rail line (p. 25),
- 3) Big Bend Rd at I-75, interchange improvements (p. 26),
- 4) High speed ferry commuter transit from south Hillsborough County to MacDill Air Force Base (p. 26),
- 5) Port Redwing Rail (on Port Property), a new rail line to Port Redwing (p. 26)
- 6) Port Redwing Access Road (Port Redwing to US41, on Port Property), a new 2 lane access road (p. 26).

FDOT: Five-Year Work Program (FY19-FY23)

The FDOT Five Year Work Program for South County includes new interchanges, on/off ramps, road widening, and road resurfacing projects. The following facility projects are located within the South County area (Table 6):

**Table 6. Adopted Five-Year Work Program Projects in South Hillsborough County Study Area**

Project Name	Description
Alafia St & Vern St from Nundy Ave to Gibsonton Dr (2018-2020)	Sidewalk
Apollo Beach Extension from US 41 to Paseo Al Mar Boulevard (2020-2021)	New Road Construction
Big Bend Rd from E of Dickman Rd to W of Wyandotte Rd (2018-2019)	Bridge Replacement
Gibsonton Dr EB from NB on Ramp to I-75 (2020-2022)	Add turn lanes
I-75 from S of Big Bend Rd to S of Progress Blvd (2018-2019)	ITS freeway management
I-75 @ Big Bend Rd New NB & SB ramps (2018-2019)	Interchange ramp (new)
I-75 @ Big Bend Rd SB Off ramp (2018-2021)	Interchange improvement
I-75 NB on ramp from NB US 301 to I-75 NB (2018-2019)	Interchange ramp
I-75 from Manatee County Line to N of CR 672 (2019-2020)	Resurfacing 6 lanes
I-75 from N of CR 672 to S of Progress Blvd (2018-2021)	Resurfacing 6 lanes
I-75 over Riverview Drive (2021-2023)	Bridge repair/rehab
Old Big Bend Rd from West of Bullfrog Creek to East of Bullfrog Creek (2018-2019)	Bridge replacement
South Coast County Greenway from Apollo Beach to Sun City Center (2018-2019)	PD&E/EMO Study
SR 674 from US 41 to E of College Chase Dr (2019-2020)	Resurfacing 6 lanes
US 301 at Riverview Dr (2019-2020)	Traffic signal update
US 301 from Lake St Charles Blvd to N of Progress Blvd (2018-2021)	Resurfacing 6 lanes
US 41 at Gibsonton Drive (2018-2021)	Traffic signal update
US 41 over Alafia River Long Bridge Repair (2019-2021)	Bridge repair/rehab
Port Tampa Bay - Big Bend Channel Improvements	Seaport capacity project

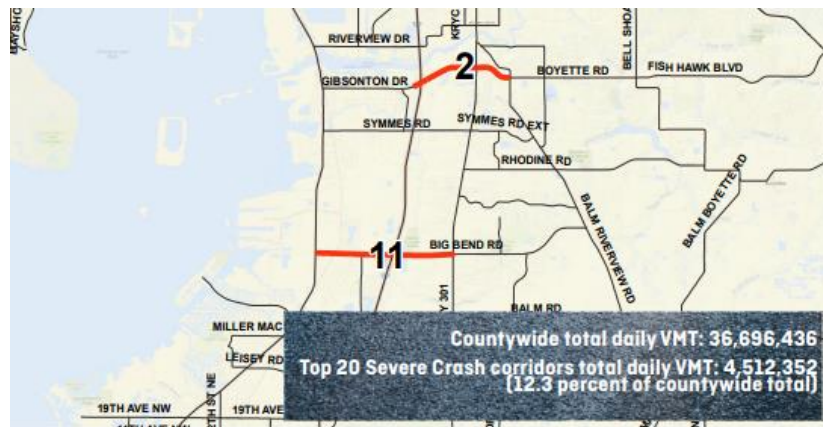
Source: FDOT Adopted Five Year Work Program FY19-FY23



## Vision Zero Action Plan (2017)

Vision Zero is a commitment to set a goal for zero traffic deaths or severe injuries by shifting how communities approach traffic safety. The Vision Zero Action Plan provides strategies to accomplish the goal of zero traffic deaths or severe injuries. The Vision Zero Action Plan for Hillsborough County mapped public safety concerns, and analyzed five (5) years of data from the Crash Database Management System. Fatalities and injuries were mapped on corridors and at intersections throughout the County. This data was used to identify 20 areas of high concern called severe crash corridors (Figure 33). Two “Vision Zero” corridors in the South County area are among those in the top 20 most dangerous corridors list due to aggressive driving, inadequate lighting, and overall unsafe roadway conditions. US 41 from Big Bend Road to Symmes Road can be added as a third dangerous corridor for bicyclists and pedestrian due to aggressive driving, and inadequate street lighting

- 1) Gibsonton Dr/Boyette Rd from I-75 to Balm Riverview Rd; 49 crashes (21 crashes per mile); Daily VMT: 79,720.
- 2) Big Bend Rd from US 41 to I-75; 51 crashes (16.6 crashes per mile); Daily VMT: 72,145.



**Figure 33. Top 20 severe crash corridors: all modes (2012-2016)**

Source: Hillsborough MPO - Vision Zero Action Plan Hillsborough, 2017

## Imagine 2040

The Imagine 2040 Plan lists Big Bend Road between US 41 and I-75 as one of the most congested intersections in Hillsborough County (Figure 34). The plan defines these heavily congested corridors as those forecast by 2040 to be greater than 50% over their capacity. Major corridors projected to be over capacity by 2040 are shown in Figure 35. These include I-75 between Gibsonton Drive and Big Bend Road, SR 674 between US 301 and Balm Wimauma Road, and Big Bend Road between US 41 and US 301.



**Figure 34. Existing Hillsborough County congested intersections map**

Source: Hillsborough MPO - Imagine 2040: Long Range Transportation Plan, 2018



**Figure 35. 2040 traffic volumes**

Source: Hillsborough MPO - Imagine 2040: Long Range Transportation Plan, 2018

Pedestrian crash areas and the most dangerous locations for pedestrians in Hillsborough County can be seen in Figure 36. Several corridors in South County have at least one pedestrian crash and/or are identified as fatal pedestrian crash locations.



**Figure 36. Pedestrian crash areas**

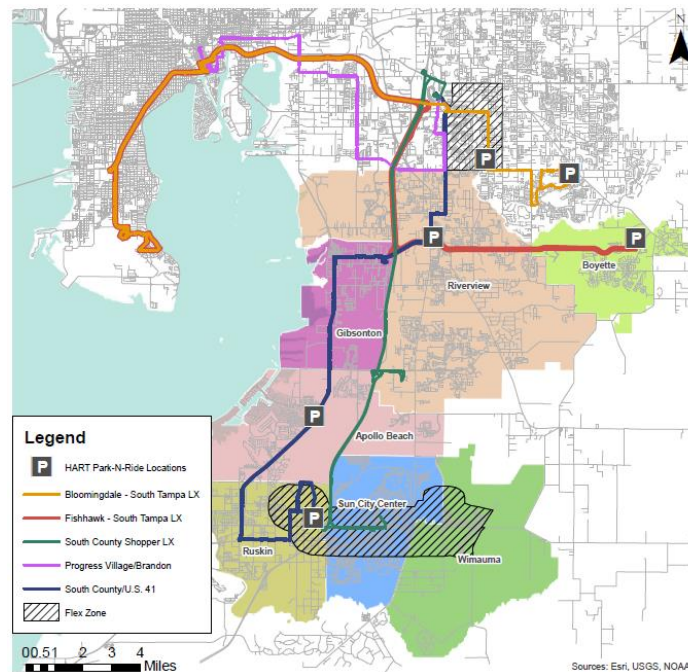
Source: Hillsborough MPO - Imagine 2040: Long Range Transportation Plan, 2018

## 5 Public Transportation

### 5.1 Existing Facilities

HART has three different routes that serve South County (Figure 37):

- 1) Local bus Route 31 operates on weekdays and has starting and ending points at the Amazon Warehouse in Ruskin and the Westfield Brandon Mall in Brandon.
- 2) Limited express bus route 75LX operates on weekdays and has starting and ending points at Kings Point in Sun City Center and the Westfield Brandon Mall in Brandon.
- 3) South County FLEX is available on weekdays and provides both door-to-door service and regular circulator bus service, with designated stops near SR 674 in South Hillsborough County. Door-to-door service is available for customers who pre-book on the phone.



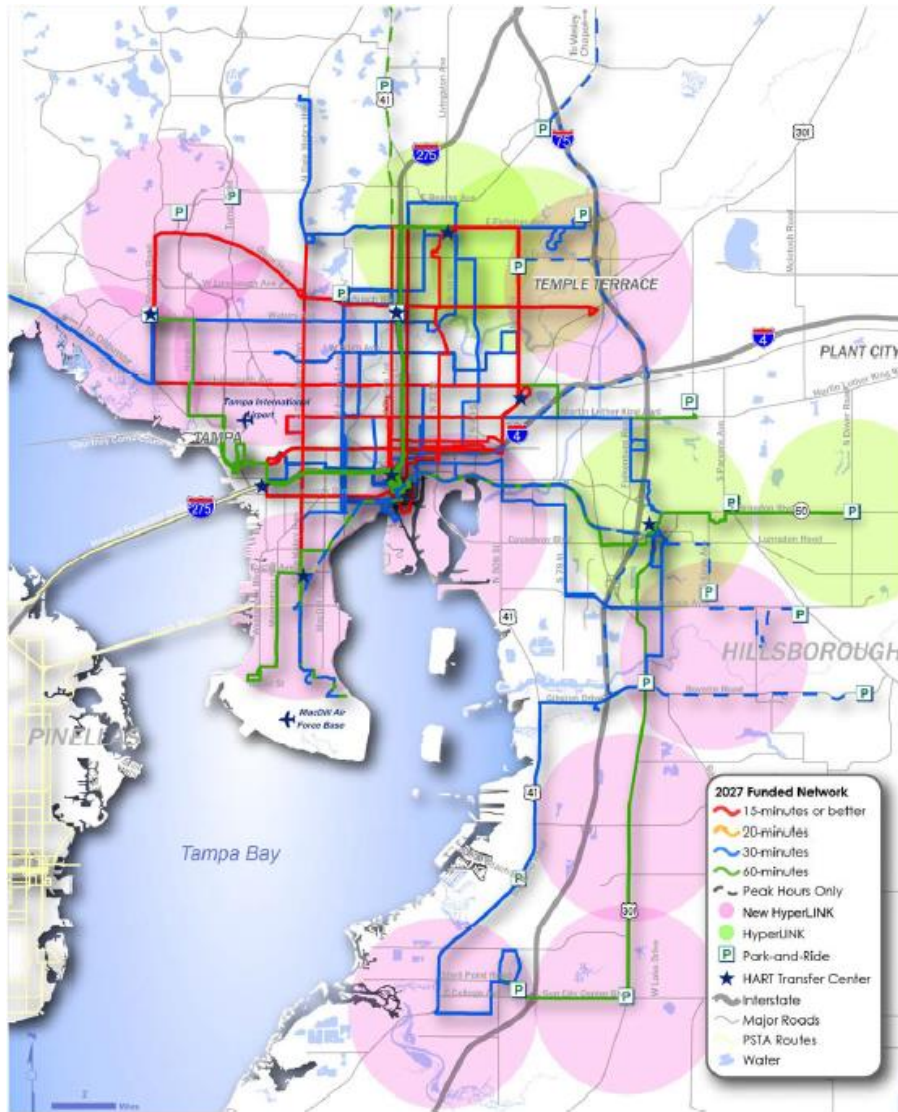
**Figure 37. Existing transit routes**

Source: HART & Hillsborough MPO - SouthShore Transit Study Reevaluation, 2018

Accessibility/transit travel sheds in the South Hillsborough County area were found to be located more than a 10 minute bus ride from downtown, Tampa International Airport, Westshore Mall, MacDill Airforce Base, and the University of South Florida, with a small portion of the study area being within a 10 minute bus ride of Brandon.

The 10-year needs plan identifies needed improvements to “enhance existing HART services in the core service areas, connect the areas outside of the core to the core network, and add technologies and modes to expand the scope of HART’s services” (HART, 2017, p.10-1). The

proposed 2027 needs network identified by the TDP designates routes in South County on a 30 to 60 minute frequency, and identifies four (4) proposed HyperLINK service zones. As of July 2018, HART HyperLINK service ended in all zones.



**Figure 38. 2027 TDP Network**

Source: HART Transit Development Plan, 2017

## 5.2 Planned Improvements

In 2018, HART released the Transit Development Plan (TDP) update, which strategically guides public transportation development in Hillsborough County for the next 10 years. The plan proposes to connect transit services with mixed-use centers, including three corridors in the study area: US 301/Causeway Boulevard in Riverview/Palm River/Brandon, Progress Boulevard in Riverview, and Gibsonton Drive in Gibsonton.

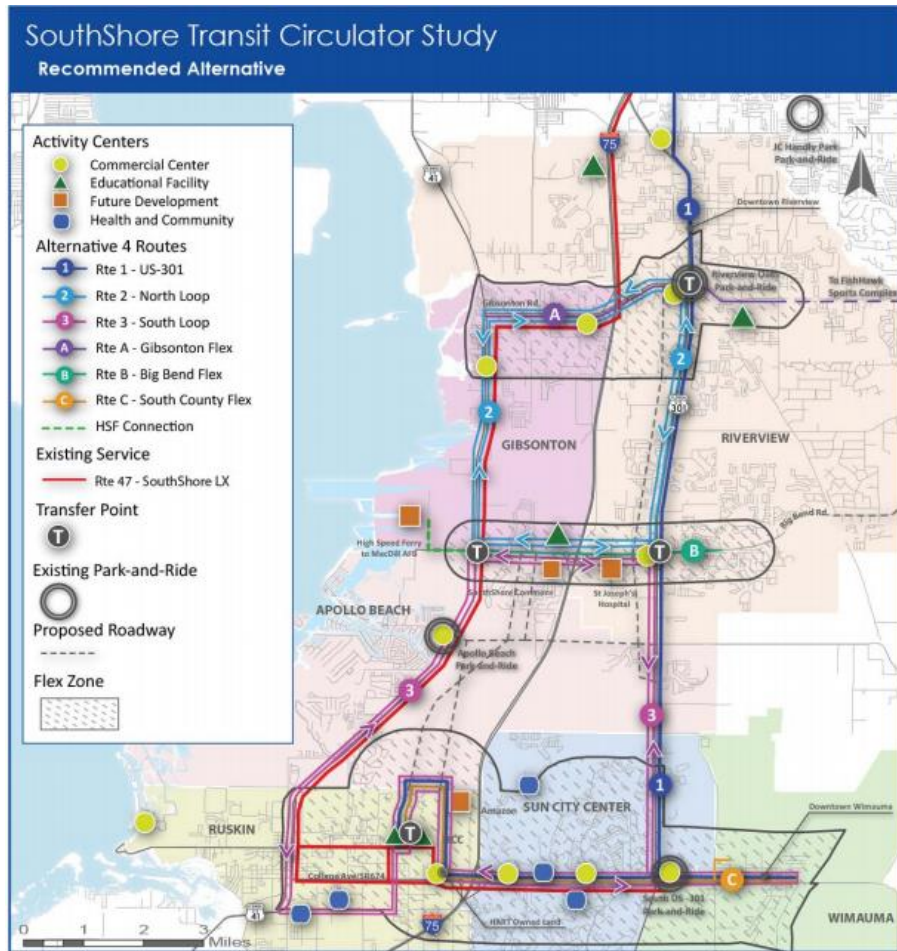
The TDP has funded planned improvements for Route 31. Route 31 increases weekday service frequency to 30 minutes and adds weekend service with a 60-minute frequency. Unfunded planned improvements include two new local bus routes in South Hillsborough County, two more FLEX routes, and a South County Transit Center.

Based on HART's Service Ridership Summary, Route 47LX (which was eliminated due to Mission Max) performed 75% or higher above the express system average. In addition, HART Route 31 typically performed 60% or lower than the local system and express system averages, respectively. The South County Flex is among the poorest performing flex routes.

A SouthShore Circulator Study published in 2014 was created to:

...assess the need for transit circulator service to connect the existing and future residential, employment, and activity centers within the SouthShore Area and develop the best alternative and implementation plan to provide input into the Hillsborough County Metropolitan Planning Organization (MPO) and Hillsborough Area Regional Transit Authority (HART) Plans (Hillsborough MPO, 2018b, p.1).

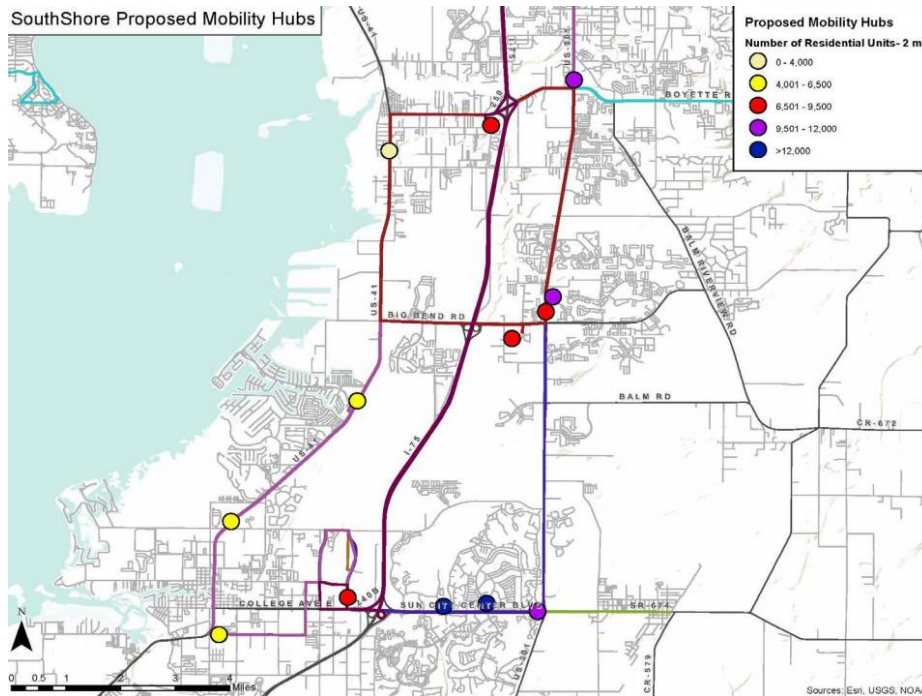
Previous study alternatives included HART Planned Service with FishHawk connection, figure 8 configuration, two one-way loops with local service to Brandon Mall and Fishhawk, two two-way loops, extended flex to Riverview High School, and no FishHawk extension. The recommended alternative from the previous transit study is provided in Figure 39.



**Figure 39. SouthShore transit circulator study recommended alternative.**

Source: Hillsborough MPO - SouthShore Transit Circulator Study, 2014

HART and Hillsborough MPO began reevaluating the SouthShore Transit Study in 2018. The study aims to generate a phased plan of transit alternatives for the Southshore area and choose a preferred option to recommend to elected officials, including financial and operating strategies. The study covers six communities (Gibsonton, Riverview, Apollo Beach, Ruskin, Sun City Center, and Wimauma). Five initial draft (5) scenarios were identified by HART and can be found in Appendix G. Figure 40 identifies mobility hubs that will serve as focal points for transit connections.



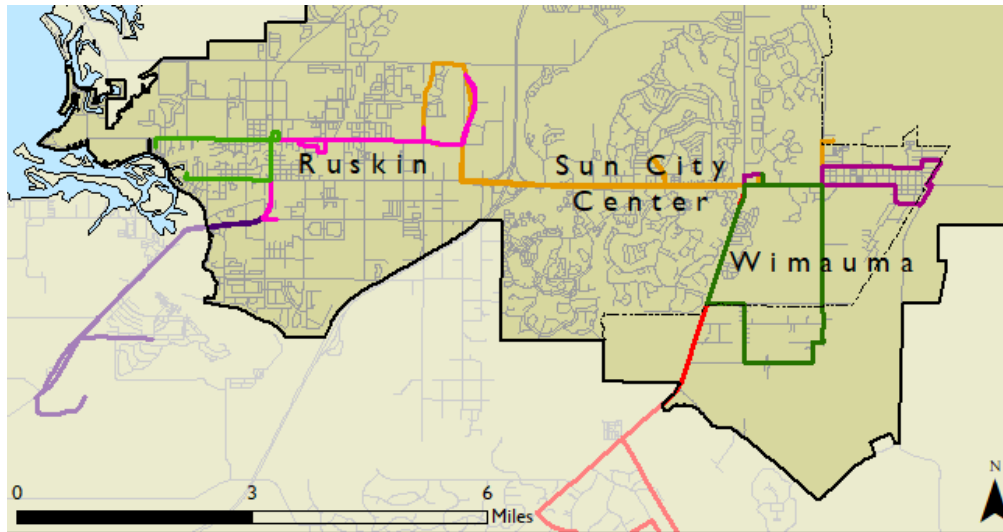
**Figure 40: Proposed mobility hubs for SouthShore transit study.**

Source: HART & Hillsborough MPO - SouthShore Transit Study Reevaluation, 2018

Planners are also exploring the potential to provide on-demand service (e.g. Uber, Lyft) for a subsidized fare for first/last mile connections to a mobility hub. Park and ride lot locations are being identified, as well, including one at Gibsonton Drive and I-75 that ties into Fishhawk and the downtown route. Next steps include continued evaluation of existing conditions, needs assessment and market analysis, identify priorities and proposed alternatives with financial and operational plans, and develop implementation plans, action plans, and phasing plans.

Hart is also currently working in partnership with the County and a nonprofit organization called Enterprising Latinas in Wimauma on preliminary concepts for a local circulator with Walmart as a hub and three small circulators to the north, west, and south (Figure 41). The project is aimed at improving mobility and connections to area jobs and services as well as transit for residents in the Wimauma, Sun City Center and Ruskin areas. Hillsborough County has dedicated \$650 thousand to advance the project, which is in the initial planning stages.





Proposed Concepts for Enterprising Latinas Circulator Project  
 South County Integrated Mobility Study

- |               |                       |                  |
|---------------|-----------------------|------------------|
| South Wimauma | 571 South County Flex | Central Wimauma  |
| East Wimauma  | Northeast Route       | South Route      |
| West Route    |                       | Project Boundary |

**Figure 41: Draft concepts for local circulator project.**

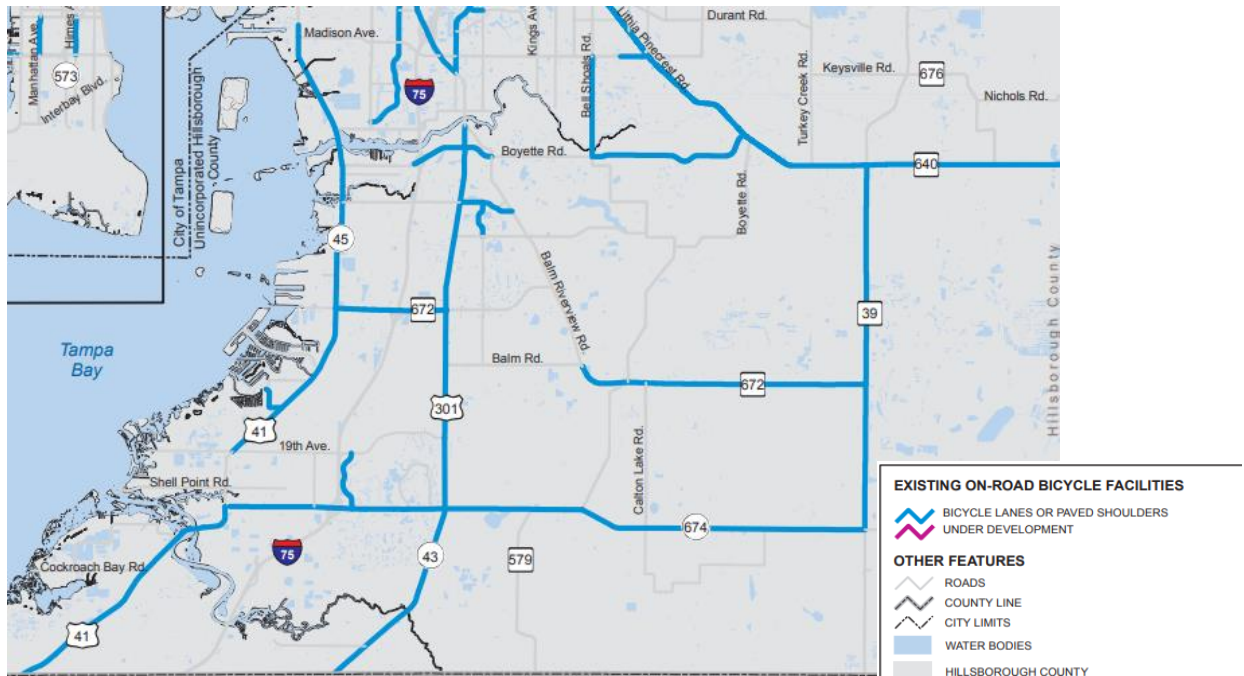
Source: HART, October 2018

# 6 Bicycle & Pedestrian Facilities

## 6.1 Existing Facilities

Bicycling infrastructure in South Hillsborough County exists in the form of shared-use trails, side paths, and painted on-street bike lanes (Figure 42). Current bicycle facilities in the study area include:

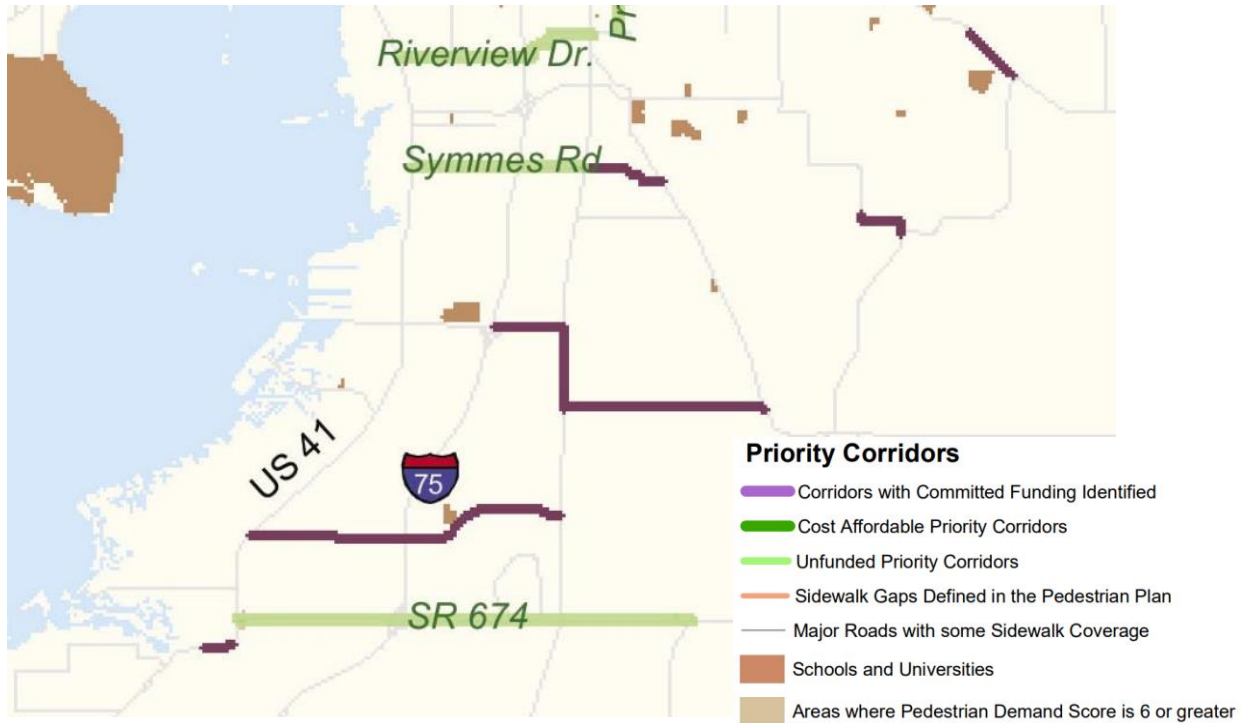
- US 301 (from Gibsonton Drive to Balm Road) in the form of a side path and on-street bike lanes;
- US-41 (from Gibsonton to Ruskin) in the form of on-street bike lanes;
- State Road 674 (from Kings Boulevard to US 301) in the form of a shared-use path



**Figure 42. Existing on-road bicycle facilities**

Source: Hillsborough County - 2008 Comprehensive Bicycle Plan Update, 2008

The 2025 Comprehensive Pedestrian Plan identifies priority corridors with high levels of pedestrian demand that are missing sidewalks, as well as sidewalk gaps on arterial and collector roads. Figure 43 identifies corridors with committed funding, cost affordable priority corridors, unfunded priority corridors, and sidewalk gaps.



**Figure 43. Pedestrian priority corridors**

Source: Hillsborough County MPO - 2025 Comprehensive Pedestrian Plan, 2004

Roadway segments in the study area with no sidewalks are shown in Table 7. Unfunded priority corridors in the study area include: Riverview Drive and Symmes Road from US 41 to US 301 and SR 674 from Interstate 75 to Westlake Drive; US 41 from 19<sup>th</sup> Avenue NE and SR 674; US 41 from Elsberry Road to Leisey Road

**Table 7. Roadway Segments in South County with No Sidewalks**

Street	From	To
19 <sup>th</sup> Ave NE	US Highway 301	US Hwy 41
19 <sup>th</sup> Ave	Columbus Drive	40th St
Big Bend Rd	US Highway 301	I-75

Source: 2025 Comprehensive Pedestrian Plan, 2004

## 6.2 Planned Improvements

### Greenways and Trails Plan Update

In 1995, the Hillsborough County Board of County Commissioners (BOCC) approved the Hillsborough County Greenways Master Plan (found in the Recreation and Open Space Element of the Comprehensive Plan). The Hillsborough Greenways Conceptual Plan, seen in Appendix H,

was developed as a part of the Greenways Master Plan to identify natural corridors, recreational corridors, bike/pedestrian connecting routes, and possible connectors to greenways in other counties.

The 1995 conceptual plan identified the South Coast Greenway (Appendix H.1) as a recreational corridor. It is described as a north-south alignment connecting public lands on the Little Manatee River to the McKay Bay Bikeway in the City of Tampa. On-road bike lanes were identified on 19<sup>th</sup> Avenue N.E. and Shell Point Road connecting the Greenway to Ruskin and Bahia Beach.

The South Coast Greenway is also a part of a larger system of corridors. These systems include the Florida Greenways and Trails System (FGTS) - a connected statewide system of trails; and the Gulf Coast Trail - connecting trails along the West Coast of Florida.

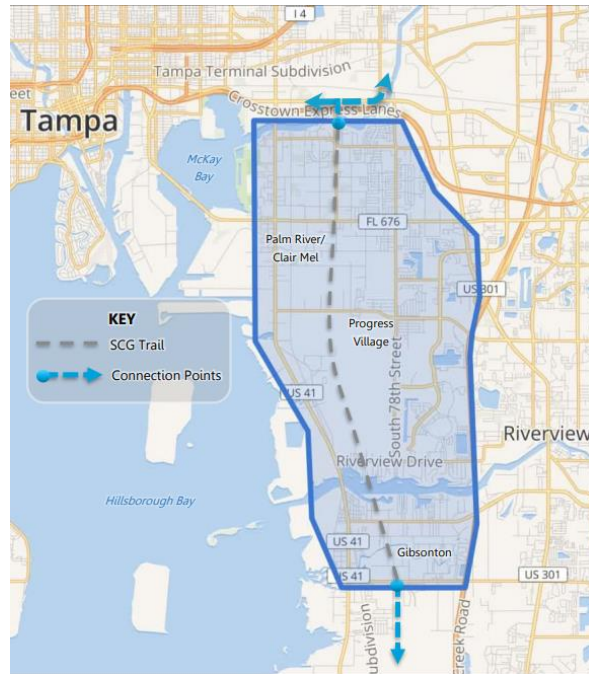
In 2016, the Hillsborough MPO adopted the *Greenways and Trails Plan Update* (Appendix H.2). The update identified existing, planned, and conceptual trails, side paths, green spines (buffered bike lanes), complete streets, and Sun Trail eligible trails in Hillsborough County. The update identified an intra-County connection to Manatee County along I-75 and conceptual trails connecting to Manatee County along US 41 and US 301.

The Hillsborough County Existing and Proposed Trails map (Appendix H.3), dated March 17, 2017, identifies existing, proposed and funded trails, and the SUN Trail network. The map shows a realignment of the intra-County connector between the South Coast Greenway and Manatee County (originally along I-75, now along US 301). The alternative connection to Manatee County along US 301 (Appendix H.4) was approved by the Hillsborough MPO Board in 2017 in an amendment to the *Greenways and Trails Plan Update*.

The *South Coast Greenway Trail Alignment Study: Symmes Road to Adamo Drive* was completed on September 2018 and is discussed further below.

#### South Coast Greenway Trail Alignment Study

A new shared-use trail connecting the South Coast Greenway Trail with the Tampa Bypass Canal Trail has been prioritized by Hillsborough County and Hillsborough MPO. The connector is expected to provide additional mobility for the communities it intersects, including Gibsonton (Figure 44). The southern sector will extend from Symmes Road to Riverview Drive and includes Gibsonton, Bullfrog Creek, and the Alafia River.

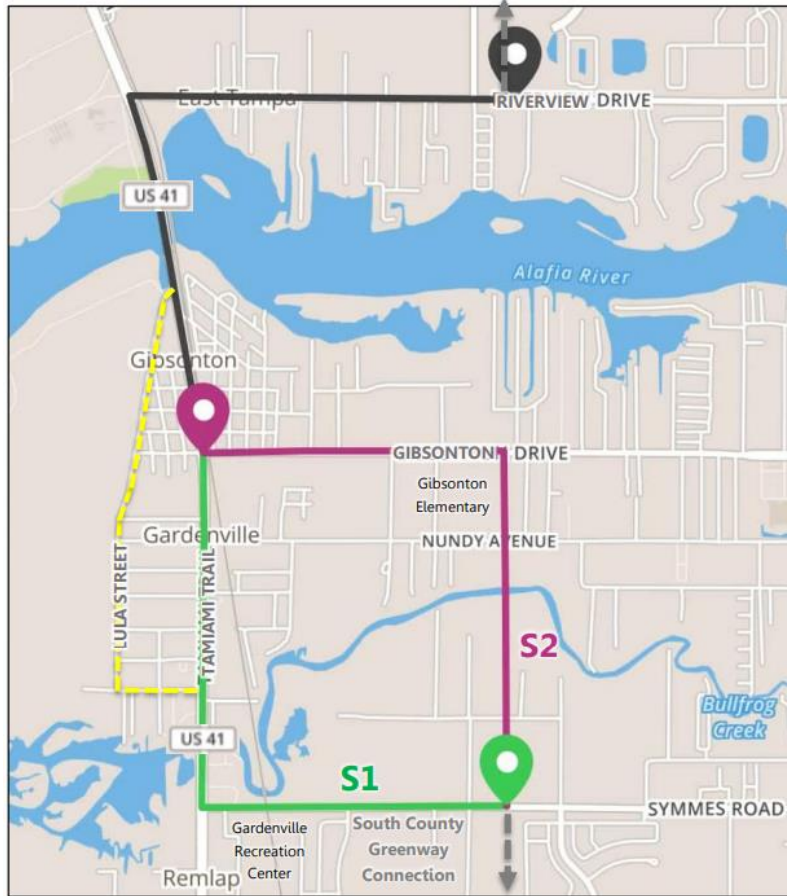


**Figure 44. South Coast greenway trail alignment project area**

Source: Hillsborough MPO & Hillsborough County - South Coast Greenway Trail Alignment Study, 2018

Alternatives for the southern sector trail are identified in Figure 45 and include:

- US 41 Alternative (green): Starting from the TECO utility tract at Symmes Road, the alignment travels west on Symmes Road and turns north on US 41. The route uses the US 41 bridge across Bull Frog Creek, and provides access to the Gardenville Recreation Center and businesses along US 41
- Utility Tract Alternative (purple): Continues north along the TECO utility tract starting from Symmes Road to Gibsonton Road, adjacent to Gibsonton Elementary School. The trail travels west along Gibsonton Road to connect to US 41. This alternative requires a new pedestrian bridge across Bull Frog Creek.
- Lula Alternative (yellow): Due to limited right of way (ROW) on US 41, the study proposed the trail be routed along Lula Street, which was the vision of the 1995 Greenways and Trails Master Plan. This deviation off US 41 could be explored more in future studies but has challenges including open drainage, limited Right of Way, and environmental constraints.



**Figure 45. Southern sector alternatives**

Source: Hillsborough MPO & Hillsborough County - South Coast Greenway Trail Alignment Study, 2018

## 7 Freight

In 1999, *Resolution #99-149* was approved to restrict trucks on certain County roads in Hillsborough County. The resolution prohibits trucks on all local streets and roads, and selected collector roads in unincorporated Hillsborough County. The resolution also identified designated truck routes, where trucks may travel without the restrictions noted in the resolution. These designated truck routes include Federal and State roads, and several listed County roads.

In 2005, the Hillsborough County Board of County Commissioners approved an update to the truck route plan. This update added several roadways to the list of designated truck routes including Rhodine Road and Balm Riverview Road. All of the designated truck routes in the study area can be seen in Figure 46.

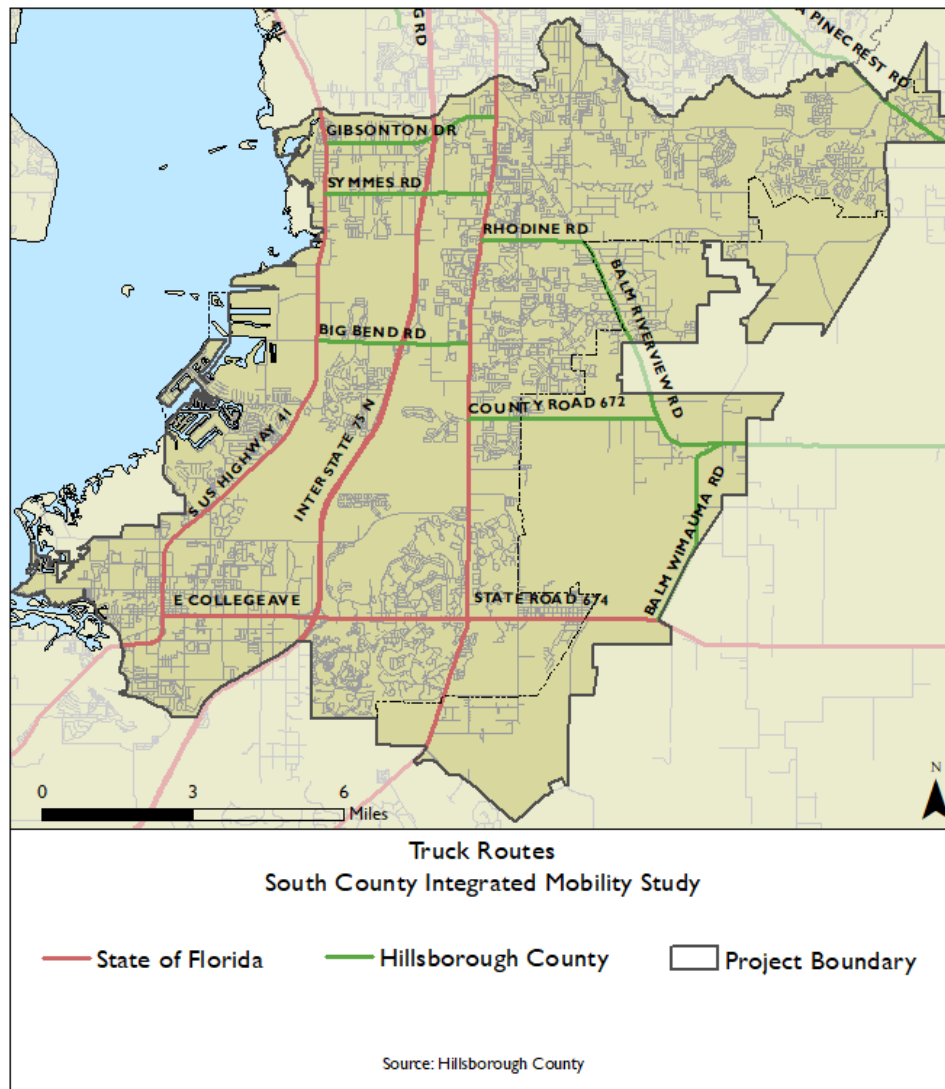
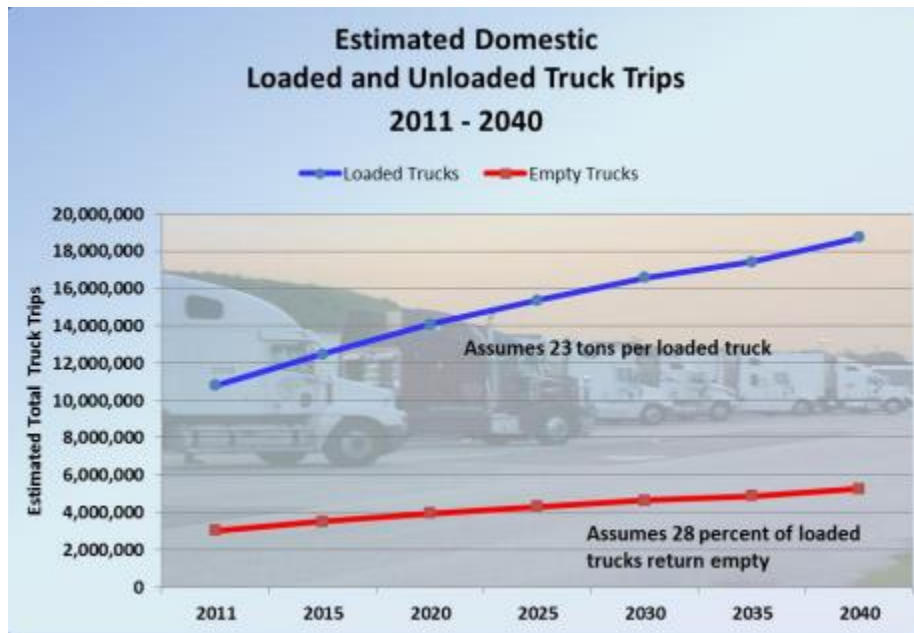


Figure 46. Designated truck routes

By 2040, the highway transportation system in the Tampa Bay area will move almost 24 million trucks annually (Figure 47). Hillsborough MPO identifies that these numbers can be reduced with rail, but their findings show only a small reduction in those truck trips.



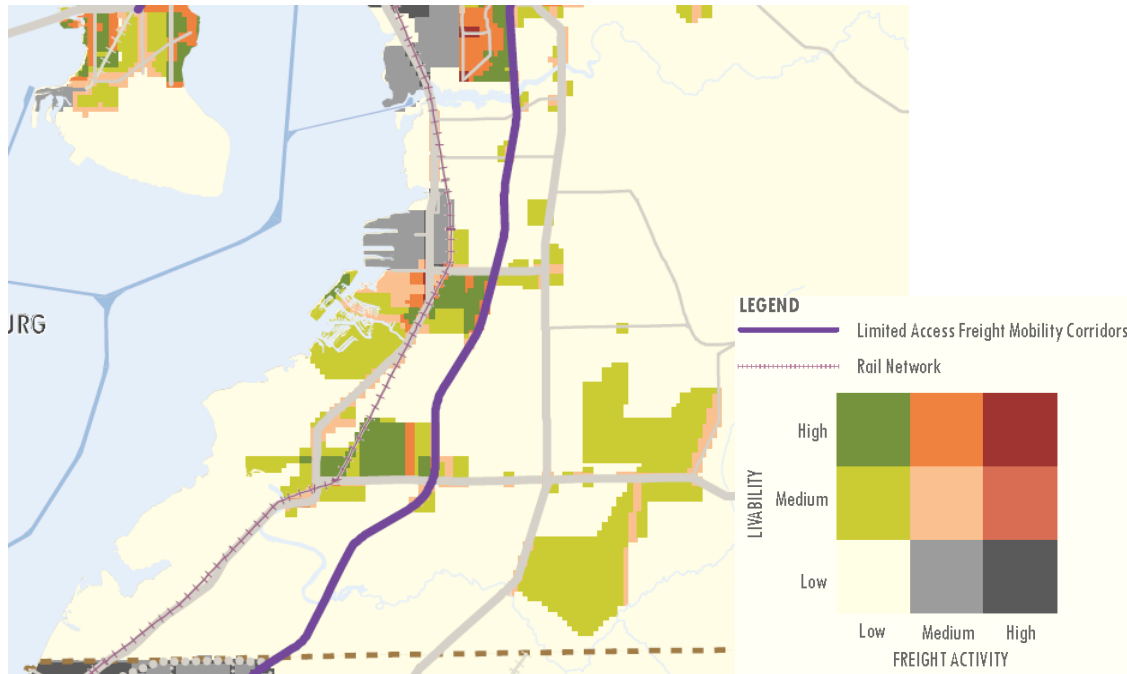
**Figure 47. Tampa Bay annual estimated truck trips**

Source: Hillsborough MPO - Final Technical Memorandum: Freight Investment Program for the 2040 Long Range Transportation Plan

The *Final Technical Memorandum: Freight Investment Program for the 2040 Long Range Transportation Plan* identifies congested segments of local and regional freight corridors. SR 672/Big Bend Road at East Bay High School was identified as a freight-related congested intersection that involves significant freight movement. The US 41, I-75, and US 301 corridors between Big Bend Road and Selmon Expressway were identified as freight corridor segments with low travel reliability. For example, US 41 between Big Bend Road and the Selmon Expressway was identified as a corridor segment with extremely low travel time reliability and “one of the most heavily used truck routes due to its proximity to all the port facilities” (p. 6).

A freight and land use compatibility analysis was conducted by FDOT District 7 as a part of the Tampa Bay Regional Strategic Freight Plan to examine potential conflicts between freight movement and livability in the Tampa Bay Area. South County neighborhoods were generally identified as having only moderate to few conflicts between freight and livable community areas, with the most potential for such conflicts along US 41 south of Port Redwing in Apollo Beach (Figure 48).





**Figure 48. Freight and land use compatibility analysis**

Source: FDOT D7 - Tampa Bay Regional Strategic Freight Plan: An Investment Strategy for Freight Mobility and Economic Prosperity in Tampa Bay, 2012

The FDOT SIS Atlas states that District 7 has 393 SIS highway miles, 18 miles of SIS Highway Connector, and 122 miles of SIS Railroad. I-75 and the Tampa CSX Intermodal Railway Corridor are SIS corridors intersecting the project study area with a SIS Highway Connector serving Port Redwing (Figure 49). The SIS connector is from I-75 to Big Bend Road, to US 41 to Pembroke Road, to the port entrance.

Two funded projects in South County have been identified by the SIS first five year plan for FY2018/2019 through FY2022/2023:

- I-75 @ Big Bend Rd: New northbound & southbound Ramps, modify Interchange, and
- Gibsonton Drive eastbound from northbound on ramp to I-75, add turn lane

The 2040 SIS multi-modal unfunded needs plan identifies transportation capacity improvements on SIS facilities that are currently unfunded. Identified projects in the study area can be found in Table 8.



Figure 49. FDOT District 7 SIS atlas

Source: FDOT - SIS Atlas, 2017

Table 8. SIS Unfunded Projects in the South County Study Area

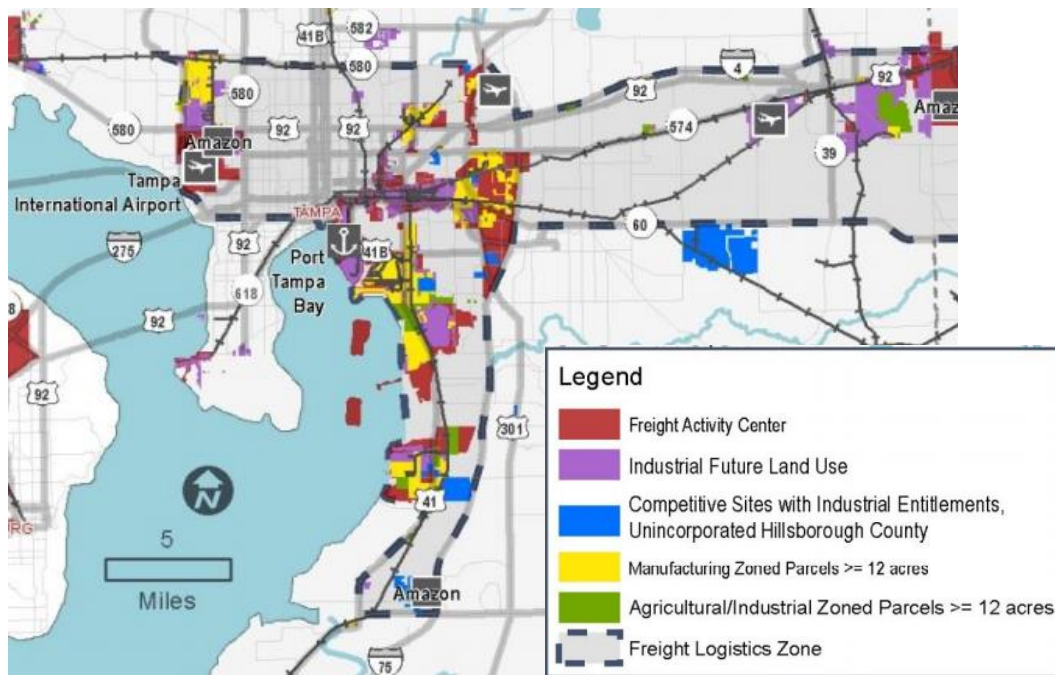
Facility	Description	Horizon	Improvement Type
<b>Highway</b>			
Big Bend Road	from US 41 to Covington Garden Drive	Short-term	Add 2 lanes to build 6 lanes
I-75	at Gibsonton Drive	Long-term	Modify Interchange
I-75	at Big Bend Road	Long-term	Modify Interchange
I-75	at SR 674	Long-term	Modify Interchange
I-75	at South County Interchange	Long-term	New Interchange
<b>Rail</b>			
CSX Transportation		Short-term	Grade Separation
Tampa Port Authority	at Port Redwing	Mid-term	Capacity Upgrade
New SW Rail Line	from AZA line to Welcome Junction	Mid-term	New Freight Rail Line
<b>Seaports</b>			
Port of Tampa Port	Redwing Access Road	Short-term	Internal Roadway

Source: FDOT - Florida's SIS Multi-Modal Unfunded Needs Plan, 2011

## 7.1 Freight Logistics Zones

The Hillsborough County MPO and the Polk County TPO jointly created the Freight Logistics Zone Strategic Plan (adopted by the Hillsborough County Board of County Commissioners and the Polk County Board of County Commissioners in October 2017). The purpose of this plan was to identify a freight logistics zone (FLZ) and supporting infrastructure to demonstrably serve a strategic interest in the region and the State.

The Hillsborough and Polk counties FLZ is depicted in the map below (Figure 50), but generally stretches in an east/west direction with Tampa International Airport and Port Tampa Bay on the west and the Central Florida Integrated Logistics Center (ILC) anchoring on the east. Port Tampa Bay is the primary generator of freight activity in the FLZ, with over 36 million tons of freight processed annually. Around 85% of that tonnage moved over land is transported by truck, while the remainder is transported by rail. The majority of the more than 9,000 truck movements into and out of the Port are west or east bound.



**Figure 50. Hillsborough and Polk freight logistics zones and clusters**

Source: Hillsborough MPO - Freight Logistics Zone Strategic Plan, 2016

The project study area is a part of the freight logistic zone intersected by I-75 (a SIS limited access facility), US 41 (a regional freight facility), US 301 (a regional freight facility), Big Bend Road (a regional freight facility) and 674 (a regional freight facility) (Figure 51). The ratio of truck traffic to other modes in the study area ranges from 4.1 to 22 percent (Figure 52).

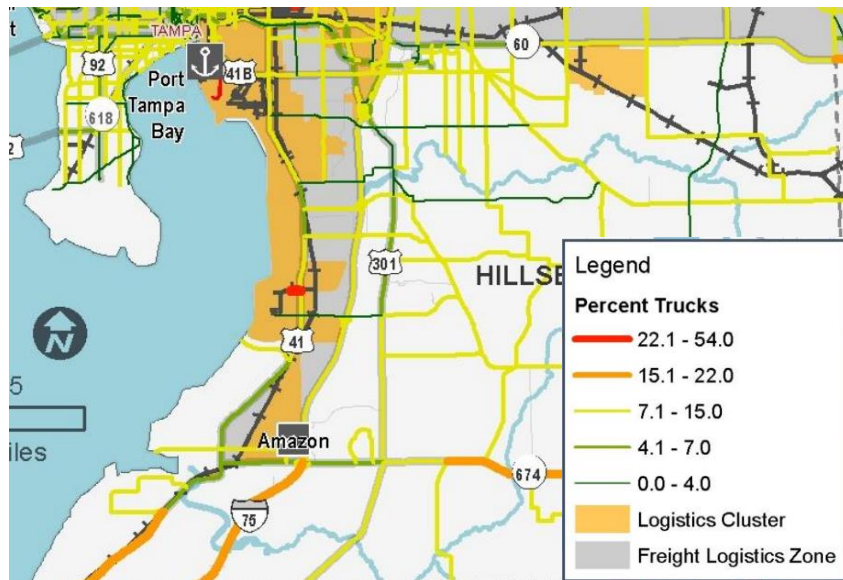
I-75 and US 41 have been identified by freight stakeholders to improve goods movement in the region. Proposed improvements identified by the FLZ strategic plan include capacity

improvements on Big Bend Road from US 41 to Covington Garden Drive, express lanes on I-75 between SR 674 and Fowler, Port Redwing access improvements, and intersection improvements at US 41 and Pembroke Road (Table 9).



**Figure 51. Designated freight network**

Source: Hillsborough MPO - Freight Logistics Zone Strategic Plan, 2016



**Figure 52. 2014 Truck traffic percent of average annual daily traffic**

Source: Hillsborough MPO - Freight Logistics Zone Strategic Plan, 2016

**Table 9. Strategic infrastructure improvements in Hillsborough County**

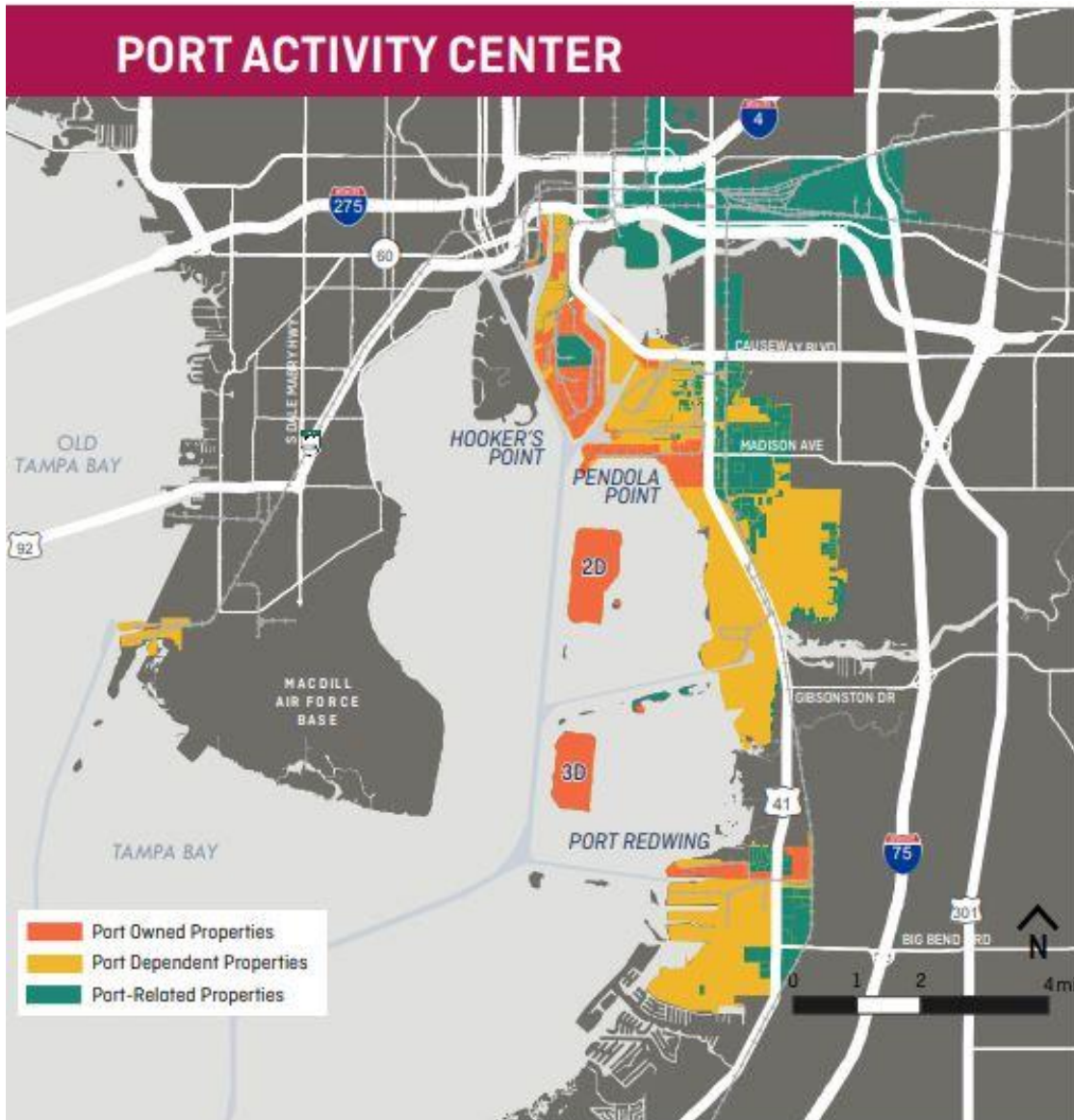
Facility	From	To	Improvement
Big Bend Rd	US 41	Covington Garden Dr	Capacity
Columbus Rd	at US 301		Intersection improvement
I-275	Pinellas County	Hillsborough River Bridge	Capacity/Express lanes
I-275	at SR 60		Interchange improvement
I-4	I-275	Polk Pkwy	Capacity/Express lanes
I-75	SR 674	Fowler	Express lanes
Port Redwing Access			Access improvement
Progress Blvd	Magnolia Park Blvd	Valley Dale Dr	Capacity
Rice Rd	County Line Rd	Coronet Rd	Road extension
SR 60/Memorial Hwy	I-275	Boy Scout Blvd	Capacity
US 301 @ Bloomingdale			Intersection improvement
US 41	at Causeway Blvd		Grade separation
US 41	at Madison Ave		Intersection improvement
US 41	at CSX S of Broadway		Grade separation
US 41	Pendola Point	Causeway Blvd	Capacity
US 41	at Pembroke Rd		Intersection improvement
US 92	US 301	CR 579	Capacity
US 92	Reynolds St	County Line Rd	Capacity
Veterans Expwy	Courtney Campbell Cswy	Independence Pkwy	Capacity

Source: Hillsborough MPO - Freight Logistics Zone Strategic Plan, 2016

### 7.3 Port Redwing

The Tampa Port Authority is undergoing a large expansion of Port Redwing, which is located near Gibsonton in South Hillsborough County (Figure 53). The proposed expansion of Port Redwing will provide additional capacity for Tampa’s bulk trade and intermodal transportation activities. The Florida Ports Council reports that cargo capacity at full build out could reach 12 million tons.

In August 2016, Tampa Tank and Florida Structural Steel broke ground on an \$18-million facility expansion plan at Port Redwing (Florida Ports Council, 2018). The area has 145 acres of industrially zoned property available adjacent to deep water and is currently served by US 41, I-75 and Big Bend Road. The Hillsborough MPO TIP identifies candidates for new funding which includes a new two-lane access road connecting Port Redwing to US 41 and a new rail line connecting Port Redwing to the CSXT mainline (Florida Ports Council, 2018 & Hillsborough MPO, 2018a). FDOT rebuilt Kracker Avenue east of US 41 into Port property for improved truck access.



**Figure 53. Port activity centers**

Source: Port Tampa Bay Master Plan: Vision 2030, 2016

The Florida Ports Council estimates that the Port Redwing expansion can provide 5,765 jobs and avoid 59 million truck miles once complete. In conjunction with the Port Redwing improvements, the Big Bend Channel is proposed to be widened and deepened to accommodate larger ships and “help optimize landside infrastructure investment at Port Redwing” (Florida Ports Council, 2018). The FDOT District 7 Five Year Work Plan for FY19 – FY23 has identified \$25,650,000 invested for Big Bend Channel improvements.

## 8 Conclusion

South County is clearly experiencing rapid growth, creating increasing need for employment, housing, shopping, and transportation. The review of plans and studies reveals that a variety of efforts are underway to address the area's transportation needs, support economic development, and expand modal options. It also indicates a desire of residents for livable communities and a more pedestrian- and bicycle-friendly environment.

In November 2018, Hillsborough County voters approved the Transportation Surtax for a 30-year penny sales tax. The proposed County Charter amendment identified that more than half of the proceeds will improve transportation by funding projects that reduce roadway user vulnerability, reduce congestion, improve safety, and improve the transportation network. Additionally, funds will be allocated to improve transit service by enhancing bus services, and expanding public transit options.

### 8.1 Similarities, Common Themes and Potential Conflicts

This section concludes the analysis with a few observations regarding the similarities, common themes, and potential conflicts among the various plans and studies reviewed. Below are key highlights from this review.

Similarities and Common Themes: Many of the community plans identified a desire for a more pedestrian and bicycle friendly environment, a town center, and improved transit service.

Potential Conflicts:

- Some roadways included in town center visions are major through traffic and evacuation routes not conducive to town center treatments and high levels of bicycle and pedestrian activity. Examples are US 301 and Big Bend Road (Riverview) and US 41 (Ruskin).
- Complete streets designs were not evident among the PD&E studies reviewed.
- Existing land uses, street network configurations, and planned densities are generally not currently aligned with the type and location of town center that is expressed in community plans and visions. Additional master planning and form based codes are an opportunity to advance these visions.

Similarities and Common Themes: Several community plans noted growth in truck traffic on major routes as an area of concern.

Potential Conflicts:

- The expansion of Port Redwing, construction of the Amazon Fulfillment Center, and designation of a freight logistic zone in the study area indicate a potential for growth in truck volumes in the study area. This growth corresponds with projections for significant job growth in the industrial sector in South County. The population in

South County is also projected to grow rapidly; therefore, measures may be needed to balance increasing demand for goods movement and the desire for more livable and walkable communities as expressed in the community plans.

- Designated truck routes (other than I-75) include US 41 (State designated truck route), US 301 (State designated truck route), SR 674 (State designated truck route), Big Bend Road (County designated truck route), Gibsonton Drive (County designated truck route), Symmes Road (County designated truck route), Rhodine Road (County designated truck route), Balm Riverview Road (County designated truck route), Balm Wimauma Road (County designated truck route), and CR 672 (County designated truck route). These routes traverse some of the town centers and pedestrian villages identified in the community plans (e.g., Gibsonton, Ruskin, Wimauma, Riverview, Balm).

Similarities and Common Themes: Several plans and studies identify growing congestion as a significant concern in South County. Extensive investments are being made to address roadway capacity issues and the MPO is currently collaborating with HART on undertaking a major transit study (SouthShore Transit Study) to expand transit service in South County.

Potential Conflicts:

- Existing and proposed development in the study area is relatively low density and characterized by low levels of network connectivity – conditions that exacerbate vehicular congestion and delay and reduce the efficiency of transit service.
- The lack of alternate routes continues to funnel the majority of vehicular trips onto only a few major routes. Commuters and buses must travel in congested conditions on a limited number of roadways. Incidents, such as crashes or poor weather, can easily cause the system to fail and result in long delays.

## 8.2 Next Tasks

The goal of this study is to identify baseline conditions for the development of an integrated mobility strategy for South County. The next tasks of this project are to examine current land use and transportation conditions of the study area in more detail. Technical Memorandum 2 will include identification of land use and development entitlements, development and redevelopment opportunities, identification of existing nodes and connections, and an origin-destination analysis. Technical Memorandum 3 will further inventory transportation conditions, including roadway safety and operational conditions and examine multimodal accessibility (connectivity) in relation to key nodes and activity areas.



## References

- FDOT District 7. (2012). Tampa bay regional strategic freight plan: an investment strategy for freight mobility and economic prosperity in Tampa bay. Retrieved from [https://tampabayfreight.com/wp-content/uploads/StrategicFreightPlan\\_FinalOnlineVersion.pdf](https://tampabayfreight.com/wp-content/uploads/StrategicFreightPlan_FinalOnlineVersion.pdf)
- FDOT District 7. (2016). US 41 project development and environment study. Retrieved from <http://active.fdotd7studies.com/us41/manatee-to-12th/>
- FDOT. (2011). Strategic intermodal system 2040 multi-modal unfunded needs plan. Retrieved from [http://www.fdot.gov/planning/systems/programs/mspi/pdf/2040%20SIS%20Unfunded%20Needs%20Plan\\_final.pdf](http://www.fdot.gov/planning/systems/programs/mspi/pdf/2040%20SIS%20Unfunded%20Needs%20Plan_final.pdf)
- FDOT. (2017). SIS atlas. Retrieved from [http://www.fdot.gov/planning/systems/programs/mspi/pdf/SIS\\_Atlas.pdf](http://www.fdot.gov/planning/systems/programs/mspi/pdf/SIS_Atlas.pdf)
- FDOT. (2018). Adopted five-year work program fiscal year 2019 to fiscal year 2023. Retrieved from <http://www.d7wpph.com/pdf/D7-Work-Program-FY-2019-2023-ADOPTED.pdf>
- FDOT. (n.d.). Strategic intermodal system funding strategy first five year plan: multimodal fy 2018/2019 through fy2022/2023. Retrieved from [http://www.fdot.gov/planning/systems/programs/mspi/pdf/Adopted\\_First\\_Five.pdf](http://www.fdot.gov/planning/systems/programs/mspi/pdf/Adopted_First_Five.pdf)
- Florida Department of Environmental Protection & the Florida Greenways Coordinating Council. (1998). Connecting Florida's communities with greenways and trails. Retrieved from [https://floridadep.gov/sites/default/files/1998FGTSPPlanConnectingFlorida%27sCommunities\\_0.pdf](https://floridadep.gov/sites/default/files/1998FGTSPPlanConnectingFlorida%27sCommunities_0.pdf)
- Florida Department of Environmental Protection. (n.d.). Florida greenways and trails system plan and maps. Retrieved from <https://floridadep.gov/parks/ogt/content/florida-greenways-and-trails-system-plan-and-maps>
- Florida Ports Council. (2018). 2018-2022 five-year Florida Seaport mission plan. Retrieved from <https://s3.amazonaws.com/fla-ports-resources/2018+SMP+Web-FINAL.pdf>
- Florida Ports Council. (2018). 2018-2022 five-year Florida seaport mission plan. Retrieved from <https://s3.amazonaws.com/fla-ports-resources/2018+SMP+Web-FINAL.pdf>
- Florida Ports Council. (n.d.). Port Tampa Bay. Retrieved from <http://flaports.org/ports/port-tampa-bay/>
- HART & Hillsborough MPO. (2018). SouthShore transit study reevaluation. Retrieved from <http://www.planhillsborough.org/wp-content/uploads/2018/05/SouthShore-Transit-Study-Meeting-Presentation-20180913-1.pdf>
- HART. (2017). Transit Development Plan. Retrieved from [http://www.gohart.org/Style%20Library/goHART/pdfs/transit\\_development\\_plan/FY2018%20HART%20TDP%20-%20Final%20Report.pdf](http://www.gohart.org/Style%20Library/goHART/pdfs/transit_development_plan/FY2018%20HART%20TDP%20-%20Final%20Report.pdf)

- Hillsborough County City-County Planning Commission. (2007). Evaluation and appraisal report amendments to the comprehensive plan first cycle of 2007: balance of land uses within the urban service area. Retrieved from <https://www.hillsboroughcounty.org/library/hillsborough/media-center/documents/emergency-management/19--pdrp-activity-centers-report.pdf>
- Hillsborough County Public Schools. (2017). Hillsborough County public schools long range planning study. Retrieved from [https://www.sdhc.k12.fl.us/docs/00/00/02/47/HC\\_Schools\\_LRP\\_2017\\_5\\_23\\_17\\_2.pdf](https://www.sdhc.k12.fl.us/docs/00/00/02/47/HC_Schools_LRP_2017_5_23_17_2.pdf)
- Hillsborough County Public Schools. (2018). Hillsborough County public schools annual growth management report.
- Hillsborough County, Economic Development Department. (n.d.). Competitive sites. Retrieved from <http://www.hillsboroughcounty.org/en/businesses/land-development/competitive-sites>
- Hillsborough County. (2008a). Comprehensive plan for unincorporated Hillsborough County: future land use. Retrieved from [http://www.planhillsborough.org/wp-content/uploads/2012/10/FUTURE-LAND-USE\\_1\\_2018.pdf](http://www.planhillsborough.org/wp-content/uploads/2012/10/FUTURE-LAND-USE_1_2018.pdf)
- Hillsborough County. (2008b). Comprehensive plan for unincorporated Hillsborough County: livable communities element. Retrieved from <http://www.planhillsborough.org/wp-content/uploads/2012/10/Livable-Communities-Element-1.pdf>
- Hillsborough County. (2008c). Comprehensive plan for unincorporated Hillsborough County: transportation element appendix i: Hillsborough County local functional classification. Retrieved from [http://www.planhillsborough.org/wp-content/uploads/2012/10/Transportation-Appendix-I\\_11-2012.pdf](http://www.planhillsborough.org/wp-content/uploads/2012/10/Transportation-Appendix-I_11-2012.pdf)
- Hillsborough County. (2014). Hillsborough County board of county commissioners truck routes. Retrieved from <https://www.hillsboroughcounty.org/library/hillsborough/media-center/documents/development-services/land-development/resource-maps/trans-truck-route.pdf>
- Hillsborough County. (2015). HC corridor preservation plan map 25. Retrieved from <http://www.planhillsborough.org/wp-content/uploads/2015/07/Map-25-HC-Corridor-Preservation-Plan.pdf>
- Hillsborough County. (2017a). Comprehensive plan for unincorporated Hillsborough County: transportation element appendix g: MPO's year 2035 needs assessment highway component and county corridor plan. Retrieved from [http://www.planhillsborough.org/wp-content/uploads/2017/07/Transportation-Appendix-G\\_6\\_2015\\_Rev\\_7\\_2017.pdf](http://www.planhillsborough.org/wp-content/uploads/2017/07/Transportation-Appendix-G_6_2015_Rev_7_2017.pdf)  
[http://www.planhillsborough.org/wp-content/uploads/2012/10/Transportation-Appendix-I\\_11-2012.pdf](http://www.planhillsborough.org/wp-content/uploads/2012/10/Transportation-Appendix-I_11-2012.pdf)
- Hillsborough County. (2017b). Competitive sites. Retrieved from <https://www.hillsboroughcounty.org/en/businesses/land-development/competitive-sites>

Hillsborough County. (2018a). Land Development Code. Retrieved from [https://library.municode.com/fl/hillsborough\\_county/codes/land\\_development\\_code?nodeId=12399](https://library.municode.com/fl/hillsborough_county/codes/land_development_code?nodeId=12399)

Hillsborough County. (2018b). Future Land Use Map. Retrieved from [http://www.planhillsborough.org/wp-content/uploads/2013/02/Adopted\\_Unincorporated\\_FLU.pdf](http://www.planhillsborough.org/wp-content/uploads/2013/02/Adopted_Unincorporated_FLU.pdf)

Hillsborough County. (2018c). Investment considerations for future growth. [PowerPoint slides]

Hillsborough County. (n.d.). FY 18-23 adopted capital improvement program. Retrieved from <https://www.hillsboroughcounty.org/library/hillsborough/media-center/documents/budget/fy-18-19/completed-adopted-fy18-23-cip-book-web.pdf>

Hillsborough Fire Rescue. (2017). Hillsborough County fire rescue master plan.

Hillsborough MPO & Hillsborough County. (2018). South coast greenway trail alignment study. Retrieved from [http://www.planhillsborough.org/wp-content/uploads/2018/08/scg\\_final\\_082418.pdf](http://www.planhillsborough.org/wp-content/uploads/2018/08/scg_final_082418.pdf)

Hillsborough MPO. (2004). 2025 comprehensive pedestrian plan. Retrieved from [http://www.planhillsborough.org/wp-content/uploads/2015/04/2025CompPedestrian\\_Plan\\_with\\_maps2004.pdf](http://www.planhillsborough.org/wp-content/uploads/2015/04/2025CompPedestrian_Plan_with_maps2004.pdf)

Hillsborough MPO. (2008). 2008 comprehensive bicycle plan update. Retrieved from <http://www.planhillsborough.org/wp-content/uploads/2012/10/Bicycle-Plan-Update-Adopted-2008.pdf>

Hillsborough MPO. (2014a). SouthShore transit circulator study. Retrieved from <http://www.planhillsborough.org/wp-content/uploads/2013/11/SouthShore-Transit-Circulator-Study-Report-Final-051314.pdf>

Hillsborough MPO. (2014b). Final technical memorandum: freight investment program for the 2040 long range transportation plan. Retrieved from <http://www.planhillsborough.org/wp-content/uploads/2014/09/2040-LRTP-Freight-Program-Costs-Benefits-Tech-Memo.pdf>

Hillsborough MPO. (2016a). Greenway and trails master plan update. Retrieved from <http://www.planhillsborough.org/wp-content/uploads/2016/08/Hillsborough-MPO-2016-Greenways-and-Trails-Master-Plan-Update-Final.pdf>

Hillsborough MPO. (2016b). Freight logistics zone strategic plan. Retrieved from [http://www.planhillsborough.org/wp-content/uploads/2016/01/FLZ\\_StrategicPlan\\_063016\\_rev10-17-FINAL-post-resolutions.pdf](http://www.planhillsborough.org/wp-content/uploads/2016/01/FLZ_StrategicPlan_063016_rev10-17-FINAL-post-resolutions.pdf)

Hillsborough MPO. (2017). Hillsborough County level of service report. Retrieved from <https://www.hillsboroughcounty.org/library/hillsborough/media-center/documents/public-works/traffic/traffic-level-of-service-report.pdf>

Hillsborough MPO. (2017). Vision zero action plan Hillsborough. Retrieved from [http://www.planhillsborough.org/wp-content/uploads/2017/08/VZ\\_ActionPlan\\_Final\\_Dec2017-smaller.pdf](http://www.planhillsborough.org/wp-content/uploads/2017/08/VZ_ActionPlan_Final_Dec2017-smaller.pdf)

- Hillsborough MPO. (2018a). Transportation improvement program for fiscal years 2018/19-2022/23. Retrieved from [http://www.planhillsborough.org/wp-content/uploads/2018/05/Final TIP 19-23 for Website-1.pdf](http://www.planhillsborough.org/wp-content/uploads/2018/05/Final_TIP_19-23_for_Website-1.pdf)
- Hillsborough MPO. (2018b). SouthShore transit circulator study reevaluation. Retrieved from <http://www.planhillsborough.org/southshore-transit-study-reevaluation/>
- Hillsborough MPO. (2018c). Imagine 2040: Hillsborough long range transportation plan summary report. Retrieved from <http://www.planhillsborough.org/wp-content/uploads/2014/10/2040-LRTP-Final-Full-Report-Modified-9-5-18.pdf>
- Hillsborough MPO. (n.d.) Hillsborough County areawide vision map. Retrieved from <http://www.planhillsborough.org/hillsborough-county-areawide-vision-map/>
- Plan Hillsborough. (2014). SouthShore areawide systems plan update. Retrieved from <http://www.planhillsborough.org/wp-content/uploads/2012/12/Southshore-Areawide-System-Plan-Data-Packet-Final-small-file-size.pdf>
- Port Tampa Bay. (2016). Port Tampa Bay master plan: vision 2030. Retrieved from <https://frontrunner-bucket.s3.amazonaws.com/53128A37-5056-907D-8D9D-67426B3DB12B.pdf>
- South Shore Corporate Park DRI #249. (2002). Map “H” master development plan.
- Southbend DRI #145. (2010). Map “H” master development plan.
- Tampa Bay Times. (2018). Hillsborough voters approve sales tax hikes for transportation, schools improvements. Retrieved from <https://www.tampabay.com/blogs/baybuzz/2018/11/06/hillsborough-voters-approve-sales-tax-hikes-for-transportation-schools-improvements/>
- TBARTA. (2015). Regional transportation master plan: activity centers and travel markets technical memorandum. Retrieved from [http://tbarta.com/files/TM\\_ActivityCentersTravelMarkets.pdf](http://tbarta.com/files/TM_ActivityCentersTravelMarkets.pdf)
- Vote Hillsborough. (2018). Proposed Hillsborough charter amendment. Retrieved from [https://www.votehillsborough.org/Portals/Hillsborough/Documents/2018%20General%20Election/Proposed%20Hillsborough%20County%20Charter%20Amendment\\_Full%20Text.pdf](https://www.votehillsborough.org/Portals/Hillsborough/Documents/2018%20General%20Election/Proposed%20Hillsborough%20County%20Charter%20Amendment_Full%20Text.pdf)
- Waterset DRI #266 (2006). Map “H” master development plan.

## Appendix A Plans and Studies Reviewed

### Hillsborough County

Plan/Study	Year Adopted	Description
<b>Capital Improvements Program (CIP): Fiscal Year 2018 - 2023</b>	2017	This program lays out the county's budget for infrastructure projects over a six-year period.

### Hillsborough County City-County Planning Commission

Plan/Study	Year Adopted	Description
<b>Comprehensive Plan for Unincorporated Hillsborough County: Future Land Use Element</b>	2008	The Future Land Use Element is the foundation for the Comprehensive Plan, as it affects each Element within the plan through its designations and distribution of land uses.
<b>Comprehensive Plan for Unincorporated Hillsborough County: Transportation Element</b>	2008	The Transportation Element is intended to allow unincorporated Hillsborough County to pursue a balanced transportation system.
<b>Comprehensive Plan for Unincorporated Hillsborough County: Livable Communities Element</b>	2008	This Element contains Community and Special Area Studies. These Community and Special Area Studies are intended to be extensions and refinements of the County's Comprehensive Plan. The studies should discuss the special and unique characteristics of the areas under study and examine the issues and problems facing the areas and provide strategies for solutions.

<b>SouthShore Areawide Systems Plan (SSASP)</b>	2003, Updated 2011	The SouthShore Areawide Systems Plan (SSASP) was developed in 2003 and preceded all other community based plans in south county.
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Hillsborough MPO

<b>Plan/Study</b>	<b>Year Adopted</b>	<b>Description</b>
<b>Long Range Transportation Plan (LRTP) Imagine 2040</b>	2014	The Long Range Transportation Plan directs federal and state dollars towards projects we value. It looks out at least 20 years and must be updated every five years.
<b>Freight Investment Program Final Technical Memorandum</b>	2014	The final technical memorandum for the Freight Investment Program describes investments that could be made to improve the movement of good or freight operations within Hillsborough County.
<b>Transportation Improvement Program (TIP)</b>	2018	The TIP is the 5-year budget for the LRTP. It prioritizes state and federal funding and justifies those funding decisions.
<b>Hillsborough County MPO: 2025 Comprehensive Pedestrian Plan</b>	2004	The Comprehensive Pedestrian Plan recommends safety and education programs and policies, analyzes areas used by pedestrians, and indicates priority corridors for pedestrian improvements. This is a part of the 2025 LRTP. The plan is comprised of goals, objectives, and policies which include: facilities, destinations, transit, crossings, safety and education, special needs, and encouragement and enforcement.

<b>Hillsborough Countywide Bicycle Safety Action Plan</b>	2011	The Hillsborough Countywide Bicycle Safety Action Plan outlines a vision for the County and objectives to reach the goal. The vision for 2035: We will have a zero-fatality transportation system that supports our sustainable, high-quality, livable community.
<b>Hillsborough County 2008 Comprehensive Bicycle Plan Update</b>	2008	The 2008 Comprehensive Bicycle Plan primarily outlines goals, objectives, and policies for all jurisdictions within Hillsborough County. The plan entails 6 goals to improve and enhance bicycle infrastructure, safety, education, awareness, data, and funding relating to bicycle transportation.
<b>Vision Zero Hillsborough</b>	2017	This plan outlines strategies to bring us closer to zero traffic deaths.
<b>SouthShore Transit Circulator Study</b>	2014	The objective of the study was to generate a phased plan of transit alternatives for the specified area and choose a preferred option to recommend to elected officials, including financial and operating strategies.
<b>Southshore Transit Study Reevaluation (draft)</b>	2018 (in progress)	Reevaluation of transit priorities in the SouthShore Transit Circulator Study for the SouthShore area following Mission MAX.
<b>Hillsborough County Water Ferry Feasibility Study – Phase 2</b>	2012	The result of Phase 1 found that the best location for a port for the ferry is in Apollo Beach between US-41 and Williams State Park where there is currently a small fishing pier. Phase 2 focused entirely on this site.

<b>Freight Logistics Zone Strategic Plan</b>	2016	A strategic plan to identify a freight logistics zone and supporting infrastructure. The strategic needs identified in the Plan represent the FLZ's high priority freight infrastructure improvements crucial to the future mobility and reliability of goods movement in the region.
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Florida Department of Transportation

<b>Plan/Study</b>	<b>Year Adopted</b>	<b>Description</b>
<b>FDOT District 7: Five-Year Work Program (2019-2023)</b>	2018	This program contains many of the priorities listed in the MPO's Imagine 2040 Transportation Plan.
<b>Strategic Intermodal Systems Plan</b>	2016	This plan seeks to enhance and improve interregional connectivity, intermodal connectivity, and economic development. The SIS includes three types of facilities: hubs (airports, spaceports, seaports, rail terminals), corridors (highways, rail, waterways), and connectors (highways, rail, waterways).
<b>Strategic Intermodal Systems Plan, Five Year Plan</b>	2018	Additional information relating to strategic intermodal systems projects are found in the SIS Five Year Plan.
<b>FDOT District 7: Tampa Bay Regional Strategic Freight Plan</b>	2012	This plan defines the freight network and identifies regional freight investment priorities needed to sustain economic growth in the Tampa Bay Region.
<b>FDOT District 7: I-75 PD&amp;E Study</b>	2010	FDOT has conducted two Project Development Environment (PD&E) studies that consider improvements along I-75. I-75 is a major corridor



		that primarily support commuters, tourists, and trade activities in the Tampa Bay region. As the Hillsborough County population grows, congestion is expected to increase along the corridor. The identified improvements are expected to relieve traffic congestion, improve safety, reduce emergency response time, and efficiency.
<b>FDOT District 7: US-41 PD&amp;E Study</b>	2016	This study focuses on roadway improvements along US 41 in Hillsborough County extending approximately 10 miles from the Manatee County line to 12 <sup>th</sup> Street NE. The study involves developing roadway alternatives which include widening US 41 from four to six lanes and may include evaluation of a one-way pair system of roadways through downtown Ruskin.
<b>FDOT District 7: US-41 PD&amp;E Study</b>	2016	This PD&E study focuses on 7 miles of US 41 from Kracker Avenue to SR 676. Study objectives included: determining proposed typical sections and developing preliminary conceptual design plans for proposed improvements, while minimizing impacts to the environment; considering agency and public comments; and ensuring project compliance with all applicable federal and state laws. Improvement alternatives were identified which will improve safety and satisfy future transportation demand. A State Environmental Impact Report (SEIR) was prepared for this study.

<b>FDOT District 7: US-41 PD&amp;E Study</b>	2009	This PD&E study focuses on 6.2 miles of US 41 from 12th Street to Kracker Avenue. The highway is to be improved from an existing, four-lane rural facility to an urban and suburban 6 lane divided facility.
<b>FDOT District 7: US-301 PD&amp;E Study</b>	1982	This PD&E study focuses on the need for a six-lane divided arterial roadway on US 301 from SR 674 to Gibsonton Drive. The proposed improvements include 10 miles of US 301 to be upgraded to a multi-laned facility from the existing two-lane roadway. These improvement will involve multi-laning, geometric improvements to major intersections, widening and/or replacement of existing bridge structures at Big and Little Bullfrog Creeks and at Cowley Road and well as vehicular circulation and access considerations.
<b>FDOT District 7: SR-674 PD&amp;E Study</b>	2006	This PD&E study focuses on 2.4 miles of SR 674 from US 301 to CR 579. The objective of this study is to analyze and access improvements along SR 674 to accommodate future traffic demand in a safe and efficient manner.
<b>FDOT District 7: SR-674 PD&amp;E Study</b>	1985	This study focuses on 6 miles of SR 674 from two-lanes to six-lanes from US 41 to US 301. The widening is recommended to accommodate for future growth and traffic demand.

Hillsborough Area Regional Transit (HART) Authority

<b>Plan/Study</b>	<b>Year Adopted</b>	<b>Description</b>
<b>Transit Development Plan</b>	2017	A strategic guide for improving public transportation in Hillsborough County over the next 10 years, which includes funded and unfunded needs, service and capital priorities, and implementation and financial plans.
<b>Mission Max</b>	2017	This plan was a massive system redesign and route consolidation plan prompted by budget cuts.

Port Authority of Tampa Bay

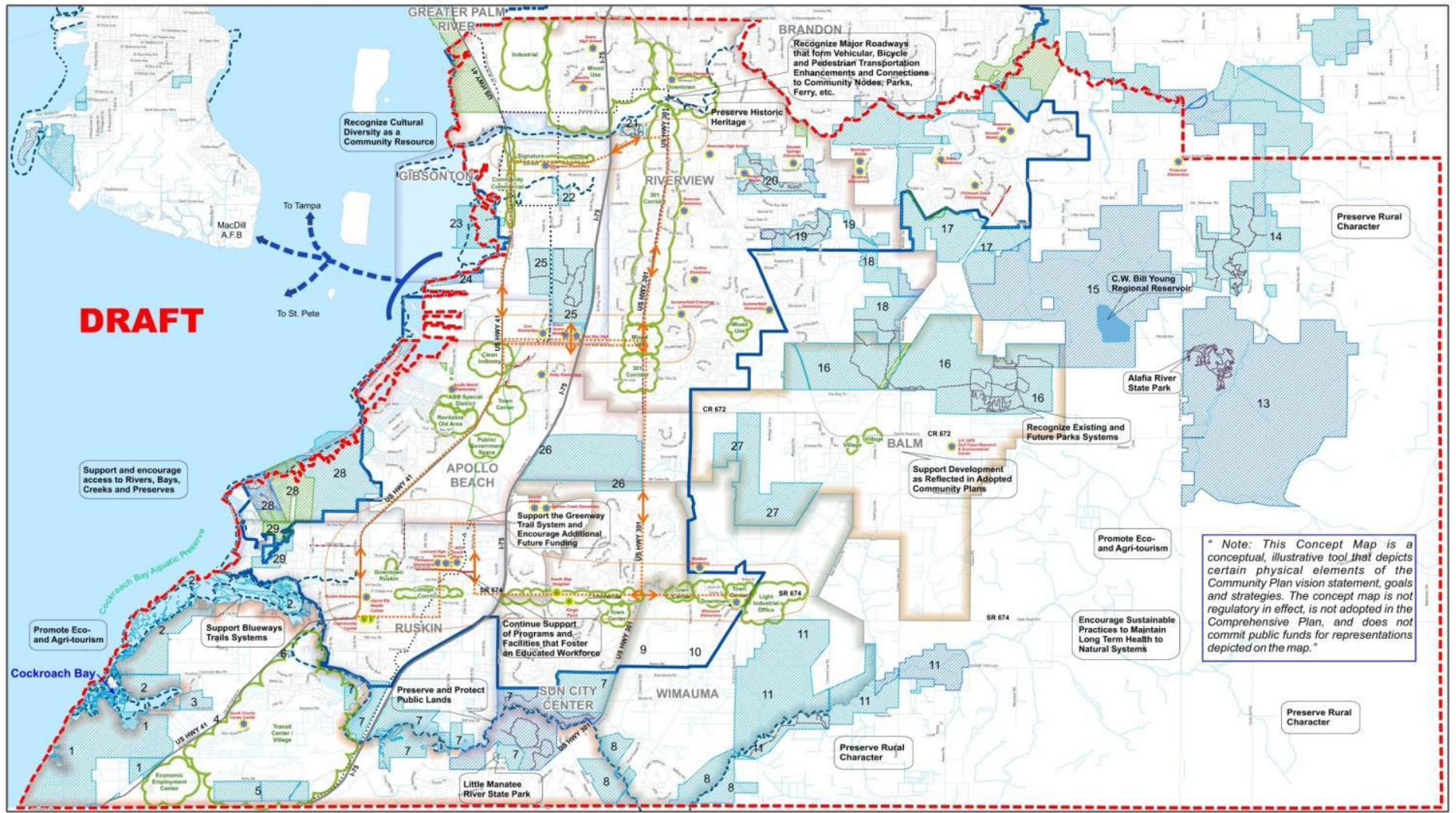
<b>Plan/Study</b>	<b>Year Adopted</b>	<b>Description</b>
<b>Port Tampa Bay Master Plan Vision 2030</b>	2016	This plan provides a strategic, market driven roadmap for planning, rehabilitating, modernizing, expanding and managing PTB's marine terminals as well as supporting infrastructure throughout the Port.

## Appendix B Agency Interviews


Agency	Interviewee	Position
FDOT District 7	Ming Gao, P.E.	Modal Development Administrator
FDOT District 7	Brian Hunter	Freight Coordinator
Plan Hillsborough	Sarah McKinley	Principal Planner
Plan Hillsborough	Pedro Parra	Principal Planner
HART	Christopher Cochran, AICP	Manager of Planning
Hillsborough County Economic Development Department	Lindsey Kimball	Department Director
	Eric Lindstrom	Competitive Sites and Redevelopment Manager
Hillsborough County School Board	Lorraine Duffy Suarez, AICP	General Manager of Growth Management and Planning

# Appendix C

## SouthShore Areawide Systems Plan Conceptual Map




**LEGEND**

 SOUTHSHORE AREA-WIDE SYSTEMS PLAN BOUNDARY


 ACTIVITY & TOWN CENTERS


 STREAMS, CANALS

**EXISTING & FUTURE ACTIVITY CENTERS**


 COMMERCIAL CENTER


 EDUCATIONAL FACILITY


 FUTURE DEVELOPMENT

 HEALTH FACILITY & COMMUNITY CENTER


**EXISTING TRAILS**

 EXISTING

 MULTI USE, HIKING, MOUNTAIN BIKING, EQUESTRIAN


 SIDE-PATH

**PROPOSED TRAILS**

 PLANNED UNFUNDED / CONCEPTUAL

 GREENWAYS TRAIL

**ELAPP AREAS**


 ACQUIRED


 OTHER PRESERVATION

 OTHER PUBLIC LAND

**BOUNDARY LINES**

 COUNTY BOUNDARY

 JURISDICTION BOUNDARY

 TAMPA SERVICE AREA

 URBAN SERVICE AREA

**TRANSPORTATION**

 HART LINE CIRCULATOR

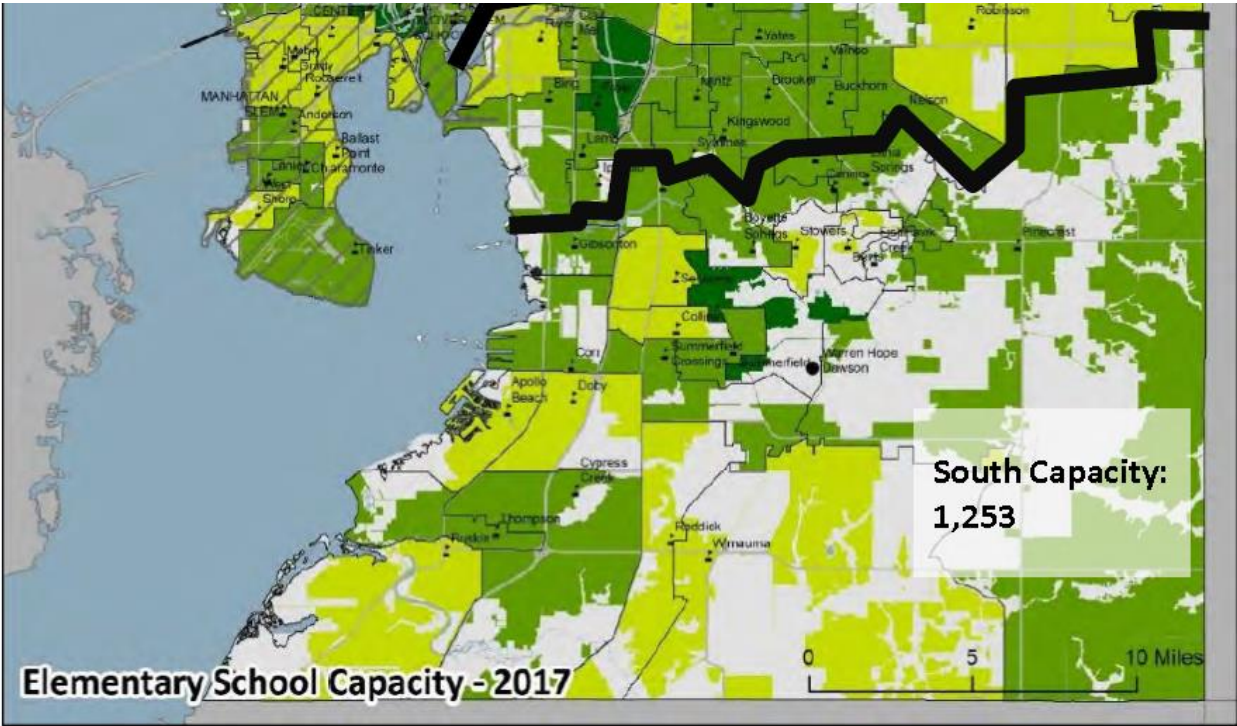
 HART LINE CIRCULATOR FLEX

 FUTURE FERRY

Source: SouthShore Areawide Systems Plan Update Data Packet, 2014

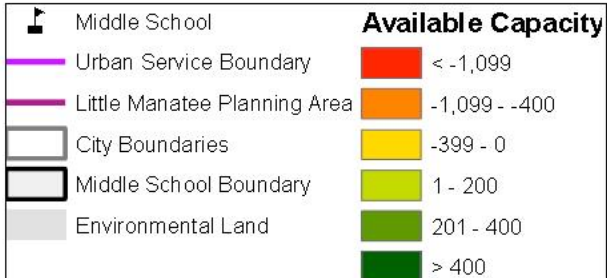
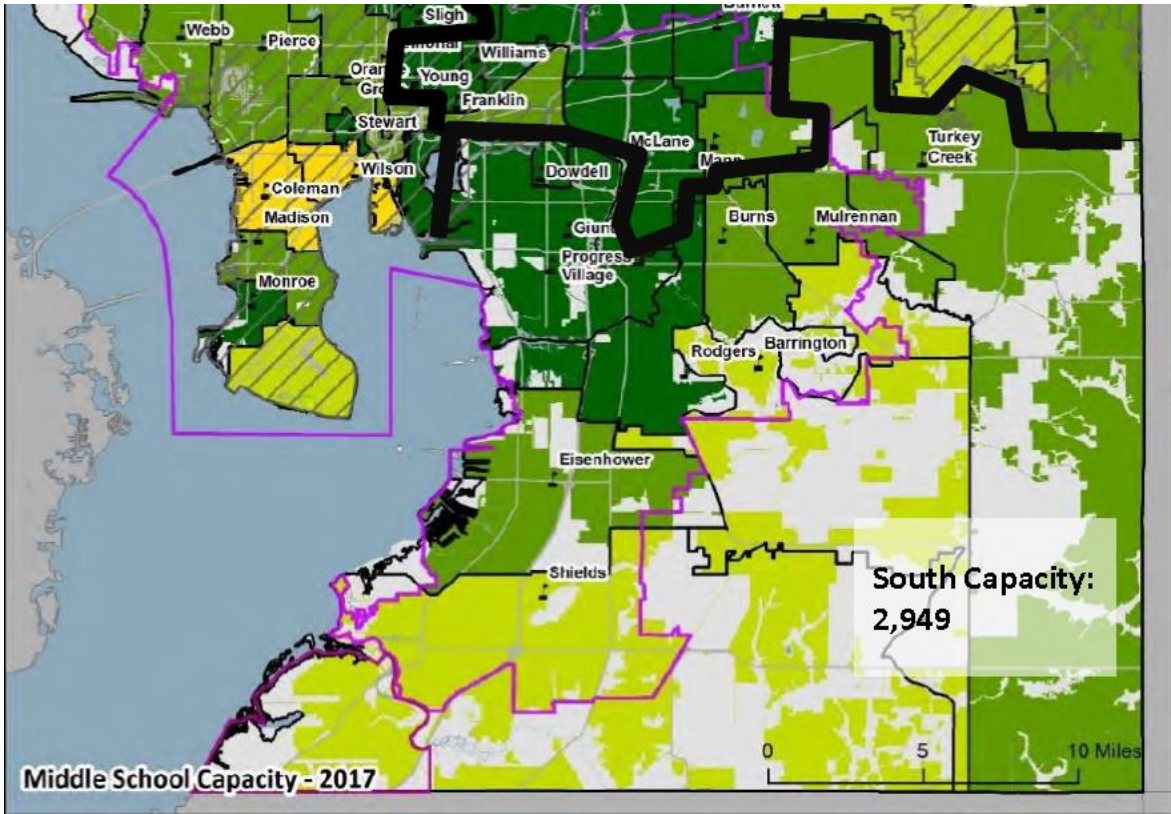
# Appendix D

## Hillsborough County Schools Current Available Capacity by School Level



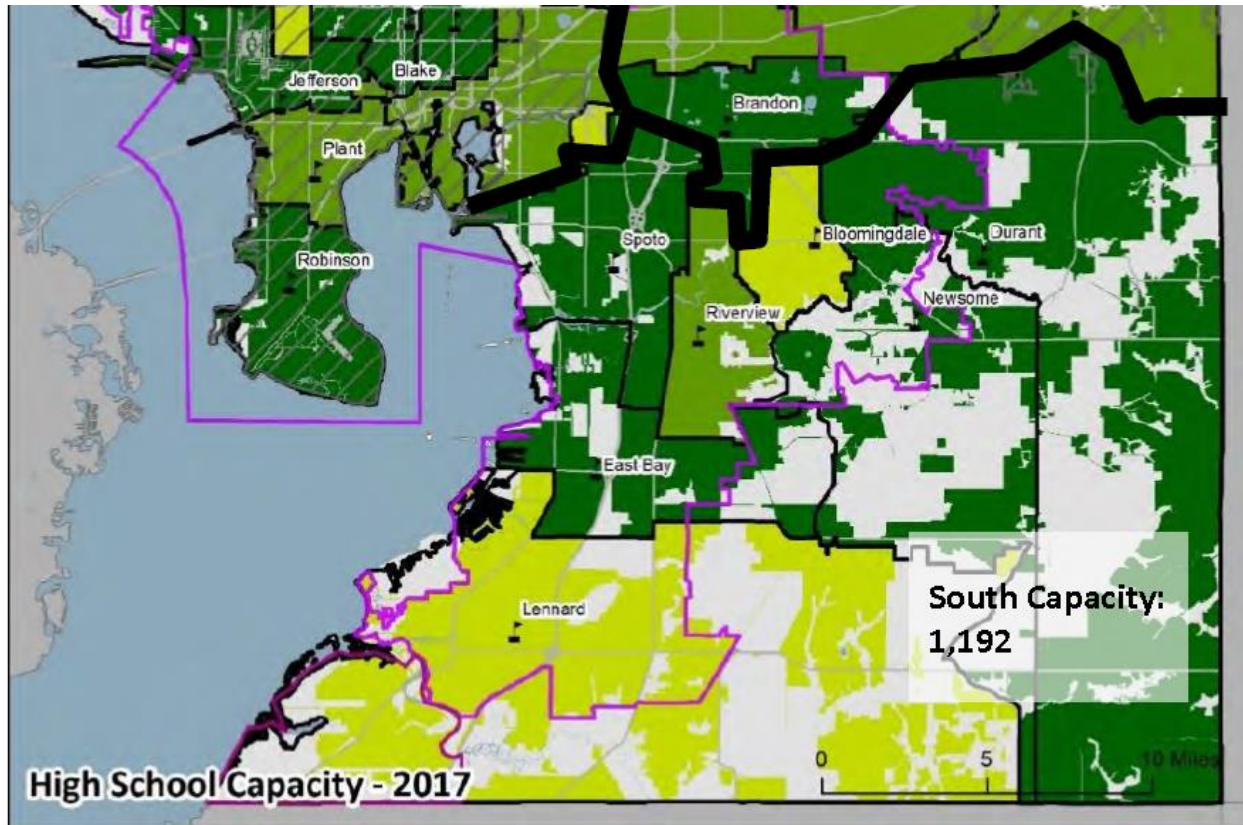
Elementary School		Available Capacity	
	Urban Service Boundary		< -1,425
	Little Manatee Planning Area		-1,424 - -700
	City Boundaries		-699 - -250
	Elementary School Boundary		-249 - 0
	Environmental Land		1 - 250
			>250

Source: Hillsborough County Public Schools Long Range Planning Study 2017



Source: Hillsborough County Public Schools Long Range Planning Study 2017





Source: Hillsborough County Public Schools Long Range Planning Study 2017

## Appendix E

### CIP Transportation Program Master Projects

Master Project	Sub-Project Title	Project Number	Project Status
<b>Bridge and Guardrail Rehabilitation and Repair</b>	Bridge #104323 (Dickman Rd over Noonan Branch) Repair	C62120105	Pre-Con
	Bridge #104335 (Balm Boyette Rd over Bell Creek) Repair	C62120117	Pre-Con
	Bridge #104433 (Dorman Rd over Little Fish Hawk) Repair	C62120125	Final Design
	Bridge #104327 (Boyette Road over Fish Hawk Creek) Repair	C62120129	In PD&E
	Bridge #104316 Pebble Beach Blvd	C62120131	In PD&E

	over Aging Creek) Repair		
	Bridge #104361 (Rhodine Rd over Bell Creek) Repair	C62120132	Final Design
	Bridge #104322 (Dickman Road over Dolphin Cove) Repair 09-	C62120148	In PD&E
<b>Community Investment Tax (CIT) Funded Bridge Improvement</b>	Bridge #104366 (Saffold Road over Dug Creek) Replacement	C69200102	In PD&E
	Bridge #100271 (Old Big Bend Rd. over Bullfrog Creek) Replacement	C69200103	In PD&E
	Bridge #104320 (Phillips Lane over Kitchen Branch)	C69200106	In PD&E

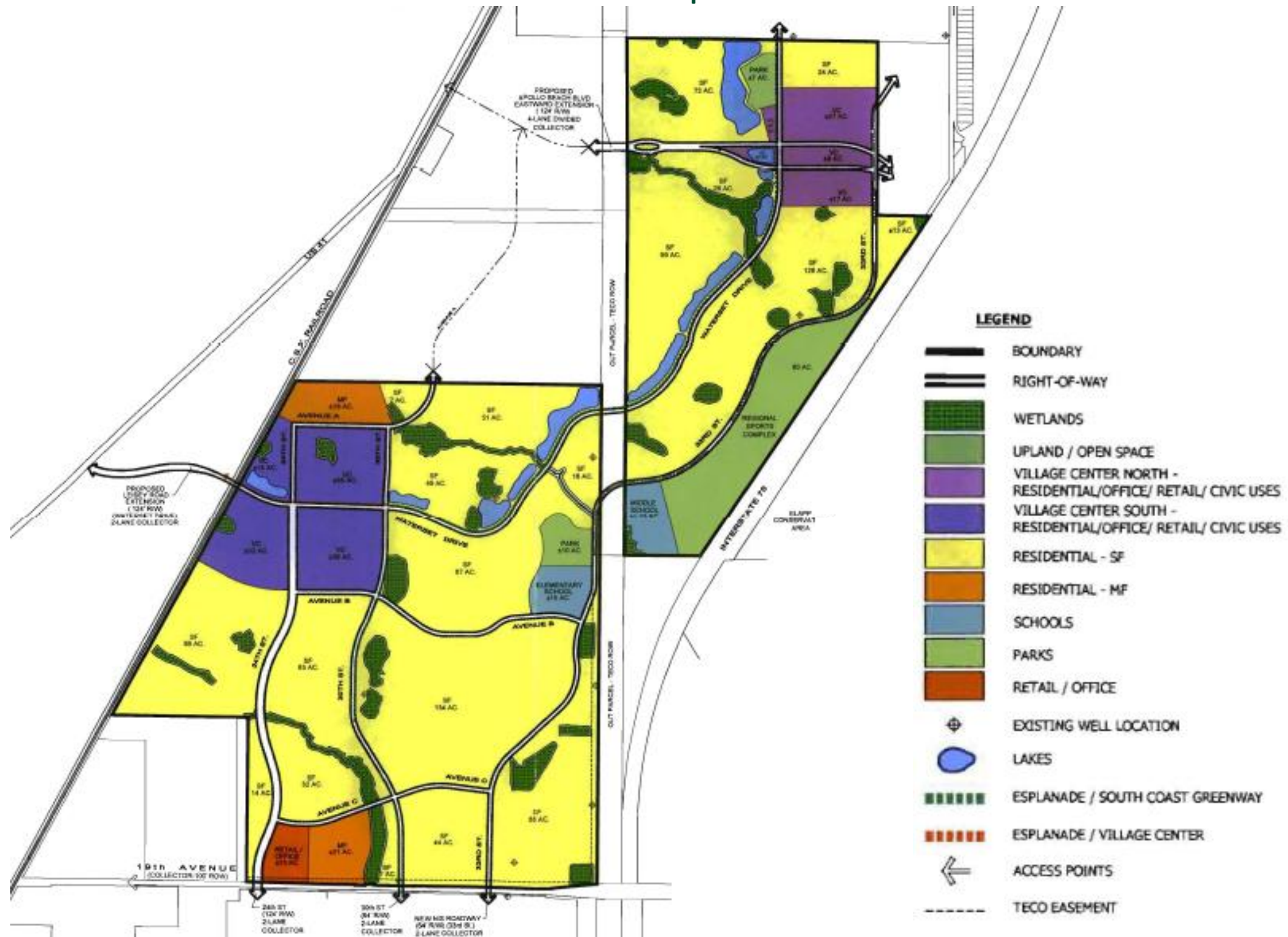
<b>Intersection Improvement Program</b>	Balm Riverview Rd at Symmes Rd - (CIT 69600)	C69600106	In PD&E
	Gibsonton Dr at Fern Hill Dr Intersection Improvements	C69600311	In PD&E
<b>Intersection Operation &amp; Safety Enhancement Program</b>	Balm Riverview Rd at Rhodine Rd	C69645106	In PD&E
	US 301 at Riverview Dr	C69645121	In PD&E
	Big Bend Rd at Heritage Green Pkwy and Summerfield Crossing Blvd	C69645126	In PD&E
	Lithia Pinecrest Rd at Fish Hawk Trail Dr / Hawkpark Blvd and Boyette Rd at Dorman Rd	C69645127	In PD&E
<b>Roadway Pavement Program</b>	Cockroach Bay Road	C69631057	In PD&E

	Lula Street	C69631059	In PD&E
	Boyette Road / Balm Boyette Road	C69631061	In PD&E
<b>Pedestrian Safety &amp; Mobility Enhancement Program</b>	Riverview Elementary School	C69638016	In PD&E
	Collins Elementary School	C69638021	in PD&E
	Rodgers Middle School	C69638022	in PD&E
	Cypress Creek Elementary School and Doby Elementary School	C69638023	in PD&E
	Reddick Elementary School and Wimauma Elementary School	C69638024	in PD&E
<b>Sidewalk Retrofit Construction Funding</b>	Cypress Creek Elementary School Sidewalk Project	C69508006	In PD&E

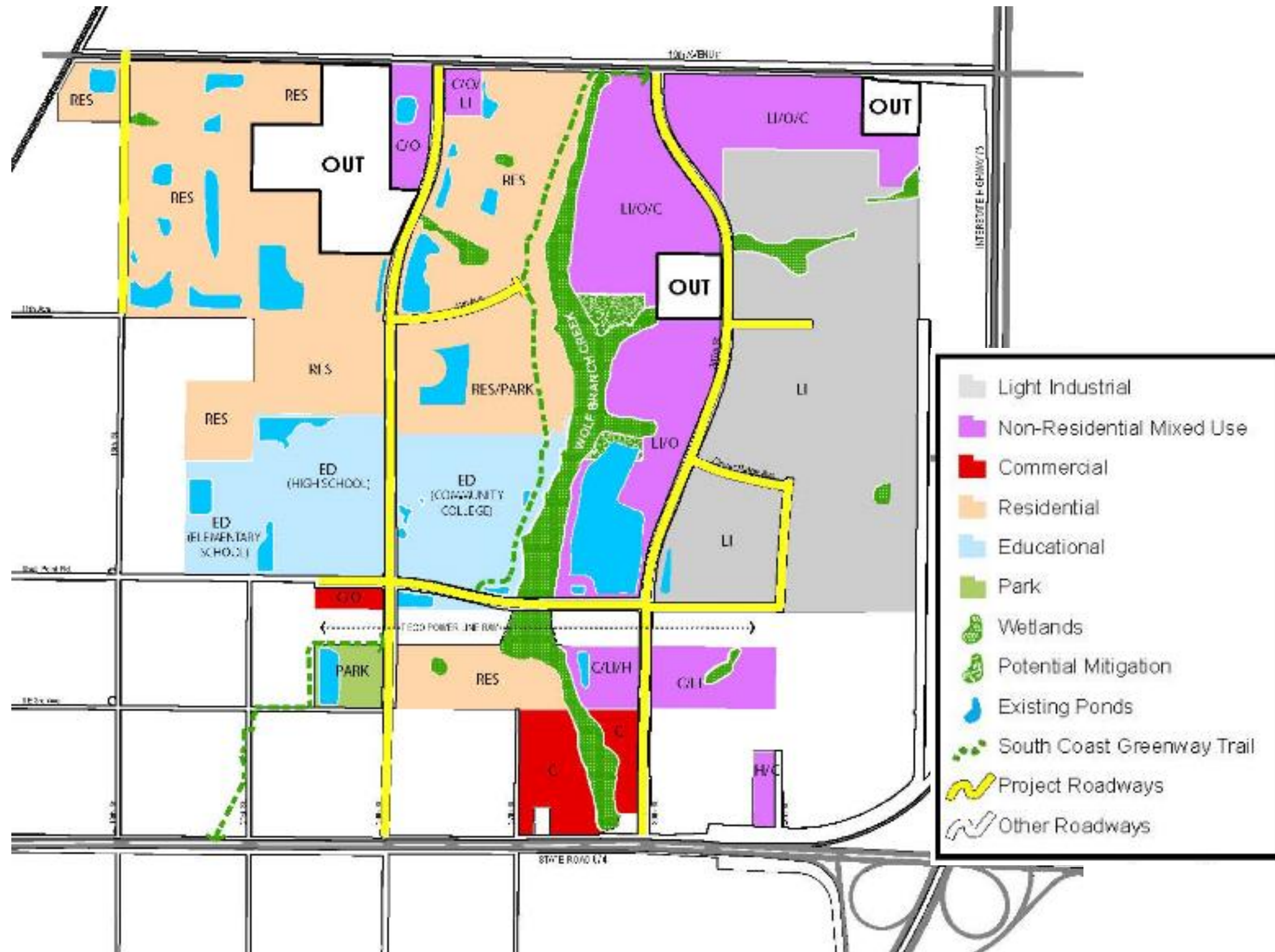
	Summerfield Elementary School Sidewalk Project	C69508009	in PD&E
	19 <sup>th</sup> Ave NE (Cypress Elementary) Sidewalk gap Project	C69508110	in PD&E

Hillsborough County Capital Improvements Program FY18-FY23.

## Appendix F DRI Master Development Plans

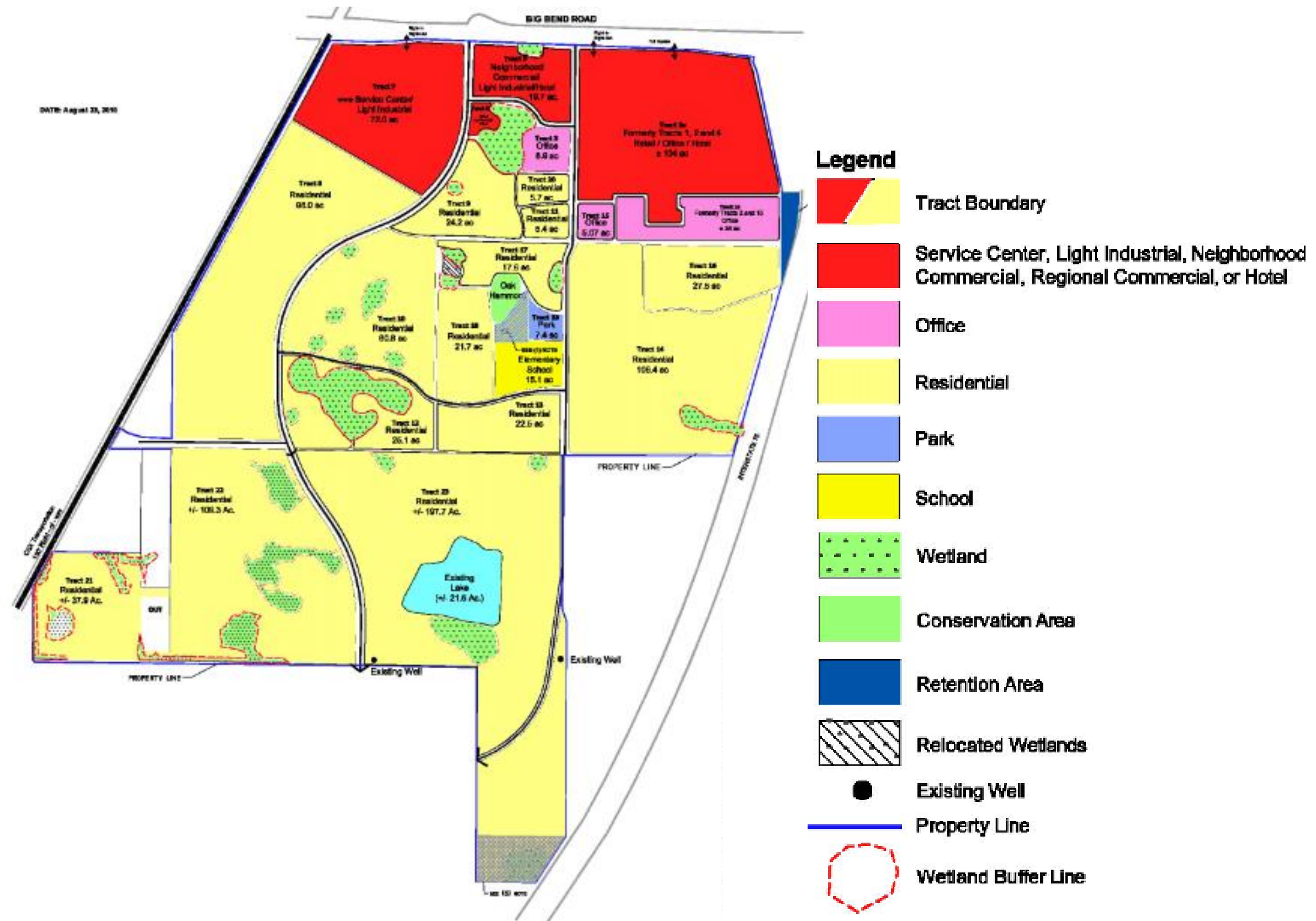


Source: Waterset DRI #266, 2006



Source: South Shore Corporate Park DRI #249, 2002

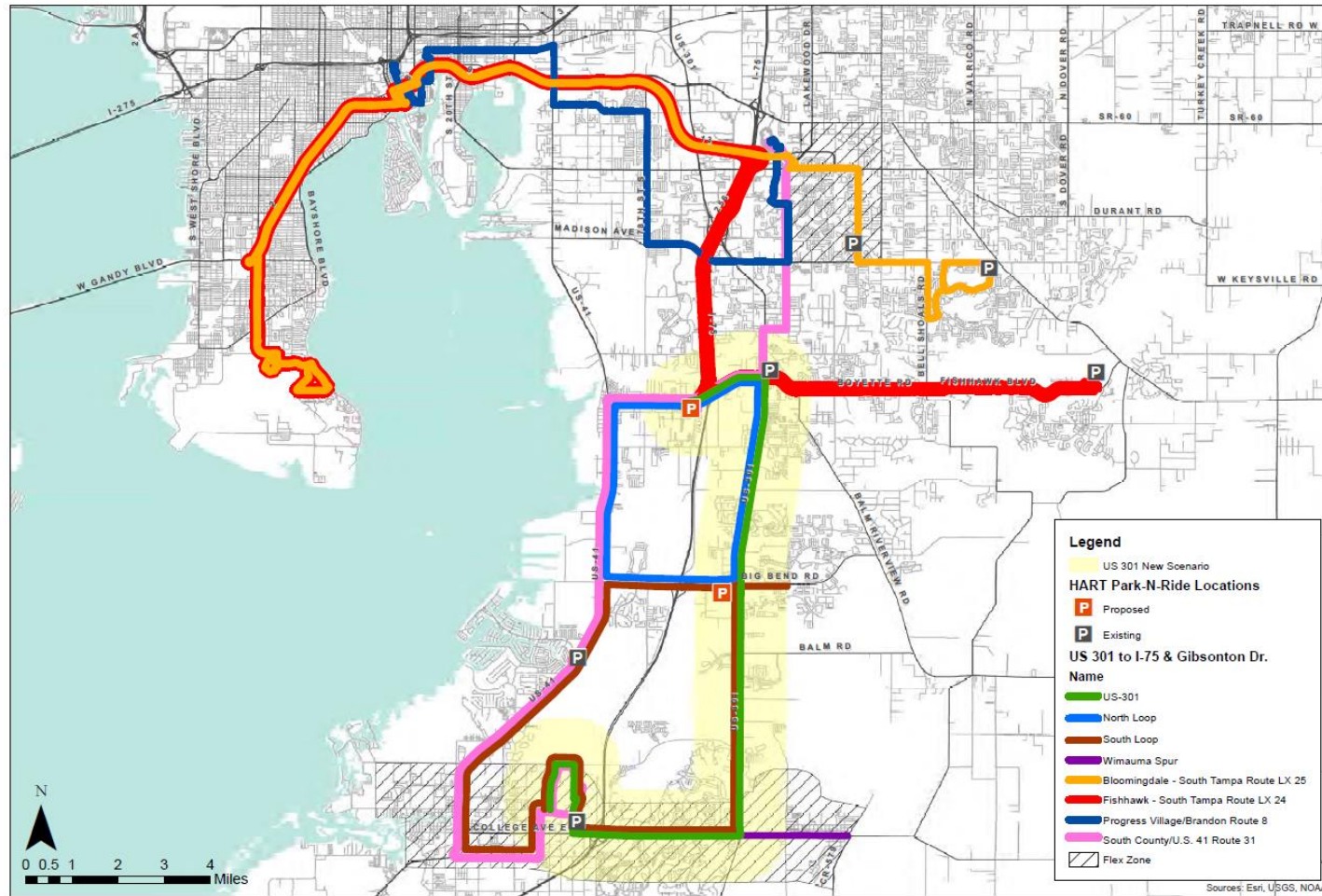




Source: Southbend DRI #145, 2010

# Appendix G HART SouthShore Circulator Study Reevaluation Scenarios

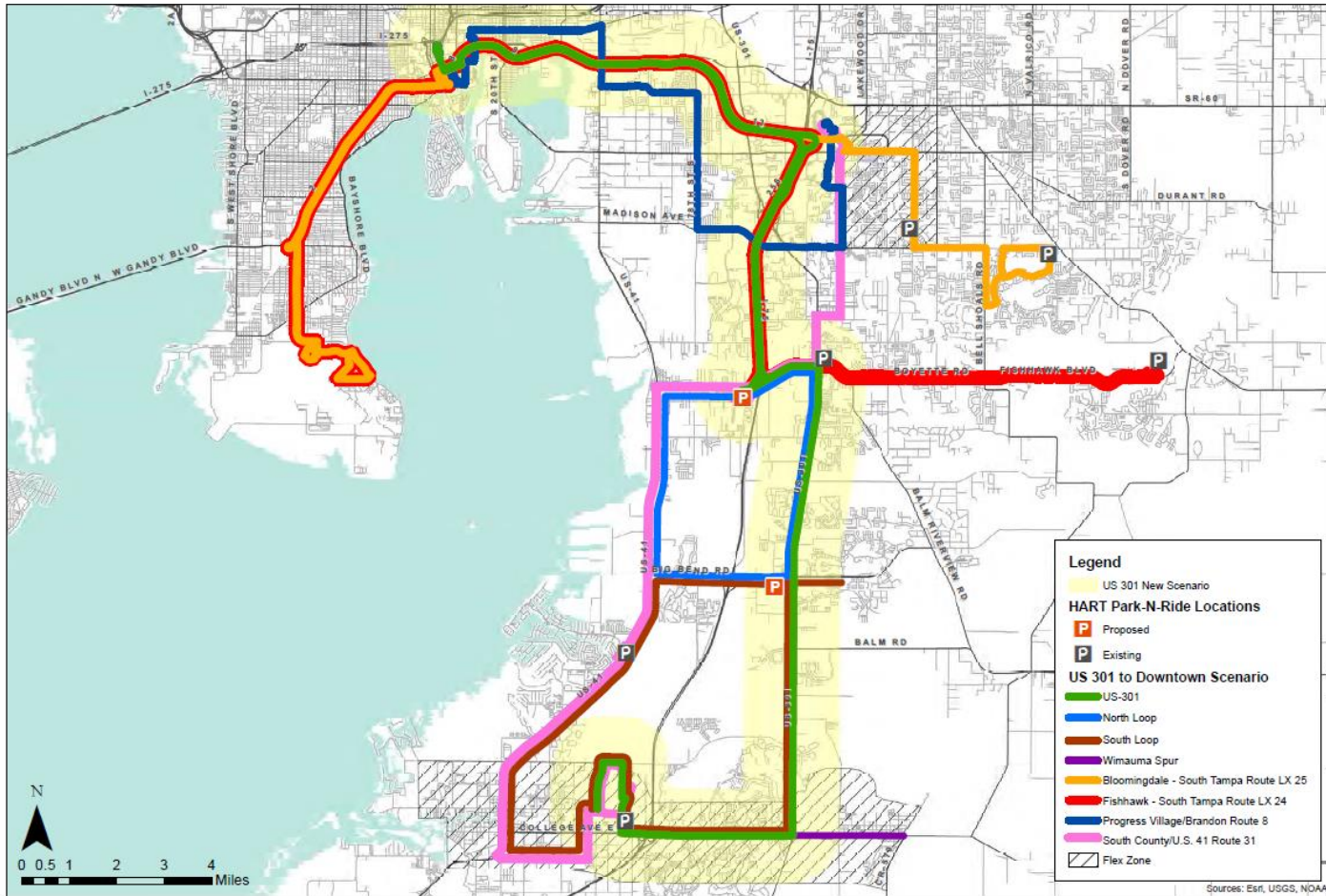
## US 301 to I-75 & Gibsonton Dr. Scenario



Source: SouthShore Study Reevaluation PowerPoint, 2018

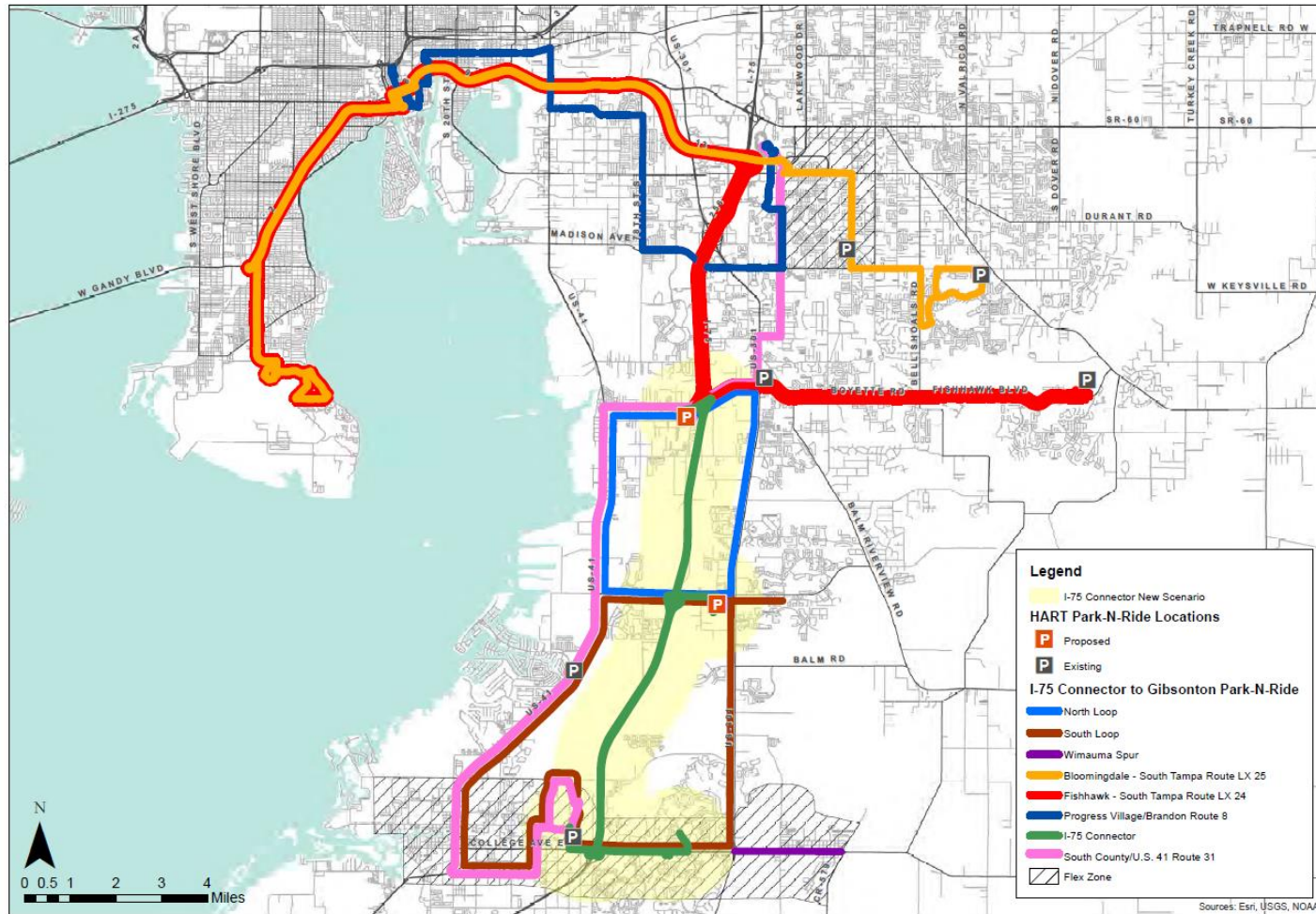


## US 301 to Downtown Scenario



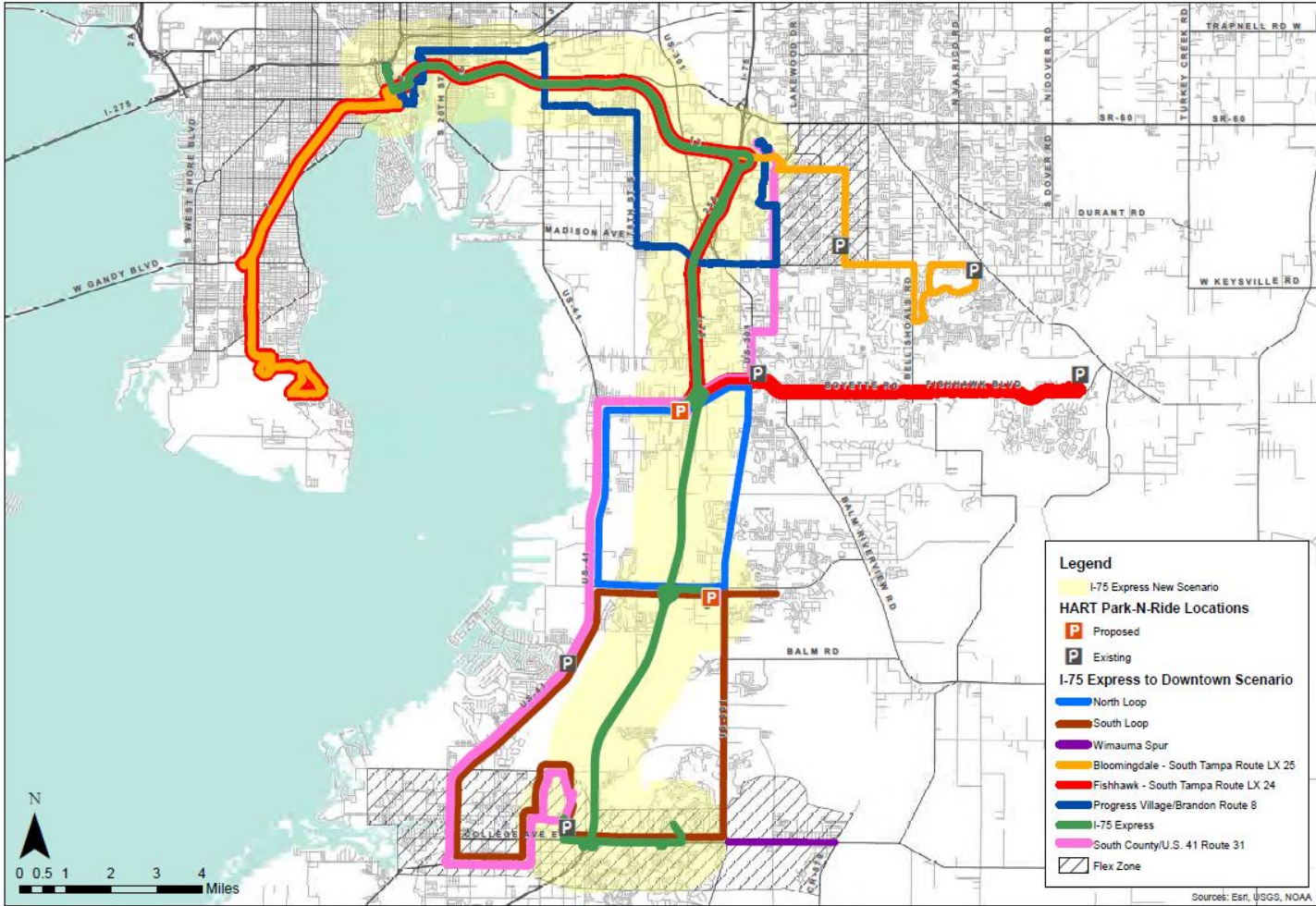
Source: SouthShore Study Reevaluation PowerPoint, 2018

## I-75 Connector to Proposed Gibsonton Park-N-Ride Scenario



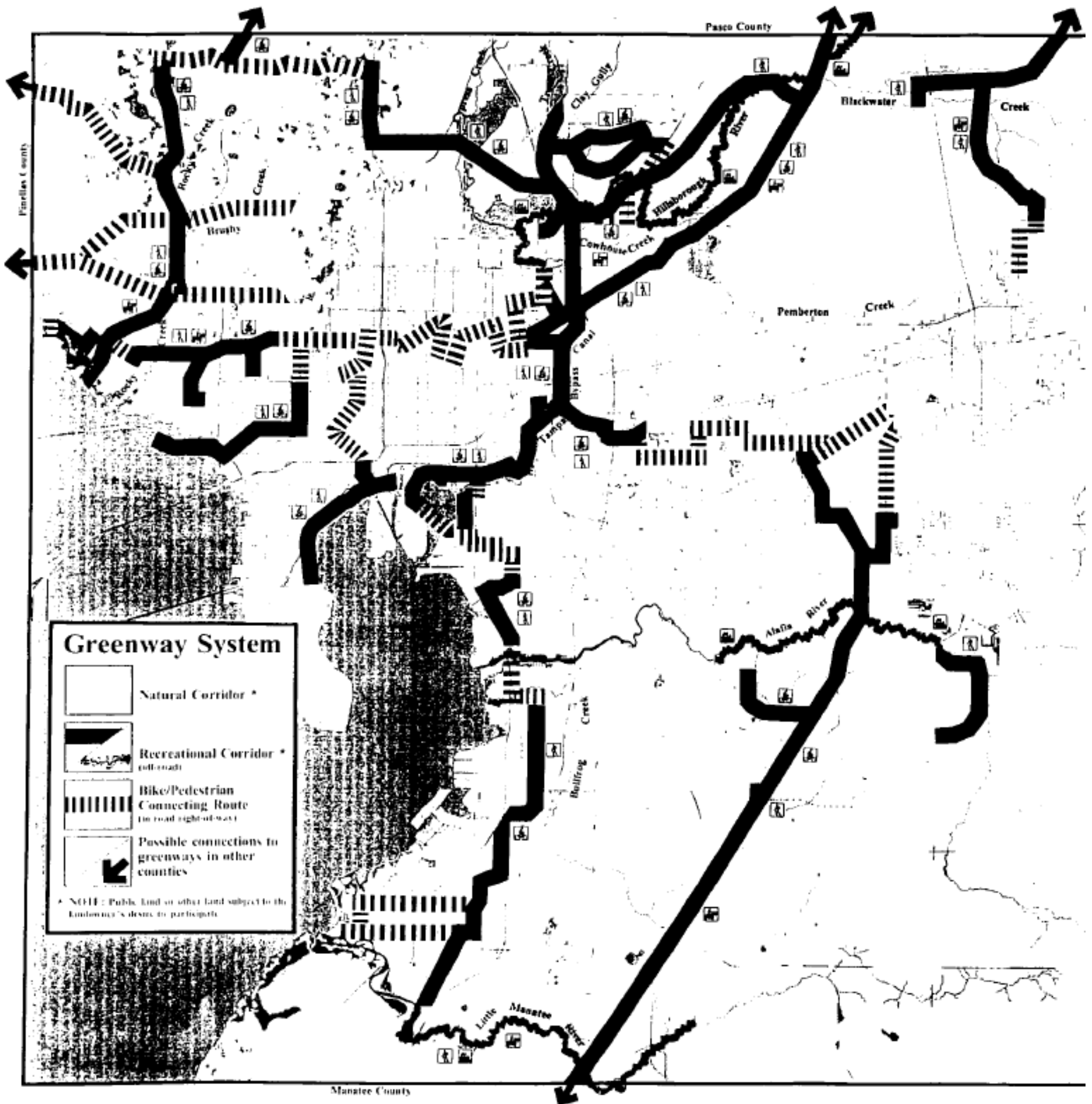
Source: SouthShore Study Reevaluation PowerPoint, 2018

# I-75 Express to Downtown Scenario



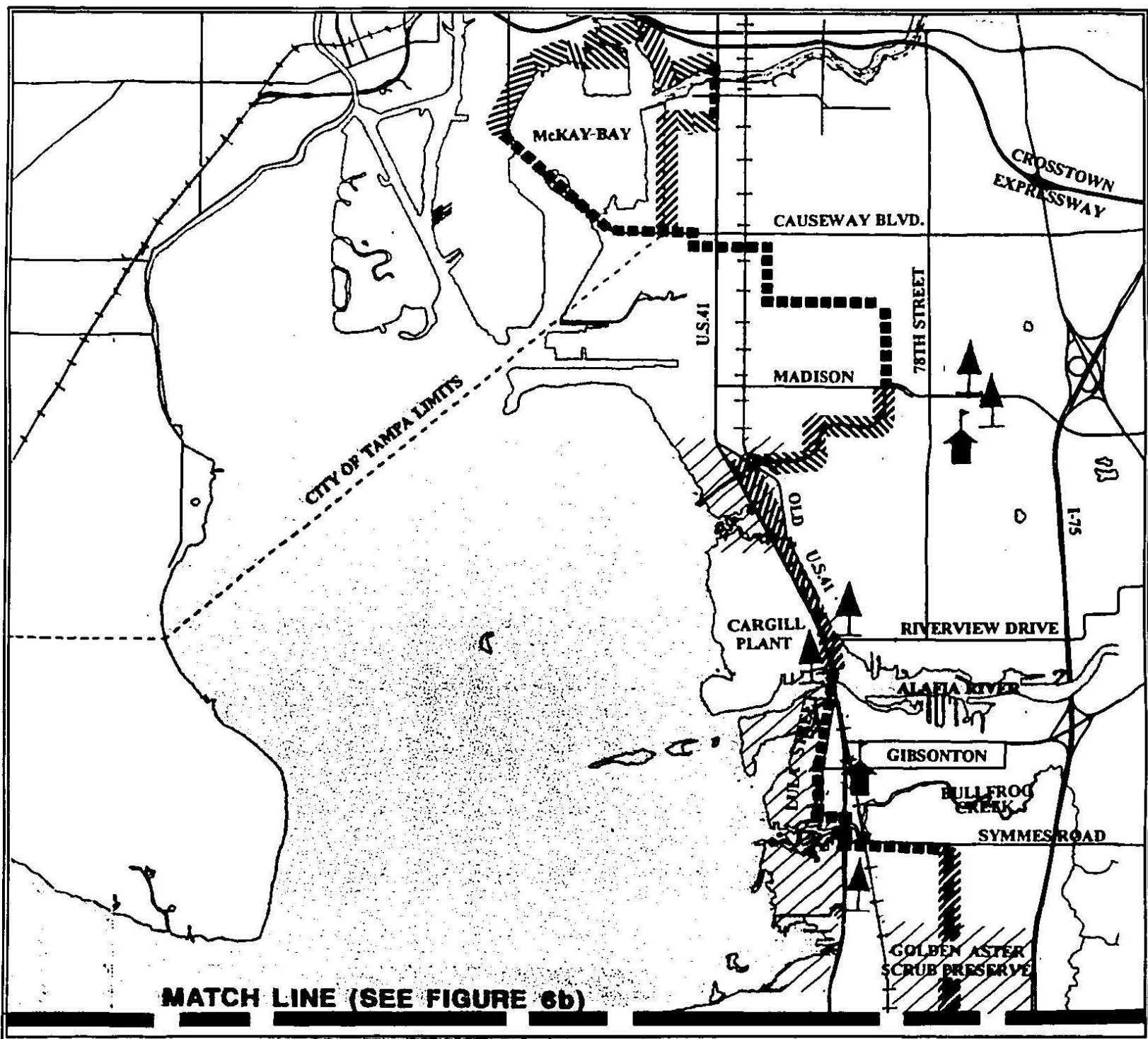
Source: SouthShore Study Reevaluation PowerPoint, 2018

## Appendix H Hillsborough Greenways Conceptual Plan






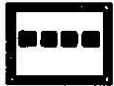


Source: BOCC PH/Greenways Master Plan, 1995

## Appendix H.1 South Coast Greenway Conceptual Plan

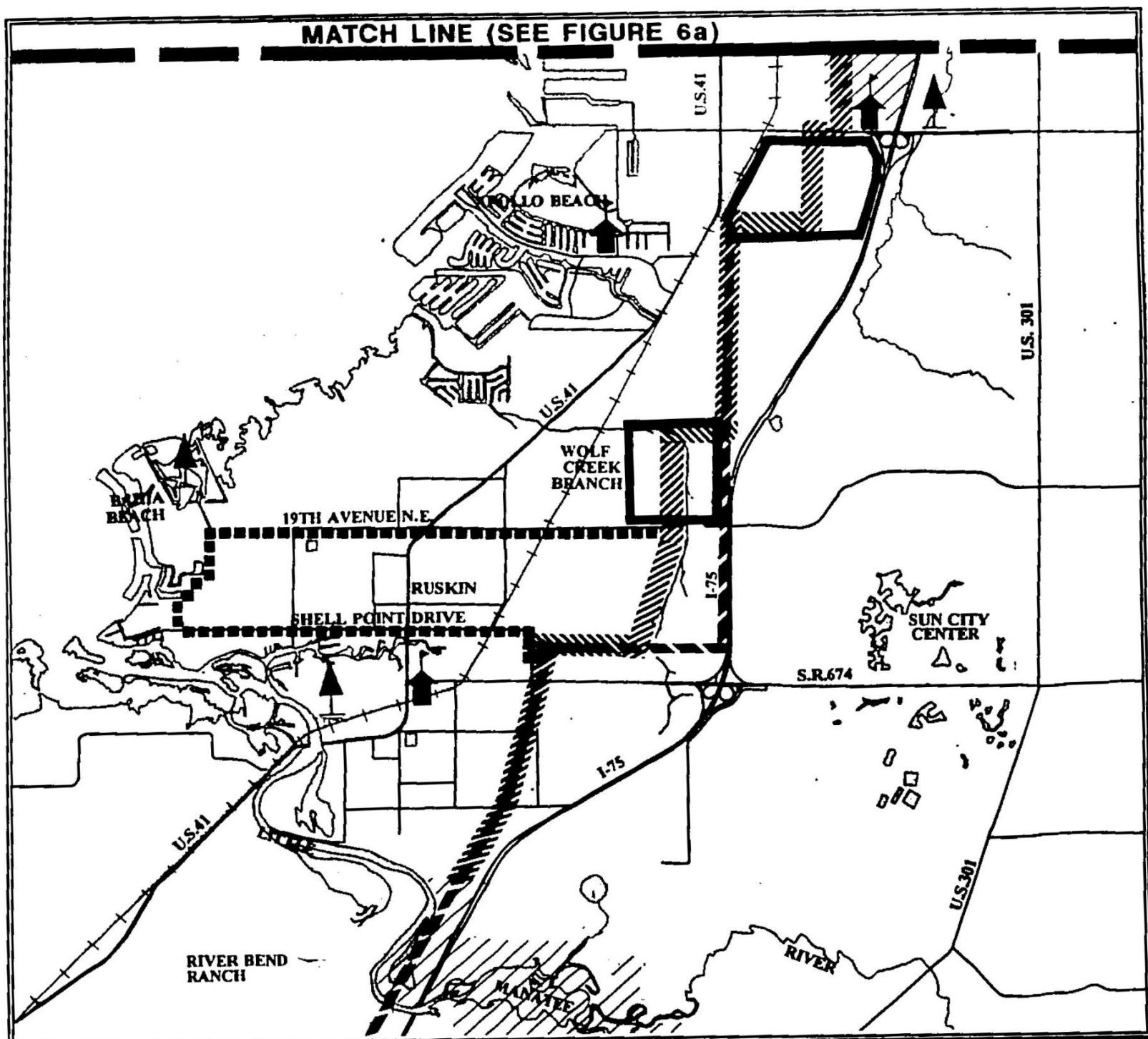


### LEGEND








- |   |                   |   |                     |
|---|-------------------|---|---------------------|
|  | PROPOSED GREENWAY |  | POWERLINE CORRIDOR  |
|  | PARK              |  | SCHOOL              |
|  | ELAP SITE         |  | PROPOSED BIKE LANES |

Source: BOCC PH/Greenways Master Plan, 1995



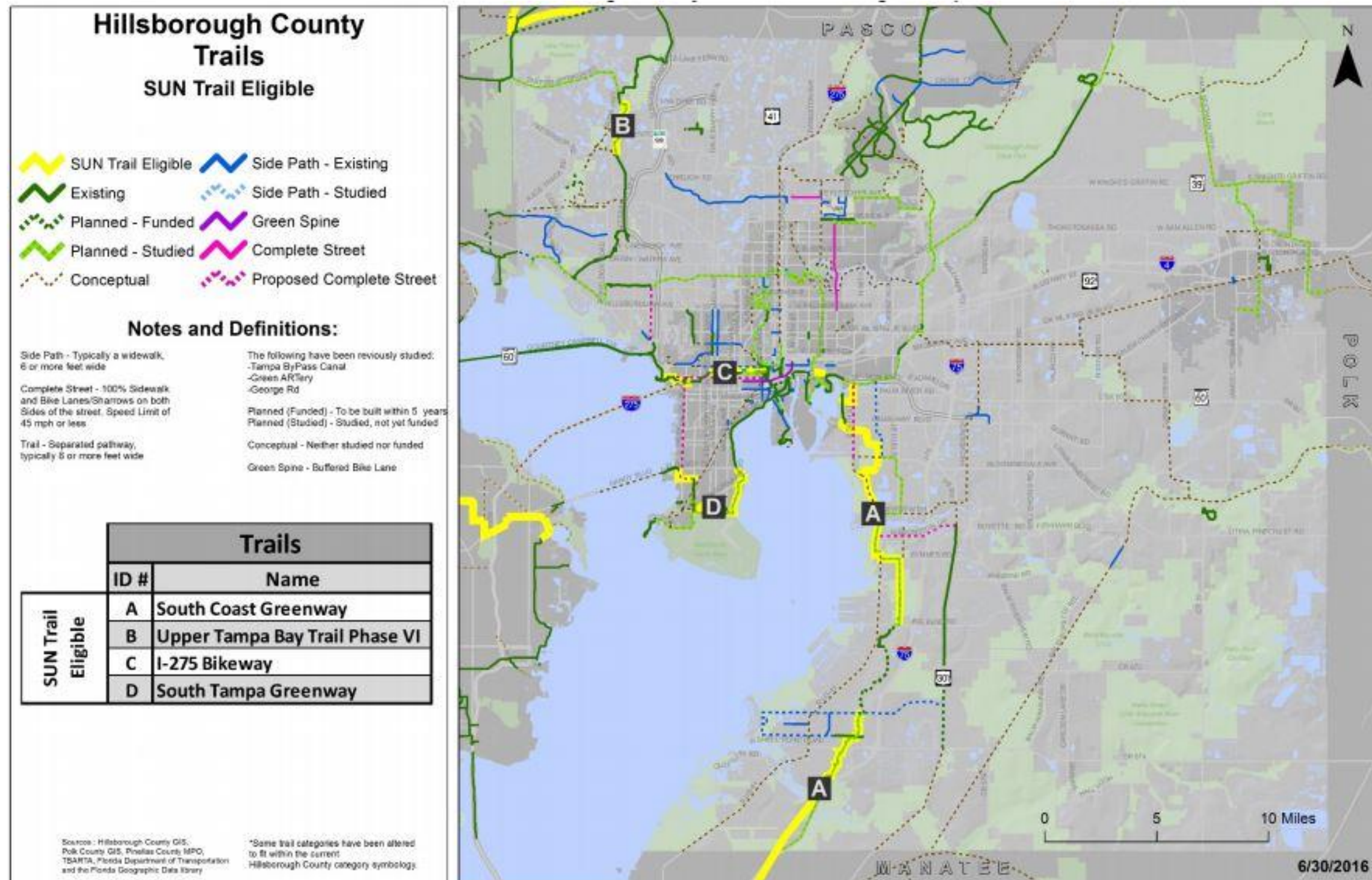


**LEGEND**

- |   |                   |   |                     |
|---|-------------------|---|---------------------|
|  | PROPOSED GREENWAY |  | POWERLINE CORRIDOR  |
|  | PARK              |  | SCHOOL              |
|  | ELAP SITE         |  | PROPOSED BIKE LANES |
|  | DRI PROJECT       |   |                     |

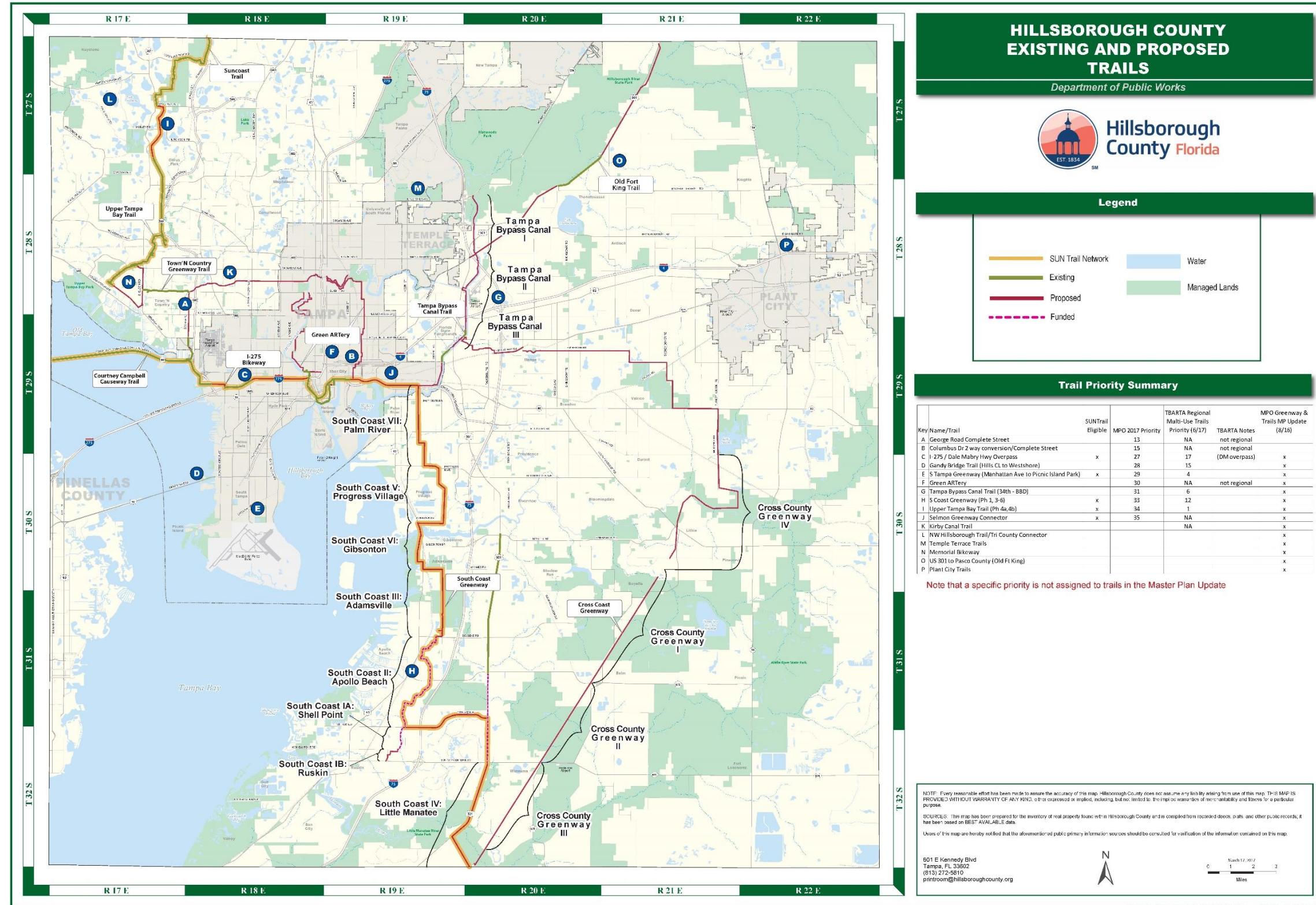
Source: BOCC PH/Greenways Master Plan, 1995

## Appendix H.2 Hillsborough County Trails Update



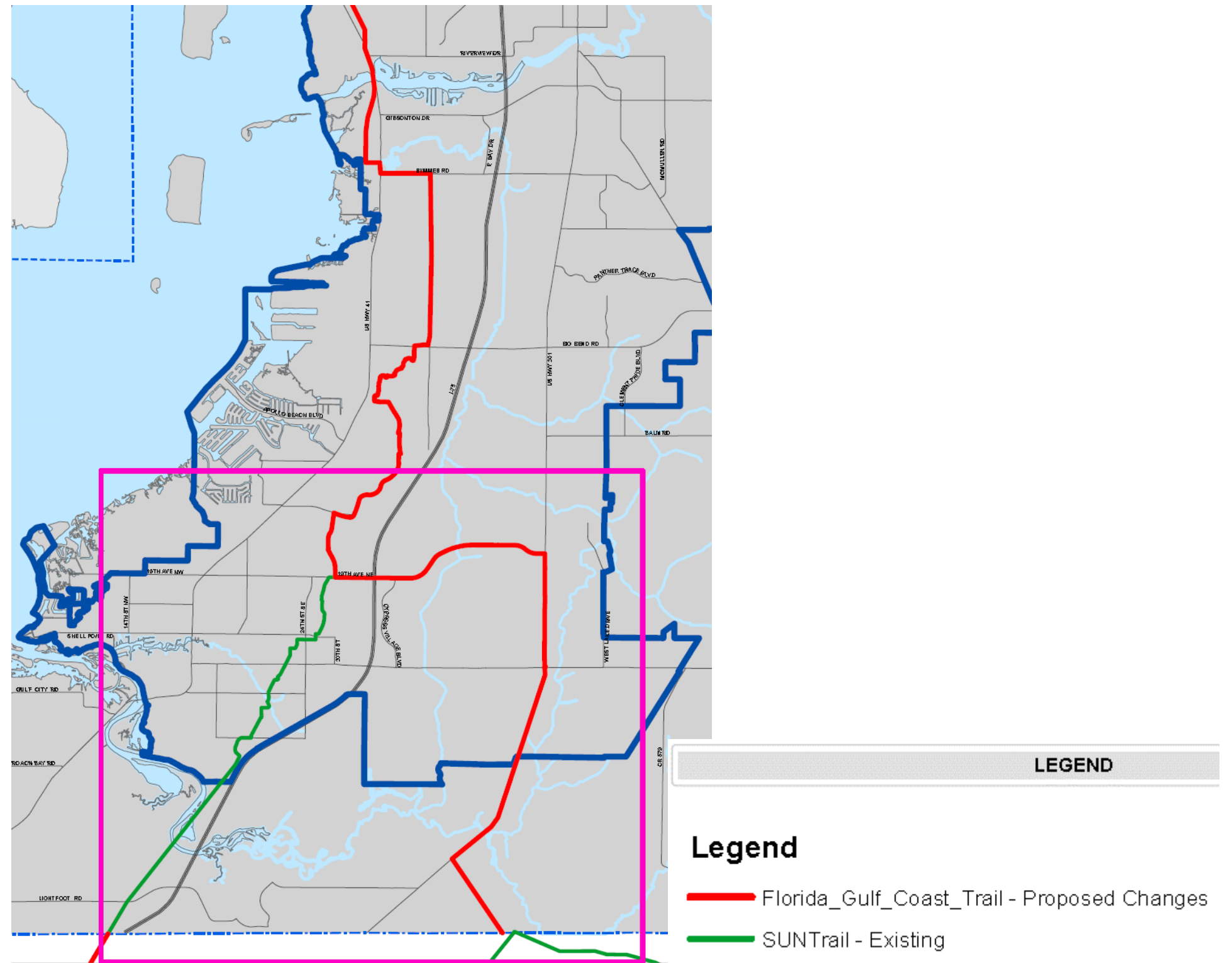
Source: Hillsborough County MPO Greenways and Trails Plan Update, 2016

# Appendix H.3 Hillsborough County Existing and Proposed Trails



Source: Hillsborough County Existing and Proposed Trails, 2017

## Appendix H.4 Florida Gulf Coast Trail Proposed Changes



Source: Hillsborough MPO – Hillsborough County Section - Gulf Coast Trail, 2017

# South County Integrated Mobility Solutions and Investment Strategy: Phase 1

Land Use and Transportation Conditions

Prepared For  
Hillsborough County, Florida

Prepared By  
USF Center for Urban Transportation Research

May 2019

2019



**USF** UNIVERSITY OF  
SOUTH FLORIDA.

CUTR.USF.EDU

## **Disclaimer**

The contents of this report reflect the views of the authors, who are responsible for the facts and the accuracy of the information presented herein. The opinions, findings, and conclusions expressed in this report are those of the authors and not necessarily those of Hillsborough County.

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## Chapter 1 Introduction

This technical memorandum is second in a series of technical memoranda for Phase I of the South County Integrated Mobility Study. The purpose of the study is to assess baseline transportation and land use conditions in the South County region of unincorporated Hillsborough County as a foundation for developing integrated land use and transportation mobility solutions. This report contains an inventory and analysis of land use and transportation conditions in the South County study area, including areas of activity (nodes) and travel patterns. Specific objectives are to:

1. Identify land use and development entitlements and redevelopment opportunities;
2. Identify existing areas of activity (nodes) and connections; and
3. Perform an origin-destination (OD) analysis.

The report begins with an inventory and analysis of existing land use, future land use, zoning, development entitlements, and development and redevelopment potential. It proceeds with identification of areas of activity (nodes) and connecting corridors. These areas of activity (nodes) and corridors form the land use and transportation structure that will guide continued growth of the region. Finally, an origin destination (OD) analysis was conducted to identify travel patterns within the region for multimodal planning purposes.

Origin destination data for the analysis were obtained from StreetlightData, Inc. Streetlight Data is a third-party platform that collects mobility data using smartphone and GPS technologies. They aggregate the raw data to provide information about the movement between places (defined as zones). Streetlight Data uses a sample of data collected from location enabled smartphone apps for estimating personal travel information. Commercial travel is derived from commercial GPS units. GIS data used in the analysis were obtained from Hillsborough County, Plan Hillsborough, Tampa Bay Regional Planning Council, and the Hillsborough County Property Appraiser, and Open Street Map, which is a crowdsourcing platform where users contribute geographic information throughout the globe. Open Street Map provides open source detailed geographic data, including transportation grids suitable for network analysis. Other data collected and integrated into this study were obtained from the Future Land Use Element of the Hillsborough Comprehensive Plan, the Hillsborough County Land Development Code, and the Hillsborough County Development Services Department.

The report supplements findings from *Technical Memorandum 1: Review of Plans and Studies*, which included a review of future land use and the County's vision for future growth, activity centers and competitive sites, agency strategies to accommodate growth, and community visions for the project study area. *Technical Memorandum 1* also included a review of plans and studies that identify existing facilities and planned improvements for major roadways, public transportation, bicycle and pedestrian facilities, and freight.

## Chapter 2 Land Use, Development, and Redevelopment Potential

This chapter summarizes land use findings for the South County study area. It includes analysis of existing and future land use, planned and approved development, and areas with development and redevelopment potential. Relative proportions of residential to non-residential uses are evaluated for insight into the jobs/housing balance in the region. Development entitlements reflect approved building permits, Developments of Regional Impact (DRI), sites with certificates of capacity, and competitive sites (as designated by the Hillsborough County Economic Development Department). Development and redevelopment potential (undeveloped land or land with low existing improvement value or development intensity) maps indicate where future development has the potential to occur.

### 2.1 Existing Land Use

The study area includes approximately 90,500 acres of land divided into 86,817 parcels. The majority of the study area is developed, with about 10 percent vacant land remaining (see Table 1). According to the Hillsborough County Land Development Code, “Vacant means any building, structure or property that is not legally occupied for more than 30 days”. The study area is predominantly residential (31.7%) with high proportions of single-family residential (28.2%), public (23.1%) and agricultural (21.6%).

**Table 1. Existing Land Use Summary**

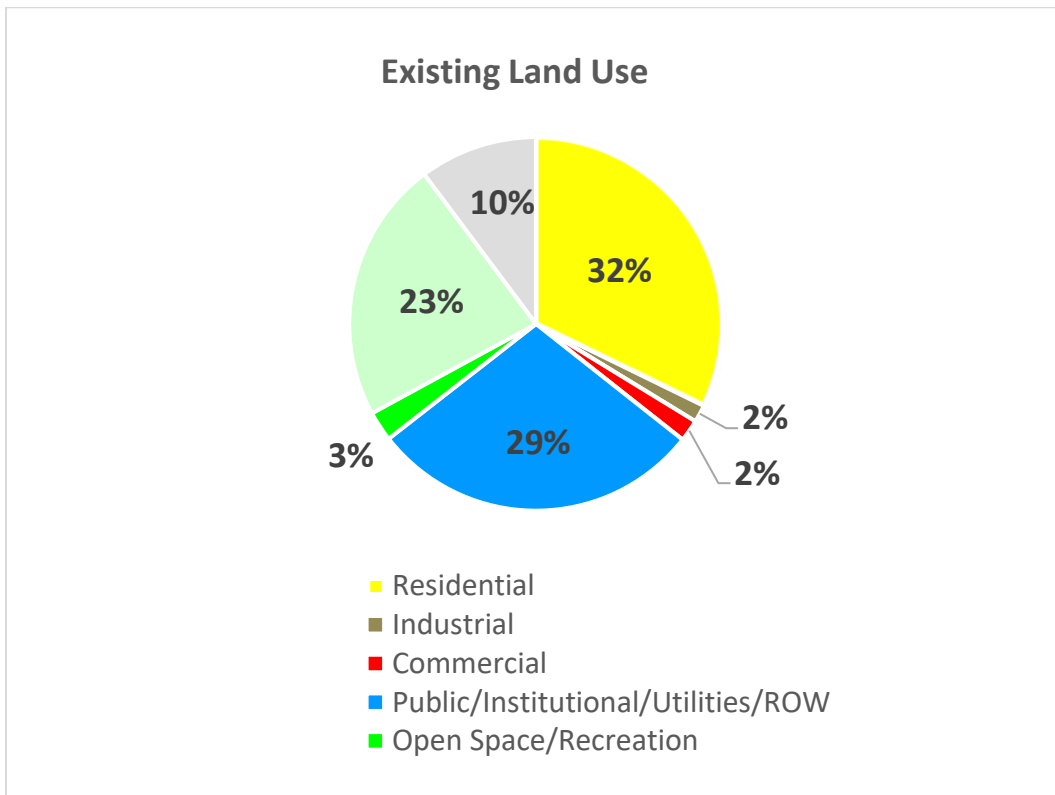
Existing Land Use	Acres	Percent	Number of Parcels
<b>Residential</b>	<b>29,135</b>	<b>32.2%</b>	<b>4,066</b>
Single-family/Mobile Home	25,981	28.7%	3493
Two-family	220	0.2%	121
Multi-family	2,218	2.5%	367
Mobile Home Park	715	0.8%	85
<b>Industrial</b>	<b>1,365</b>	<b>1.5%</b>	<b>109</b>
Light Industrial	477	0.5%	67
Heavy Industrial	888	1.0%	37
Mining	0	0.0%	5
<b>Commercial</b>	<b>1,750</b>	<b>1.9%</b>	<b>411</b>
Light Commercial	1,548	1.7%	358
Heavy Commercial	202	0.2%	53
<b>Public/Institutional/Utilities/ROW</b>	<b>26,096</b>	<b>28.8%</b>	<b>1,778</b>
Public/Quasi-Public/Institutions	23,264	25.7%	1549
Public Communications/Utilities	1,548	1.7%	101
Right-of-way/Roads/Highways	323	0.4%	70
Educational	962	1.1%	58
<b>Open Space/Recreation</b>	<b>2,349</b>	<b>2.6%</b>	<b>50</b>
Recreation/Open Space	2,312	2.6%	48
<b>Agricultural</b>	<b>20,552</b>	<b>22.7%</b>	<b>282</b>
<b>Vacant</b>	<b>9,223</b>	<b>10.2%</b>	<b>2602</b>
<b>Total</b>	<b>90,499</b>	<b>100.0%<sup>1</sup></b>	<b>9,319</b>

Source: Plan Hillsborough

<sup>1</sup> Existing land use categories less than 0.1% are not included in the existing land use table. The “unknown” category, seen in Figure 2, is 0.0003% of the existing land use in the study area and includes any parcel with no Department of Revenue (DOR) code or folio number.

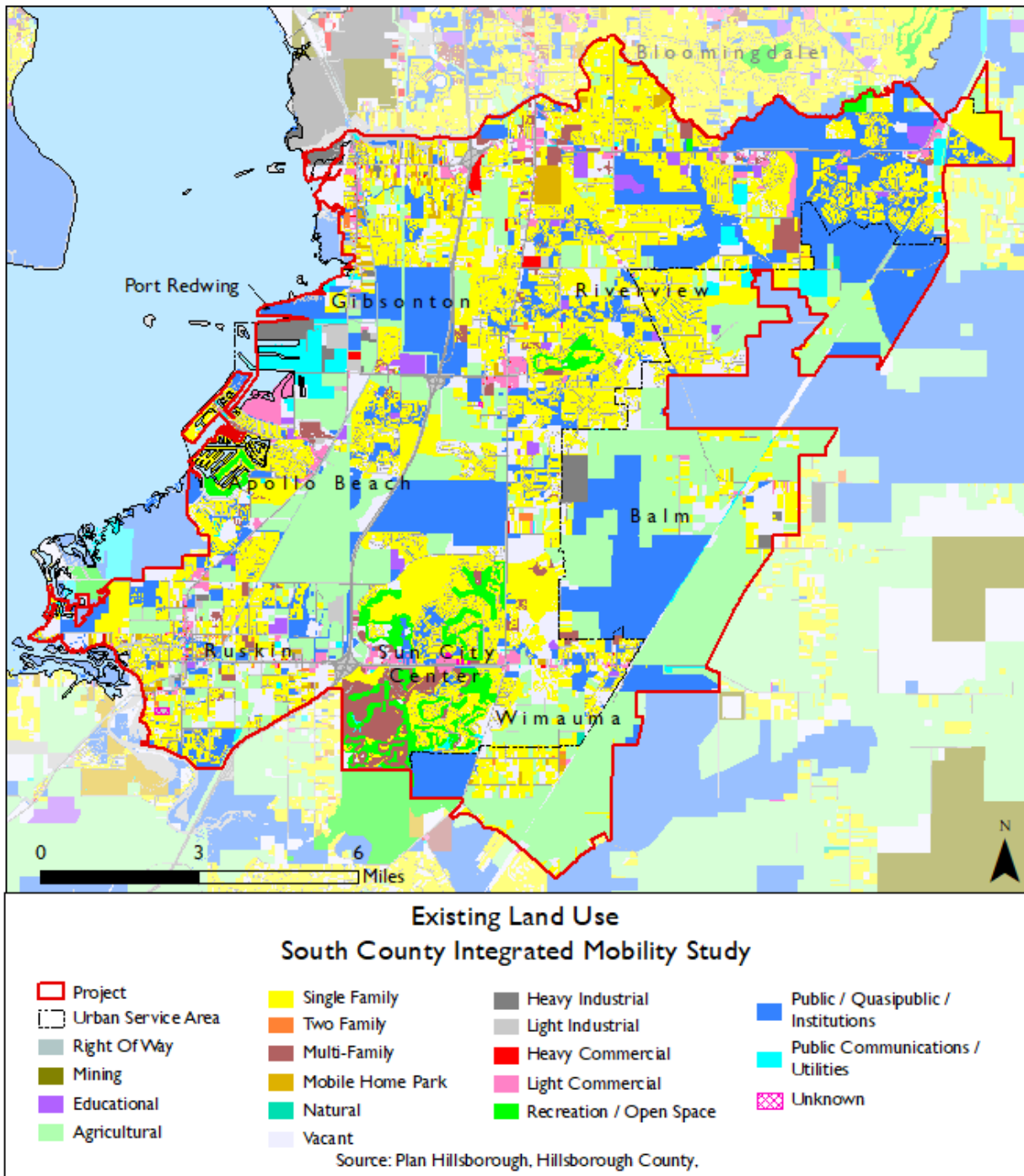
Figure 1 shows the relative percentage of existing land uses by category in the study area, and Figure 2 shows existing land use by location. The combined percentage of commercial and industrial land in the study area is relatively low (< 4 percent) in relation to residential land (see Figure 3). Figure 4 compares the relative proportions of land uses in South County with those of the City of Tampa. The City of Tampa provides an interesting point of reference, particularly with regard to future land use in Section 2.2 of the report, given that the South County population is projected to be comparable to that of the City by 2040 (see Technical Memorandum 1). As might be expected, the relative proportions of institutional and commercial lands are higher in the City, with open space/agricultural land use significantly higher in South County. Less difference is observed in residential and industrial land use proportions.

An employment to housing ratio was calculated for further insight into the availability of employment opportunities and the degree of land use diversity – conditions that can influence commute lengths and travel demand. An employment to housing ratio in the range of 0.75 to 1.5 is generally considered beneficial for reducing vehicle miles of travel (VMT) (EnviroAtlas, 2014; BIA, 2017). Comparison of total employment to total households at the census block group level yielded a ratio of 0.35 (18,543 jobs and 53,602 dwelling units) for the study area (U.S. EPA Smart Location Database, 2010 Census, 2010 LEHD Data). This suggests a need to expand employment opportunities in the region.



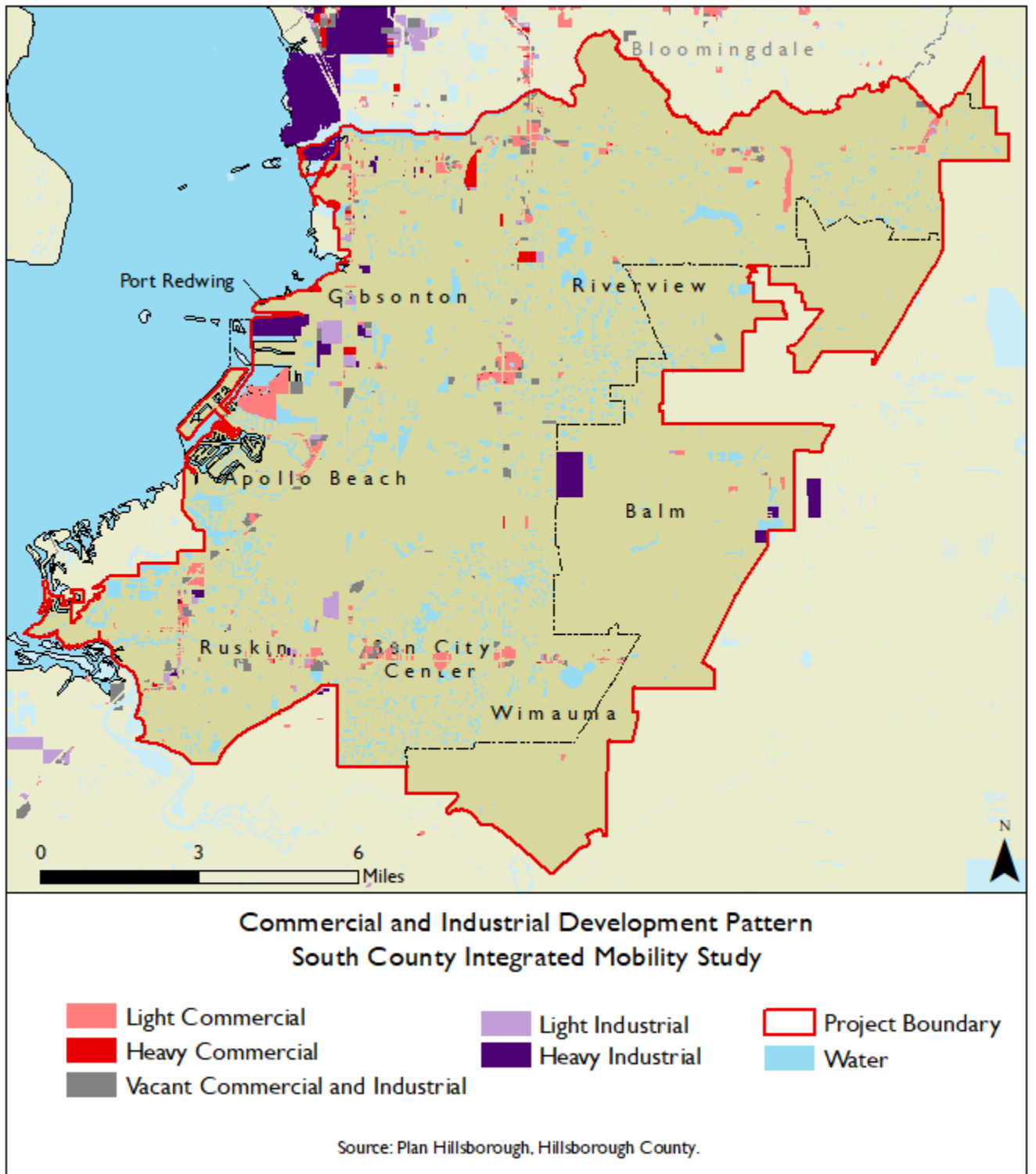
**Figure 1. Existing land use by percentage**

Source: Plan Hillsborough

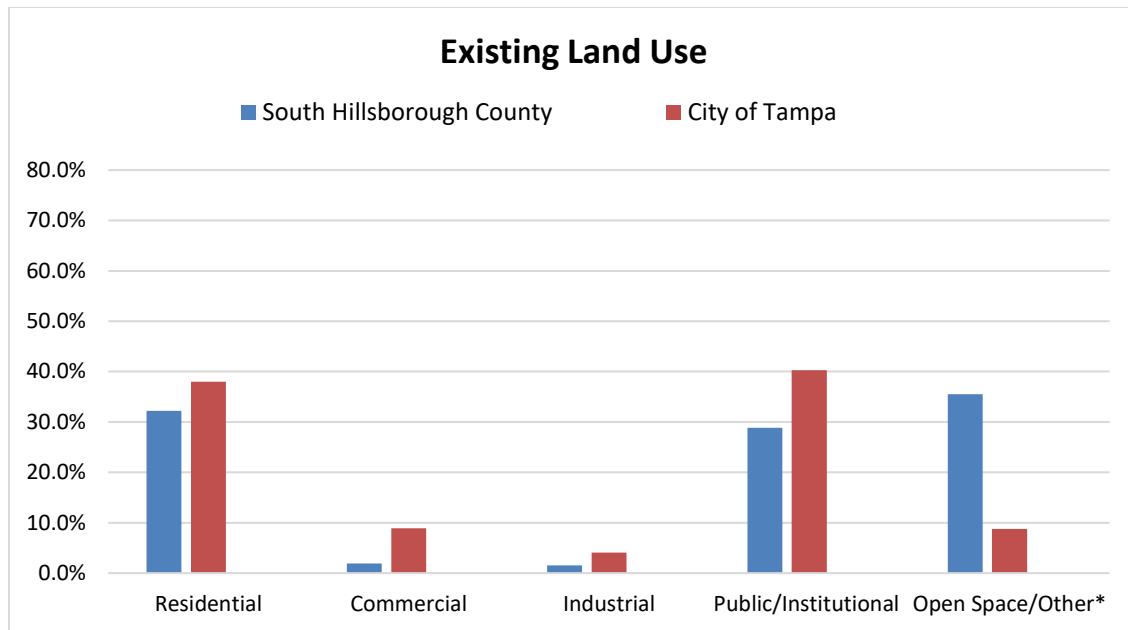


**Figure 2. Existing land use**





**Figure 3. Commercial and industrial development pattern**



\*Open Space/Other also includes agricultural, and vacant

**Figure 4. Existing land use comparison**

Source: Plan Hillsborough

## 2.2 Future Land Use

Future land use categories (FLUC) in the study area were evaluated using data from the Future Land Use Element of the Comprehensive Plan for Unincorporated Hillsborough County. A large percentage of the study area is currently designated to be residential (69%) in the future. Much of this residential land is designated for low to low-medium density residential (R-1, R-2, R-4, R-6, and R-9) (42.2%). The Residential Planned-2 (RP-2) category, described in *Technical Memorandum 1*, is located on the eastern portion of the study area and is intended for planned villages up to two dwelling units per gross acre. The future land use map designates 15,075 acres (16.7 %) as RP-2.

A brief description of the Future Land Use Element as it relates to the study area and the Hillsborough County Future Land Use map can be found in *Technical Memorandum 1: Review of Plans and Studies*. FLUCs such as mixed use, natural preservation, and research corporate park were developed for future land use planning purposes and are not identified in the existing land use categories. Therefore, direct comparison of existing and future land use categories is not possible.

The next major future land use category in the study area (16 percent) is designated for mixed-use development, including suburban, urban, and community mixed use. The mixed-use development areas are located on the western side of the study area along I-75. Less than ten percent of the land area is designated for natural preservation (9.3 percent). Agricultural land accounts for 0.3 percent of future land use. Smaller portions of the study area are designated

for commercial (1.1 percent), industrial (2.7 percent), public and quasi-public (1.5 percent), and research corporate park (0.1 percent). Table 2 summarizes the relative acreage dedicated in the Future Land Use Element for various future land use categories in the study area. Figure 5 and Figure 6 provide visuals of the future land use in the project boundary.

Figure 7 compares the FLUC proportions in South Hillsborough County with those of the City of Tampa. AS noted above, Tampa was chose as a point of reference, given that by 2040 South County is projected to have a population similar to that of Tampa today. The most striking finding is that significantly more land is set aside in South Hillsborough County for residential use (69%) than in the City of Tampa (28.3%). In contrast, lower proportions of land in South County are set aside for industrial (2.7%), public/quasi-public (1.5%), and natural/agricultural (9.6%) uses. The proportions of office commercial (1.1%) and mixed use (16.0%) land in South County are relatively similar to those of the City of Tampa (3.6% and 17.4% respectively).

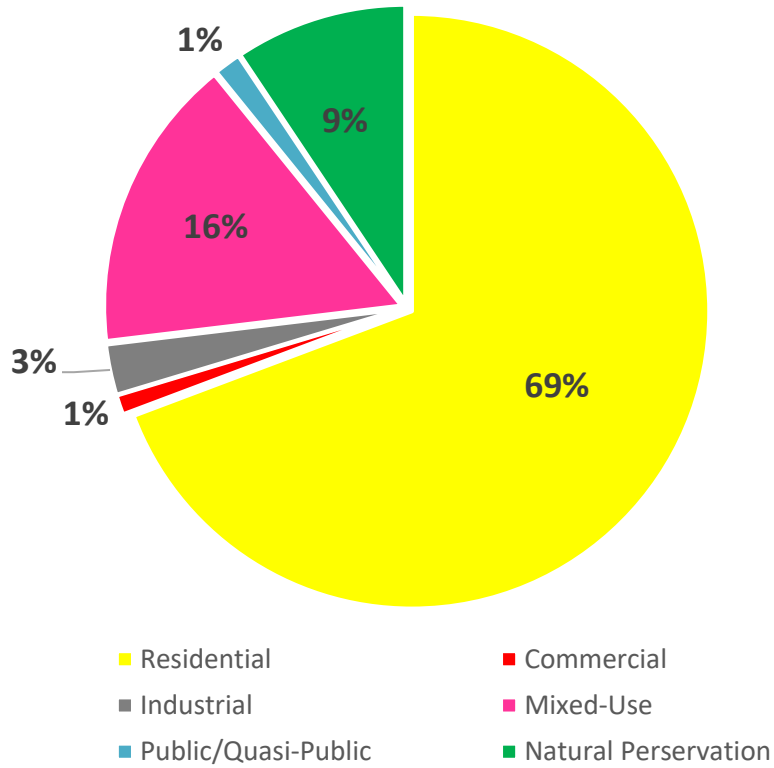
The mixed-use FLUC may include a single use or a mix of uses. Possible land use categories include retail commercial, office, light industrial, residential, residential support uses, and civic uses, as defined in the Unincorporated Hillsborough County Comprehensive Plan and the City of Tampa Comprehensive Plan. The Comprehensive Plan for Unincorporated Hillsborough County requires properties 10 acres or greater to develop with at least two land uses.

**Table 2. Future Land Use**

<b>Future Land Use</b>	<b>Acres</b>	<b>Percent (Acres)</b>	<b>Number of Parcels</b>
<b>Residential</b>	<b>62,443</b>	<b>69.0%</b>	<b>72</b>
Low to Low-Medium (R-1, R-2, R-4, R-6, R-9)	38,174	42.2%	59
Medium to High Density (R-12, R-20)	930	1.0%	8
Residential Planned-2 (RP-2)	15,075	16.7%	4
Village Residential (WVR-2)	8,264	9.1%	1
<b>Office Commercial (OC-20)</b>	<b>959</b>	<b>1.1%</b>	<b>16</b>
<b>Industrial (LI, LI-P, HI)</b>	<b>2,480</b>	<b>2.7%</b>	<b>6</b>
<b>Mixed-Use</b>	<b>14,481</b>	<b>16.0%</b>	<b>24</b>
Suburban Mixed Use (SMU-6)	12,152	13.4%	11
Urban Mixed Use (UMU-20)	648	0.7%	2
Community Mixed Use (CMU-12)	1,681	1.9%	11
<b>Public/Quasi-Public (P/QP)</b>	<b>1,319</b>	<b>1.5%</b>	<b>32</b>
<b>Research Corporate Park (RCP)</b>	<b>100</b>	<b>0.1%</b>	<b>3</b>
<b>Natural (N)</b>	<b>8,444</b>	<b>9.3%</b>	<b>21</b>
<b>Agricultural (A/R)</b>	<b>274</b>	<b>0.3%</b>	<b>3</b>
<b>Total</b>	<b>90,500</b>	<b>100.0%</b>	<b>177</b>

Source: Plan Hillsborough

## Future Land Use



**Figure 5. Future land use by percentage in South County**

Source: Plan Hillsborough

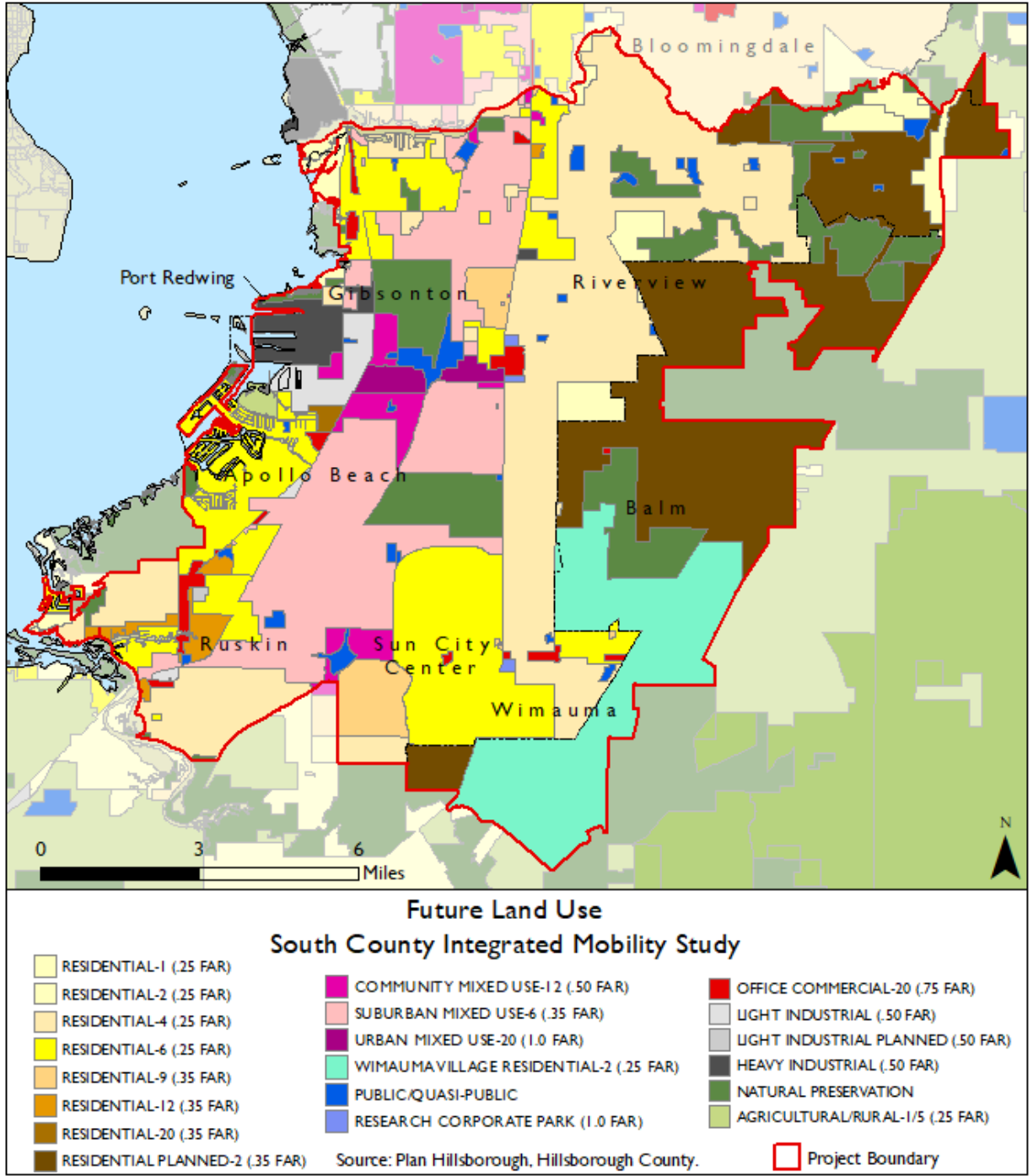
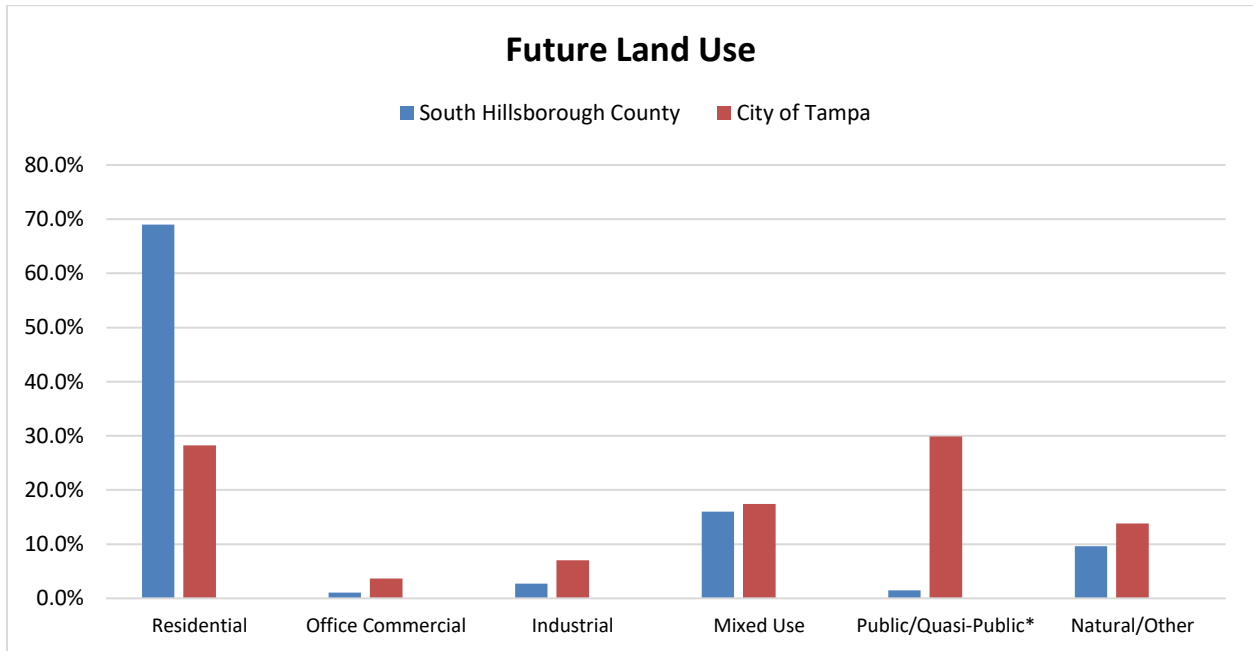


Figure 6. South County future land use map



*\*Note: Public/Quasi-Public also includes MacDill Air force and the Municipal Airport*

**Figure 7. Future land use comparison**  
Source: Plan Hillsborough

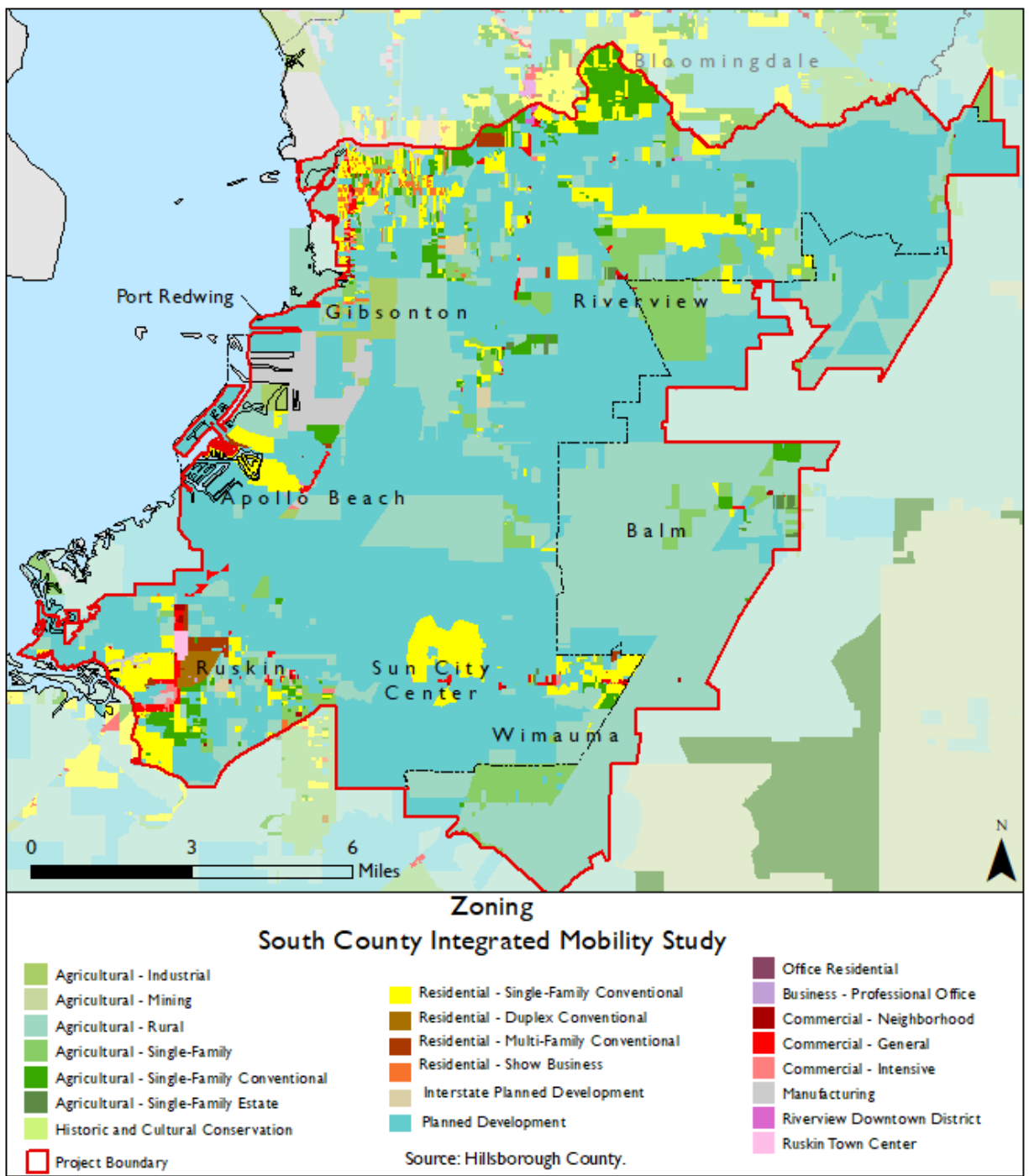
### 2.3 Zoning

Zoning categories for the study area in the Hillsborough County Land Development Code include residential, downtown (Riverview Downtown District – LDC 3.19.00), town center (Ruskin Town Center – LDC 3.17.00), agricultural, commercial, office, industrial, planned development, and special public interest. Half of the study area is zoned for planned development (54.4 %). A third of the study area (35.4 %) is zoned for agricultural uses. Residential zoning comprising single-family, two-family, multi-family, and show business is only 7.7 percent of the area. The rest of the zoning is as follows: downtown and town center (0.1 %); commercial, office, and industrial (2.4 %); and special public interest (0.1 %). Table 3 includes detailed information about zoning in the study area. A zoning map is also available in Figure 8.

**Table 3. South County Zoning by Acreage**

<b>Zoning</b>	<b>Acres</b>	<b>Percent</b>
<b>Residential</b>	<b>6,950</b>	<b>7.7%</b>
Single-family: Residential, Single-Family Conventional	6,145	6.8%
Two-family: Residential, Duplex Conventional	235	0.3%
Multi-family: Residential, Multi-family Conventional	291	0.3%
Residential, Show Business	279	0.3%
<b>Downtown and Town Center</b>	<b>110</b>	<b>0.1%</b>
Riverview Downtown District	26	0.0%
Ruskin Town Center	85	0.1%
<b>Agricultural</b>	<b>32,029</b>	<b>35.4%</b>
Agricultural Industrial; Agricultural Rural; Agricultural, Single-Family; Agricultural, Single-Family Conventional; Agricultural, Single-Family Estate	32,029	35.4%
<b>Commercial/ Office/ Industrial</b>	<b>2,198</b>	<b>2.4%</b>
Office Residential; Business, Professional Office; Commercial, Neighborhood; Commercial, General; Commercial, Intensive; Manufacturing	2,198	2.4%
<b>Planned Development</b>	<b>49,192</b>	<b>54.4%</b>
Planned Development; Interstate Planned development	49,192	54.4%
<b>Special Public Interest</b>	<b>1</b>	<b>&lt;0.1%</b>
Historic and Cultural Conservation	1	<0.1%
<b>Total</b>	<b>90,482</b>	<b>100.0%</b>

Source: Hillsborough County



**Figure 8. South County zoning designations**



## 2.2 Development Entitlements

### 2.2.1 Building Permit Activity

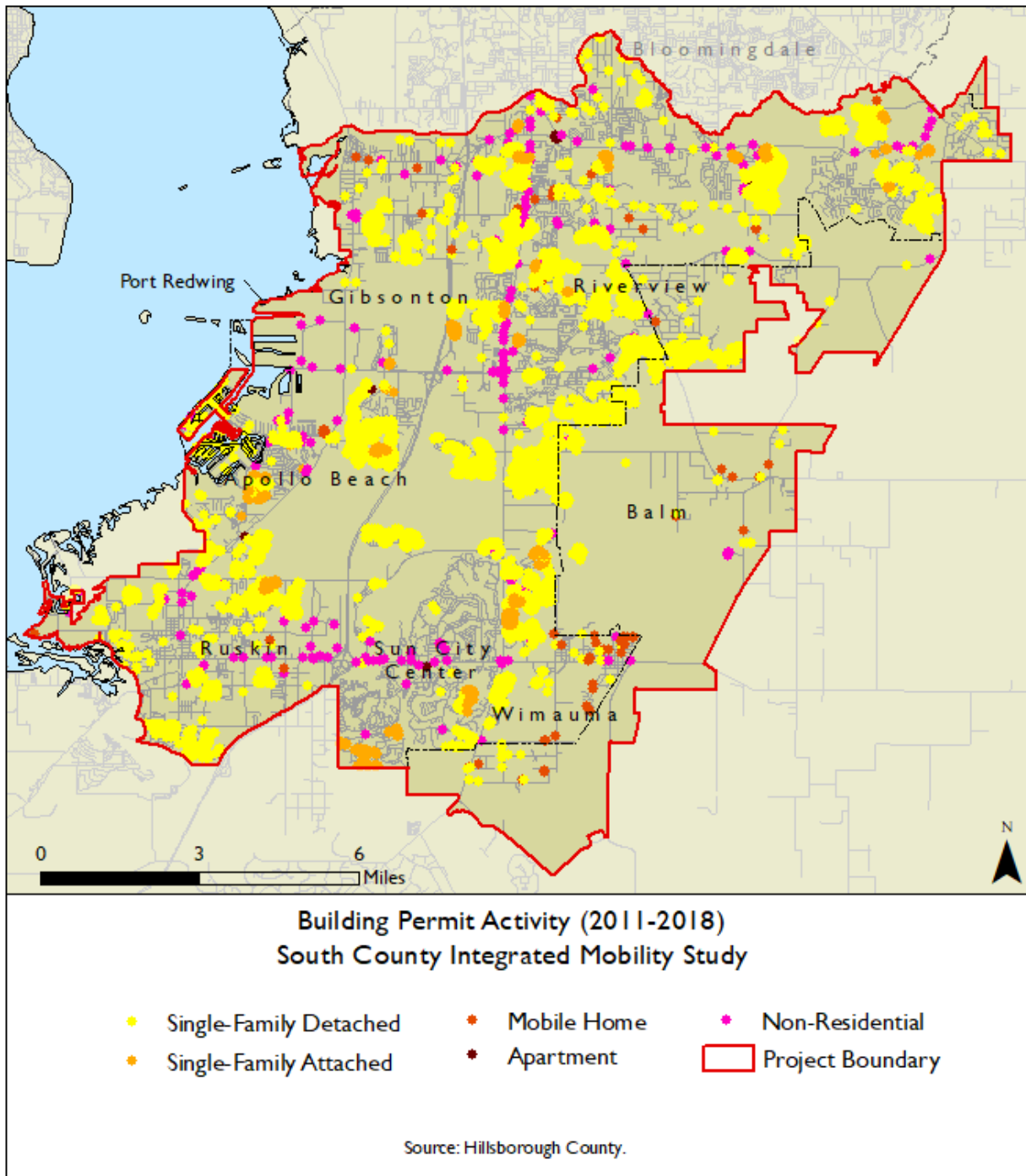
Analysis of the Hillsborough County Development Services data shows that the county issued 19,046 permits within the study area between 2011 and 2018. The majority of the issued permits were single-family (SF) (98%) with 86 percent of all permits issued being SF detached residences. SF attached dwellings comprise 11 percent of all permits issued in the study area, while apartments and mobile homes consisted of less than 1 percent respectively. Non-residential permits were only 2 percent of the total permits issued.

The data also reveals an increase in SF detached and attached dwelling units over time. A total of 4,570 SF permits were issued in 2018 – more than triple the number of SF permits (1,294) issued in 2011. A summary of the building permit activity in the study area between 2011 and 2018 is provided in Figure 9 illustrates the locations of permits by type.

**Table 4. Building Permit Activity, 2011-2018**

Issued Permits						
Year	SF Detached	SF Attached	Apartment	Mobile Home	Non-Residential	Total
2011	1118	176	5	7	18	1324
2012	1590	297	1	10	67	1965
2013	2057	256	6	8	37	2364
2014	1874	244	15	5	49	2187
2015	2527	272	8	16	55	2878
2016	2933	427	0	17	45	3422
2017	3427	363	0	12	39	3841
2018	4177	393	0	16	48	4634
<b>Total</b>	<b>19703</b>	<b>2428</b>	<b>35</b>	<b>91</b>	<b>358</b>	<b>22615</b>
<i>Note: 25 additional permits were reissued in 2014 with 1 SF Detached and 24 Non-Residential and 289 NOC (Notice of Commencement) were parts of the building permit activity</i>						

Source: Hillsborough County



**Figure 9. South County building permit activity 2011-2018**

### 2.2.2 Certificates of Occupancy

Between 2011 and 2018, a total of 18,181 single-family certificates of occupancy, and commercial certificates of occupancy comprising 2,343,802 square feet were issued in the study area. Similar to the permit data, single-family certificates of occupancy increased over the seven-year period between 2011 and 2018.

**Table 5. Certificates of Occupancy (2011 – 2018)**

Year	SF (Number)	Non-Residential/ Commercial (Square Feet)
2011	1084	105,090
2012	1332	76,108
2013	1960	227,802
2014	1785	117,785
2015	2092	1,169,554
2016	2766	335,280
2017	3225	275,439
2018	3937	36,744
<b>Total</b>	<b>18,181</b>	<b>2,343,802</b>

Source: Hillsborough County

### 2.2.3 Developments of Regional Impact (DRI)

The study area includes ten active DRIs, one of which (Fishhawk Ranch - residential) has been built out. Of the remaining nine, seven DRIs are mixed-use (Apollo Beach Phase 1, Summerfield Crossings, Southbend, Harbor Bay, South Shore Corporate Park, Lake Hutto, and Waterset), one is residential (DG Farms), and one is industrial (Big Bend Transfer Company).

A summary of the DRIs, including total acreage, buildout and expiration year, amount approved, and percent built is provided in Table 6 and Table 7. The ten DRIs encompass 15,649 acres, with 25,111 SF residential units, 7,682 multi-family residential units, 8.4 million gross square feet (GSF) of commercial, and 3.8 million GSF of industrial. The DRIs would provide educational facilities that will accommodate an estimated 4,210 students. One DRI also includes 675 boat slips. At the time of this report, 59 percent of approved single-family residential, 35 percent of approved multi-family residential, 25 percent of approved commercial and services, 6 percent of approved educational, 67 percent of approved industrial, and 60 percent of the approved slips have been built.

- **Apollo Beach Phase 1 (DRI 59) (Mixed-Use):** 62 percent of single-family residential and 42 percent of commercial and services are built.
- **Summerfield Crossings (DRI 73) (Mixed-Use):** 91 percent of single-family residential and 99 percent of multi-family residential are built; 30 percent of approved commercial development is built.

- **Southbend (DRI 145) (Mixed-Use):** 100 percent of approved single-family is built; none of the approved multi-family, commercial, and services has been built.
- **Fishhawk Ranch (DRI 191) (Residential):** built out.
- **DG Farms (DRI 194) (Residential):** only 4 percent of single-family approved residential development, 55 percent of approved multi-family residential and 50 percent of approved commercial and services are built.
- **Harbor Bay (DRI 241) (Mixed-Use):** 79 percent of approved single-family residential, 39 percent of approved multi-family residential, and 30 percent of approved commercial and services are built.
- **Big Bend Transfer Company (DRI 245) (Industrial):** percent built information is not available.
- **South Shore Corporate Park (DRI 249) (Mixed-Use):** 68 percent of approved single-family residential, 13 percent of approved multi-family residential, 0 percent of approved commercial and services built, and 34 percent of approved industrial are built. A notice of proposed changes is under review for this DRI.
- **Lake Hutto (DRI 259) (Mixed-Use):** 32 percent of approved single-family residential, 0 percent of approved multi-family residential, and 8 percent of approved commercial and services are built.
- **Waterset (Wolf Creek Branch) (DRI 266) (Mixed-Use):** 10 percent of approved single family residential, 0 percent of approved multi-family residential, and 2 percent of approved commercial and services are built.

A visual illustration of each DRI in the study area is presented in Figure 10 through Figure 20.

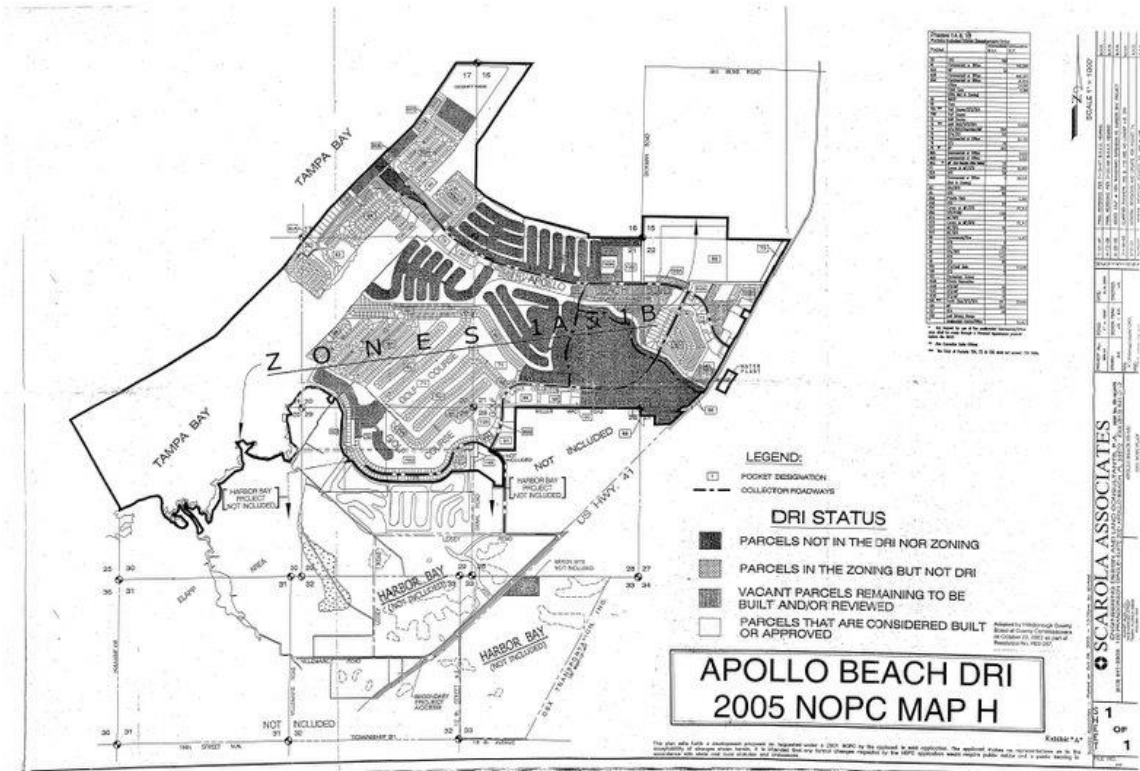


Figure 10. Apollo Beach DRI

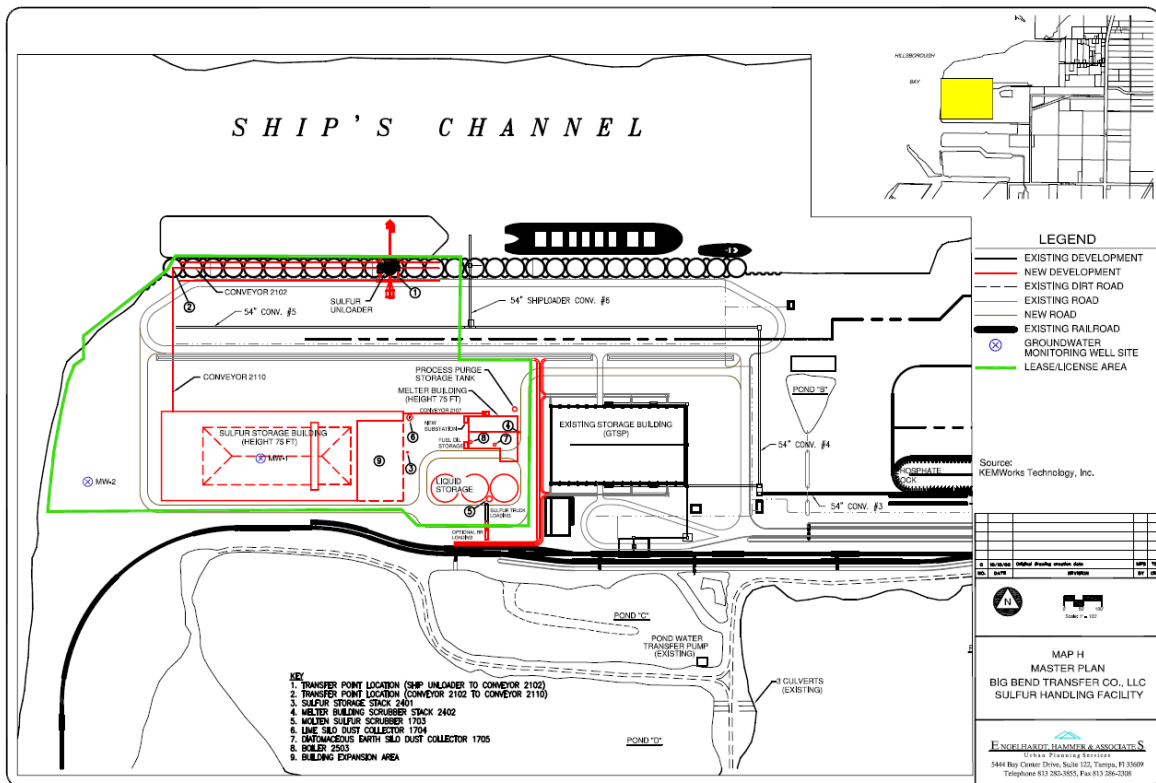


Figure 11. Big Bend Transfer Company DRI



# FISHHAWK RANCH

## FISHHAWK COMMUNITIES LIMITED PARTNERSHIP

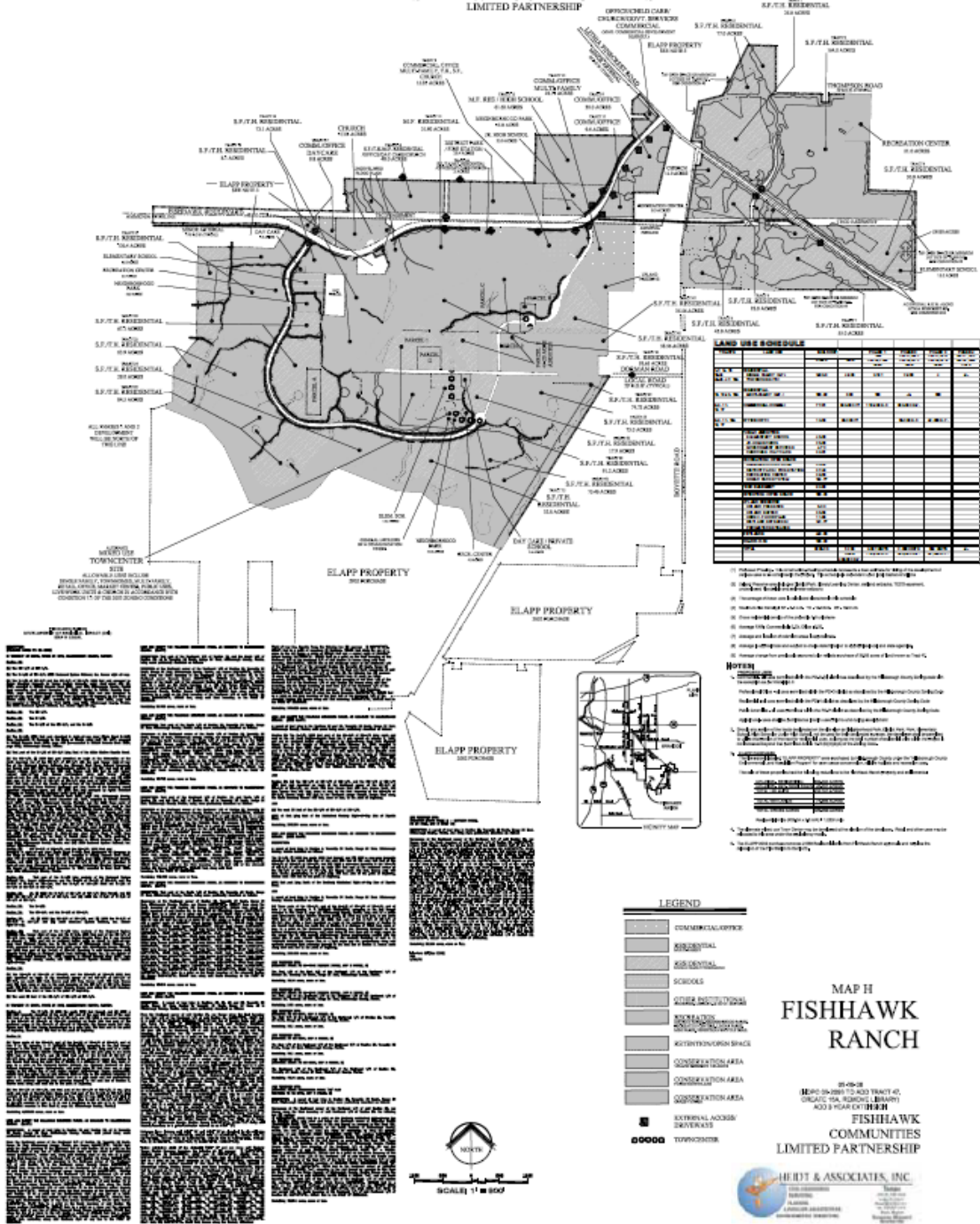


Figure 13. Fishhawk Ranch DRI

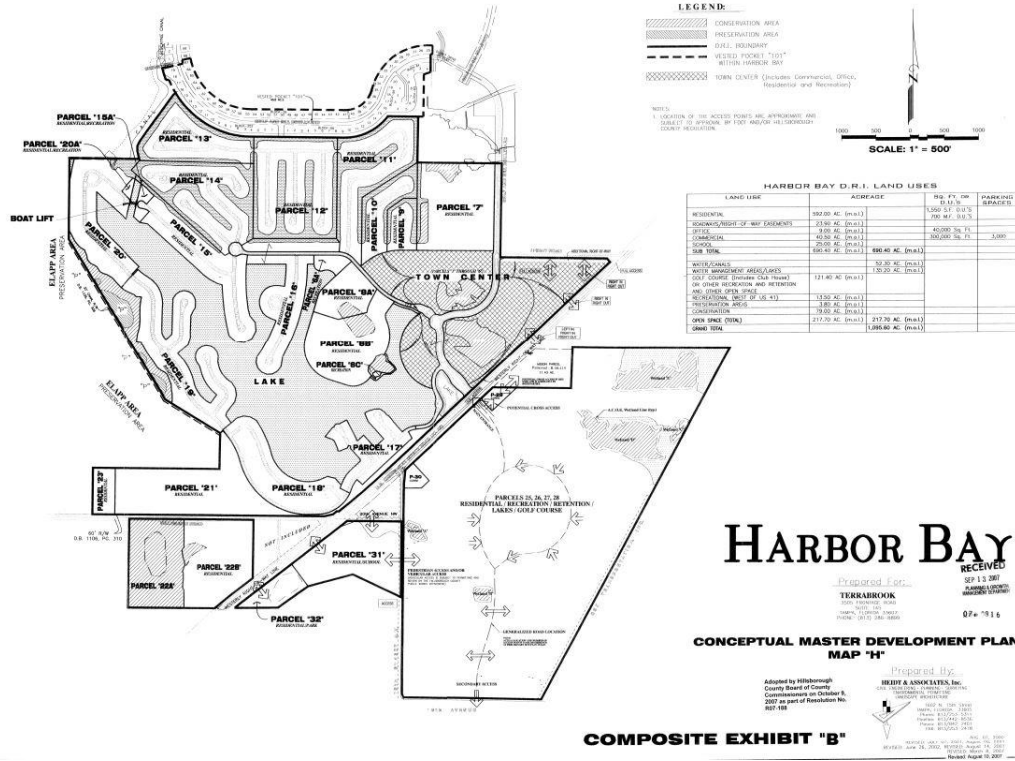


Figure 14. Harbor Bay DRI

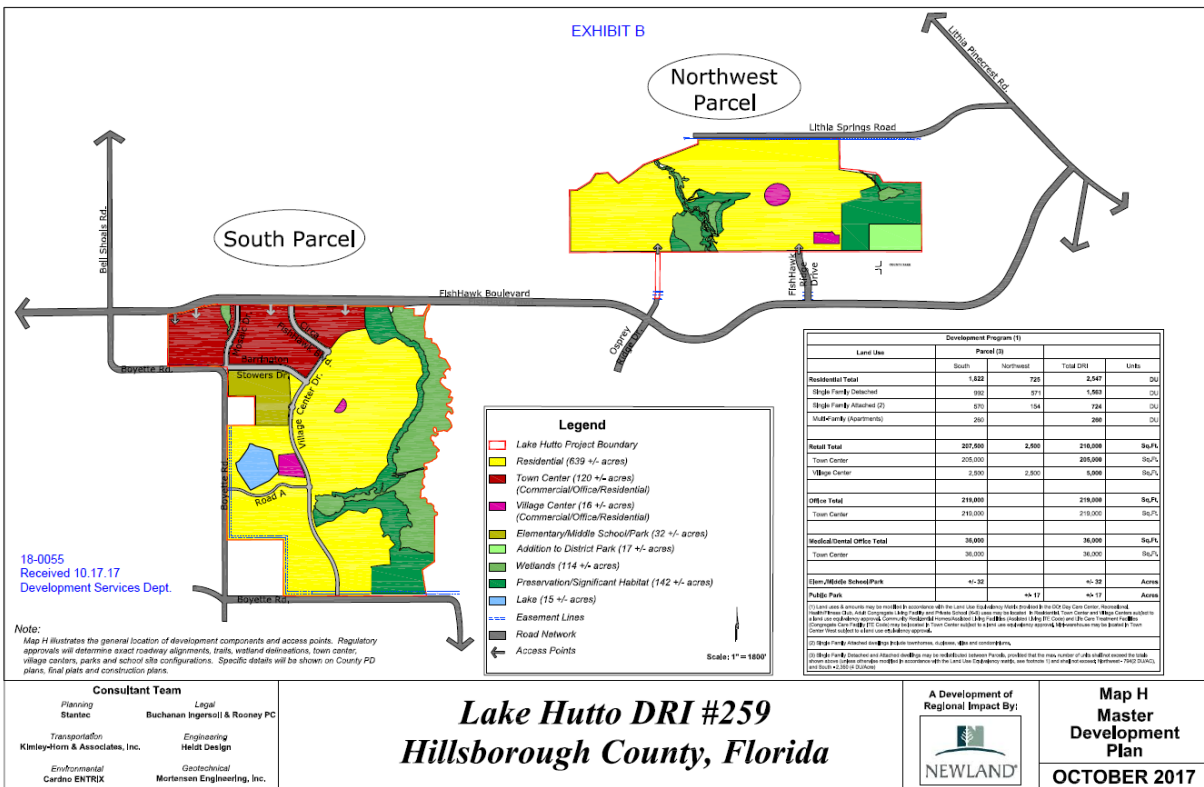


Figure 15. Lake Hutto DRI



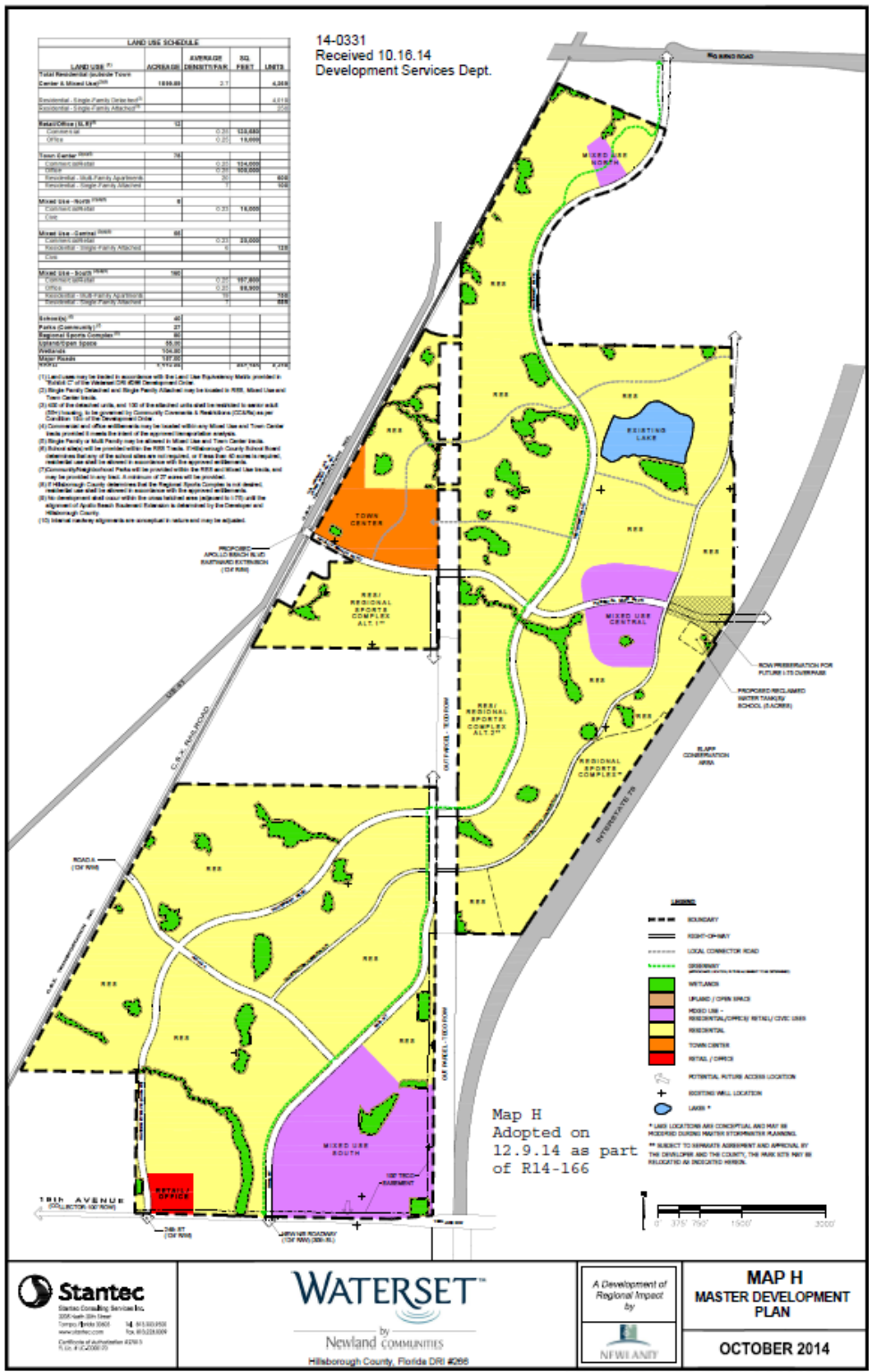


Figure 16. Waterset DRI

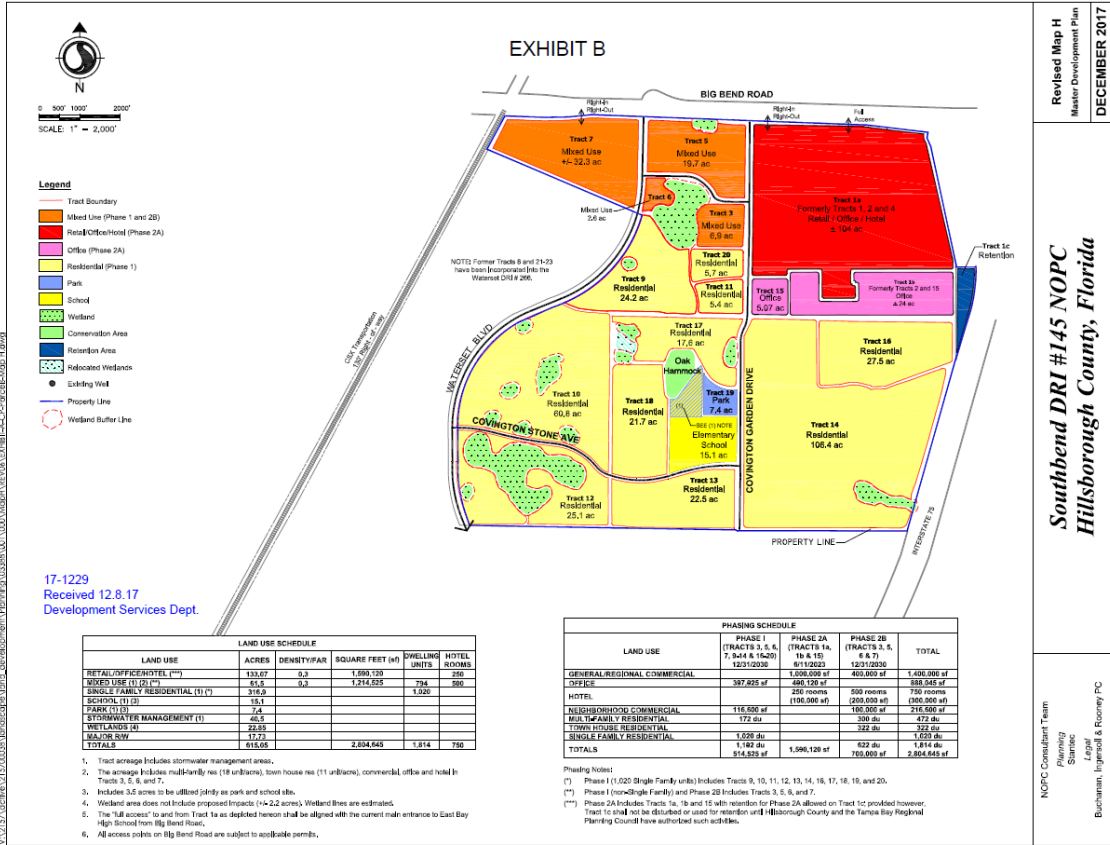


Figure 17. Southbend DRI

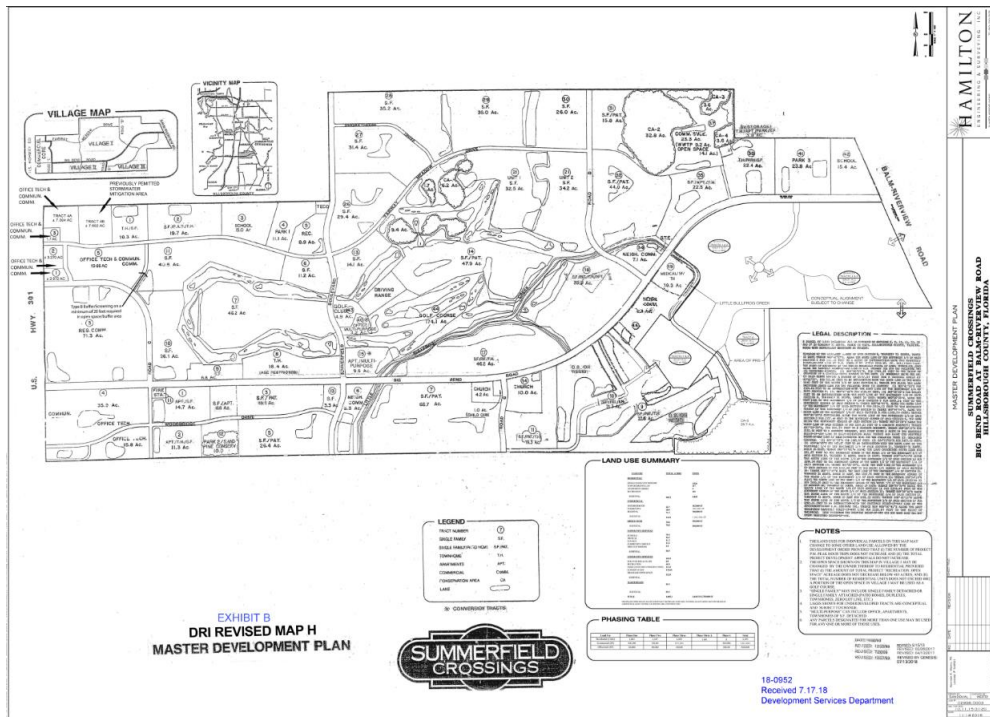


Figure 18. Summerfield Crossings DRI

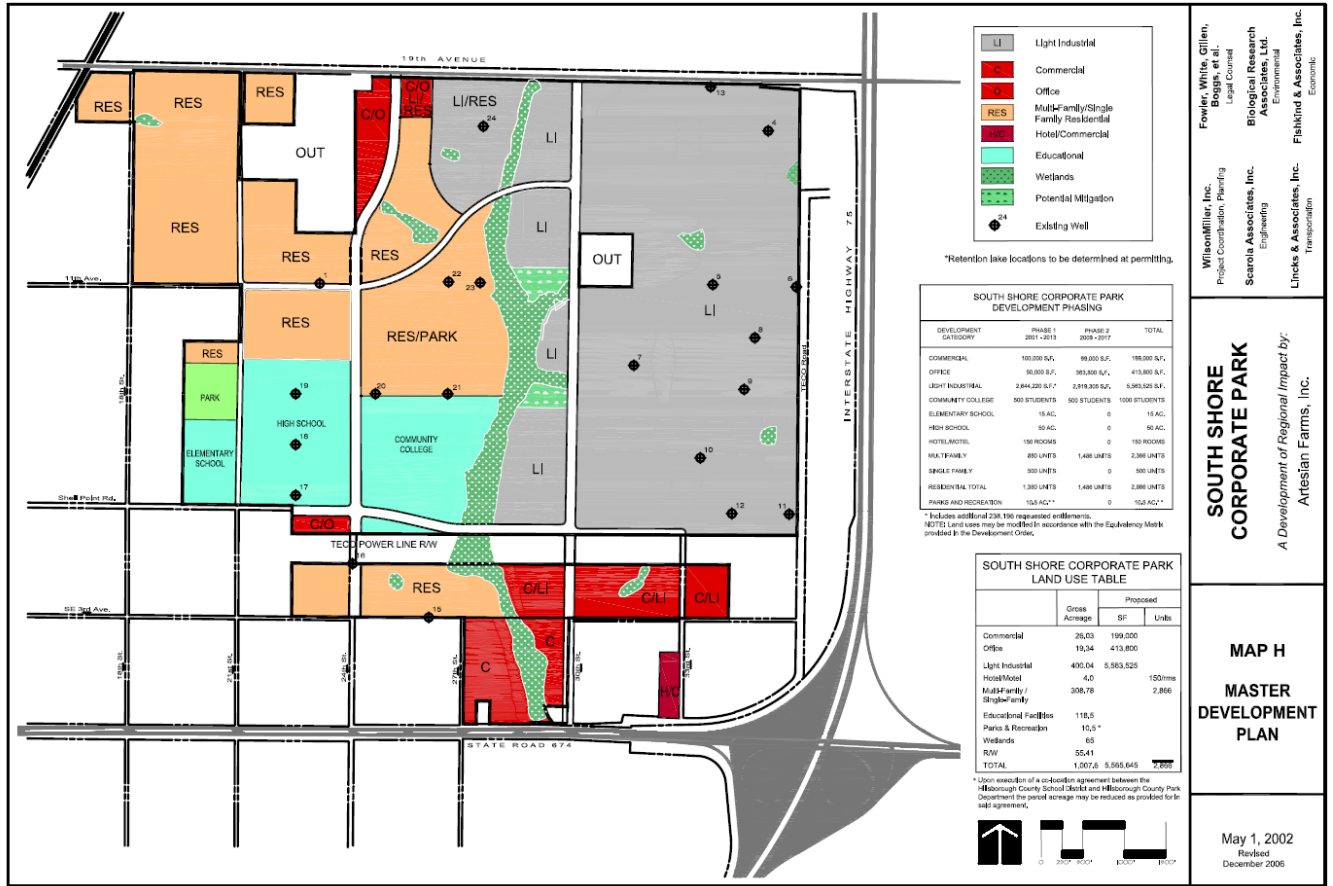


Figure 19. South Shore Corporate Park DRI

**Table 6. South County DRIs (Amount Approved)**

<b>DRI #</b>	<b>Project Name</b>	<b>Description</b>	<b>Total Acres</b>	<b>SF (#)</b>	<b>MF (#)</b>	<b>Commercial &amp; Services (GSF/SF)</b>	<b>Educational (#)</b>	<b>Industrial (GSF)</b>	<b>Boat/ Marina Slips (#)</b>	<b>Buildout/ Expiration Year</b>
59	Apollo Beach/ Phase 1	Mixed-Use	3,100	2,429		1,010,464	-	-	-	2022
73	Summerfield Crossings	Mixed-Use	1,886	3,871	522	1,923,264	-	-	-	2027
145	Southbend	Mixed-Use	612	1,020	794	2,504,645	-	-	-	2030
191	Fishhawk Ranch	Residential	3,037	4,503	660	478,569	-	48,315	-	2016
194	DG Farms	Residential	1,385	3,624	2,504	445,047	-	-	-	2029
241	Harbor Bay	Mixed-Use	1,096	1,550	700	340,000	-	-	675	2025
245	Big Bend Transfer Company	Industrial	18	-	-	-	-	-	-	2025
249	South Shore Corporate Park	Mixed-Use	1,001	749	892	871,000	2,800	3,742,220	-	2030
259	Lake Hutto	Mixed-Use	1,139	2,287	260	184,400	160	-	-	2029
266	Waterset	Mixed-Use	2,375	5,078	1,350	677,380	1,250	-	-	2037
<b>Total</b>			<b>15,649</b>	<b>25,111</b>	<b>7,682</b>	<b>8,434,769</b>	<b>4,210</b>	<b>3,790,535</b>	<b>675</b>	

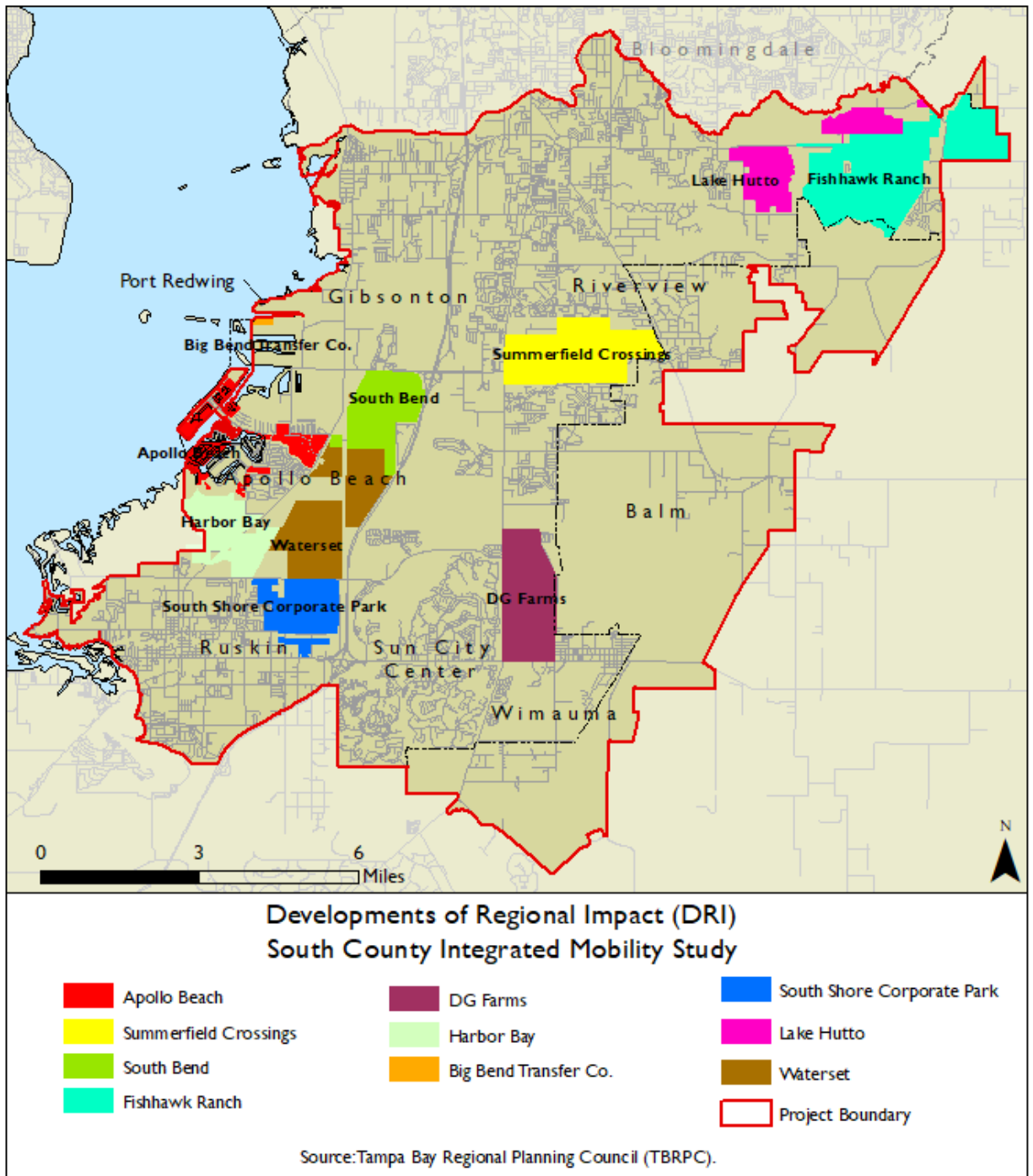
**Note:** Red indicates that there is a current notice of proposed change(s) under review for the particular project

Source: Tampa Bay Regional Planning Council (TBRPC)

**Table 7. South County DRIs (Percent Built)**

<b>DRI #</b>	<b>Project Name</b>	<b>Description</b>	<b>SF Percent Built</b>	<b>MF Percent Built</b>	<b>Commercial and Services Percent Built</b>	<b>Educational Percent Used</b>	<b>Industrial Percent Built</b>	<b>Slips Percent Built</b>
59	Apollo Beach/ Phase 1	Mixed-Use	62%	-	42%	-	-	-
73	Summerfield Crossings	Mixed-Use	91%	99%	30%	-	-	-
145	Southbend	Mixed-Use	100%	0%	0%	-	-	-
191	Fishhawk Ranch	Residential	71%	74%	62%	-	100%	-
194	DG Farms	Residential	4%	55%	50%	-	-	-
241	Harbor Bay	Mixed-Use	79%	39%	30%	-	-	60%
245	Big Bend Transfer Company	Industrial	-	-	-	-	-	-
249	South Shore Corporate Park	Mixed-Use	68%	13%	0%	18%	34%	-
259	Lake Hutto	Mixed-Use	32%	0%	8%	0%	-	-
266	Waterset	Mixed-Use	10%	0%	2%	0%	-	-
<b>Average for all DRIs</b>			<b>59%</b>	<b>35%</b>	<b>25%</b>	<b>6%</b>	<b>67%</b>	<b>60%</b>
<i>Note: Red indicates that there is a current notice of proposed change(s) under review for the particular project</i>								

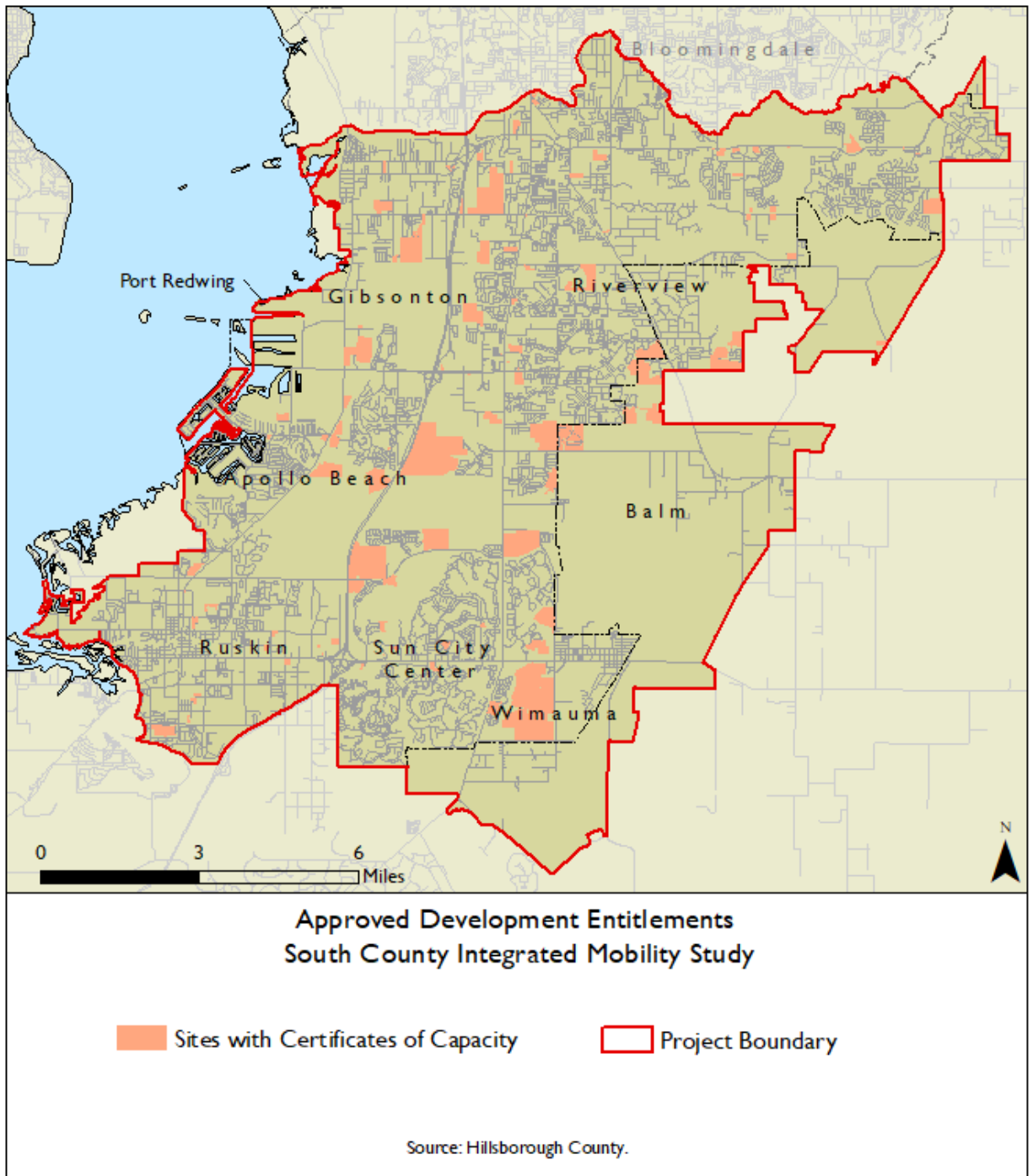
Source: Tampa Bay Regional Planning Council (TBRPC)



**Figure 20. Active DRIs**

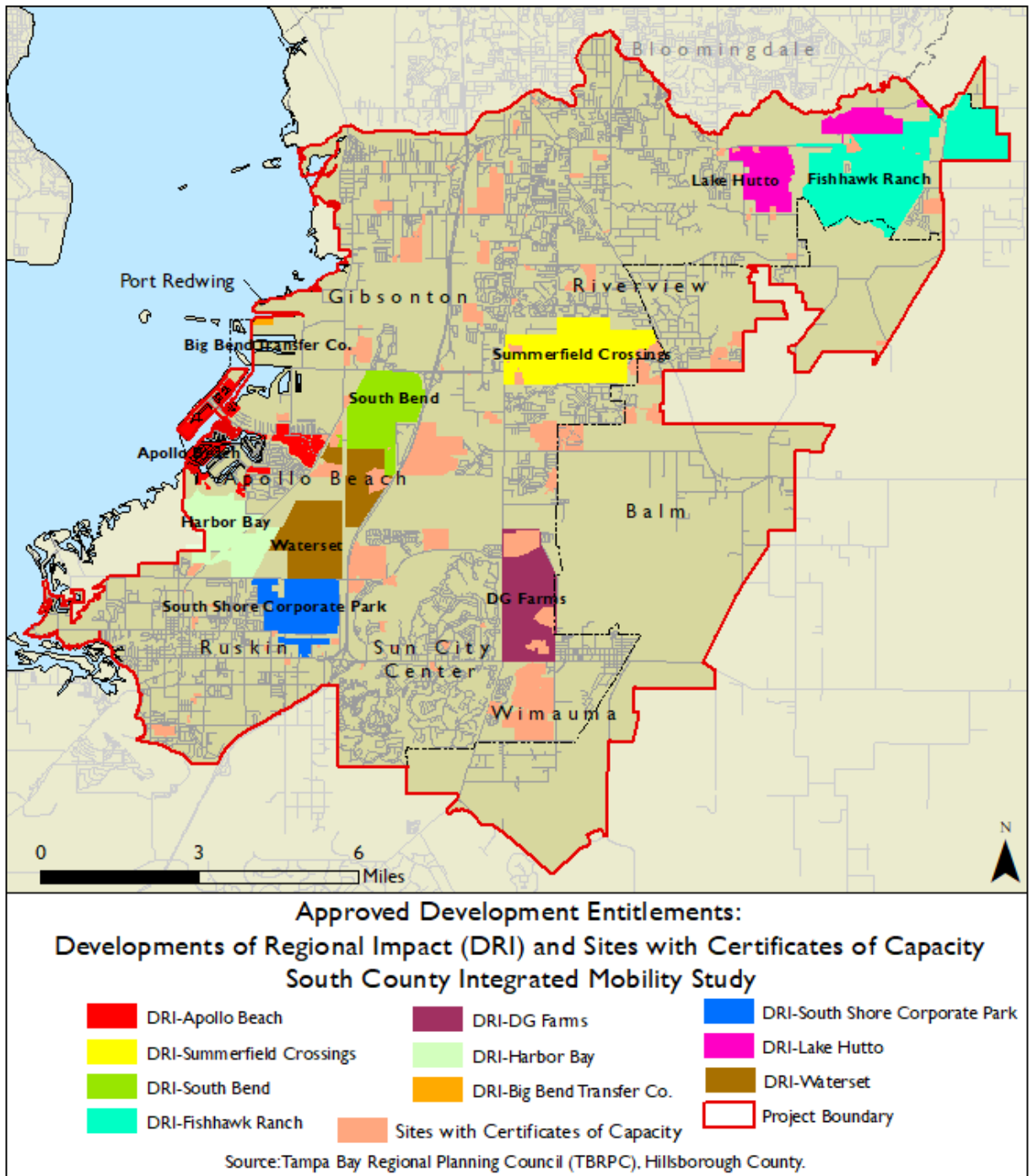
#### ***2.2.4 Sites with Certificates of Capacity***

Other approved development entitlements in the study area include sites with certificates of capacity (122 sites occupying 4,617 acres). A certificate of capacity is a certification of a determination of capacity (storm water, transportation, solid waste, and parks) “issued upon approval of subdivision construction plan, site development plan, DRI Development Order, Building Permit, or Development Agreement and payment of the reservation fee” (Hillsborough County, Florida, Land Development Code art. XII 12.01.00 (2019)). A map illustrating sites with certificates of capacity is provided in Figure 21. Figure 22 shows sites with certificates of capacity in relation to study area DRIs.



**Figure 21. Sites with certificates of capacity**





**Figure 22. Approved development entitlements**

### 2.2.5 Competitive Sites

The Hillsborough County Economic Development Department has designated a number of “competitive sites” for economic development purposes. As stated on the Hillsborough County website, “a competitive site is a location in Hillsborough County that has been identified as having specific real estate attributes that make it attractive to sizable industrial or office development. These attributes include size, zoning, land use, development entitlements, development complexity, and supporting infrastructure.” The County’s Competitive Sites program identifies these potential sites and crafts policies to encourage industry, investment and development of these locations.

There are sixteen (16) competitive sites in the study area, ten (10) of which are planned development (PD), one (1) is manufacturing, and five (5) are light industrial (LI). The planned development sites are mostly mixed-use and DRIs. Table 8 and Table 9 give more information on the competitive sites in the study area. Maps of the competitive sites and DRIs overlaid on competitive sites are available in Figure 23 and Figure 24.

**Table 8. Competitive Sites**

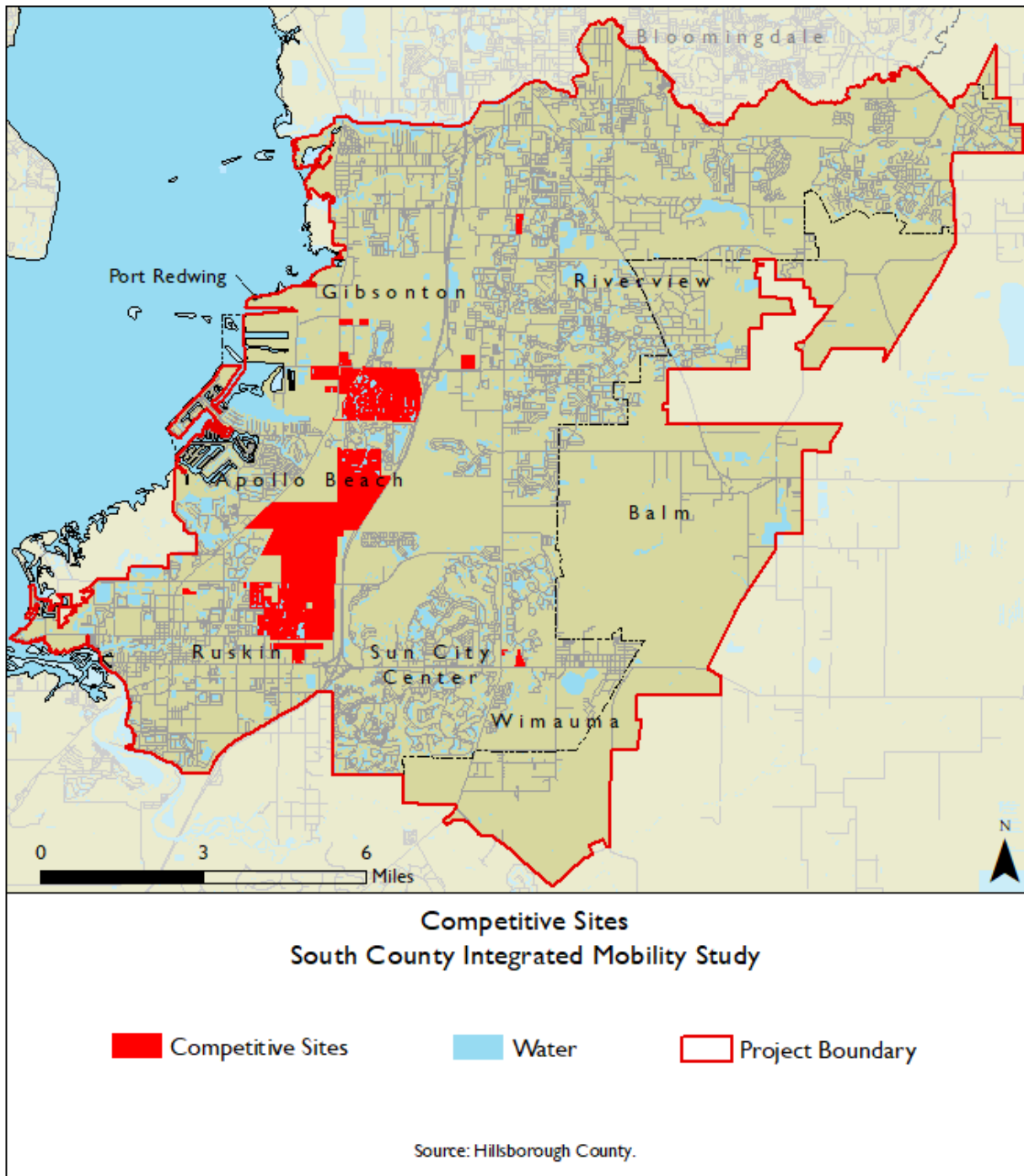
Competitive Sites	# Sites	Acres
<b>All Planned Development (PD)</b>	<b>10</b>	<b>5,346</b>
PD Mixed-Use	5	284
PD (DRI 145/DRI 194/DRI 249/DRI 266)	4	5,020
PD Hospital	1	42
<b>Manufacturing (M)</b>	<b>1</b>	<b>66</b>
<b>Light Industrial (LI)</b>	<b>5</b>	<b>79</b>
<b>Total</b>	<b>16</b>	<b>5,491</b>

Source: Hillsborough County

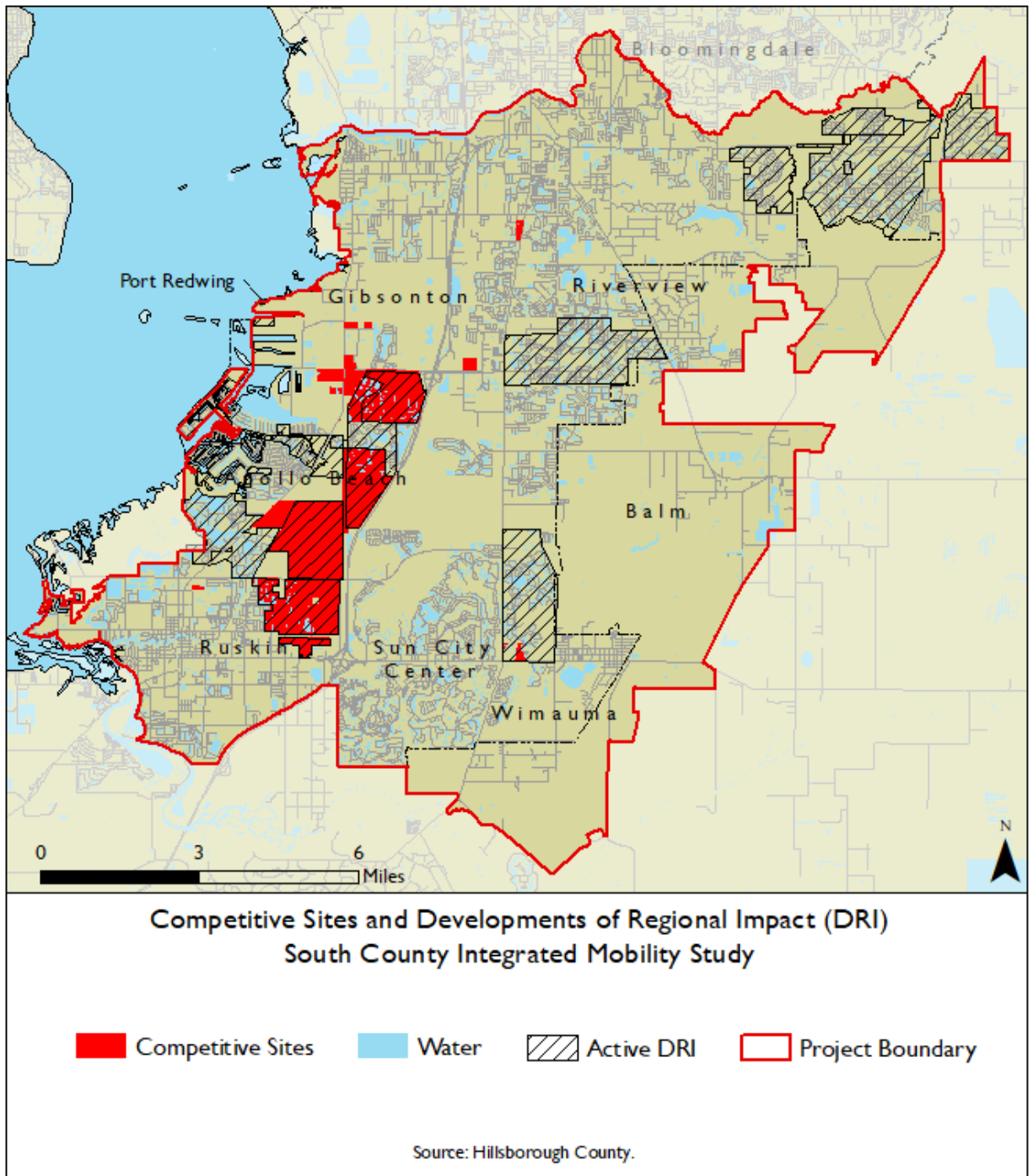
**Table 9. Competitive Sites (Square Feet)**

Land (Square Feet)	Entitled	Built	Remaining
<b>Residential</b>	9,453	1,485	8,087
<b>Commercial</b>	2,704,853	2,940	2,701,913
<b>Office</b>	2,124,374	0	2,234,374
<b>Industrial</b>	7,778,955	1,593,653	4,248,172
<i>Note: The remaining office is more than entitled because a planned development mixed-use changed from no office to 120,000 sq. ft. of office.</i>			

Source: Hillsborough County



**Figure 23. Competitive Sites**



**Figure 24. Competitive sites and DRIs**

## **2.3 Evaluation of Development and Redevelopment Potential**

To determine development and redevelopment potential, the study team evaluated land use, development intensity, building value, and environment constraints for parcels within and adjacent to the study area using Hillsborough County Property Appraiser data. The evaluation procedure included the following:

- Identify parcels with development potential (undeveloped land),
- Identify parcels with redevelopment potential (developed, but with low existing improvement value or development intensity),
- Detect potential environment constraints that could limit development and redevelopment of a site,
- Assess the remaining unconstrained acreage.

### ***2.3.1 Parcels with Development Potential***

Parcels with existing vacant land use classifications in the property appraiser data were identified as having development potential. In addition, other parcels with no building information, including agricultural, commercial, or residential parcels with no building square footage, building effective build date, or building value, were also considered as developable. Finally, public parcels classified as homeowner association (HOA), right-of-way (ROW), utility, cemeteries, public, private schools, golf courses, churches, and transportation as well as parcels with approved development entitlements were excluded from consideration. Based on this evaluation, 8,310 parcels (20,986 acres) were identified to have development potential. The results are illustrated in Table 12 and Table 13.

### ***2.3.2 Parcels with Redevelopment Potential***

Property appraiser parcel data was used to determine parcels with redevelopment potential. Information used during this process include existing use, building and land value and development intensity. Similar to identifying development potential, public parcels classified as homeowner association (HOA), right-of-way (ROW), utility, cemeteries, public, private schools, golf courses, churches, and transportation, as well as parcels with approved development entitlements, were excluded from consideration. The 8,310 parcels identified in the previous step as having development potential were also excluded. Subsequently, parcels with high utilization rates or high value buildings relative to total parcel value were also removed from consideration. The following two main criteria were used to identify the parcels with redevelopment potential (see Table 10):

- Ratio of building value to total value between 0.1 percent to 33 percent
- Ratio of building area to site area [floor-area-ratio (FAR)] for development intensity between 0.01 to 0.2 for sites greater than five acres

Parcels with low building to total value ratios and low FAR in those ranges are considered as having higher potential to redevelop than other parcels with higher value buildings or FAR.

Some of the parcels meet both criteria. A breakdown of the parcels by criteria is available in Table 10 and Table 11. A total of 1,943 parcels occupying 8,693 acres were classified as having low building value percentage. A total of 124 parcels were classified as low development intensity, covering 1,549 acres. Nineteen (19) parcels (137 acres) have both low building value and low development intensity. Maps of non-residential FAR and age of building construction (variables which indicate redevelopment potential) are provided in Figure 25 and Figure 26.

**Table 10. Redevelopment Potential Evaluation Criteria**

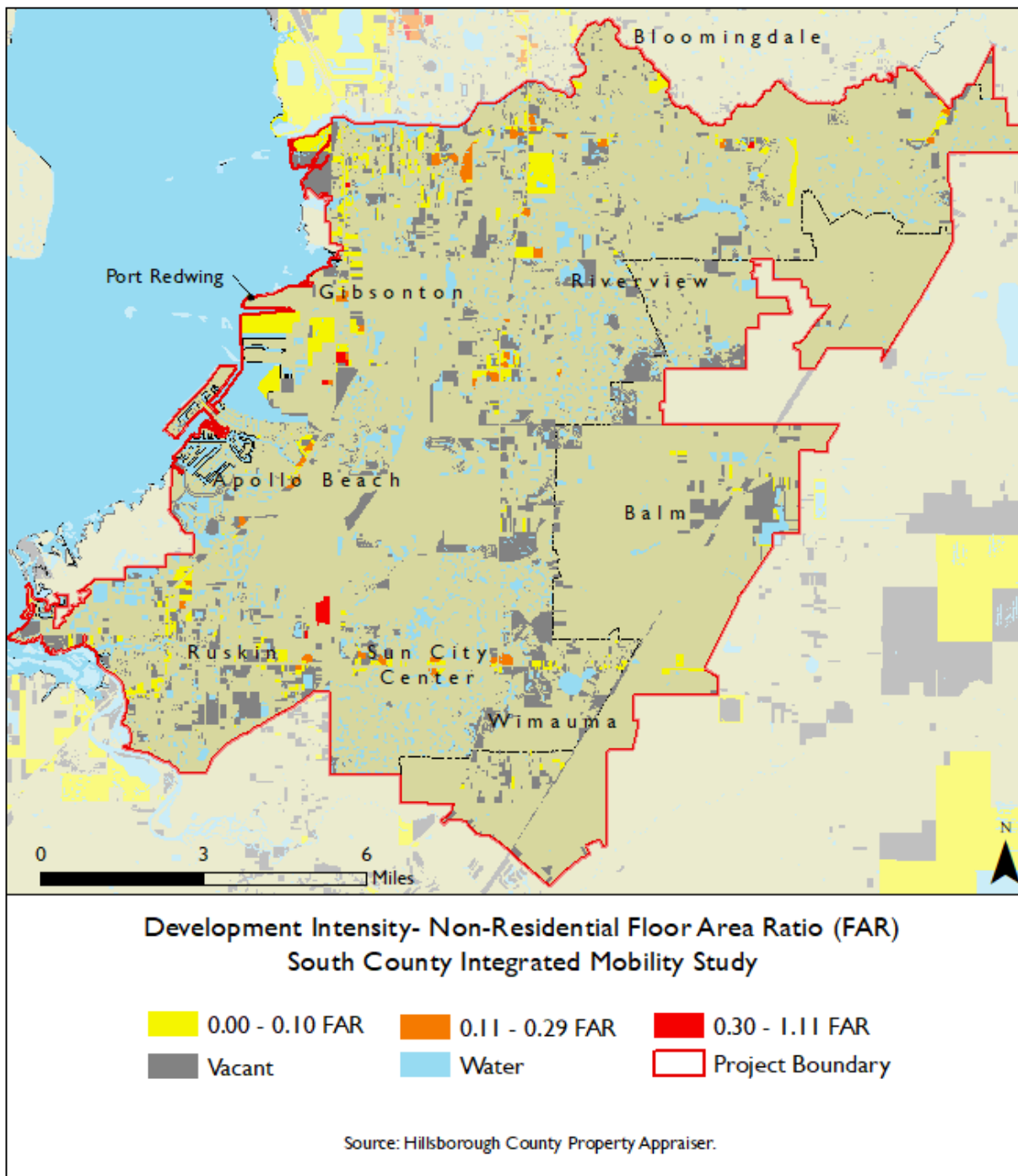
Criteria	# Parcels	Acres
<b>Parcel with Low Building Value Percentage</b>		
Building Value as Percent of Total Value (0.1% to 33%)	1,962	8,830
<b>Parcel with Low Development Intensity</b>		
Development Intensity (FAR) for Parcels 5 Acres or Greater in Size (0.01 to 0.2 FAR)	143	1,686

Source: Hillsborough County Property Appraiser

**Table 11. Redevelopment Potential Parcels**

Criteria	# Parcels	Acres
Parcel with Low Building Value Percentage	1,943	8,693
Parcel with Low Development Intensity	124	1,549
Parcel with Low Building Value and Low Development Intensity	19	137
<b>Total</b>	<b>2,086</b>	<b>10,378</b>

Source: Hillsborough County Property Appraiser



**Figure 25. Non-residential floor-area-ratio (FAR)**

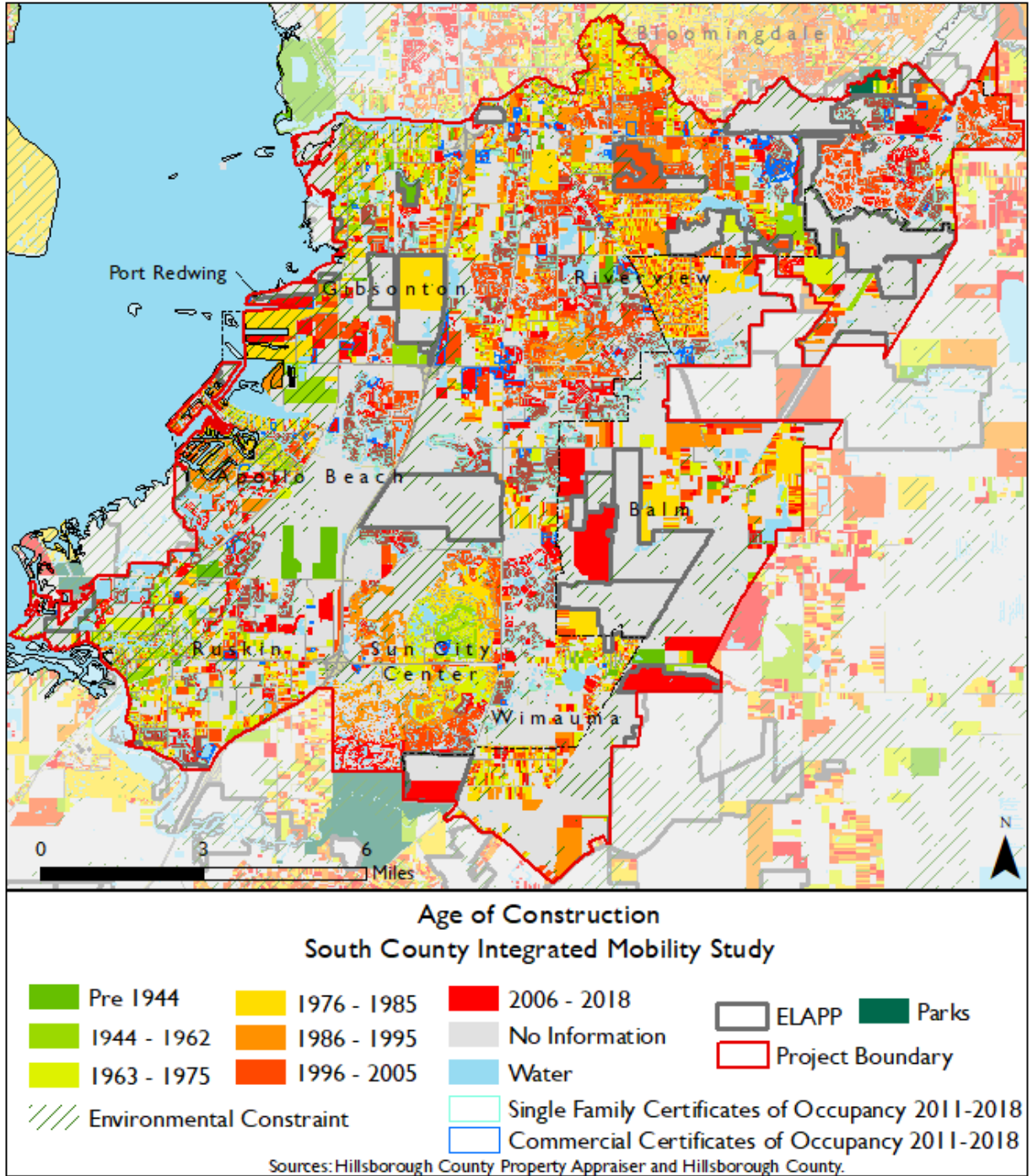


Figure 26. Age of construction



### 2.3.3 Additional Analysis: Environmental Constraints

Developable and re-developable parcels were further evaluated in terms of the presence environmental constraints. Parcels with 75 percent or more land area covered by water, wetlands, and FEMA regulatory floodways were withdrawn from consideration. This process resulted in the removal of 1,624 parcels (6,640 acres) from consideration as developable and 588 parcels (3,785 acres) from consideration as re-developable sites (Table 12). Parcels with less than 75 percent of land area constrained by water, wetland, and flood hazard areas were labeled partially constrained.

Unconstrained acreage for partially constrained parcels was then calculated and added to the total acreage of developable and re-developable parcels. The total number of parcels, total acreage, and unconstrained acreage for the developable and re-developable parcels are provided in Table 12. A total of 10,396 parcels (31,364 acres) were identified as having development and redevelopment potential, but only 8,184 of those parcels (20,939 acres) were determined to be unconstrained (including partially and unconstrained sites).

Next, the parcels with development and redevelopment potential were sorted by the size of unconstrained acreage to identify clusters of small parcels that could be assembled for development. Most of the unconstrained parcels (7,462 parcels) with development and redevelopment potential are less than five (5) acres. A total of 722 sites greater than five (5) acres were considered as developable or re-developable, with 152 of these parcels having more than 20 acres. Figure 27 identifies the sites with development and redevelopment potential, as well as public land and environment constraints.

**Table 12. Sites with Development and Redevelopment Potential by Unconstrained Acreage**

	Development Potential Sites	Redevelopment Potential Sites	Total
<b>All Development/Redevelopment Sites (preliminary identification)</b>			
# Parcels	8,310	2,086	10,396
Acres	20,986	10,378	31,364
<b>Unconstrained and Partially Constrained Sites (with less than 75% constrained acreage)</b>			
# Parcels	6,686	1,498	8,184
Unconstrained Acres	14,346	6,594	20,939

Source: Hillsborough County Property Appraiser

**Table 13. Sites with Development and Redevelopment Potential by Parcel Size**

Parcel Size	Development Potential Sites		Redevelopment Potential Sites		All Sites		
	# Parcels	Unconstrained Acres	# Parcels	Unconstrained Acres	# Parcels	Unconstrained Acres	% Acres
< 1 acres	5,519	957	640	307	6,159	1,265	6%
1-5 acres	702	1,690	601	1,179	1,303	2,869	14%
5-10 acres	234	1,644	174	1,165	408	2,809	13%
10-20 acres	112	1,652	50	694	162	2,346	11%
20+ acres	119	8,403	33	3,247	152	11,651	56%
<b>Total</b>	<b>6,686</b>	<b>14,346</b>	<b>1,498</b>	<b>6,594</b>	<b>8,184</b>	<b>20,939</b>	<b>100%</b>

Source: Hillsborough County Property Appraiser

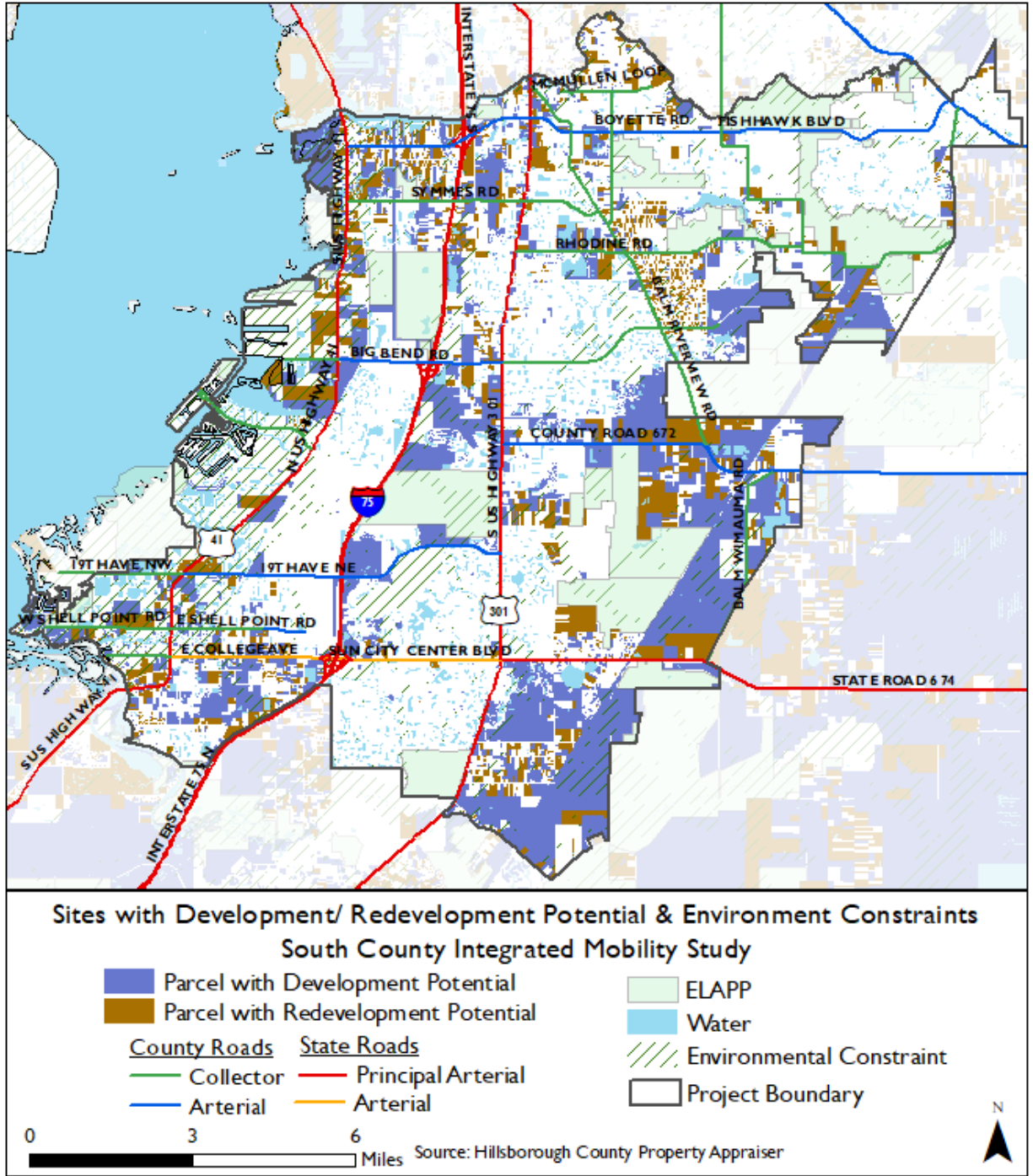


Figure 27. Sites with development and redevelopment potential

## Chapter 3

### Overview of Areas of Activity (Nodes) and Origin/Destination Analysis

This chapter addresses methods and data used to define and identify areas of activity (nodes) and to conduct an origin destination analysis of travel patterns in the South County region. Existing nodes and connections in the study area were identified using a methodology developed for the County in previous studies. Streetlight Data (see description in Chapter 1) was used to identify trips with an origin or destination within the study area, trips traveling within the study area, and trips traveling through the study area.

The chapter provides an overview of nodes in the study area, a description of each node, and key findings from an OD analysis performed on the identified nodes. The results of the analysis are described and mapped. Basic socio-economic, trip-making, and housing characteristics for residents in the study area are also provided. The OD zones are overlaid onto these characteristics for further insight into the specific travel patterns that emerge from the OD analysis. The chapter is organized as follows: Study Approach (including definitions, methods, and data), Overall Study Area (Areas of activity (nodes), OD analysis of zones, and underlying characteristics of zones), and Key Findings (from areas of activity (nodes), OD analysis, and zone characteristics).

#### 3.1 Study Area Areas of Activity (Nodes)

##### 3.1.1 Definitions of Areas of Activity (Nodes)

Areas of activity (node) patterns include Compact Urban, Connected Suburban, Modern Suburban, as well as two additional patterns – Industrial and Natural – added to reflect the characteristics of the region. These areas of activity (nodes) are defined as follows.<sup>2</sup>

- Compact Urban: A physical pattern of towns and cities where public streets form an interconnected network that surrounds traditional city blocks.
- Connected Suburban: A post-war physical pattern that replaces traditional gridded city blocks with irregular blocks while maintaining a connected network of public streets that are spaced at quarter-mile intervals.
- Modern Suburban: A late 20th century suburban pattern that groups large superblocks and single-purpose pods into master-planned communities that are physically separated from adjoining communities. Most jobs, shopping, and entertainment can be reached on wide arterial roads or expressways.
- Industrial: Major industrial areas that impact corridors.
- Parks/Recreation: Destinations including parks and state parks.

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<sup>2</sup> Definitions taken from the report: *Strip Commercial and Mixed-Use Development in Hillsborough County*, 2014, Dover, Kohl & Partners and Spikowski Planning Associates.

### **3.1.2 Methods for Identifying Areas of Activity (Nodes)**

Areas of activity were identified using employment, population, and land use characteristics to identify Census Block Groups of potential destinations. Places with high employment, low population, and predominantly non-residential uses (based on land use and parcel information) were filtered from other Census Block Groups. Using Aerial photographs, parcel boundaries, and Census Blocks within the study area, the Block Groups identified were reshaped to match more closely with the physical boundaries of the areas of activity (nodes).

The descriptions were matched to the areas of activity (nodes) by a visual check of the area, underlying parcel DOR codes, the total area of the areas of activity (node) (in acres), and the density of the street network. Dominant corridors between areas of activity (nodes) were identified using the road network and Annual Average Daily Traffic.

### **3.1.3 Data Description**

#### *Average Annual Daily Traffic*

Two sources were used for Annual Average Daily Traffic (AADT): Hillsborough County, and the Florida Department of Transportation (FDOT). FDOT provides 2017 AADT for linear features. Hillsborough County provided point locations of AADT. These points were matched to the nearest road segment based on local road names.

#### *Employment Information*

Employment information was collected from the U.S. Census Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employment Statistics (LODES) version 7.0 for 2015 Workplace Area Characteristics (WAC). For the WAC jobs are totaled by Census Block, and separated into North American Industry Classification System (NAICS) codes. The WAC data were also matched to Census Block Groups using the LEHD geography crosswalk information.

#### *Population and Households*

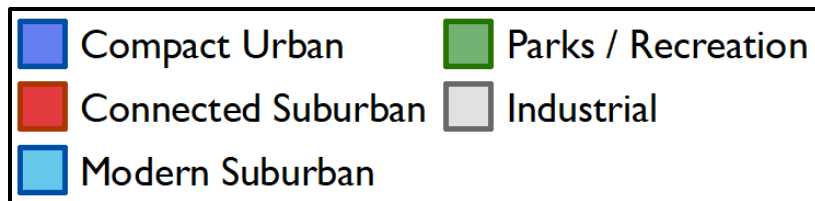
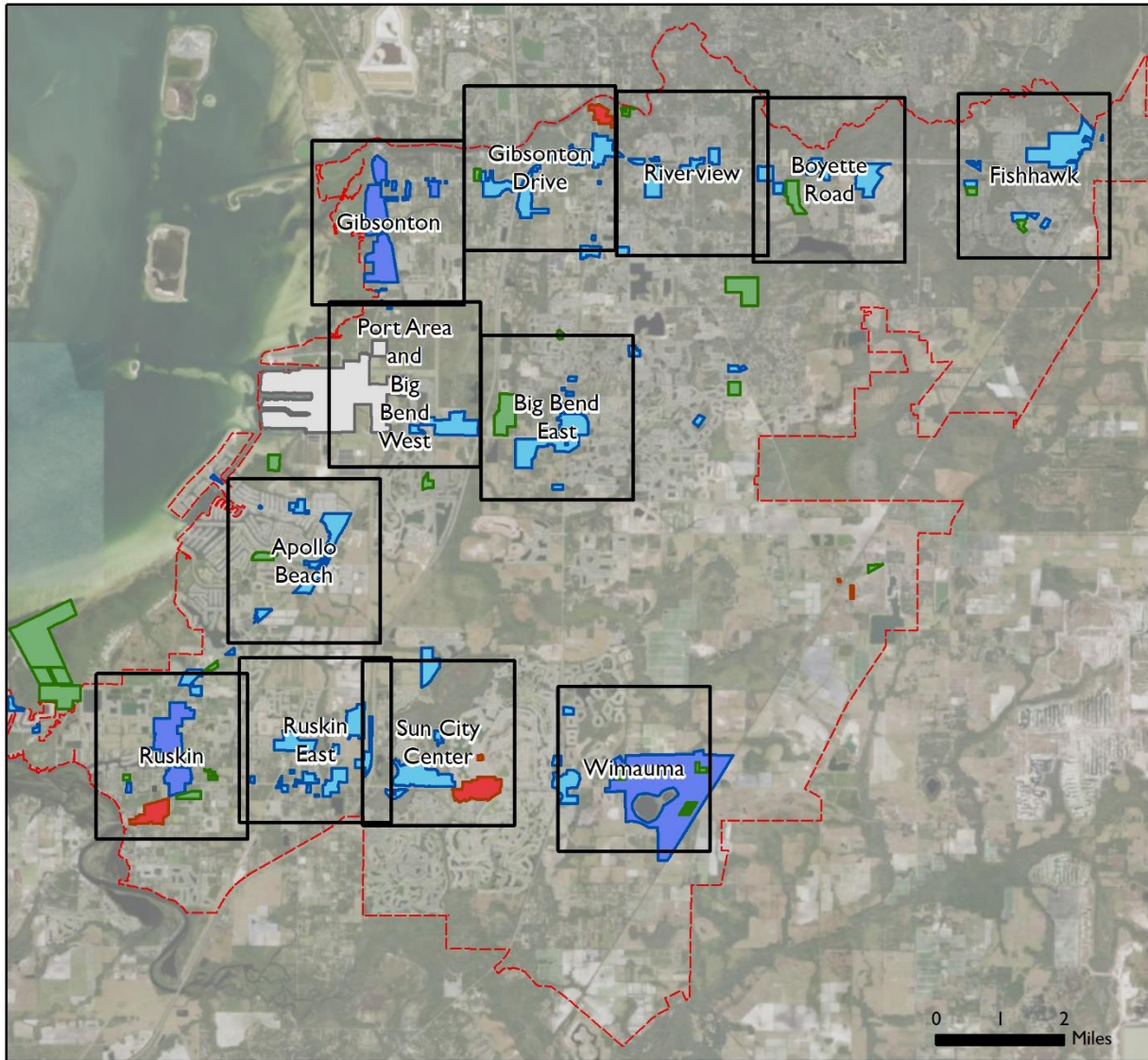
Population and household information is taken from the American Community Survey (ACS) 2016 5-year averages for Census Tracts. American Community Survey data is only available for aggregated scale data. To map 2016 population estimates at the Census Block level, 2010 population and household Census Block data was used. The proportion of the 2010 Census data was calculated for each block within a tract. The 2016 ACS population and household estimate was then divided into blocks by the 2010 proportion so that it totaled to the appropriate Census Tract. This was done for both households and population estimates.

#### *Existing Land Use and Parcels*

Existing Land Use information was taken from the Hillsborough County City-County Planning Commission, and Parcels were taken from Hillsborough County Property Appraiser. Land use is derived from DOR codes by the planning commission.

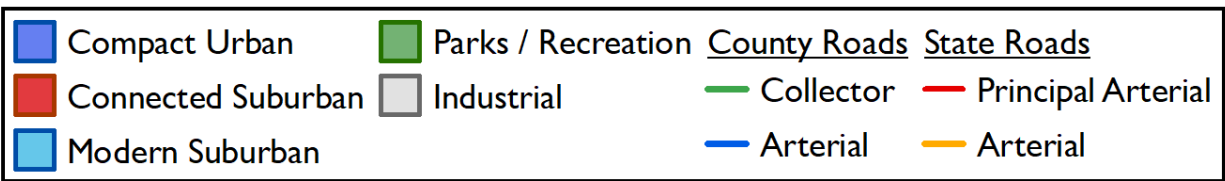
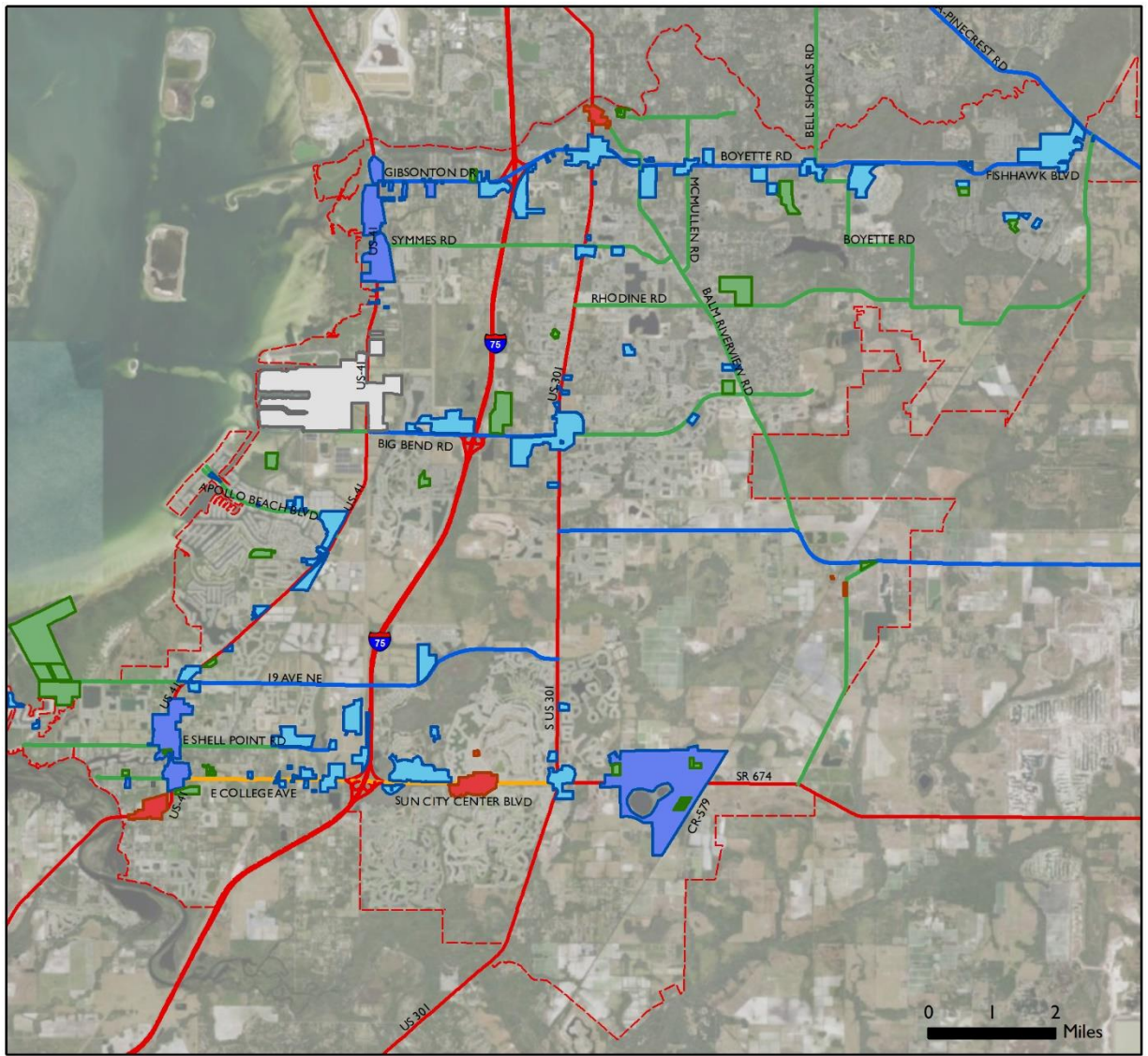
### **3.1.4 Overview of Areas of Activity (Nodes)**

An overview of the areas of activity (nodes) identified in the study area is provided in Figure 28. Areas of activity (nodes) and connecting corridors are provided in Figure 29.



**Figure 28. Overview map for areas of activity (nodes)**

Source: Hillsborough County, U.S. Census Bureau



**Figure 29. Areas of activity (nodes) and connecting corridors**

Source: Hillsborough County, U.S. Census Bureau

## 3.2 Study Area Zones for Origin/Destination Analysis

### 3.2.1 Definitions of Zones

**Zones:** polygons used to aggregate trips. These are treated as origins and destinations within the study area. Nodal zones are based on aggregating areas of activity (nodes) and activity areas within communities.

**Trips:** is a representation of activity based on the Streetlight Trip Index. May sometimes be referred to as traffic. “StreetLight Trip Index represents trip activity but does not indicate actual number of trips or vehicles. The values are provided on an index. Personal and Commercial values use different indices. Projects in the US and Projects in Canada also use different indices.”<sup>3</sup> The index approach allows samples from the same areas and time periods to be comparable.

**Personal:** A StreetLight designation that defines trips for personal non-commercial use. It is based on a sample from smart-phone applications.

**Commercial:** A StreetLight designation that defines trips for commercial non-personal use. It is based on a sample from GPS data.

**Gates:** polygons used to determine trips that pass through specific roads. For example, a gate on the north side of the study area placed on I-75 was used to determine the number of trips that pass through that roadway. Trips based on the StreetLight Index.

**Home-Based Work (HBW):** StreetLight attribute used for trip purpose, travel between home and work in either direction. “To calculate this metric, all trips in the analysis are evaluated to determine whether their origin zones are also the devices’ expected home or work locations. (In contrast, our Simple Trip Purpose Metrics use the parcel data associated with trips’ origin zones to assign a trip purpose of ‘residential, commercial, or other.’)”<sup>4</sup>

**Home-Based Other (HBO):** StreetLight attribute used for trip purpose, travel to or from home, to anywhere other than work. See above for how this metric is calculated.

**Non-Home Based (NHB):** StreetLight attribute used for trip purpose, all travel not to or from home. See above for how this metric is calculated.

### 3.2.2 Methods for Identifying Zones

Zones used for the OD analysis were derived in two ways. Nodal zones were developed by aggregating major activity areas within communities. From these nodal boundaries, a 5-minute walking (10-minute biking) service area was used to expand activity areas to encompass areas that were within a reasonable walking/biking distance.

To derive the service area, all land use centroids within the areas of activity (node) were selected, and the ArcGIS Network Analyst extension was used to calculate a 10 minute bicycle

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<sup>3</sup> Gische, Kimberly 2018 “StL Trip Index”, <https://support.streetlightdata.com/hc/en-us/articles/360018552772-StL-Trip-Index>

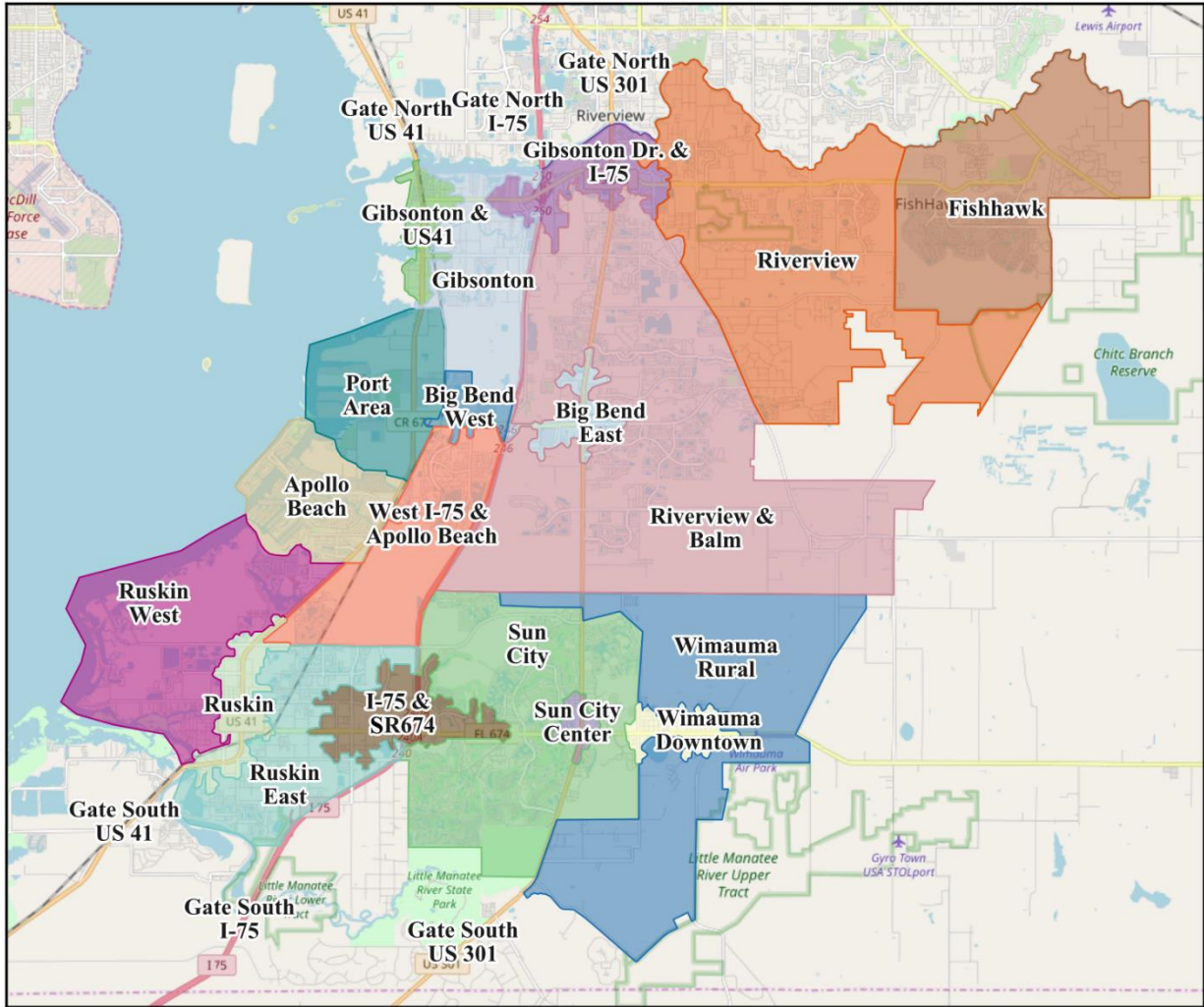
<sup>4</sup> Gische, Kimberly 2018 „July 11<sup>th</sup>, 2017” <https://support.streetlightdata.com/hc/en-us/articles/360017709491-July-11th-2017>



area from each centroid. The network used for this service area was taken from Open Street Map, which provides detailed routing information for multiple modes of transportation. Non-nodal zones were derived from residential areas and community planning areas within the non-nodal portion of the study area. These zones were split along major roadways or roadways that naturally divide parts of the study area.

### ***3.2.3 Zones (OD Analysis)***

Figure 30 presents the location of the zones developed for the OD analysis. Three primary roads provide access to the study area and access from the study area to other places: US41, US301, and I-75. To capture the trips that leave or enter the zone through these major roads, Streetlight Data requires specifying a special type of zone. Streetlight Data only provide trips between zones in the study area, except in the case of a pass-through gate. Pass-through gates count the number of trips that pass through a small stretch of road in both directions of traffic. Six gates (three in the north and three in the south) were designated and used to understand trips that entered or left the zones within the study area to/from outside of the study area. A separate designation, Alternate Gate, was used to account for trips originating from the zone and leaving the study area, but not through one of the gates, and also for trips entering the study area but not through the gates.



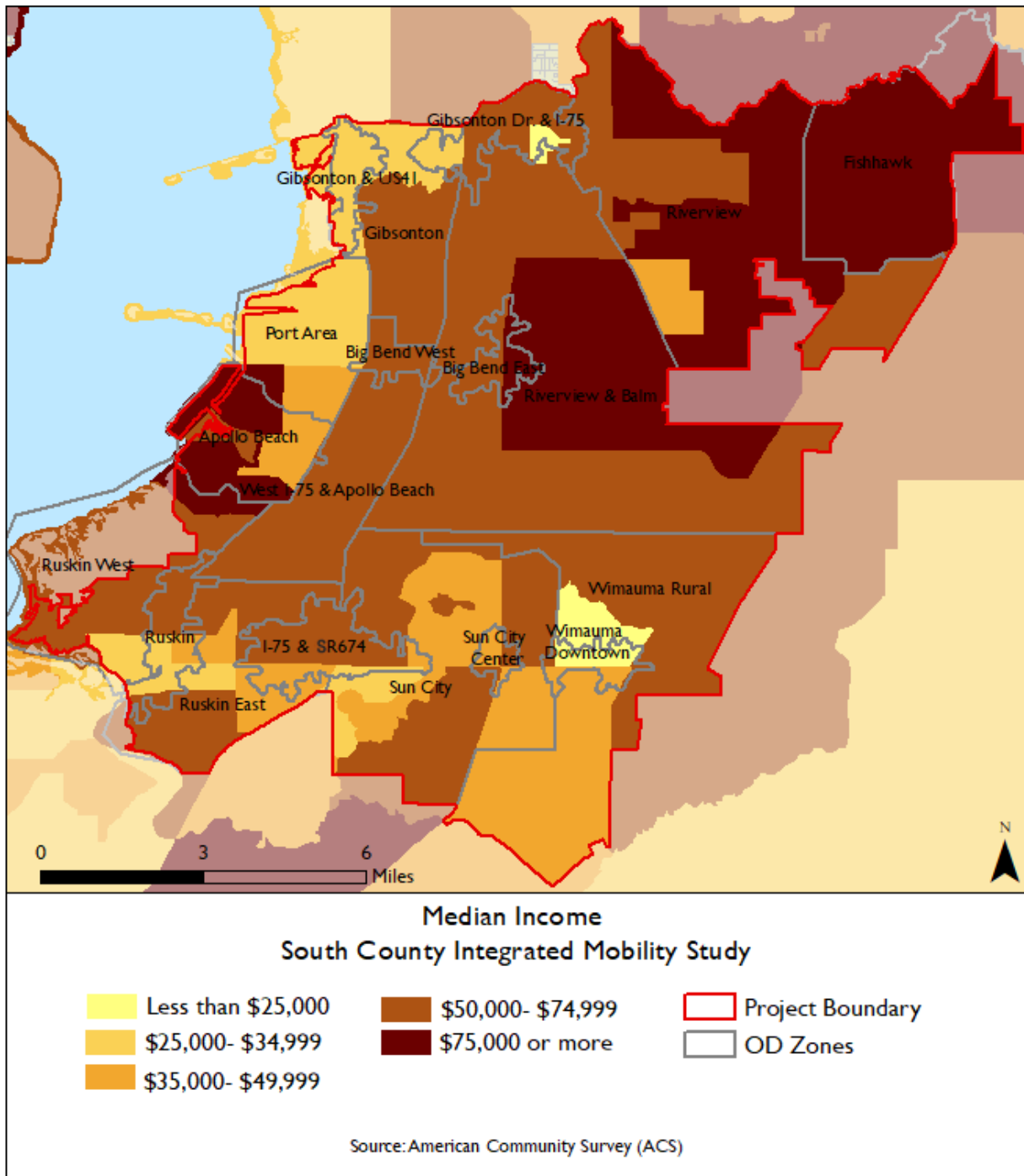
**Figure 30. Location map for zones**

Source: Hillsborough County, U.S. Census Bureau

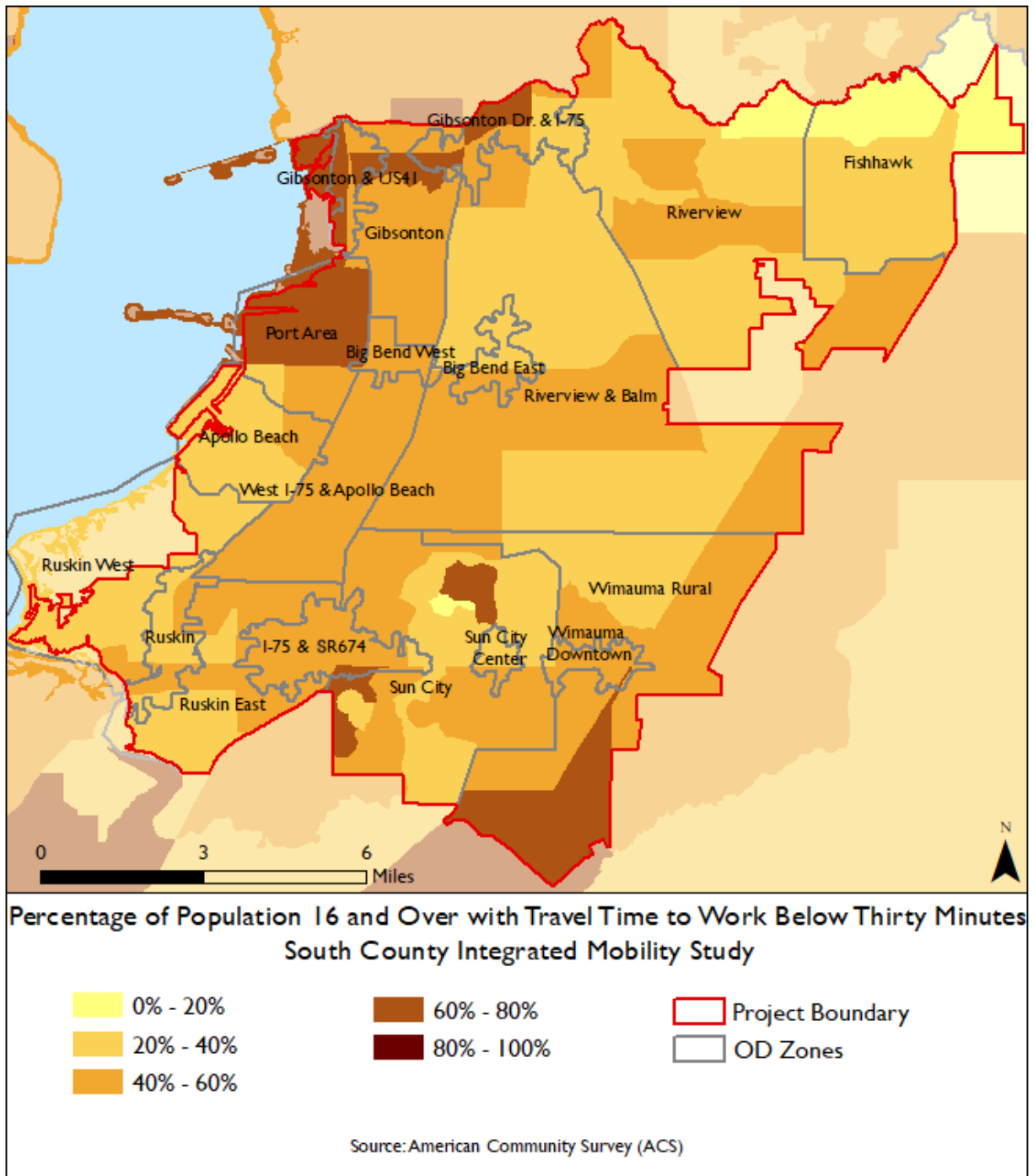
Zones were submitted to the StreetLight platform and used as both origins and destinations for the analysis. The sampling periods for the study are displayed in Table 14. These are the most recent months available, and use the recommended 6 months. They encompass all seasons for the past year (2017 – 2018). For the detailed analyses below, trips were examined hourly for 24-hours and daily. For aggregated analysis, certain time and day ranges were selected shown in Table 15.

### 3.3 Zone Attributes

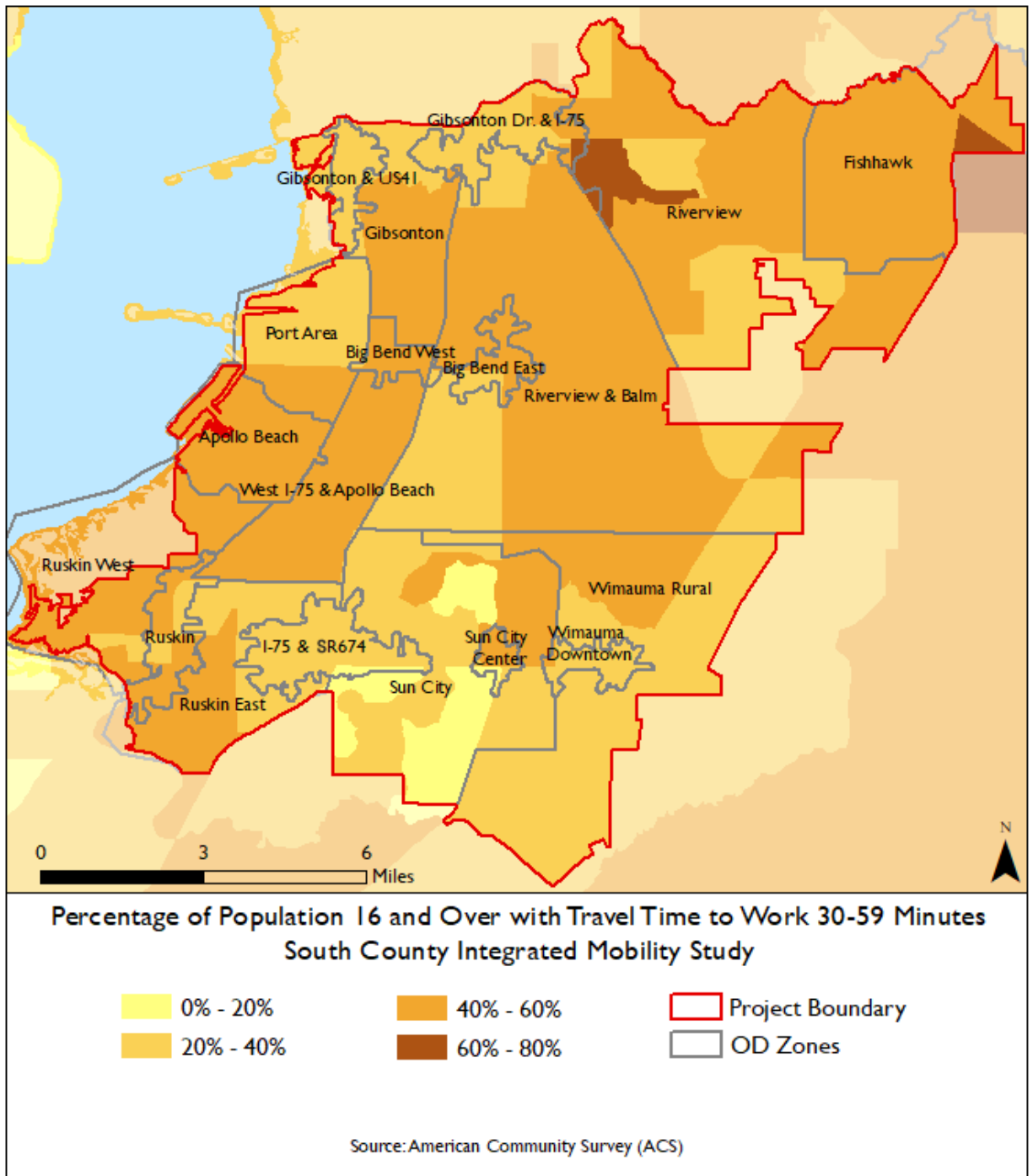
Maps were developed by overlaying OD zones on the socioeconomic, commuting, and housing characteristics of the study area. These maps provide information on factors that help to explain travel behavior in the study area. Maps can be seen in Figure 31 through Figure 33 and in the Appendix. Observations relative to these characteristics are provided in Section 3.4.3.



**Figure 31. Median income**



**Figure 32. Commute below 30 minutes**



**Figure 33. Commute between 30-59 minutes**

### 3.4 Overview of Key Findings

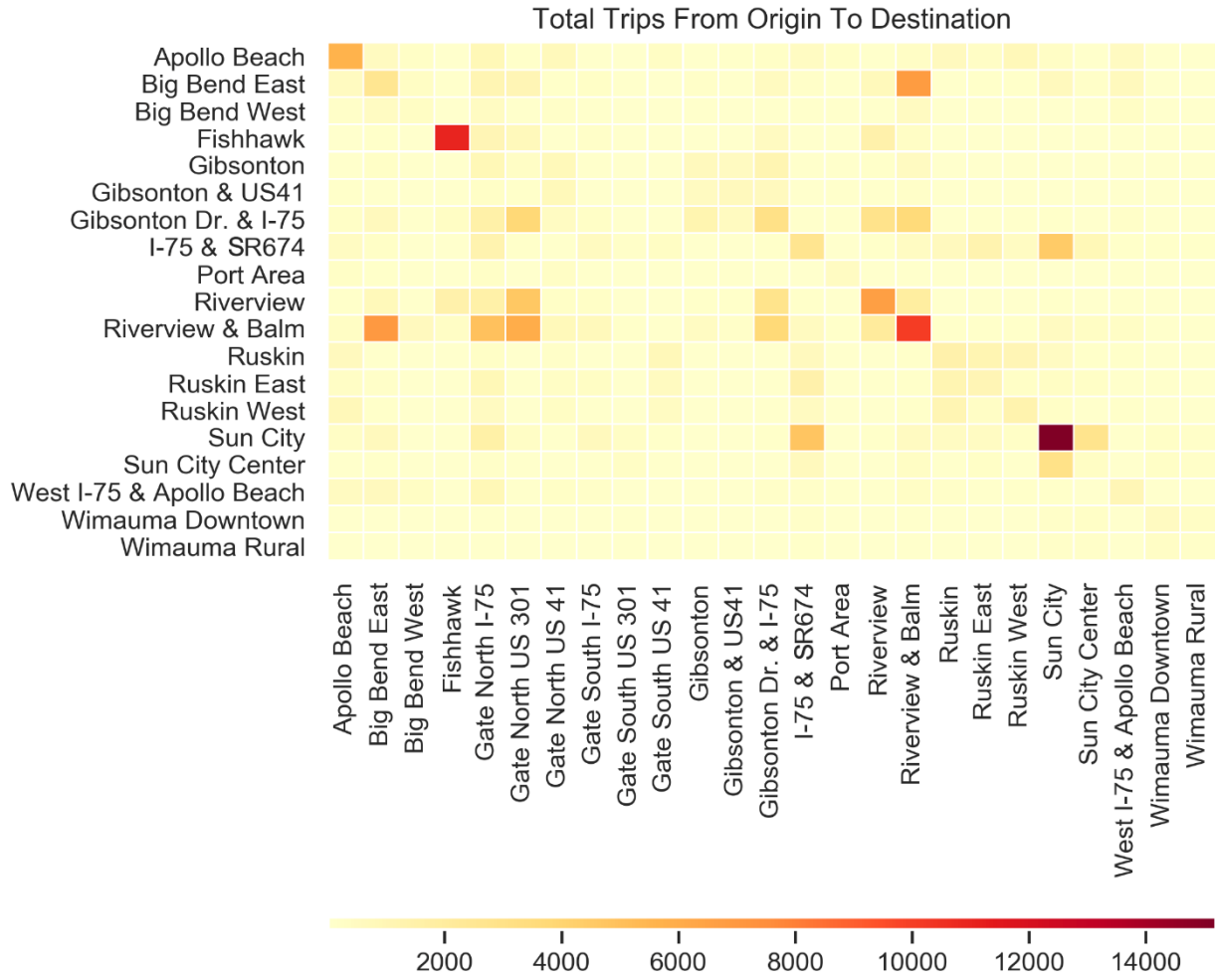
Key findings are summarized below and in Figure 34 through Figure 39 and in the Appendix.

### **3.4.1 Areas of Activity (Nodes)**

- The dominant area of activity (node) pattern in the study area is Modern Suburban. Emphasizing large superblocks (combined blocks) or single-purpose destinations.
- Major corridors in the area are large arterial roads and expressways. These also tend to connect areas of activity (nodes).
- Compact urban patterns were found in Gibsonton, Ruskin, and Wimauma.
- Gibsonton and Ruskin's grid networks are split by US 41.
- Most destinations within areas of activity (nodes) are adjacent to major north-south corridors, such as US 41, US 301, and I-75.
- Major east-west corridors include Gibsonton Dr., Big Bend Rd., and Sun City Blvd.
- There is no major east-west greenway.
- No greenway trails connect areas of activity (nodes).

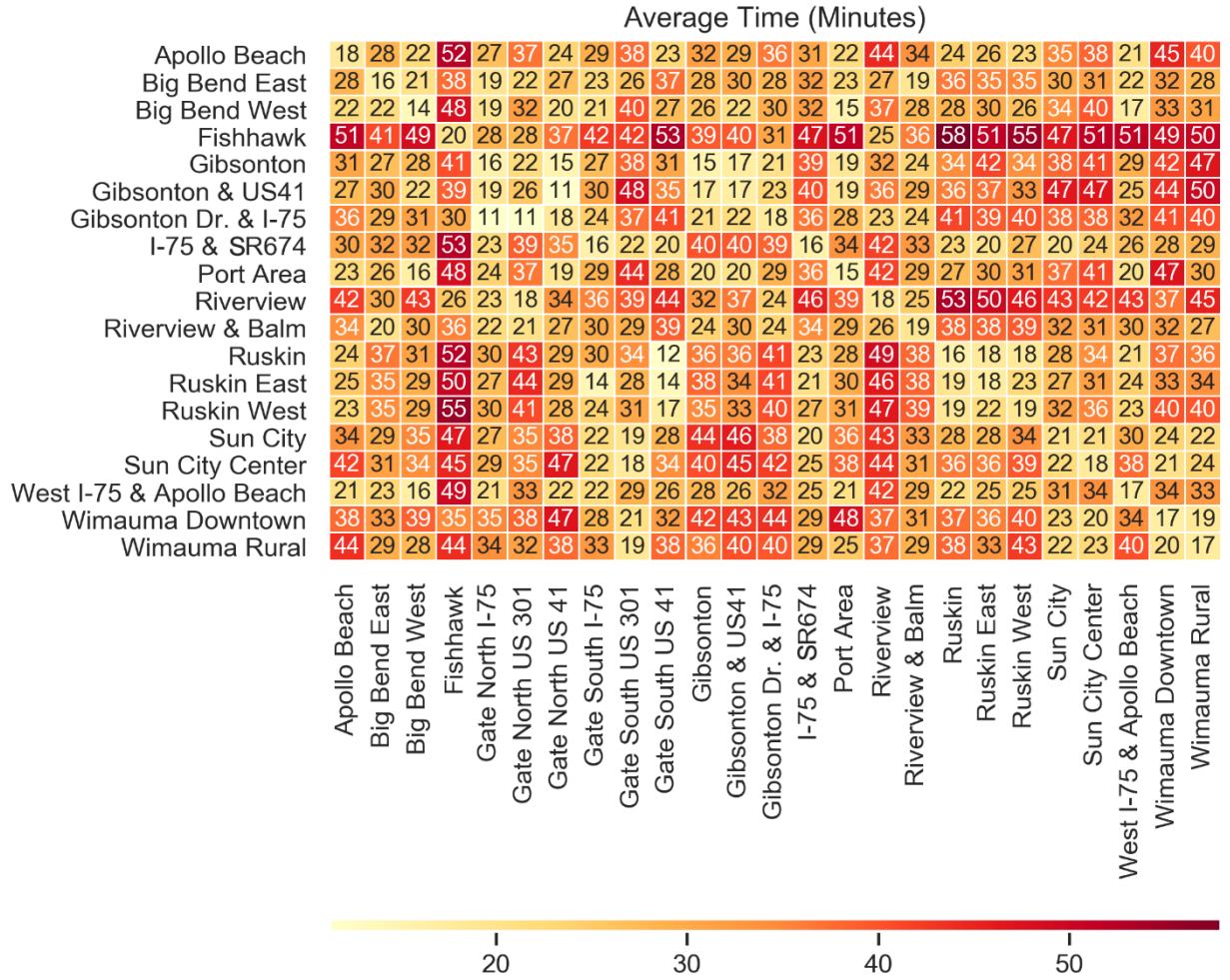
### **3.4.2 OD Analysis**

- Most travel activity that originates in the study area is between zones: 77% between zones; 18% leaving through north US41, US301, and I-75; and 4% leaving through south US41, US301, and I-75. Even when trips entering through the north or south gates are included, 63% of the trips are between zones.
- For personal trips, 20% of traffic entering the zones arrives from outside of the study area, 72% from other zones within the study area.
- For personal trips, 26% of trips within study area start and end at the same zone. 42% for Apollo Beach, 47% for Fishhawk, and 50% for Sun City Center begin and end in those same zones.
- Approximately 26% of personal trips within the study area begin and end at the same internal zones. When nodal zones are removed, this increases to 32%.
- The majority of personal activity within the study area (36%) takes place during the mid-day from 10am to 3pm.
- The majority of personal activity entering study (34%) area through the gates occurs between 3pm and 5pm
- Activity leaving the study area through the gates occurs throughout the day, but the majority of personal trips (32%) occur during the mid-day from 10am to 3pm.
- The Riverview, Riverview & Balm, and Fishhawk zones produce the most total origin traffic, and destination traffic. Sun City Center produces the most in the southern portion of the study area.
- Nodal zones Gibsonton Dr. & I-75, I-75 & SR 674, and Big Bend East produce the most activity within and outside the study area.
- Most personal trips within, leaving, and entering the study area were Home-Based Other (~46% on average), and for Home-Based Work (~21%).



**Figure 34. Total trips from origin to destination**

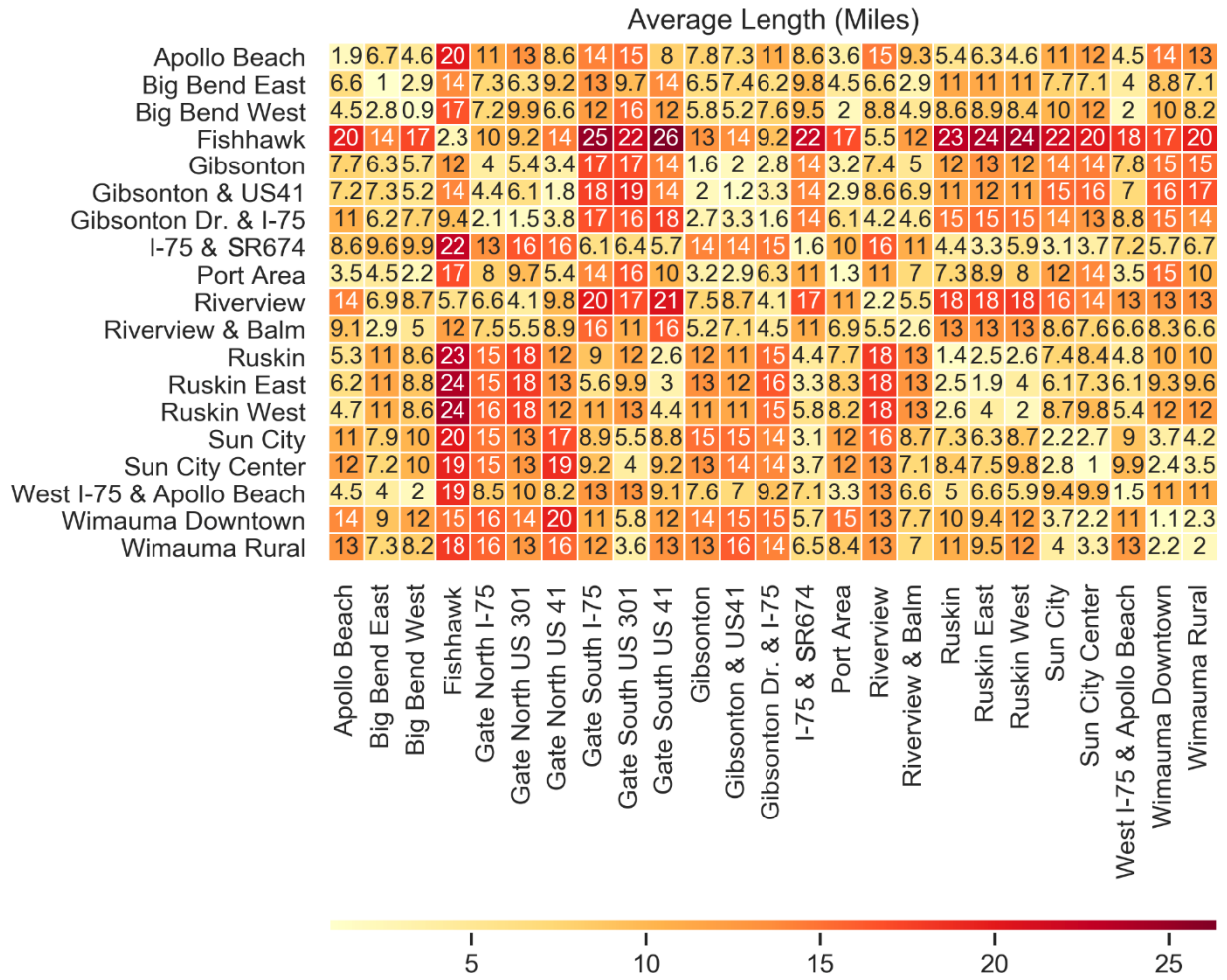
Source: StreetlightData, Inc.



**Figure 35. Average trip time**

Source: StreetlightData, Inc.





**Figure 36. Average trip length**

Source: StreetlightData, Inc.

**Table 14. Months Used for the StreetLight Origin / Destination Analysis.**

Dates					
September 2018	July 2018	May 2018	March 2018	January 2018	November 2017

Source: StreetlightData, Inc.

**Table 15. Time Periods for Aggregated Information in StreetLight.**

Label	Start	End
Early AM	3am	6am
Peak AM	6am	10am
Mid-Day	10am	3pm
Peak PM	3pm	7pm
Late PM	7pm	10pm
Midnight	10pm	3am
Average Weekday	Monday	Friday
Average Weekend Day	Saturday	Sunday
Full Weekend	Friday	Sunday
Average Day	Monday	Sunday

Source: StreetlightData, Inc.

Table 16 presents the total activity originating from the study area zones, and Table 17 presents total activity ending in these zones. There is a reciprocal nature to the origin and destinations, as trips will often originate at a destination zone (the destination becomes the origin).

Riverview & Balm has the most overall activity for personal and commercial trips regardless of day and time. This may be due to the large zone area, but it also encompasses many residential areas and some single use activity land uses (see above). Overall, most activity in the study area is concentrated in the northern portion in what would be considered Riverview and Fishhawk.

**Table 16. Zones and Origin Trips During Peak Times**

<b>Zone Label</b>	<b>Origin Personal Trips All Day All Times</b>	<b>Origin Commercial Trips All Day All Times</b>	<b>Origin Personal Trips Weekday Peak AM</b>	<b>Origin Personal Trips Weekday Peak PM</b>
<b>Riverview &amp; Balm</b>	40053	55418	14162	9892
<b>Sun City</b>	29737	32014	7427	8051
<b>Riverview</b>	21624	23578	7982	7282
<b>Gibsonton Dr. &amp; I-75</b>	19777	22417	3197	6626
<b>Big Bend East</b>	17306	23460	2420	5588
<b>Fishhawk</b>	15791	9098	6879	6544
<b>Area of Activity (Node) I-75 &amp; SR674</b>	15153	31351	2768	4757
<b>Apollo Beach</b>	13240	11893	3123	3775
<b>Ruskin East</b>	8151	20971	2852	1869
<b>Ruskin</b>	7783	10302	1364	2422
<b>Ruskin West</b>	6660	6759	1742	1738
<b>Sun City Center</b>	6618	8595	967	2001
<b>Gibsonton</b>	6093	8583	1908	1551
<b>West I-75 &amp; Apollo Beach</b>	5684	8825	1964	1429
<b>Gibsonton &amp; US41</b>	4102	6147	969	1238
<b>Big Bend West</b>	3350	3783	916	1393
<b>Port Area</b>	2407	22630	597	803
<b>Area of Activity (Node) Wimauma Downtown</b>	2106	2177	503	601
<b>Wimauma Rural</b>	1682	2812	526	448

Source: StreetlightData, Inc.

**Table 17. Zones as Destinations During Peak Times**

<b>Zone Label</b>	<b>Destination Personal Trips All Day All Times</b>	<b>Destination Commercial Trips All Day All Times</b>	<b>Destination Personal Trips Weekday Peak AM</b>	<b>Destination Personal Trips Weekday Peak PM</b>
<b>Riverview &amp; Balm</b>	37870	57855	6413	13473
<b>Sun City</b>	29486	32738	6573	8124
<b>Area of Activity (Node) Gibsonton Dr. &amp; I-75</b>	20921	22127	4655	6157
<b>Riverview</b>	20753	23456	4264	7391
<b>Area of Activity (Node) Big Bend East</b>	18209	22896	3908	5330
<b>Area of Activity (Node) I-75 &amp; SR674</b>	15668	30011	4670	3642
<b>Fishhawk</b>	15150	8925	3477	5264
<b>Apollo Beach</b>	13181	12181	2502	4215
<b>Area of Activity (Node) Ruskin</b>	7876	10399	1806	2249
<b>Ruskin East</b>	7690	19457	1152	2675
<b>Area of Activity (Node) Sun City Center</b>	6758	8380	1291	1635
<b>Ruskin West</b>	6460	6766	925	2155
<b>Gibsonton</b>	5780	9539	924	1998
<b>West I-75 &amp; Apollo Beach</b>	5394	9910	1003	1914
<b>Area of Activity (Node) Gibsonton &amp; US41</b>	4116	6484	897	1183
<b>Area of Activity (Node) Big Bend West</b>	3469	4281	1533	1006
<b>Port Area</b>	2414	21614	889	396
<b>Area of Activity (Node) Wimauma Downtown</b>	2112	2116	447	596
<b>Wimauma Rural</b>	1621	2870	301	539

Source: StreetlightData, Inc.

The most active nodal zone is at the intersection of Gibsonton Drive and I-75. This is a major destination for shopping, entertainment and employment. This pattern is also reflected as the main destination zones presented in Table 17. The second most active nodal zone is area of activity (node) Big Bend East, which is an important destination for trips originating from the Riverview & Balm zone. Regardless of activity, the majority of trips to any area of activity (node) originated within the study area (see Table 18).

Sun City Center is the most active area in the southern portion of the zone, and also has the most internal activity where trips start and end in the same zone (see Table 19). The most active area of activity (node) in the southern part of the study area is Area of Activity (Node) I-75 and SR674 (SR 674 is also Sun City Boulevard or East College Ave). This area of activity (node) encompassed the Amazon Distribution Center, and South Bay Hospital, two major destinations in that part of the county; but also included shopping and entertainment destinations.

The estimated commercial activity reflected the personal activity with the exception of the Port Area zone. There was little personal activity in this zone, but was in the top ten for the origin and destination of commercial activity. The Apollo Beach zone incorporated the Apollo Beach area of activity (node) and residential area. Slightly less than half the trips begin and end in within this same zone. It is likely that trips within this zone are related to the areas of activity (nodes) located at the intersection of Apollo Beach Boulevard and US 41.

**Table 18. Personal Trips Originating within Study Area that End in Study Area Areas of Activity (Nodes)**

<b>Area of Activity (Node) Zone Label</b>	<b>Percentage*</b>
<b>Area of Activity (Node) Big Bend West</b>	66%
<b>Area of Activity (Node) Big Bend East</b>	66%
<b>Area of Activity (Node) I-75 &amp; sR674</b>	63%
<b>Area of Activity (Node) Ruskin</b>	60%
<b>Area of Activity (Node) Gibsonton Dr. &amp; I-75</b>	49%
<b>Area of Activity (Node) Gibsonton &amp; US41</b>	49%

\*excludes trips beginning and ending within area of activity (node).

Source: StreetlightData, Inc.

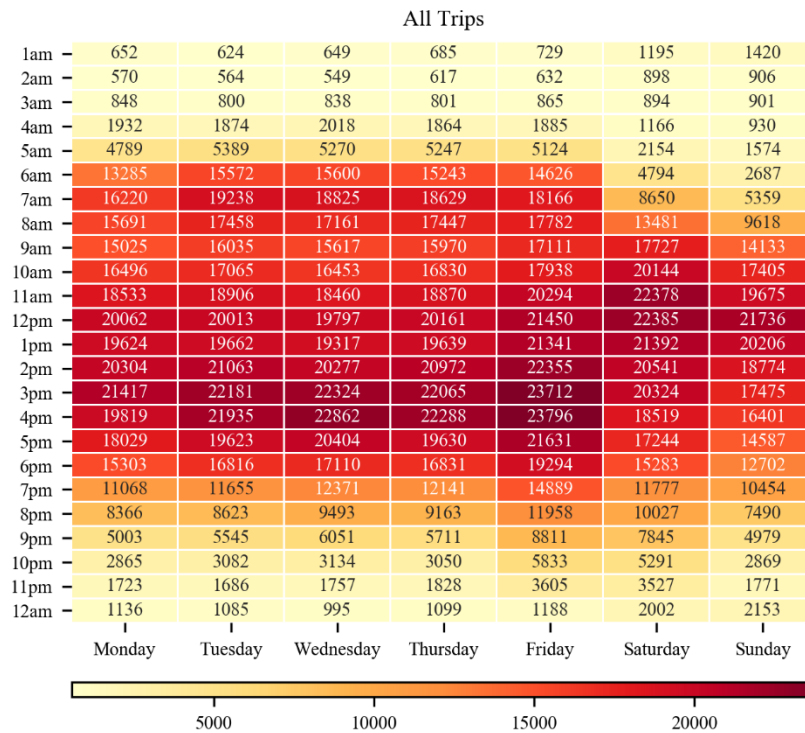
**Table 19. Personal Trips Beginning and Ending in Same Zone.**

<b>Zone Label</b>	<b>Percentage</b>
Sun City	50%
Fishhawk	48%
Apollo Beach	42%
Riverview	26%
Riverview & Balm	24%
Area of Activity (Node) Wimauma Downtown	24%
Ruskin West	19%
Area of Activity (Node) Ruskin	18%
Port Area	17%
Area of Activity (Node) Gibsonton & US41	17%
Area of Activity (Node) I-75 & sR674	17%
West I-75 & Apollo Beach	17%
Area of Activity (Node) Gibsonton Dr. & I-75	15%
Area of Activity (Node) Big Bend East	14%
Wimauma Rural	12%
Ruskin East	12%
Gibsonton	11%
Area of Activity (Node) Big Bend West	11%
Area of Activity (Node) Sun City Center	5%
<i>Note: all days, all times</i>	

Source: StreetlightData, Inc.

Figure 37 shows hourly and daily activity for personal trips. These trips include those within the study area and trips leaving or entering the study area. Overall, weekday trips begin from about 6am and last until about 8pm. Weekend trips begin later about 9am and end earlier about

6pm. Most activity is concentrated between 10am and 3pm. The most overall activity according to the StreetLight sample index, is Friday from 2pm to 6pm. Peak commuting times between 3pm and 5pm during the weekday shows a lot of activity in the study area.



**Figure 37. Activity for all personal trips in the study area (within, leaving, and entering)**

Source: StreetlightData, Inc.

Analysis for each zone in the study area is presented in different sections. For each zone, a map shows total connections between every zone in the study area, gates, and trips that enter/leave the study area through an alternative route. The size of the circle indicates total trips between zone and main zone. The width of the line also reflects this, but is relative to the amount of travel to and from the main zone. Also included are the total trips from and to a zone by hour and day. Finally, the estimated percentage of trips within the HBO and HBW trips to and from the zone broken up by travel time period is shown.

### Gates

Roadways US 41, US 301, and I-75 serve as important entry and exit points to the study area. Six pass-through zones for these gates were established outside the study area boundary (three in the north and three in the south) (see Table 20). According to Table 20, US 41 and US 301 have the highest percentage of trips either beginning or ending in the study area. The percentage is of all trips in the sample that pass through the gates in both directions. A small percentage of trips in the study area are tied to the southern I-75 gate. This suggests few trips leaving or entering the study area from the south. Trips heading north through the south I-75

gate do not end in the study area. However, this is not the same with US 41 and US 301. About half the trips passing through the north I-75 gate are tied to the study area zones.

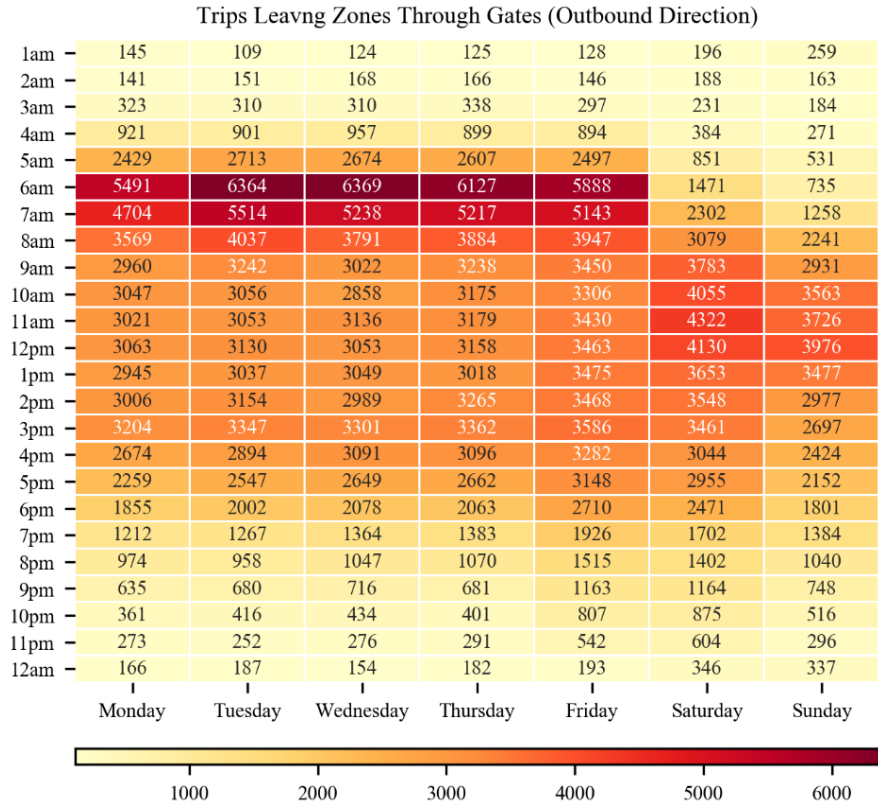
**Table 20. Personal Trips Passing through Gates That Begin or End in Study Area Zones**

	Leaving	Entering
<b>Gate I-75 North</b>	57%	55%
<b>Gate US 41 North</b>	89%	94%
<b>Gate US 301 North</b>	87%	85%
<b>Gate I-75 South</b>	25%	20%
<b>Gate US 41 South</b>	77%	76%
<b>Gate US 301 South</b>	81%	79%

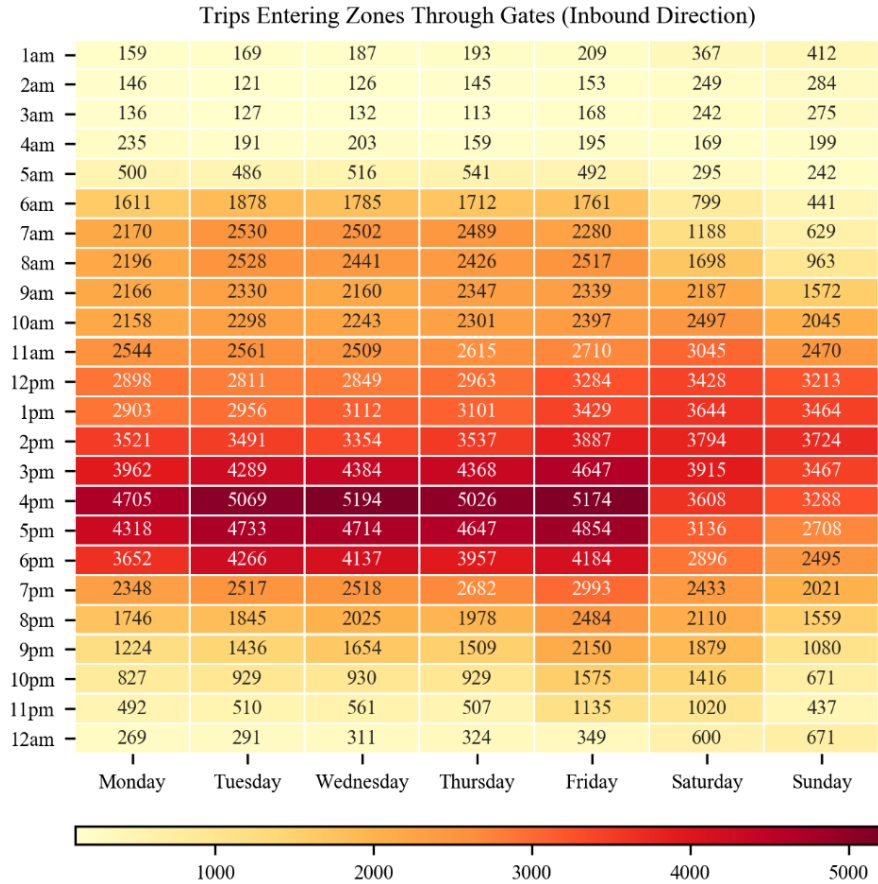
Source: StreetlightData, Inc.

Figure 38 and Figure 39 show personal trips that enter or leave the study area through the gates. They are inverses of each other, with peak travel leaving the study area through the gates about 6am, and entering the study area approximately 4pm. The peak times (early in the morning and later in the afternoon) might indicate the times when commuters are leaving and returning to the study area. During the weekend, peak travel is during the mid-day from 10am to 3pm.





**Figure 38. Activity for all personal trips in the study area that leave through gates**  
 Source: StreetlightData, Inc.



**Figure 39. Activity for all personal trips in the study area that enter through gates**

Source: StreetlightData, Inc.

### 3.4.3 Zone Characteristics

The following section highlights findings from a review of attributes identified in Section 3.3 and the Appendix. These findings characterize study area zones by describing commute time, age, income, poverty level, and vehicle ownership.

The Riverview and Fishhawk zones have the highest percentage of residents with a commute time between 30 and 59 minutes (60% - 80%). Between 20 percent and 60 percent of residents in all other zones have a commute time between 30 and 59 minutes. Small areas within the Sun City, Wimauma Rural, Gibsonton Dr. & I-75, Gibsonton & US 41, Gibsonton, and Port Area zones have a high proportion of persons with commute times less than 30 minutes (60% to 80%).

Most zones have a median age of 44 or younger. Areas in the Apollo Beach, West I-75 & Apollo Beach, and Ruskin zones have a median age between 45 and 64. As would be expected for this retirement community, a large area within the Sun City and Sun City Center zones have a median age of 65 or older. The Apollo Beach, Apollo Beach West, Riverview & Balm, Riverview, and Fishhawk zones have areas with a median income above \$75,000. Generally, the median income in the study area is between \$50,000 and \$74,999. Areas in Wimauma Downtown and

Wimauma Rural have the highest proportions of households with income below poverty level (50% or more).

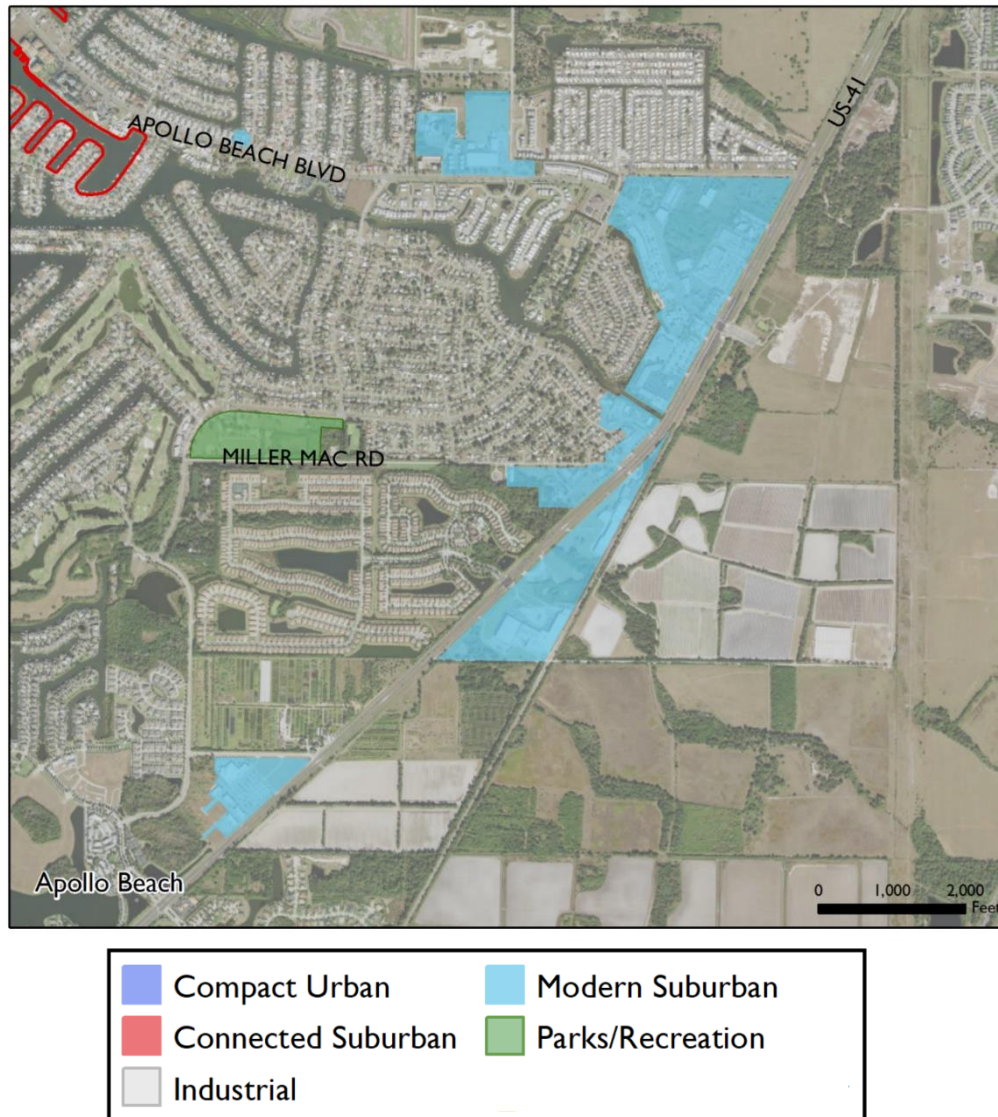
Most areas within the study area have 10 percent or less zero vehicle households. Areas that exceed 10 percent zero vehicle households are found in the following zones: Gibsonton & US 41, Gibsonton Drive & I-75, Riverview, the Port Area, Ruskin, Ruskin East, Ruskin West, I-75 & SR 674, Sun City, Wimauma Downtown, and Wimauma Rural.

## Chapter 4 Areas of Activity (Nodes) and Origin/Destination Analysis Findings

The following chapter identifies specific areas of activity (nodes) and zones within the study area. Detailed findings from the OD analysis are presented for each zone, including trips to and from the zone, trips to and from the zone by hour and day, and trip purpose to/from the zone.

### 4.1 Apollo Beach

#### 4.1.1 Apollo Beach Areas of Activity (Nodes)



**Figure 40. Areas of activity (nodes) within the area of Apollo Beach**

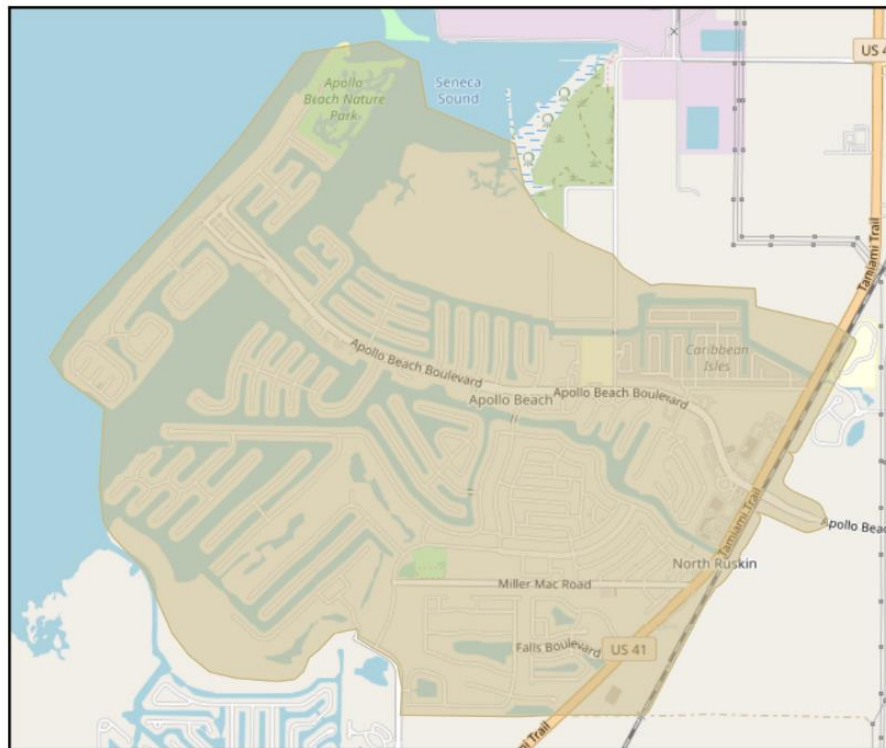
Source: Hillsborough County, U.S. Census Bureau

Apollo Beach includes a modern suburban area of activity (node) at the intersection of US 41 and Apollo Beach Boulevard that consists of retail, entertainment and office uses (Figure 40).

Some natural areas of activity (nodes) are also contained in the area, including the Manatee Viewing Center to the north (not shown). The two main corridors connecting these areas of activity (nodes) to the surrounding area are US 41 and Apollo Beach Blvd., which serves as the main access point for housing located west of US 41. AADT for US 41 is between 30,000 AADT and 50,000 AADT, and for Apollo Beach Blvd. is between 10,000 AADT and 15,000 AADT. US 41 directly connects Apollo Beach with Gibsonton and Ruskin, and also connects to east-west corridors like Gibsonton Dr., Big Bend Rd., and E. College Ave. All three of these routes provide access to I-75. HART operates a bus route along this section of US 41, and a proposed mobility center would be located just south of Apollo Beach Blvd. along US 41.

#### **4.1.2 Apollo Beach Zone (OD Analysis)**

This zone encompasses areas of activity (nodes) at the intersection of US 41 and Apollo Beach Blvd., the residential area along Apollo Beach Blvd., and the Manatee Viewing Center (see Figure 41). Important roadways in this zone are Apollo Beach Blvd. and US 41.



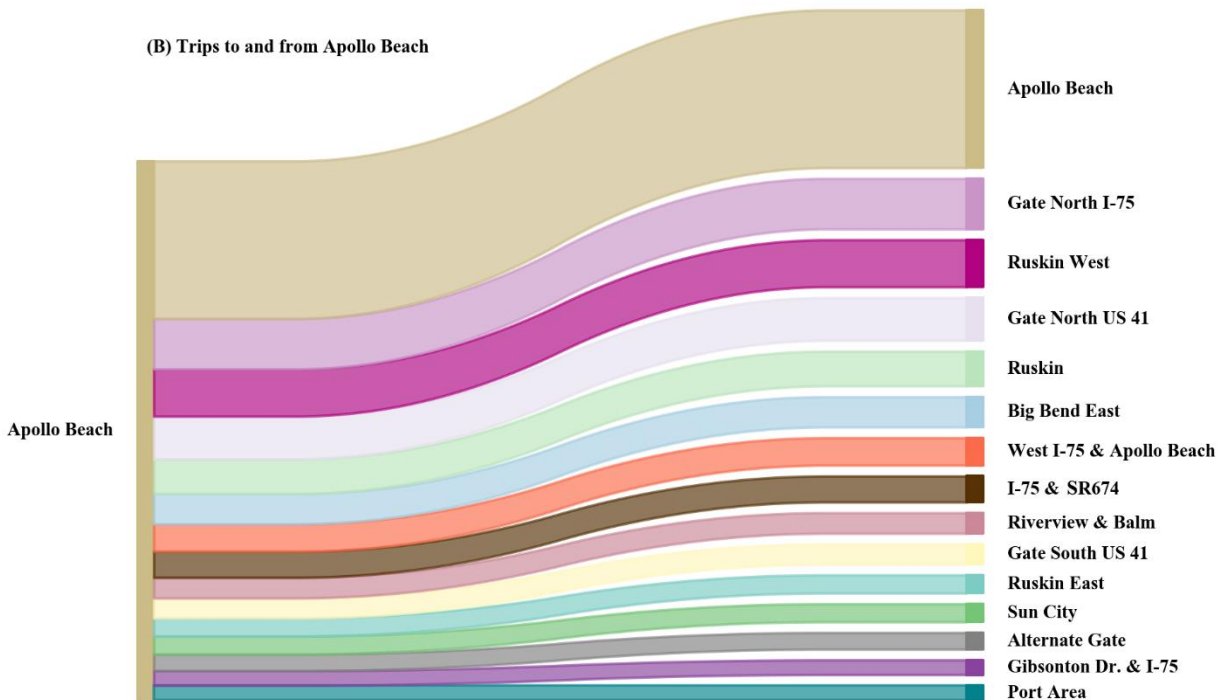
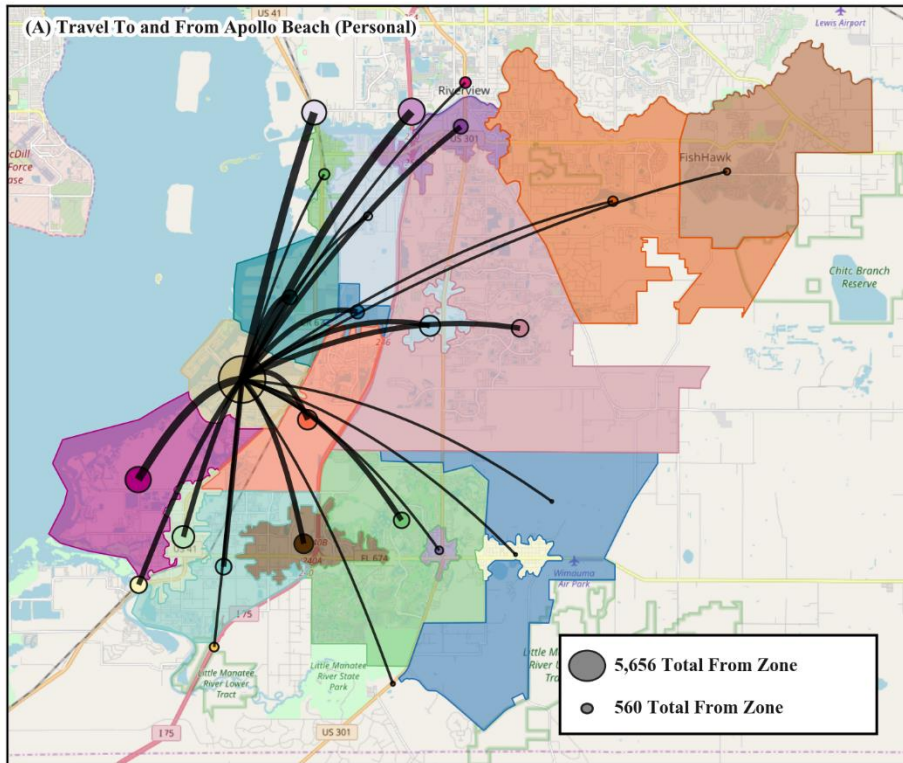
**Figure 41. Apollo Beach zone**

Source: Hillsborough County, U.S. Census Bureau

#### **Key Findings:**

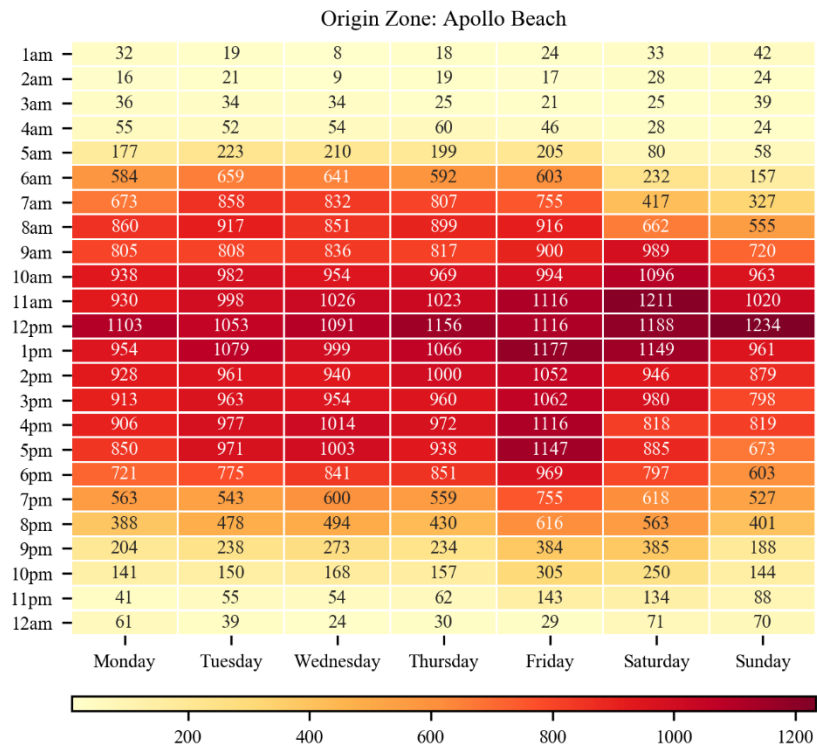
- The majority of trips are internal trips within the zone. These trips are likely accessing the area of activity (node) at the intersection of US 41 and Apollo Beach Blvd. (see Figure 42).

- Trips leaving the study area leave through the north gates of I-75 and US 41 (see Figure 42).
- Activity occurs throughout the day, peaking around midday for trips starting in the zone (see Figure 43).
- Trips arriving in the zone peak around 4pm in the afternoon on weekdays, and middays on weekends (see Figure 44). This late afternoon peak could be due to the shopping and entertainment services offered at the Apollo Beach area of activity (node).
- Most trips leaving and entering this zone are for HBO purposes (see Figure 45).



**Figure 42. All personal trips to and from Apollo Beach zone**

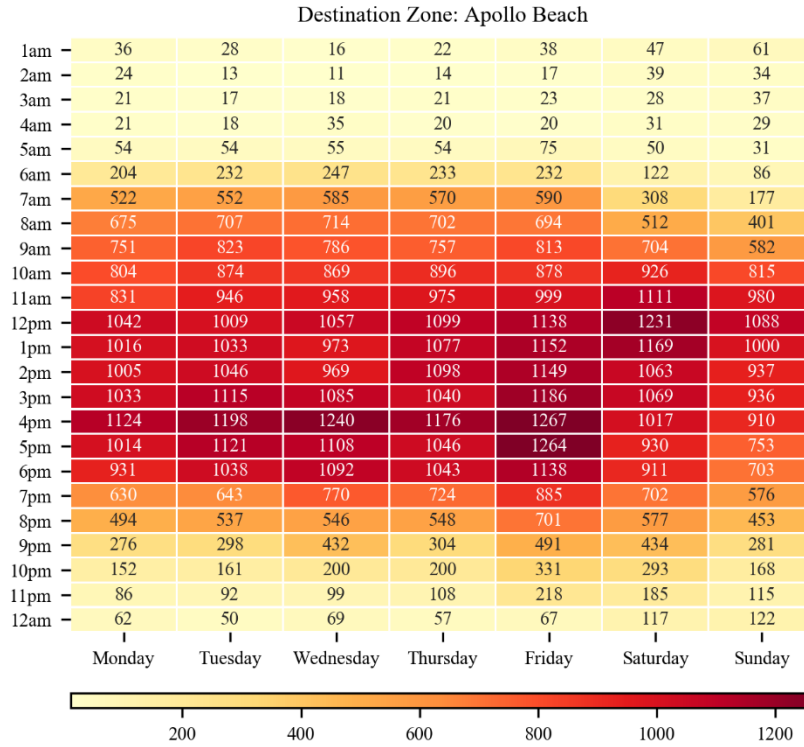
Source: StreetlightData, Inc.



**Figure 43. All personal trips from Apollo Beach zone by hour and day**

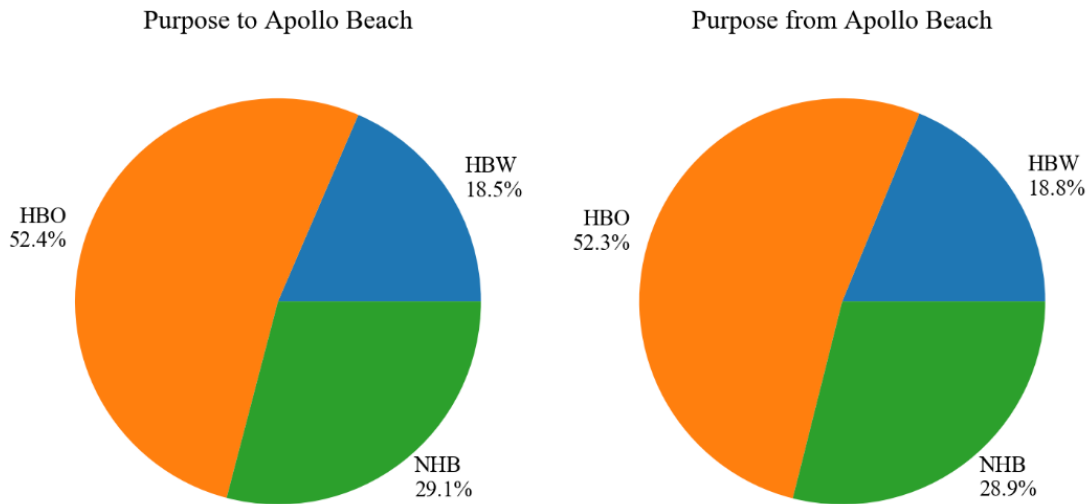
Source: StreetlightData, Inc.





**Figure 44. All personal trips to Apollo Beach zone by hour and day**

Source: StreetlightData, Inc.

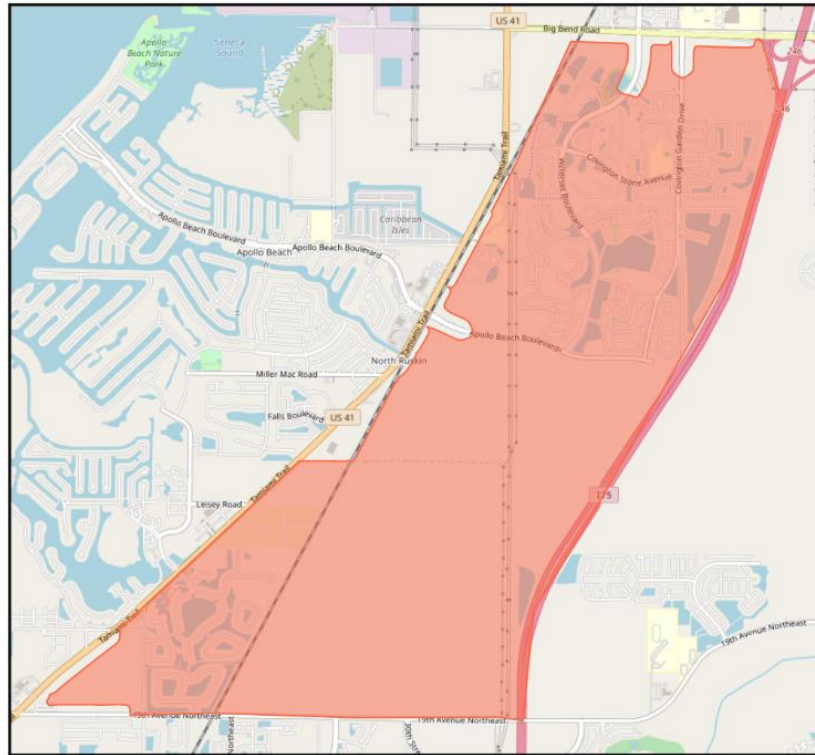


**Figure 45. Personal trip purpose to and from Apollo Beach zone**

Source: StreetlightData, Inc.

#### 4.1.3 West I-75 & Apollo Beach Zone (OD Analysis)

This zone lies west of I-75 between US 41 and I-75 (see Figure 46). It is primarily residential, with some single use activity areas like schools, or agricultural/industrial related land uses. Important roadways in this zone are US 41, I-75, Big Bend Rd. and 19<sup>th</sup> Ave NE.

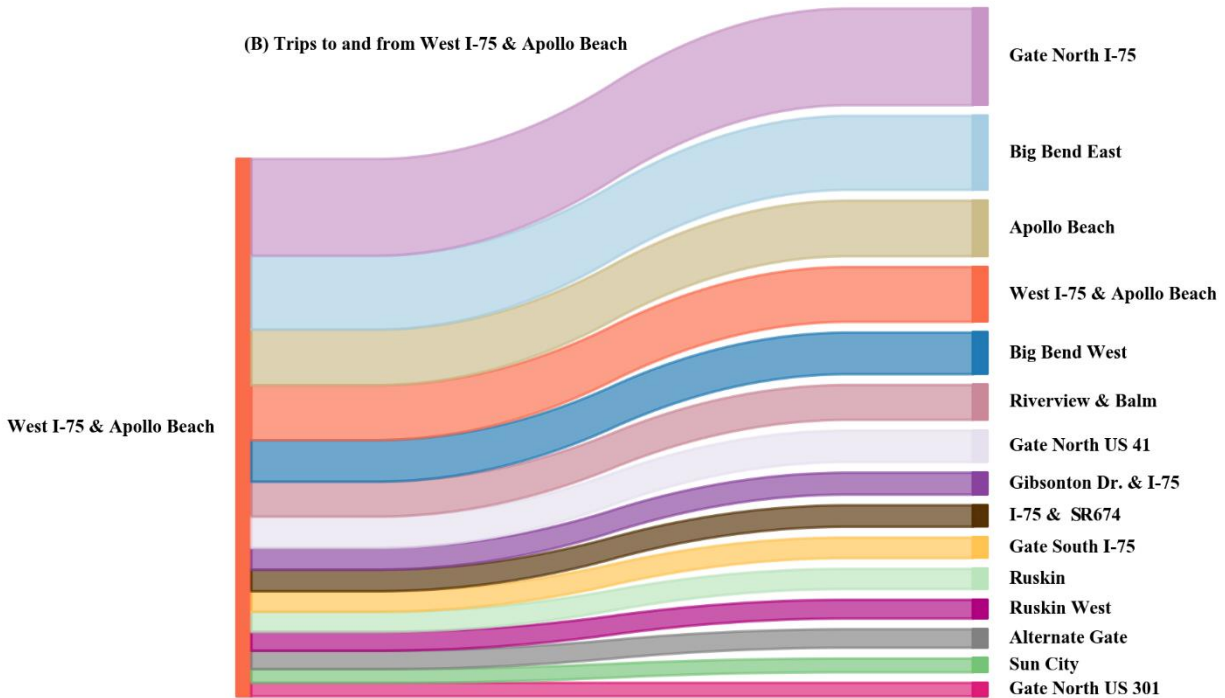
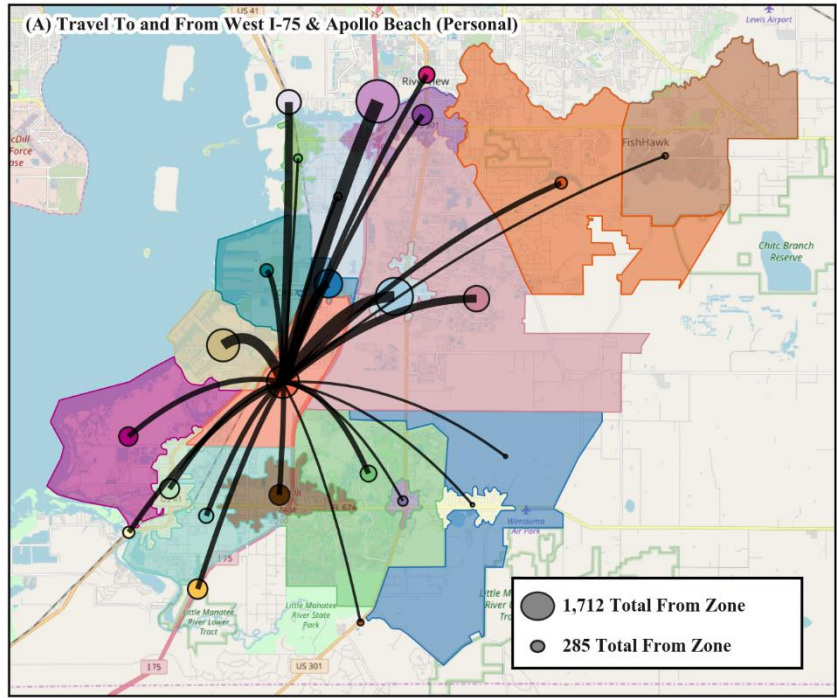


**Figure 46. West I-75 & Apollo Beach zone**

Source: Hillsborough County, U.S. Census Bureau

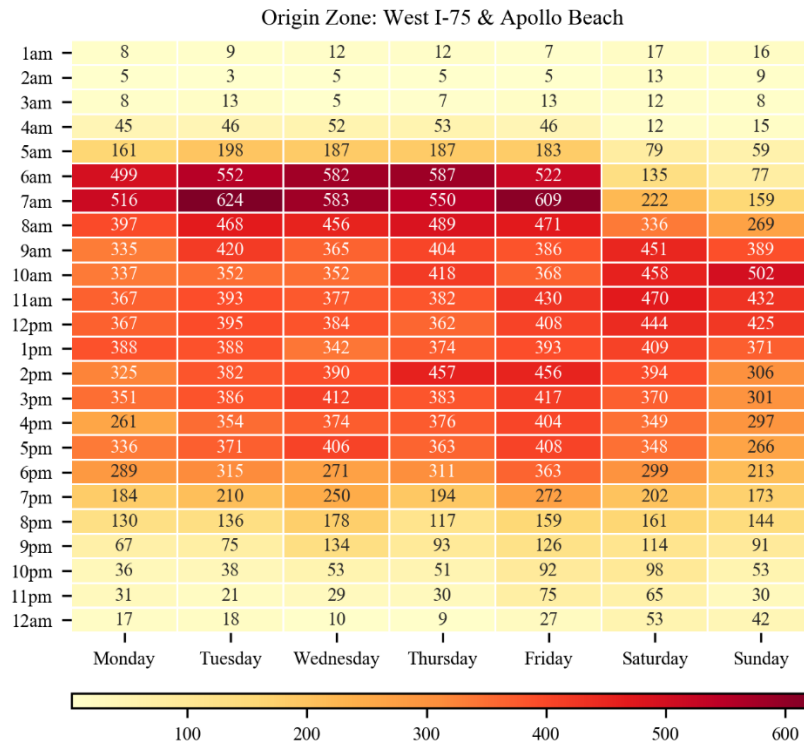
#### Key Findings:

- Most trips are connecting to the area of activity (node) at Big Bend East and the Apollo Beach zones (see Figure 47).
- The majority of trips enter or leave through the North I-75 gate (see Figure 47).
- Trips leaving the zone peak during the am peak period, and entering trips peak during the pm peak period (see Figure 48 and Figure 49).
- Trips leaving the zone have a mix of HBO and HBW, with Apollo Beach and Area of Activity (Node) Big Bend West zones having a high percentage of HBW related trip purposes (see Figure 50).



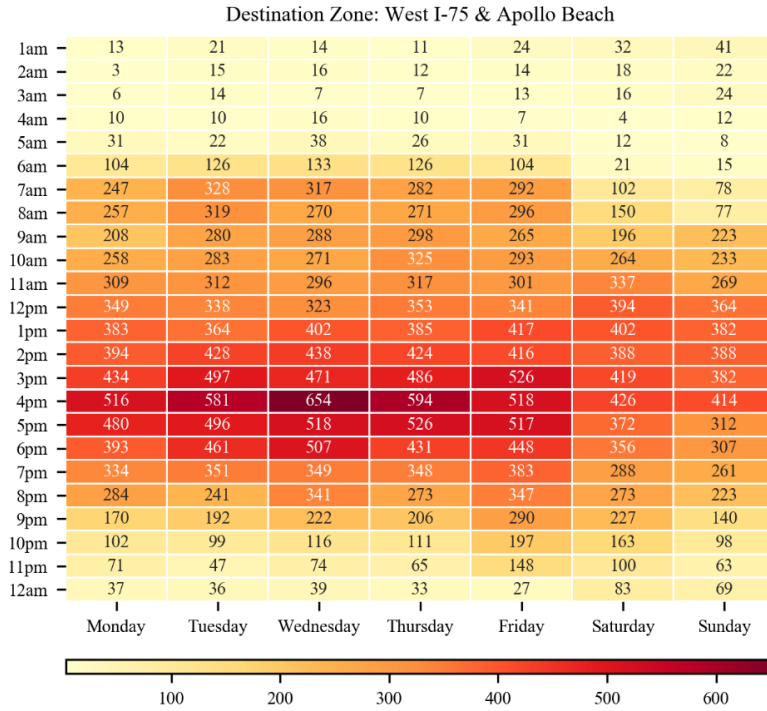
**Figure 47. All personal trips to and from West I-75 & Apollo Beach zone**

Source: StreetlightData, Inc.



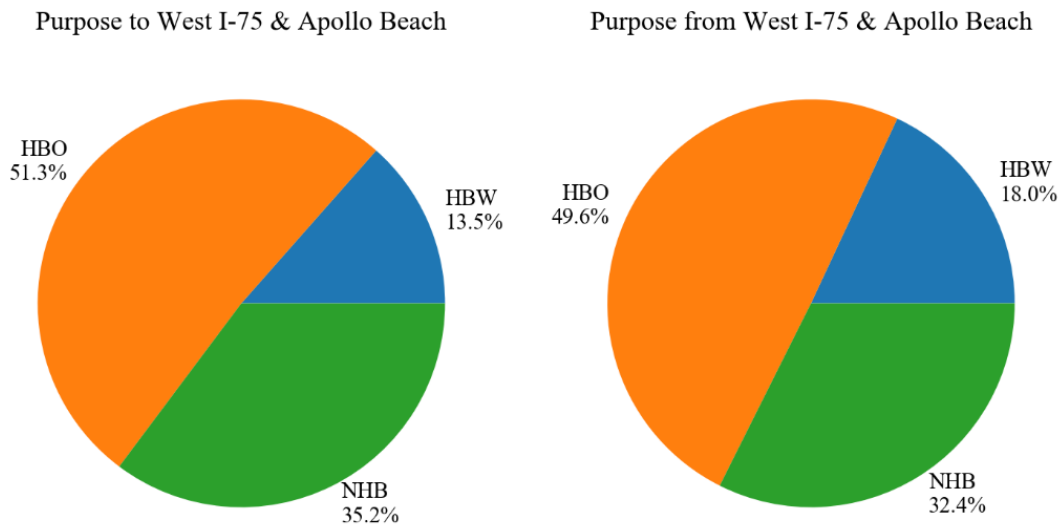
**Figure 48. All personal trips from West I-75 & Apollo Beach zone by hour and day**

Source: StreetlightData, Inc.



**Figure 49. All personal trips to West I-75 & Apollo Beach zone by hour and day**

Source: StreetlightData, Inc.



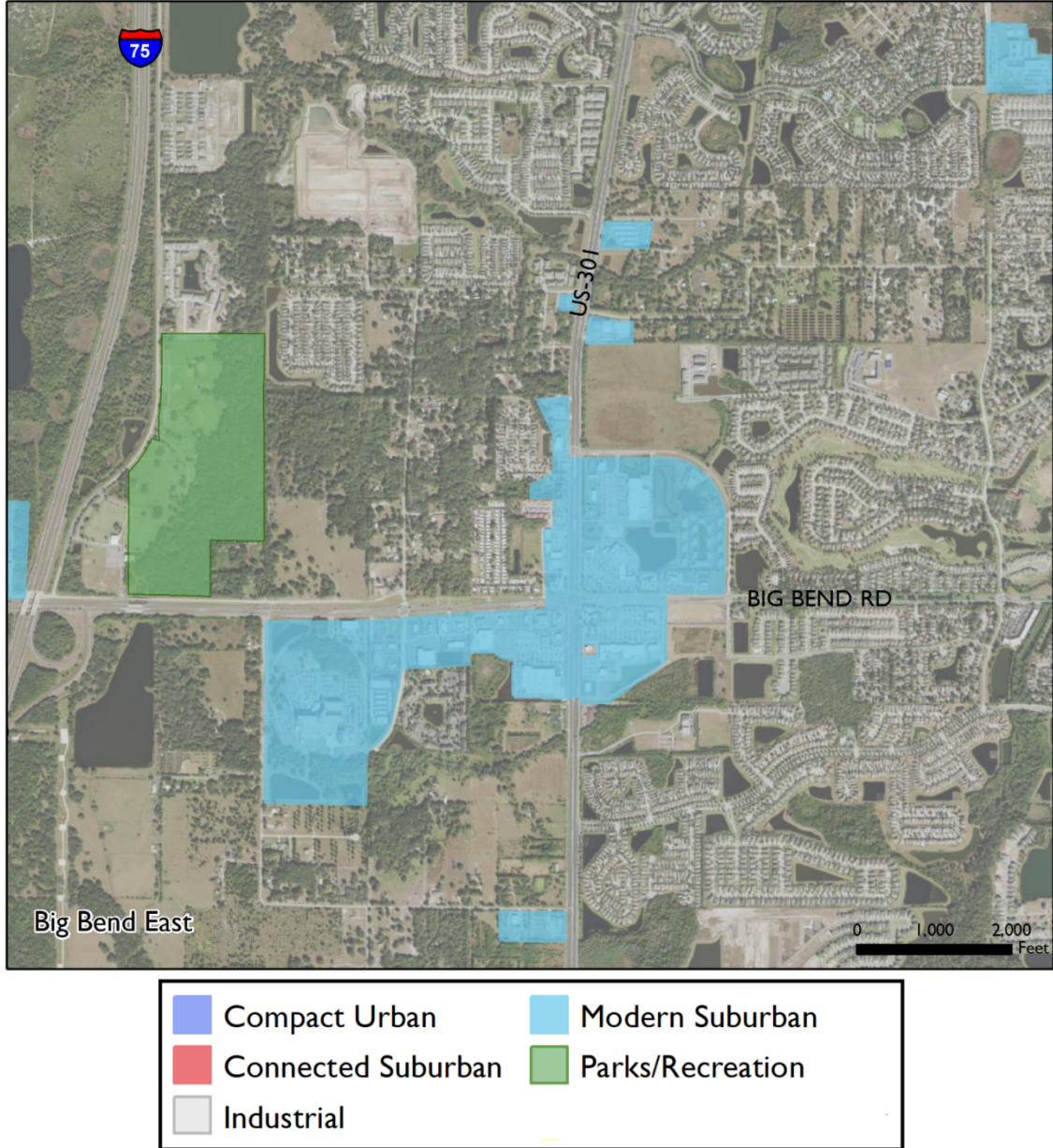
**Figure 50. Personal trip purpose to and from West I-75 & Apollo Beach zone**

Source: StreetlightData, Inc.

## **4.2 Big Bend and Port Area**

### ***4.2.1 Big Bend Rd. East Area of Activity (Node)***

Big Bend Rd. East is dominated by a modern suburban area of activity (node) consisting of retail/commercial and office uses at the intersection of US 301 and Big Bend Road (see Figure 51). A hospital campus is located along Big Bend Rd. west of US 301 near the HART route loop. Some natural areas of activity (nodes) are also found in the area. The two main corridors are US 301 and Big Bend Road. AADT on US 301 north of Big Bend Rd. is between 30,000 AADT and 50,000 AADT. The OD study found more traffic to the north from this area. Big Bend Rd. connects this area with US 41 and I-75 to the east, and Balm to the west. US 301 connects this area of activity (node) to Riverview and Sun City Center. The existing greenway runs parallel to US 301 from Big Bend Rd., and connects this area with areas of activity (nodes) at Gibsonton Dr. There are three proposed mobility hubs in this area.



**Figure 51. Areas of activity (nodes) within the area of Big Bend Rd. east of I-75**

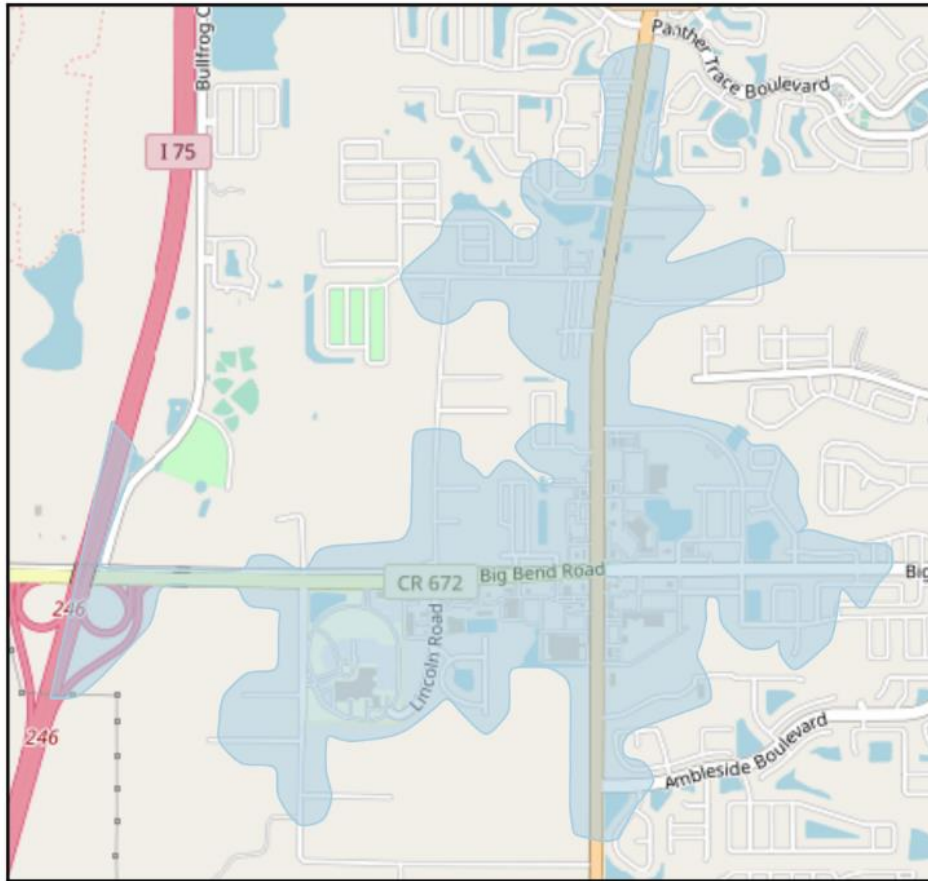
Source: Hillsborough County, U.S. Census Bureau

**4.2.2. Big Bend East Zone (OD Analysis)**

This nodal zone encompasses the intersection of Big Bend Rd. and US 301. I-75 is the west boundary of the area of activity (node) (see Figure 52). This zone includes shopping, entertainment, and a 5-minute walking buffer. It serves as an access point for Riverview and Balm in the east, and the Port area and Apollo Beach in the west.

Key Findings:

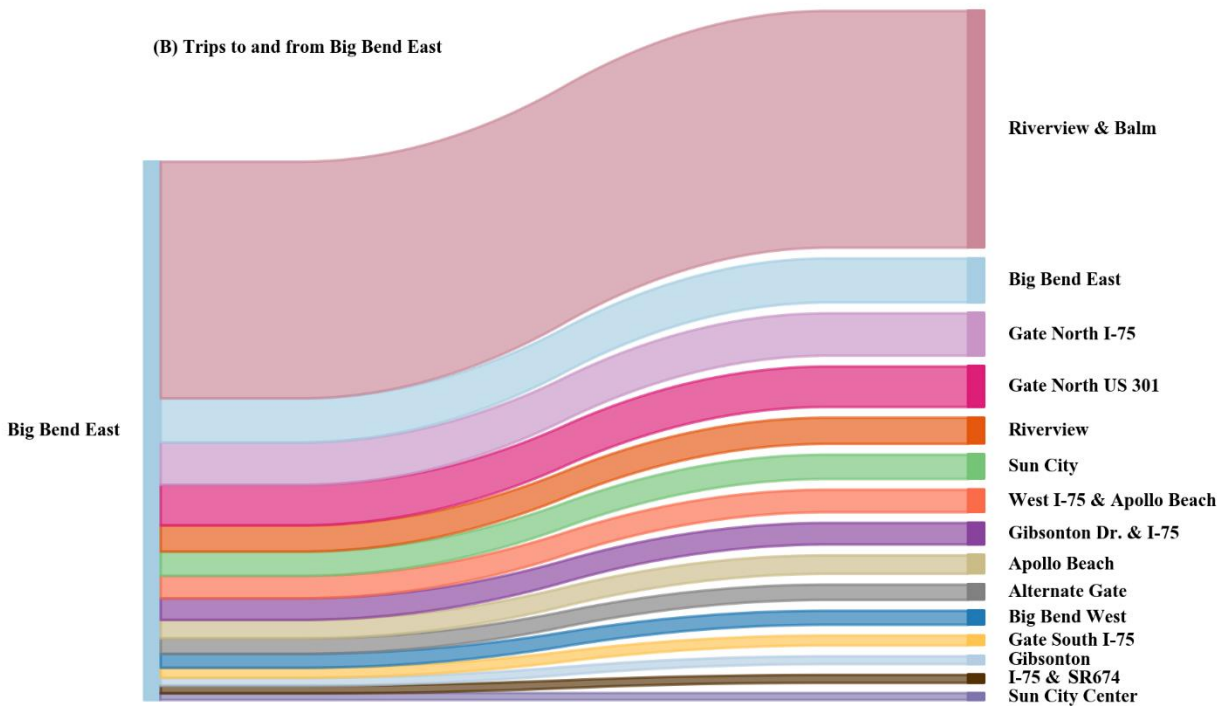
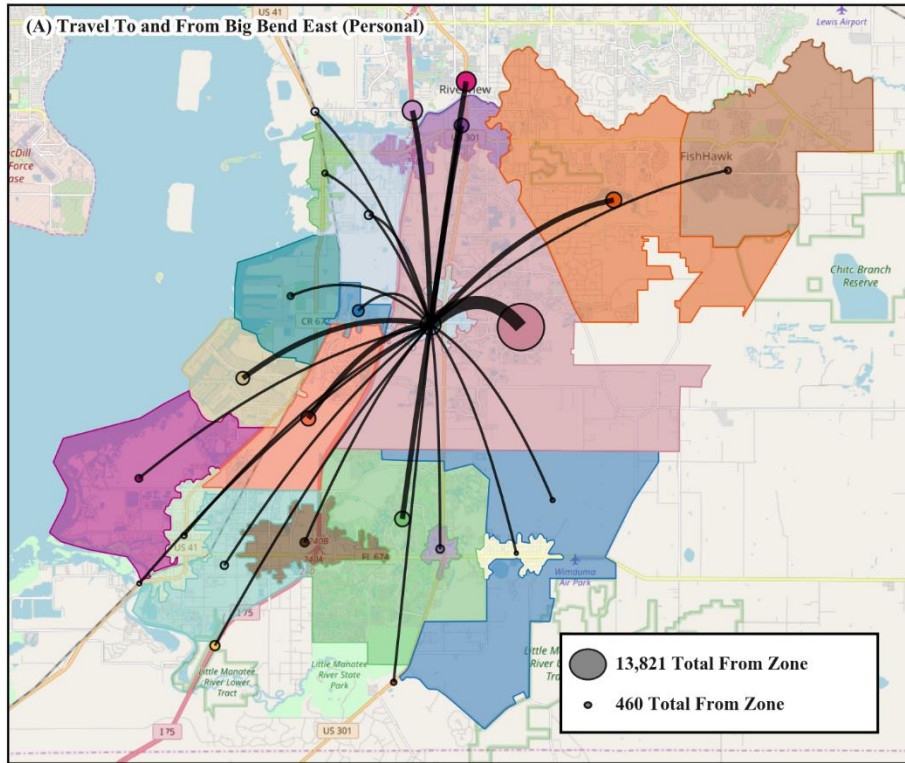
- Most trips to and from this zone are with the Riverview & Balm zone (see Figure 53)
- Most trips leaving and entering this zone occur from 11am to 5pm, every day (see Figure 54 and Figure 55).
- The trip purpose leaving or entering is primarily HBO or NHB (e.g. between Area of Activity (Node) Big Bend east and Area of Activity (Node) Gibsonton Dr. & I-75) (see Figure 56).



**Figure 52. Big Bend East zone**

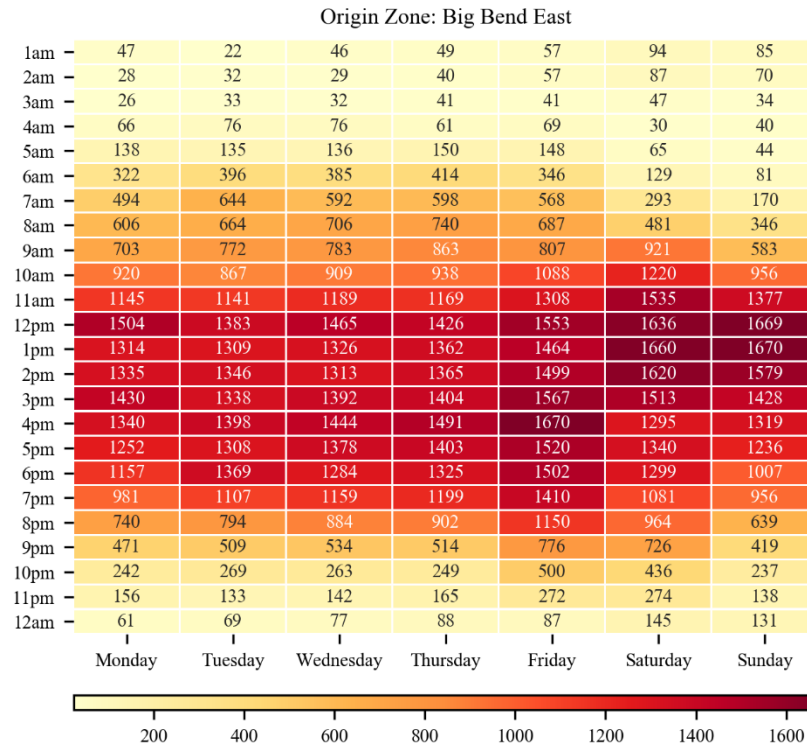
Source: Hillsborough County, U.S. Census Bureau





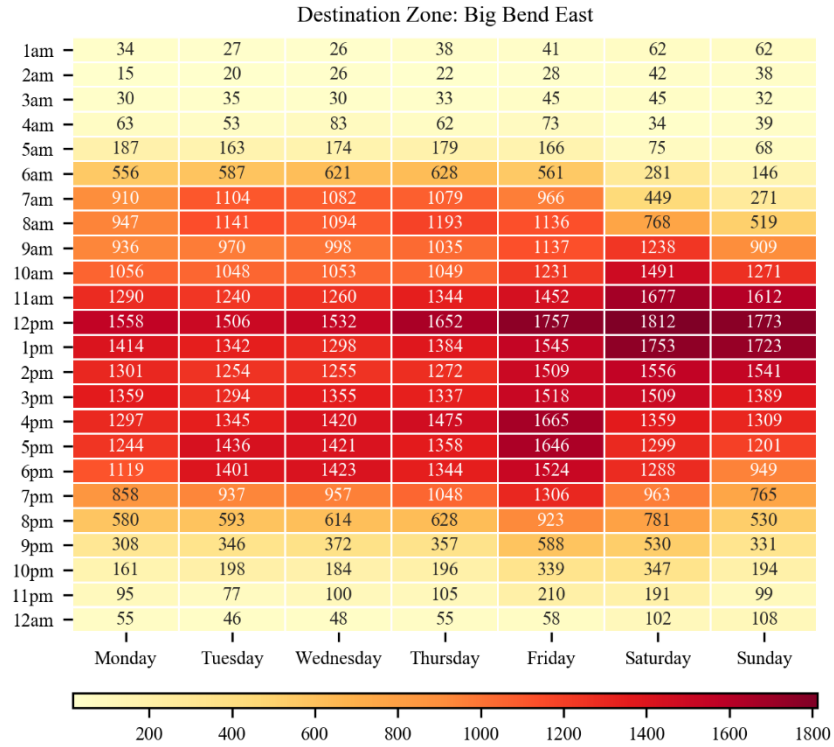
**Figure 53. All personal trips to and from Big Bend East**

Source: StreetlightData, Inc.



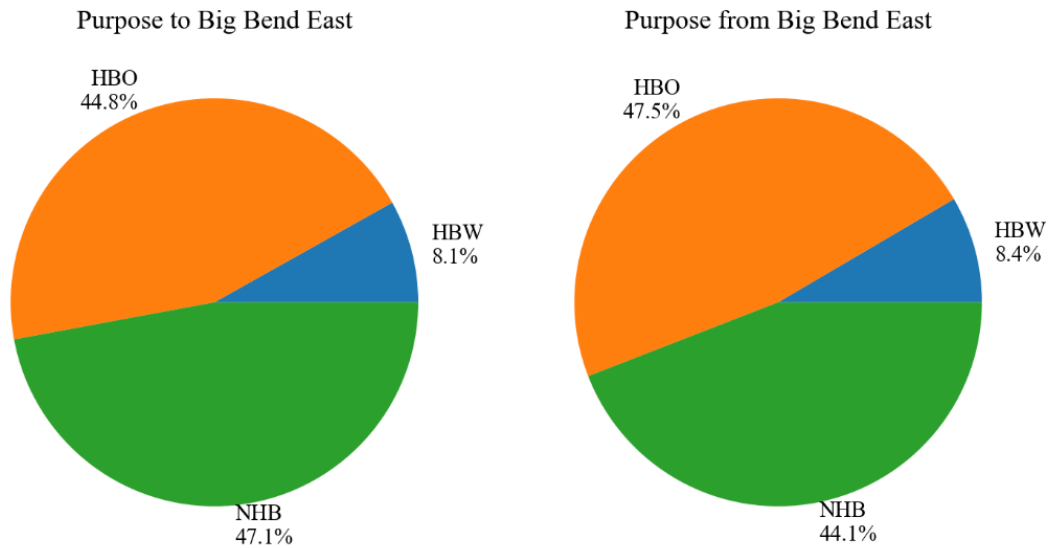
**Figure 54. All personal trips from Big Bend East by hour and day**

Source: StreetlightData, Inc.



**Figure 55. All personal trips to Big Bend East by hour and day**

Source: StreetlightData, Inc.

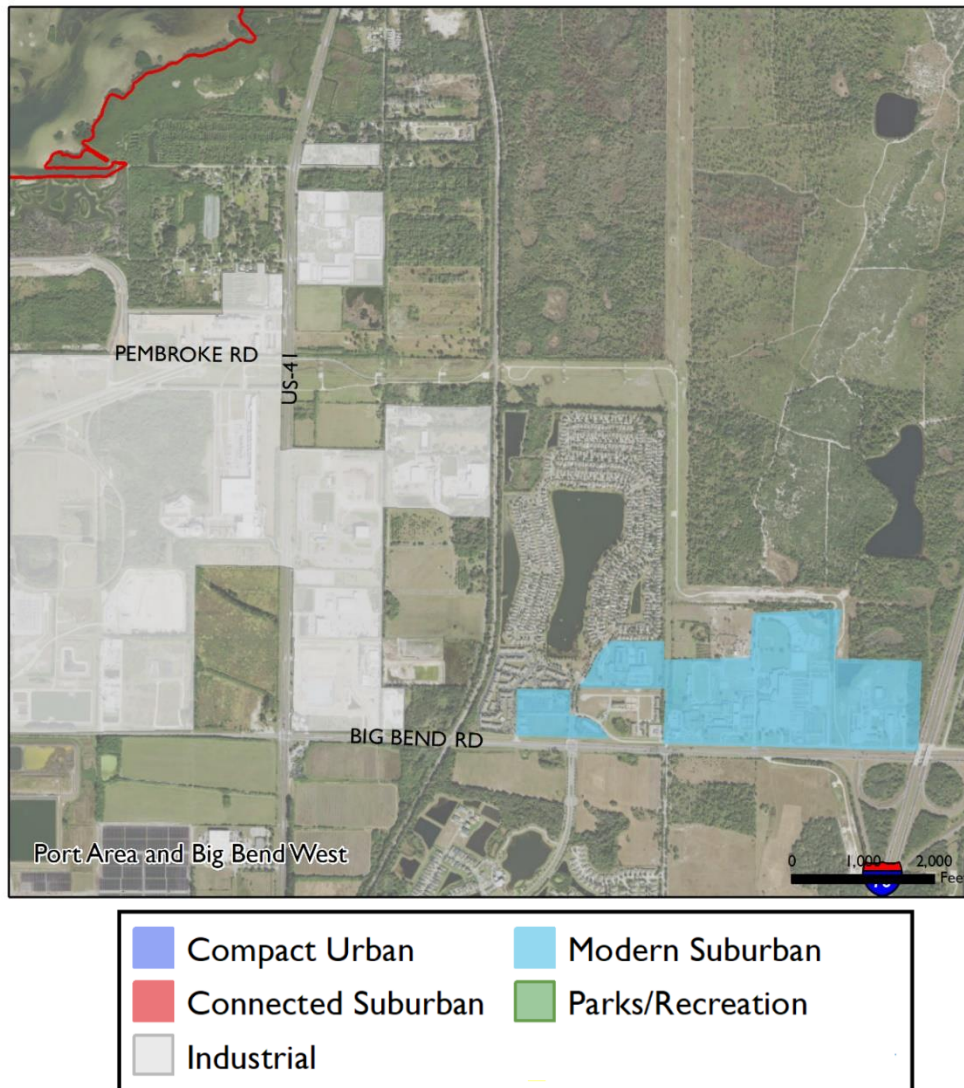


**Figure 56. Personal trip purpose to and from Big Bend East**

Source: StreetlightData, Inc.

**4.2.3. Port Area and Big Bend West Area of Activity (Node)**

This section is divided into two areas, the port consists primarily of agricultural and industrial areas of activity (nodes), and Big Bend Rd. west of I-75 is a modern suburban area of activity (node) (see Figure 57). The port area would have influence on commercial traffic in this area. The Big Bend area of activity (node) consists of schools, a church, and the Hillsborough County Public Works South Service Unit. The major corridors in this area are US 41 and Big Bend Rd., both with AADT ranging from 15,000 AADT to 30,000 AADT. There is an existing HART route along US 41. Greenways to the north do not connect directly to either area of activity (node).



**Figure 57. Areas of activity (nodes) within the area of the Port and Big Bend Rd. west of I-75**

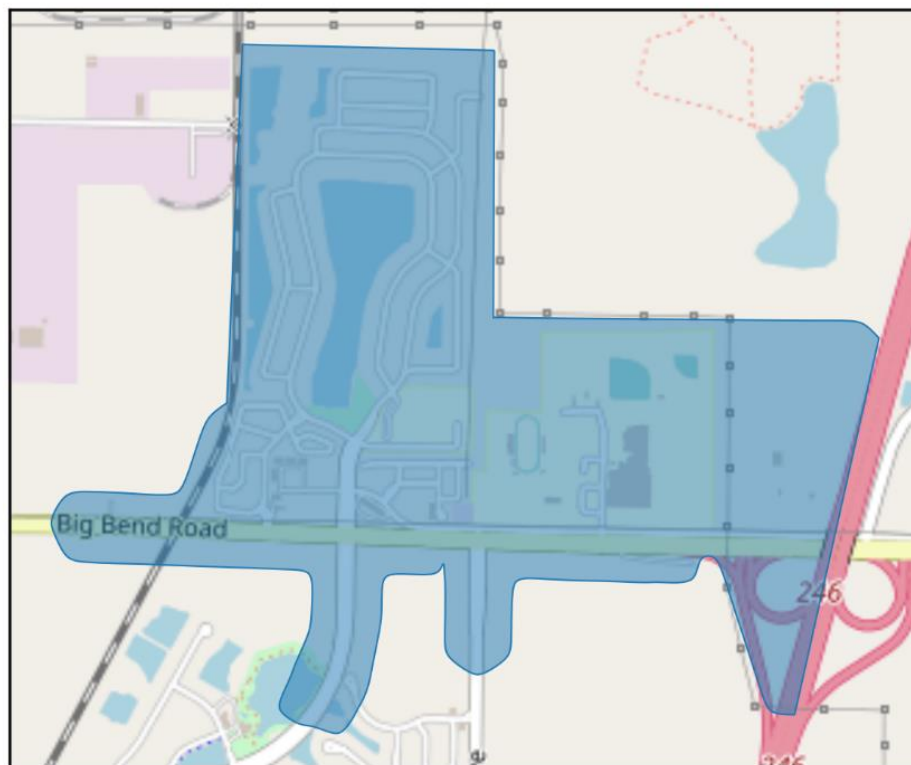
Source: Hillsborough County, U.S. Census Bureau

#### 4.2.4 Big Bend West Zone (OD Analysis)

This nodal zone sits west of the intersection of Big Bend Rd. and I-75 (see Figure 58). It includes shopping, commercial areas, and education land uses. It also includes a 5 minute walking buffer. Major roadways within this area of activity (node) are Big Bend Rd. and I-75.

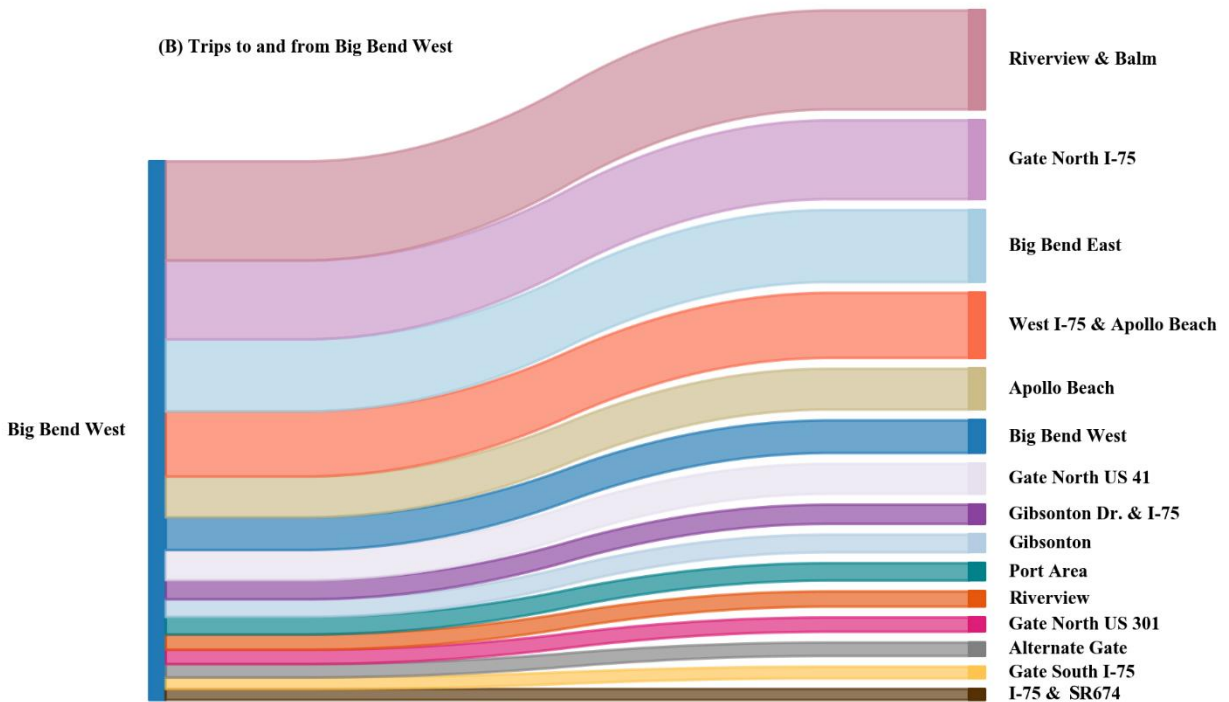
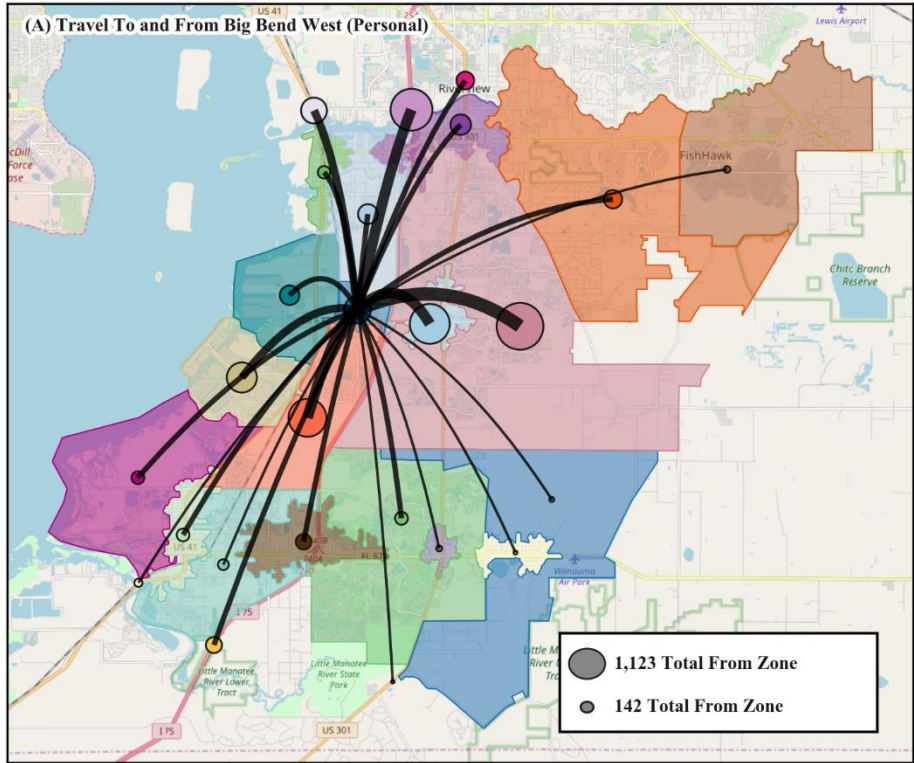
Key Findings:

- Most trips connect to the Riverview & Balm and Area of Activity (Node) Big Bend East zones (see Figure 59)
- Trips leaving and entering the zone pass through the North I-75 gate (see Figure 59)
- Trip activity leaving the zone peaks during the weekday peak am period (6am to 10am) (see Figure 60)
- Trips leaving the zone for Riverview & Balm have a high percentage of HBW purposes, but for peak pm times (3pm – 7pm) (see Figure 62).
- Trips entering the zone for Riverview & Balm have a high percentage of HBW purposes for peak pm times (3pm – 7pm) (see Figure 61 and Figure 62).
- Most trip activity has an HBO trip purpose (see Figure 62).



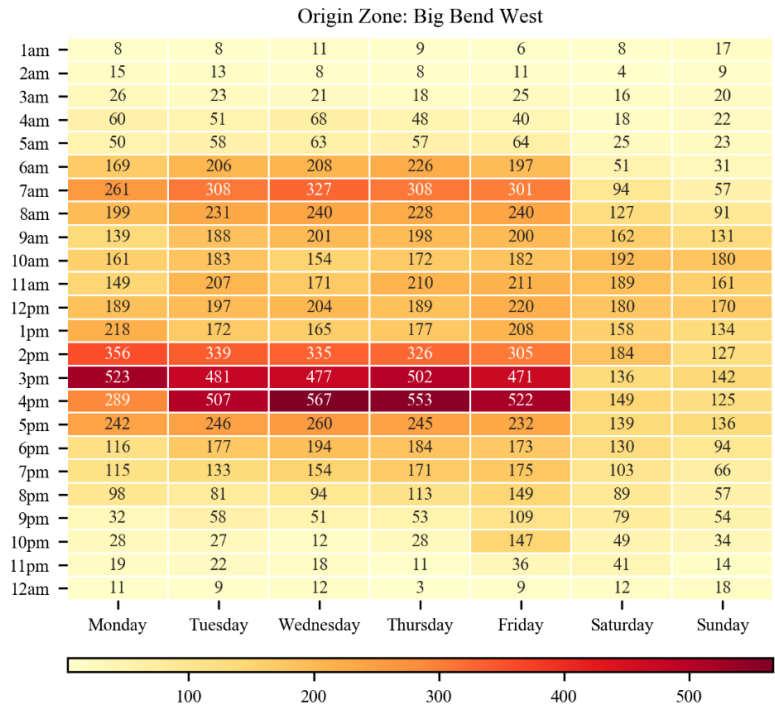
**Figure 58. Big Bend West zone**

Source: Hillsborough County, U.S. Census Bureau



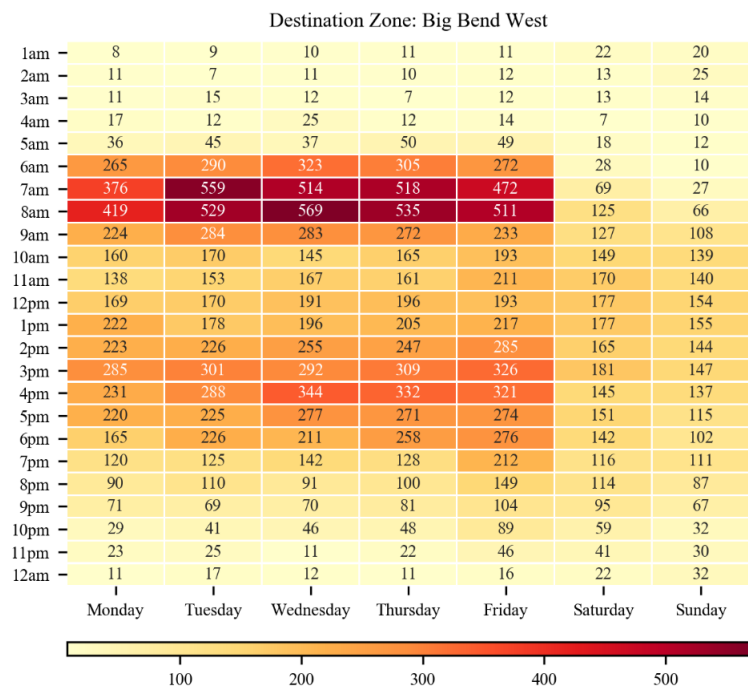
**Figure 59. All personal trips to and from Big Bend West zone**

Source: StreetlightData, Inc.



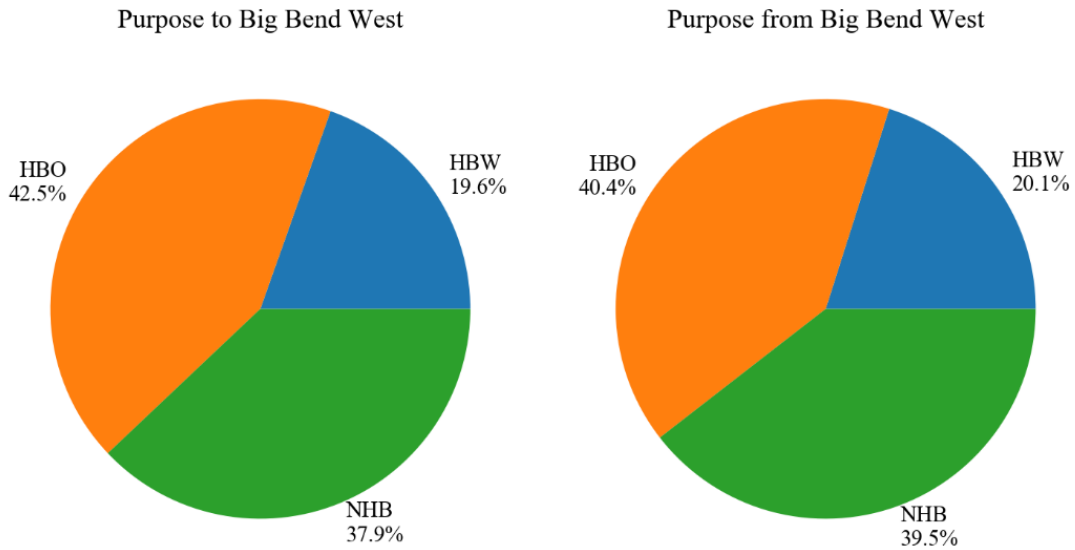
**Figure 60. All personal trips from Big Bend West zone by hour and day**

Source: StreetlightData, Inc.



**Figure 61. All personal trips to Big Bend West zone by hour and day**

Source: StreetlightData, Inc.



**Figure 62. Personal trip purpose to and from Big Bend West zone**

Source: StreetlightData, Inc.

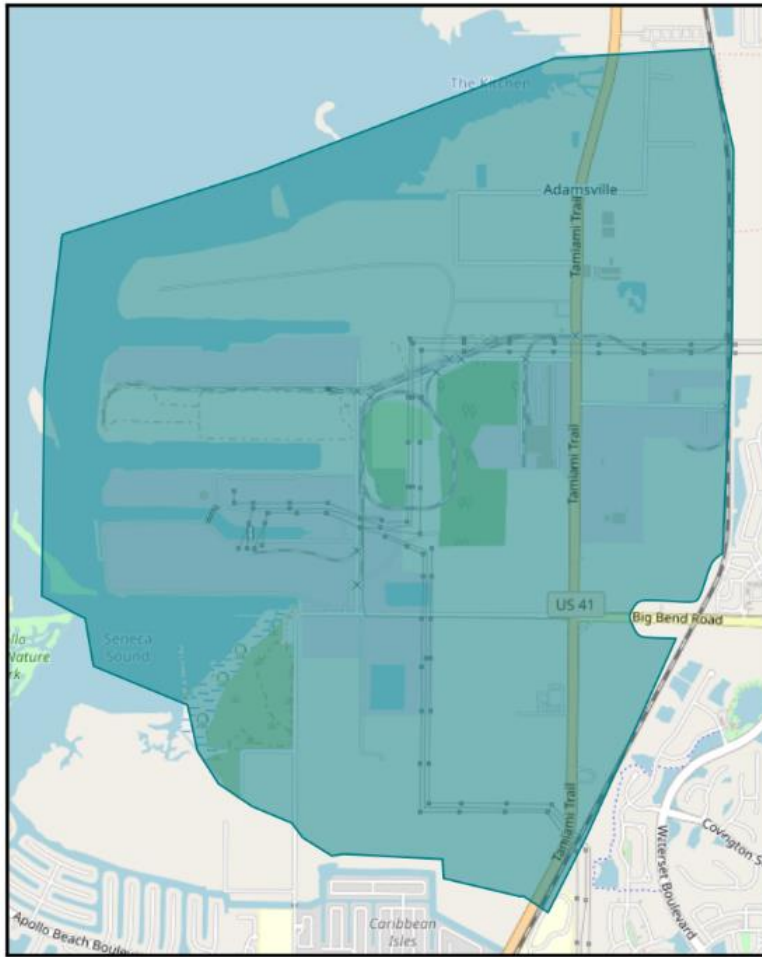
#### **4.2.5 Port Area Zone (OD Analysis)**

This zone includes the port, and agricultural/industrial land uses. Important roadways include US 41 and Big Bend Rd. (see Figure 63).

Key Findings:

- Most trips to and from this zone pass through gates North I-75 and North US 41 (see Figure 64).
- Trips leaving the zone peak in the afternoon, and trips entering peak in the morning (see Figure 65 and Figure 66).
- Most trips leaving and entering this zone are for NHB purposes (Figure 67).





**Figure 63. Port Area zone**

Source: Hillsborough County, U.S. Census Bureau

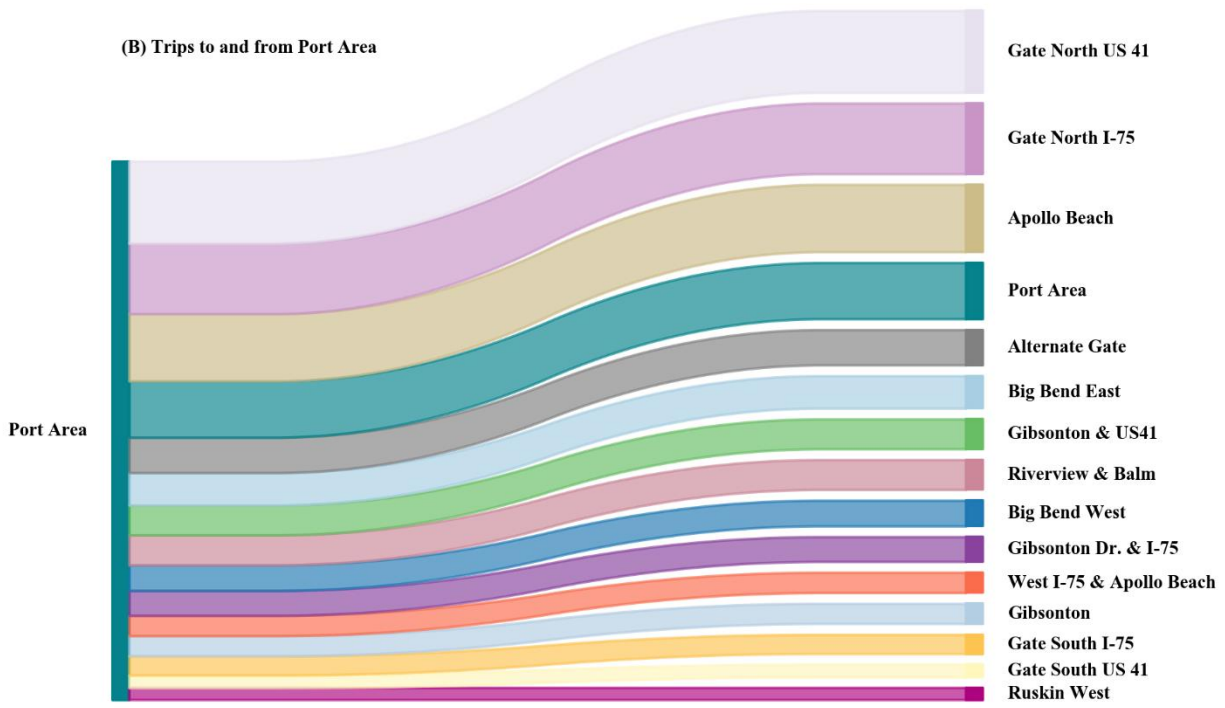
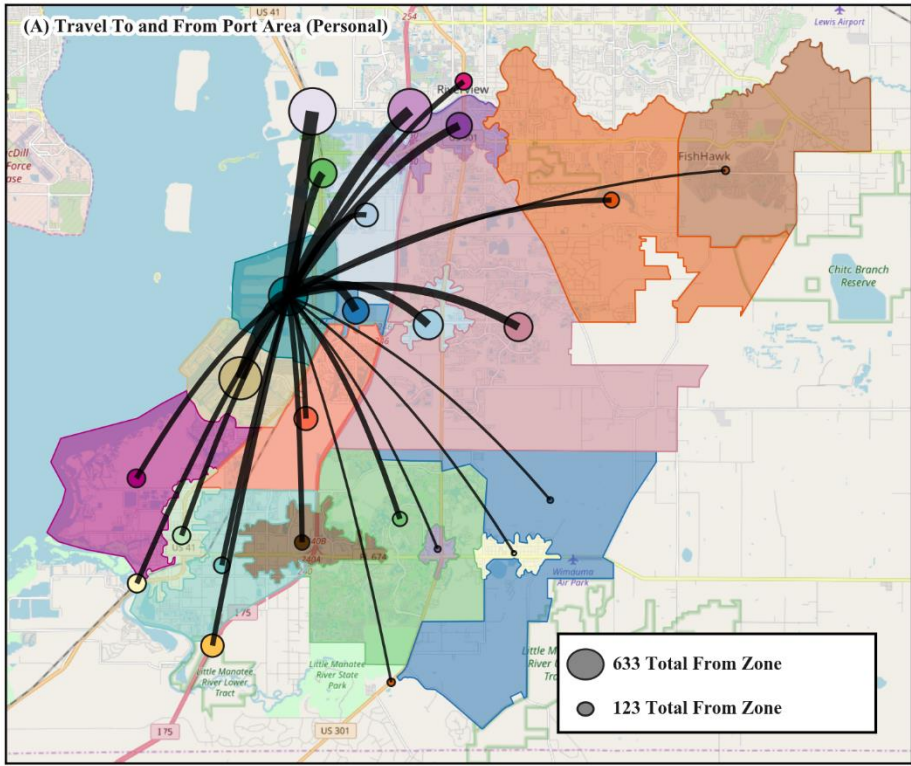
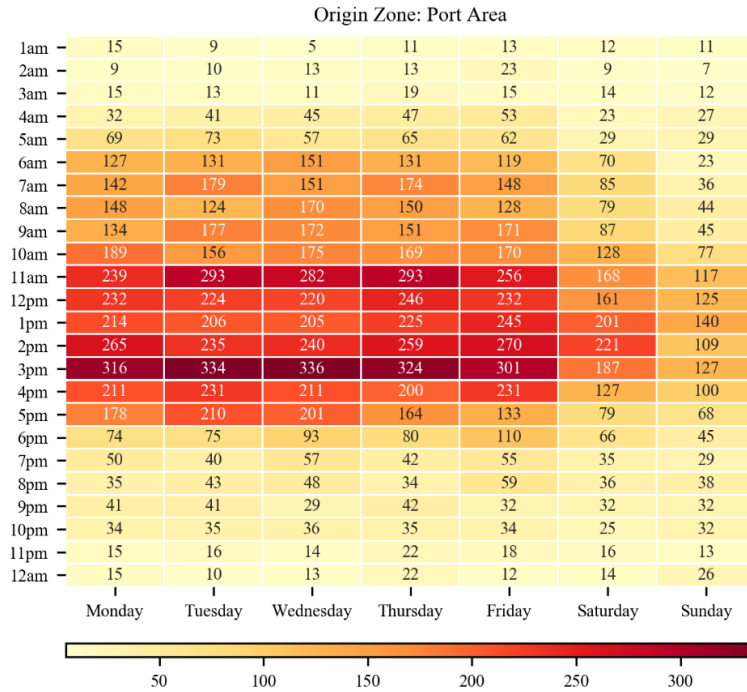
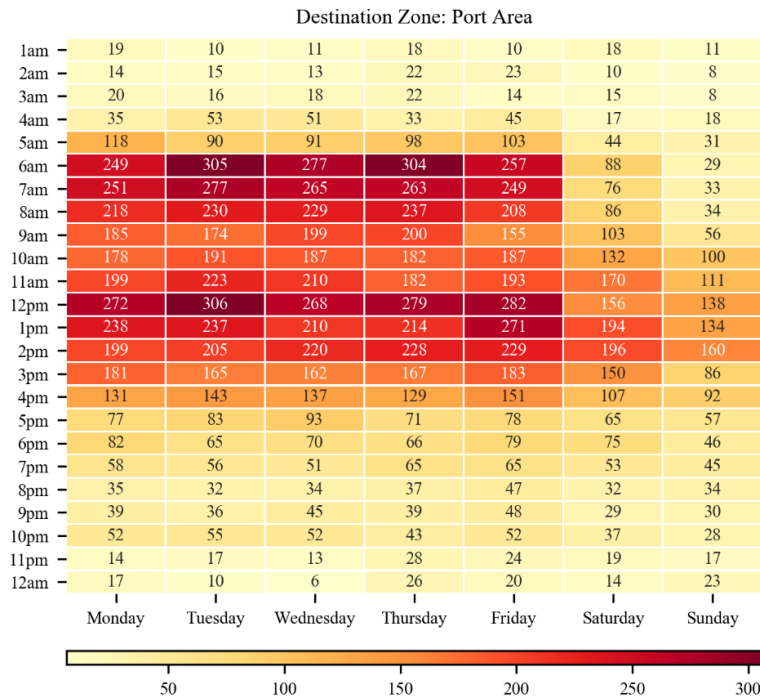


Figure 64. All personal trips to and from Port Area zone  
 Source: StreetlightData, Inc.



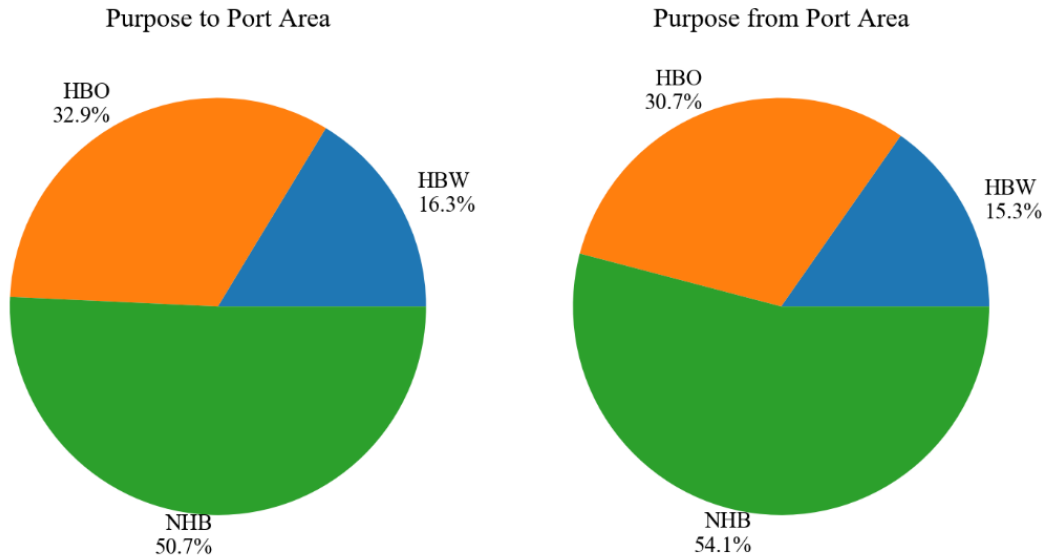
**Figure 65. All personal trips from Port Area zone by hour and day**

Source: StreetlightData, Inc.



**Figure 66. All personal trips to Port Area zone by hour and day**

Source: StreetlightData, Inc.



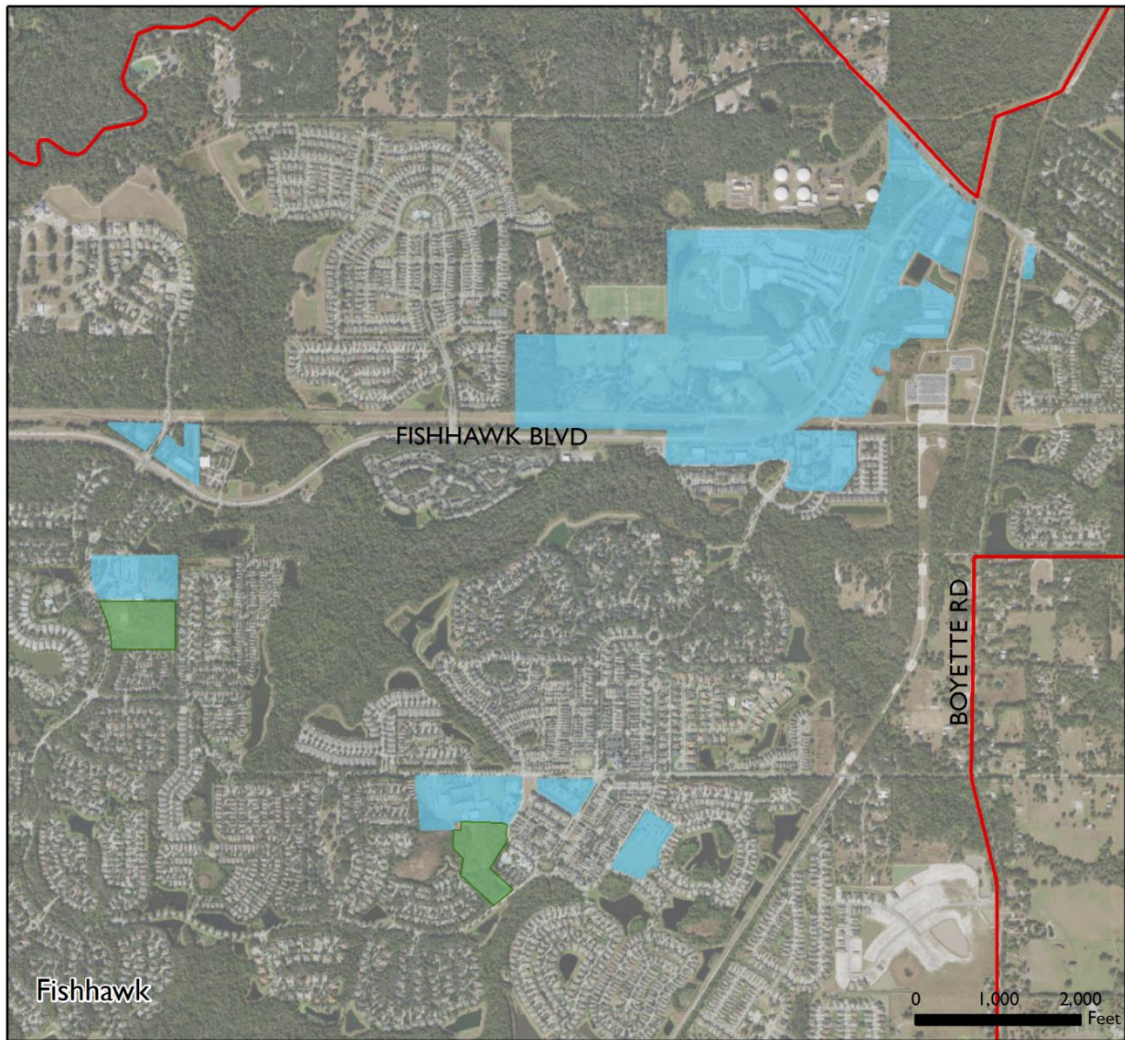
**Figure 67. Personal trip purpose to and from Port Area zone**

Source: StreetlightData, Inc.

### 4.3 Fishhawk

#### 4.3.1 Fishhawk Area of Activity (Node)

Fishhawk is dominated by modern suburban development along the Fishhawk Blvd. corridor (Figure 68). The modern suburban area of activity (node) consists of retail, entertainment, office, and a school campus. The main corridor is Fishhawk Blvd, connecting this area to Riverview and I-75. Fishhawk Blvd also intersects with Lithia Pinecrest Rd, which serves as an alternative gate to this section of the study area. There is an existing HART route along Fishhawk Blvd.



**Figure 68. Areas of activity (nodes) within the area of Fishhawk**

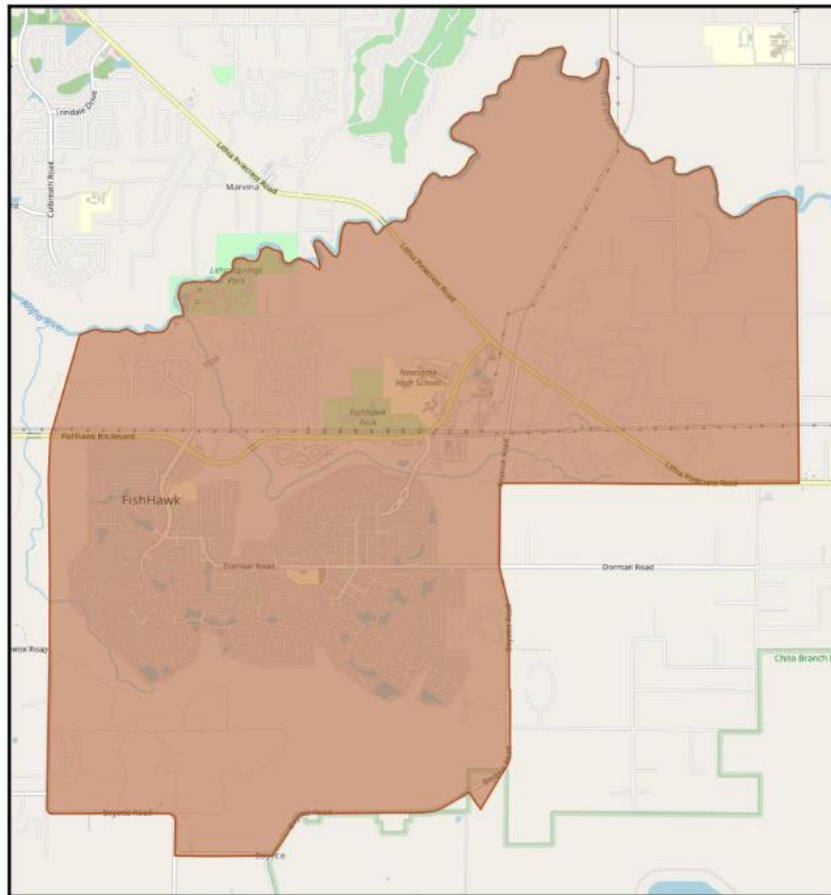
Source: Hillsborough County, U.S. Census Bureau

**4.3.2 Fishhawk Zone (OD Analysis)**

This zone encompasses a primarily residential area. It also includes areas of activity (nodes) located along Fishhawk Blvd towards the east (including shopping area, commercial, and a school campus) (see Figure 69). Primary roadways in this area are Fishhawk Blvd, Bell Shoals Rd, and Lithia Pinecrest Rd.

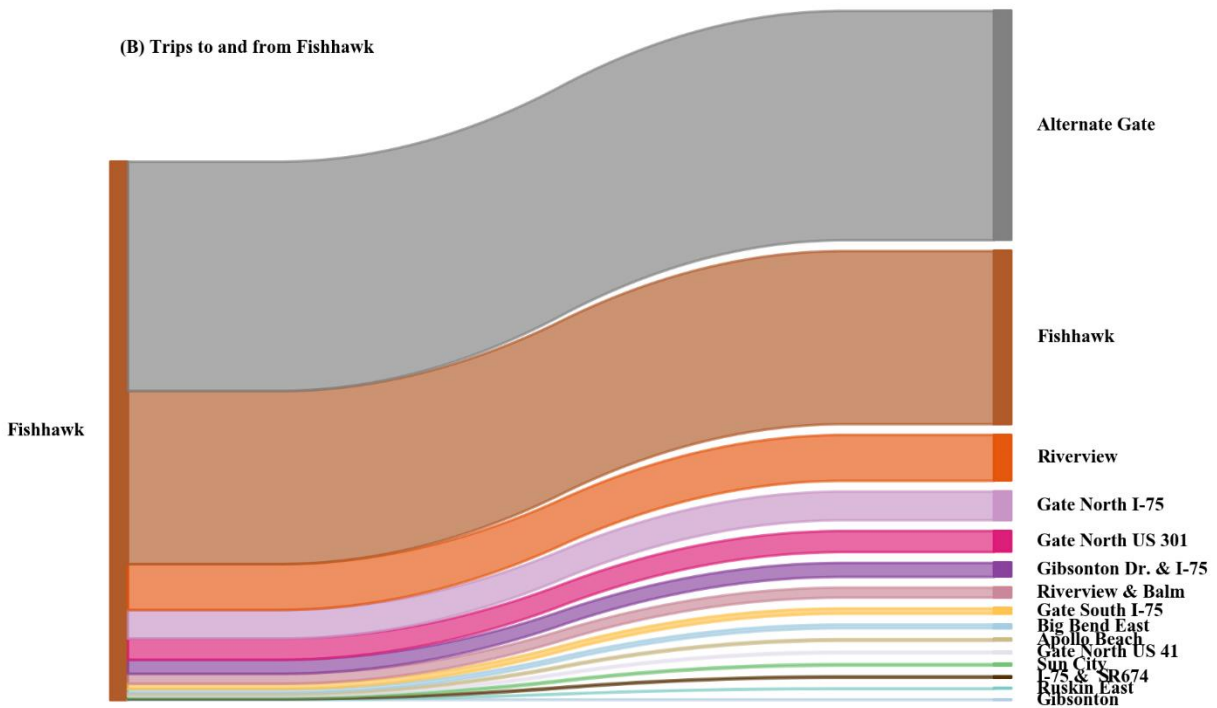
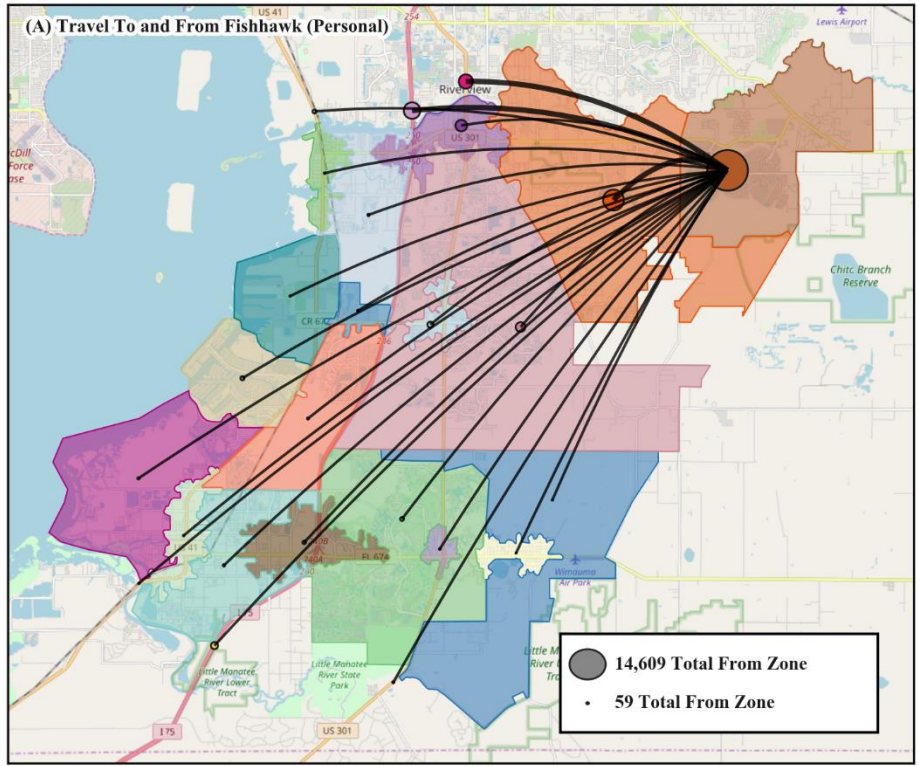
Key Findings:

- Most trips to and from this zone use alternative routes to leave the study area (likely through Bell Shoals Rd. and Lithia Pinecrest Rd.) (see Figure 70)
- Many trips begin and end in Fishhawk (possibly because the zone includes an activity area)
- Trips leaving the zone peak during the peak am times (6am – 10am) while trips entering the zone are during the peak pm period (3pm – 7pm) (indicating a commuting pattern) (see Figure 71 and Figure 72).
- Trip purposes exhibit a mix of HBW, HBO and NHB (see Figure 73).

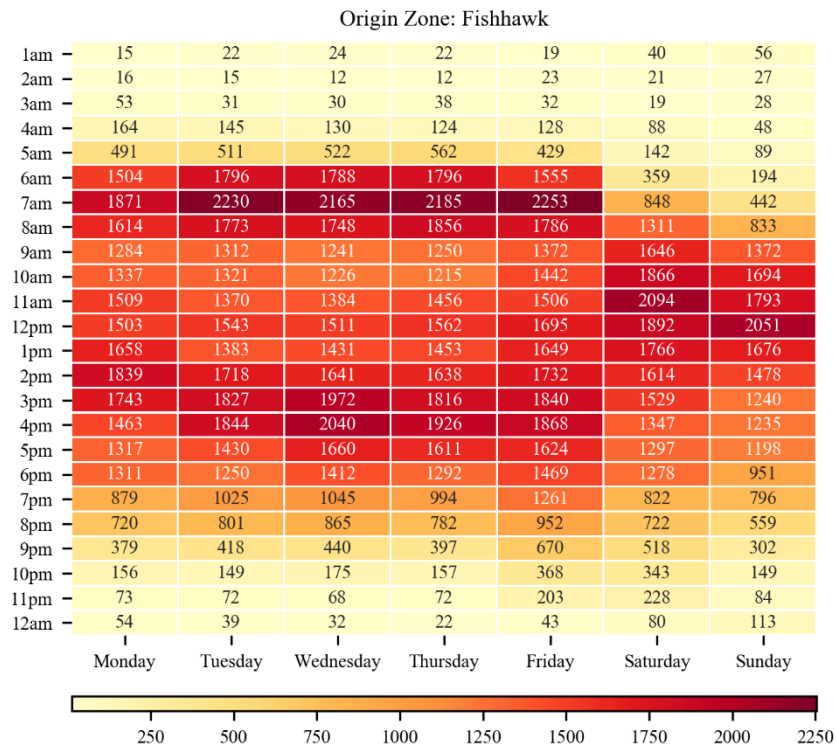


**Figure 69. Fishhawk zone**

Source: Hillsborough County, U.S. Census Bureau



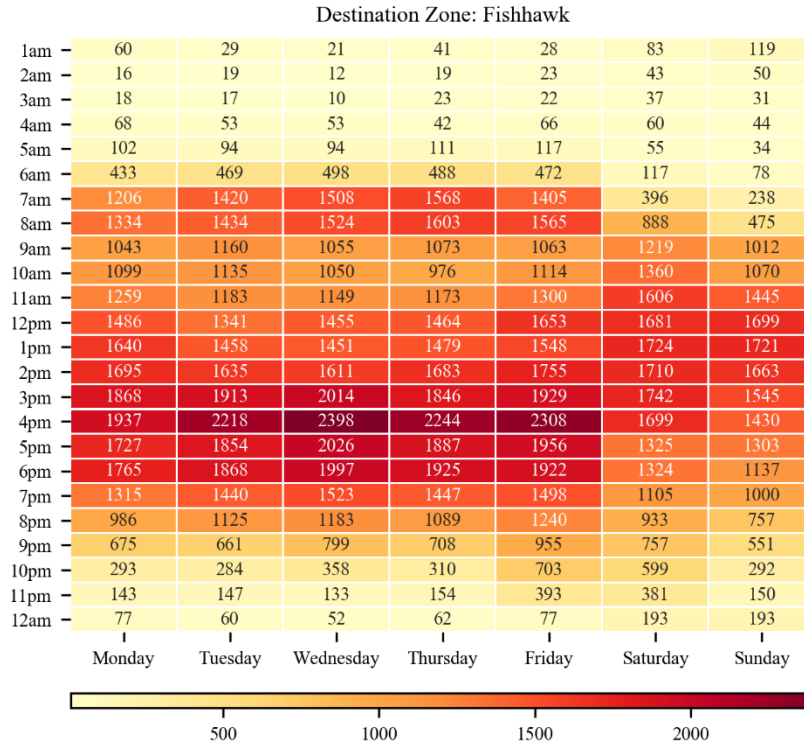
**Figure 70. All personal trips to and from Fishhawk zone**  
 Source: StreetlightData, Inc.



**Figure 71. All personal trips from Fishhawk zone by hour and day**

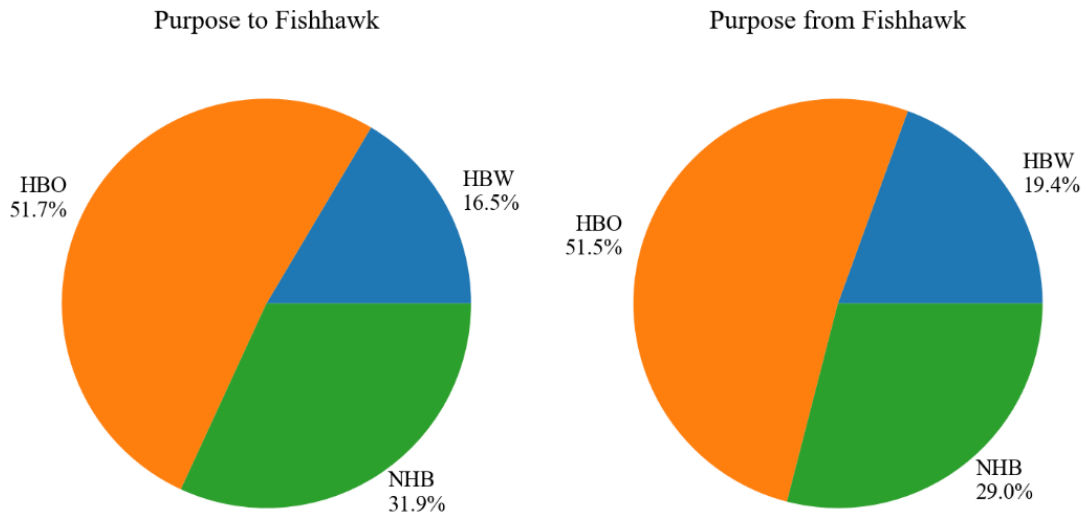
Source: StreetlightData, Inc.





**Figure 72. All personal trips to Fishhawk zone by hour and day**

Source: StreetlightData, Inc.



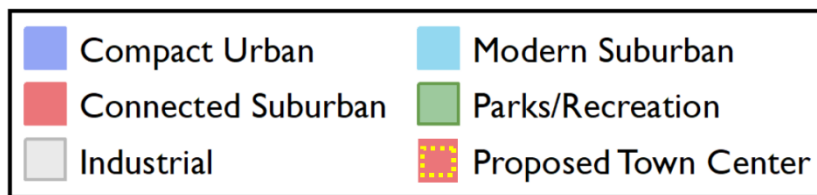
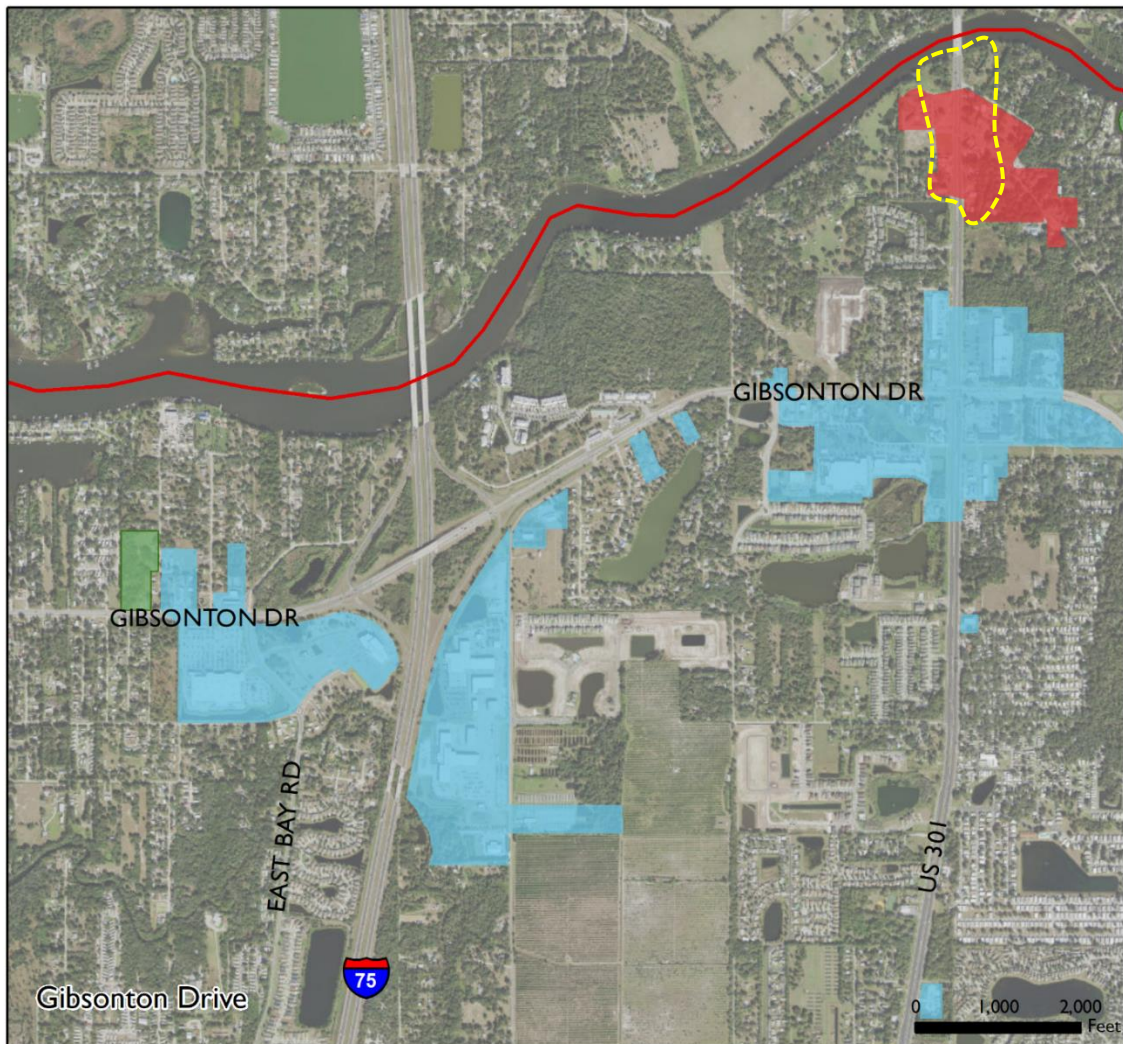
**Figure 73. Personal trip purpose to and from Fishhawk zone**

Source: StreetlightData, Inc.

## **4.4 Gibsonton**

### ***4.4.1 Gibsonton Drive Area of Activity (Node)***

Gibsonton Dr. includes three major modern suburban areas of activity (nodes), and a connected suburban area of activity (node) north on US 301 (Figure 74). The connected suburban area of activity (node) overlaps with a proposed town center and has a mix of commercial and residential areas. The modern suburban area of activity (node) at the intersection of US 301 and Gibsonton Dr. is primarily retail, entertainment, and office spaces. The modern suburban area of activity (node) to the east of I-75 is primarily commercial with a single entry point from Gibsonton Dr. Finally, the modern suburban area of activity (node) to the west of I-75 is primarily retail, and entertainment. Gibsonton Dr. is the main east-west corridor connecting these areas of activity (nodes) with Gibsonton, Riverview, and Fishhawk. There is an existing HART Route along this corridor, and a proposed mobility hub in the area of activity (node). I-75 and the segment where US 301 crosses the river are major gates for north-south traffic in this area. The existing greenway stops at Gibsonton Dr.

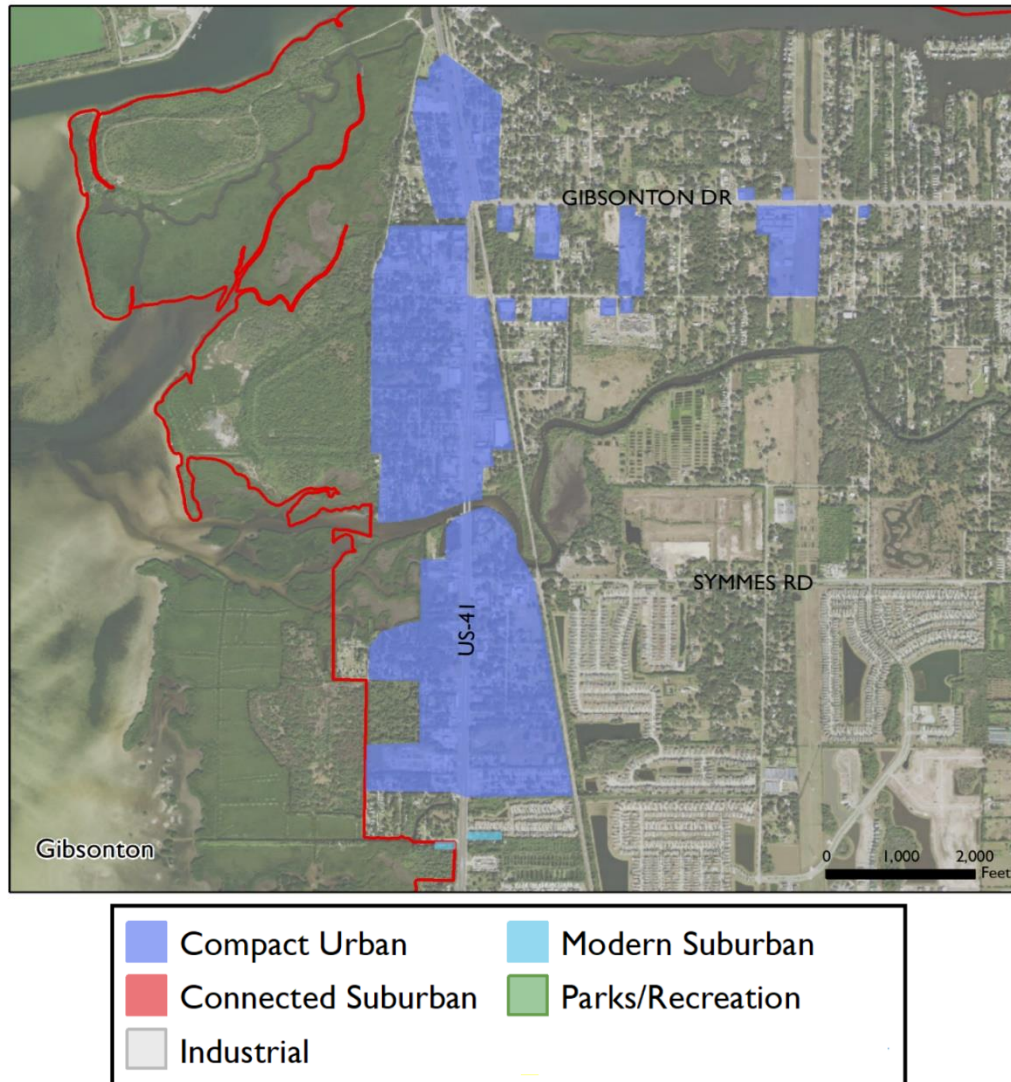


**Figure 74. Areas of activity (nodes) within the area of Gibsonton Dr. between US 301 and I-75**

Source: Hillsborough County, U.S. Census Bureau

Compact urban areas of activity (nodes) have been identified in Gibsonton along US 41 with some isolated areas of activity (nodes) along Gibsonton drive (Figure 75). The compact urban area of activity (node) category was selected because of the grid network pattern located in Gibsonton; however, US 41 acts as a potential barrier in this area. The proposed Main Street/Signature Corridor in the Gibsonton Community Plan is along Gibsonton Dr., away from

the identified area of activity (node). The two main corridors in this area are US 41 and Gibsonton Dr. US 41 crosses the river and acts as a gateway to and from Gibsonton. Towards the south, US 41 connects Gibsonton to Apollo Beach and Ruskin. Towards the east, Gibsonton Dr. connects to Riverview and I-75. Symmes Rd. connects the southern part of Gibsonton to US 301 (no interchange with I-75). There is an existing HART route along US 41 and Gibsonton Dr. A proposed mobility hub will be located just north of the greenway.



**Figure 75. Areas of activity (nodes) within the area of Gibsonton along US 41**

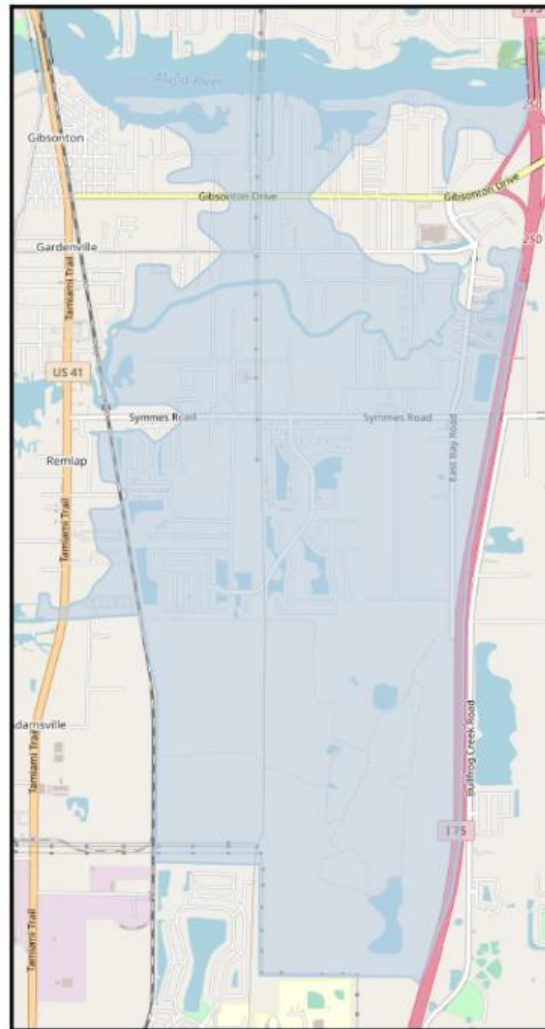
Source: Hillsborough County, U.S. Census Bureau

#### **4.4.2 Gibsonton Zone (OD Analysis)**

This residential zone sits between I-75 and US 41, and between Gibsonton & US 41 and Gibsonton Dr. & I-75 zones (Figure 76). Important roadways in this zone are US 41, I-75, Gibsonton Dr., and Symmes Rd.

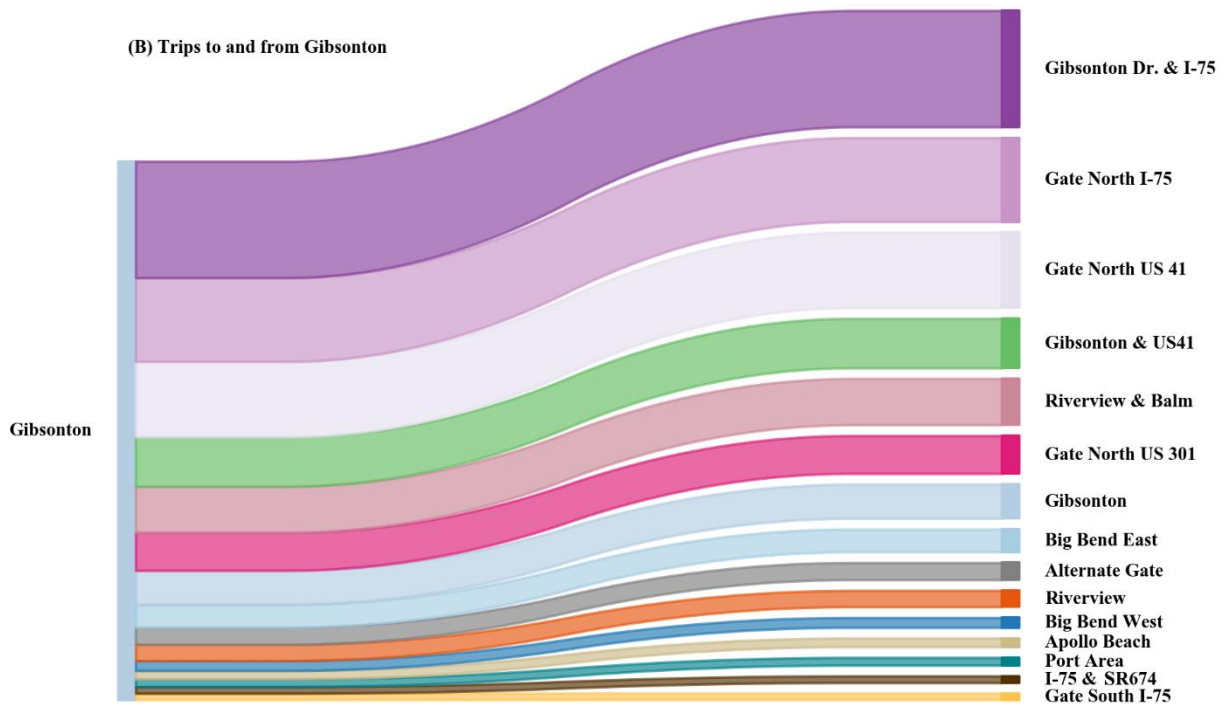
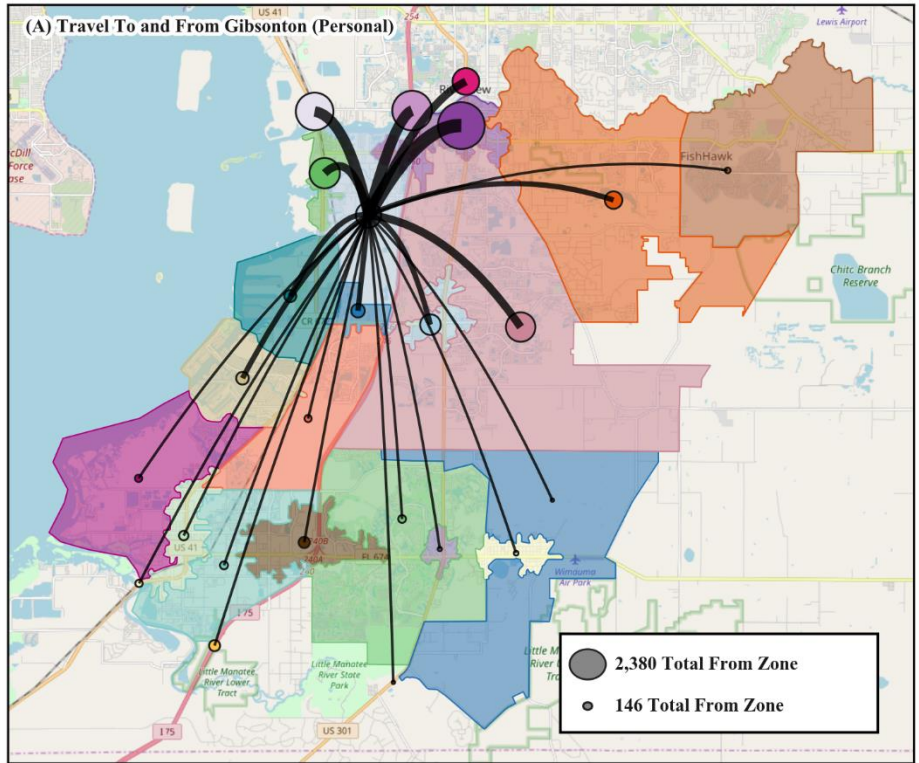
Key Findings:

- Most trips to and from this zone connect to the Area of Activity (Node) Gibsonton Dr. & I-75 zone (see Figure 77).
- Trips entering and leaving from this zone through the gates occur at the North US 41 and I-75 gates (see Figure 77).
- Trips leaving the zone peak during peak am (6am to 10am) (see Figure 78).
- Trips entering the zone peak during peak pm periods (3pm – 7pm) (see Figure 79).
- Most trips leaving and entering this zone are for HBO purposes (see Figure 80).



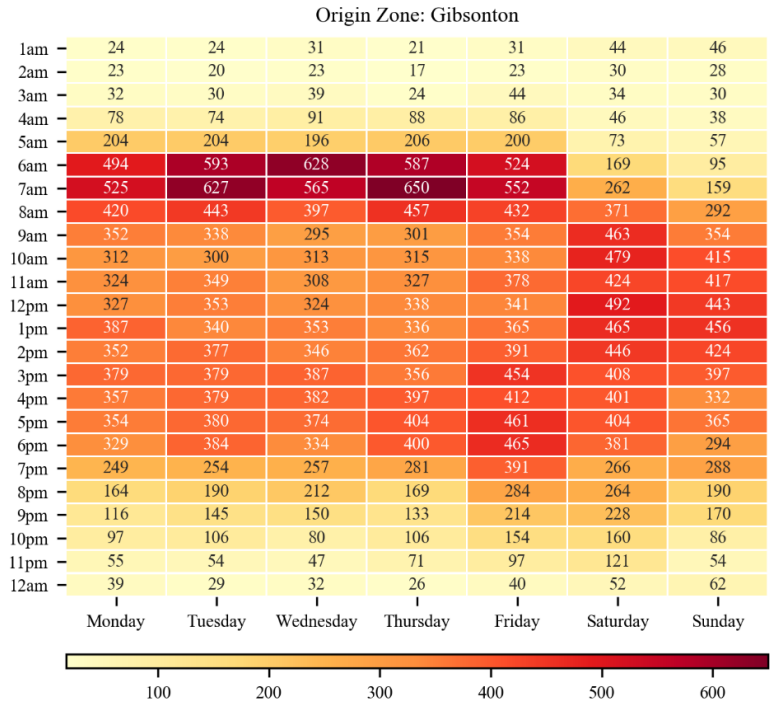
**Figure 76. Gibsonton zone**

Source: Hillsborough County, U.S. Census Bureau



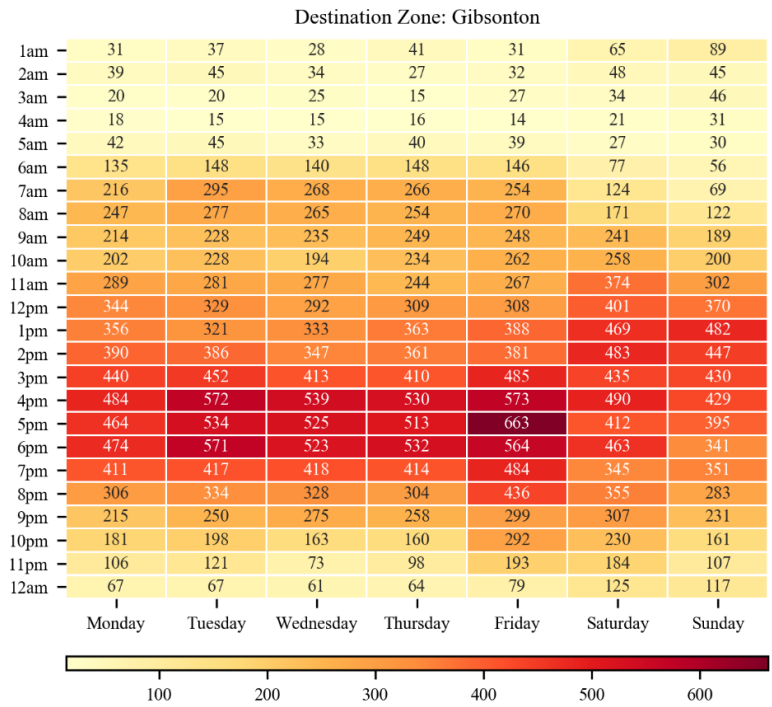
**Figure 77. All personal trips to and from Gibsonton zone**

Source: StreetlightData, Inc.



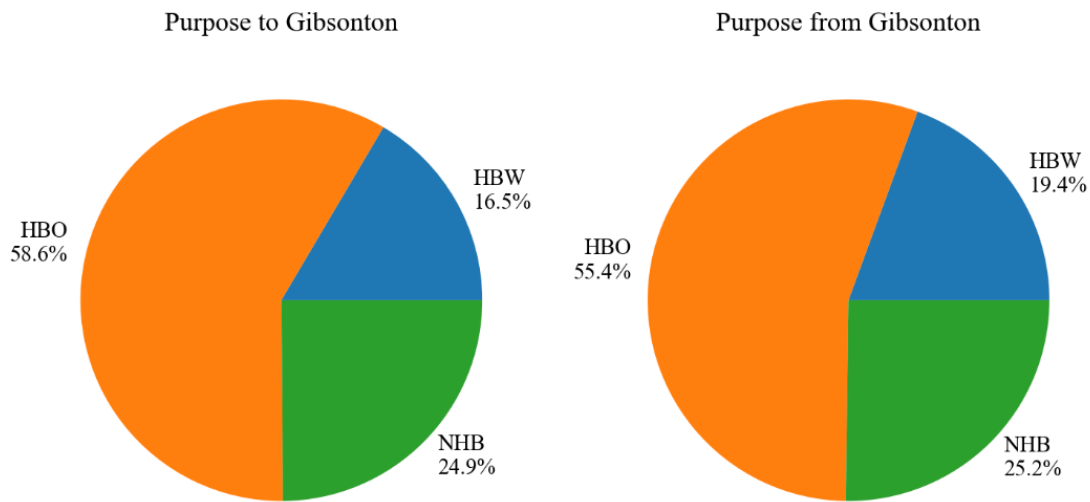
**Figure 78. All personal trips from Gibsonton zone by hour and day**

Source: StreetlightData, Inc.



**Figure 79. All personal trips to Gibsonton zone by hour and day**

Source: StreetlightData, Inc.



**Figure 80. Personal trip purpose to and from Gibsonton zone**

Source: StreetlightData, Inc.

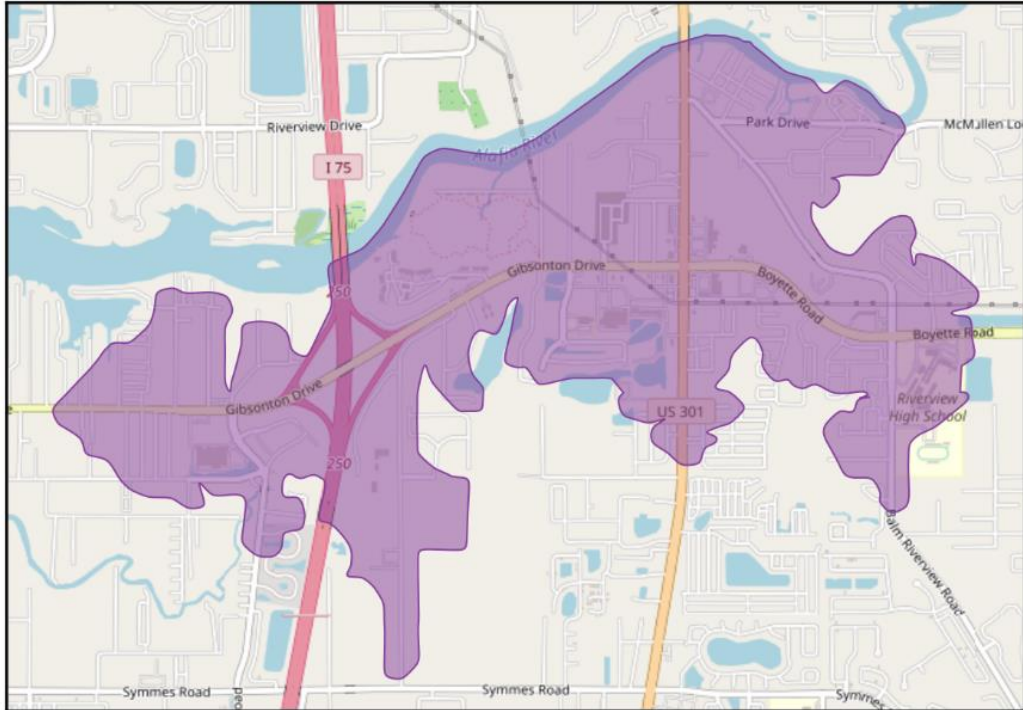
#### **4.4.3 Gibsonton Dr. & I-75 Zone (OD Analysis)**

This zone encompasses areas of activity (nodes) identified near the intersection of I-75 and Gibsonton Dr. It includes shopping, entertainment, and employment areas (see Figure 81). The primary roadways in this zone are Gibsonton Dr., US 301, and I-75, and serves as a point of access to the Riverview zone and Gibsonton zone.

##### **Key Findings:**

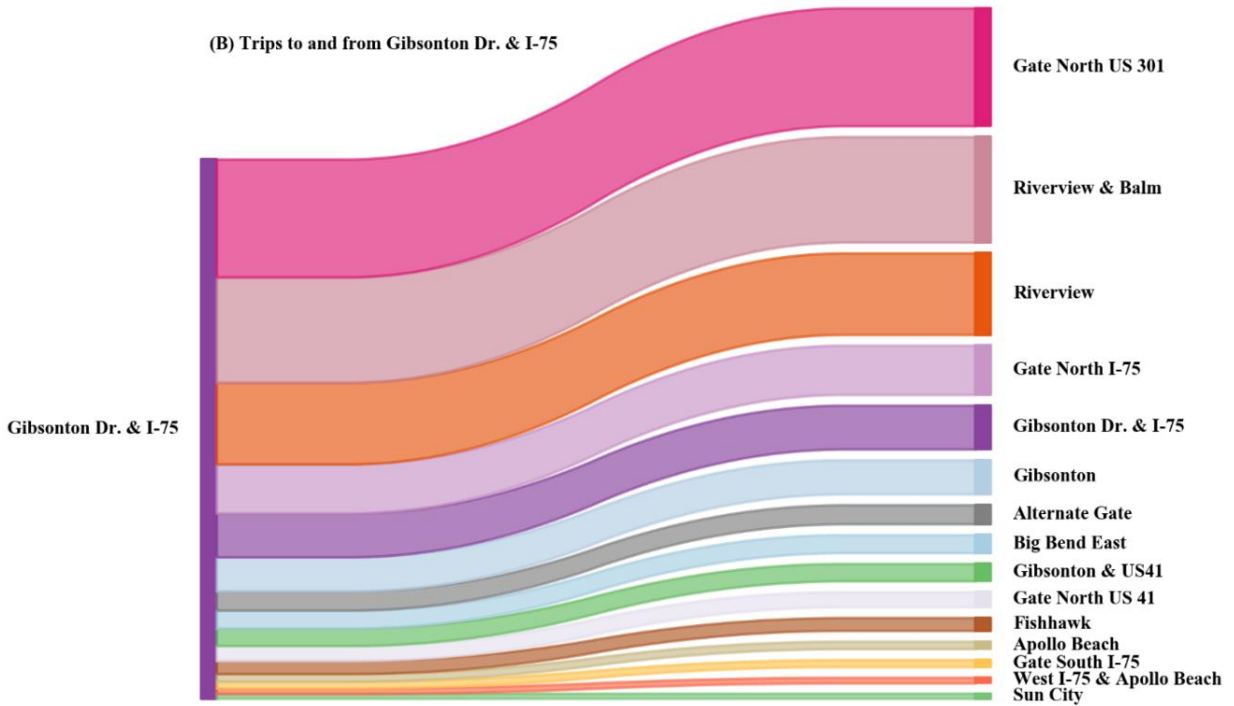
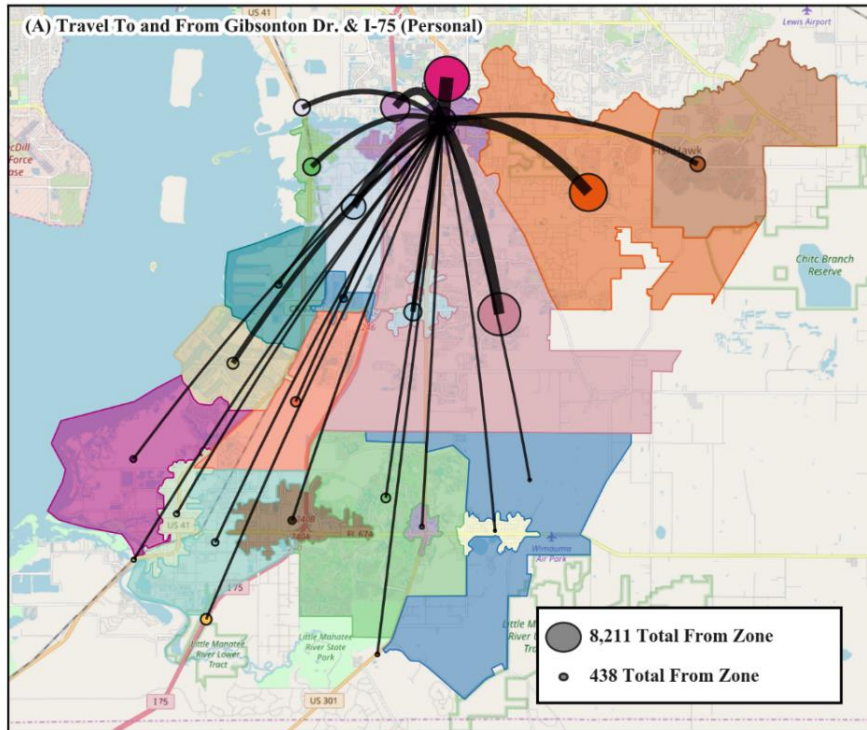
- Primary connections are with the Riverview & Balm and Riverview zones.
- More trips pass through the North US 301 gate to and from this zone than the North I-75 gate (see Figure 82)
- Trips leaving this zone peak around 3pm during the weekdays (see Figure 83)
- Most trips leaving this zone are an HBO purpose (see Figure 85).
- Trips entering the zone are active throughout the day (see Figure 84).
- Most trips entering this zone are an HBO purpose (see Figure 85).
- A high percentage of trips (~25%) entering the zone from North US 301, North I-75, Riverview, and Riverview & Balm zones are HBW related.





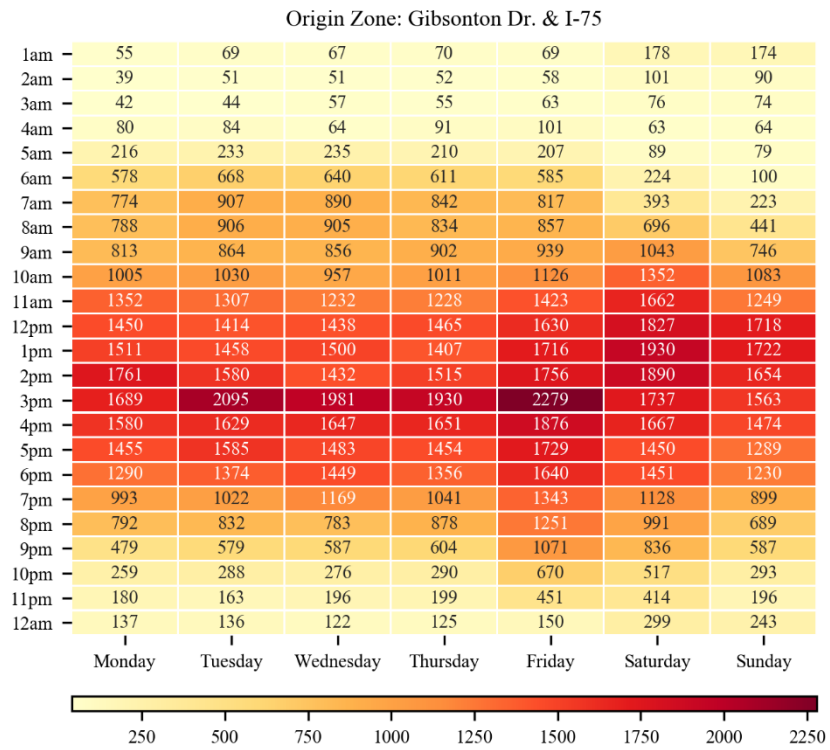
**Figure 81. Gibsonton Dr. & I-75**

Source: Hillsborough County, U.S. Census Bureau



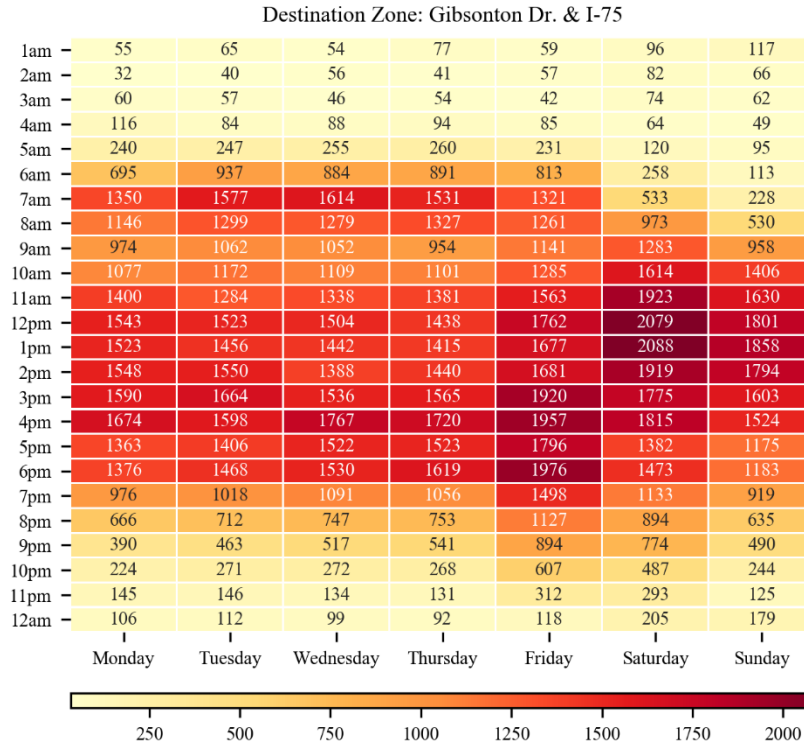
**Figure 82. All personal trips to and from Gibsonton Dr. & I-75**

Source: StreetlightData, Inc.



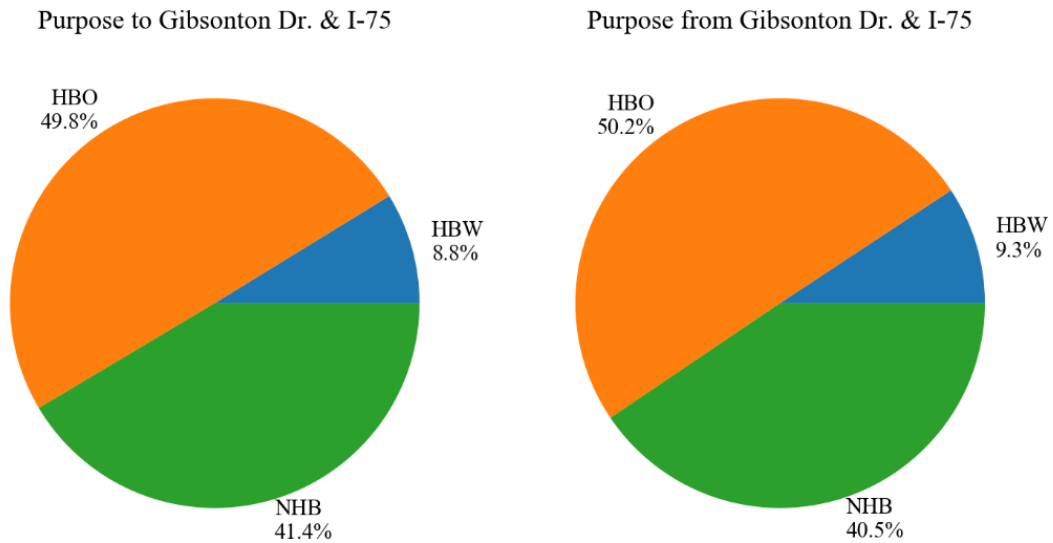
**Figure 83. All personal trips from Gibsonton Dr. & I-75 by hour and day**

Source: StreetlightData, Inc.



**Figure 84. All personal trips to Gibsonton Dr. & I-75 by hour and day**

Source: StreetlightData, Inc.



**Figure 85. Personal trip purpose to and from Gibsonton Dr. & I-75**

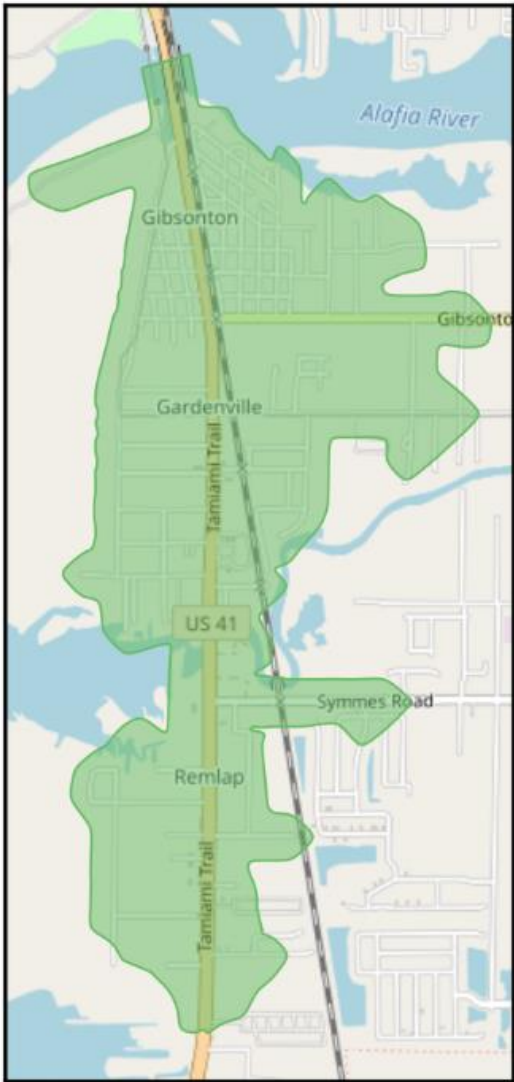
Source: StreetlightData, Inc.

#### **4.4.4 Gibsonton & US41 Zone (OD Analysis)**

This nodal zone sits along US 41 (Figure 86). It includes commercial, shopping, and industrial land uses. It also includes a 5 min walking buffer. Major roadways within this area of activity (node) are US 41, Gibsonton Dr., and Symmes Rd.

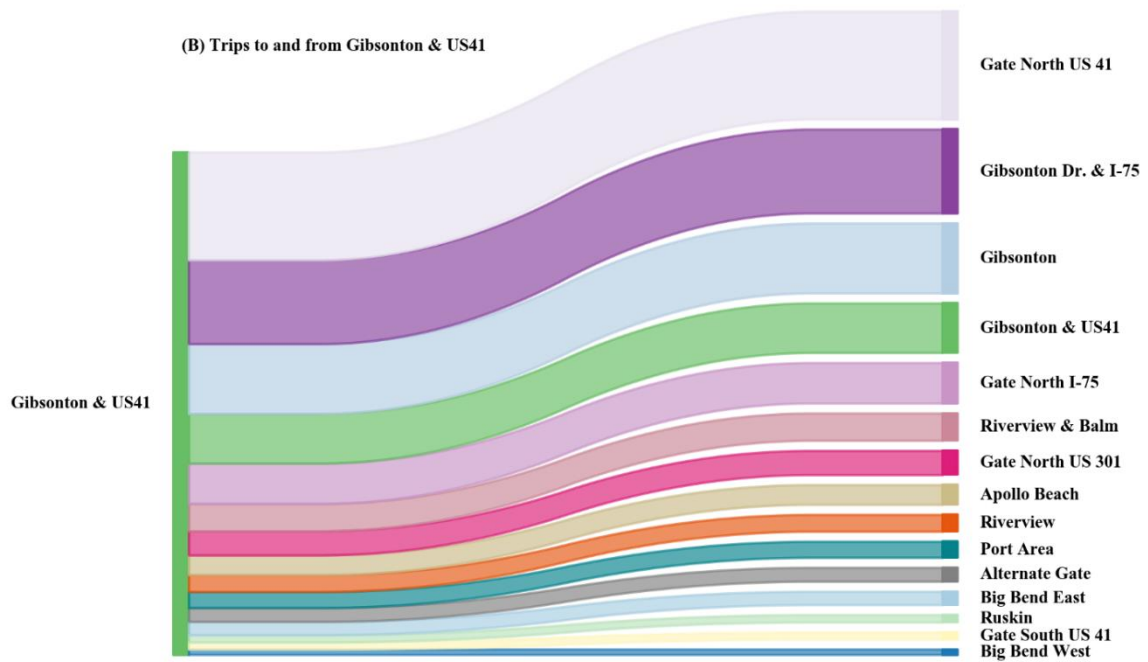
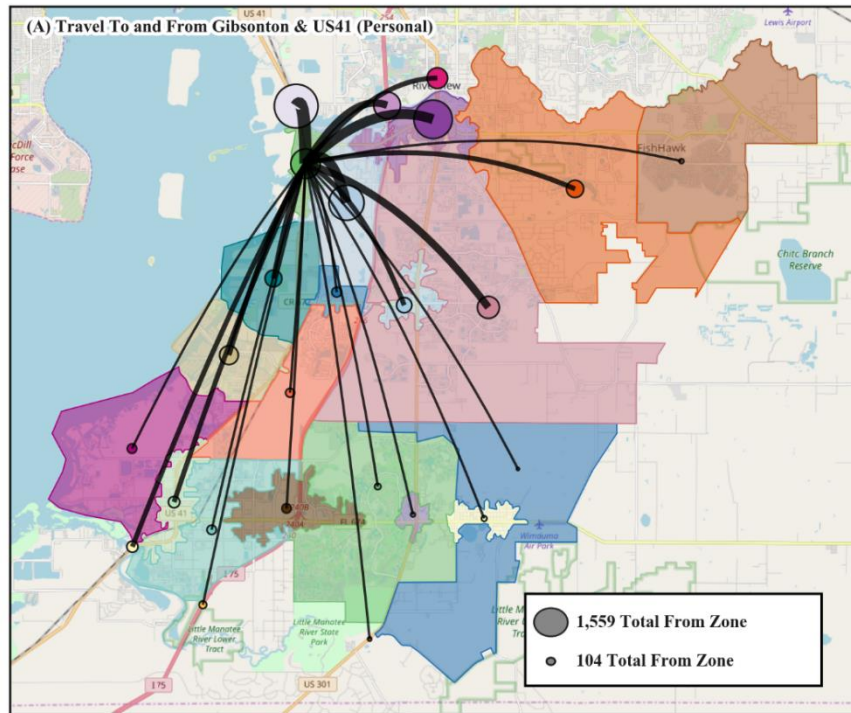
Key Findings:

- Most trips to and from this zone are connected to the Gibsonton Dr. & I-75 and Gibsonton zones (see Figure 87).
- Trips leaving and entering the zone pass through the North US 41 gate (see Figure 87).
- Trip activity leaving the zone is scattered throughout the day, with some peaks on weekday afternoons (see Figure 88).
- Trips entering the zone has some peaks on the weekend (see Figure 89).
- Most trip activity has an HBO trip purpose (see Figure 90).



**Figure 86. Gibsonton & US41 zone**

Source: Hillsborough County, U.S. Census Bureau



**Figure 87. All personal trips to and from Gibsonton & US 41 zone**

Source: StreetlightData, Inc.

Origin Zone: Gibsonton & US41

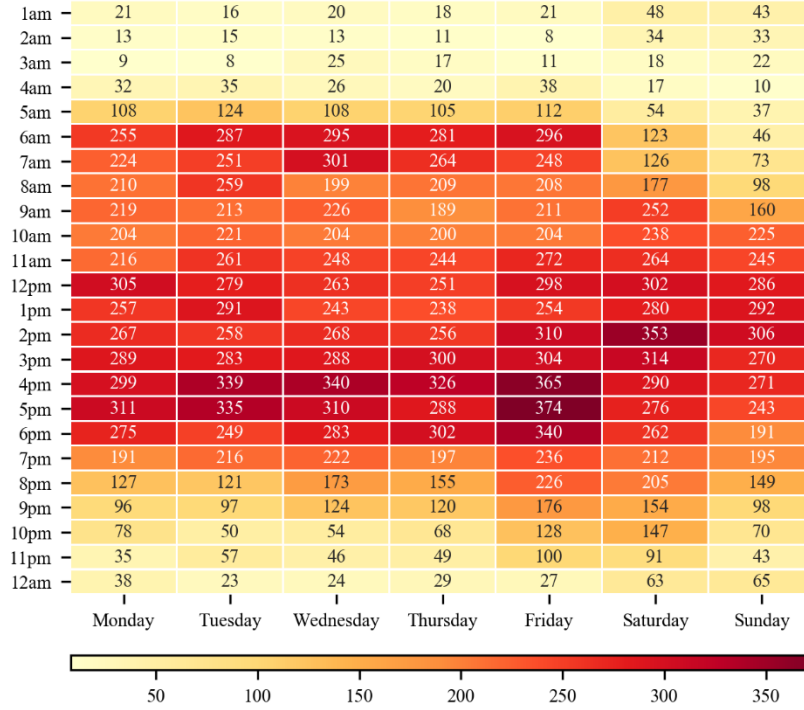
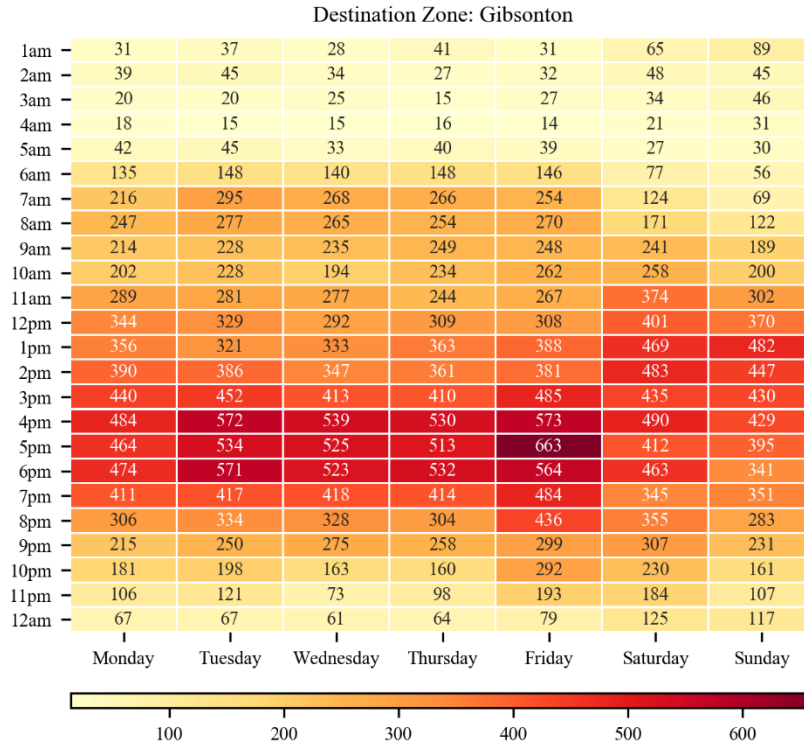


Figure 88. All personal trips from origin by hour and day

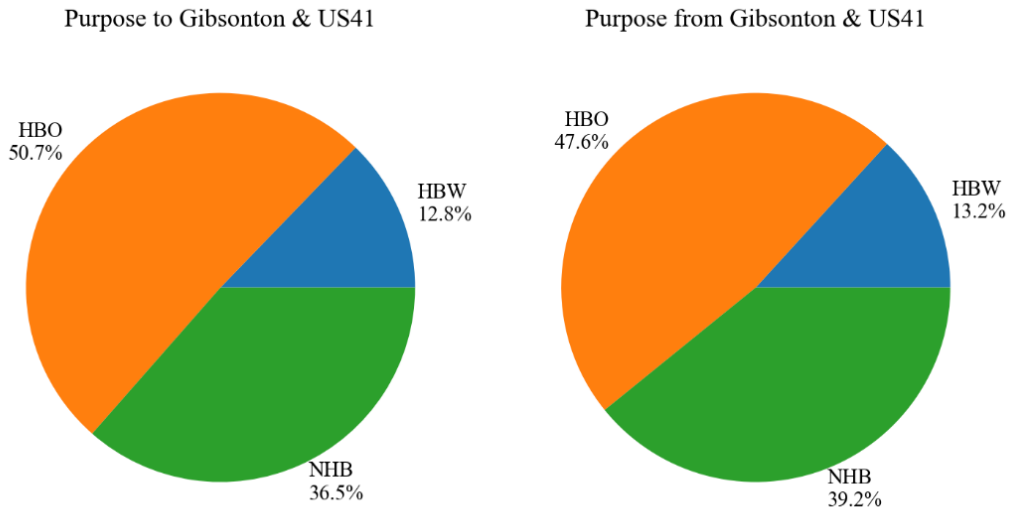
Source: StreetlightData, Inc.





**Figure 89. All personal trips to destination by hour and day**

Source: StreetlightData, Inc.



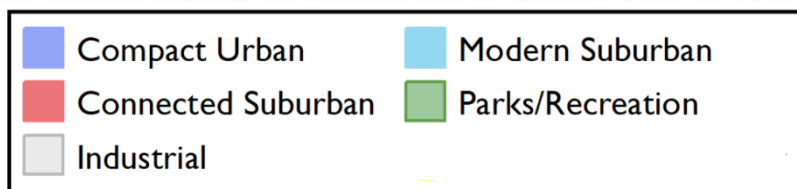
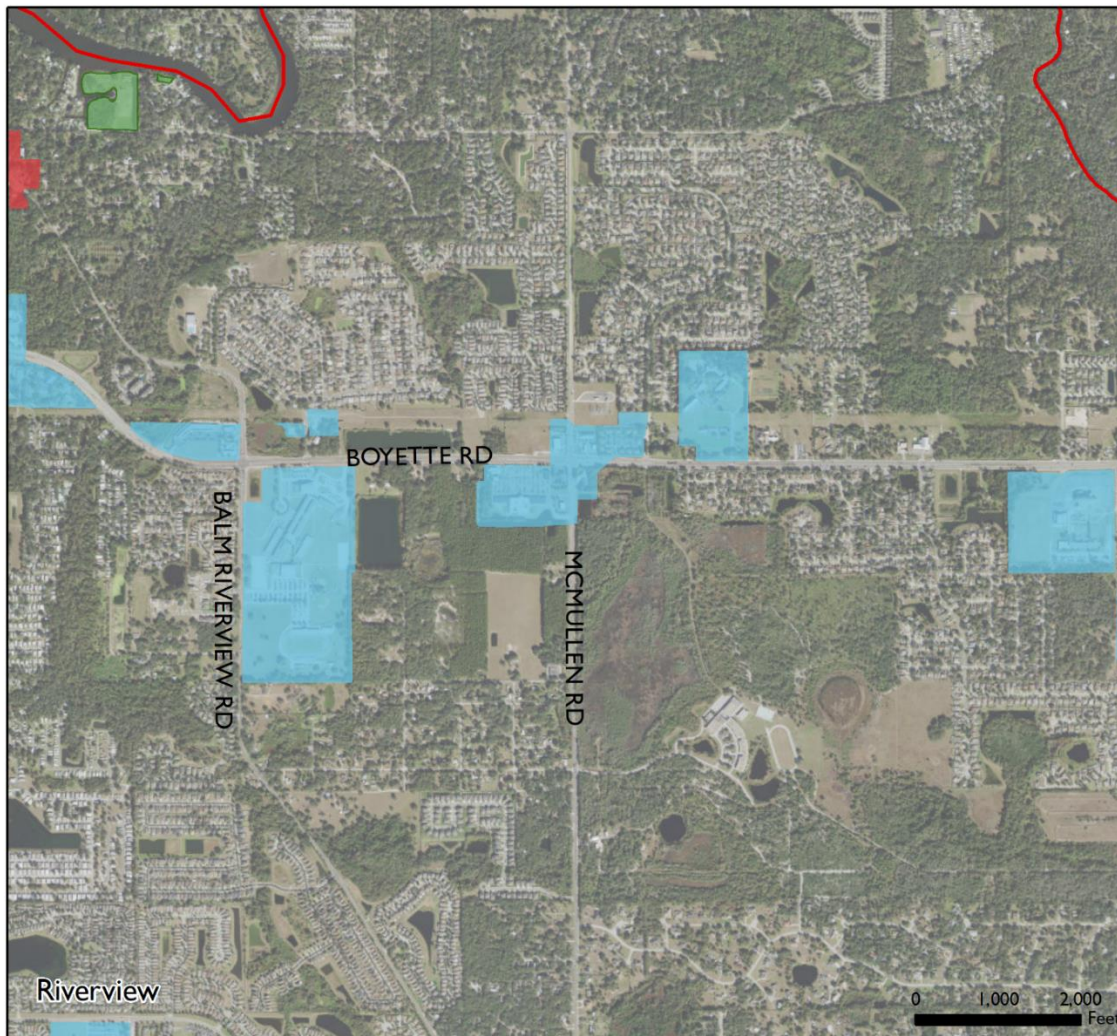
**Figure 90. Personal trip purpose to destination**

Source: StreetlightData, Inc.

## **4.5 Riverview**

### ***4.5.1 Riverview Area of Activity (Node)***

This section of Riverview along Boyette Rd. consists of modern suburban areas of activity (nodes) that are attached to Boyette Rd. (Figure 91). These areas of activity (nodes) are comprised of commercial, retail, and entertainment spaces. There is also a high school located along Balm Riverview Rd. There is an existing HART route along Boyette Rd. Greenway trails partially connect some of the areas of activity (nodes), but not to the main residential areas nearby.



**Figure 91. Areas of activity (nodes) within the area of the Riverview along Boyette Rd**

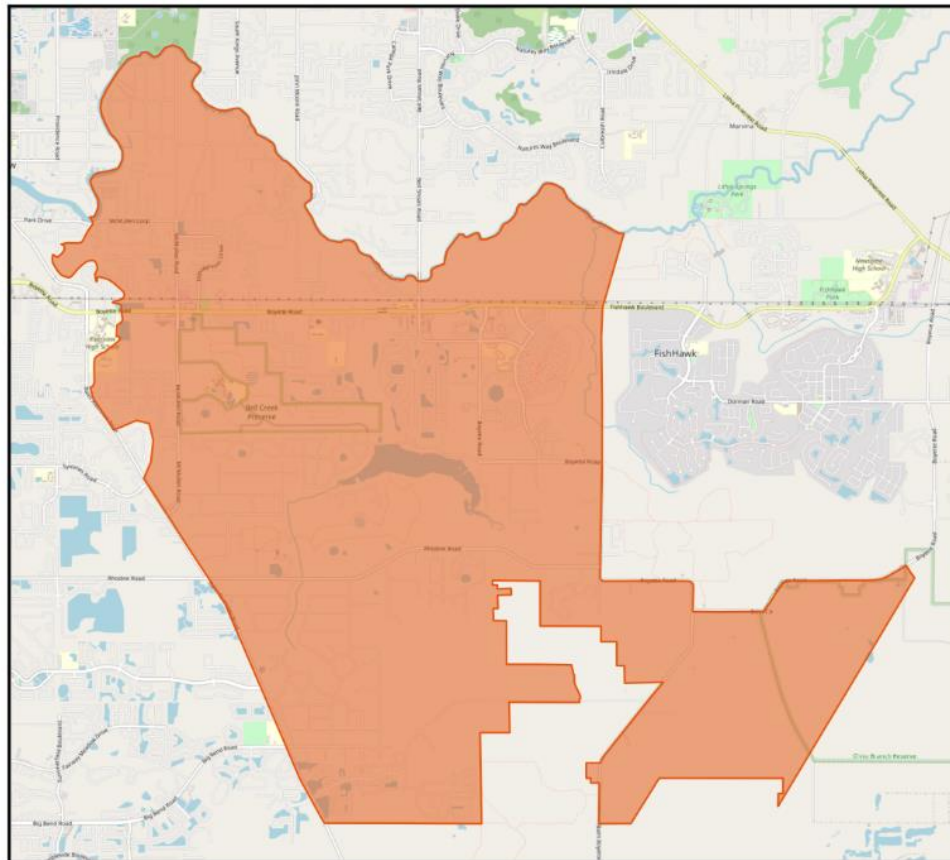
Source: Hillsborough County, U.S. Census Bureau

**4.5.2 Riverview Zone (OD Analysis)**

This zone encompasses residential areas in southern Riverview and is adjacent to Fishhawk (Figure 92). The west edge of the zone borders Balm Riverview Rd. The primary roadways in this zone are Boyette Rd., Bell Shoals Rd., and part of Fishhawk Blvd.

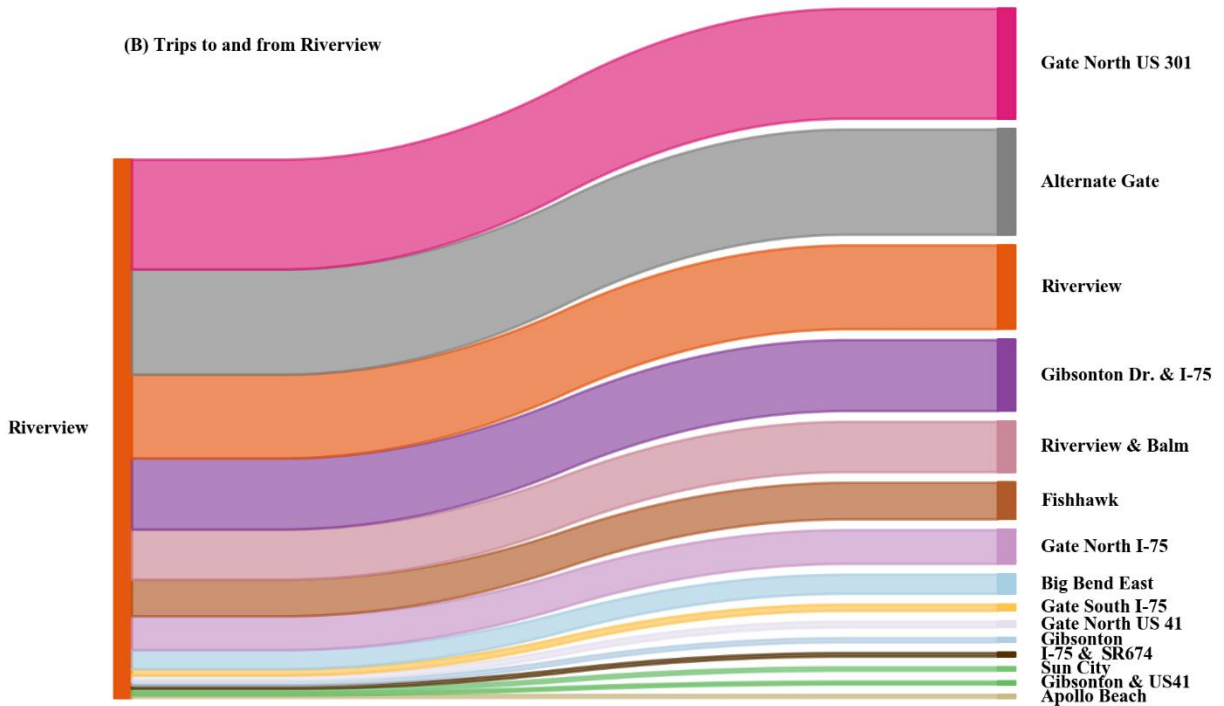
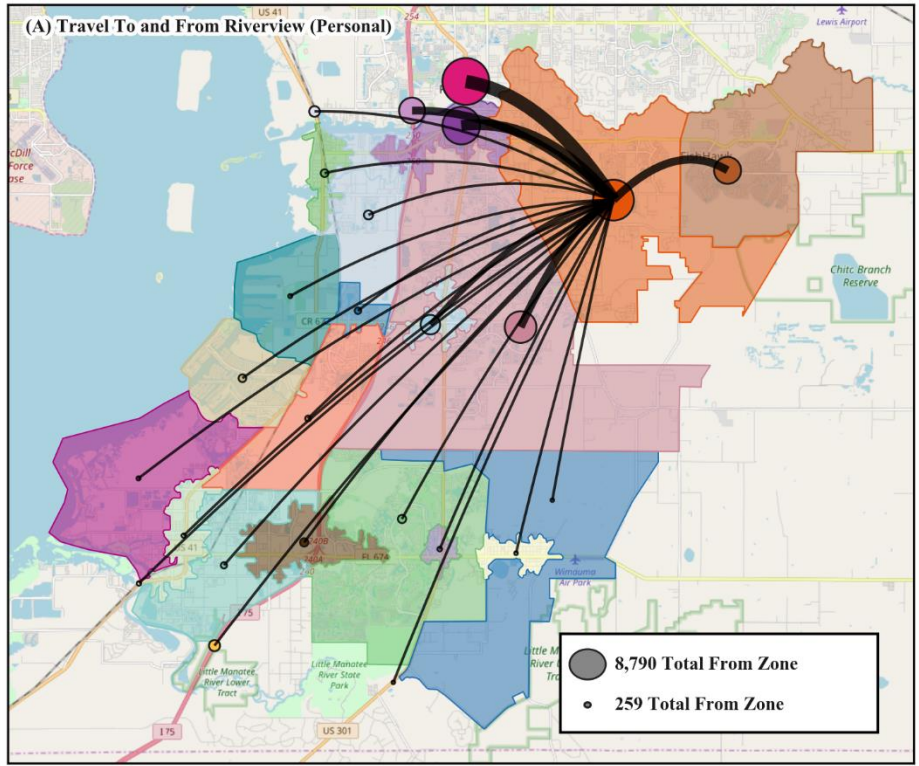
Key Findings:

- Most trips from Riverview left the zone through North US 301 or alternative routes (likely leaving through Bell Shoals Rd. and Fishhawk Blvd).
- A high number of trips were internal to the zone, or visited the adjacent area of activity (node) at the intersection of Gibsonton Dr. and I-75 (Figure 93).
- Trips leaving the zone had two peaks in the am (6am to 8am) and pm (3pm to 5pm) during weekdays (Figure 94).
- Trips entering the zone peaked in the pm (Figure 95).
- Most trips leaving or entering this zone had an HBO trip purpose, regardless of time of day (Figure 96).
- Trips leaving for Fishhawk had a high percentage of HBW purpose trips during the peak am period (6am to 10am), but relative fewer trips overall.
- Trips arriving from the Riverview & Balm zone had a high percentage of HBW purpose trips during the peak am period (6am to 10am).



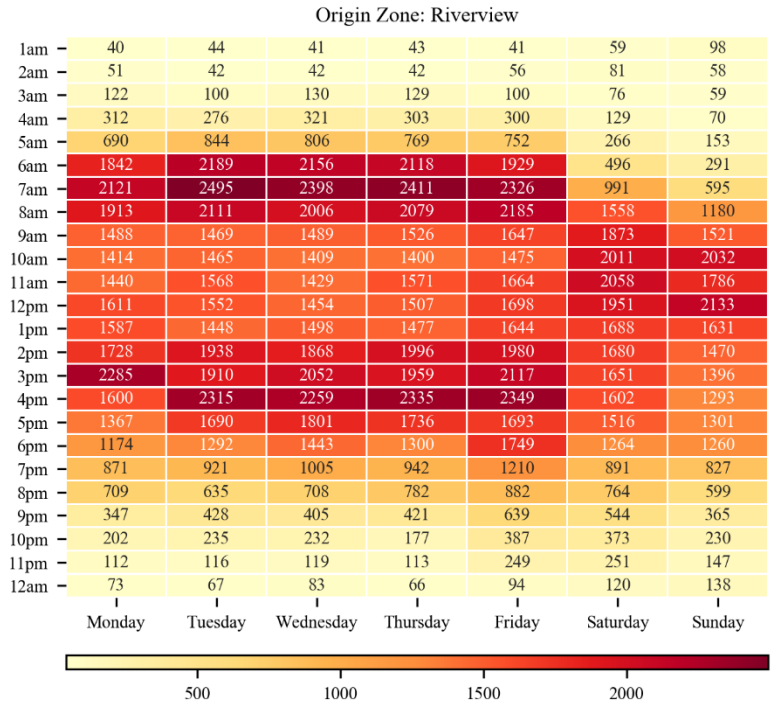
**Figure 92. Riverview zone**

Source: Hillsborough County, U.S. Census Bureau



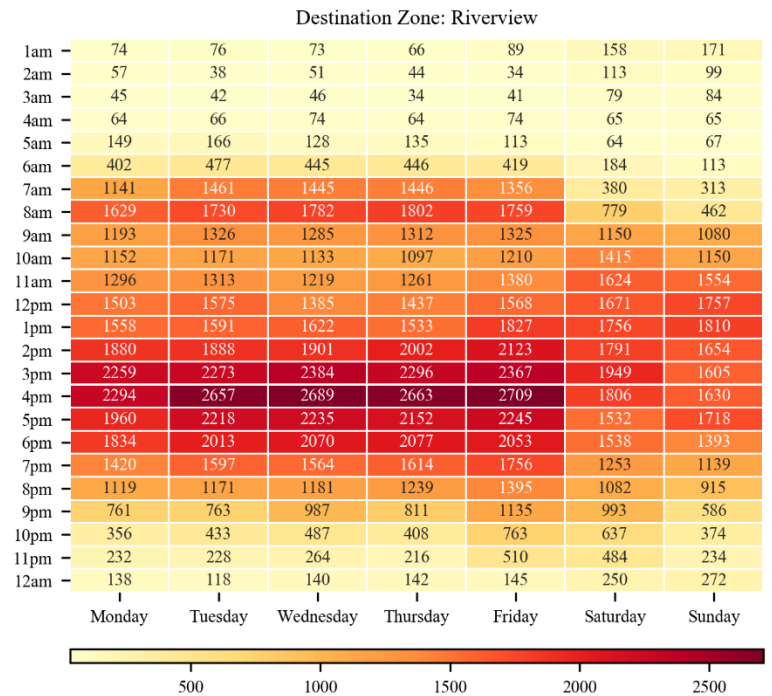
**Figure 93. All personal trips to and from Riverview zone**

Source: StreetlightData, Inc.



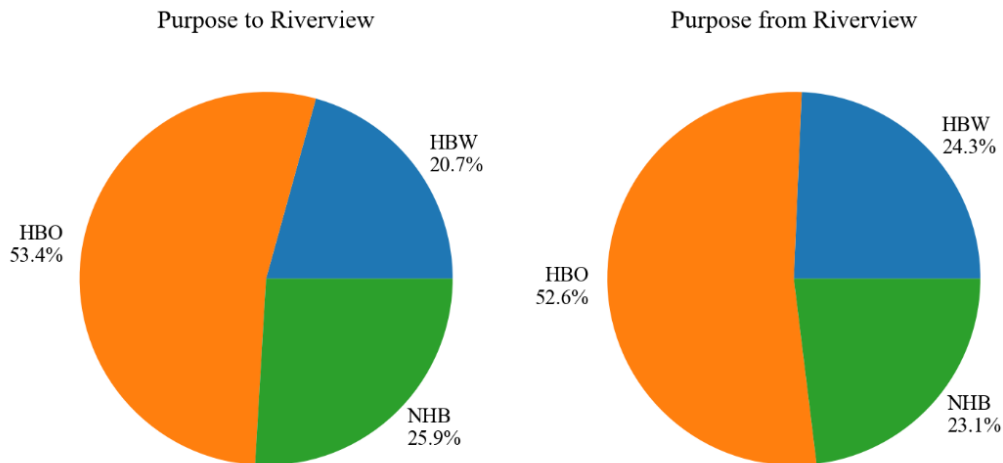
**Figure 94. All personal trips from Riverview zone by hour and day**

Source: StreetlightData, Inc.



**Figure 95. All personal trips to Riverview zone by hour and day**

Source: StreetlightData, Inc.



**Figure 96. Personal trip purpose to and from Riverview zone**

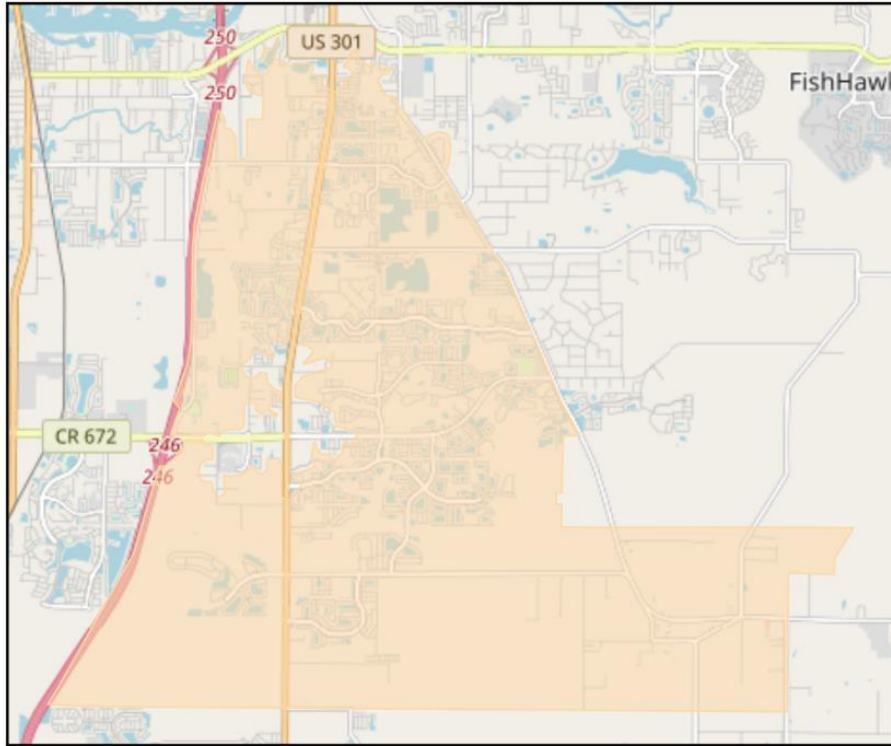
Source: StreetlightData, Inc.

#### **4.5.3 Riverview & Balm Zone (OD Analysis)**

This zone encompasses a large section of the county that is east of I-75 (see Figure 97). It includes parts of southern Riverview and Balm. Important roadways in this area are US 301, Big Bend Rd., Balm Rd. Balm Riverview Rd., and Balm Boyette Rd.

Key findings:

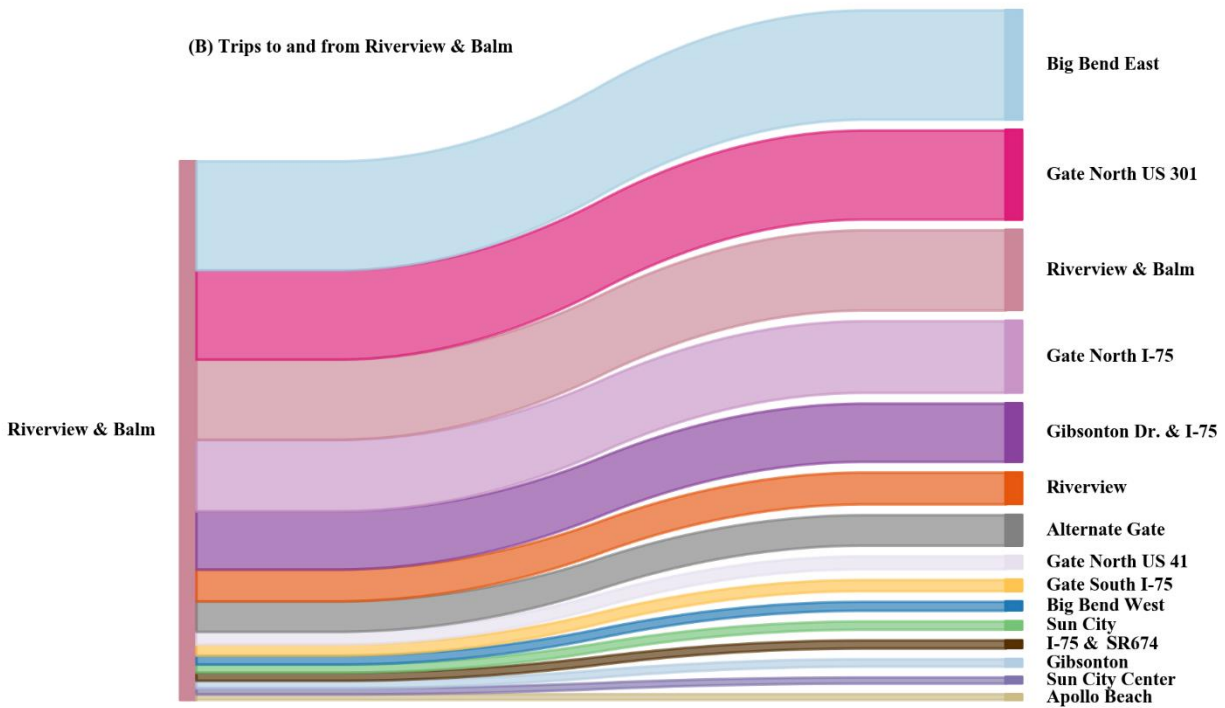
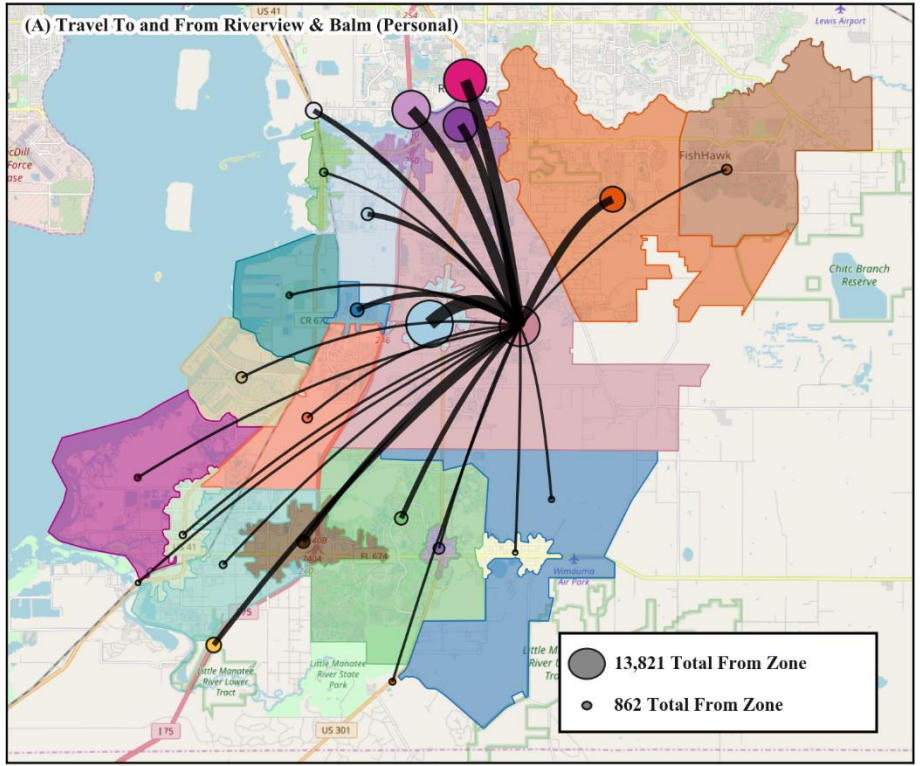
- Top three origins and destinations to this zone are the area of activity (node) Big Bend East, through gate US 301, and internal trips within Riverview & Balm (Figure 98).
- Trips leaving and entering the zone proceeded through North US 301 and North I-75 (see Figure 98).
- Most trips leaving the zone peak in the morning between 6am and 8am (Figure 99).
- A high percentage of trips leaving the zone during the peak am period (6am – 10am) towards Riverview were HBW related.
- Most trips leaving this zone had an HBO trip purpose, regardless of time of day (Figure 101).
- Most trips entering the zone peak in the afternoon between 3pm and 5pm (Figure 100)
- Most trips entering this zone had an HBO trip purpose, regardless of time of day (Figure 101).



**Figure 97. Riverview & Balm zone**

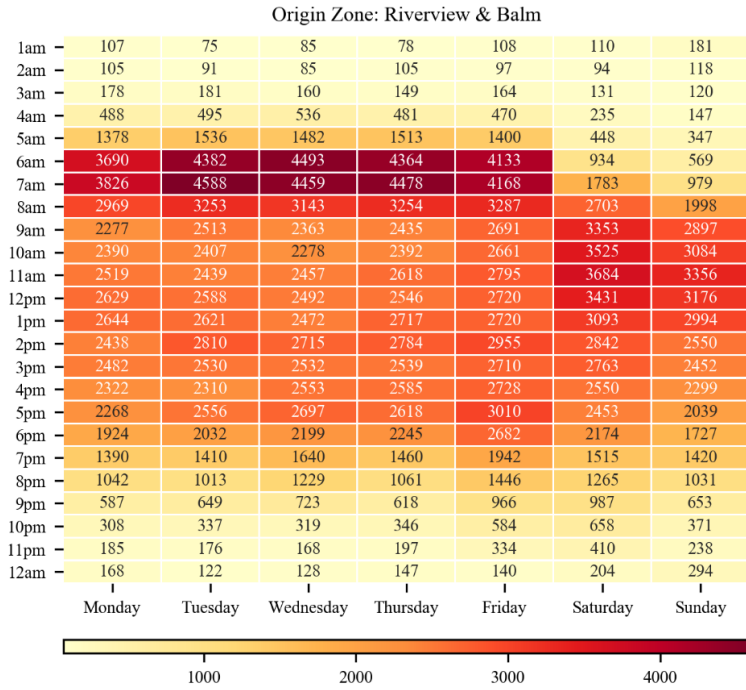
Source: Hillsborough County, U.S. Census Bureau





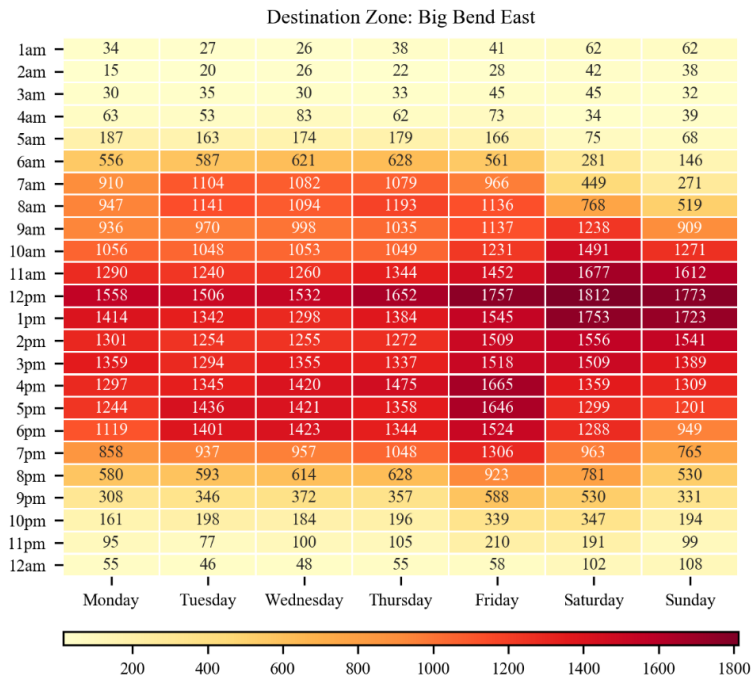
**Figure 98. All personal trips to and from Riverview & Balm zone**

Source: StreetlightData, Inc.



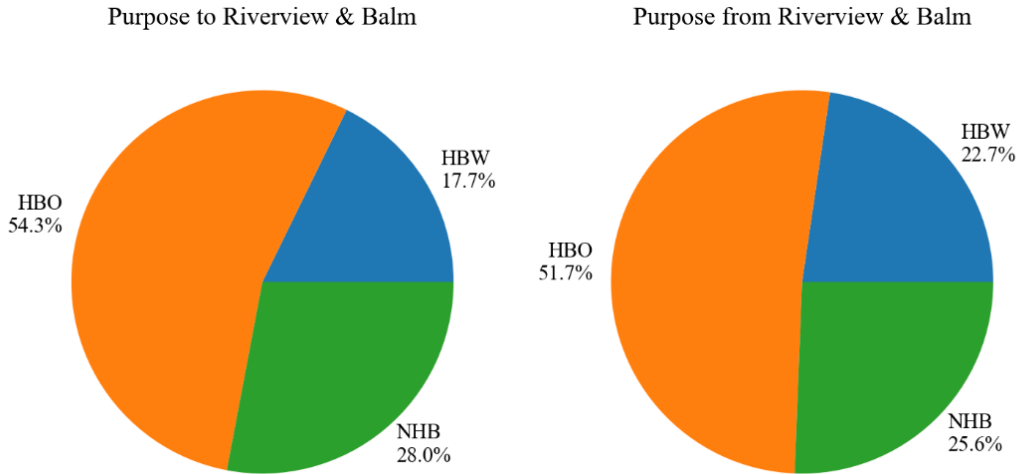
**Figure 99. All personal trips from Riverview & Balm zone by hour and day**

Source: StreetlightData, Inc.



**Figure 100. All personal trips to Riverview & Balm zone by hour and day**

Source: StreetlightData, Inc.



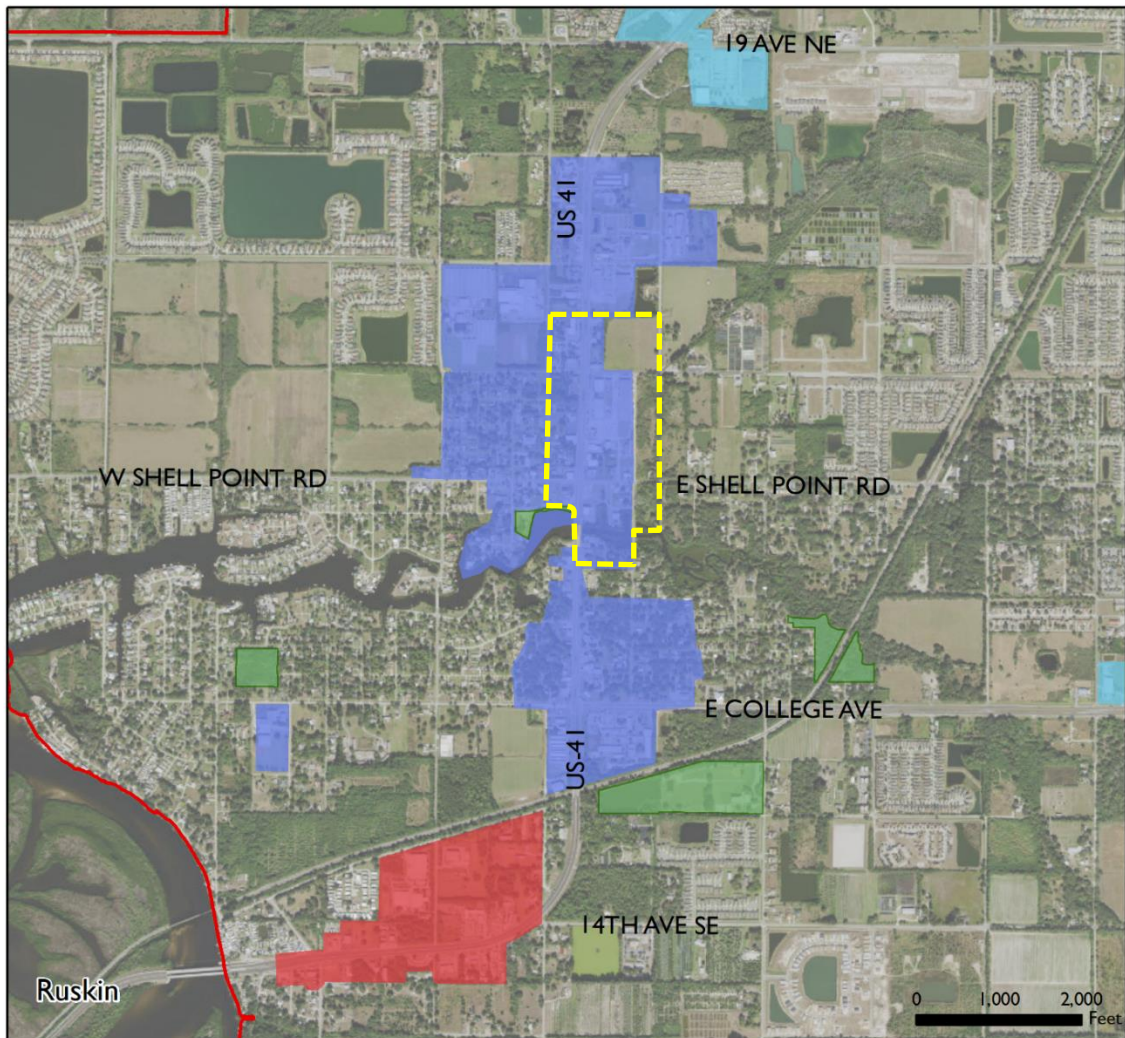
**Figure 101. Personal trip purpose to and from Riverview & Balm zone**

Source: StreetlightData, Inc.

## 4.6 Ruskin

### 4.6.1 Ruskin Area of Activity (Node)

Ruskin along US 41 consists of compact urban, and a section of connected suburban (Figure 102). The main compact urban area of activity (node) along US 41 overlaps with a proposed town center near E. Shell Point Rd. The main corridor in this area is US 41 and most of the retail, commercial, and entertainment spaces run along this corridor. US 41 connects Ruskin with Gibsonton and Apollo Beach to the North, and Manatee County to the south. The OD study below describes that the gate through US 41 is not an active through point. E. College Ave. connects Ruskin with I-75 and Sun City Center. E. Shell Point Rd and 19<sup>th</sup> Ave. connects to the Amazon Distribution Center to the east. There is an existing HART route along 14<sup>th</sup> Ave. and US 41.



**Figure 102. Areas of activity (nodes) within the area of Ruskin**

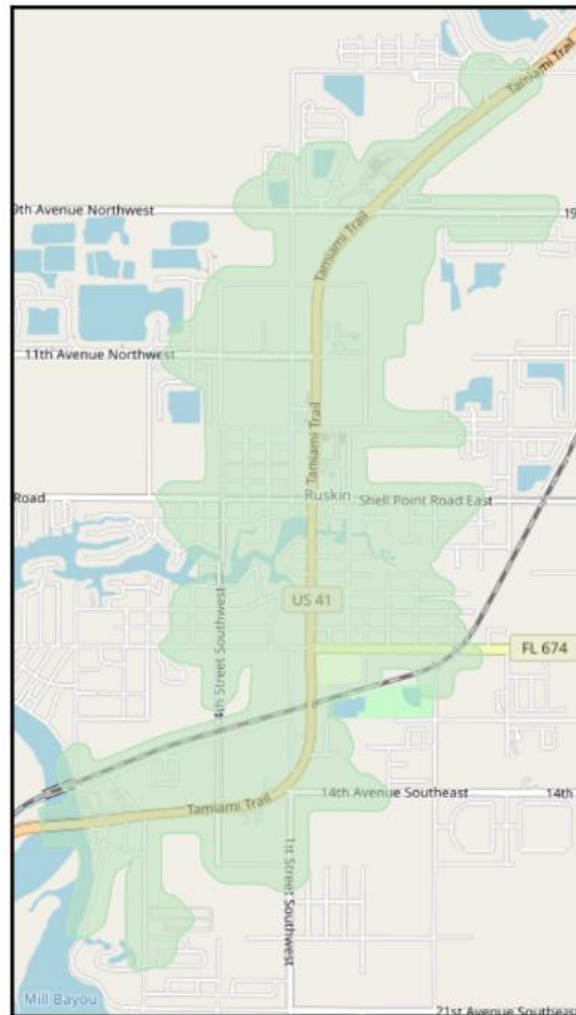
Source: Hillsborough County, U.S. Census Bureau

#### **4.6.2 Ruskin Zone (OD Analysis)**

This nodal zone sits along US 41. It includes primarily commercial, industrial, and shopping activity spaces. It also includes a 5 min walking buffer (see Figure 103). Major roadways within this area of activity (node) are US 41, E. Shell Point Rd, and E. College Ave.

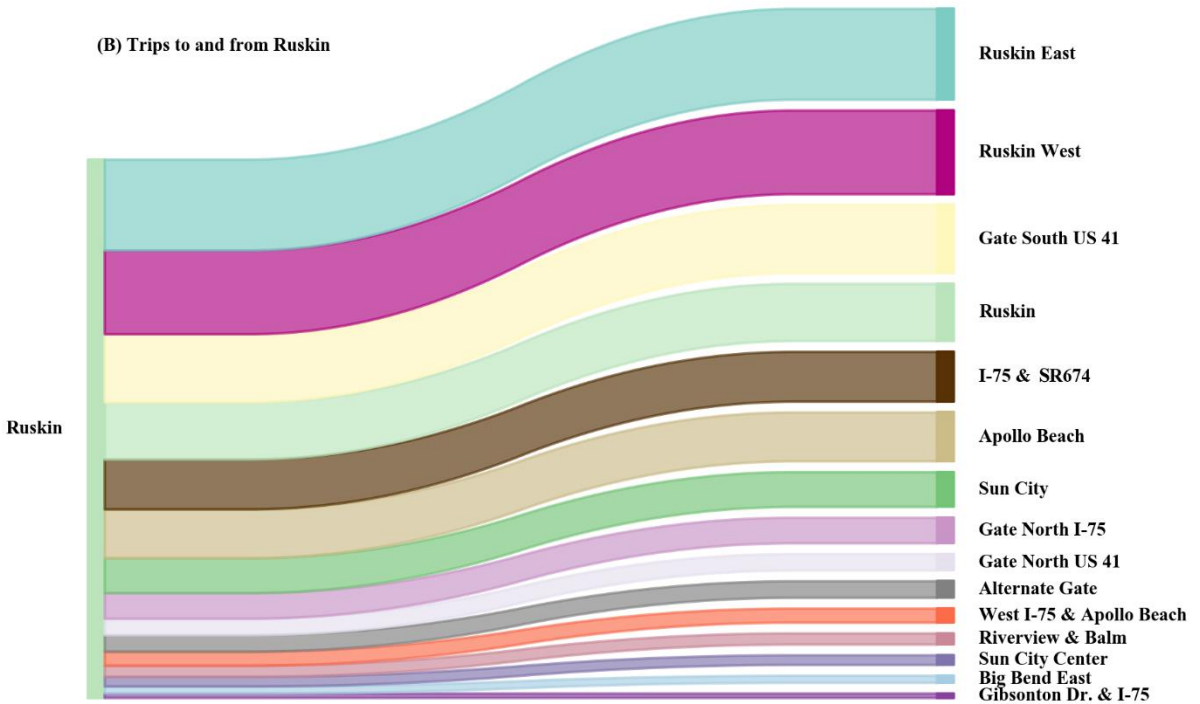
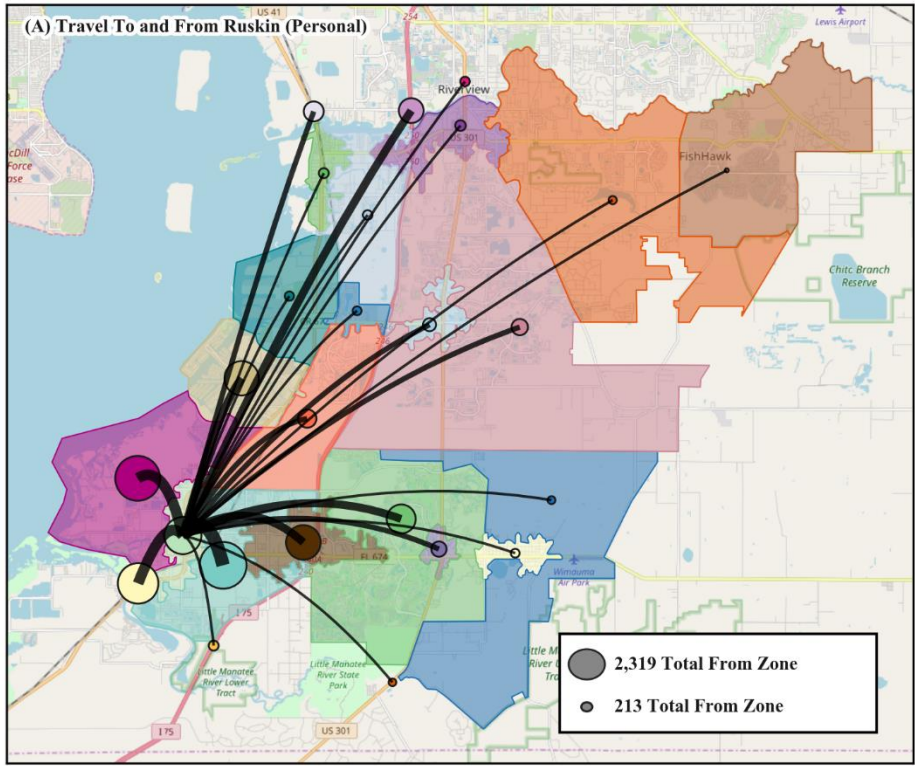
Key Findings:

- Most trips to and from this area of activity (node) connect with Ruskin East and Ruskin West zones (see Figure 104).
- Trips leaving or entering the zone through the gates primarily occur through South US 41 (see Figure 104)
- The zone is connected mainly to the closest zones in the southern portion of the county (see Figure 104).
- Trips occur throughout the day (see Figure 105 and Figure 106).
- Most trip purposes are HBO (see Figure 107).



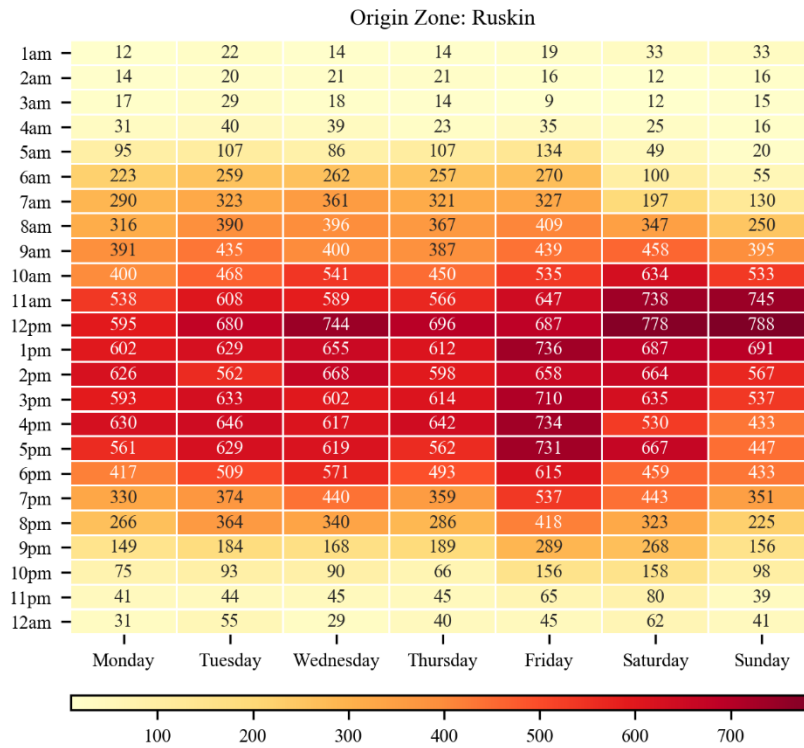
**Figure 103. Ruskin zone**

Source: Hillsborough County, U.S. Census Bureau



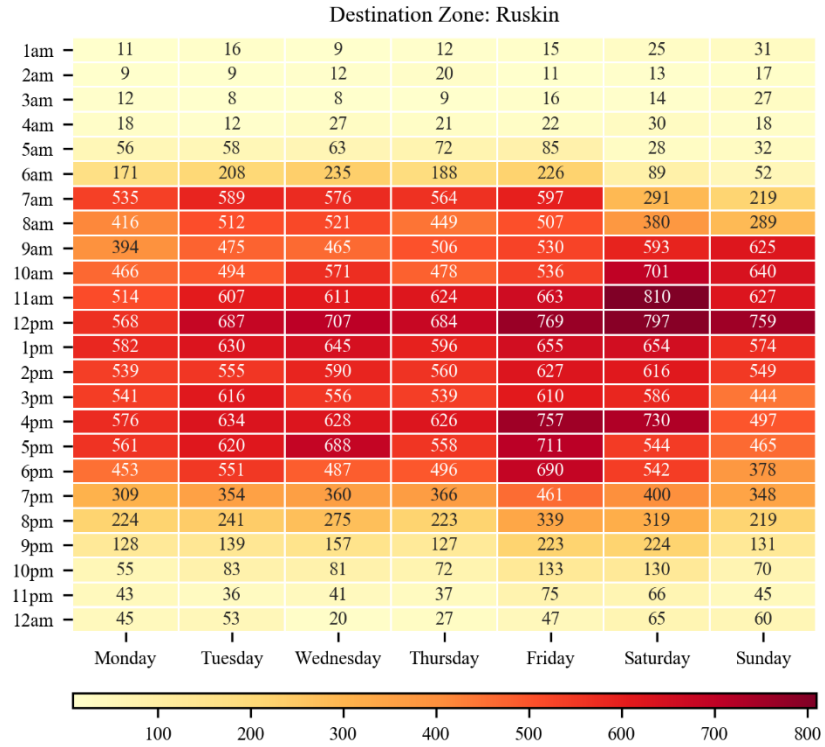
**Figure 104. All personal trips to and from Ruskin zone**

Source: StreetlightData, Inc.



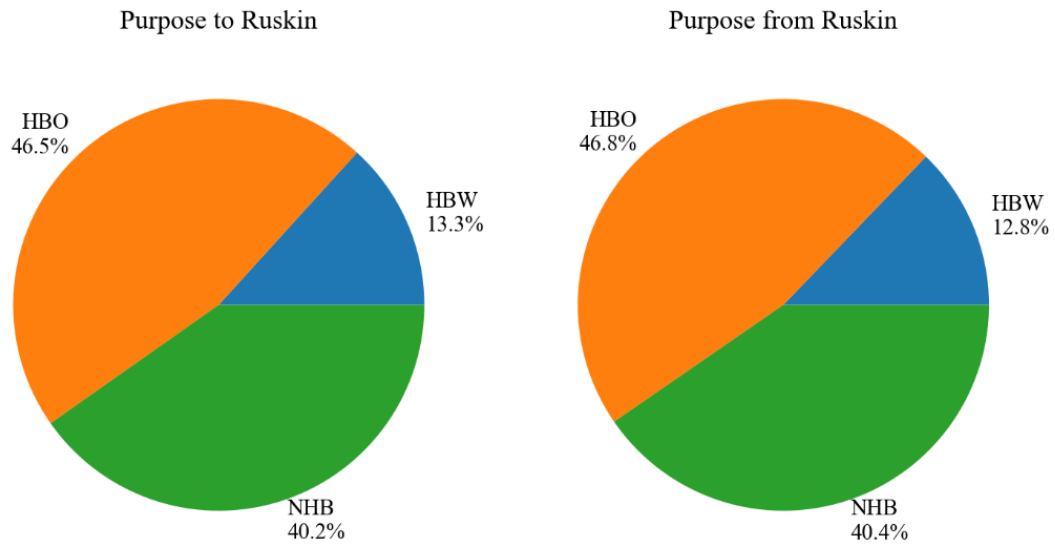
**Figure 105. All personal trips from Ruskin zone by hour and day**

Source: StreetlightData, Inc.



**Figure 106. All personal trips to Ruskin zone by hour and day**

Source: StreetlightData, Inc.



**Figure 107. Personal trip purpose to and from Ruskin zone**

Source: StreetlightData, Inc.

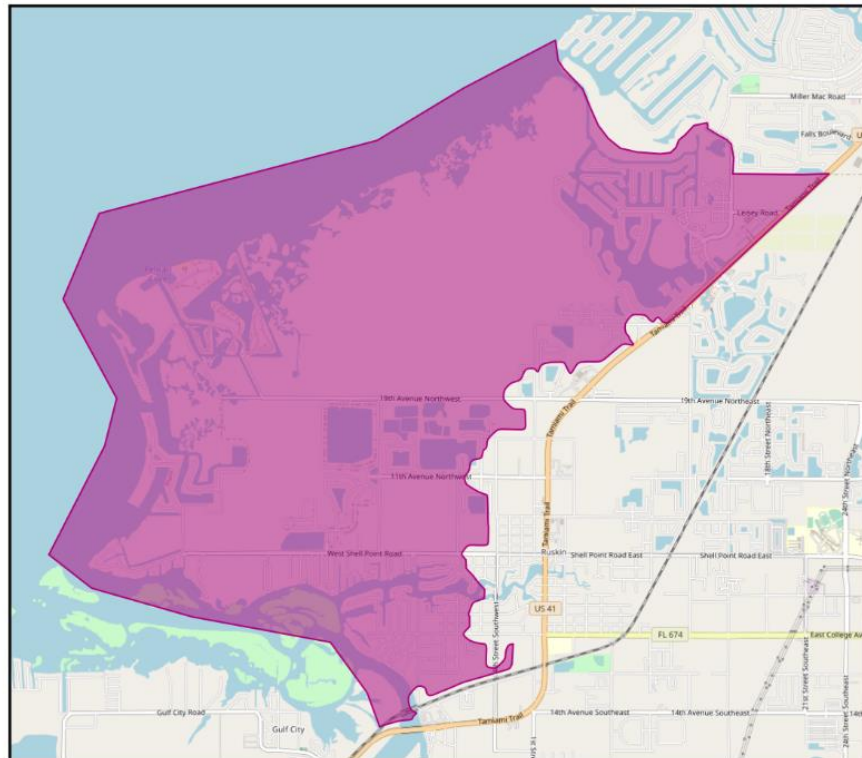


#### 4.6.3 Ruskin West Zone (OD Analysis)

This zone sits to the south of Apollo beach and west of the Area of Activity (Node) Ruskin zone. It includes some commercial but is primarily residential. Important roadways are 19<sup>th</sup> Ave. NW, and US 41 (see Figure 108).

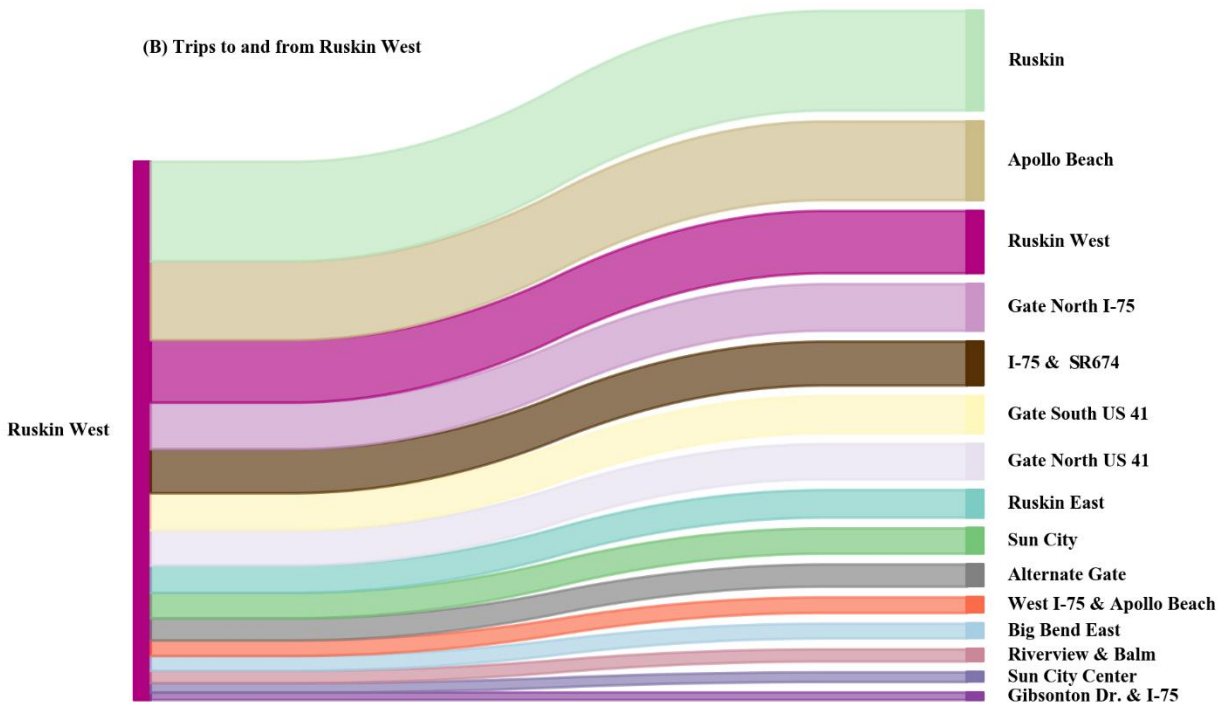
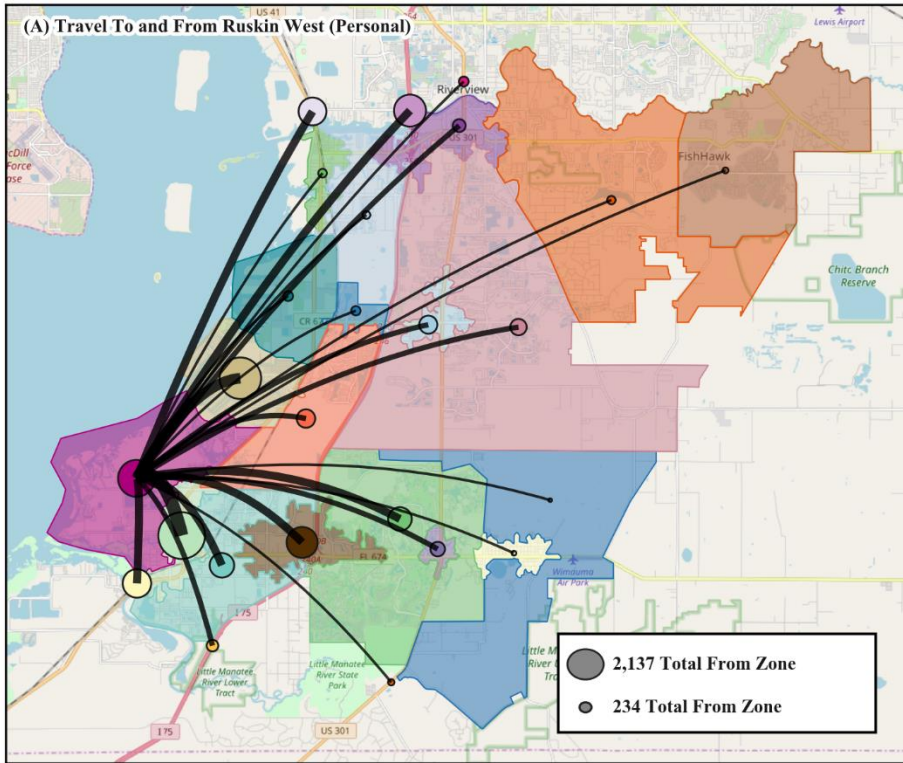
Key Findings:

- Most trips connect this zone to Apollo Beach and Area of Activity (Node) Ruskin zones (see Figure 109).
- Trips leaving or entering the zone through the gates primarily occur through North I-75 (see Figure 109).
- Activity leaving the zone occurs throughout the day during the week, but peaks on weekends around midday (Figure 110).
- Most trips leaving the zone have an HBO purpose. Trips leaving for the Area of Activity (Node) I-75 & SR 674 have a higher percentage of HBW purpose trips (Figure 112).



**Figure 108. Ruskin west zone**

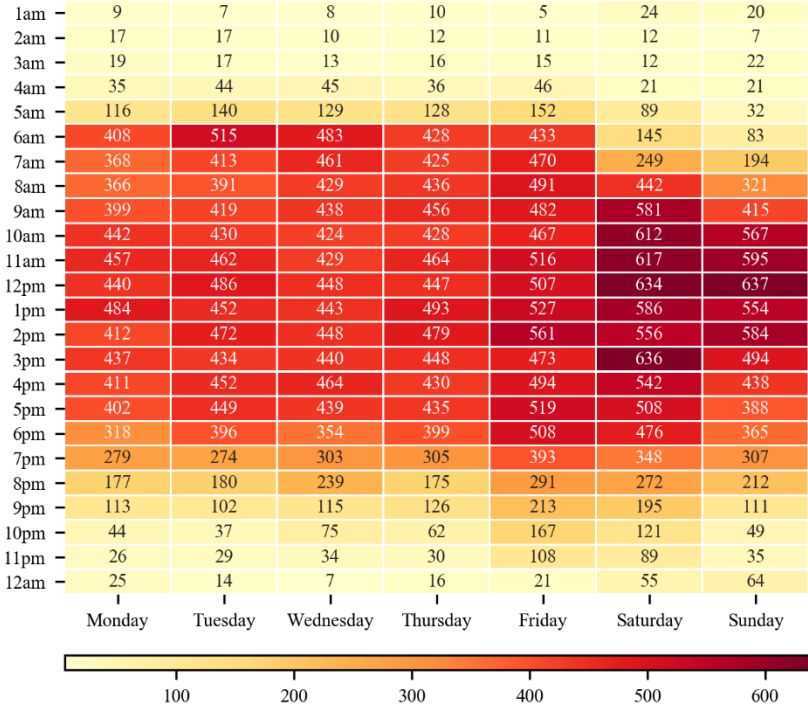
Source: Hillsborough County, U.S. Census Bureau



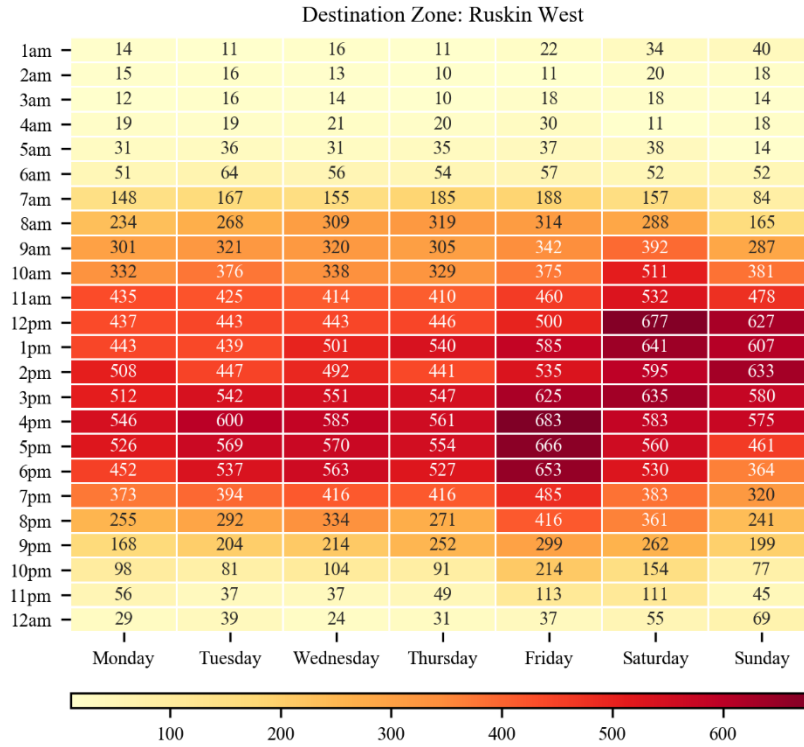
**Figure 109. All personal trips to and from origin**

Source: StreetlightData, Inc.

Origin Zone: Ruskin West

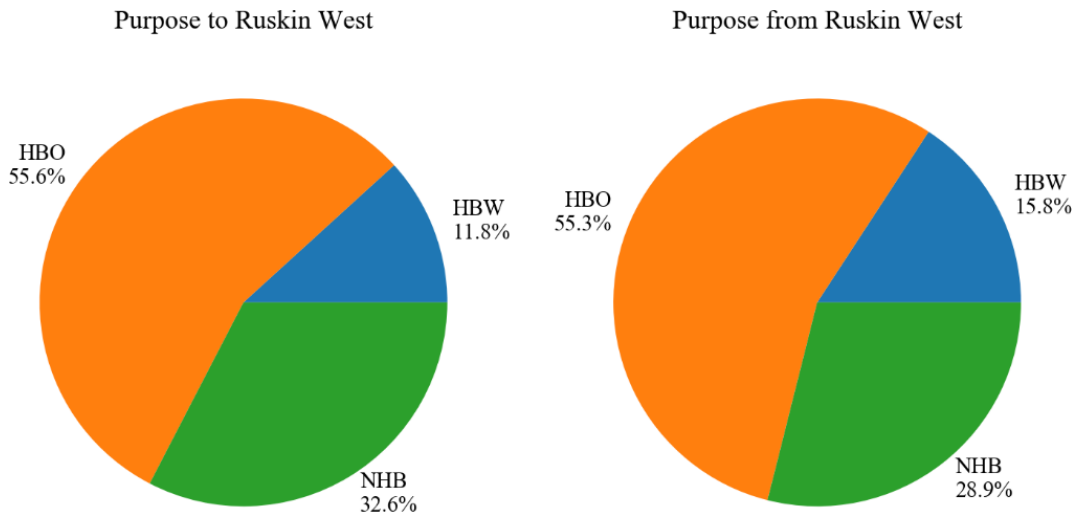


**Figure 110. All personal trips from origin by hour and day**  
 Source: StreetlightData, Inc.



**Figure 111. All personal trips to destination by hour and day**

Source: StreetlightData, Inc.



**Figure 112. Personal trip purpose to and from destination**

Source: StreetlightData, Inc.

#### 4.6.4 Ruskin East Area of Activity (Node)

According to Figure 113, this section of Ruskin east of US 41 and west of I-75 primarily consists of modern suburban isolated areas of activity (nodes). These areas of activity (nodes) consist of commercial, and office space. The most important of these areas of activity (nodes) is the Amazon Distribution Center. The main corridor is College Ave (also Sun City Blvd east of I-75) that connects to downtown Ruskin and Sun City Center. 19<sup>th</sup> Ave. also connects to Sun City Center and US 41. There is an existing HART route along College Ave. A partial greenway trail connects 30<sup>th</sup> St. to part of Ruskin.

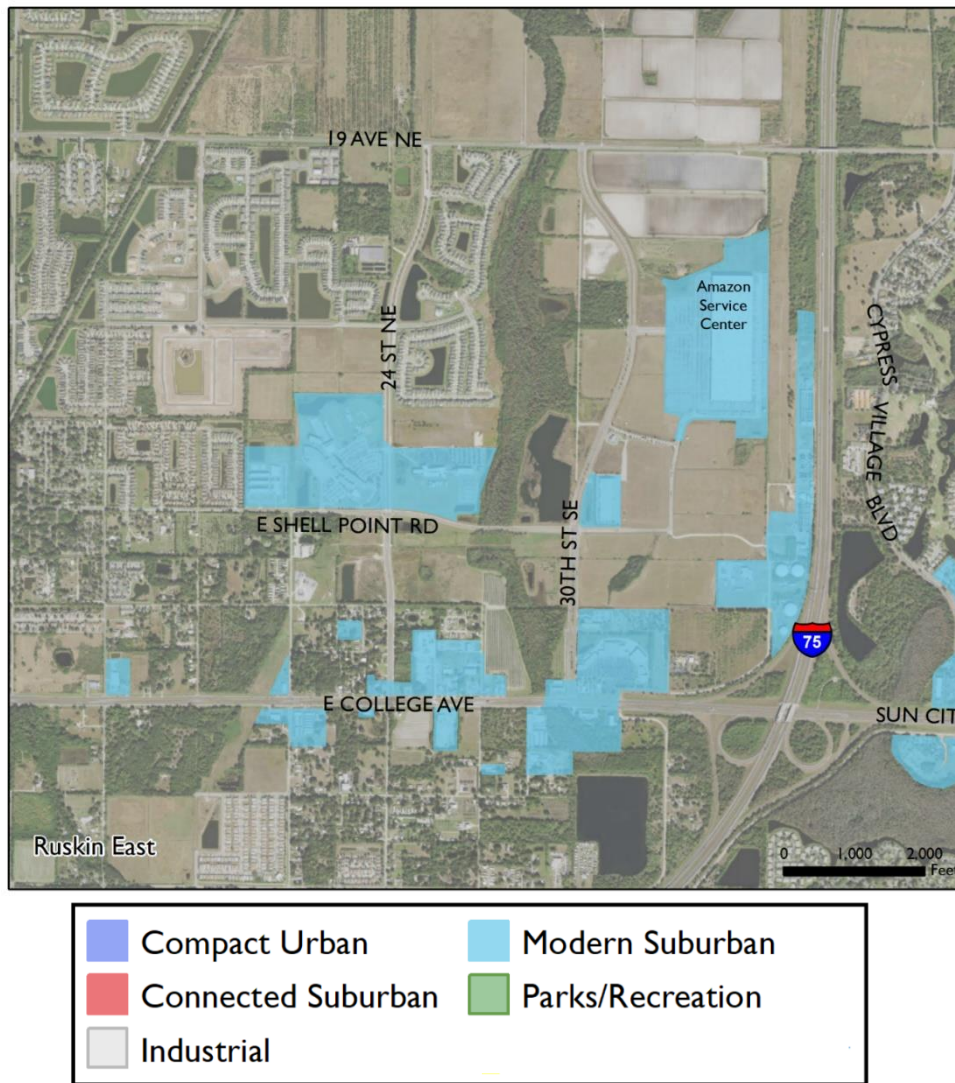


Figure 113. Areas of activity (nodes) within the area of Ruskin east

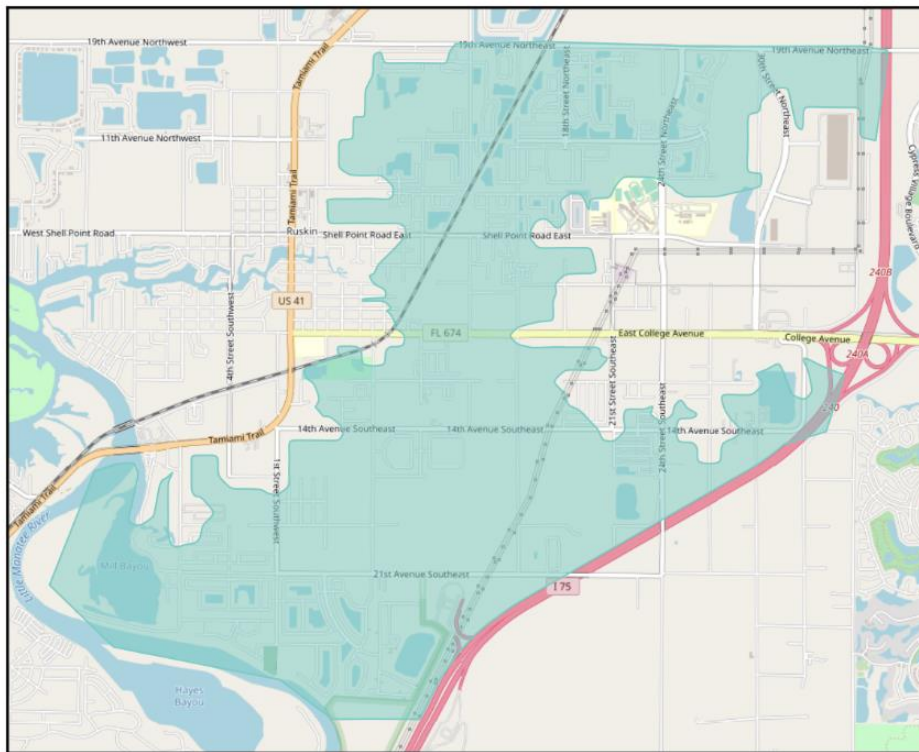
Source: Hillsborough County, U.S. Census Bureau

#### 4.6.5 Ruskin East Zone (OD Analysis)

This zone is located between US 41 and I-75. It is a primarily residential area and sits between two nodal zones for Ruskin and the intersection of I-75 and SR 674 (see Figure 114). The latter contains the Amazon Distribution Center. Important roadways in this zone are E. Shell Point Rd., E College Ave., 19<sup>th</sup> Ave NE, US 41, and I-75.

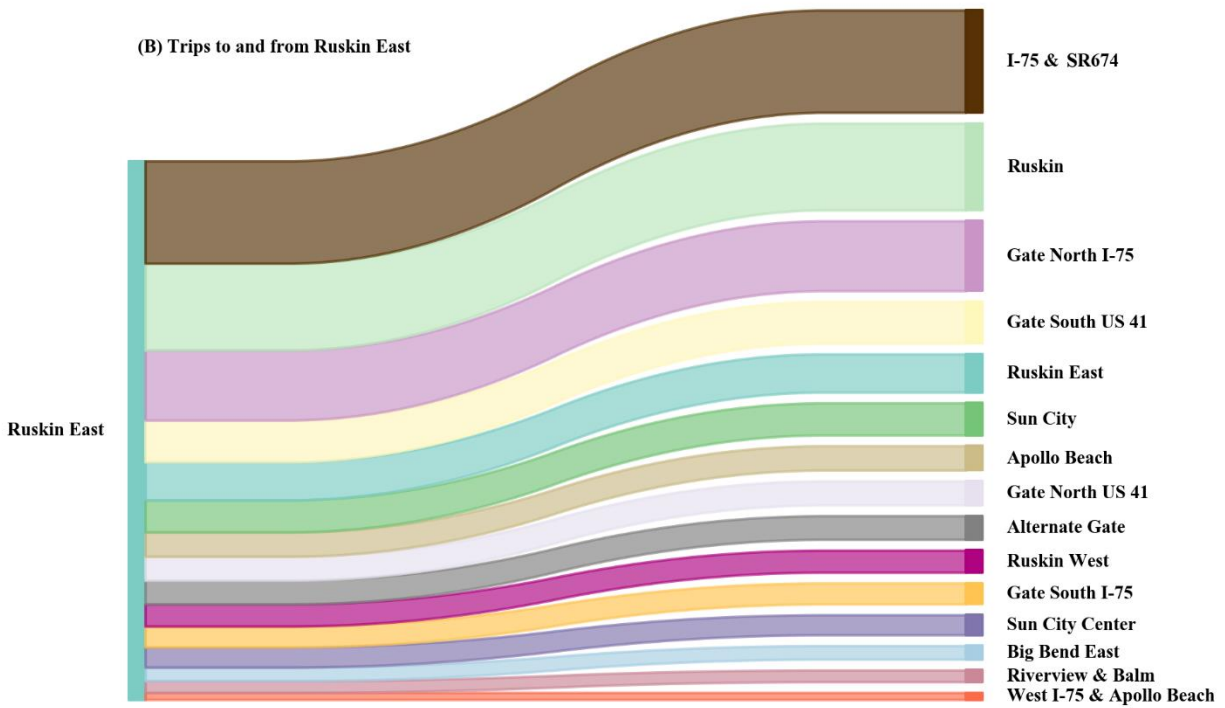
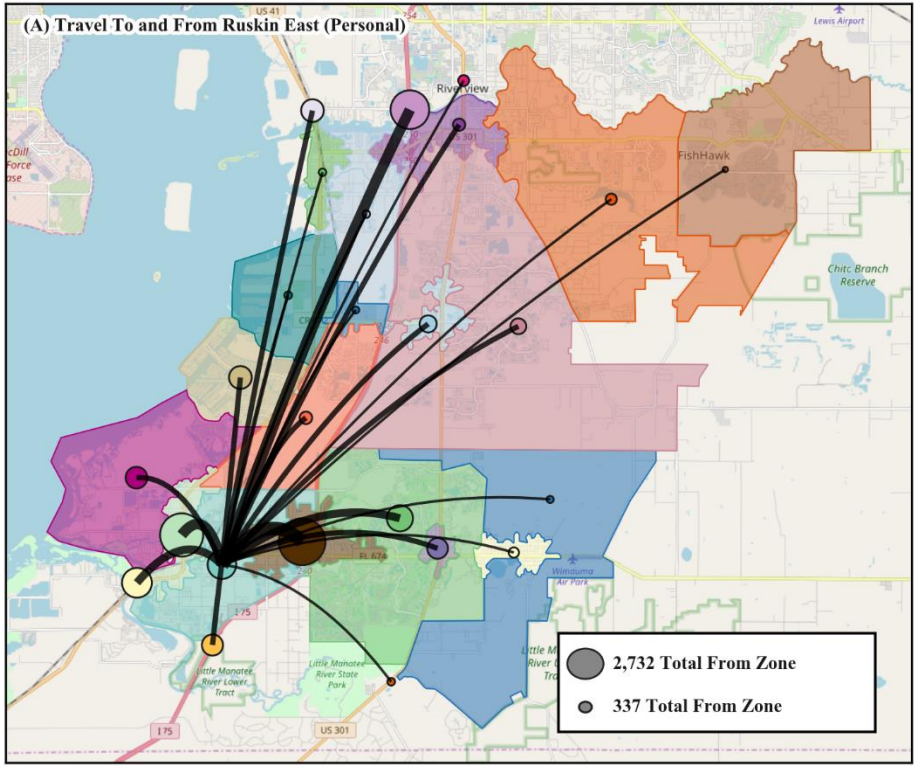
Key Findings:

- Most trips to and from this zone are between the Area of Activity (Node) I-75 & SR 674 and Area of Activity (Node) Ruskin zones (see Figure 115).
- Trips leaving or entering the zone through the gates primarily occur through North I-75 and South US 41 (see Figure 115).
- Trips leaving the zone occur during the peak am period (6am – 10am), with a higher percentage of HBW purpose trips (see Figure 116 and Figure 118).
- Trips entering the zone occur during the peak pm period (3pm – 7pm), with a mix of HBW and HBO purpose trips (see Figure 117 and Figure 118).

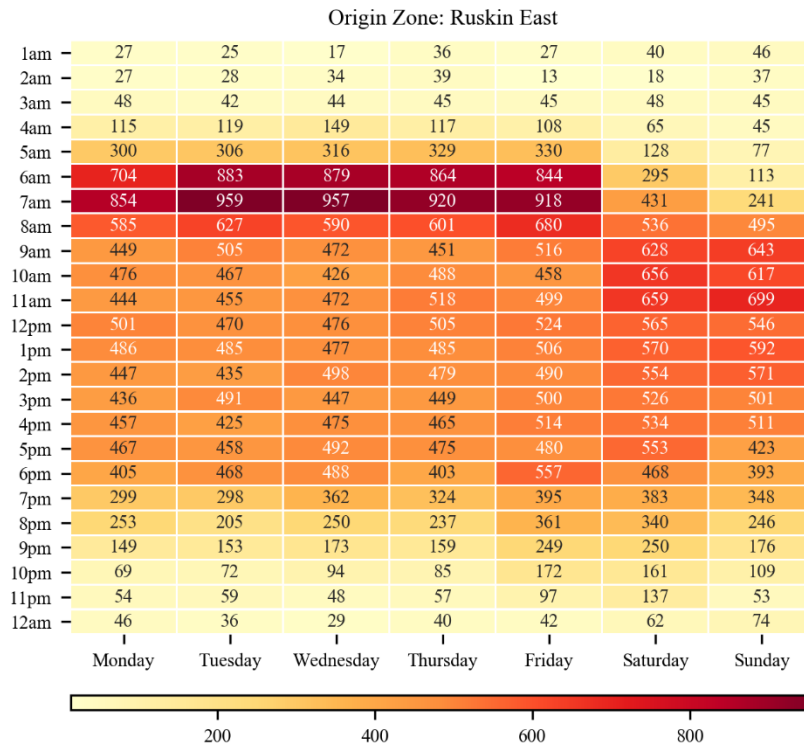


**Figure 114. Ruskin East zone**

Source: Hillsborough County, U.S. Census Bureau



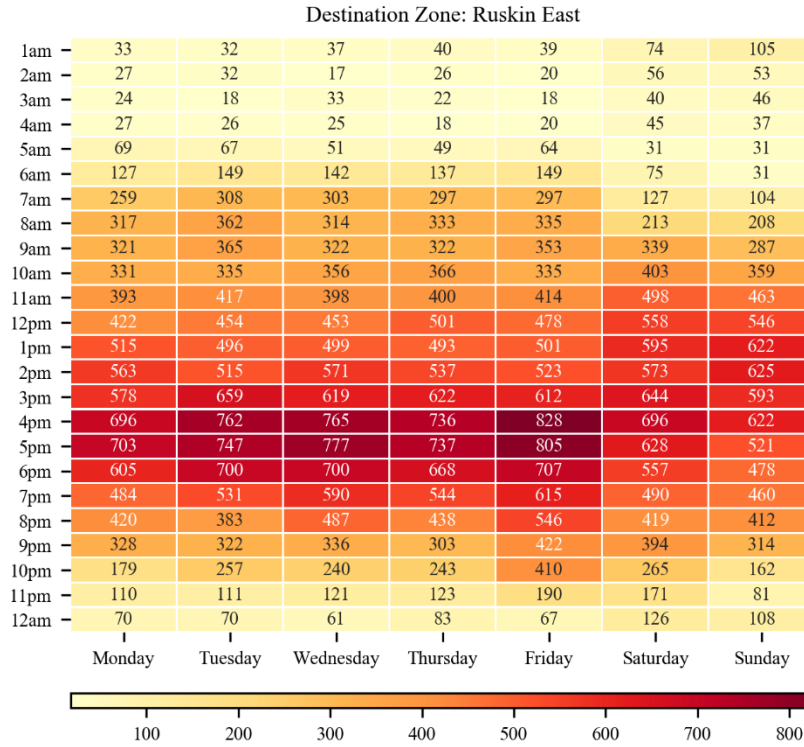
**Figure 115. All personal trips to and from Ruskin East zone**  
 Source: StreetlightData, Inc.



**Figure 116. All personal trips from Ruskin East zone by hour and day**

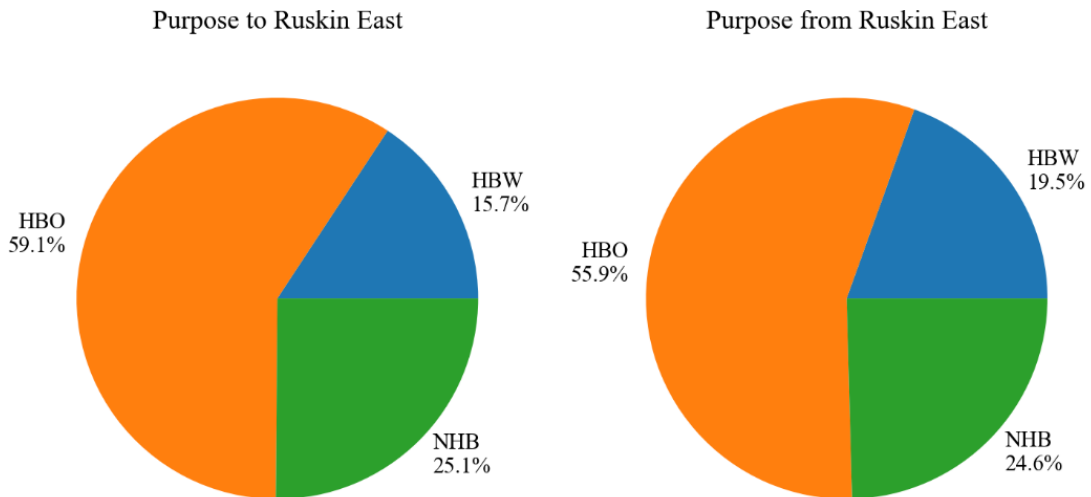
Source: StreetlightData, Inc.





**Figure 117. All personal trips to Ruskin East zone by hour and day**

Source: StreetlightData, Inc.



**Figure 118. Personal trip purpose to and from Ruskin East zone**

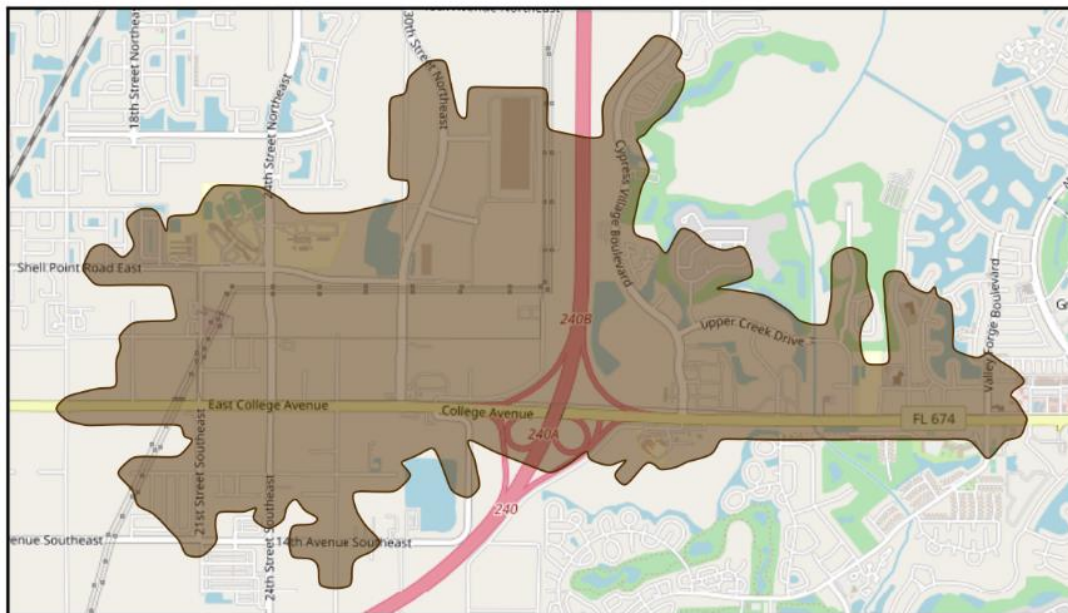
Source: StreetlightData, Inc.

#### 4.6.6 I-75 & SR 674 Zone (OD Analysis)

This nodal zone sits at the intersection of SR 674 and I-75. It includes South Bay Hospital, the Amazon Distribution Center, and shopping, entertainment, and commercial areas. It also includes a 5 min walking buffer (see Figure 119). Major roadways within this area of activity (node) are College Ave. (SR 674), Sun City Blvd. (SR 674), I-75, E. Shell Point Rd, and N. 19<sup>th</sup> Ave.

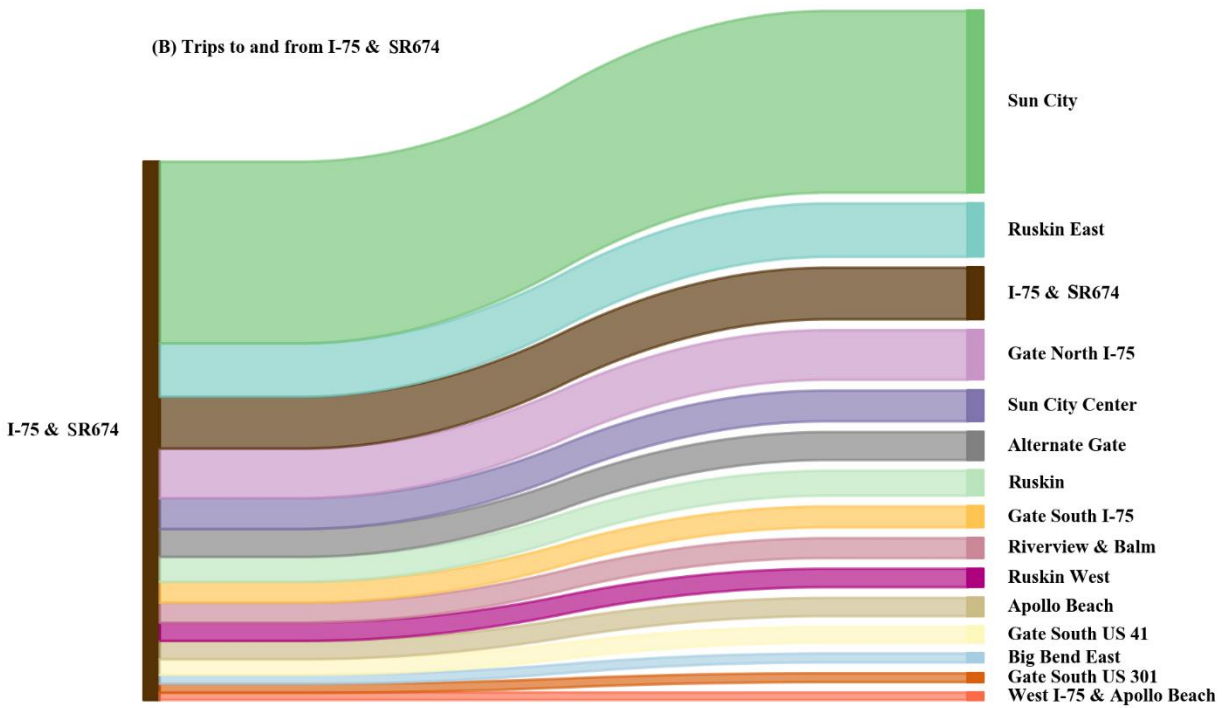
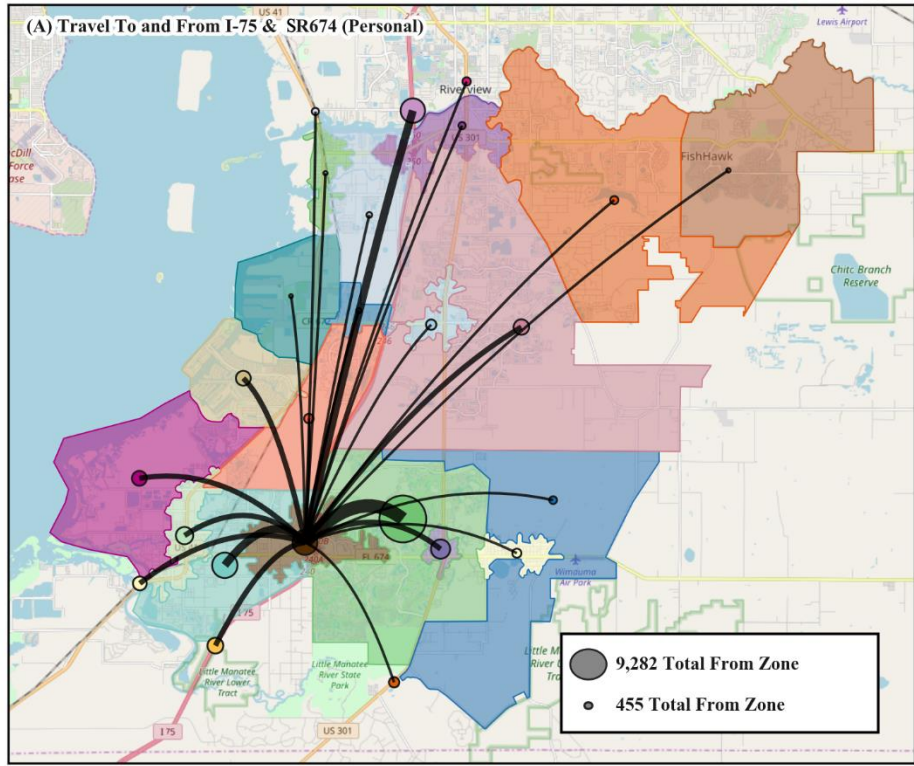
Key Findings:

- Most trips to and from this zone are from Sun City Center, Ruskin East, and internal trips (see Figure 120)
- Trips leaving and entering this zone peak throughout the day from 10am to 4pm (see Figure 121 and Figure 122).
- Most trips leaving and entering this zone are for HBO purposes (see Figure 123).

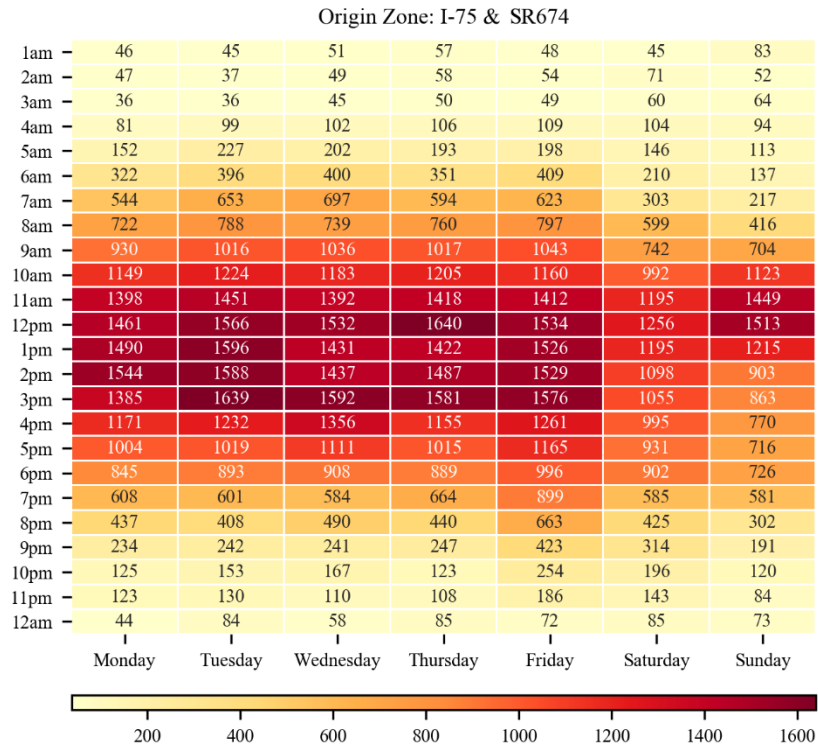


**Figure 119. I-75 & SR674**

Source: Hillsborough County, U.S. Census Bureau

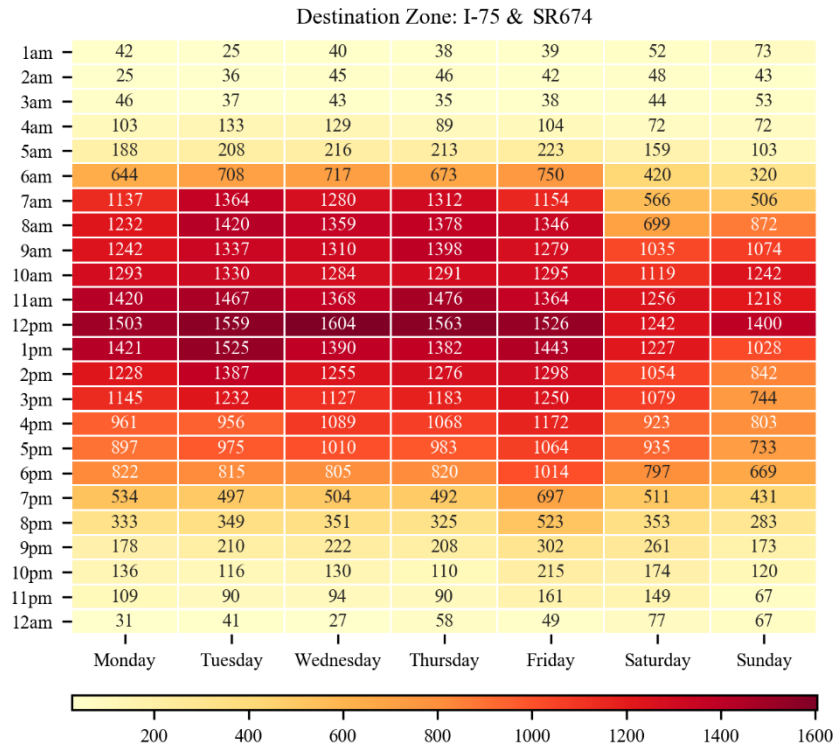


**Figure 120. All personal trips to and from I-75 & SR674**  
 Source: StreetlightData, Inc.



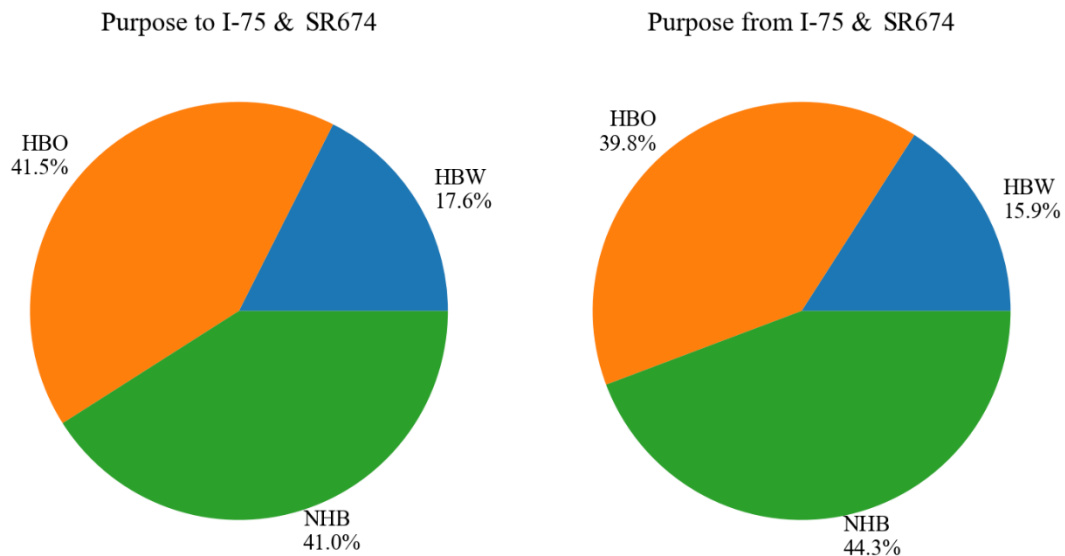
**Figure 121. All personal trips from I-75 & SR674 by hour and day**

Source: StreetlightData, Inc.



**Figure 122. All personal trips to I-75 & SR674 by hour and day**

Source: StreetlightData, Inc.



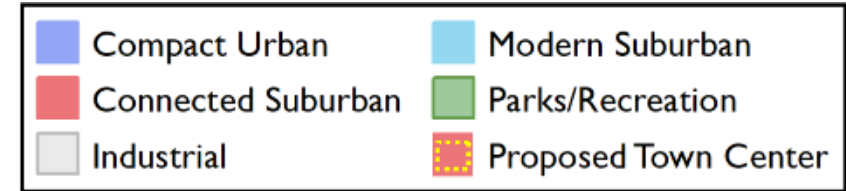
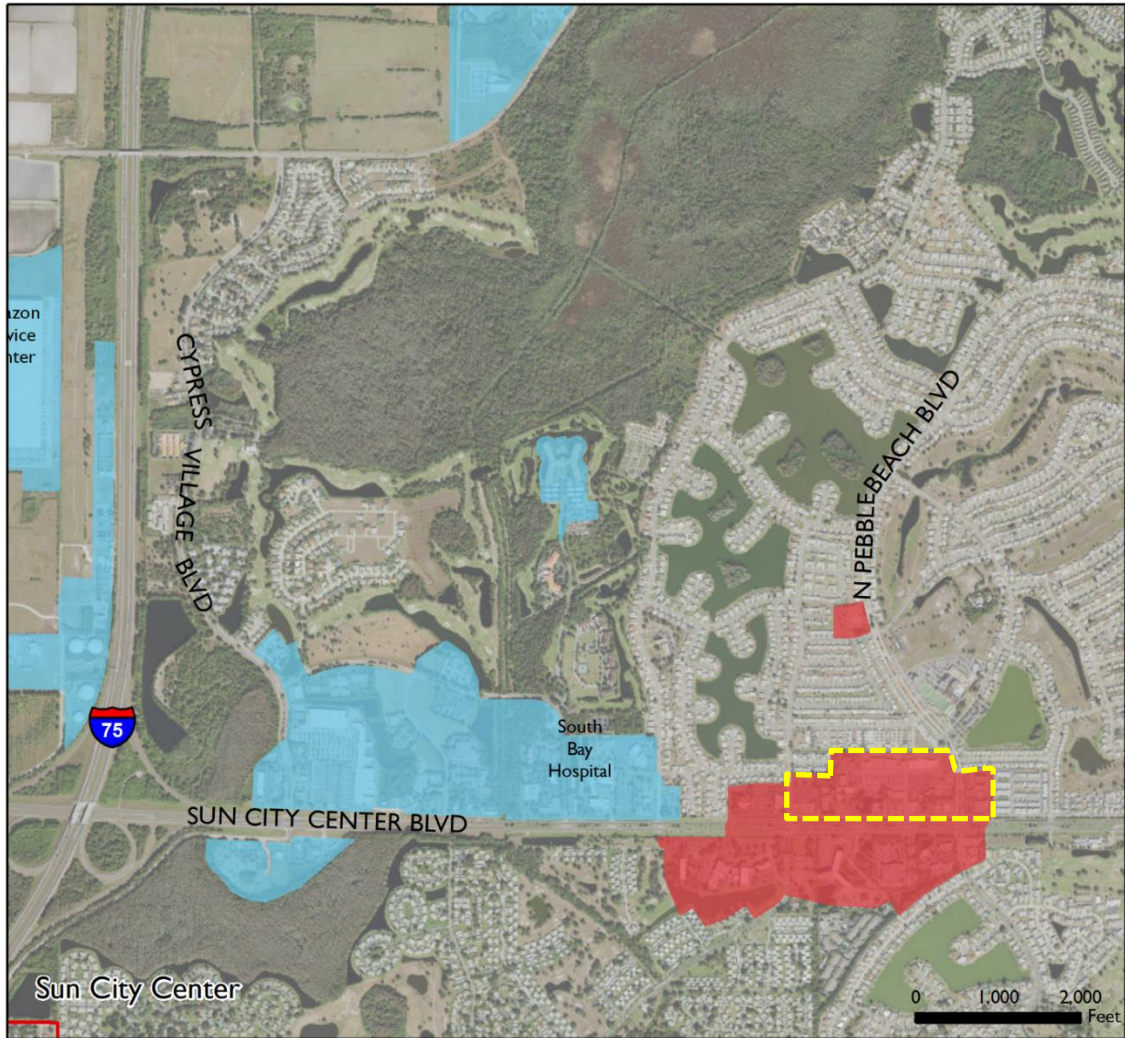
**Figure 123. Personal trip purpose to and from I-75 & SR674**

Source: StreetlightData, Inc.

## **4.7 Sun City Center**

### ***4.7.1 Sun City Center Area of Activity (Node)***

Sun City Center consists of two main areas of activity (nodes) - a modern suburban and connected suburban (Figure 124). The modern suburban area of activity (node) contains South Bay Hospital, and other retail, commercial, health, and entertainment places. The main connected suburban area of activity (node) at the intersection of Pebble Beach Blvd. and Sun City Center Blvd. is primarily filled with retail, and commercial spaces. It is connected to residential areas through the loop of Pebble Beach Blvd. Sun City Blvd connects to I-75, Ruskin in the west, US 301, and Wimauma in the east. There is an existing HART route along Sun City Blvd and I-75. The proposed town center overlaps with the connected suburban area of activity (node).



**Figure 124. Areas of activity (nodes) within the area of Sun City Center**

Source: Hillsborough County, U.S. Census Bureau

**4.7.2 Sun City Center Zone (OD Analysis)**

This nodal zone sits at the intersection of SR 674 (Sun City Blvd.) and US 301 (see Figure 125). It has shopping, entertainment, and commercial areas. It also includes a 5 min walking buffer. Major roadways within this area of activity (node) are US 301, and Sun City Blvd.

Key Findings:

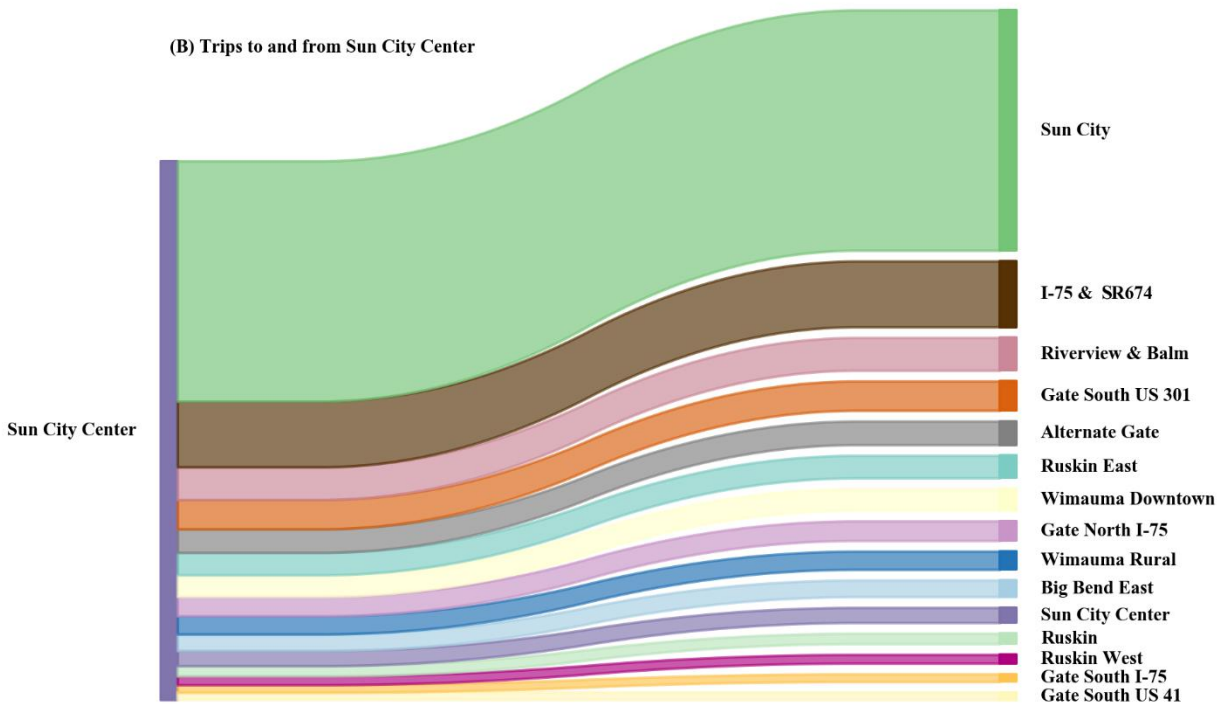
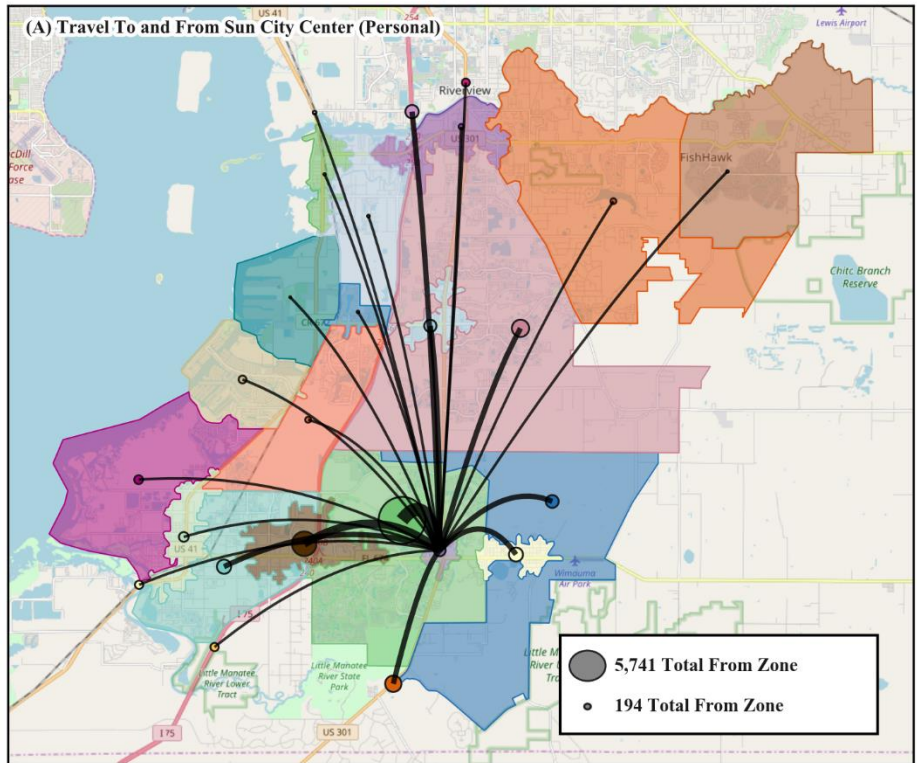
- Most trips to and from this zone are connected to the Sun City Center zone (see Figure 126).
- Activity leaving or entering the zone is concentrated in the middle of the day, and towards weekends (see Figure 127 and Figure 128).
- Most trips leaving and entering this zone are for HBO purposes (see Figure 129).



**Figure 125. Sun City Center zone**

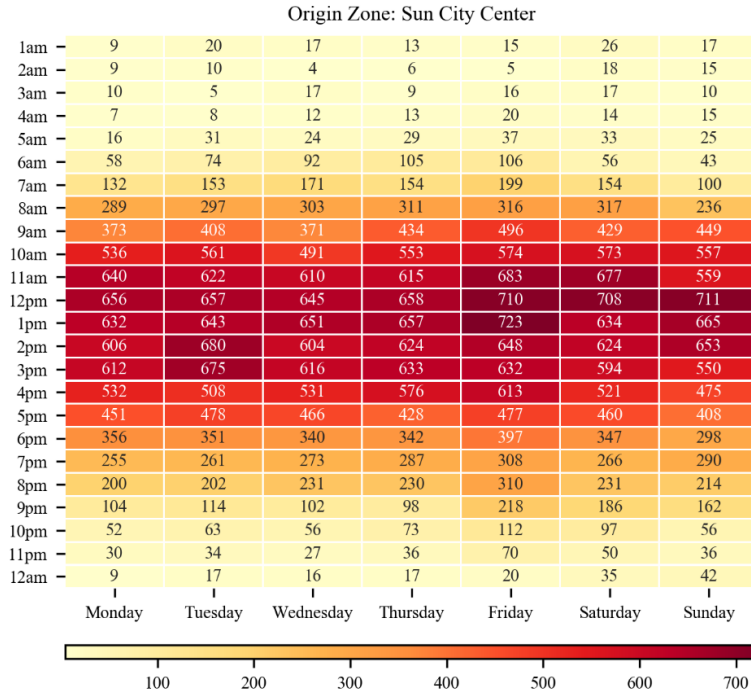
Source: Hillsborough County, U.S. Census Bureau



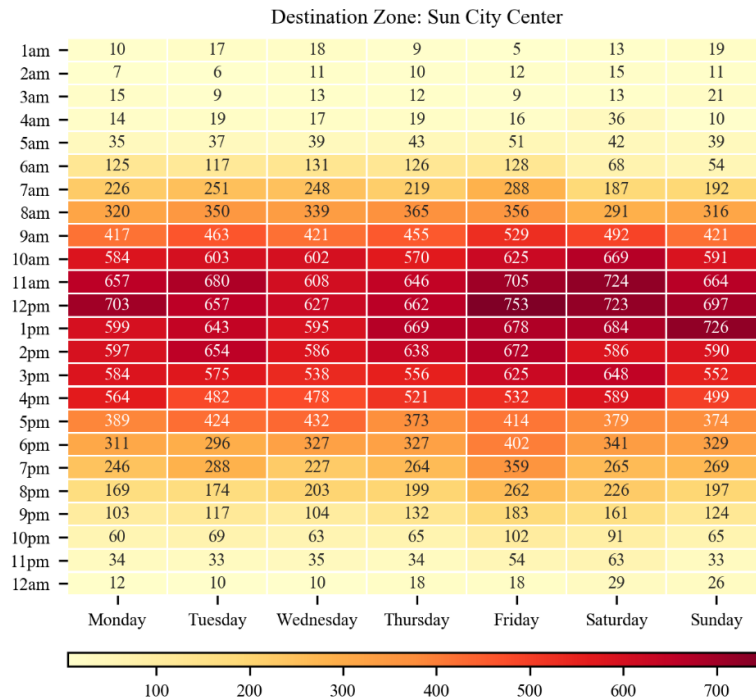


**Figure 126. All personal trips to and from origin**

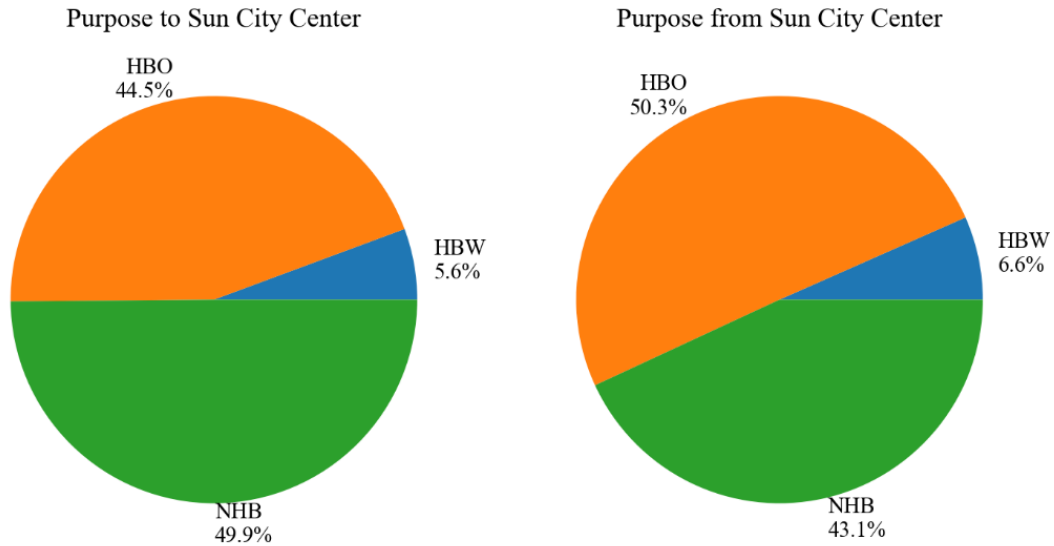
Source: StreetlightData, Inc.



**Figure 127. All personal trips from origin by hour and day**  
Source: StreetlightData, Inc.



**Figure 128. All personal trips to destination by hour and day**  
Source: StreetlightData, Inc.



**Figure 129. Personal trip purpose from and to destination**

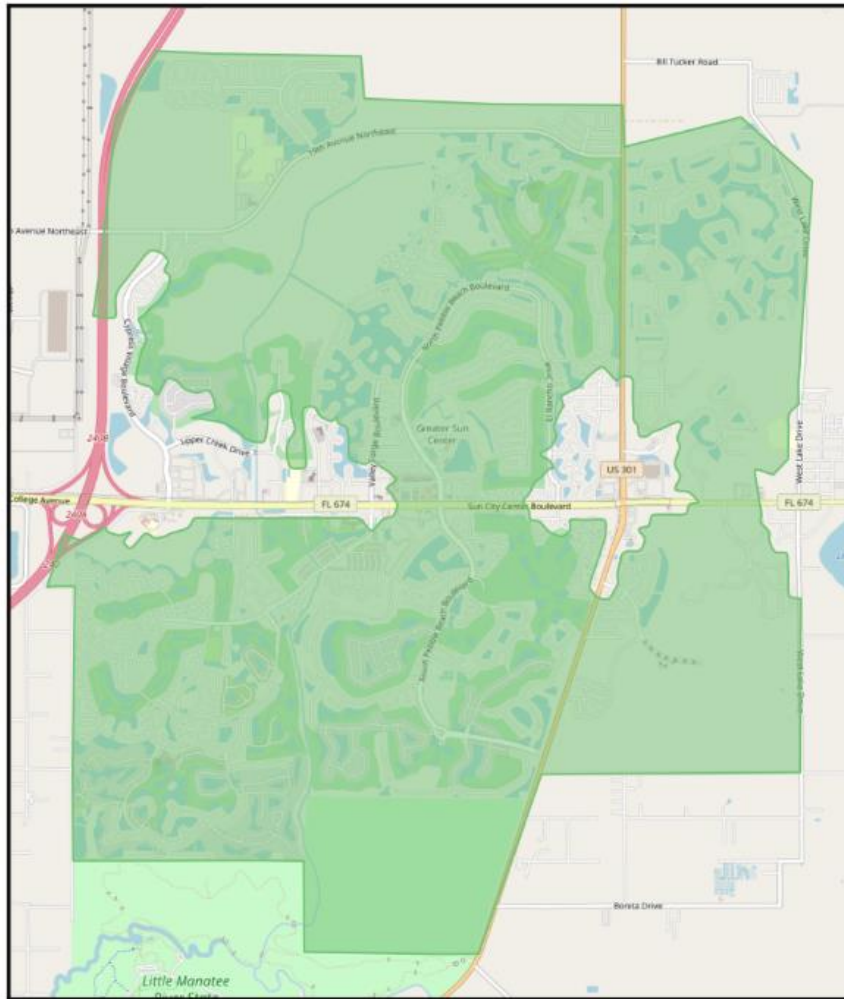
Source: StreetlightData, Inc.

#### **4.7.3 Sun City Zone (OD Analysis)**

This zone encompassed the primary residential area of Sun City between I-75 in the west and Wimauma in the east (see Figure 130). The main roadways in this zone were US 301, Sun City Boulevard, and I-75.

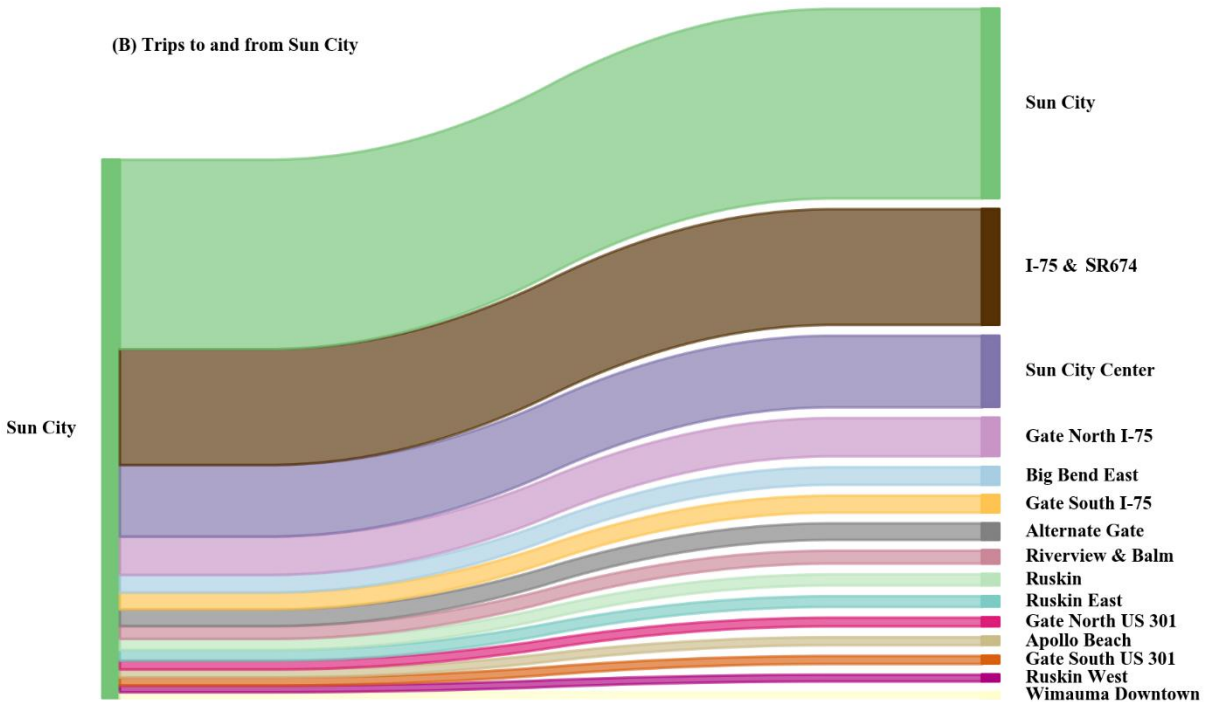
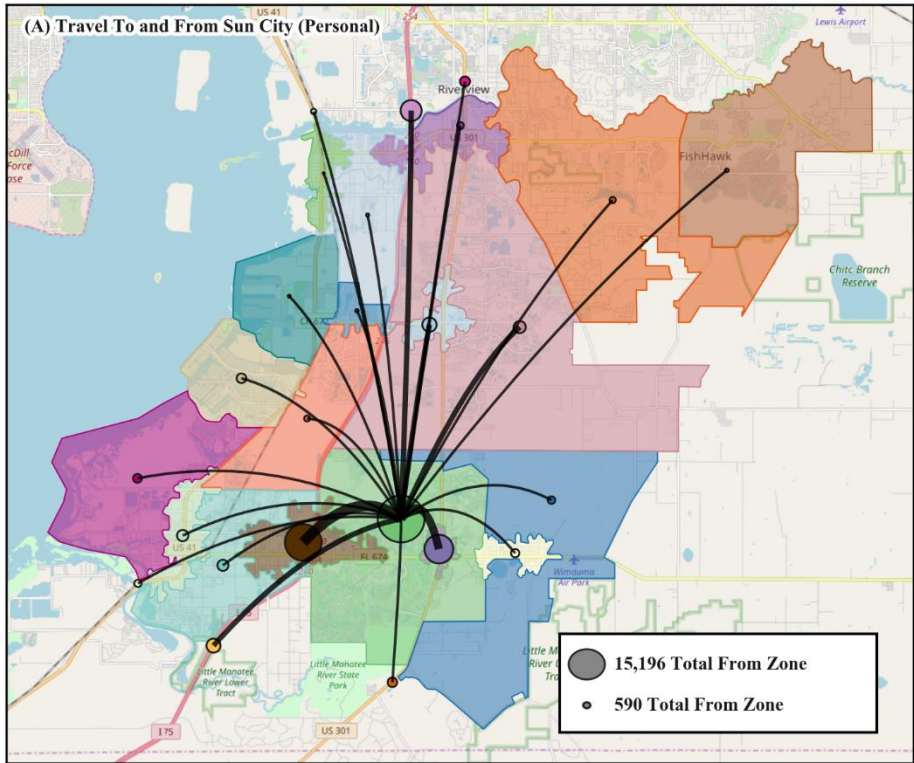
Key Findings:

- Most trips in the Sun City zone were internal, starting and ending in Sun City (Figure 131).
- More trips connected to the area of activity (node) at the intersection of I-75 & Sun City Boulevard than to Sun City Center. This may be because of South Bay Hospital.
- Trips leaving and entering the zone proceeded through North I-75 more than South I-75.
- Most trips leaving and entering the zone were active throughout the mid-day all days (Figure 132 and Figure 133).
- Most trips leaving and entering this zone had an HBO trip purpose, regardless of time of day (Figure 134).



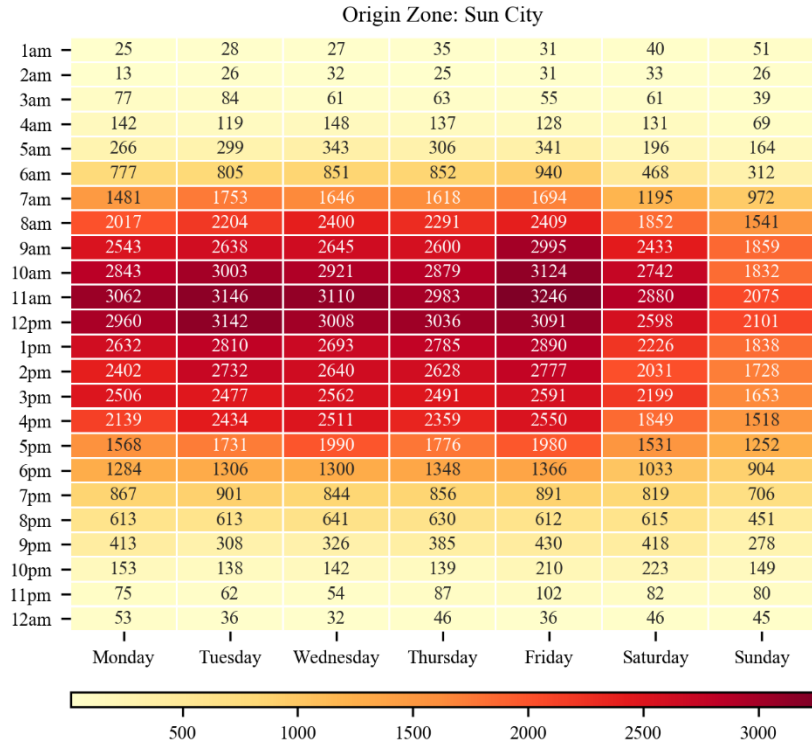
**Figure 130. Sun City zone**

Source: Hillsborough County, U.S. Census Bureau



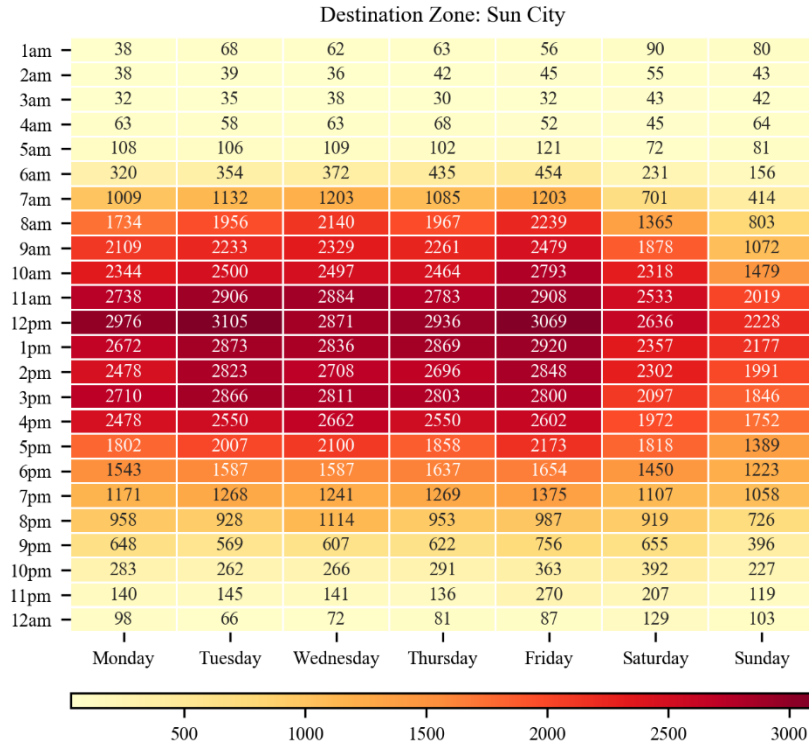
**Figure 131. All personal trips to and from Sun City Center zone**

Source: StreetlightData, Inc.



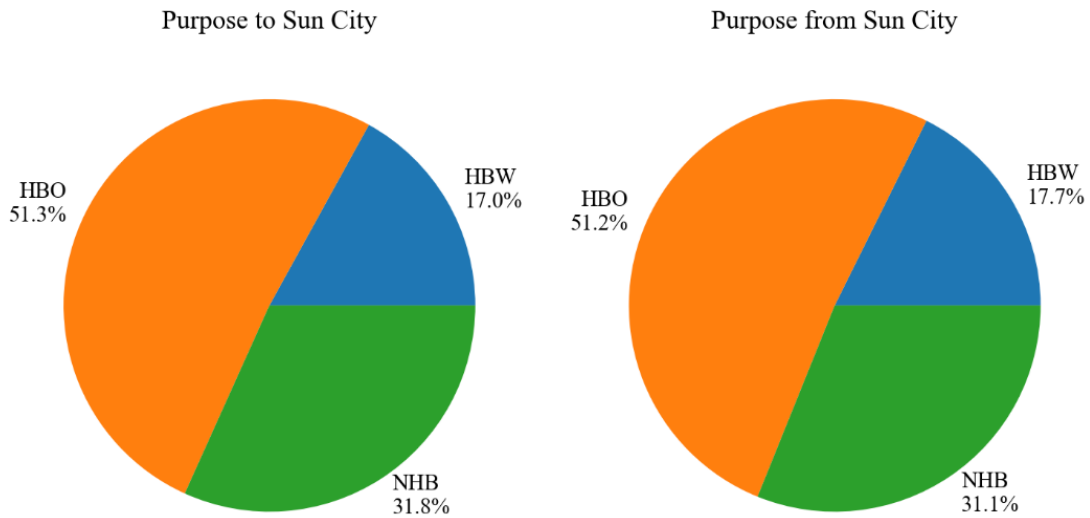
**Figure 132. All personal trips from Sun City Center zone by hour and day**

Source: StreetlightData, Inc.



**Figure 133. All personal trips to Sun City Center zone by hour and day**

Source: StreetlightData, Inc.



**Figure 134. Personal trip purpose to and from Sun City zone**

Source: StreetlightData, Inc.

## 4.8 Wimauma

### 4.8.1 Wimauma Area of Activity (Node)

Wimauma consists of one main compact urban area of activity (node), and a smaller modern suburban area of activity (node) at the intersection of US 301 and SR 674 (Figure 135). The modern suburban area of activity (node) consists mostly of retail, commercial, and entertainment spaces. The compact urban area of activity (node) overlaps with Wimauma's proposed town center, and existing town center along SR 674. The two major corridors are US 301 and SR 674. The latter connects Wimauma to Sun City Center and I-75. US 301 connects to the north and to the south towards Manatee County.

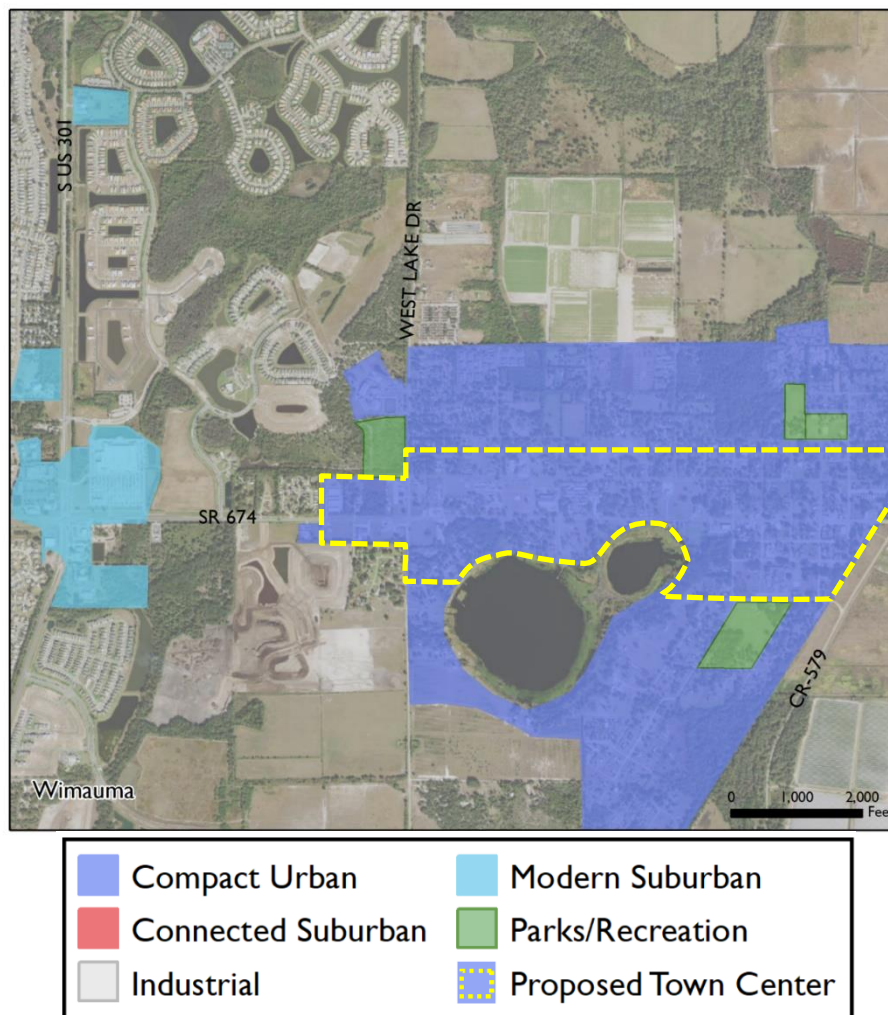


Figure 135. Areas of activity (nodes) within the area of US 301 and Wimauma

Source: Hillsborough County, U.S. Census Bureau

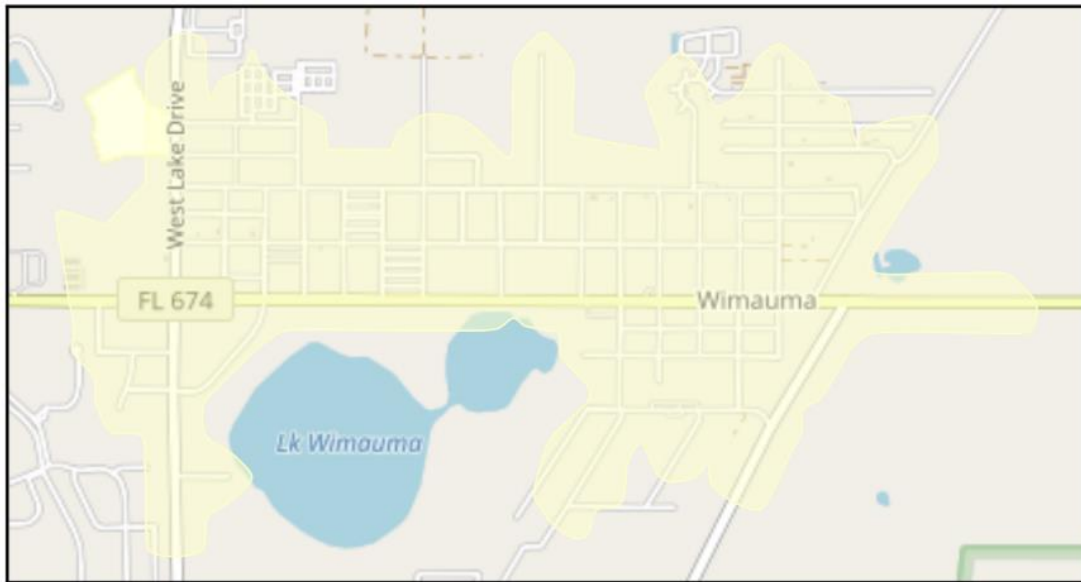


#### **4.8.2 Wimauma Downtown Zone (OD Analysis)**

This nodal zone encompasses Wimauma along SR 674 and has a 5 min walking buffer around the areas of activity (nodes) in this area (see Figure 136).

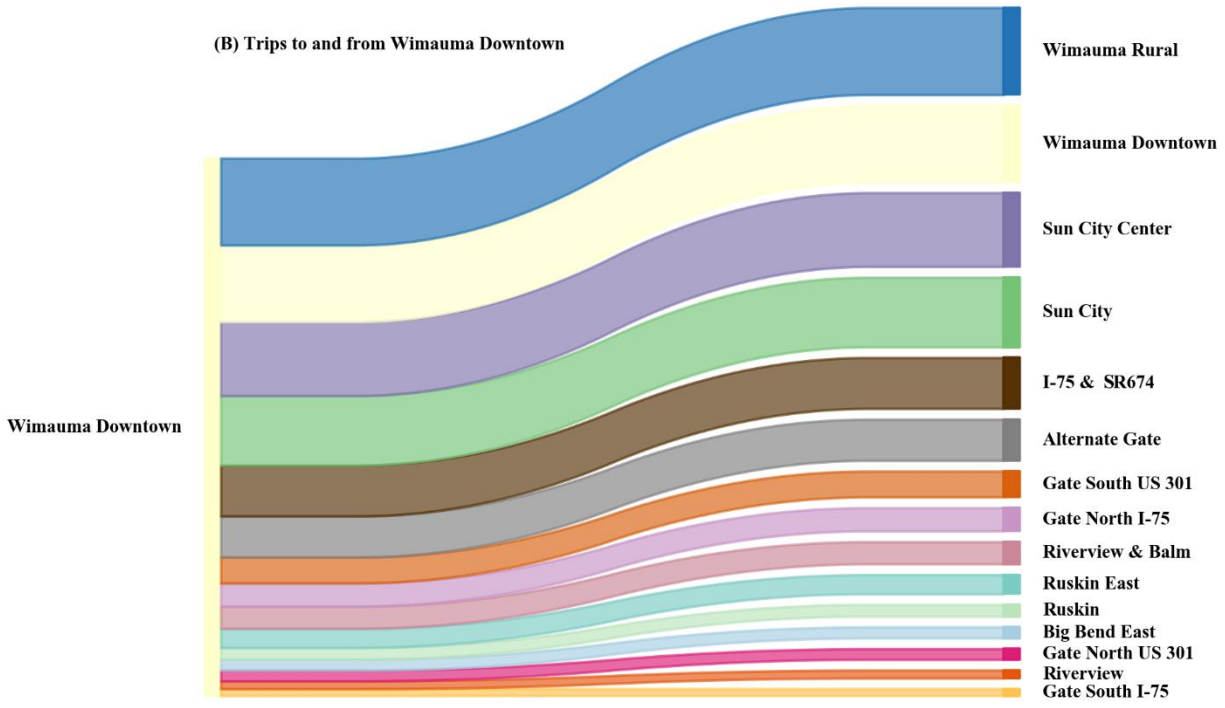
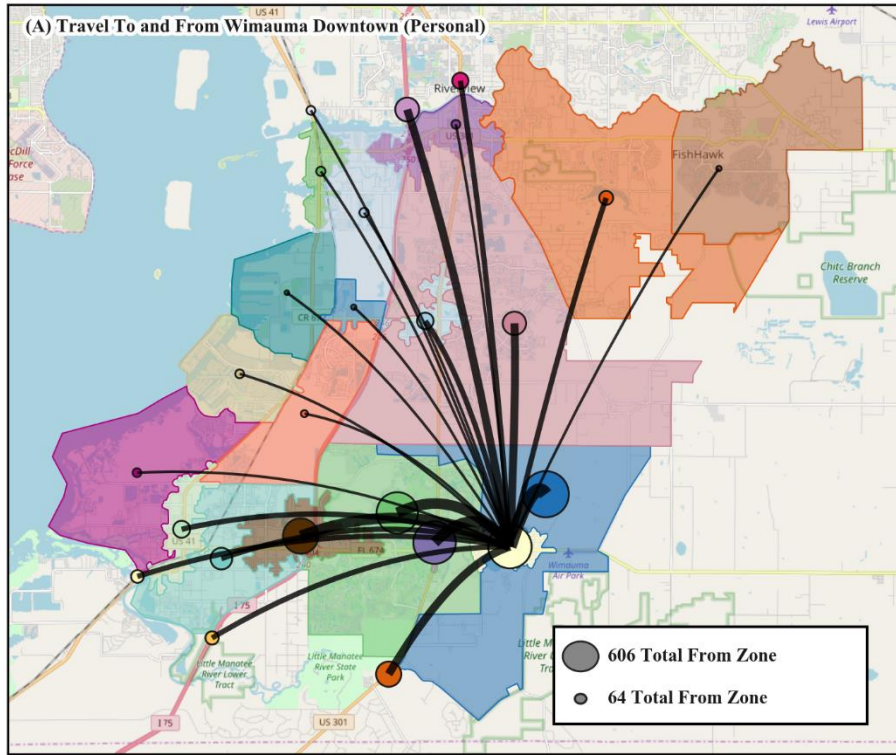
Key Findings:

- Most trips to and from this zone are connected to Wimauma Rural and Area of Activity (Node) Sun City Center zones, or are internal trips (see Figure 137).
- Trips entering and leaving the zone are active throughout the day, with a primary HBO purpose (See Figure 138, Figure 139, and Figure 140).



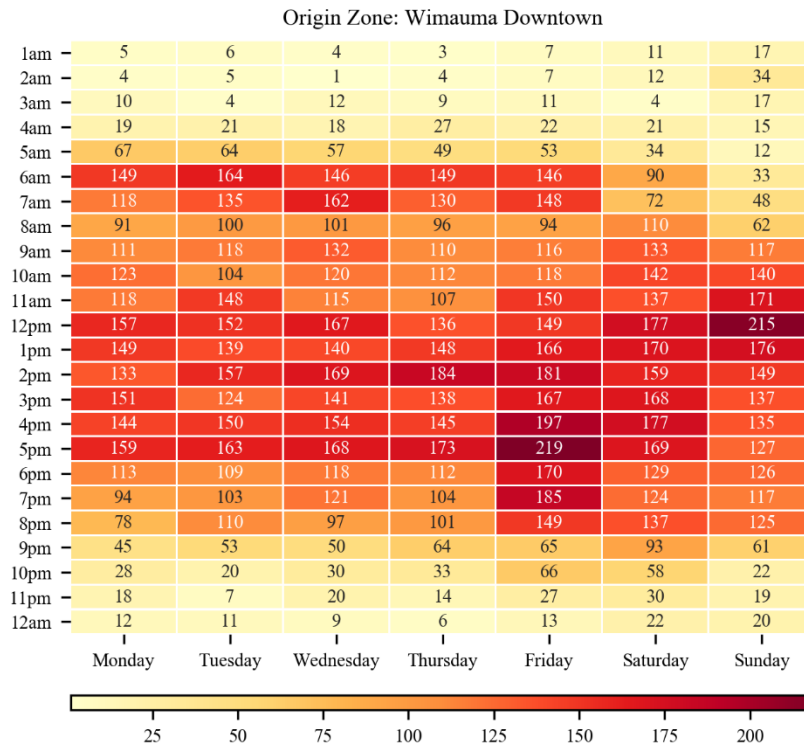
**Figure 136. Wimauma downtown zone**

Source: Hillsborough County, U.S. Census Bureau



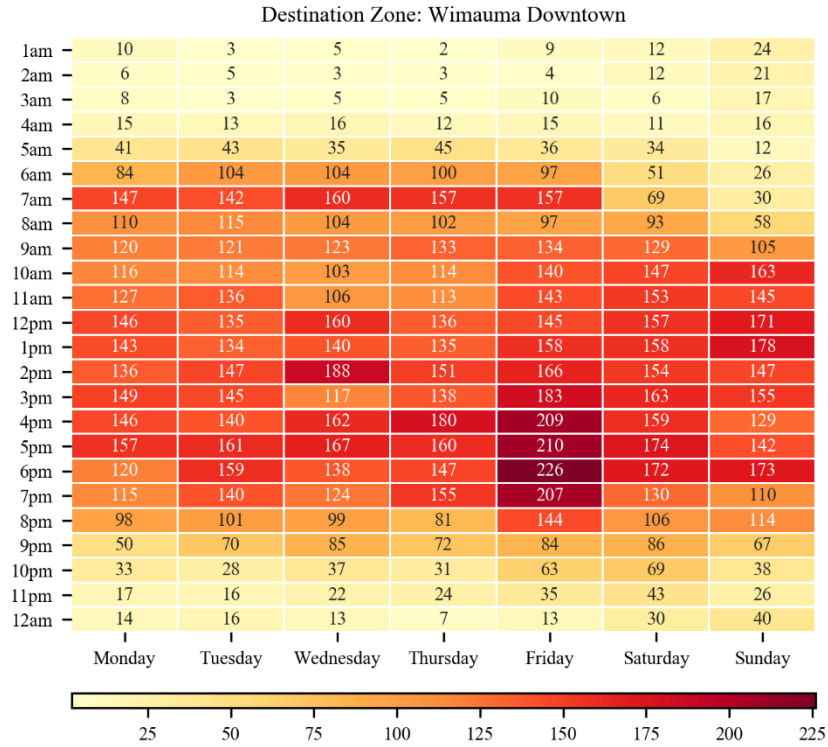
**Figure 137. All personal trips to and from Wimauma downtown zone**

Source: StreetlightData, Inc.



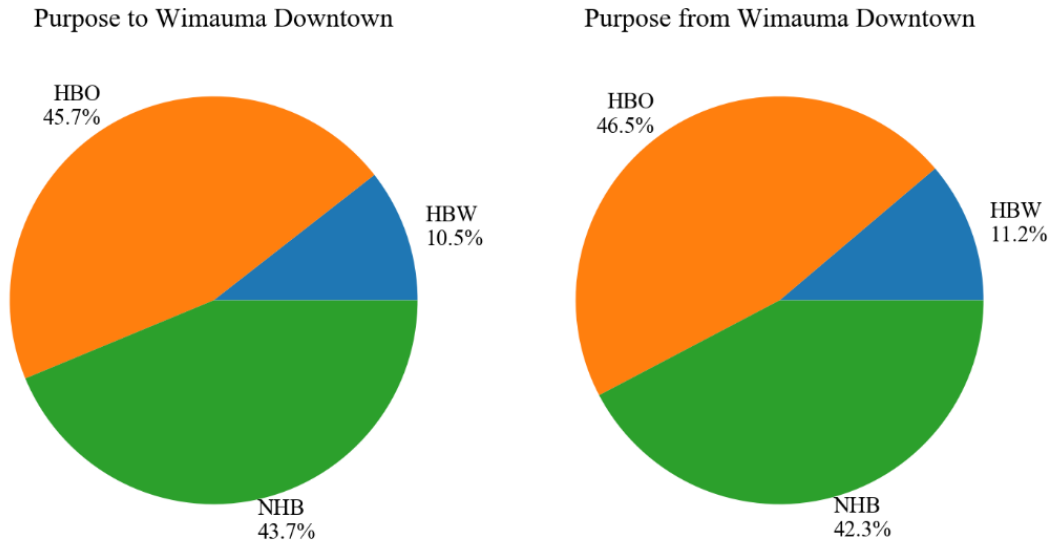
**Figure 138. All personal trips from Wimauma downtown zone by hour and day**

Source: StreetlightData, Inc.



**Figure 139. All personal trips to Wimauma downtown zone by hour and day**

Source: StreetlightData, Inc.



**Figure 140. Personal trip purpose to Wimauma downtown zone**

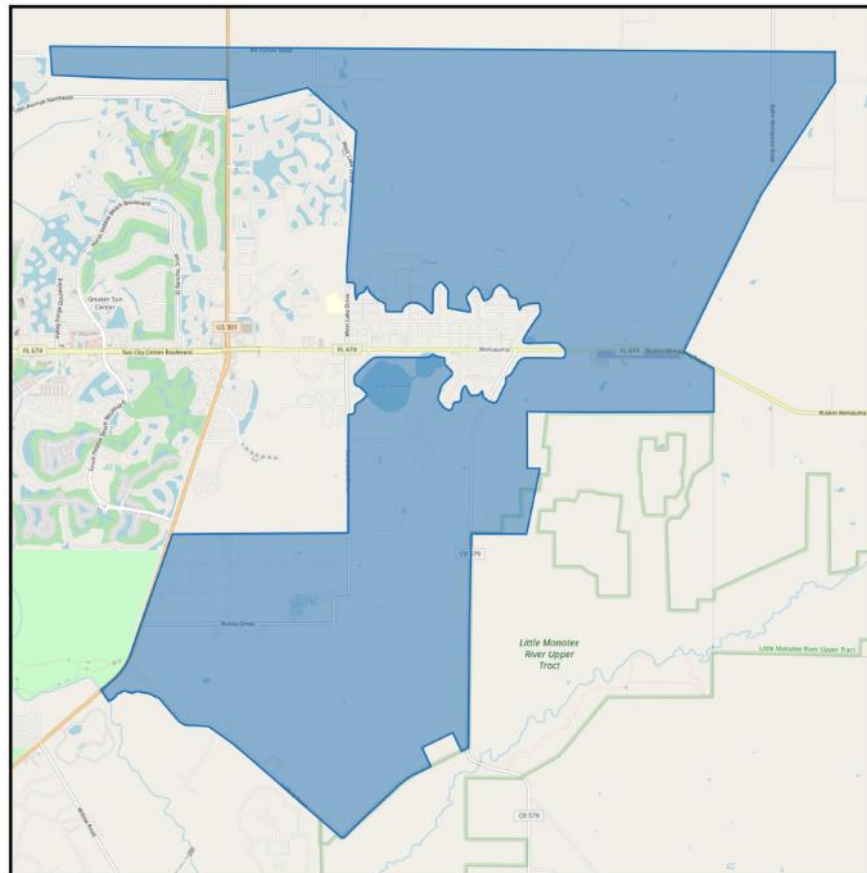
Source: StreetlightData, Inc.

### 4.8.3 Wimauma Rural Zone (OD Analysis)

This zone encompasses the area surrounding Wimauma, including parts of Wimauma not in the downtown area. This zone contains primarily residential and agricultural land uses. Important roadways in this zone are US 301 and SR 674 (see Figure 141).

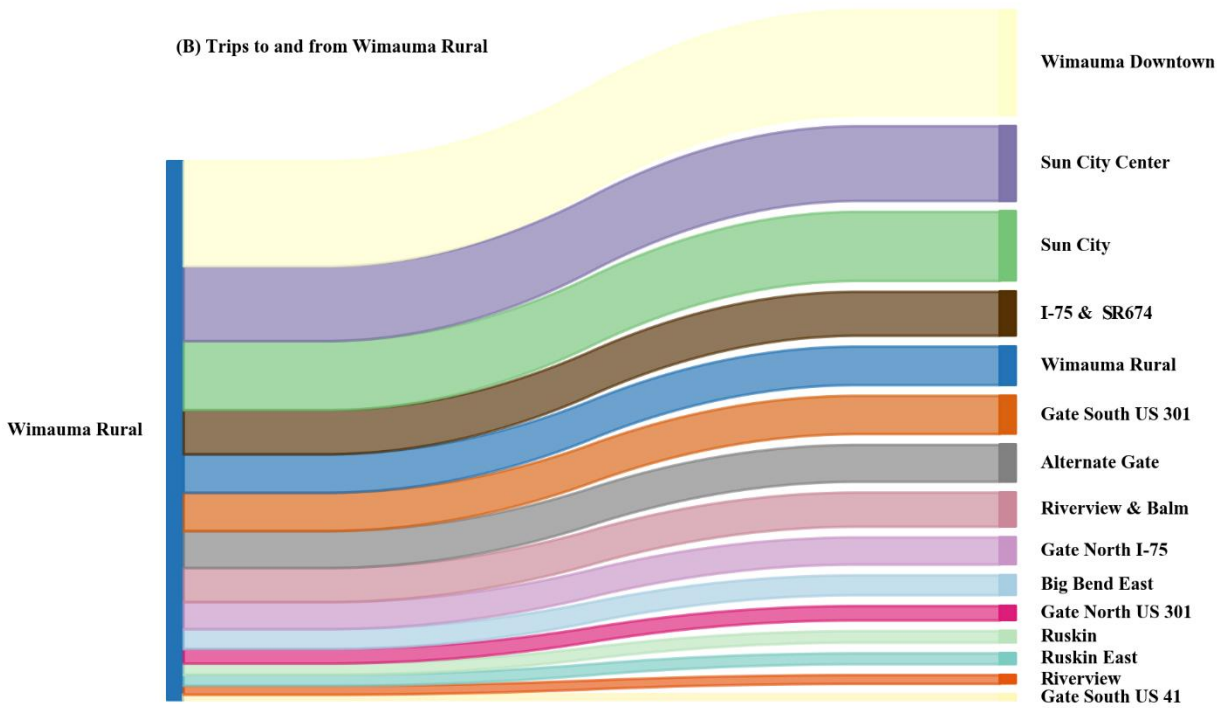
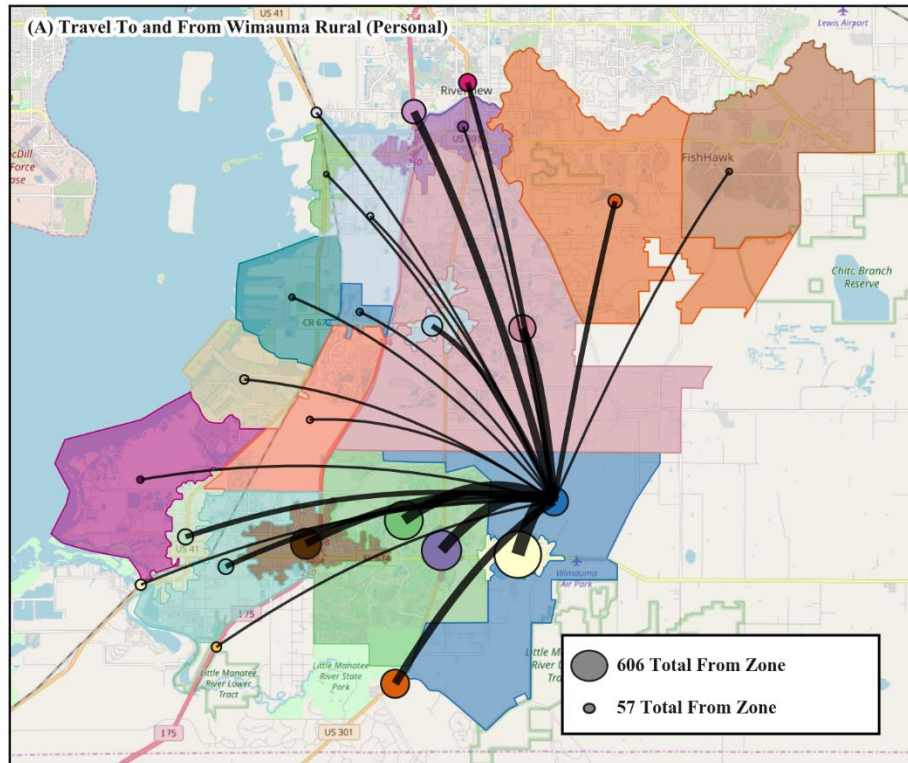
Key Findings:

- Most trips connect to the Area of Activity (Node) Wimauma Downtown zone and zones within Sun City Center (see Figure 142).
- Trips leaving the zone occur primarily during the peak am period (6am – 10am), and trips primarily enter the zone during peak pm times (3pm – 7pm) (see Figure 143 and Figure 144).
- Trips from this zone to the Sun City Center zone have a high percentage of HBW purpose trips (see Figure 145).



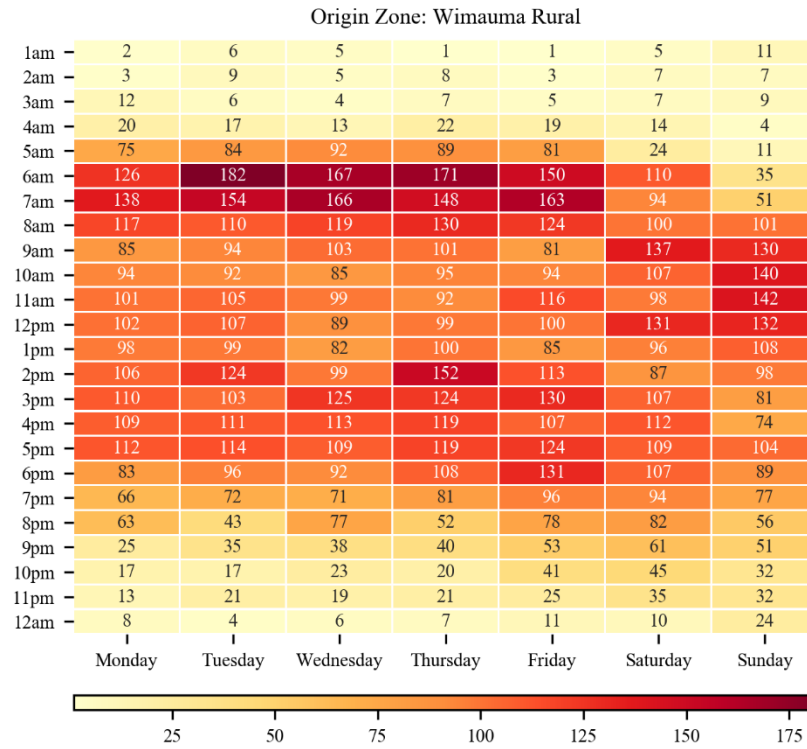
**Figure 141. Wimauma Rural zone**

Source: Hillsborough County, U.S. Census Bureau



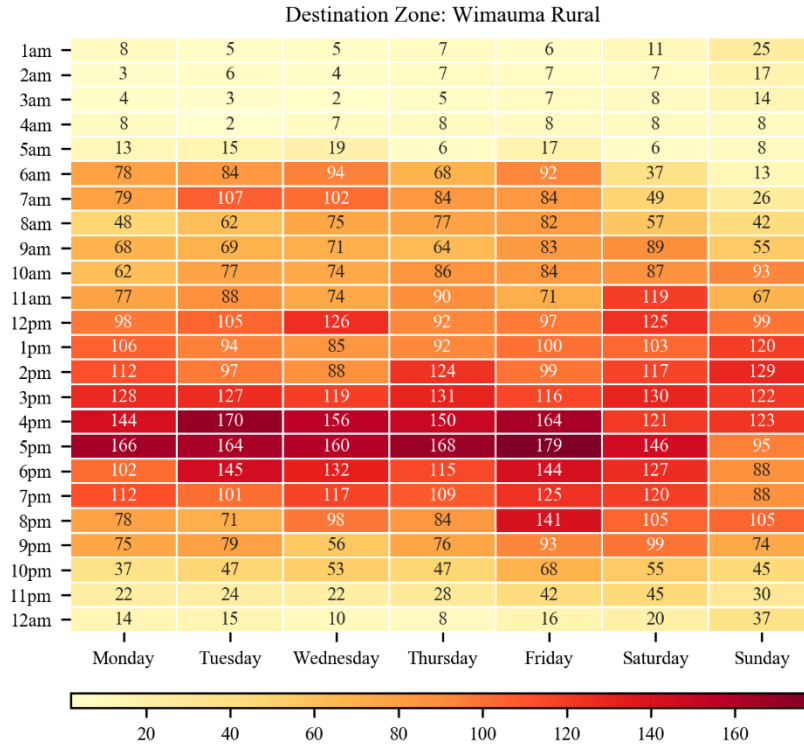
**Figure 142. All personal trips to and from Wimauma Rural zone**

Source: StreetlightData, Inc.



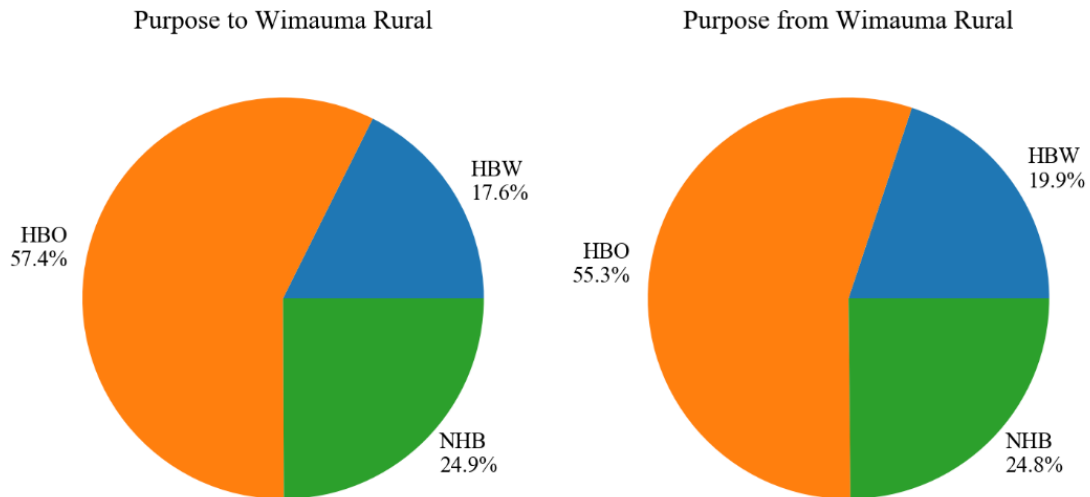
**Figure 143. All personal trips from Wimauma Rural zone by hour and day**

Source: StreetlightData, Inc.



**Figure 144. All personal trips to Wimauma Rural zone by hour and day**

Source: StreetlightData, Inc.



**Figure 145. Personal trip purpose to and from Wimauma Rural zone**

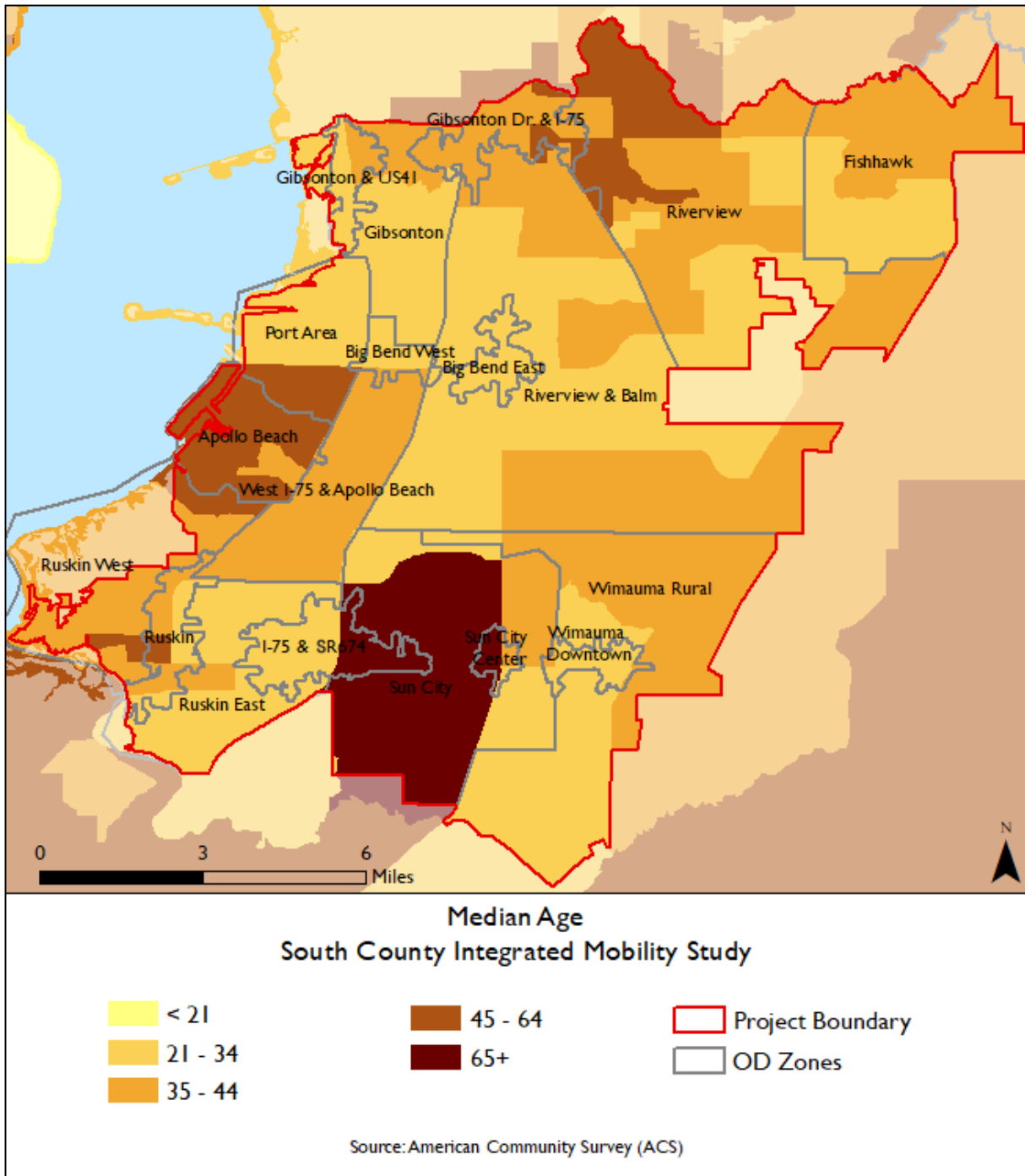
Source: StreetlightData, Inc.

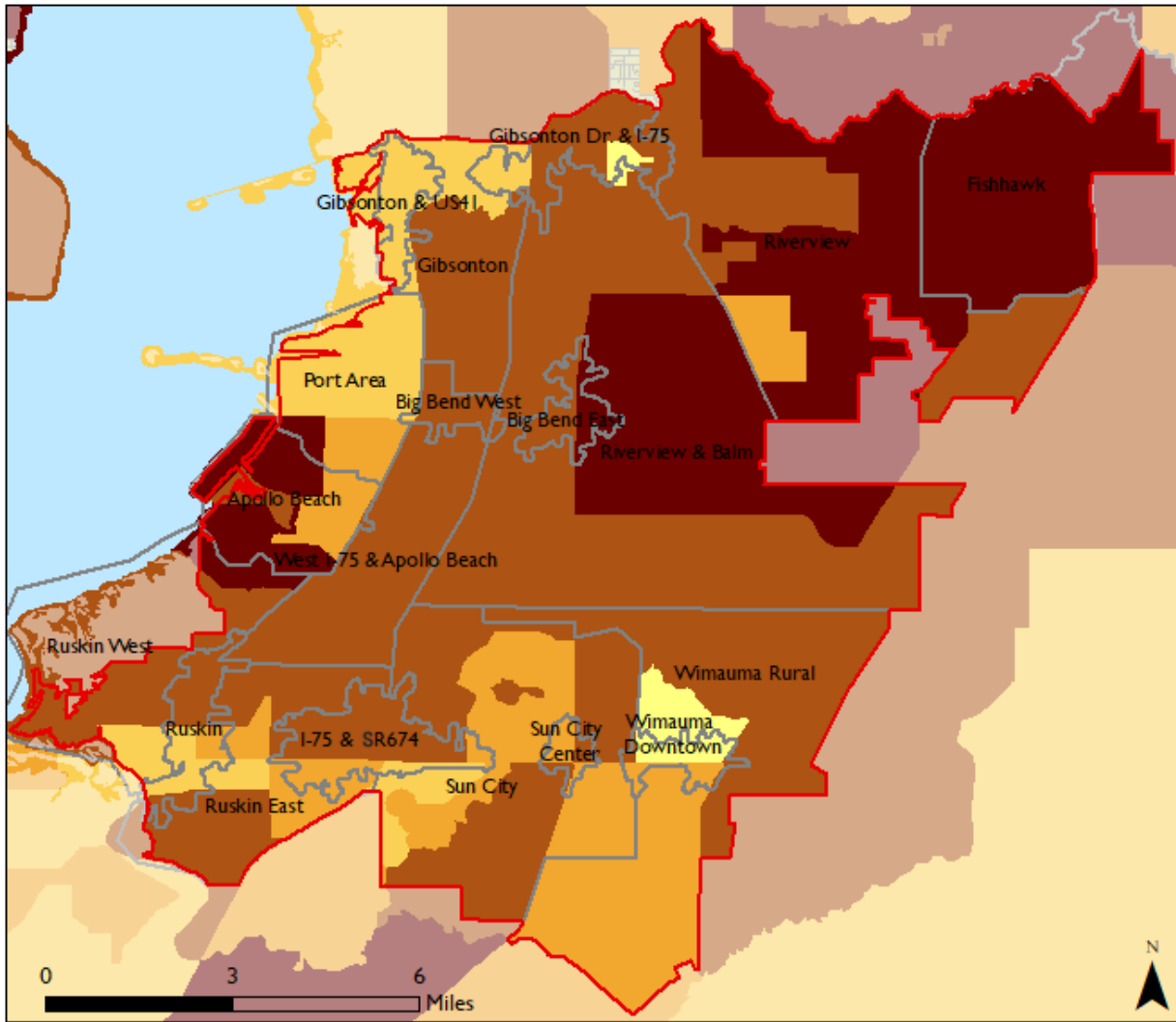


## References








- BIA (Building Industry Association). (2017). Bay Area jobs-housing 'balance'. Retrieved from [https://drive.google.com/file/d/0B0F-5MSgywJ\\_S2FoM2lvOGI5NmNwUzV3Y1BtRXZyZmhDU3lZ/view](https://drive.google.com/file/d/0B0F-5MSgywJ_S2FoM2lvOGI5NmNwUzV3Y1BtRXZyZmhDU3lZ/view) .
- Dover, Kohn & Partners, and Spikowski Planning Associates. (2014). Strip commercial and mixed-use development in Hillsborough County. Retrieved from [http://www.planhillsborough.org/wp-content/uploads/2014/04/Hillsborough\\_Strip-Comercial\\_Mixed-Use\\_August-25-2014smaller.pdf](http://www.planhillsborough.org/wp-content/uploads/2014/04/Hillsborough_Strip-Comercial_Mixed-Use_August-25-2014smaller.pdf)
- EnviroAtlas. (2014). Employment to housing ratio. U.S. Environmental Protection Agency (EPA). Retrieved from <https://enviroatlas.epa.gov/enviroatlas/DataFactSheets/pdf/Supplemental/EmploymentHousingRatio.pdf>.
- Hillsborough Area Regional Transit Agency. (2017). Transit development plan. Retrieved from [http://www.gohart.org/Style%20Library/goHART/pdfs/transit\\_development\\_plan/FY2018%20HART%20TDP%20-%20Final%20Report.pdf](http://www.gohart.org/Style%20Library/goHART/pdfs/transit_development_plan/FY2018%20HART%20TDP%20-%20Final%20Report.pdf)
- Hillsborough County Board of County Commissioners. (2019) Land Development Code. Retrieved from [https://library.municode.com/fl/hillsborough\\_county/codes/land\\_development\\_code](https://library.municode.com/fl/hillsborough_county/codes/land_development_code)
- Hillsborough County Board of County Commissioners. (2008). Comprehensive plan for unincorporated Hillsborough County Florida: future land use. Retrieved from [http://www.planhillsborough.org/wp-content/uploads/2012/10/FUTURE-LAND-USE\\_1\\_2018.pdf](http://www.planhillsborough.org/wp-content/uploads/2012/10/FUTURE-LAND-USE_1_2018.pdf)
- Hillsborough County City-County Planning Commission. (2016). Imagine 2040 Tampa comprehensive plan. Retrieved from <http://www.planhillsborough.org/city-of-tampa-2040-comprehensive-plan/>
- Hillsborough County, Economic Development Department. (n.d.). Competitive sites. Retrieved from <http://www.hillsboroughcounty.org/en/businesses/land-development/competitive-sites>
- TBARTA. (2015). Regional transportation master plan: activity centers and travel markets technical memorandum. Retrieved from [http://tbarta.com/files/TM\\_ActivityCentersTravelMarkets.pdf](http://tbarta.com/files/TM_ActivityCentersTravelMarkets.pdf)

## Appendix

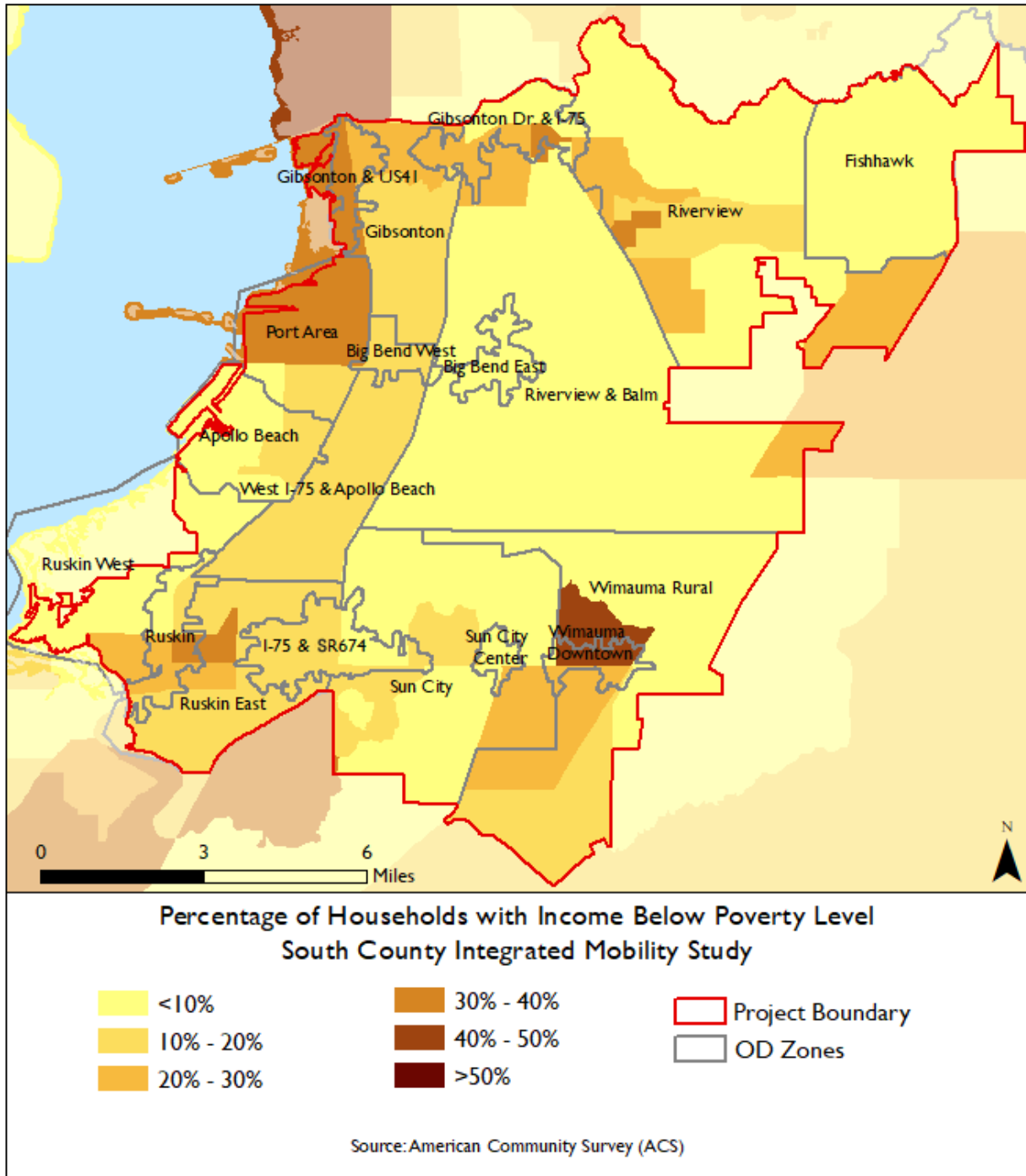


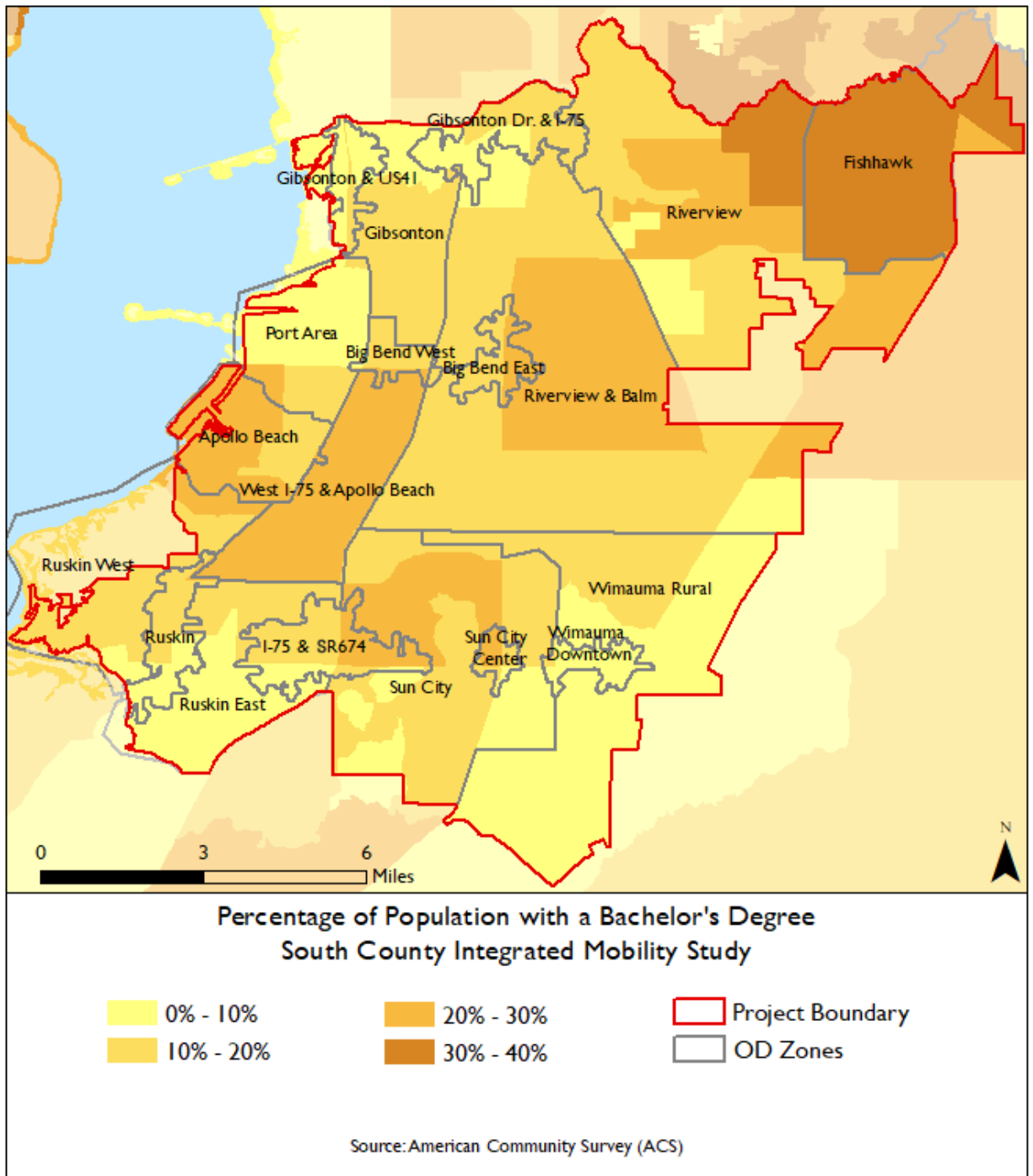


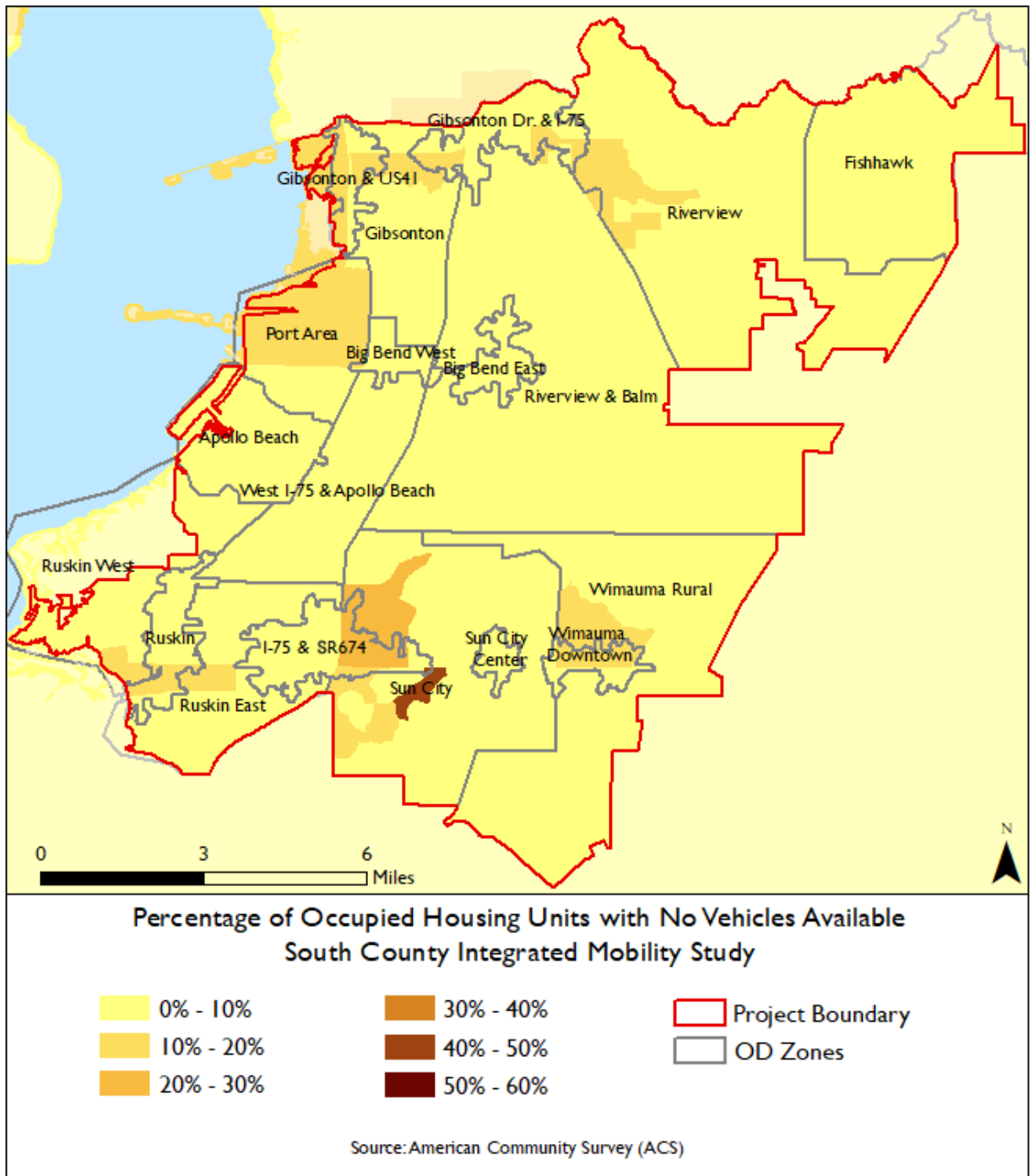
**Median Income  
South County Integrated Mobility Study**

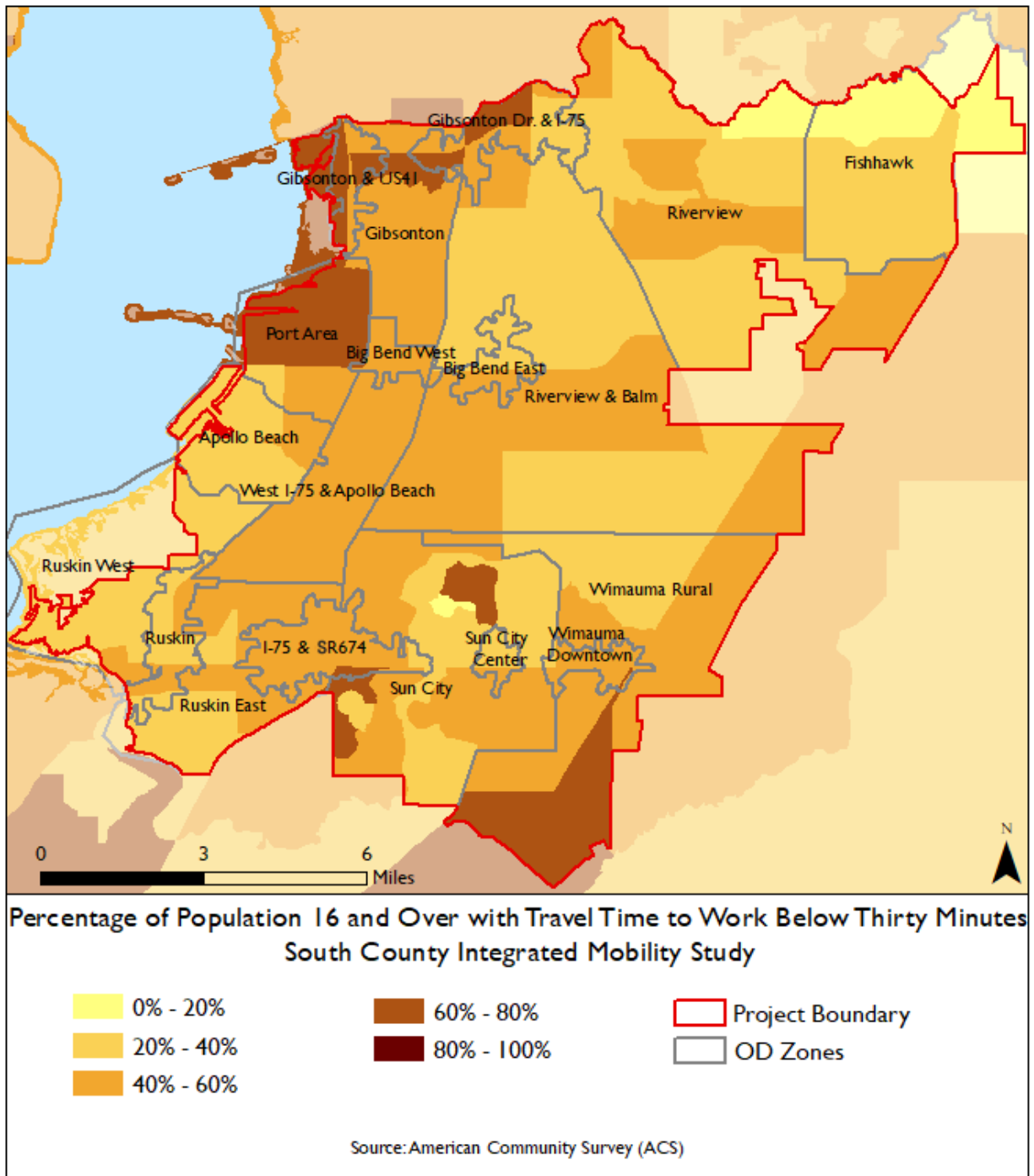
- |  |  |  |
|--|--|--|
|  Less than \$25,000 |  \$50,000- \$74,999 |  Project Boundary |
|  \$25,000- \$34,999 |  \$75,000 or more   |  OD Zones         |
|  \$35,000- \$49,999 |  |  |

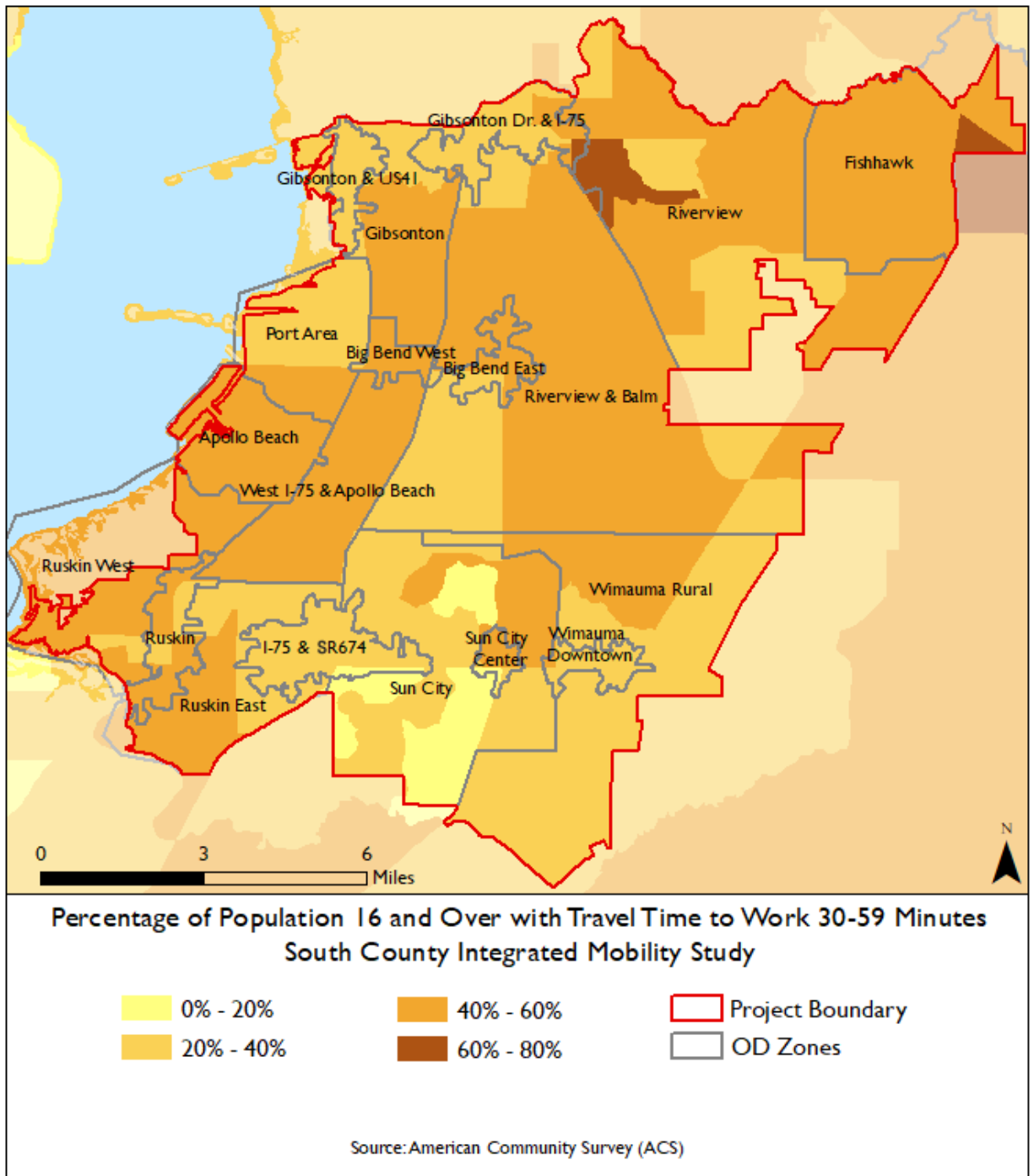
Source: American Community Survey (ACS)



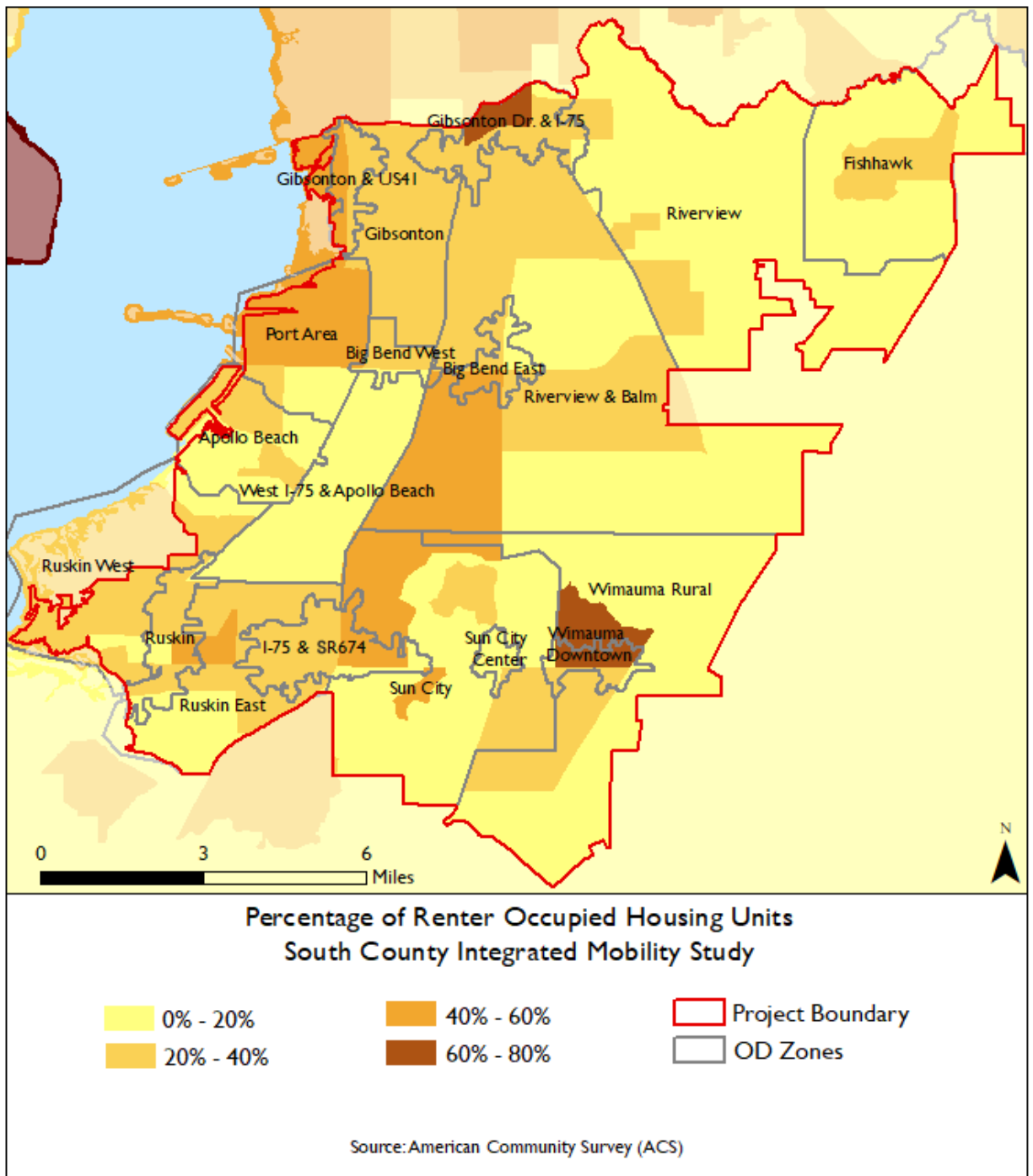


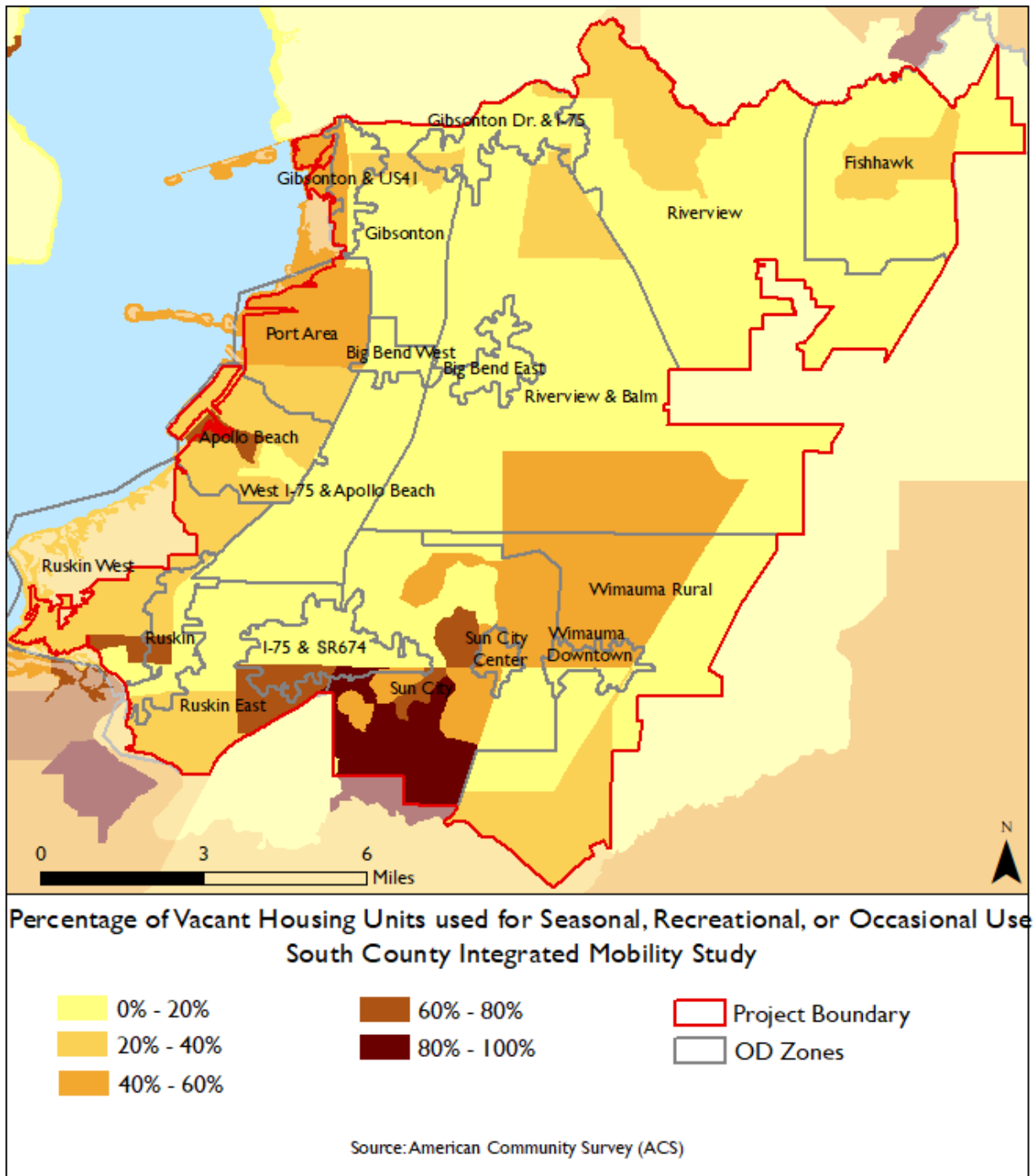


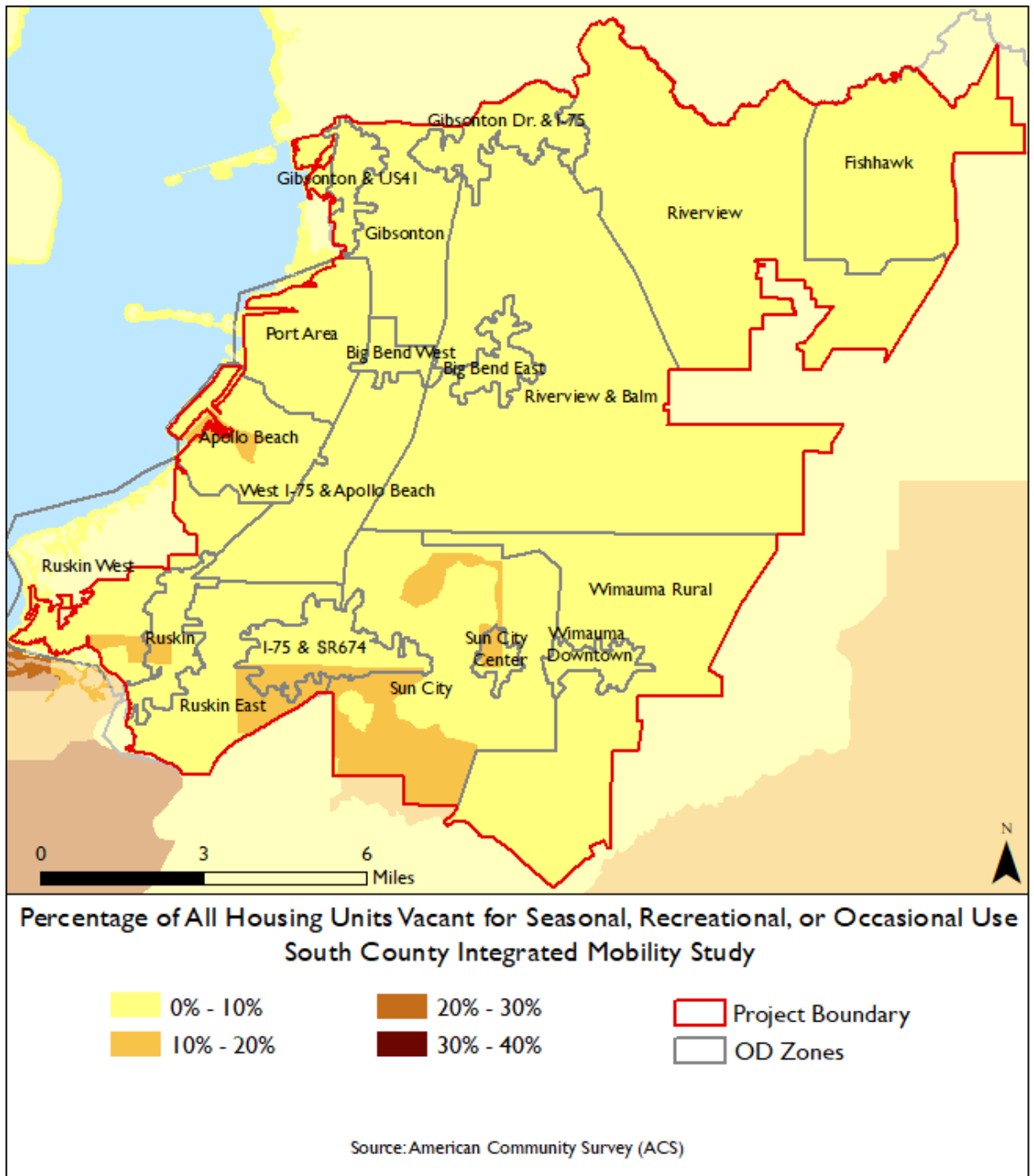












# South County Integrated Mobility Solutions and Investment Strategy: Phase 1

**Travel Patterns and Conditions**

Prepared For  
**Hillsborough County, Florida**

Prepared By  
**USF Center for Urban Transportation Research**

**October 2019**

**Project Team**

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**Disclaimer**

The contents of this report reflect the views of the authors, who are responsible for the facts and the accuracy of the information presented herein. The opinions, findings, and conclusions expressed in this report are those of the authors and not necessarily those of Hillsborough County.

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## 1 Introduction

This is the third and final technical memorandum for Phase I of the South County Integrated Mobility Study. The purpose of the memorandum is to evaluate multimodal accessibility in South County as it relates to walking, biking and transit use, as well as the safety and operational conditions of study area roadways.

The report begins with an evaluation of bicycle, pedestrian, and transit accessibility using available GIS data. Accessibility was evaluated based on sidewalk length, bicycle lane length, and roadway network density. The assessment identified connectivity and gaps in the transportation network including potential areas of concern and barriers to safe bicycle, pedestrian, and transit access to activity generators.

The report continues with an inventory of four communities in the study area: Apollo Beach, Gibsonton, Sun City Center, and Riverview. This subset of communities was selected to illustrate conditions representative of the different contexts in South County. The inventory identifies transit routes and stops, bicycle and pedestrian infrastructure, and bicycle and pedestrian crashes in each community.

Finally, Hillsborough County's access management policies and regulations for access management and corridor (right-of-way) management were summarized and evaluated. This assessment also identified examples of existing access conditions in South County and concluded with observations for potential enhancements to the existing corridor and access management program.

The report builds on findings from *Technical Memorandum 1: Review of Plans and Studies* and *Technical Memorandum 2: Land Use and Transportation Conditions*. Technical Memorandum 1 cataloged and summarized existing plans and studies that affect mobility needs in the study area. Technical Memorandum 2 inventoried land use and transportation conditions in the study area, identifying areas of activity (nodes) and travel patterns.

## 2 Multimodal Accessibility Assessment

This chapter reviews methods and findings of a multimodal accessibility analysis conducted for the study area. The purpose of the analysis is to evaluate network connectivity and gaps and identify barriers to safe multimodal transportation. Modes evaluated include walking, cycling, and transit using indices generated for a grid of cells covering the entire study area. The indices represent both accessibility and potential.

- Accessibility accounts for the availability of existing infrastructure to support these transportation modes and is addressed by incorporating factors such as sidewalk length, bicycle lane length, and roadway network density.
- Potential is a function of both the relative population and the number of services that can be reached within a reasonable distance using the identified transportation mode.

The following section details the methodology used to generate grid cells, identify indices, and calculate bus travel time distance. The chapter concludes with results from the analysis and a summary of key findings.

### 2.1 Methods

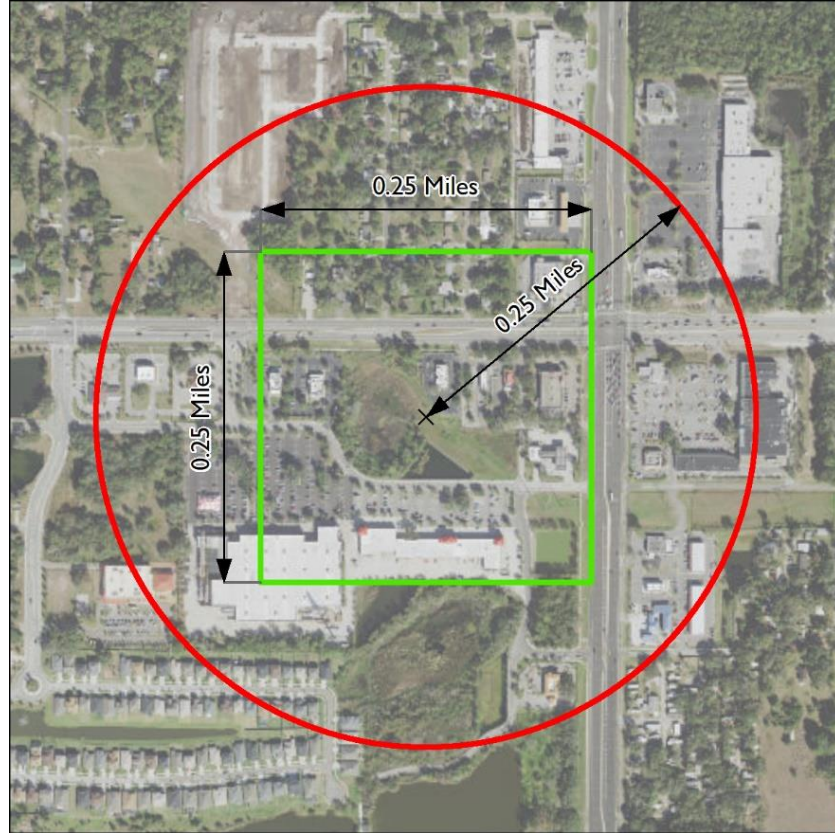
A grid of cells was generated for the study area with length and width set to  $\frac{1}{4}$  mile (see Figure 1)<sup>1</sup>. This produced 2,528 cells. For each grid cell, indices were calculated based on certain criteria within the cell, and within a  $\frac{1}{4}$  mile radius of the center of the cell for walking and transit, and within a 1 mile radius of the center of the cell for cycling (see Table 1 through Table 8 for a list of criteria). To calculate the accessibility indices, each criterion was scaled between 0 and 1 enabling an equivalent comparison among factors.

A discount of 50% was applied to each of the penalty criteria to reduce their overall impact. A discount factor was needed so that the penalty criteria did not overpower the overall accessibility score. However, too small a discount (e.g. 25%) tended to overstate the walkability or bikeability of an area. A discount of 50% was selected as it produced the most reasonable results in terms of overall score in relation to observed conditions. For the transit accessibility criterion, the walking time to the nearest bus stop was used.

Several limitations to this analysis have been identified. The  $\frac{1}{4}$  by  $\frac{1}{4}$  cells used to develop the study area grid cannot account for the curvature of roadways or discretely capture property lines. Therefore, results should be considered at a regional scale, looking at the overall accessibility. In areas where development is currently occurring, time-lapses between GIS data availability, development, and the construction of infrastructure can result in an underestimation of accessibility.

---

<sup>1</sup> This methodology is based on the Livable Polk Initiative by the Polk Transportation Planning Organization (TPO) in Polk County, Florida.



**Figure 1. Grid cell dimensions and ¼ mile radius from cell center.**

The Walking Accessibility Index (Table 1) examines the potential of study area residents to walk to surrounding destinations. The analysis begins by combining three factors that influence the potential for walking to nearby destinations – 1) the density of services within a walkable distance (¼ mile radius) of a grid cell, 2) street network (intersection) density, and 3) sidewalk length. Next, this combined score is penalized by subtracting a barriers index, sidewalk gap index, and the estimated average walking time to the four adjacent cells. Recognizing that these factors impede, but generally do not completely prevent walk access, each penalty index is discounted by 50% to reduce its overall impact on the score.

The barriers index removes areas covered with water, or with a major roadway that would be difficult to cross. The sidewalk gap index penalizes areas lacking sidewalks. Walking time is estimated using the Google Directions API, and averaged across four of the nearest cells. This measure provides an estimate of how connected a cell is to neighboring cells. The longer the walking time, the higher the penalty. A cell with high network density, good sidewalk coverage, and services within a quarter-mile, along with few sidewalk gaps or barriers, and low walking time is assigned a high potential index for walking accessibility to the surrounding area. An example calculation for the Walking Accessibility Index is provided in Table 2.

**Table 1. Criteria used to Develop the Walking Accessibility Index.**

	Criteria	Description
<b>Combined</b>	Services	Density of nonresidential parcels within a ¼ mile radius of the center of the grid cell (based on DOR code).
	Network	Density of roadway intersections within a grid cell (excluding culs de sac and major roadways).
	Sidewalk Length	Total sidewalk length within a grid cell.
<b>Subtract (Discount each by 50%)</b>	Barriers	Subtract barrier index from above combination.
	Gaps in Sidewalk	Subtract sidewalk gap index from above combination
	Estimated Google Directions Walking Time	Subtract average walking time to four closest adjacent cells.

**Table 2. Example Calculation for the Walking Accessibility Index**

Example Values for Calculation*	Walking Accessibility Index Result
Services Criteria = 1 Network Criteria = 0 Sidewalk Length Criteria = .146 Barriers = .092 Gaps in Sidewalk = .515 Walking Time = .118 Weights for Each Criteria = 1,1,1,.5,.5,.5	$\frac{((1*1+1*0+1*.146)-.5*.092-.5*.515-.5*.118)}{(1+1+1+.5+.5+.5)} = .174$
Description: this cell had a high number of services within a close distance of the center, a high number of existing sidewalks, and low barriers.	.174 is >2.5 Standard Deviations and classified as High Potential

\* All values are scaled to a range of 0 to 1 for combining.

The Cycling Accessibility Index (Table 3) examines the potential of study area residents to cycle to surrounding destinations and is calculated as follows. The density of services within a bikeable distance (1-mile radius) of the grid cell is added to network density, bike lane length, and the centerline length of local roads. The network density criterion largely reflects residential neighborhoods resulting from the denser connections of roads within those neighborhoods. The radius assumes that most individuals are able to cycle for one mile in one direction. Bicyclists may use local roads for travel, therefore the index accounts for local roads with a speed limit of 25 mph or less.

The combined score is then penalized by subtracting the barriers index, sidewalk and bike lane gap index, and estimated average cycling time to the four adjacent cells. Recognizing that these factors impede, but generally do not completely prevent cycling access, each penalty criteria is discounted by 50% to reduce its overall impact on the score. The cycling time was estimated using the Google Directions API, and averaged across four of the nearest cells, providing an estimate of how connected a cell is to neighboring cells. The longer the cycling time, the higher the penalty. A cell with high network density, bike lane lengths, and services within a mile; and low sidewalk/bike lane gaps, barriers, and walking time is assigned a high (cycling accessibility) potential index. An example calculation for the Cycling Accessibility Index is provided in Table 4.

**Table 3. Criteria used to develop the Cycling Accessibility Index.**

	<b>Criteria</b>	<b>Description</b>
<b>Combined</b>	Services	Density of nonresidential parcels within a 1-mile radius of the center of the grid cell (based on DOR code).
	Network	Density of roadway intersections within a grid cell (excluding culs de sac and major roadways).
	Bike lane	Total bike lane length within the cell.
	Local Roadway	Centerline length of local roadway within a grid cell. Local roads were selected by their approximate speed limit (<=25)
<b>Subtract (Discount each by 50%)</b>	Barriers	Subtract the barrier index from the combination above.
	Gaps in Sidewalks and Bike lanes	Subtract the sidewalk gap index from the combination above
	Estimated Google Directions Bicycling Time	Subtract the average bicycling time to the four closest adjacent cells.

**Table 4. Example Calculation for the Cycling Accessibility Index**

Example Values for Calculation*	Walking Accessibility Index Result
Services Criteria = .199 Network Criteria = 0 Bikelane Length Criteria = 0 Local Roads Criteria = .198 Barriers = .40 Gaps in Sidewalks and Bikelanes = 1.0 Walking Time = .394 Weights for Each Criteria = 1,1,1,1,.5,.5,.5	$(1 * .199 + 1 * 0 + 1 * 0 + 1 * .198) - .5 * .4 - .5 * 1.0 - .5 * .394 / (1 + 1 + 1 + .5 + .5 + .5) = -.091$
Description: this cell had a low number of services within a mile of the services, no bikelanes, and was close to a major barrier (I-75).	-.091 is <.5 Standard Deviations and classified as No Potential

\* All values are scaled to a range of 0 to 1 for combining.

**Table 5. Criteria used to develop the Transit Accessibility and Coverage Index.**

Criteria	Description
<b>HART Route</b>	Length of HART route within grid cell.
<b>HART Stops</b>	Number of HART stops within a grid cell.
<b>Residential</b>	Density of residential parcels within a ¼ mile of the center of the grid cell (based on DOR code).
<b>Services</b>	Density of nonresidential parcels within a ¼ mile of the center of the grid cell (based on DOR code).
<b>Walking time</b>	Subtract the estimated walking time from the combination above.

**Table 6. Criteria used to develop the Barrier Index.**

Criteria	Description
<b>Roadway</b>	Length of major roadway and number of lanes within a grid cell.
<b>Railroad</b>	Length of railroad within a grid cell
<b>Water</b>	Percentage of the cell covered with water.

For the Sidewalk Gap Index (Table 7), the length of existing roadways within a cell is divided by the combined length of sidewalks and roadways. This results in an index ranging from zero to one, with one indicating the absence of sidewalks, and the lowest values indicating the presence of sidewalks on both sides of a roadway. An area where the sidewalk covers only one side of a roadway is assigned a value of .5. Areas with no roadway were automatically assigned

a one. When this gap is subtracted from the Walking Accessibility Index, areas with no sidewalks penalize the walking index more than areas with sidewalks.

**Table 7. Criteria Used to Develop the Sidewalk Gap Index.**

	Criteria	Description
<b>Divide roadway length by sum of sidewalk and roadway lengths. A value of 1 indicates no sidewalks.</b>	Roadway	Centerline length of roadway within a grid cell.
	Sidewalk	Length of sidewalk within a grid cell

For the Sidewalk\Bike lane Gap Index (Table 8), the length of existing roadways within a cell is divided by the combined length of sidewalks, bike lanes, and roadways. A bicycle may use either a bike lane or sidewalk. Local roads were not included in the gap analysis but added in the Cycling Accessibility Index. This results in an index ranging from zero to one, where one indicates the absence of sidewalks or bike lanes, and lower values indicating the presence of more sidewalks or bike lanes than roadway centerline miles (i.e., both sides of the roadway). The lowest score is for areas with both bike lanes and sidewalks. Also, an area where the sidewalk covers only one side of a roadway is assigned a value of .5. Areas with no roadway are automatically assigned a one. When this gap is subtracted from the Biking Accessibility and Potential Index, areas with no sidewalks or bike lanes penalize the biking index more than areas with sidewalks or bike lanes.

**Table 8. Criteria Used to Develop the Sidewalk and Bike Lane Gap Index**

	Criteria	Description
<b>Divide roadway length by sum of sidewalk, bikelane and roadway lengths. A value of 1 indicates no sidewalks or bikelanes.</b>	Roadway	Centerline length of roadway within a grid cell.
	Sidewalk	Length of sidewalk within a grid cell
	Bikelane	Length of bikelane within grid cell.

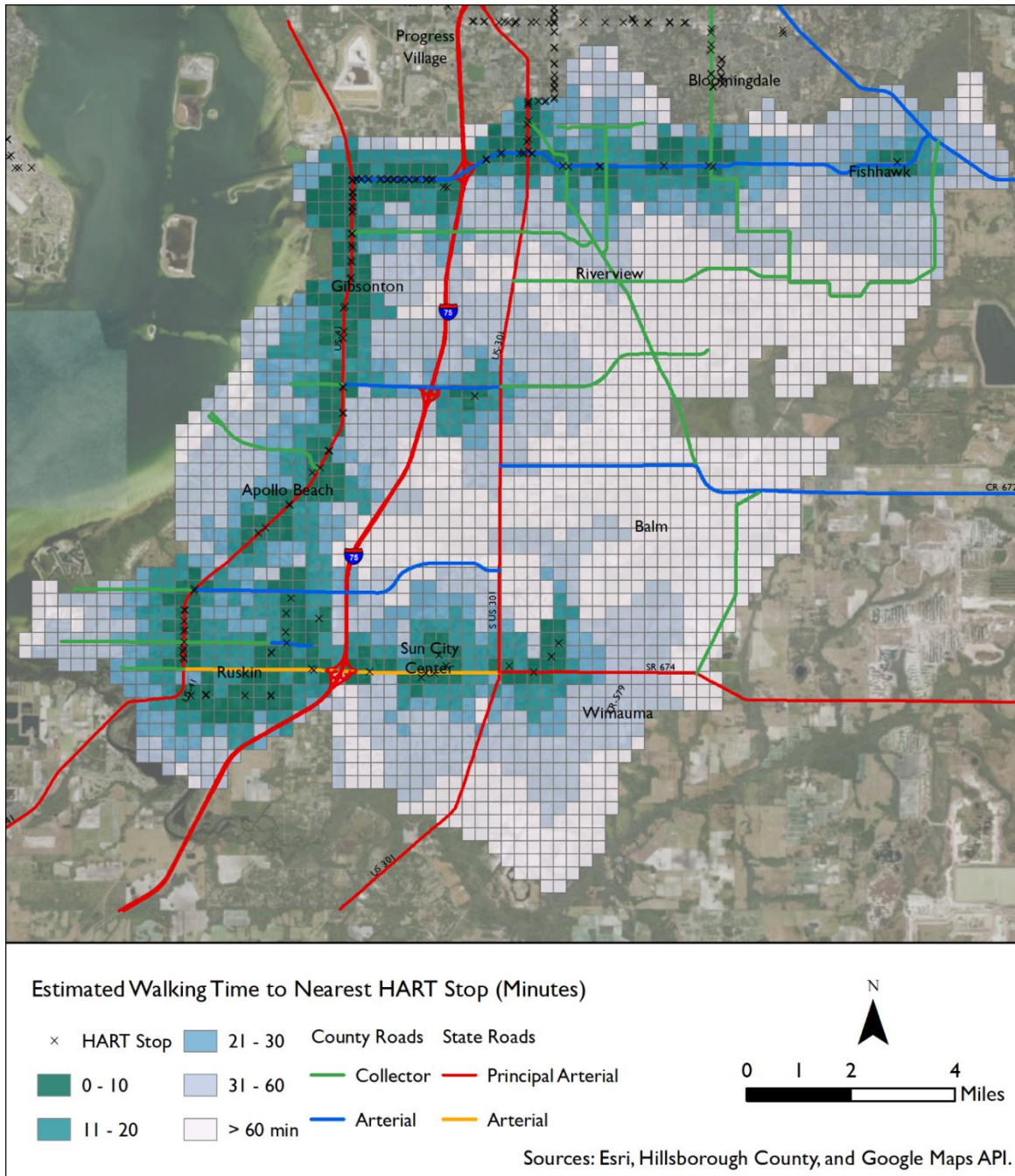
### **2.1.2 Categories**

All indices ranged between -1 and 1. Indices are grouped by a maximum of 4 categories: no potential, low potential, moderate potential, and high potential. These categories are determined by the index’s standard deviations from the mean. Less than -0.5 standard deviation represents no potential, between -0.5 and 0.5 represents low potential. Between -0.5 and +2.5 standard deviation represents the average, and greater than 2.5 standard deviation represents high potential. These categorizations represent the relative potential for the area. These indices are relative to South County and are not transferrable for analysis in areas outside of the study area. For example, the classifications are relative to the high and low values within the study area; downtown Tampa has much higher road density and would have different potential than Ruskin.

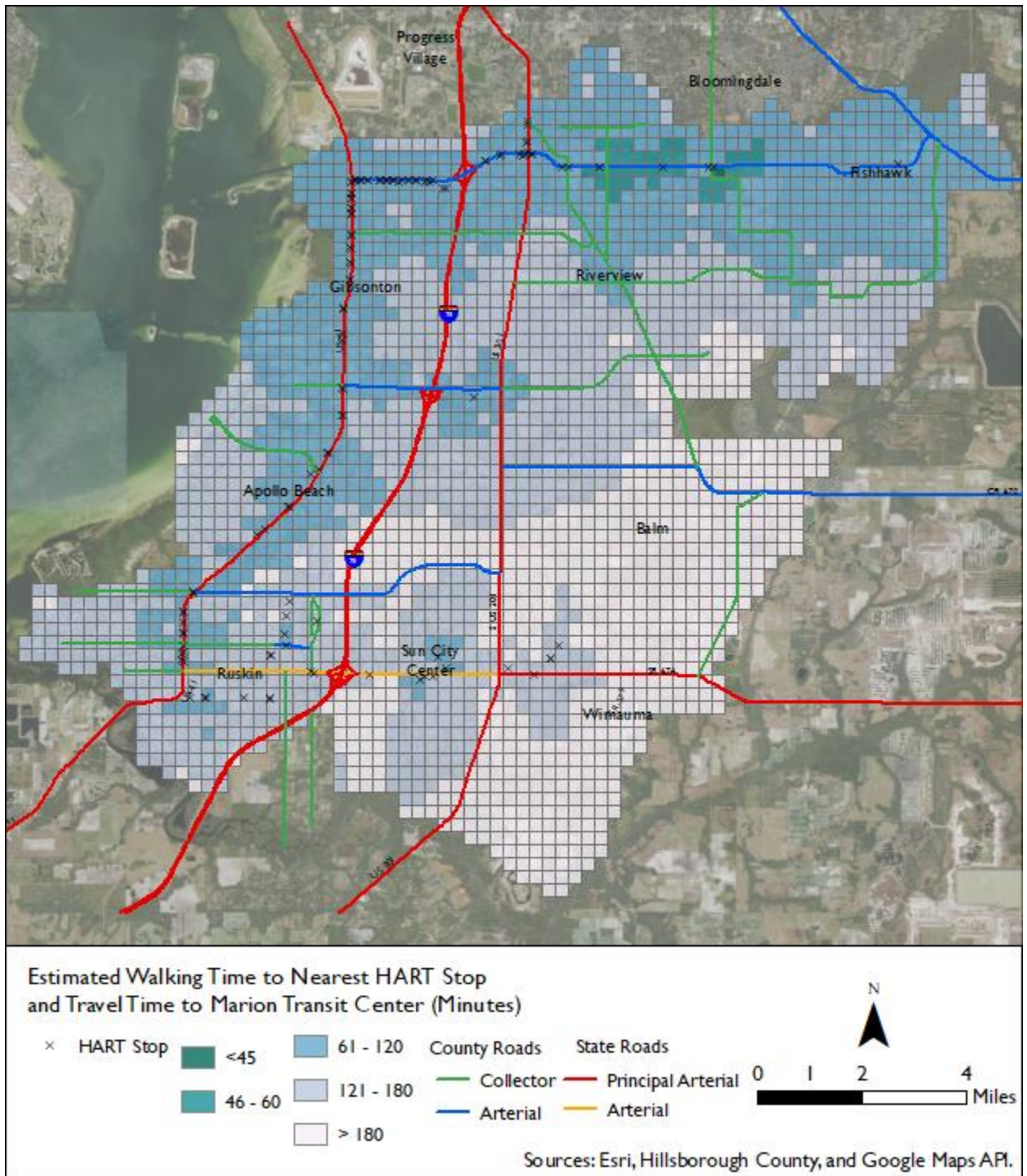


### ***2.1.3 Bus Travel Time Distance***

The Google Maps API was used to calculate the estimated walking distance to the nearest HART bus stop. First, the nearest bus stop to a given cell was identified, measuring distance “as the crow flies” (distance measured in a straight line). The cell center and the bus stop location was then input into the Google Maps API, which provided the estimated walking time and distance. See Figure 2 for coverage of bus stops and estimated walking times. Google Maps and Directions API was used to estimate the travel time at midday to the Marion Transit Center (MTC) in Downtown Tampa from each bus stop within the study area. This travel time was added to the walking time for each cell to estimate the total travel time from the study area to Downtown Tampa (see Figure 3).



**Figure 2. Estimated walking time to the nearest HART stop in minutes.**



**Figure 3. Estimated walking time to the nearest HART stop & travel time to MTC (minutes)**

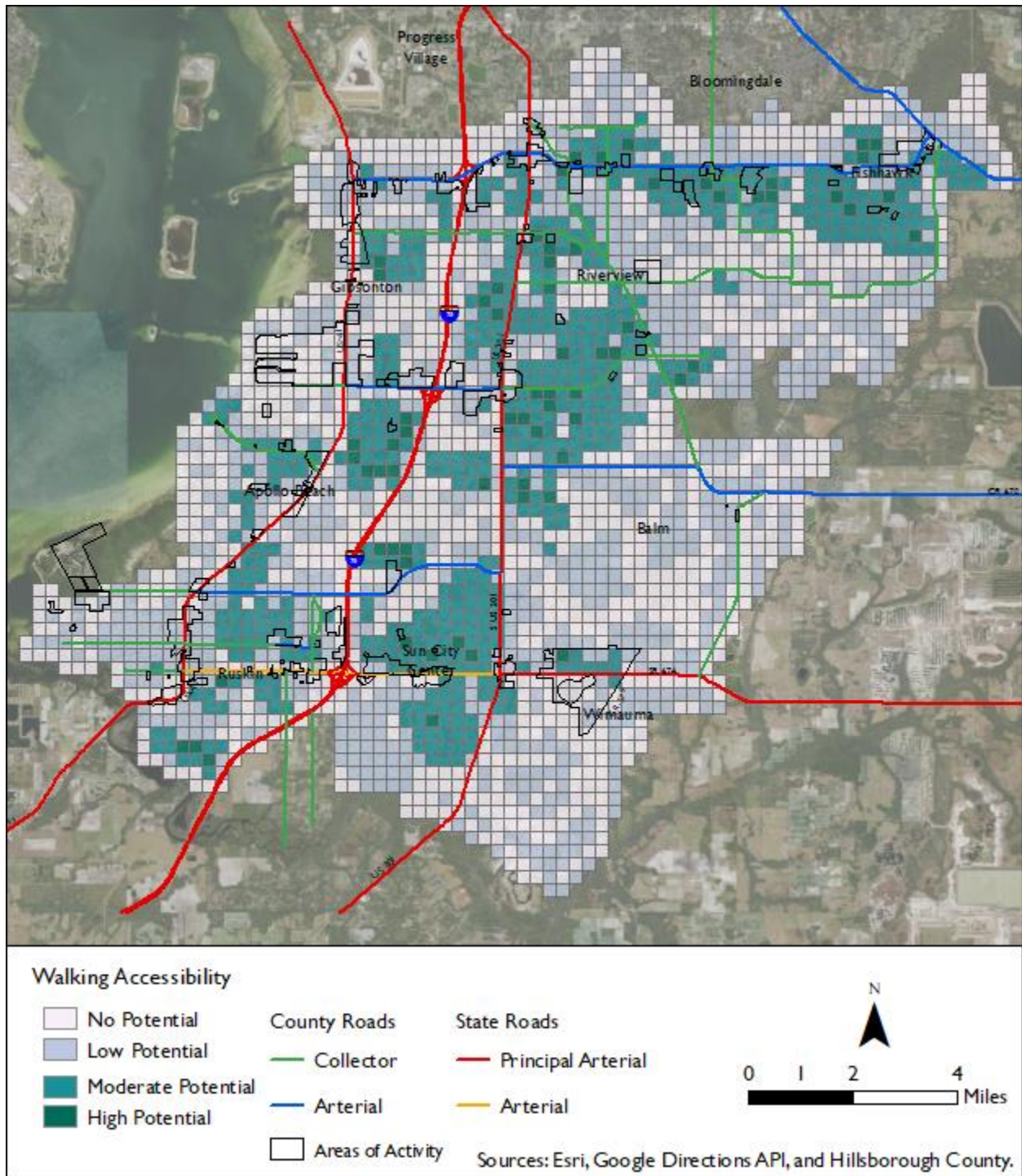
## 2.2 Results

### 2.2.1 *Walking Accessibility Index*

Figure 4 presents the range of walking accessibility. The high category represents areas near services with existing sidewalks and high network connectivity. This category is likely more skewed towards areas with a high number of sidewalks, as reflected in the overrepresentation of newer neighborhoods in Fishhawk and Riverview. Sun City Center is also well represented in this category.

The moderate category represents areas likely to have some sidewalks and higher network connectivity, but few services within a ¼ mile. The older neighborhoods of Gibsonton, Ruskin, and Wimauma are more represented here. They have the potential for walking in terms of service and residential density, but likely lack the existing infrastructure or may have barriers that limit the access.

The low category represents areas that likely have no services within a ¼ mile, have low network connectivity or no sidewalks, and are possibly near a barrier. Balm is most represented in the low category, as is much of the study area beyond the areas of activity. Areas with no accessibility don't have services within a ¼ mile and either have no sidewalks or are dominated by a barrier. The analysis reveals that most of the study area has only low to moderate walking potential.



**Figure 4. Walking accessibility and potential index.**

### **2.2.2 Cycling Accessibility Index**

The range of cycling accessibility is presented in Figure 5. The high category represents areas that are within 1 mile of services, have existing bike lanes and sidewalks, and have high network

connectivity. Pockets with high cycling accessibility are more interspersed in the north portion of the study area.

The moderate category represents areas likely to have sidewalks and bike lanes and higher network connectivity but has few services within 1 mile. The low category represents areas that have low network connectivity or no sidewalks/bike lanes, is possibly near a barrier, and is not likely to have services within 1 mile. Most of Balm and a large portion of Wimauma is represented in the low category. Areas with no cycling accessibility have no bike lanes and sidewalk, are dominated by a barrier, and have no services within 1 mile.

Given the similarity in criteria, the results of this analysis are similar to those of the Walking Accessibility Index. The addition of bike lanes does little to change the overall pattern. Some cells with high cycling accessibility are scattered throughout the study area, Fishhawk and Sun City Center have the largest contiguous areas. Most of the study area has low to moderate cycling potential. This is likely because of a lack of bike lanes in many locations and/or an absence of any services that connect to those bikelanes and sidewalks. The addition of local roads for cycling improves accessibility in areas such as Ruskin and Apollo Beach. Sun City Center has the highest potential because of its high network density, sidewalks, and services within a mile of these areas.

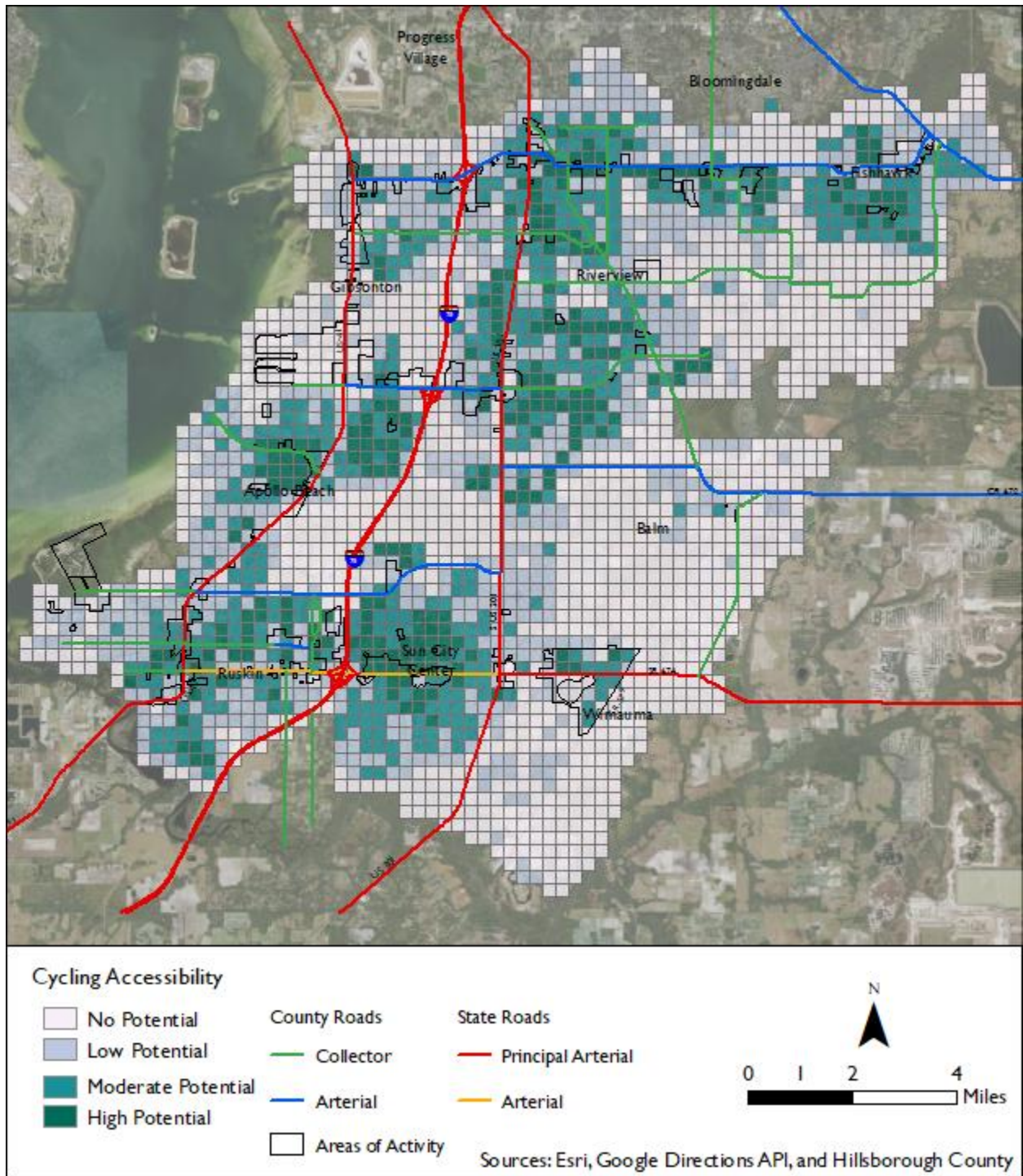


Figure 5. Cycling accessibility and potential index.

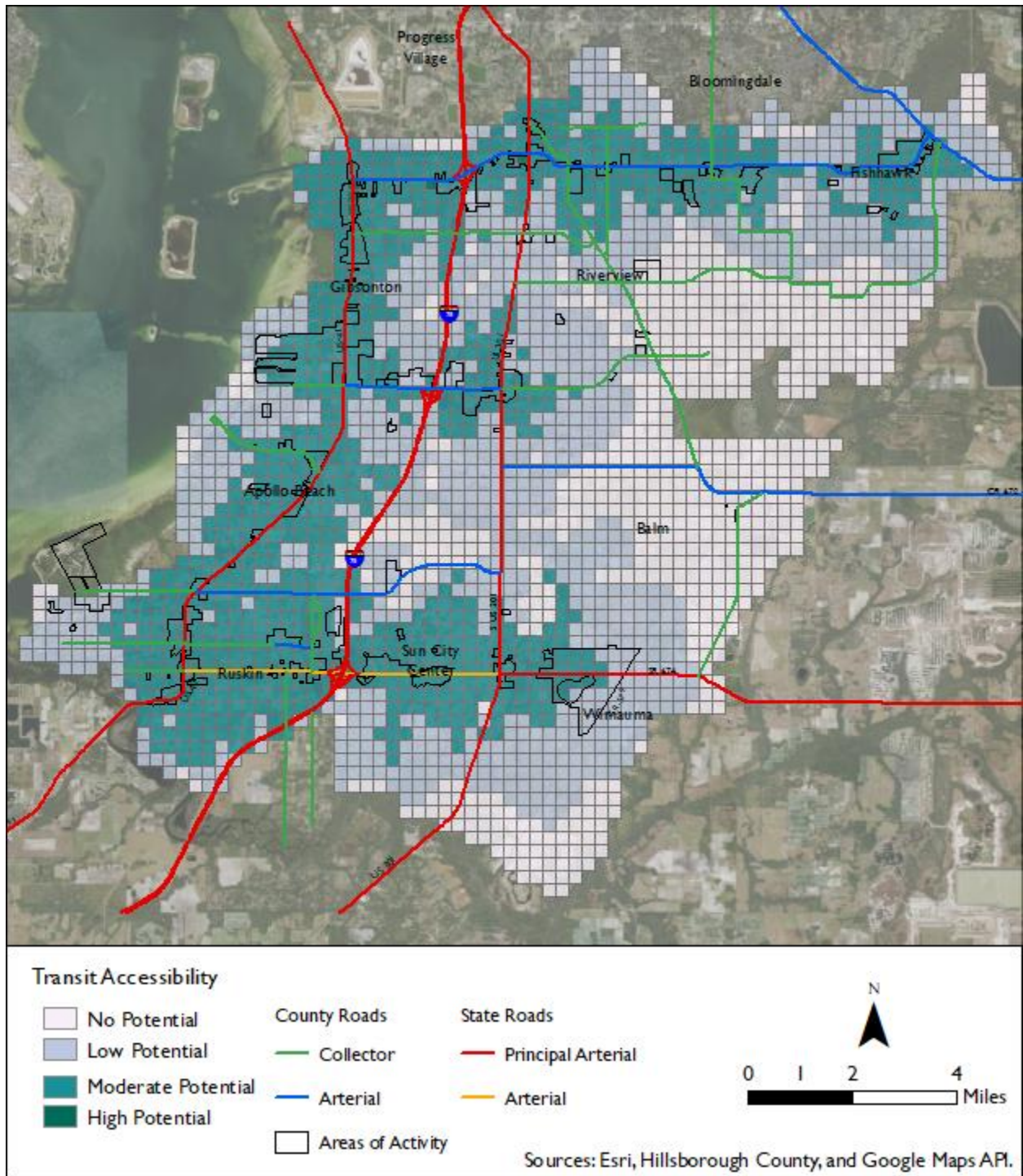
### ***2.2.3 Transit Coverage and Accessibility***

Areas covered by transit service and their accessibility are presented in Figure 6. This figure should be considered in conjunction with Figure 2 and Figure 3, which present walking and transit times. The areas of high potential represent areas with existing HART bus stops and relatively dense residential population and services within less than a 30-minute walking distance of these stops.

The moderate potential category represents areas with the potential to be serviced by transit in light of the existing residential and service density and walking time to the nearest transit stop. They have a high residential density but are more than 30-minutes walking distance from existing stops and services. The low to no potential categories represent regions with very limited or no potential to be served by transit given long walking times to the nearest transit stop, or relatively low residential and service densities. These categories are predominantly east of the study area.

Considering Figure 3, it would take between one and two hours for most of the study region to reach the Marion Transit Center in Downtown Tampa. This estimate includes the time to walk to the bus stop. A small part of Riverview may be able to reach Downtown Tampa within an hour.





**Figure 6. Transit coverage and accessibility index.**

**2.2.4 Barriers Index**

Figure 7 shows the Barriers Index. This index represents potential barriers to walking and cycling access within the study area and is based on the amount of water coverage within an

area, major roadways, and railroads. Major barriers are I-75, US 41, and US 301 which impede the ability to provide a major cycling corridor in the east/west direction.

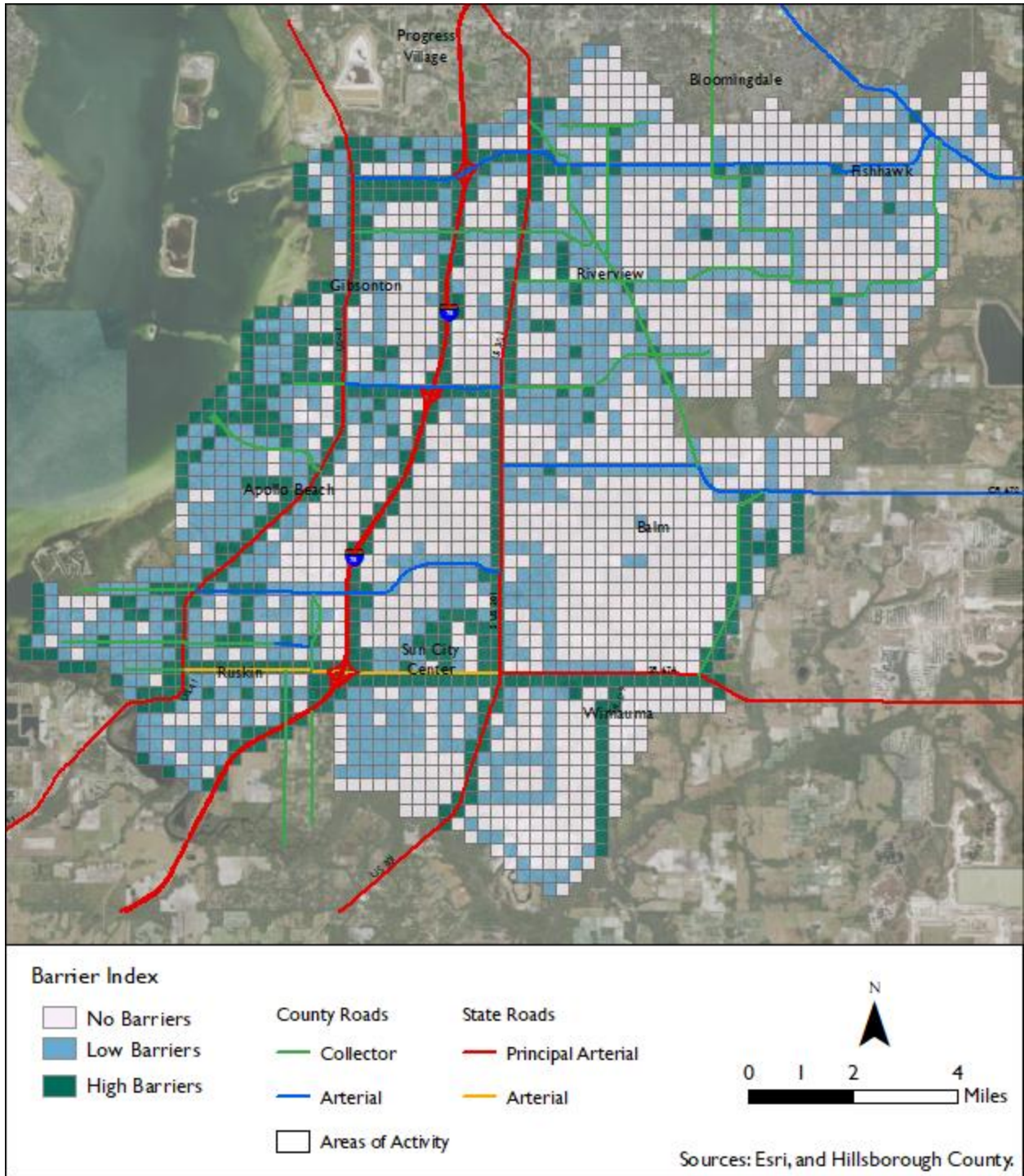
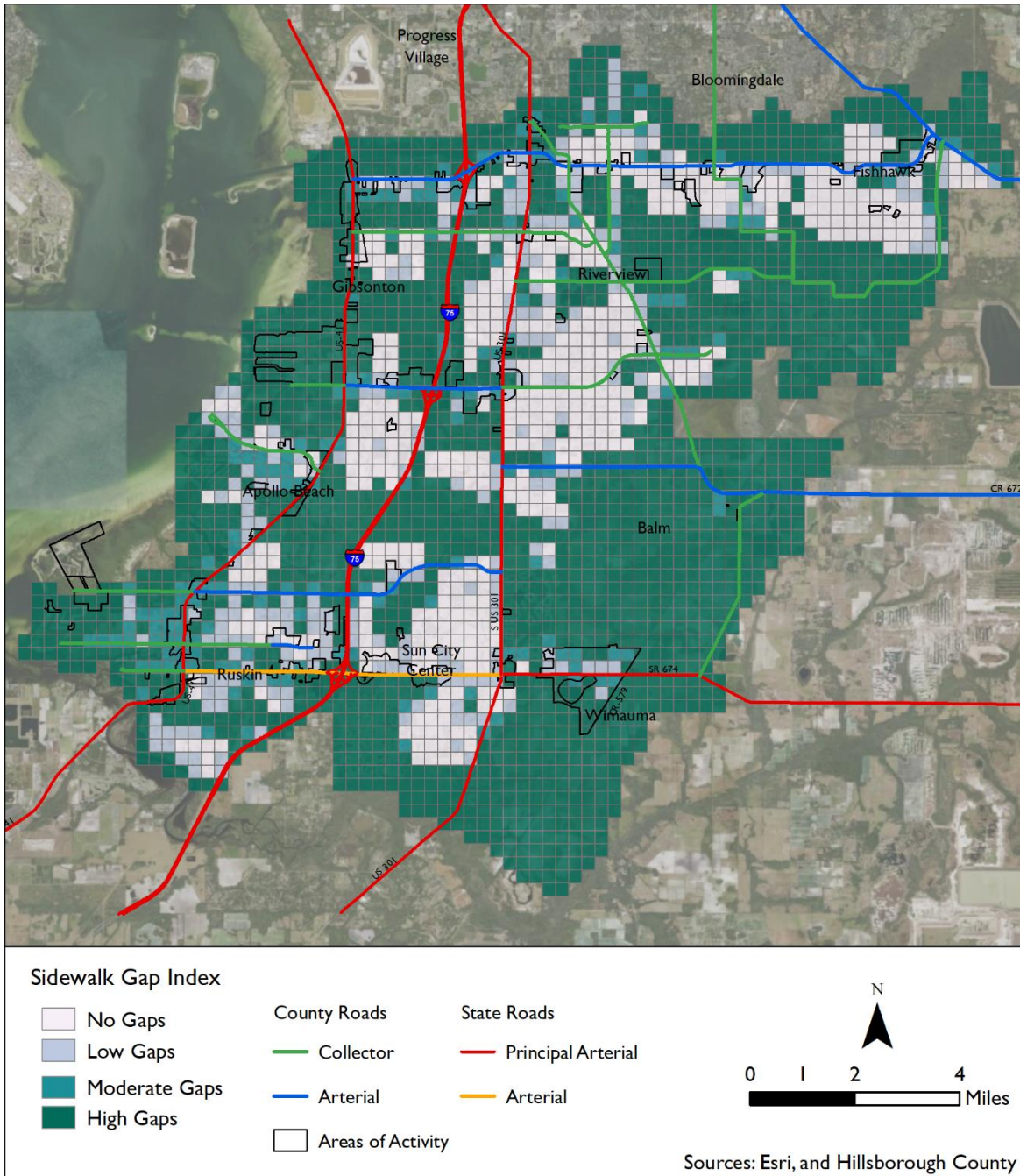


Figure 7. Barriers index.

### 2.2.5 Sidewalk Gap Index

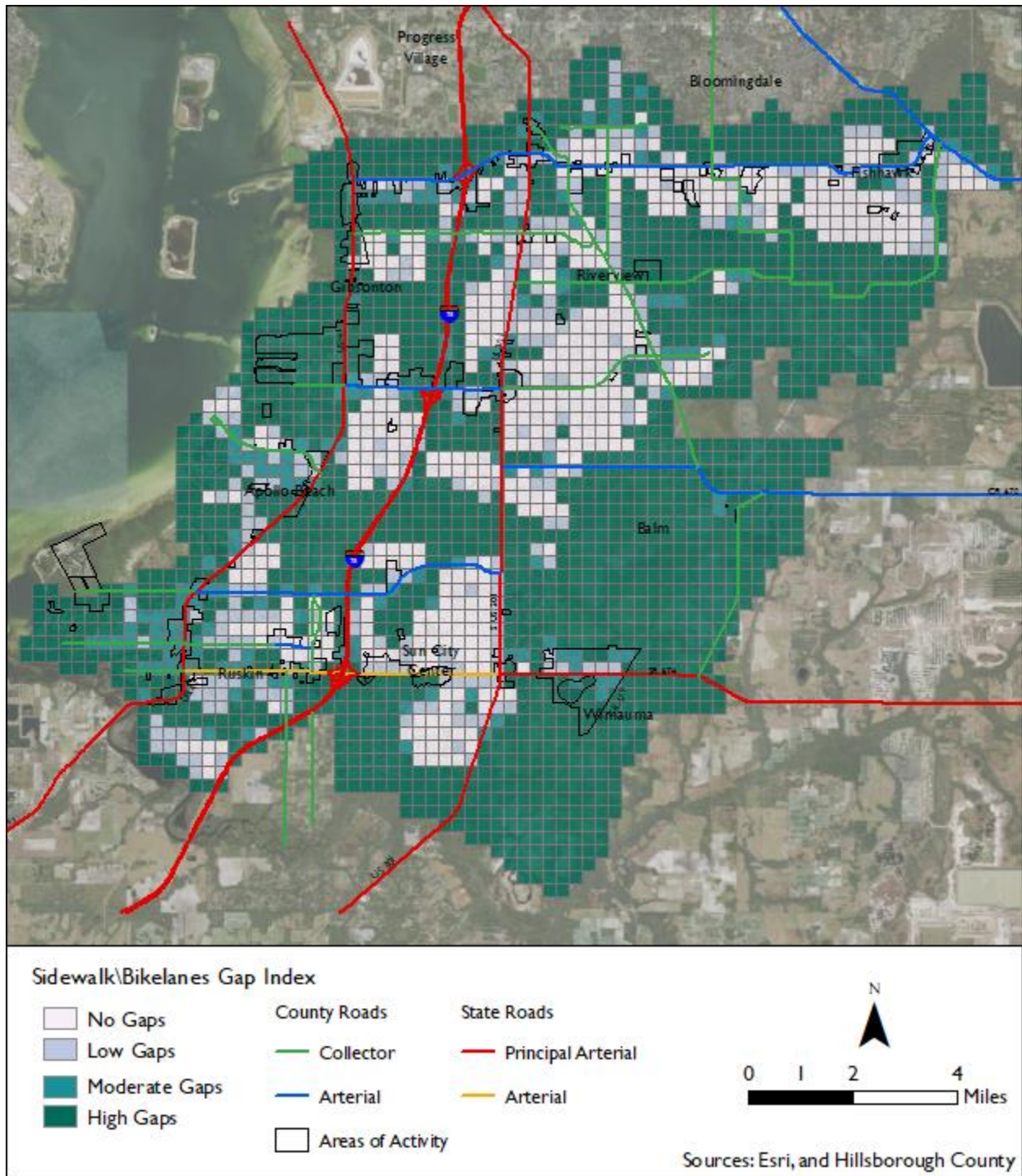
The area with the biggest gap in sidewalks is located to the southeast of Sun City Center (west side of I-75). This is a residential area with limited sidewalk access. Parts of Ruskin to the East of US-41 lack access to sidewalks, and large sections of Gibsonton (north of Gibsonton Drive).



**Figure 8. Sidewalk gap index**

### **2.2.6 Sidewalk/Bike Lane Gap Index**

While very few bike lanes exist within the study area, some sidewalks might be used for cycling. Thus the bike lane and sidewalk gap index follow a similar pattern to the sidewalk gap index. The area with the biggest gap in sidewalks\bike lanes is located southeast of Sun City Center (west side of I-75). This residential area has limited sidewalks\bike lane access. Parts of Ruskin to the east of US-41 lack access to sidewalks\bike lanes, and also large sections of Gibsonton (north of Gibsonton Dr.). Most areas of activity have low to average sidewalk and bike lane gaps.



**Figure 9. Gaps index.**

### 2.3 Key Findings

Below are some key findings from the multimodal accessibility analysis:

- Areas with the highest walking and cycling potential tended to be disconnected

- Three significant barriers to east-west travel are US 41, US 301, and I-75. These split the study area into thirds along the north and south.
- Major barriers to north-south travel are Sun City Center Boulevard/East College Avenue in the southern part of the study area, and Gibsonton Drive between US 41 and US 301 in the northern part of the study area. Although these roadways are barriers, they do not significantly divide the study area like the east-west barriers.
- Walking accessibility and potential are highest in the areas of Riverview and Sun City Center, because of the distribution of sidewalks in these areas.
- Cycling accessibility and potential are highest in parts of Riverview, because of the distribution of bicycle lanes and sidewalks in relation to population and activity areas.
- Using the cell area, we estimate only 30% of the study area is within a 30-minute walking distance of a bus stop; this 30% of the study area accounts for approximately 40% of the population in the study area.
- Using the cell area, we estimate that only 1.4% of the study area could reach the Marion Transit Center within 1 hour (including walking to the bus stop), and approximately 33% of the study area within 2 hours.

### **3 Inventory of Multimodal Infrastructure System and Safety**

This chapter inventories multimodal conditions in a sample of four areas of activity in South County. A goal of the analysis is to illustrate typical network connectivity and safety issues relative to multimodal transportation in the study area. As defined and identified in *Technical Memorandum 2*, areas of activity (aka nodes) are potential destinations of travel and include five area types: compact urban, connected suburban, modern suburban, industrial, and parks/recreation.

Areas of activity in four communities that represent the contextual types in South County (compact urban, connected suburban, and modern suburban) were selected for the inventory analysis. These were areas of activity in Apollo Beach (modern suburban), Gibsonton (compact urban), Sun City Center (modern suburban and connected suburban), and Riverview (modern suburban).

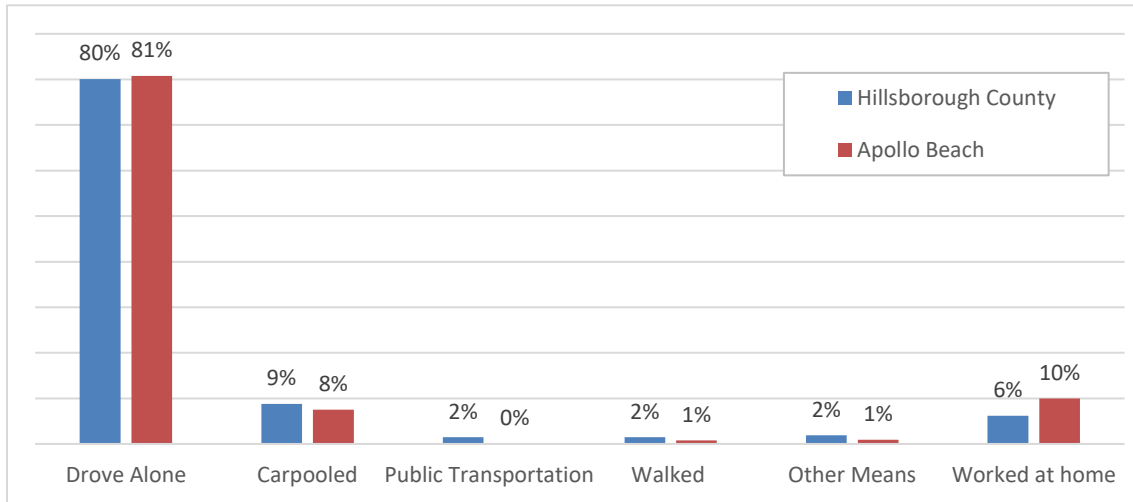
The findings include a general profile of each community, along with information on traffic conditions and multimodal accessibility and safety conditions in and around the areas of activity. The focus of the analysis is on safety and accessibility for bicycle, pedestrian and transit modes. Data for the community profiles were obtained from 2013-2017 ACS (American Community Survey) estimates and is summarized in Appendix A. Bicycle and pedestrian crash data were obtained for the period of 2012-2018 from Florida's Signal Four Analytics – a statewide crash databased maintained by the University of Florida Geoplan Center. It should be noted that the categories “Pedestrian Property Damage Only” and “Bicycle Property Damage Only” identify crashes that only resulted in damage to the property of the pedestrian or bicyclist involved in the crash. Data on roadway operational conditions and traffic volumes were obtained from the Hillsborough MPO and are summarized in Appendix B. Severe crash data was obtained from Hillsborough MPO Vision Zero Corridor Profiles and the 2014-2018 Serious Injury and Fatal Crashes heat map.

#### **3.1 Apollo Beach**

Located about 12 miles southeast of Tampa between Gibsonton and Ruskin, Apollo Beach sits directly on Tampa Bay. Established in 1979, Apollo Beach is a relatively new community compared to its neighbors. Several land uses can be found in Apollo Beach, including agricultural, commercial, light industrial, office, and residential. The 2005 community plan proposes mixed-use town centers at Apollo Beach Boulevard and US 41, and at other locations throughout the community. The main north-south thoroughfares in Apollo Beach are US 41 and I-75. The main east-west thoroughfares are Big Bend Road and 19th Avenue NE. Apollo Beach Boulevard is the main connector between US 41 and points west (Hillsborough County City-County Planning Commission, 2008).

The statistical profile for Apollo Beach can be found in Appendix A. According to 2013-2017 ACS estimates, the median age in Apollo Beach is 45 and the median household income is \$80,140 (the highest in the study area and higher than Hillsborough County as a whole). The average commute time of 33.4 minutes is the second-highest in the study area. The majority (80.8

percent) of Apollo Beach residents drive alone, similar to the estimate for Hillsborough County as a whole (80.1 percent). Zero percent of Apollo Beach residents use public transportation to commute to work, and less than 1 percent either walk or use other means of transportation for their commute. Approximately 10 percent of Apollo Beach residents work from home, which is higher than the rest of the study area and Hillsborough County (Figure 10).

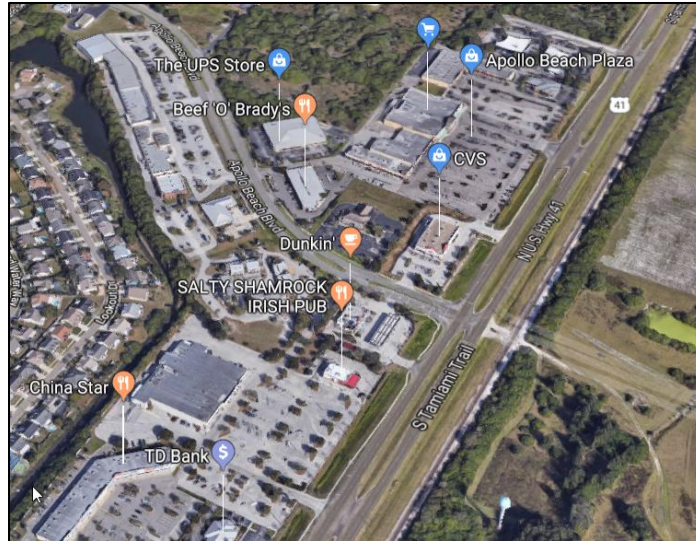


**Figure 10. Apollo Beach: means of commuting to work**

Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates.

Apollo Beach includes modern suburban areas of activity at the intersection of US 41 and Apollo Beach Boulevard that consist of retail, entertainment, and office uses (Figure 11). The two main corridors connecting these areas of activity to the surrounding area are US 41 and Apollo Beach Boulevard. The origin-destination (OD) analysis presented in Technical Memorandum 2 indicates that most trips in Apollo Beach are internal, many of which are likely accessing the areas of activity at the intersection of US 41 and Apollo Beach Boulevard. Most trips leaving Apollo Beach do so through the northern gates of US 41 and I-75.

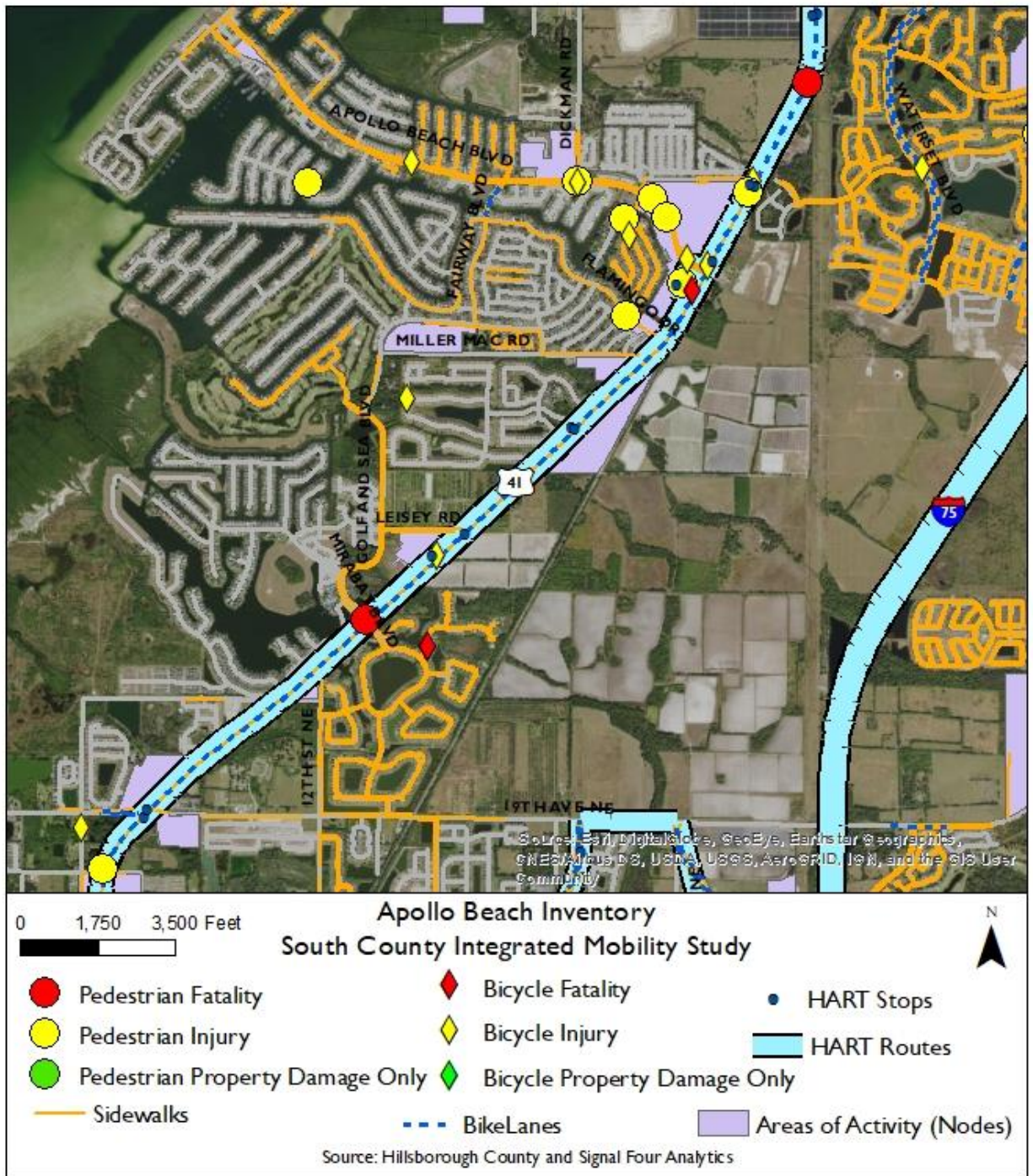




**Figure 11. Apollo Beach: modern suburban area of activity (node)**

Source: Google Maps, 2019

The inventory of Apollo Beach shows that it is characterized by network discontinuity with limited sidewalks and bike lanes (see Figure 12). Sidewalks are present along both sides of Apollo Beach Boulevard, although gaps occur along the southern side of the roadway. Residential neighborhoods west of US 41 have limited pedestrian connectivity, whereas those east of US 41 have a well-connected pedestrian network with few gaps. Sidewalks are present along the western side of US 41, but not along the eastern side. This lack of sidewalks limits pedestrian accessibility between residential neighborhoods east of US 41 and the areas of activity west of US 41. Bike lanes are present on US 41 but do not connect to surrounding neighborhoods. Short segments of bike lanes can be seen along Fairway Boulevard between Flamingo Drive and Apollo Beach Boulevard, along Waterset Boulevard, and along Paseo Al Mar Boulevard. These bike lanes do not form an interconnected bicycle network.



**Figure 12. Apollo Beach inventory**

Table 9 includes total bicycle and pedestrian crashes by type and severity between 2012 and 2018 for Apollo Beach. The inventory shows a cluster of pedestrian and bicycle injuries at the intersection of Apollo Beach Boulevard and US 41, and along Apollo Beach Boulevard near the areas of activity. Three bicycle and pedestrian fatalities occurred along US 41, and one bicycle fatality occurred in Harbor Isles Community Development District.

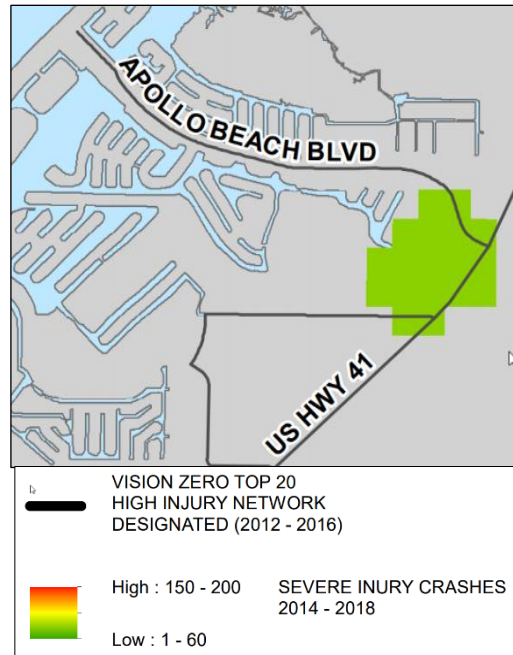
**Table 9. Apollo Beach Bicycle and Pedestrian Crashes per Square Mile by Type and Severity (2012-2018)**

<b>Criteria</b>	<b>Number of Crashes per Square Mile</b>
<b>Pedestrian Fatality</b>	0.18
<b>Pedestrian Injury</b>	0.64
<b>Pedestrian Property Damage</b>	0.00
<b>Bicycle Fatality</b>	0.09
<b>Bicycle Injury</b>	0.41
<b>Bicycle Property Damage</b>	0.05

Source: Signal Four Analytics

The posted speed limit on Apollo Beach Boulevard is 35 mph and the posted speed limit on US 41 is 55mph. Traffic volume on Apollo Beach Boulevard is less than 10,000 and traffic volume on US 41 is more than 30,000 AADT. Apollo Beach Boulevard and US 41 both have an existing LOS of “C” (see Table C- 4). The roadway network in Apollo Beach is circuitous, with no identifiable grid network resulting in longer trip lengths, and increased traffic congestion.

The Hillsborough MPO serious injury and fatal crashes heat map identifies roadways with severe injury crashes per mile between 2014 and 2018 that resulted in critical injuries and fatalities. The map also identifies the top 20 Vision Zero Severe Crash Corridors in Hillsborough County (2012-2016). A scale of 1 to 200 was delineated, with low representing roadways with 1-60 crashes per mile, and high representing roadways with 150-200 crashes per mile. US 41 between Apollo Beach Boulevard and Miller Mac Road was identified in the low category (Figure 13).



**Figure 13. Severe crashes in Apollo Beach**

Source: Hillsborough MPO, 2019

High speeds and a high volume of traffic create barriers to safe bicycle and pedestrian travel and undoubtedly contribute to the high number of bicycle and pedestrian crashes on US 41 and Apollo Beach Boulevard. In addition, other factors such as lack of safe crossing opportunities, barriers caused by waterways, and gaps in the bicycle and pedestrian network, compound safety and mobility issues.

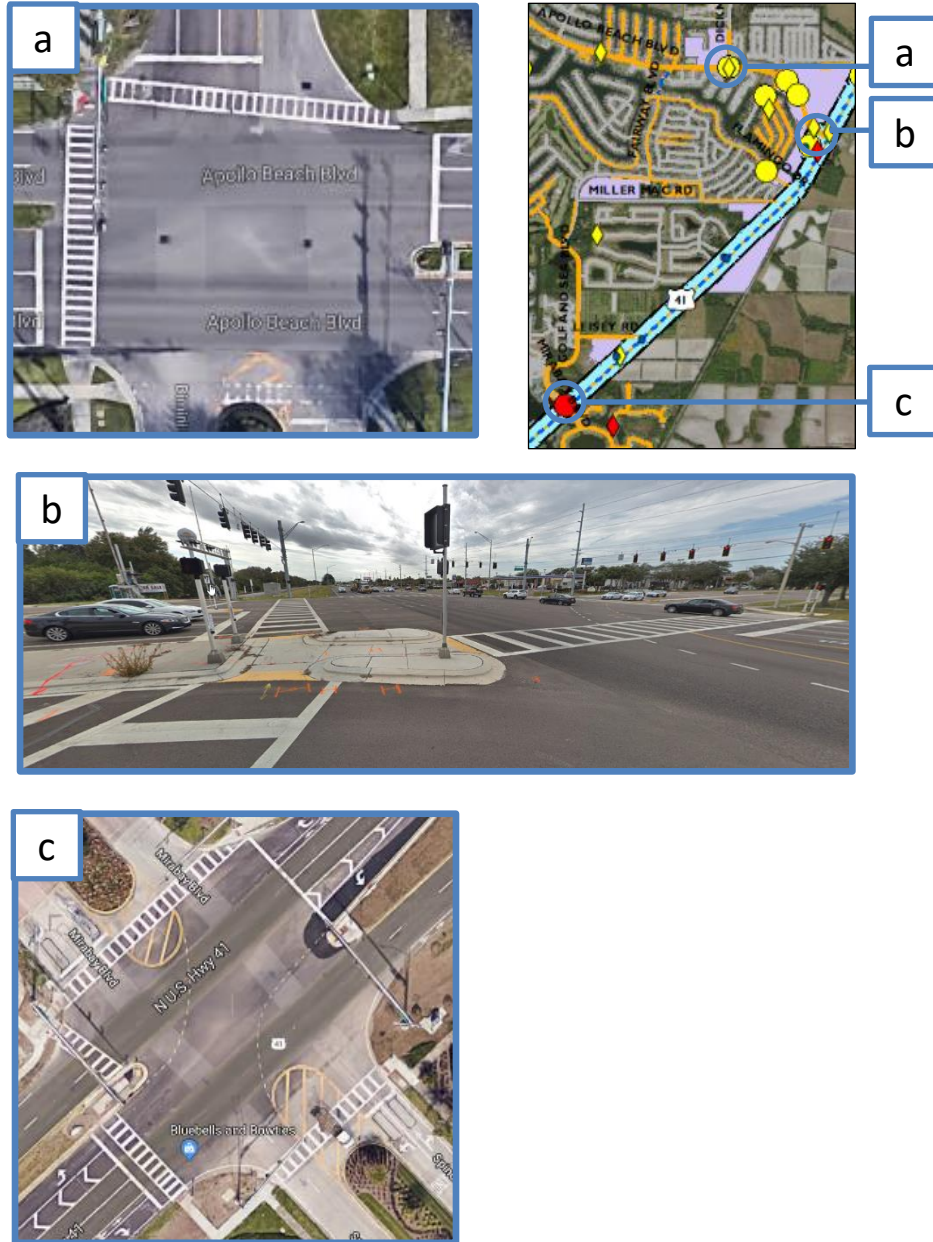
For example, residents living in Island Walk are adjacent to an area of activity with restaurants, shopping, and services. However, they can only access this area by traveling more than ½-mile on Apollo Beach Boulevard by way of Golf and Sea Boulevard, as illustrated in Figure 14. Pedestrian bridges are one option to improve access between residential areas and nearby areas of non-residential activity. A pedestrian bridge coupled with attention to bicycle and pedestrian facilities for circulation with the area of activity would shorten non-motorized trip lengths (to less than ¼-mile in some areas) and reduce conflicts between motorists and pedestrian/bicyclists.



**Figure 14. Bicycle and pedestrian access to areas of activity (nodes)**

Source: Google Maps

Safe pedestrian and bicycle crossings, presence of shade, and continuity of the network are important factors in whether individuals will use these modes. Figure 15 shows the locations of pedestrian crosswalks on Apollo Beach Boulevard and US 41. Apollo Beach Boulevard provides no visible opportunities for safe pedestrian crossing, except at the intersection of Apollo Beach Boulevard and Dickman Road (Figure 15 item a), and Apollo Beach Boulevard/Paseo Al Mar Boulevard and US 41 (Figure 15 item b). Another pedestrian crosswalk across US 41 can be seen at US 41 and Mirabay Boulevard (Figure 15 item c). The crosswalks at US 41 and Apollo Beach Boulevard/Paseo Al Mar Boulevard, labeled “b” in Figure 15, present an example of crosswalks that are well-marked, signaled, and provide amenities for safe crossing such as a pedestrian refuge island over Paseo Al Mar Boulevard.



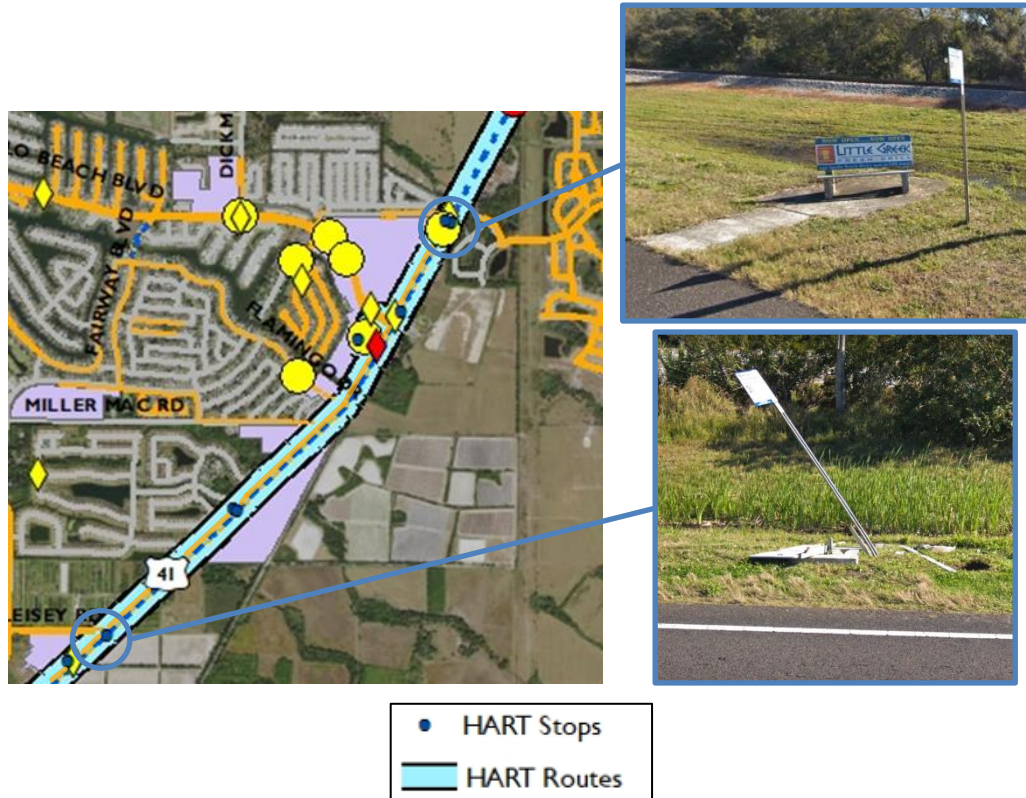
**Figure 15. Crosswalks on US 41 and Apollo Beach Blvd.**

Source: Google Maps

US 41 is a barrier for bicyclists and pedestrians traveling from the neighborhoods east of US 41 to the areas of activity (nodes), which are predominantly west of US 41. The traffic volume and speed of US 41, coupled with a lack of sidewalks along the eastern side, make this roadway particularly dangerous for bicyclists and pedestrians. Adding shade trees and sidewalks on the eastern side and providing more opportunities for safe bicycle and pedestrian crossing over US 41 would improve safety and comfort.

Apollo Beach is served by several HART stops along US 41 and one Park-n-Ride near US 41 and Apollo Beach Boulevard. Transit users needing to access stops on the eastern side of US 41 do

not have access to sidewalks (Figure 16). Limited options for safe access to transit stops may be a contributing factor to no transit ridership in this area. Sidewalks are needed along the eastern side of US 41, particularly where transit users need to safely access bus stops from residential neighborhoods or nearby services.



**Figure 16. Bus stops along US 41**

Source: Google Maps

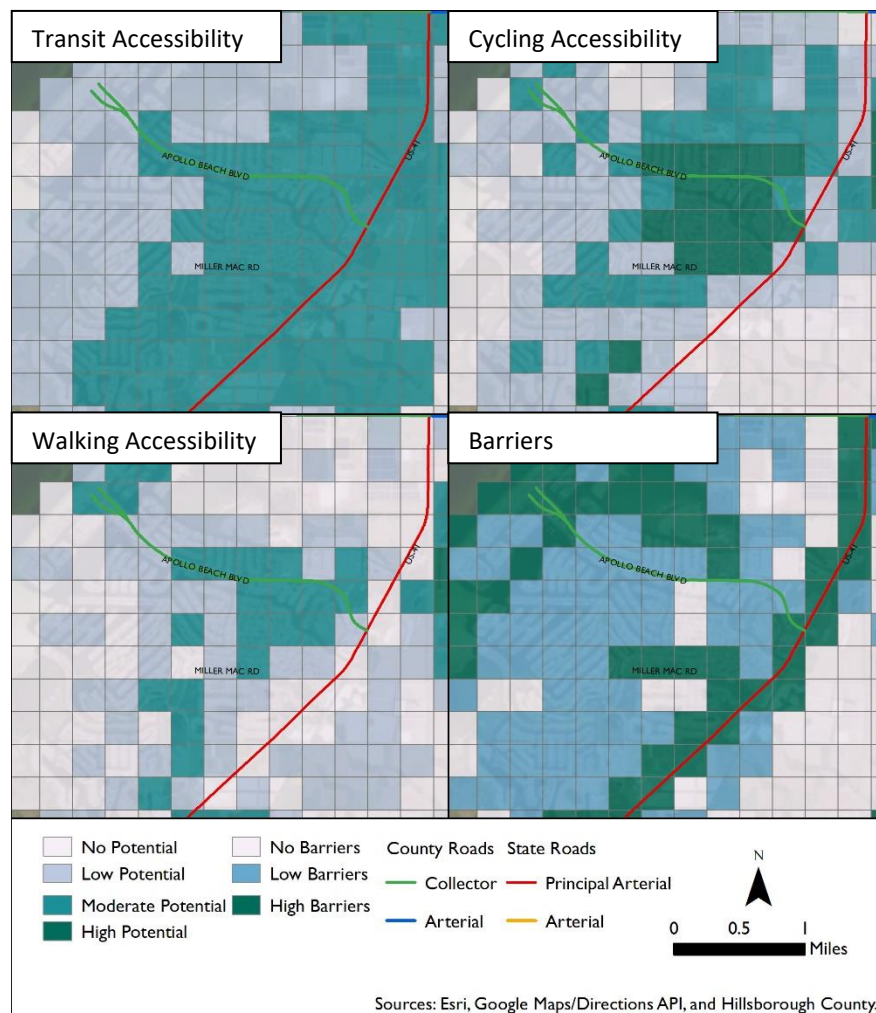
A closer look at the bus stops in Figure 16 reveals several other deficiencies limiting safe and comfortable transit use. Stops are generally located in the travel lane. Landing areas are adjacent to the roadway, increasing feelings of discomfort when in close proximity to high-speed traffic. The landing area at Apollo Beach Sweetbay North is grass, limiting access for some transit users including disabled and elderly persons. A concrete landing pad is provided at US 41 at Ellsberry Road, although it is in need of maintenance to reduce overgrown vegetation and repair uneven pavement. The lack of sidewalks along the eastern side of the roadway also minimizes the effectiveness of this landing area. Additional amenities such as shelters or shade trees can reduce exposure to the sun and inclement weather, improving the experience of using transit in Apollo Beach.

Figure 17 shows indices for multimodal accessibility and barriers in Apollo Beach. Areas in along US 41 and Apollo Beach Boulevard have moderate transit accessibility. Other areas in Apollo Beach have low transit accessibility, consistent with a longer walking time to bus stops.

Cycling accessibility is high or moderate with varying levels of sidewalk and bike lane availability. Areas with high biking accessibility are seen near Apollo Beach Boulevard and US 41. The Apollo Beach inventory (see Figure 12) identifies a short segment of bike lanes along Fairway Boulevard south of Apollo Beach Boulevard and along US 41.

Walking accessibility west of US 41 is predominantly low or has no potential with pockets of moderate accessibility along Apollo Beach Boulevard and in residential neighborhoods. These areas coincide with areas shown in the inventory as having sidewalks and are in close proximity to the areas of activity.

Several areas with high barrier indices have been identified in Apollo Beach. The most significant barriers include US 41, Miller Mac Road and areas where waterways prevent a more connected walking and cycling network.



**Figure 17. Apollo Beach multimodal accessibility and barriers**



In sum, the multimodal inventory assessment identifies several factors that likely discourage walking and cycling to/from areas of activity and transit use in Apollo Beach. Bicycle and pedestrian crashes clustered around the areas of activity at US 41 and Apollo Beach Boulevard are evidence of safety issues for these modes. Contributing to bicycle and pedestrian collisions along US 41 and Apollo Beach Blvd are the limited bicycle and pedestrian facilities, gaps in the network, high travel speeds, heavy traffic, and shortage of safe crossing opportunities. The relative lack of shade along the network and at transit stops, further discourages walking, biking and transit use in the hot, Florida sun.

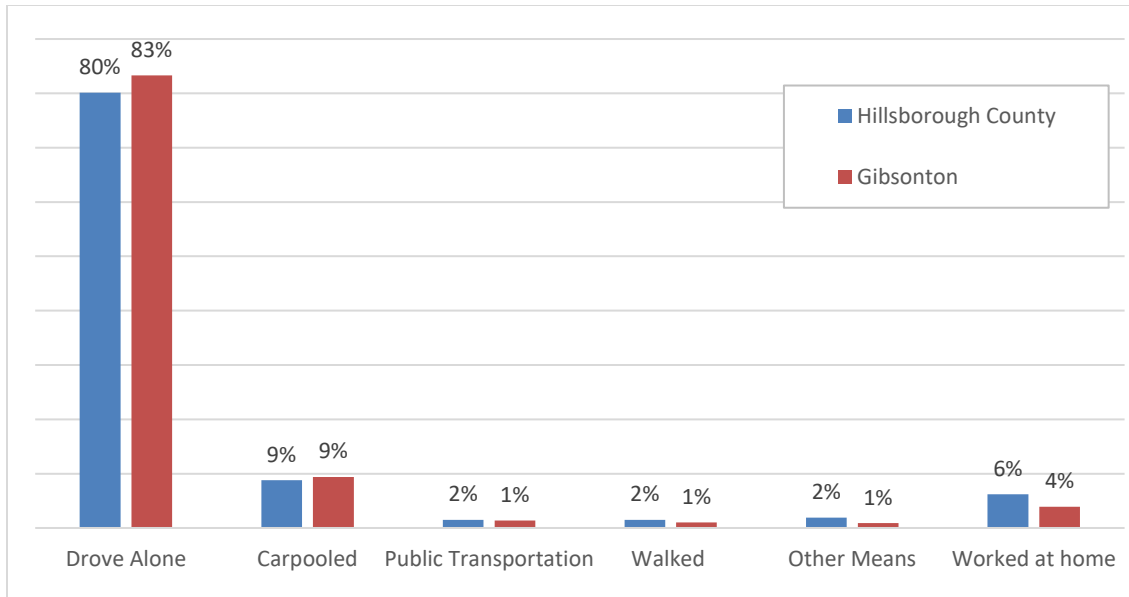
Identified solutions include:

- Completing gaps in the sidewalk network.
- Providing continuous sidewalk access to bus stops along the eastern side of US 41.
- Adding bike lanes to connect residential neighborhoods with surrounding neighborhoods and nearby commercial centers.
- Providing pedestrian bridges or cut-throughs for safe and convenient access to commercial centers from residential neighborhoods is another strategy where waterways or culs-de-sac limit accessibility.

### **3.2 Gibsonton**

Gibsonton is an unincorporated community in southwest Hillsborough County and is approximately 9,154 acres (14.3 sq. mi.). Gibsonton is unique in that many residents are involved in the carnival business. To accommodate this unique commercial sector, much of Gibsonton has a “show business” overlay district that allows “detached single-family dwelling (conventional or manufactured), group living facility and the repair, construction and open storage of show business sets, equipment and vehicles” (Hillsborough County Land Development Code). North-south traffic movement in this community is accommodated by I-75 and US 41. The main east-west thoroughfares are Gibsonton Drive, Nundy Avenue, Symmes Road, and Big Bend Road. The Alafia River and Bullfrog Creek are natural waterways within Gibsonton, providing environmental and recreational resources (Hillsborough County City-County Planning Commission, 2008).

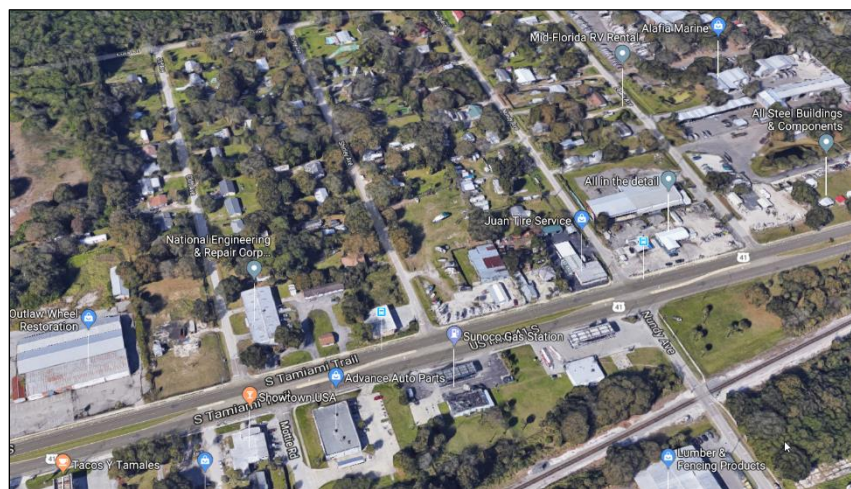
The statistical profile for Gibsonton can be found in Appendix A. According to 2013-2017 ACS estimates, the median age in Gibsonton is 32 and the median household income is \$48,320. The average commute time for Gibsonton residents is 30 minutes. When commuting to work, 83.3 percent of Gibsonton residents drive alone (the highest in the study area and higher than Hillsborough County), 1.4 percent use public transportation (the second highest in the study area), 1 percent walk to work, and 0.9 percent use other means of transportation (Figure 18). According to the OD analysis, most trips enter and leave this area through US 41 and I-75. Most trips leave the area in the morning and enter in the afternoon.



**Figure 18. Gibsonton means of commuting to work**

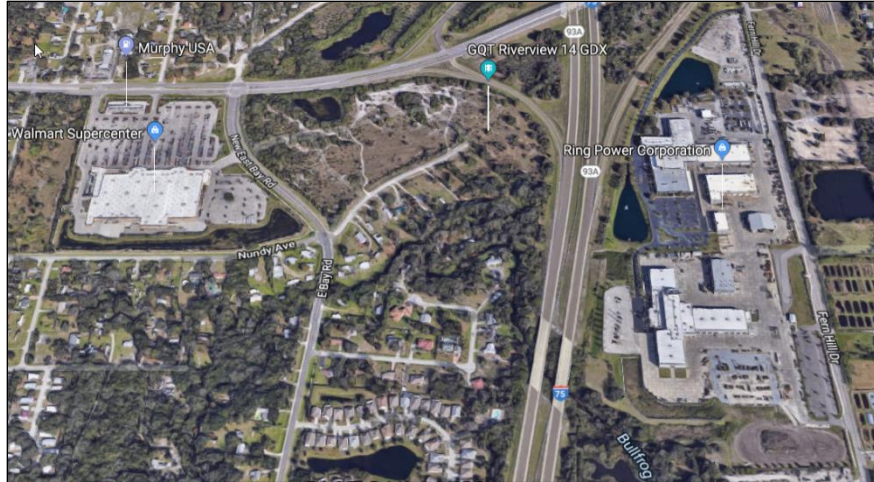
Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates.

Gibsonton is dominated by compact gridded urban road networks along US 41 (Figure 19). There are also some modern suburban areas of activity along Gibsonton Drive (Figure 20), which is proposed in the Comprehensive Plan as the Community’s “Signature Corridor” and “Main Street”. These areas of activity consist of commercial, retail, and entertainment uses.



**Figure 19. Gibsonton: compact urban area of activity (node)**

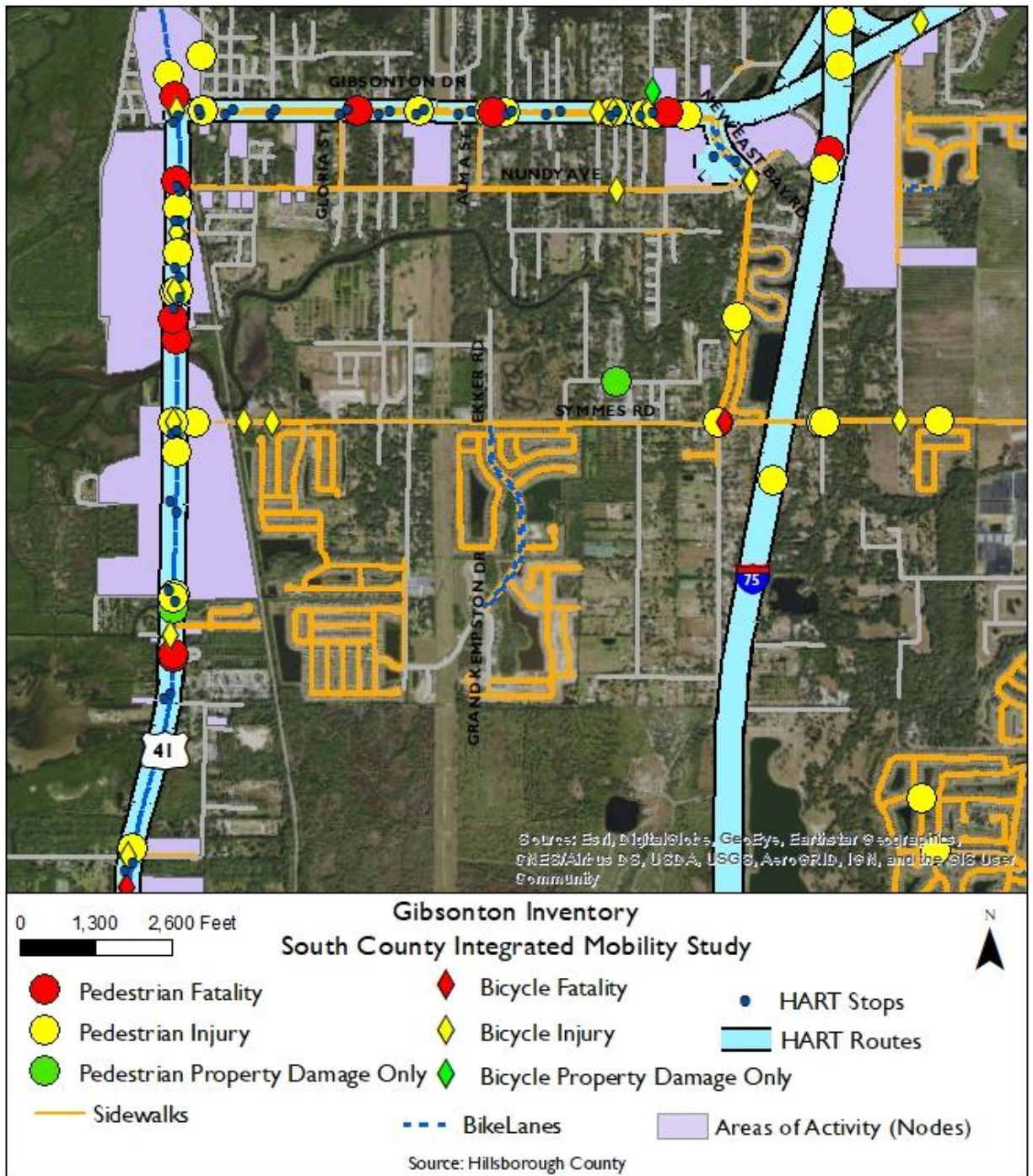
Source: Google Maps, 2019



**Figure 20. Gibsonton: modern suburban area of activity (node)**

Source: Google Maps, 2019

Despite an emerging grid in some parts of the community, Gibsonton is largely characterized by a disconnected roadway and pedestrian and bicycle network (Figure 21). Sidewalks are present on both sides along most of Gibsonton Drive and US 41. Sidewalks along Gibsonton Drive are connected to Nundy Avenue via US 41, Gloria St., Alma St., and New East Bay Road. Pedestrians and bicyclists needing to walk or bike to Symmes Road from Gibsonton Drive can only do so via US 41 or New East Bay Road. Bike lanes are present along US 41 and along segments of New East Bay Road between Gibsonton Drive and Nundy Avenue, and Ekker Road between Symmes Road and Grand Kempston Drive.



**Figure 21. Gibsonton inventory**

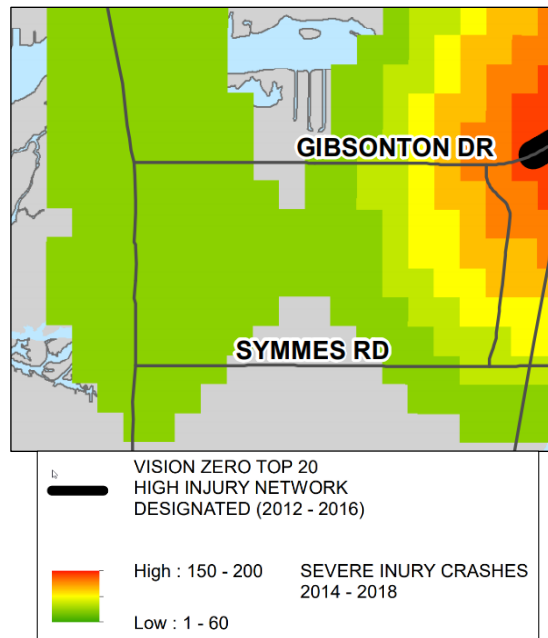
Table 10 includes total bicycle and pedestrian crashes per square mile by type and severity between 2012 and 2018 for Gibsonton. Most bicycle and pedestrian crashes in Gibsonton can be seen along US 41 and Gibsonton Drive. The inventory reveals several pedestrian fatalities associated with these incidents. The section below includes an evaluation of possible safety factors contributing to an unsafe walking and biking environment.

**Table 10. Gibsonton Bicycle and Pedestrian Crashes per Square Mile by Type and Severity (2012-2018)**

Criteria	Number of Crashes per Square Mile
<b>Pedestrian Fatality</b>	0.66
<b>Pedestrian Injury</b>	2.03
<b>Pedestrian Property Damage</b>	0.12
<b>Bicycle Fatality</b>	0.18
<b>Bicycle Injury</b>	1.91
<b>Bicycle Property Damage</b>	0.06

Source: Signal Four Analytics

Figure 22 shows serious injury and fatal crashes per mile in Gibsonton. US 41 has a low number of severe injury crashes per mile, whereas the number of severe injury crashes per mile along Gibsonton Drive varies from low to high. The highest number of severe crashes along Gibsonton Drive are closer to I-75. It should be noted that Gibsonton Drive, between I-75 and Balm Riverview Road, is the number 2 Vision Zero Severe Crash Corridor in Hillsborough County (2012-2016). Additional details about the segment of this corridor east of I-75 will be provided in the Riverview inventory.



**Figure 22. Severe crashes in Gibsonton**

Source: Hillsborough MPO, 2019

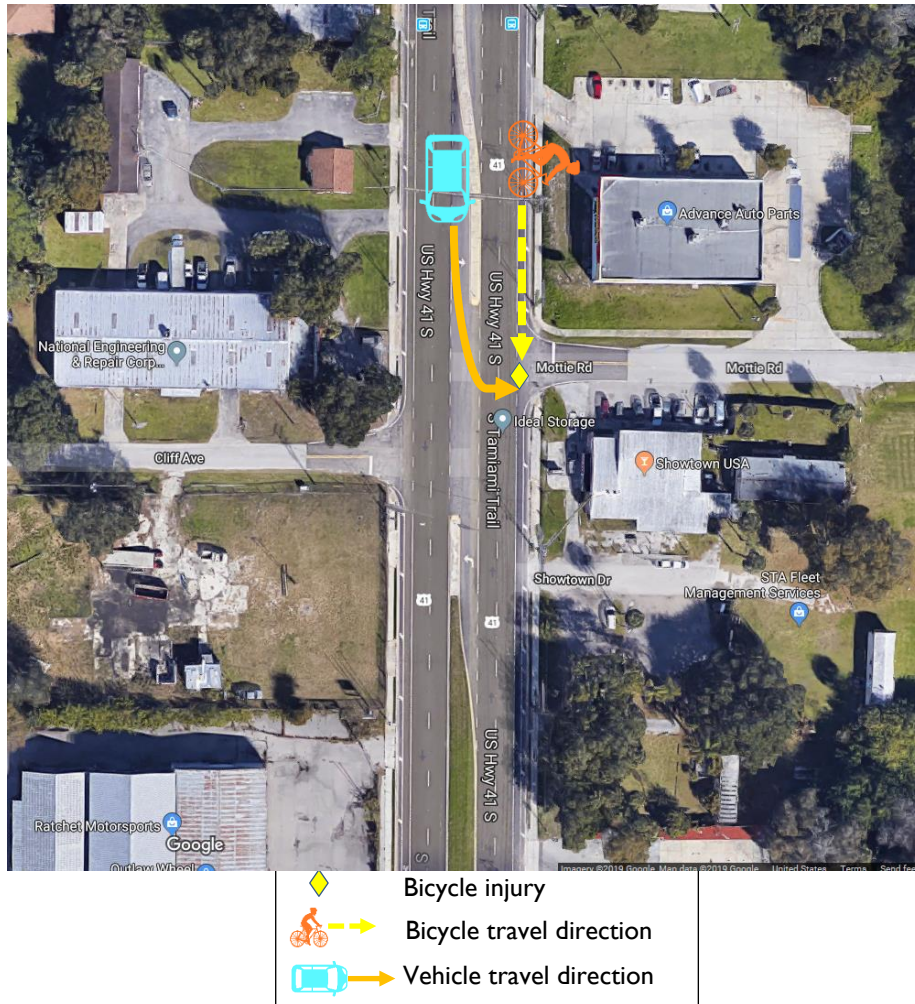
Between 2012 and 2018, a total of 12 crashes were identified along the roadway segment of US 41 between Gibsonton Drive and Symmes Road (see Appendix C). Crashes were caused by a combination of the built environment (median and intersection design, driveway access, etc.) and traveler behavior (failure to yield, etc.) Six of the twelve crashes were midblock and at least ¼ mile or more away from a crosswalk.

Figure 23 and Figure 24 show bicycle crashes at the intersection of US 41 and Mottie Road. A fatal crash, shown in Figure 23, happened when a bicyclist attempted to travel west to east across US 41 and was struck by a vehicle traveling north. The nearest crosswalk is approximately 950 feet south at US 41 and Palm Avenue. The Google Maps image of the intersection shows a full median opening measuring approximately 130 feet wide. This full median opening exposes bicyclists and pedestrians to conflicts caused by left turns as seen in the crash diagram in Figure 24. The crash shown in this figure happened when a bicyclist traveling south across Mottie Road was struck and injured by a car attempting to make a left turn onto Mottie Road from US 41.



**Figure 23. Bicycle crash on US 41 and Mottie Road**

Source: Google Maps

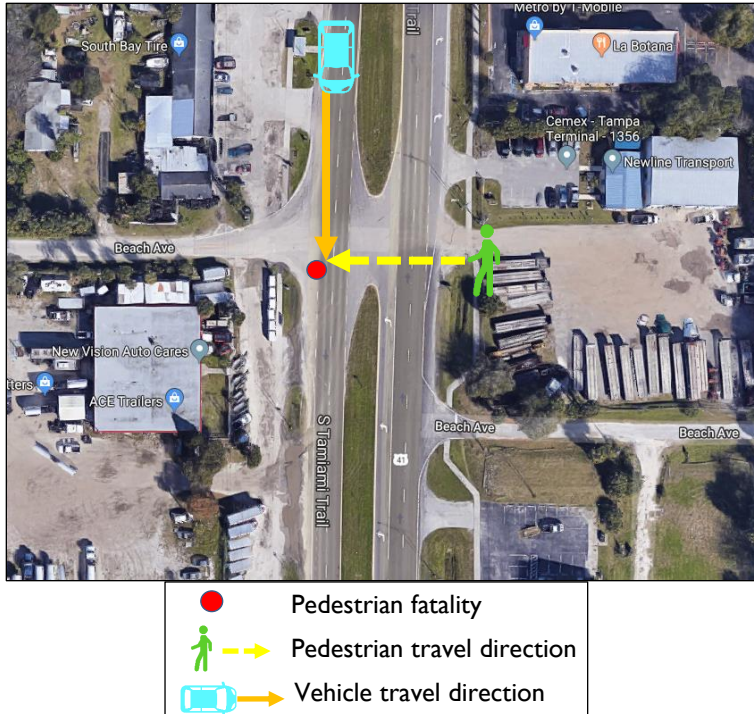


**Figure 24. Bicycle crash on US 41 and Mottie Road**

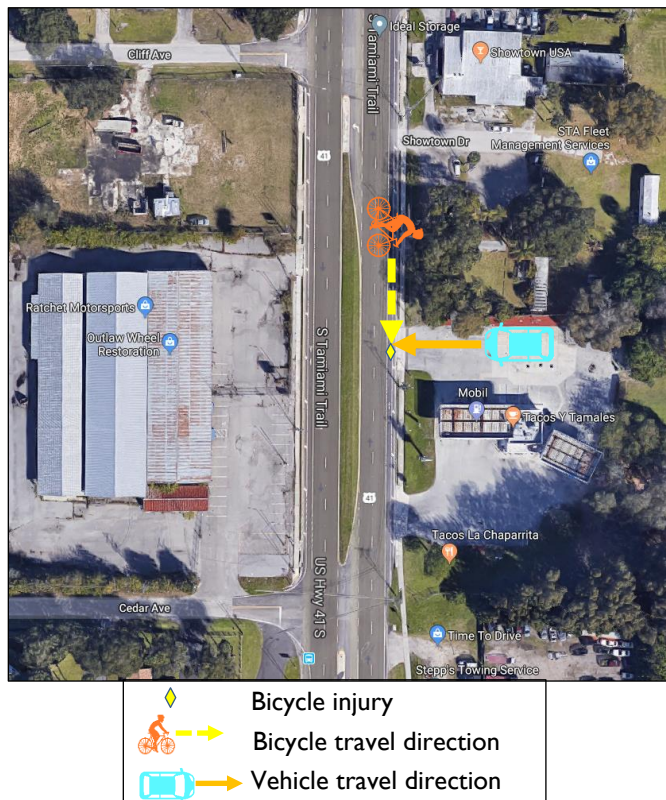
Source: Google Maps

Figure 25 shows a fatal pedestrian crash near the intersection of US 41 and Beach Avenue. This incident happened when a pedestrian attempted to travel east to west across US 41 and was struck by a vehicle traveling south. The nearest crosswalk is approximately 500 feet north at the intersection of US 41 and Palm Avenue.

Figure 26 shows a driveway-related crash. A vehicle in the driveway attempting to exit the property collided with a bicyclist traveling south on the sidewalk. The property where the crash happened has two driveways accessing US 41. Multiple driveways intersecting the walking and cycling path, as seen in Figure 27, increase conflict points between motorists and bicycles/pedestrians.

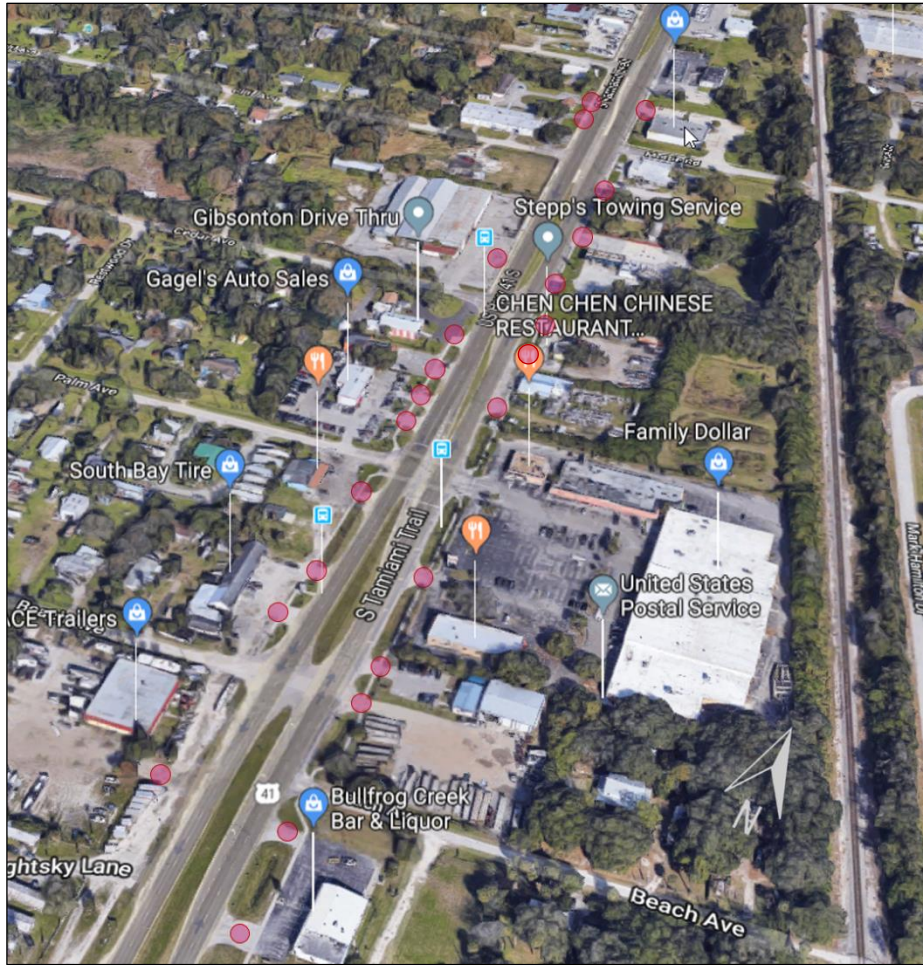


**Figure 25. Crash at US 41 and Beach Avenue**  
 Source: Google Maps



**Figure 26. Bicycle crash at driveway on US 41**  
 Source: Google Maps

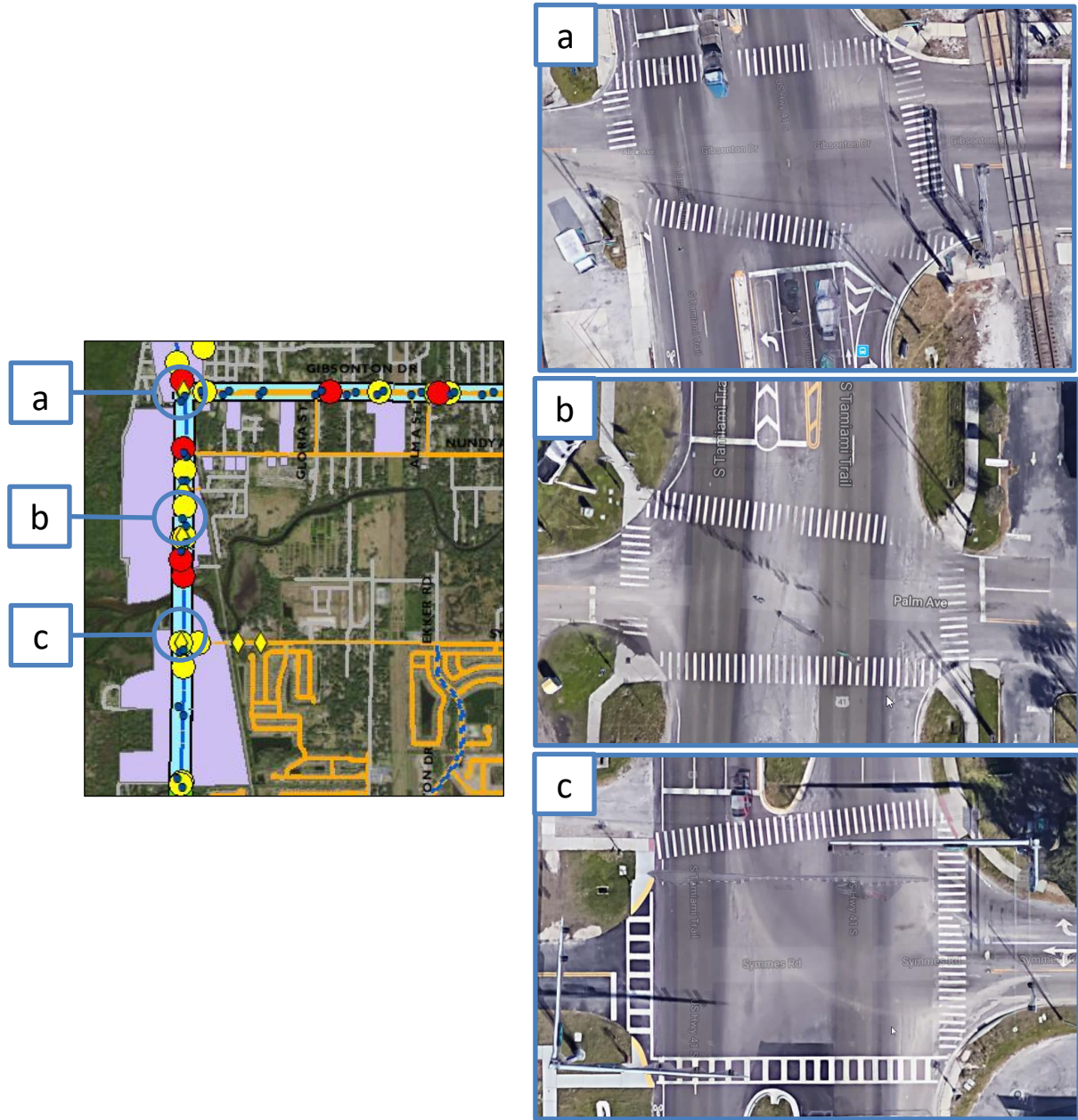




**Figure 27. Assess points along US 41**

Source: Google Maps

US 41 is a barrier to safe bicycle and pedestrian travel. The segment of US 41 that intersects Gibsonton is a 4-lane divided highway with a posted speed limit of 50 mph. The width and speed of this roadway further compound issues related to median and intersection design, midblock crossing, and driveway conflicts. Three crosswalks have been identified along US 41 between Gibsonton Drive and Symmes Road (Figure 28).



**Figure 28. Crosswalks on US 41**

Source: Google Maps

The street view of the intersections in Figure 28, highlights additional barriers to safe multimodal travel. The paint used to demarcate crosswalks is fading, reducing the effectiveness of the crosswalk (Figure 28 images a and b). The angle of the crosswalk on the southern side of US 41 and Gibsonton Drive and on the northern side of US 41 and Symmes Road exacerbate safety issues by obstructing visibility between pedestrians/bicyclists and motorists and increases the length of travel on the crosswalk (Figure 28 image a and c). The location of driveways in relation to sidewalks and crosswalks create potential conflicts between motorists and pedestrian/bicyclists (Figure 28 image a and c). The proximity of the bus stop to the right-

turn lane at the intersection of US 41 and Gibsonton Drive does not promote a feeling of safety in transit users (Figure 29). Bus stops are assessed in more detail later in this section.



**Figure 29. Right turn lane at US 41 and Gibsonton Drive**

Source: Google Maps

In areas along US 41 where sidewalks are present, there is minimal separation between the sidewalk and roadway, and multiple driveways create conflict points (Figure 30). Adding buffers or additional space between sidewalks and the roadway, and reducing the number of driveways can provide a more walkable environment. Sidewalks in disrepair including uneven pavement and overgrown vegetation, utilities obstructing the pathway, and sloped driveways reduce walkability and create hazards, particularly for persons with disabilities.

Some techniques to create a more walkable/bikeable and transit-friendly environment include reconfiguring and repainting crosswalks, removing overgrown vegetation from sidewalks, repairing cracked or uneven sidewalks, providing buffers or additional space between the sidewalk and the roadway, creating wider sidewalks, moving any utilities that create obstructions, and placing bus stops a comfortable distance from the traveled way.



**Figure 30. Street view of US 41 and Gibsonton Drive**

Source: Google Maps

Several bicycle and pedestrian crashes can be seen near the intersection of Gibsonton Drive and US 41. Google Map images captured December 2018 and January 2019, show sidewalks under construction on the eastern side of US 41. These sidewalks do not currently connect to the crosswalk at the Gibsonton Drive and US 41 intersection (Figure 31). The completion of these sidewalks will improve the sidewalk network and provide safer access for bicyclists and pedestrians.

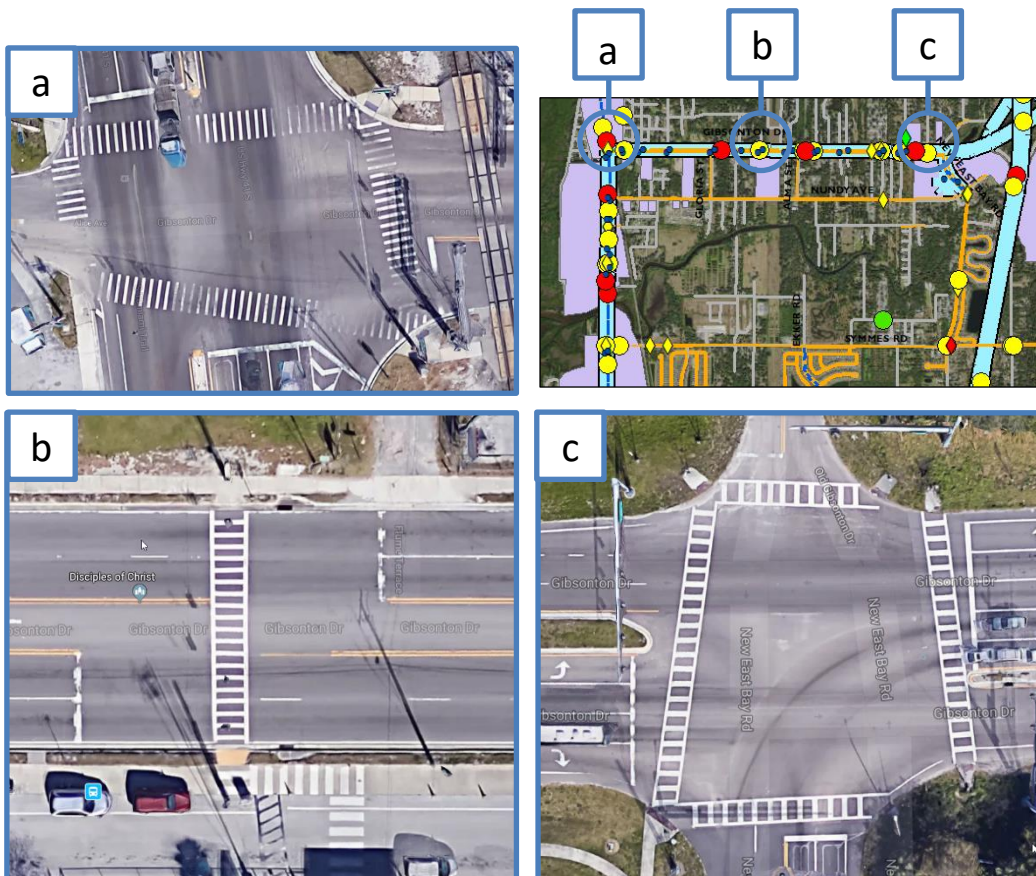


**Figure 31. Sidewalks under construction on US 41**

Source: Google Maps, 2019

Another cluster of crashes are visible on US 41 between Nundy Avenue and Symmes Road and near the intersection of US 41 and Symmes Road. There are limited opportunities for safe bicycle and pedestrian crossing between the areas of activity (nodes) identified in this area. Additionally, wide full-movement median openings in this location create a situation where numerous traffic conflicts can occur. Additional crosswalks and improved median opening design (e.g., replacing the full opening with a directional opening) can greatly improve safety.

As a 4-lane divided roadway with a posted speed limit of 45 mph, Gibsonton Drive serves as a barrier to bicycle and pedestrian accessibility. However, the 1¾ mile segment between US 41 and New East Bay Road includes sidewalks on both sides and crosswalks at signals (see Figure 32 images a, b, and c). As of October 2019, the aerial view of Gibsonton Drive and New East Bay Road from Google Maps does not show recently constructed sidewalks at the north-west corner of this intersection (Figure 32 image c). These sidewalks are visible at the street level as shown in Figure 34.

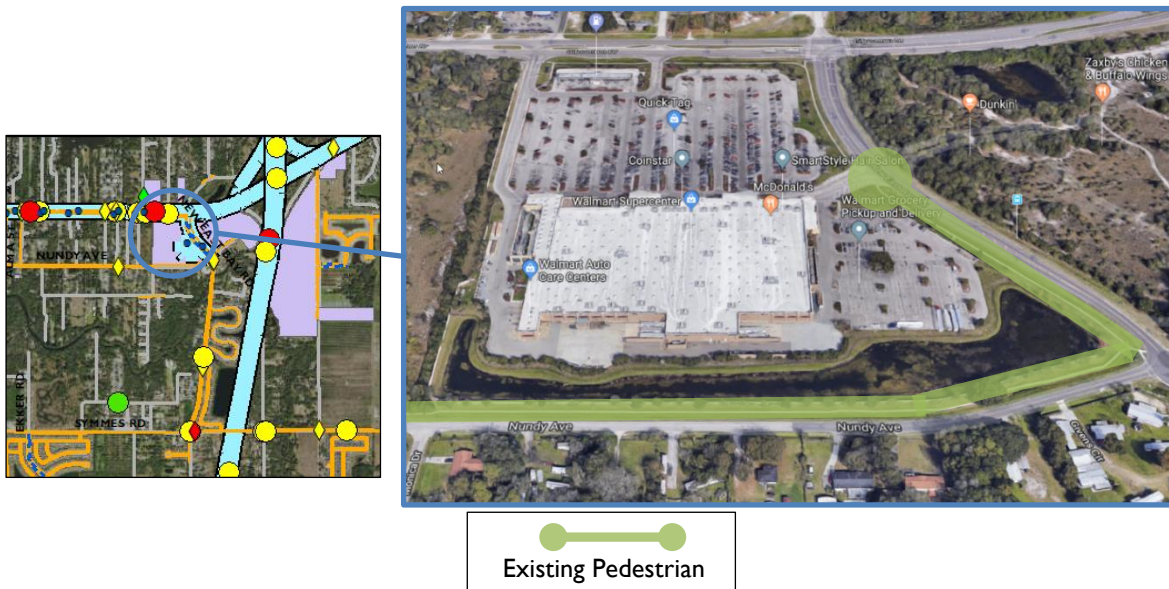


**Figure 32. Crosswalks on Gibsonton Dr.**

Source: Google Maps, 2019

The inventory maps show poor bicycle and pedestrian access to areas of activity from the surrounding residential neighborhoods. For example, a fence and large retention pond on the southern side of the Walmart property limit access for bicyclists and pedestrians traveling from neighborhoods on Nundy Avenue (Figure 33). Bicycle and pedestrian access to Walmart is only

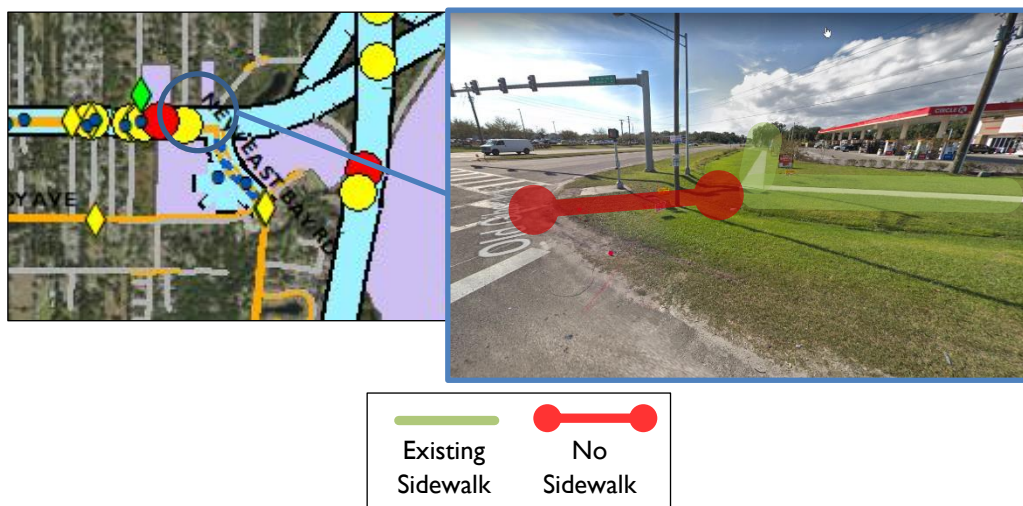
available on New East Bay Road and Gibsonton Drive. A pedestrian bridge over the retention pond connecting Walmart to the sidewalk on Nundy Avenue, or bicycle and pedestrian access along the western side of the Walmart property can improve connectivity.



**Figure 33. Walmart at Nundy Avenue**

Source: Google Maps, 2019

Pedestrians accessing the Walmart Supercenter from the northern side of Gibsonton Drive can only safely do so at the intersection of Gibsonton Drive and New East Bay Road/Old Gibsonton Drive. The sidewalk on the northern side of Gibsonton Drive lacks direct access to the crosswalk over New East Bay Road/Old Gibsonton Drive, making use of the crosswalk difficult (Figure 34). Adding a connection from the sidewalk to the crosswalk can improve safety.



**Figure 34. Crosswalk at Gibsonton Drive and New East Bay Road**

Source: Google Maps

There is a HART route and several HART stops along Gibsonton Drive, US 41, and New East Bay Road. All of the bus stops on Gibsonton Drive and New East Bay Road appear to have access to sidewalks but have limited access to safe roadway crossing. Most bus stops on US 41 have access to sidewalks, except for a few that have no access to sidewalks or have access to sidewalks in poor conditions. Some examples are described below and can be seen in Figure 35.

The bus stop on the eastern side of US 41, near the intersection of US 41 and Gibsonton Drive, does not currently have access to a sidewalk. The sidewalks being constructed (see Figure 31) will provide transit users safe access to the sidewalks and nearby crosswalks. In addition to sidewalks, other amenities that can improve the experience of transit users at this stop include a shelter or shade trees, and a landing area that is accessible and traversable by persons with disabilities. The bus stop on the western side of US 41, near the intersection of US 41 and Gibsonton Drive, has access to a sidewalk that is in need of repair. Transit users at this stop would also benefit from a shelter or shade trees, and an improved landing area. The bus stop on the western side of US 41, near the intersection of US 41 and Symmes Road, does not have direct access to the nearby sidewalk and does not have seating. Filling gaps in the sidewalk network and repairing damaged sidewalks will connect transit users to surrounding neighborhoods and areas of activity and improve safety and accessibility for transit users walking or biking to transit stops.



Figure 35. Bus stops in Gibsonton

Debris and materials from construction along US 41 can be a temporary barrier to safe bicycle and pedestrian travel. Figure 36 shows an example of construction temporarily impeding bicycle and pedestrian travel at US 41 and Lewis Avenue. Once construction is complete, bicyclists and pedestrians should be able to move safely on the sidewalk and bike lane.



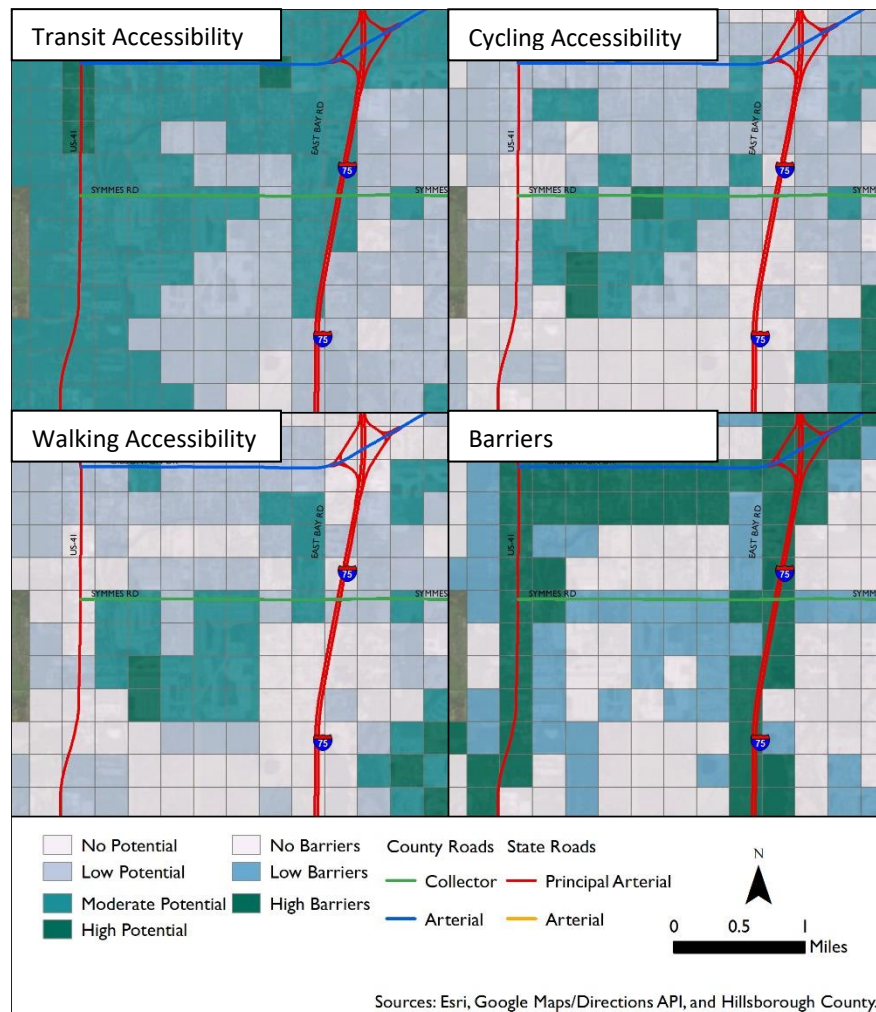
**Figure 36. Construction on US 41**

Source: Google Maps

Figure 37 shows transit, biking, and walking accessibility and barriers in Gibsonton. Transit accessibility is moderate with pockets of high accessibility along US 41 and Gibsonton Drive. Areas with moderate or low accessibility are less dense residential areas, are farther away from the bus stops identified along Gibsonton Drive and US 41, and have limited sidewalks or bike lanes (see Figure 21).

Gibsonton has low to no walking and cycling accessibility. Areas with high cycling accessibility correlate with segments of bike lanes identified in the Gibsonton inventory - US 41, New East Bay Road, and Ekker Road (Figure 21). Most of Gibsonton has low or no walking accessibility, although the inventory shows sidewalks along US 41, Gibsonton Drive, Symmes Road, Nundy Avenue, and other local roadways in the area. This low accessibility relates to a high index of barriers. For example, US 41 and the railroad are significant barriers between areas of activity west of US 41 and residential areas east of US 41. Other areas with high and very high barrier indices are seen along I-75, New East Bay Road, and segments of Symmes Road closest to US 41 and I-75.





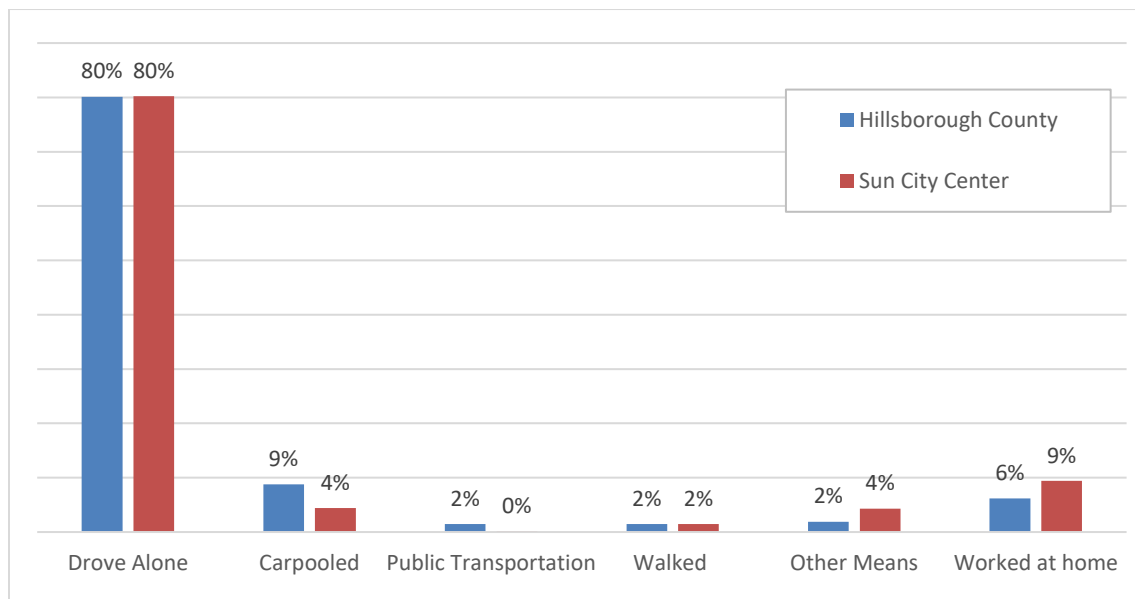
**Figure 37. Gibsonton multimodal accessibility and barriers**

Overall, limited sidewalk connectivity between residential neighborhoods and areas of activity coupled with limited opportunities for safe pedestrian crossing on high-speed roadways such as Gibsonton Drive and US 41 contribute to an unsafe bicycle and pedestrian network. A disconnected roadway network results in longer trips and high volumes of traffic compound bicycle and pedestrian safety issues. Existing barriers identified include US 41, I-75, Symmes Road and the railroad. Generally, bus stops have good access to sidewalks with a few exceptions at US 41 and Gibsonton Drive, and US 41 and Symmes Road, although additional amenities such as shelters, paved landing areas, and seating can create a more comfortable experience for transit users. Crash data identified a high number of crashes along roadway segments with bus stops increasing safety concerns related to first-mile last-mile travel for transit users. Sidewalks are under construction along US 41 where gaps in the sidewalk network have been identified. These newly constructed sidewalks can improve bicycle and pedestrian safety along US 41.

### 3.3 Sun City Center

Sun City Center is located between Ruskin and Wimauma in South County. Sun Center City is a master-planned retirement community developed in the 1960s on what was a 12,000-acre cattle ranch. The Sun City Center Senior Citizen Overlay District (SPI-SCCSC) restricts occupancy within the boundaries to individuals 55 years of age or older. Sun City Center does not have a town center. Commercial uses serving the community are found primarily along Sun City Center Boulevard (SR 674), from I-75 on the west to US 301 on the east. Several health care facilities are present in Sun City Center, including South Bay Hospital (Hillsborough County City-County Planning Commission, 2008).

The statistical profile for Sun City Center can be found in Appendix A. According to ACS estimates for 2013-2017, the median age was 72 and the median household income was \$47,285. In light of their advanced age, most Sun City Center residents are retired. Of those still in the workforce, the average commute time was 30.2 minutes and 80.2 percent of Sun City Center commuters drove to work alone. Fewer than 1 percent of Sun City Center residents used public transportation for their commute, 1.5 percent walked, 4.3 percent used other means of transportation (the highest in the study area and higher than Hillsborough County), and 9.4 percent worked at home (the second highest in the study area) (Figure 38). According to the OD analysis, most of Sun City Center trips are internal and access the modern suburban areas of activity near the intersection of I-75 and Sun City Center Boulevard.

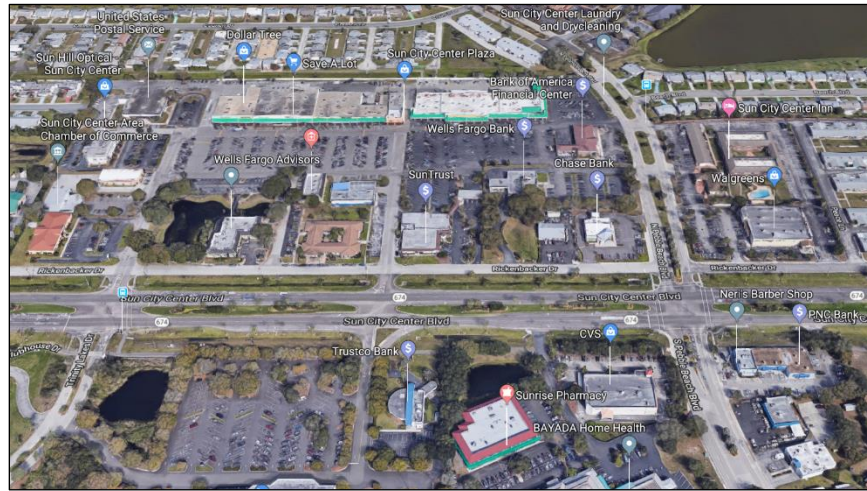


**Figure 38. Sun City Center means of commuting to work**

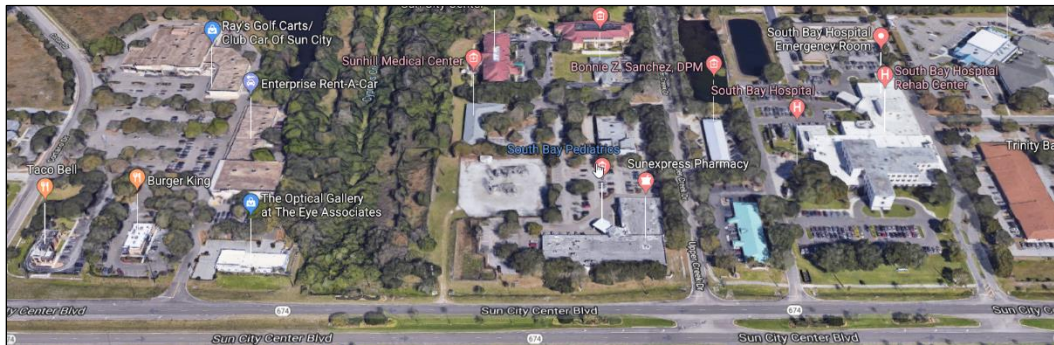
Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates.

Sun City Center consists of two area of activity types – modern suburban and connected suburban. The connected suburban area of activity is west of Pebble Beach Boulevard and contains Sun City Center Plaza – the proposed community town center (Figure 39). The modern

suburban areas of activity are west of West Del Webb Boulevard and contain South Bay Hospital and other commercial uses (Figure 40).



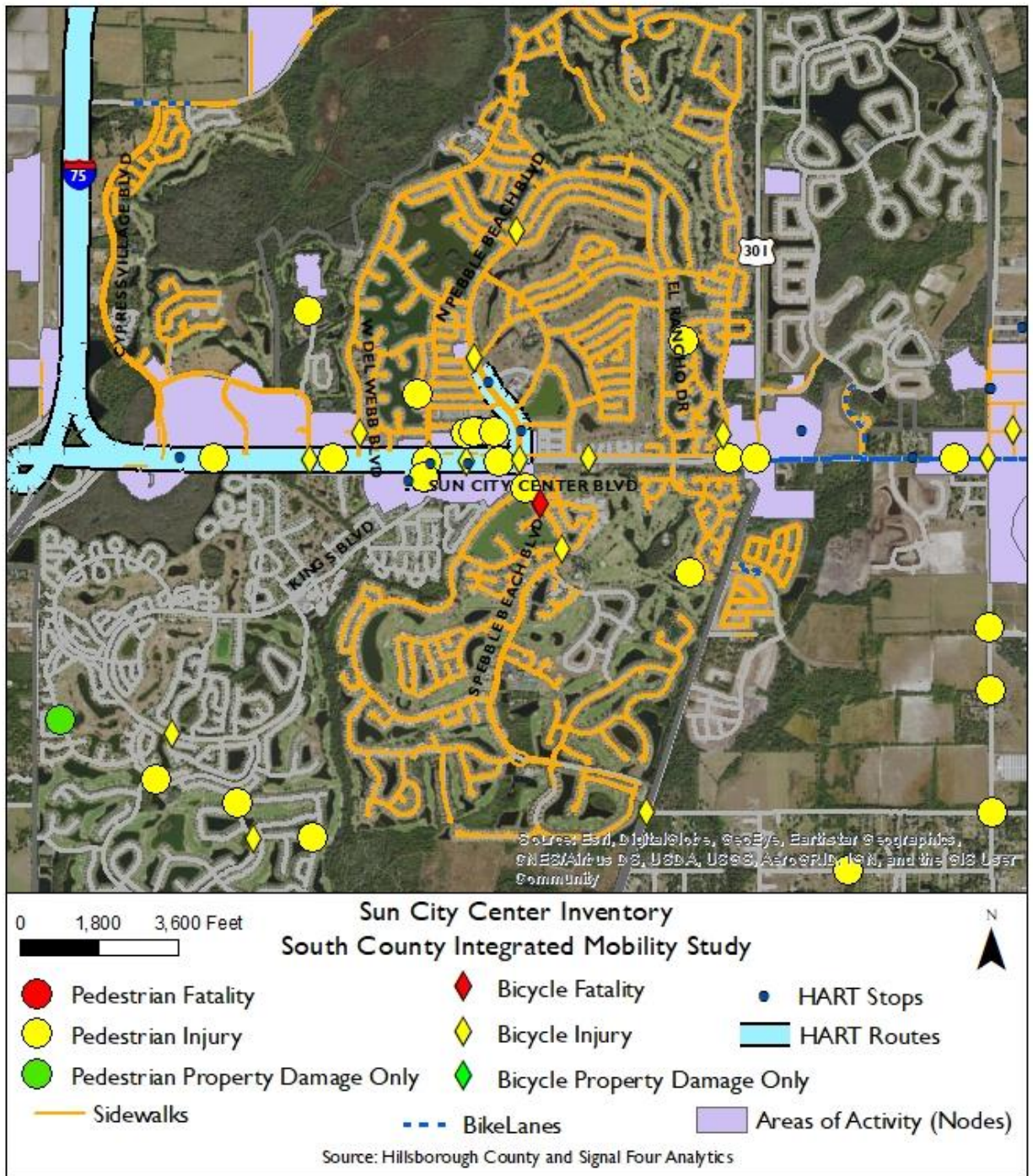
**Figure 39. Sun City Center connected suburban area of activity**



**Figure 40. Sun City Center: modern suburban area of activity**

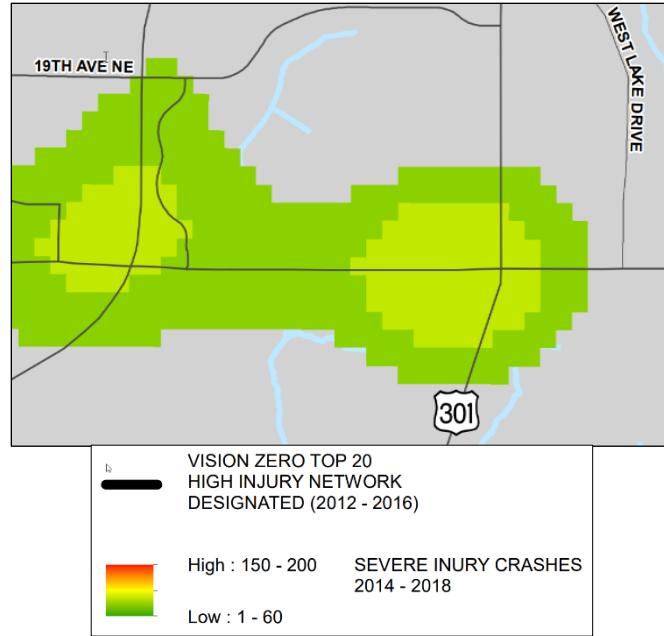
The Sun City Center inventory map (Figure 41) shows a well-connected sidewalk network north of Sun City Center Boulevard, just east of US 301, and a relatively well-connected sidewalk network, with some gaps, south of Sun City Center Boulevard between US 301 and New Bedford Drive. The remaining neighborhoods either have no sidewalks or have significant gaps in the sidewalk network. Some areas show a lack of east-west network connections, limiting circulation.

There are some sidewalks along Rickenbacker Road, which connect areas of activity north of Sun City Center Boulevard to surrounding residential neighborhoods. Golf cart paths (not shown in the inventory map) are along the south side of Sun City Center Boulevard between Kings Boulevard and US 301, and along the north side of Sun City Center Boulevard between the shopping centers east of Cypress Village Boulevard to West Del Webb Boulevard. Segments of bike lanes are present along Sereno Bridge Boulevard, Hidden Creek Boulevard, and 19<sup>th</sup> Avenue NE.



**Figure 41. Sun City Center inventory**

Figure 42 shows severe crashes per mile in Sun City Center. Sun City Center Boulevard between US 301 and I-75 has a lower number of severe injury crashes per square mile compared to the intersection of Sun City Center Boulevard and US 301, and the intersection of Sun City Center Boulevard and I-75.



**Figure 42. Severe crashes in Sun City Center**

Source: Hillsborough MPO, 2019

Table 11 includes total bicycle and pedestrian crashes by type and severity between 2012 and 2018 for Sun City Center. The inventory reveals a cluster of bicycle and pedestrian collisions along Sun City Center Boulevard, around Sun City Center Plaza and other areas of activity. The largest cluster of bicycle and pedestrian collisions can be seen near the intersection of Sun City Center Boulevard and Pebble Beach Boulevard. Sun City Center Boulevard is a 4-lane divided roadway with a posted speed limit of 45 mph. The width and speed of traffic on Sun City Center Boulevard, and the absence of protected crossings, likely contribute to the number of bicycle and pedestrian injuries along this roadway. Figure 43 shows a sidewalk between Sun City Center Boulevard and Rickenbacker Drive, but no pedestrian crossing for bicyclists or pedestrians traveling into or from the area of activity. Pedestrian crossing treatments would improve bicycle/pedestrian safety at these intersections.

**Table 11. Sun City Center Bicycle and Pedestrian Crashes per Square Mile by Type and Severity (2012-2018)**

Criteria	Number of Crashes per Square Mile
<b>Pedestrian Fatality</b>	0.00
<b>Pedestrian Injury</b>	1.66
<b>Pedestrian Property Damage</b>	0.07
<b>Bicycle Fatality</b>	0.07
<b>Bicycle Injury</b>	1.01
<b>Bicycle Property Damage</b>	0.00

Source: Signal Four Analytics



**Figure 43. Intersection of Sun City Center Blvd. and Pebble Beach Blvd**

Source: Google Maps, 2019

A smaller cluster of bicycle and pedestrian crashes can be seen near the intersection of US 301 and Sun City Center Boulevard. A closer look at this intersection shows gaps in the sidewalk network along US 301 and Sun City Center Boulevard (Figure 44). Additionally, no access is provided to the US 301 crosswalk from the shopping centers west of US 301. The lack of connected sidewalks in this area impedes pedestrian and bicycle access.

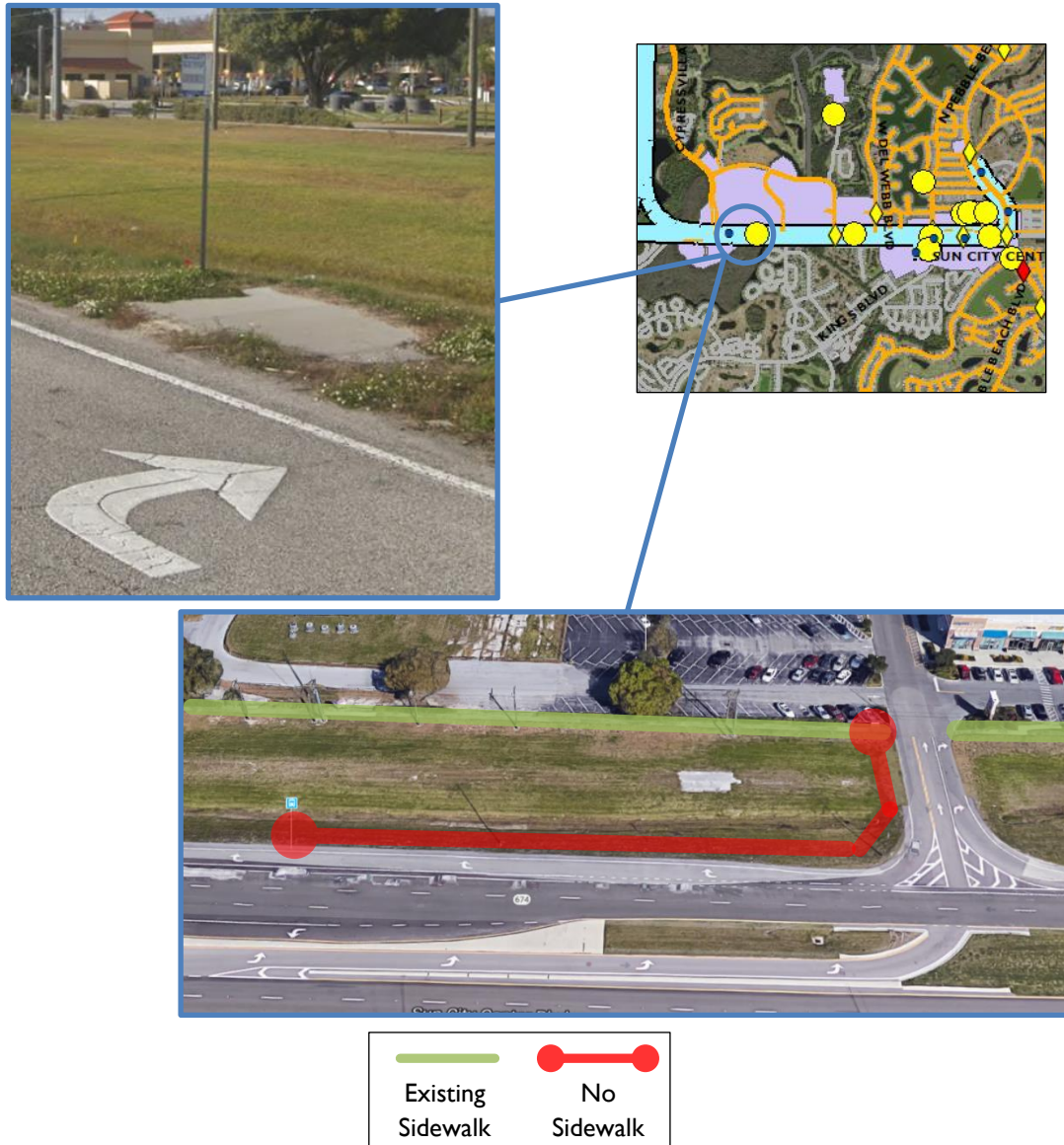


**Figure 44. Pedestrian network at US 301 and Sun City Center Blvd.**

Source: Google Maps, 2019

There are several HART stops along Sun City Center Boulevard and North Pebble Beach Boulevard. Most of the bus stops in Sun City Center are accessible by sidewalks and provide a paved landing area. One exception was identified at Sun City Center Boulevard and Cypress

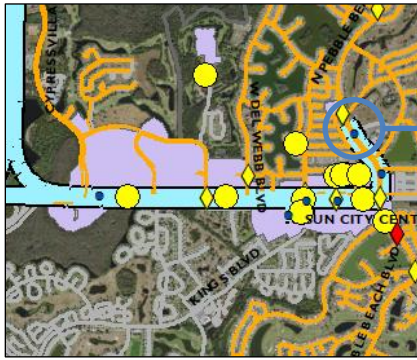
Village Blvd, which does not have direct access to the sidewalk (Figure 45). Transit users needing to use this stop must walk through grass or along the roadway. Providing sidewalks that connect to the sidewalks north of this roadway can provide safe access to this transit stop.



**Figure 45. Bus stop at Sun City Center Blvd. at Cypress Village Blvd.**

Source: Google Maps, 2019

Most bus stops along Sun City Center Boulevard are not sheltered and do not have benches, except the bus stop at North Pebble Beach Boulevard at Sun City Center. This stop is a good example of amenities that support safe and comfortable transit use. The bus stop is sheltered, has benches, appropriate signage, and a paved landing with direct access to the sidewalk (Figure 46).



**Figure 46. Bus stop at North Pebble Beach Boulevard**

Source: Google Maps

Figure 47 shows the multimodal accessibility and barriers in Sun City Center. Transit accessibility is moderate, with pockets of high accessibility. Cycling accessibility is moderate or high. Although there are not many bike lanes, there are sidewalks and low-speed residential streets that provide opportunities for bicycle travel. Walking accessibility in Sun City Center is moderate or low, although there are some smaller areas with high walking potential. Areas with high or very high barrier indices are along I-75, US 301, and Sun City Center Boulevard. Areas with low barriers include some waterbodies throughout the community.





**Figure 47. Sun City Center multimodal accessibility and barriers**

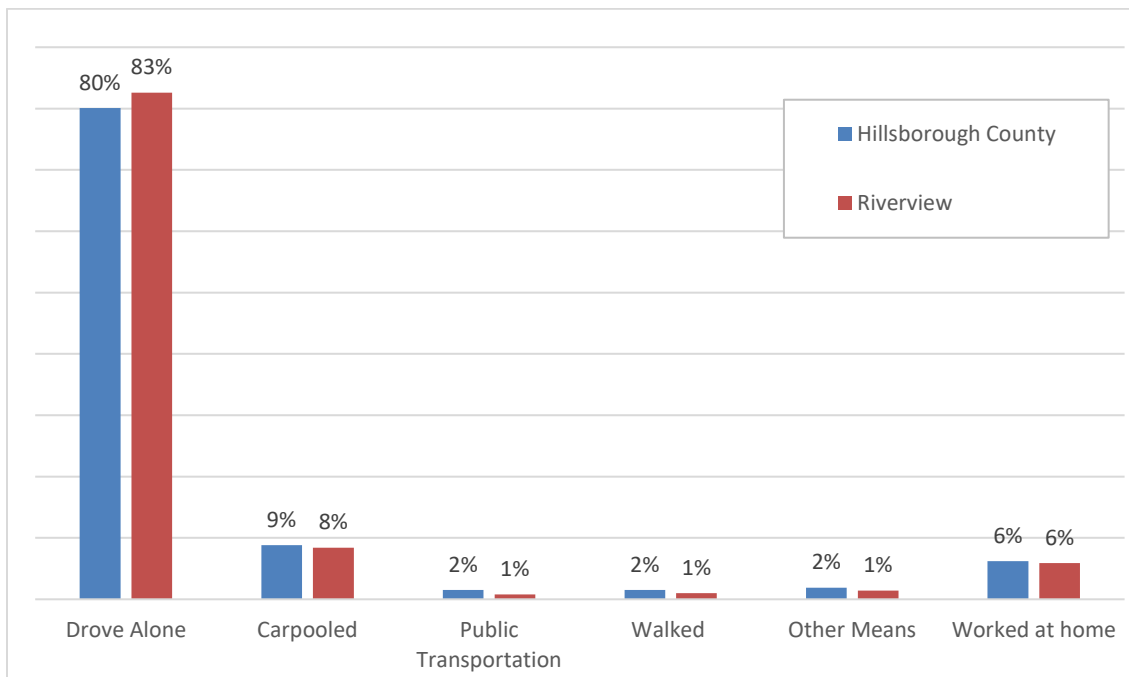
Overall, the multimodal assessment in Sun City Center shows several issues. It illustrates numerous bicycle and pedestrian collisions along Sun City Center Boulevard near Sun City Center Plaza. Additionally, it reveals a disconnected sidewalk network, limited bike lanes, and limited crosswalks - particularly in high bicycle and pedestrian crash areas. Although most bus stops in Sun City Center have good access to the sidewalk network, the stop at Sun City Center Boulevard and Cypress Village Boulevard lacks connection to the surrounding sidewalk network. Filling gaps in the sidewalk network, providing bike lanes, and more attention to designing safe pedestrian crossings on the arterial and collector network will improve multimodal safety and accessibility in this area.

### 3.4 Riverview

Riverview is approximately 35,769 acres (55.88 sq. mi.) and is located in the southeastern section of unincorporated Hillsborough County. Riverview has no town center but is an identifiable community with schools, services, and other infrastructure. The Riverview Downtown District is north of the Alafia River, outside of the project study area. The main

north-south thoroughfares in Riverview are I-75, US 301, and Balm Riverview Road. The main east-west thoroughfares are Gibsonton Drive/Boyette Road, Symmes Road, Rhodine Road, Big Bend Road, and Balm Road. The Alafia River traverses the Riverview community (Hillsborough County City-County Planning Commission, 2008).

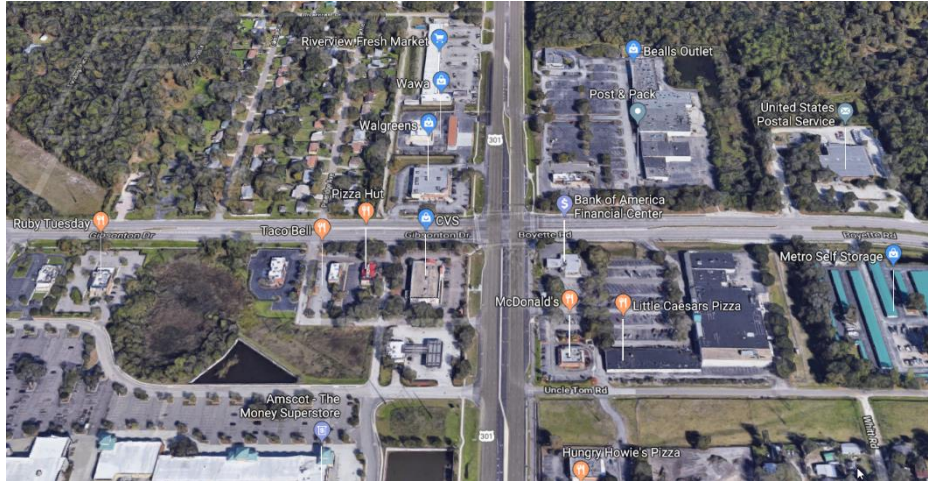
The statistical profile for Riverview can be found in Appendix A. According to ACS 2013-2017 estimates, the median age of Riverview residents was 35 and the median household income was \$68,442. The average commute time for Riverview residents was 31 minutes. Eighty-three percent (82.6%) of Riverview residents drove to work alone, which is the second-highest in the study area, and higher than the percent of residents who drove to work alone in Hillsborough County. Less than 1 percent of Riverview residents used public transportation for their commute, 1 percent walked to work, and 1.4 percent used other means of transportation (Figure 48). According to the OD analysis, a high number of trips were internal. US 301 and I-75 were the most frequently used roadways for trips entering or leaving Riverview.



**Figure 48. Riverview: means of commuting to work**

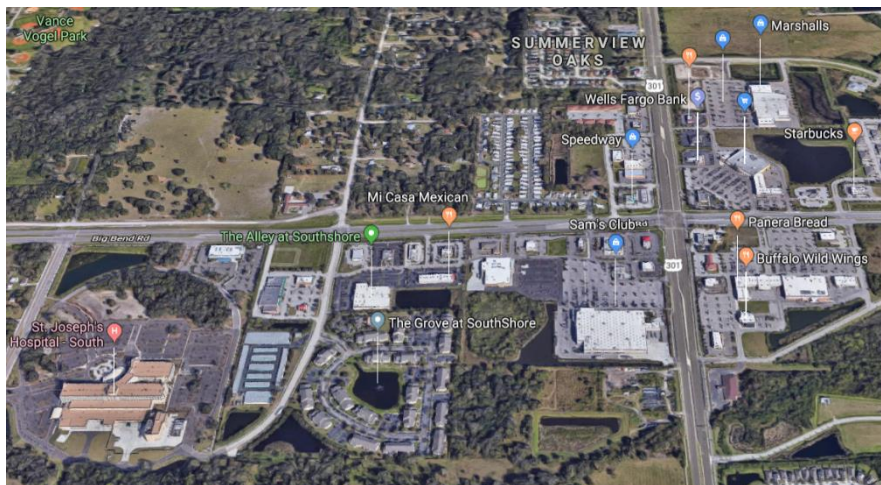
Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates.

Riverview has small modern suburban areas of activity consisting of commercial, retail, and entertainment uses. These areas of activity are intermittently located along Boyette Road, Symmes Road, US 301, Big Bend Road, and other locations throughout Riverview. For example, the modern suburban area of activity at US 301 and Boyette Road has uses that include restaurants, retail stores, and gas stations (Figure 49). The modern suburban area of activity at US 301 and Big Bend Road includes St. Joseph’s Hospital-South, grocery stores, retail stores, and restaurants (Figure 50).



**Figure 49. Riverview modern suburban area of activity at US 301 and Boyette Road**

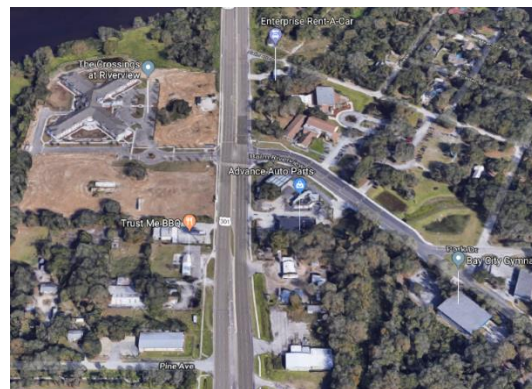
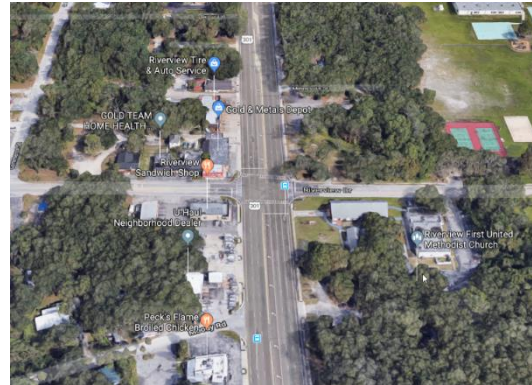
Source: Google Maps



**Figure 50. Riverview modern suburban area of activity at US 301 and Big Bend Road**

Source: Google Maps

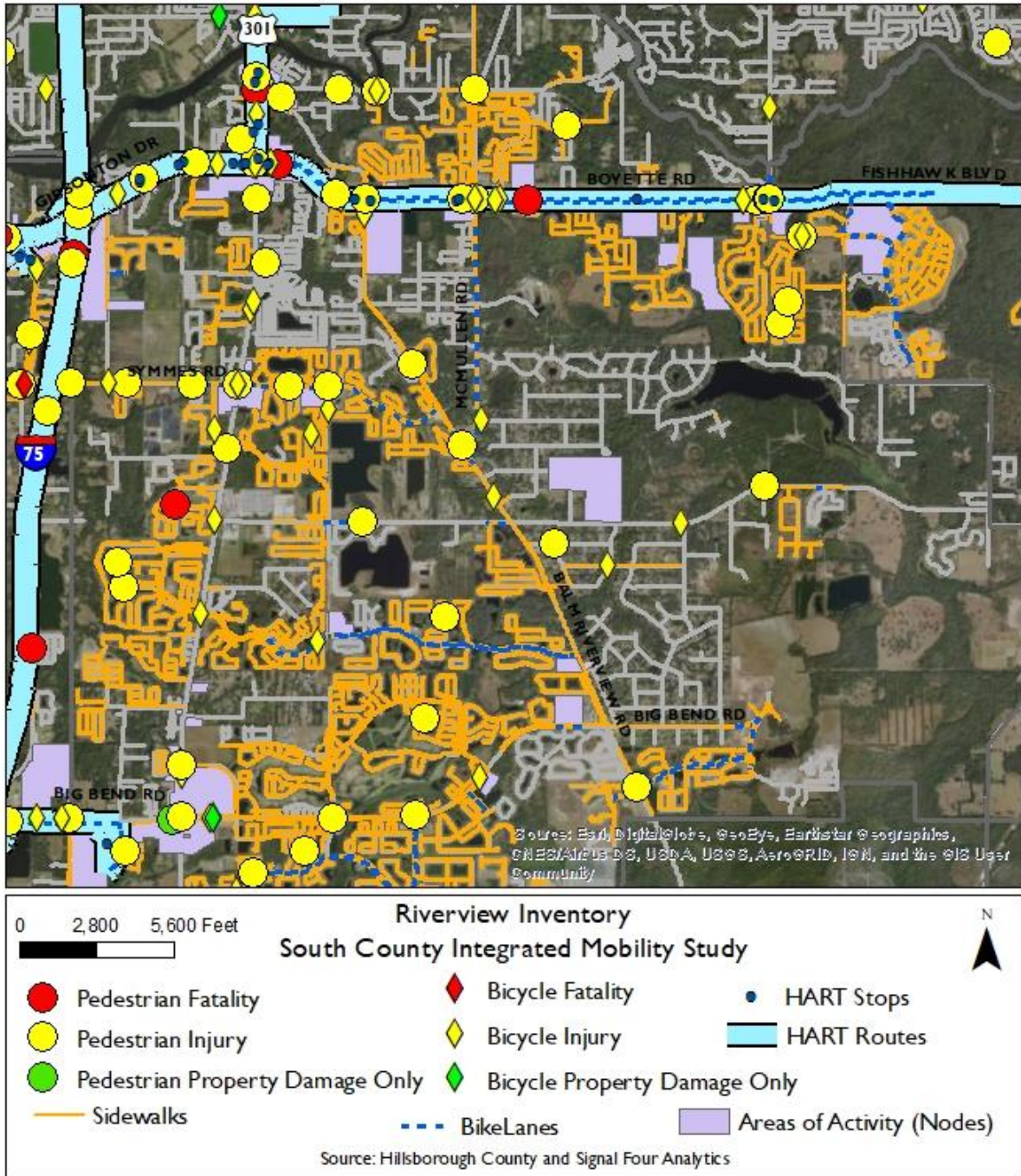
The community plan for Riverview proposes a downtown at the intersection of US 301 and Riverview Dr. (outside of the study area), and a Riverwalk at US 301 and Balm Riverview Road. The area of the proposed Riverwalk is a connected suburban area of activity. A current aerial of the proposed downtown and Riverwalk can be seen in Figure 51.



**Figure 51. Aerial of Riverview’s proposed downtown and riverwalk locations**

Source: Google Maps

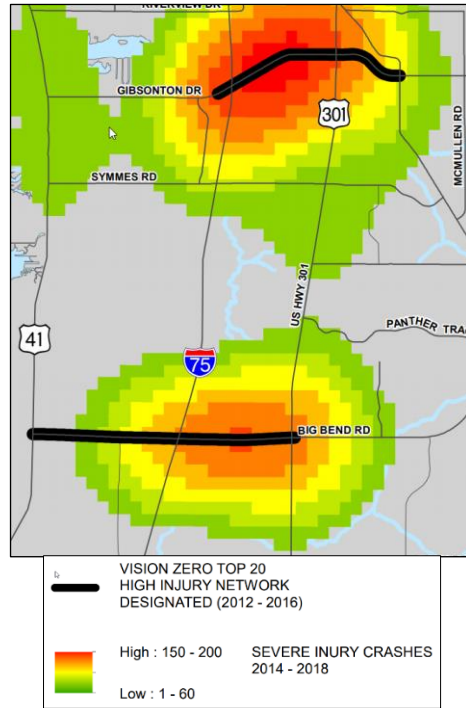
The inventory for Riverview shows a disconnected and circuitous local street network (Figure 52). Sidewalks are present in most of the neighborhoods west of Balm Riverview Road, but significant gaps in the overall pedestrian network are still present. Very few sidewalks can be seen in residential neighborhoods east of Balm Riverview Road. Bike lanes are present on Boyette Road, and connect to some roadways including Mc Mullen Road, FishHawk Boulevard, and Mosaic Dive. Bike lanes can be seen throughout Riverview, but do not form an interconnected bicycle network that connects residential neighborhoods to surrounding areas of activity.



**Figure 52. Riverview inventory**

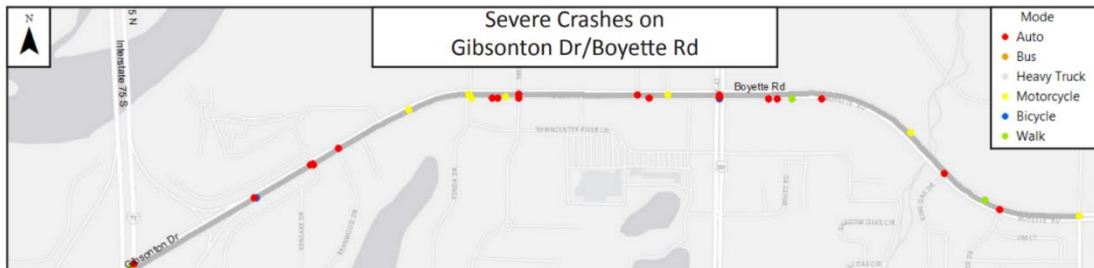
Two major roadways in Riverview are in the top 20 Hillsborough County Vision Zero Severe Crash Corridors (2012-2016) (Figure 53). Gibsonton Drive/Boyette Road, from I-75 to Balm Riverview Road, is the number 2 severe crash corridor with 49 crashes (21 per mile) (Figure 54). Big Bend Road, from US 41 to US 301, is the number 11 severe crash corridor with 51 crashes (16.6 per mile) (Figure 55). Findings in the Vision Zero corridor profiles reveal that severe crashes along Gibsonton Drive/Boyette Road involved left turns (39%), motorcycles (28%), failure to yield (29%), and aggressive driving and/or speeding (53%). Along Big Bend Road,

severe crashes involved left turns (41%), rear-end collisions (27%), failure to yield right-of-way (32%), and aggressive driving and/or speeding (53%).



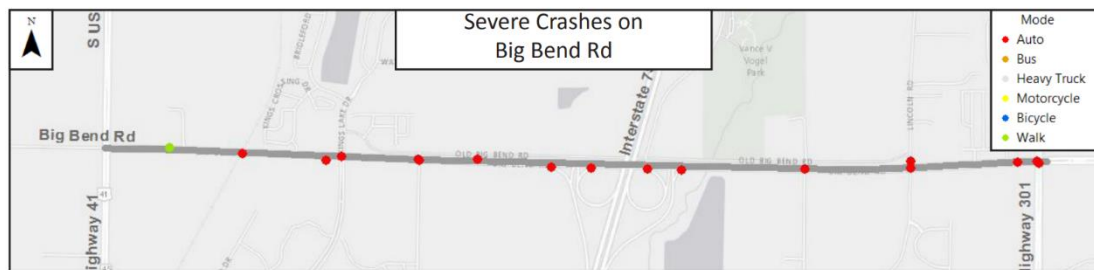
**Figure 53. Severe crashes in Riverview**

Source: Hillsborough MPO, 2019



**Figure 54. Severe crashes on Gibsonton Drive/Boyette Road**

Source: Hillsborough MPO, 2017



**Figure 55. Severe crashes on Big Bend Road**

Source: Hillsborough MPO, 2017

Table 12 includes total bicycle and pedestrian crashes by type and severity between 2012 and 2018 for Riverview. Bicycle and pedestrian crashes can be seen throughout Riverview. The highest frequency of crashes are seen along Gibsonton Drive/Boyette Road, US 301, Symmes Road, and Big Bend Road

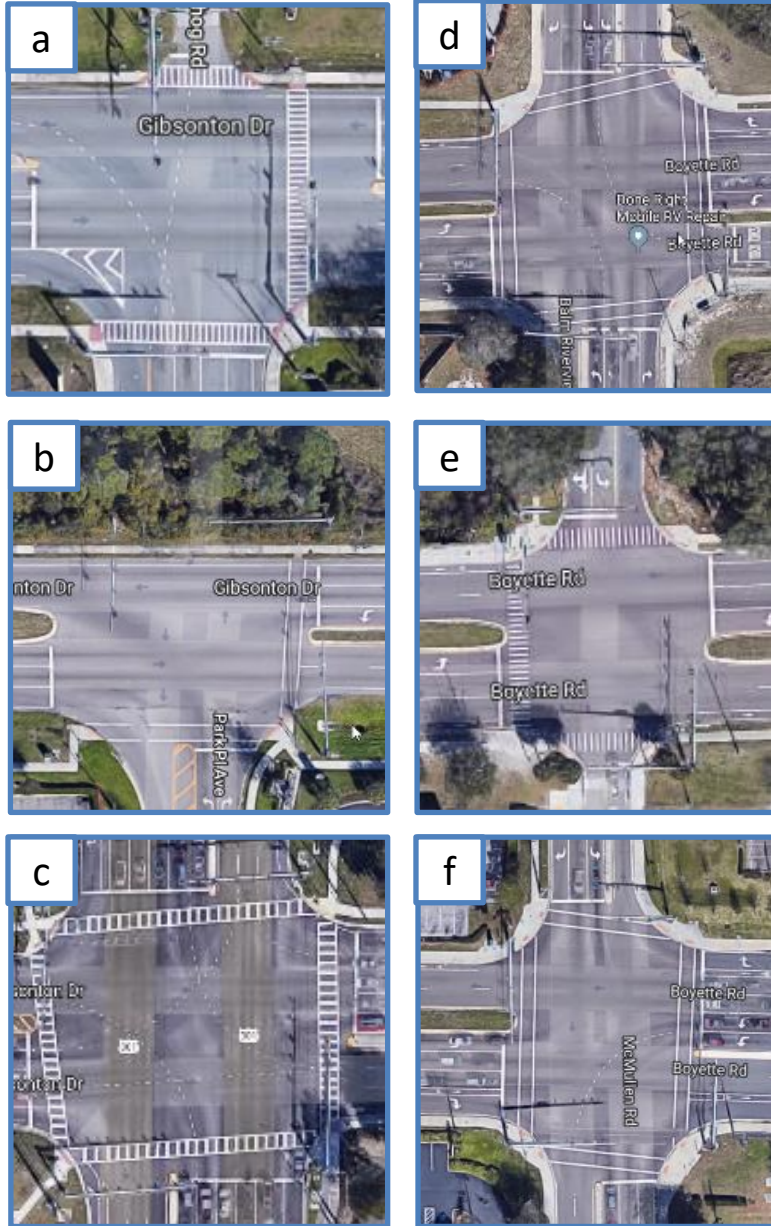
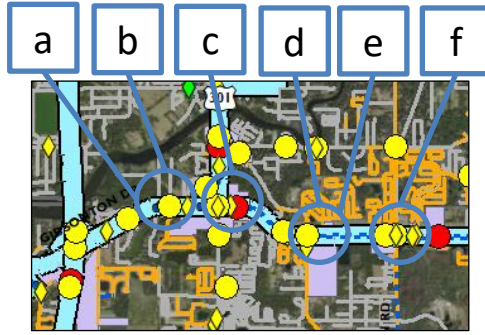
Gibsonton Drive/Boyette Road and US 301 are barriers to safe pedestrian and bicycle travel. Gibsonton Drive, west of US 301, is a 4 lane divided roadway with a posted speed limit of 45 mph. Boyette Road between US 301 and Balm Riverview Road is a 6 lane divided roadway with a posted speed limit of 45 mph. Boyette Road between Balm Riverview Road and Bell Shoals Road is a 4 lane divided roadway with a posted speed limit of 45 mph. US 301 between Rhodine Road and I-75 is a 6-lane divided roadway with a posted speed limit of 45 mph. The width and high speed on these roadways make them difficult to safely cross, even with the presence of sidewalks, bike lanes, and crosswalks.

**Table 12. Riverview Bicycle and Pedestrian Crashes per Square Mile by Type and Severity (2012-2018)**

Criteria	Number of Crashes per Square Mile
<b>Pedestrian Fatality</b>	0.21
<b>Pedestrian Injury</b>	1.66
<b>Pedestrian Property Damage</b>	0.07
<b>Bicycle Fatality</b>	0.02
<b>Bicycle Injury</b>	1.41
<b>Bicycle Property Damage</b>	0.05

Source: Signal Four Analytics

Sidewalks are present on both sides of Gibsonton Drive/Boyette Road. Crosswalks are available at several intersections along Gibsonton Drive/Boyette Road (Figure 56). Crosswalks at Gibsonton Drive and Park Place Avenue, Boyette Road and Balm Riverview Road, and Boyette Road, and Mc Mullen Road would benefit from additional striping or other treatments to increase their visibility.

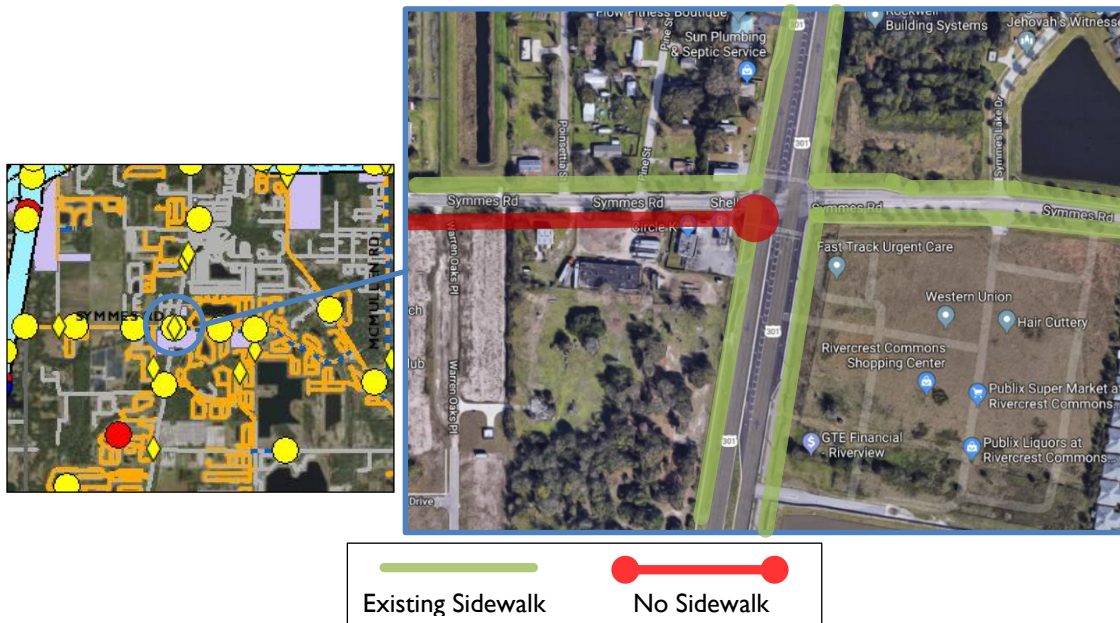


**Figure 56. Crosswalks on Gibsonton Drive/Boyette Road**

Source: Google Maps



Bicycle and pedestrian crashes can be seen along Symmes Road, but there is no discernible pattern or cluster of crashes. Symmes Road is a 2 lane undivided roadway with a posted speed limit of 45 mph between US 41 and US 301, and 25 mph between US 301 and Balm Riverview Road. Sidewalks are present on both sides of Symmes Road between US 301 and Balm Riverview Road. West of US 301, sidewalks are present along the northern side of Symmes Road, with gaps on the southern side of Symmes Road. Figure 57 shows an example of gaps in the sidewalk network along Symmes Road. Safety in this area can be improved by filling the gaps in the sidewalk network.



**Figure 57. Sidewalks on Symmes Road**

Source: Google Maps

In addition to gaps in the sidewalk network, the only crosswalks are available at the intersection of US 301 and Symmes Road, and at Symmes Road and Ramble Creek Drive (near Riverview Montessori School and Sessums Elementary School). These crosswalks can be seen in Figure 58. As Symmes Road continues to develop, additional crosswalks may be needed to support safe pedestrian and bicycle travel to nearby activity areas.

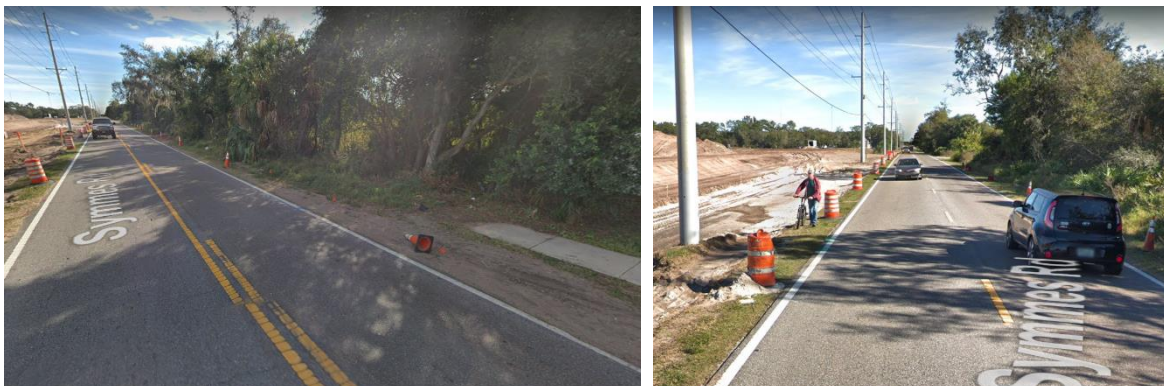


**Figure 58. Crosswalks on Symmes Road**

Source: Google Maps

Bike lanes are available along Symmes Road east of US 301. Adding bike lanes along Symmes Road west of US 301, and improving sidewalk connectivity, can provide safer travel for bicyclists.

Figure 59 is an example of how construction has created temporary obstructions to safe bicycle and pedestrian travel where sidewalks are already limited. Once construction is complete and the sidewalk on the northern side of Symmes Road is rebuilt, bicyclists and pedestrians will be able to safely travel on the sidewalk.

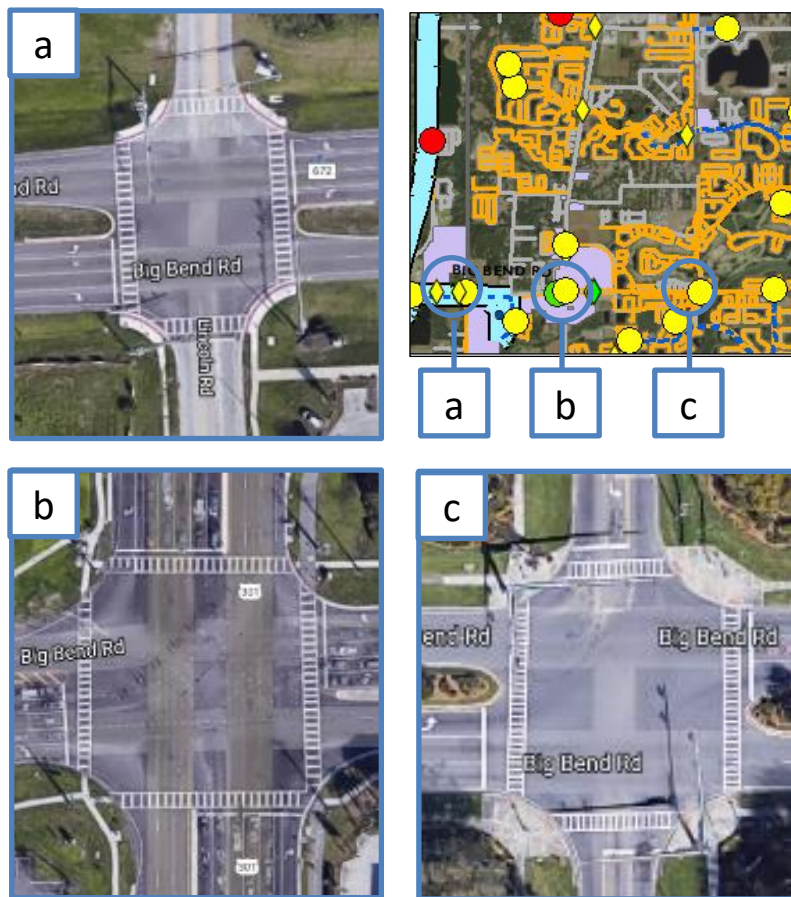


**Figure 59. Construction on Symmes Road**

Source: Google Maps

Big Bend Road is a 4 lane divided roadway between I-75 and Summerfield Boulevard, and a 2 lane undivided roadway between Summerfield Boulevard and Balm Riverview Road. The posted speed limit is 55 mph between I-75 and US 301, and 45 mph between US 301 and Balm Riverview Road. Most of the bicycle and pedestrian crashes on Big Bend Road are between I-75 and US 301, near the areas of activity. Big Bend Road is a barrier to safe bicycle and pedestrian travel, particularly between I-75 and US 301 where the roadway is wide and the speed limit is high.

Sidewalks are present on both sides of the roadway along most of Big Bend Road. Gaps in the sidewalk are visible on the northern side of Big Bend Road between I-75 and Summerfield Square Drive, and on the southern side of Big Bend Road between I-75 and Simmons Loop, between Heritage Greens Parkway and Little Bullfrog Creek, and between Balm Riverview Road and Lovers Lane. Crosswalks are available at Big Bend Road and Lincoln Road, Big Bend Road and US 301, and Big Bend Road and Summerfield Boulevard (Figure 60).



**Figure 60. Crosswalks on Big Bend Road**

Source: Google Maps

HART has routes along Gibsonton Drive/Boyette Road, US 301 north of Boyette Road, I-75, and Big Bend Road west of Lincoln Road HART stops are available on all of these routes except I-75. Most bus stops along Boyette Road have access to a sidewalk except for a few stops on the

southern side of Boyette Road between I-75 and US 301 (Figure 61). Gibsonton Drive/Boyette Road and Big Bend Road are barriers to transit users walking or biking to or from surrounding neighborhoods and areas of activity.



**Figure 61. Bus stops on Boyette Road**

Source: Google Maps

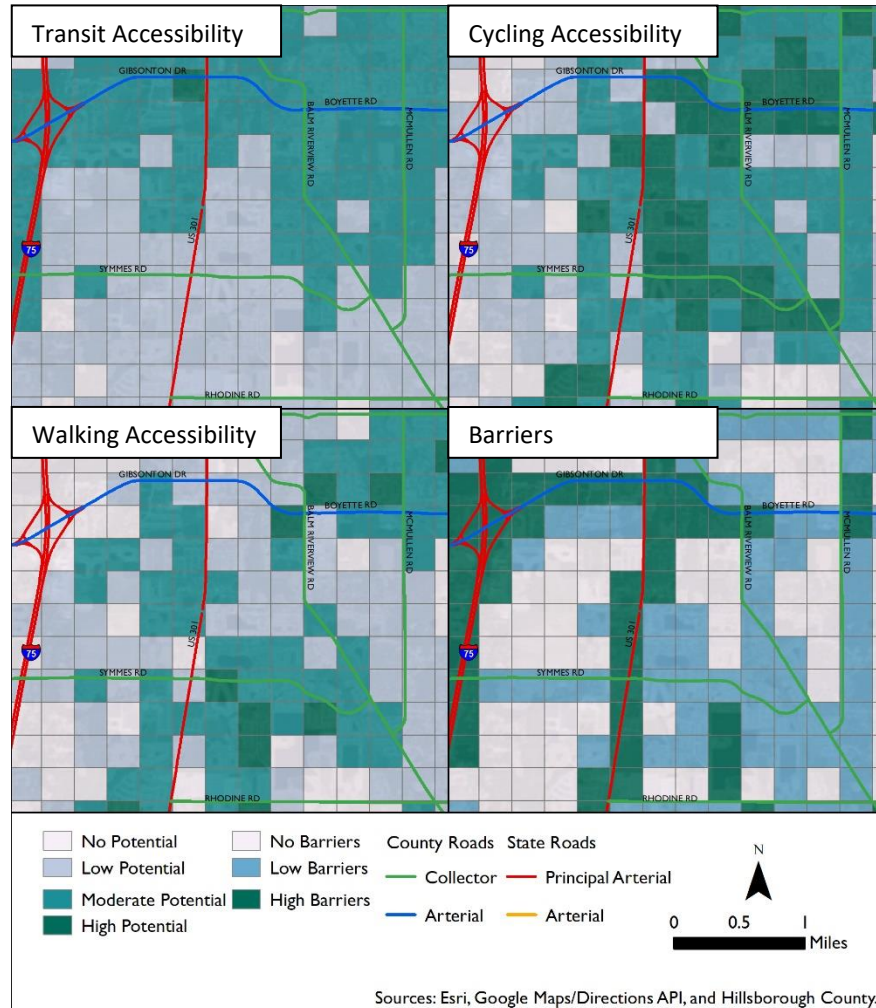
Figure 62 shows the multimodal accessibility and barriers in Riverview. Transit accessibility in Riverview is moderate or low with one cell of high accessibility at the intersection of US 301 and Gibsonton Drive. Areas with moderate transit accessibility are along Gibsonton Drive/Boyette Road and extend south along US 301, Balm Riverview Road, and McMullen Booth Road.

Cycling accessibility in Riverview ranges from low to high but is predominantly moderate or low. Areas with high cycling accessibility are seen east of US 301 and along Gibsonton Drive/Boyette Road, and Symmes Road. These areas of high and very high cycling accessibility are consistent with bike lanes identified in the Riverview inventory (Figure 52).

Walking accessibility in Riverview is predominantly low with pockets of moderate or high accessibility throughout. Areas with high accessibility are near the intersection of Gibsonton Drive/Boyette Road and Balm Riverview Road, the intersection of Gibsonton Drive/Boyette Road and McMullen Road, and pockets along Symmes Road east of US 301.

The multimodal accessibility barriers in Riverview are concentrated along I-75 and US 301, which is expected because of the speed and function of these roadways. Additional barriers can

be seen along segments of Gibsonton Drive/Boyette Road, and McMullen Road at the intersection of Boyette Road. Roadways that have a low barrier index include Symmes Road, Balm Riverview Road, and Mc Mullen Road.



**Figure 62. Riverview: multimodal accessibility and barriers**

Overall, the multimodal inventory and accessibility assessment for Riverview identifies areas in the community with multimodal safety and connectivity issues. Some of these issues include limited bike lanes, poor connectivity between existing bike lanes, gaps in the sidewalk network and areas with limited opportunity for safe bicycle and pedestrian crossing. These limitations in the bicycle and pedestrian network coupled with wide high-speed roadways make bicycle and pedestrian travel between neighborhoods and areas of activity difficult. Additionally, although most transit stops in Riverview have access to sidewalks and crosswalks, transit users traveling along, or trying to cross major roadways such as Gibsonton Drive/Boyette Road and Big Bend Road are still exposed to potential risks from motorists traveling at high speeds. Filling gaps in the sidewalk network, providing a more robust bicycle network, improving connectivity of the

local street network as development occurs (or providing bicycle/pedestrian cut-throughs at culs de sac and street ends) and creating more opportunities for safe bicycle and pedestrian crossing would facilitate safer and more convenient use of these modes.

### **3.5 Key Findings**

The inventory for Apollo Beach, Gibsonton, Sun City Center, and Riverview highlight some of the safety and mobility issues for multimodal transportation in South County. A disconnected and circuitous network increases trip lengths for all modes and discourages walking and biking. Gaps in the pedestrian and bicycle network, and deficiencies in existing sidewalks, bike lanes, and crosswalks do not foster a safe and comfortable environment for non-motorized travel. Poor access to sidewalks and limited amenities at transit stops including bus shelters, paved landings, and seating have a negative effect on transit users' experience, limit accessibility for persons with disabilities, and discourage transit use for individuals who have the option to travel using other modes. Some strategies to improve multimodal travel in South County include:

- Connecting the roadway network where possible to provide more direct routes which will shorten trip lengths and encourage non-motorized travel.
- Constructing sidewalks and bike lanes where gaps exist to provide a complete and interconnected network.
- Providing direct access to services from residential areas where feasible to reduce trip length for non-motorized travel.
- Adding buffers or additional space between sidewalks and the roadway, particularly on roadways with a high posted speed limit and high volumes of traffic.
- Reconfiguring and repainting crosswalks where the existing conditions may not be effective.
- Providing access to transit stops from sidewalks.
- Providing amenities at transit stops that improve the experience of using transit, these amenities can include shelter or shade trees, seating, a paved or level landing area.
- Adding shade trees along the walkway to protect pedestrians from the sun.

## 4 Access Management Assessment

Access management and corridor management are critical aspects of thoroughfare planning for South County. The rapid growth of the area, combined with the relatively sparse network of arterial and collector roadways, indicates a need for careful network planning. This chapter reviews Hillsborough County policies and regulations for access management and corridor (right-of-way) management, and highlights selected access management issues in the South County study area.

Access management to state maintained roadways is governed by the Florida Department of Transportation, Rules 14-96, FAC and 14-97, FAC. Access management to County maintained roadways is regulated by the County in accordance with Part 6.04.00: Access Management of the Hillsborough County Land Development Code. An overview of these requirements is provided in Table 13.

**Table 13. Hillsborough County Access Management Requirements**

TECHNIQUE	HILLSBOROUGH COUNTY
Access Classification	FDOT AC 1, 3, 5 (see Figure 63); County Access Classes are adopted in code, but not assigned to roadway segments.
Connection Permit Required	No person shall construct or modify any connection providing vehicular or pedestrian access to or from any County roadway from or to adjacent property without a connection permit (Section 6.04.01(B) & 6.04.01(I)). Approval of new subdivision plans constitutes a permit. Permit from FDOT on state maintained highways.
Driveways per Site	Minimum number of driveways to adequately serve the site without adversely impacts roadway function. Number determined by maximum desirable vehicle flow rate at entrances for residential and non-residential land uses based on street characteristics; fewer allowed by traffic engineering study (Section 6.04.03(I)).
Access Spacing Standards	Minimum connection and median opening spacing of the FDOT (State highways) or County access classification (see Table 15). Greater distances may be required for storage. Right in/out access less than minimum may be permitted where standard cannot be met due to size, configuration or location of parcel.
Access Location	Primary driveway connections to non-residential development that abuts collector/arterial and local roads shall be at collector/arterial roads and local roads shall be for secondary access (6.04.03(I)(6)). If abutting both arterial and collector roadways, access must be on collector, unless arterial access is demonstrated to be of greater public benefit. (6.04.03(B-C))

Access to Auxiliary Lanes	Prohibited unless access would be denied and driveway can function safely and efficiently (6.04.03(H)).
Corner Clearance	All connections must meet or exceed the minimum connection spacing requirements in Table 15 (Section 6.04.03(R)). Special provisions for isolated corner properties (Sec. 6.04.08).
Corridor Overlays / Special Districts	Code provides for designation of Special Corridors by the Commission.
Driveway Throat Length	Varies depending on the land use (Section 6.04.04(A)).
Flag Lot Standards	Private drive should be a minimum of 20 feet wide and shall only provide access for the single parcel. The pole portion of a flag lot should not exceed 1,000 feet in length (Section 6.02.01(B(4))).
Outparcel Regulations	None specifically identified, although policies and regulations promote internal access to developments along arterial and collector roadways.
Interchange Area Access Management	Special restrictions up to ¼ mile from an interchange area or up to the first intersection with an arterial roadway, as specified in note 3 of table of minimum spacing standards (Sec. 6.04.07).
Cross Access	Vehicular and pedestrian cross-access required if the site is on a roadway with an Access Classification of 1 to 5 and between sites with commercial or office land use designation or zoning with access on the same roadway (Section 6.04.03(Q)).
Shared Access	Encouraged when two or more contiguous sites are planned for compatible uses and where trip generation from site will not warrant a traffic signal (Section 6.04.03(D)).
Pedestrian and Bicycle Access	Sidewalks required to provide for safe pedestrian circulation and shall be constructed within rights-of-way, adjacent to or internal to the site (Section 6.03.02 and Section 6.02.08). Pedestrian cross access also required between sites with commercial or office land use designation or zoning with access on the same roadway and/or residential sites of 12 DUs or more (Section 6.04.03(Q)).
Retrofit Requirements	Modifications to existing driveways that will result in a significant change in driveway traffic volumes and/or dimensions, location, profile, or in the manner in which stormwater is handled must apply for an access permit. Substantial modifications to existing connections that are related to construction off the right-of-way and involve a building permit must also get a connection permit (Section 6.04.03(I)1b and 3)..



Signal Spacing	Regulates minimum spacing in Section 6.04.07. FDOT requirements on state maintained roadways, County regulates signal spacing per median opening spacing criteria on all County roadways in practice. No specific signal spacing criteria identified in code.
Deviations from Connection Spacing	Hillsborough County Office of the County Administrator; appeals are heard by the Land Use Hearing Officer (Section 6.04.02(B)).
Minor Subdivision or Lot Split Regulations	Regulates lot splits in Section 6.04.01 through administrative review procedures for “certified parcels” (a maximum of two lots, containing no improvement facilities). Access management is addressed in this review.

#### 4.1 Access Management Policies

The Comprehensive Plan for Unincorporated Hillsborough County includes numerous access management objectives and policies that exemplify effective practices. General access management policies from the Future Land Use Element of the Comprehensive Plan are listed in Table 14, with others included under specific topics later in the chapter.

**Table 14. Hillsborough County Access Management Policies (FLU)**

Policy 12.3:	Restrict direct access to arterial roadways from development projects when access can be provided via a collector or local facility.
Policy 12.6	Control curb cuts and intersections on new and existing arterial roadways through access management standards adopted as part of the Hillsborough County land development regulations and by the Florida Department of Transportation.
Objective 23	To maintain the vehicular capacity of public roads, the County discourages linear ("strip") non-residential development patterns and the multiple access points which accompany such linear neighborhood serving commercial development.
Policy 23.4	The linear extension of existing strip commercial areas shall be prohibited, except in accordance with infill provisions of Policy-25.3.
Policy 24.3	The development of commercial uses at interstate interchanges as planned, unified development on single tracts of land shall be encouraged to enable the use of common accesses, and to encourage other site design measures to minimize impacts to surrounding areas.
Policy 25.1	Incentive. The redevelopment or revitalization of rundown strip commercial areas shall be encouraged. Redevelopment or infill office/mixed use projects choosing to locate in established areas of strip commercial development may attain a fifty percent incentive above the maximum F.A.R. of the respective land use category, subject to a site plan-controlled development and that at least two of the three redevelopment provisions below are met:

	<ol style="list-style-type: none"> <li>1. An improvement to the transportation system and/or access management is clearly demonstrated by a reduction in the overall traffic impacts to adjoining roadways. Means to accomplish this include but are not limited to: providing transit amenities per the transit authority, reducing trip generation through the mix of uses, or deleting the number of access points, providing cross access, shared access, or realignment.</li> <li>2. An improvement to the visual qualities of the site is provided by reduced signage, greater open space or enhanced landscaping.</li> <li>3. Incorporation of vertically integrated mixed uses such as offices or residential above commercial space.</li> </ol>
Policy 34.3	Access to high density/intensity development shall be encouraged to be located onto the county arterial and collector system rather than the state highway system in the I-75 Corridor. This will be accomplished through the promotion of clustering of highest intensity uses with access to the county arterial system, through the review of access points by Florida Department of Transportation (FDOT) and the requirement that new developments provide sufficient right-of-way for a future county parallel arterial system to serve I-75 Corridor development.
Policy 38.3	The County shall develop plans to provide internal access for developments which front on collector or arterial roadways. Florida Department of Transportation participation shall be requested in the planning process for projects fronting on the State highway system.
Policy 38.4	The County shall develop an I-75 Corridor Long Range Transportation Plan to be adopted by the MPO. The Plan shall demonstrate an adequate arterial and collector support system based on the existing roadway network and the proposed arterials and collectors required to support the anticipated traffic and satisfy criteria based on Interstate-75 interchange spacing, access to highways which intersect the interchanges, access to arterial streets and intersections, temporary access and internal access road requirements. The purpose of the arterial and collector support system shall maintain the Level of Service established in the plan for I-75.

## 4.2 Access Classification System and Standards

Section 6.04.03 of the Hillsborough County Land Development Code addresses access management for the purpose of maintaining the efficiency and safety of the transportation system and to protect the planned function of the abutting roadway. Minimum spacing between adjacent access points and between adjacent median openings is “a function of the Access Class assigned to the main roadway.” (Sec. 6.04.03(J)). Despite this statement, the classifications have not been assigned to the County roadway network, as is typical of contemporary practice. County staff indicate that the determinations of the appropriate access classification and standards are made on a case-by-case basis as access permits are requested.

State maintained roadways are assigned an access classification by the Florida Department of Transportation, as shown in Figure 63 and Table 16. FDOT governs access permitting on all state maintained roadways. The County access classification system and standards are provided in Table 15. They are similar to those of FDOT, other than the use of 330 ft. spacings (FDOT applies 440 feet) Access Class 7, which contains standards unique to the County.

**Table 15. Hillsborough County Access Classification System and Standards**

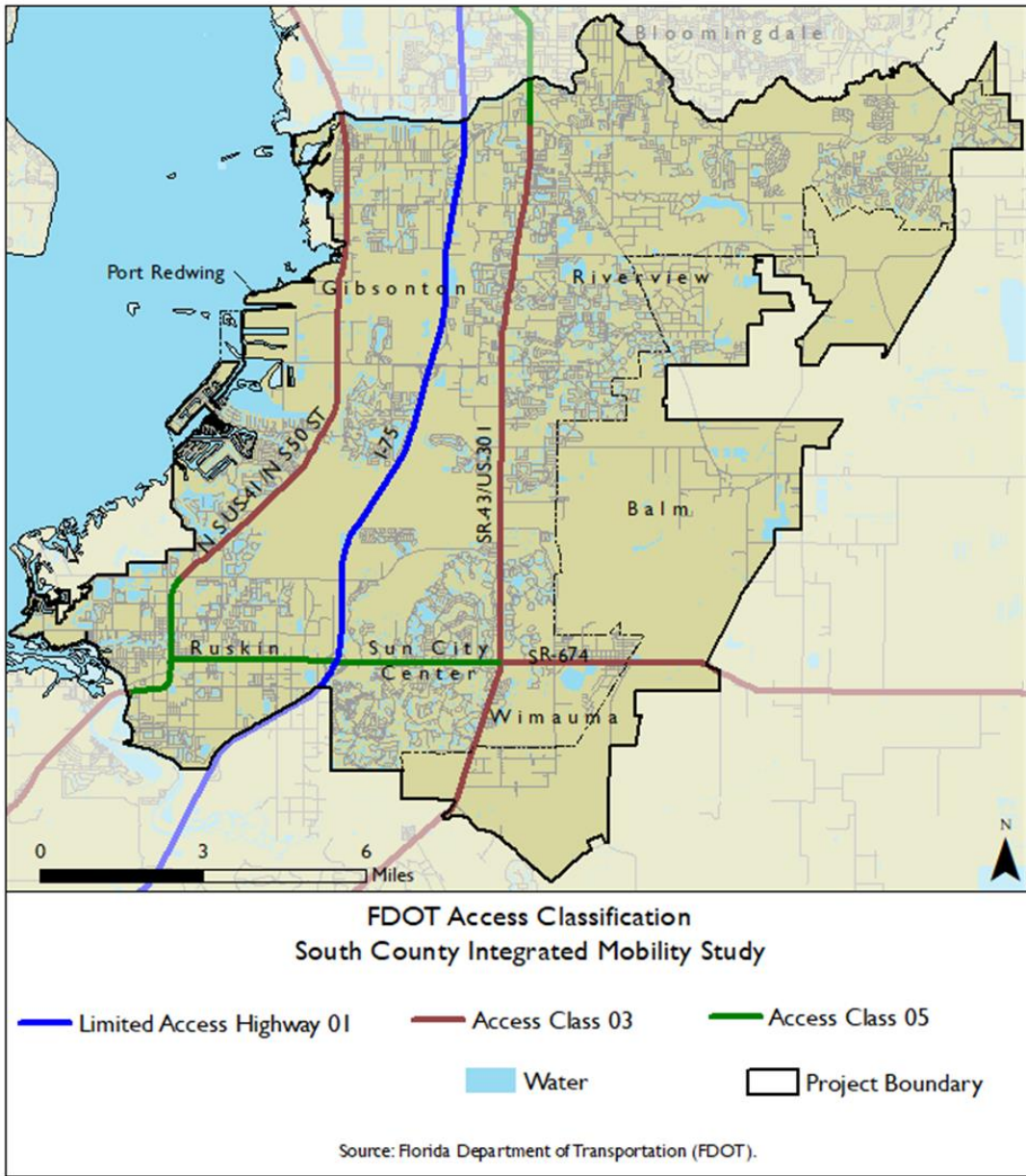
Minimum Spacing			
Access Classification (See Notes)	Minimum Connection Spacing	Min. Median; Opening Spacing (Directional)	Min. Median Opening Spacing (Full)
CLASS 2			
A specially protected corridor distinguished by an extensive existing or planned system of access roads and restrictive median treatments.	>45 mph 1320 ft ≤45 mph 660 ft	>45 mph 1320 ft ≤ 45 mph 660'	>45 mph 2640 ft ≤ 45 mph 1320 ft
CLASS 3			
New and existing roadways primarily in areas without extensive development or extensive subdivided properties. These corridors will be distinguished by existing or desired restrictive median treatments. Two lane highways with a desired high degree of access management should also be included.	>45 mph 660 ft ≤45 mph 330 ft	>45 mph 1320 ft ≤45 mph 660 ft	>45 mph 2640 ft ≤45 mph 1320 ft
CLASS 4			
New and existing roadways primarily in areas without extensive development or extensive subdivided properties. These corridors will be distinguished by nonrestrictive median treatments or highways with two-way left turn lanes.	>45 mph 660 ft ≤45 mph 330 ft	N.A.	N.A.
CLASS 5			
Existing roadways primarily in areas with moderate or extensive development or where the land is extensively subdivided. These corridors will be distinguished by existing or desired restrictive median treatments.	>45 mph 330 ft ≤ 45 mph 245 ft	All Speeds 660 ft	>45 mph 1320 ft ≤ 45 mph 660 ft
CLASS 6			
Existing roadways primarily in areas with extensive development or where the land is extensively subdivided. These corridors will be distinguished by existing or expected	>45 mph 330 ft ≤45 mph 245 ft	N.A.	N.A.

nonrestrictive medians, such as an undivided two or four lane highway or multi-lane highways with two-way left turn lanes.			
CLASS 7			
Subdivision roads and all other local roadways functioning as subdivision roads.	TYPE I = 10 ft Type II = 50 ft (<5000 vpd*) 175 ft (≥ 5000 vpd*)  Type III = 50 ft (<5000 vpd*) 250 ft (≥ 5000 vpd*)	All Speeds 330 ft	All Speeds 330 ft

March 1, 1991 \* refers to volume on adjacent roadway

#### NOTES AND SPECIAL REQUIREMENTS

1. Access road systems in Access Class 2 assumes the provision of an access road system or adequate internal property circulation through existing or new public and private roads in transportation and comprehensive plans and through local land development regulations.
2. Minimum connection and directional median spacing openings specified here may not be adequate if extensive right or left-turn storage is required. Greater distances may be required to provide sufficient site-specific storage.
3. Connections and median openings on the public roadway system located up to ¼ mile from an interchange area or up to the first intersection with an arterial roadway, whichever distance is less, shall be regulated to protect the safety and operational efficiency of the limited access facility and the interchange area. The ¼ mile distance shall be measured from the end of the taper of the ramp furthest from the interchange.
  - a. The distance to the first connection shall be at least 660 feet where the posted speed limit is greater than 45 mph or 440 feet where the posted speed limit is 45 mph or less. The distance will be measured from the end of the taper for the particular quadrant of the interchange. If the above connection spacing cannot be provided, a single connection per property will be provided if no other reasonable access to the property exists and the issuing authority determines that the connection does not create a safety, operational or weaving hazard.
  - b. The minimum distance to the first median opening shall be at least 1,320 feet as measured from the end of the taper of the egress ramp.
  - c. Connections and median openings meeting the above spacing standards still may not be permitted in the location requested in the permit application, when the issuing authority determines, based on traffic engineering principles, that the safety or operation of the interchange or the limited access highway would be adversely affected.



**Figure 63. FDOT Access Classifications in South County**

**Table 16. FDOT Access Classifications**

ROADWAY	ACCESS CLASSIFICATION
I-75	01
SR-43/US-301: Boyette Road extending south of the study area boundary	03
SR-674: SR-43/US-301 extending east of the study area boundary	03
N S US-41/N S 50 St/Melburne Boulevard: Santa Fe Road to 19 <sup>th</sup> Avenue NE	03
N S US-41/N S 50 St/Melburne Boulevard: 19 <sup>th</sup> Avenue NE to study area boundary	05
SR-674: US-41 to SR-43/US-301	05
SR-43/US-301: north of the study area boundary to Boyette Road	05

**4.2.1 Connection Permitting**

A connection permit must be obtained from the Florida Department of Transportation for access to state maintained roadways. A permit from Hillsborough County Development Services is required before modifying or constructing connections to the county road system. Specific circumstances in which the County requires a connection permit include (Sec. 6.04.01(l)1):

- All new driveways onto the public street system, regardless of whether the development served by the driveway is new or existed previously.
- All modifications to existing driveways that will result in a significant change in the driveway's traffic volumes and/or dimensions, location, profile, or in the manner in which stormwater is handled.
- Any modification to the driveway(s) required by the County due to changes made by the property owner that affect the safe and efficient operation of the driveway(s) or public street system.
- All new public or private roads, or modifications to private roads desired by the County or the property owner. For new development under the subdivision regulations of the

County, approval of the final construction plans by the Administrator shall serve as approval of the new connection(s) and no separate permit will be required.

- All sidewalk or bikeway connections to the public street system.
- Temporary driveways for access to vacant parcels or those on which a building is under construction and that are not served by a permanent driveway.

For purposes of permitting, “significant change” is defined as “a change in the use of the property, including land, structures or facilities, or an expansion of the size of the structures or facilities causing an increase in the trip generation of the property, based on the Institute of Transportation Engineers "Trip Generation Manual" (latest edition), or other rates accepted by Hillsborough County, exceeding 300 vehicles per day more than the existing use,” (Part 12.01.00 Definitions). If so, the property owner must contact the County to determine if a new permit application and modifications to existing connections will be required.

Sites undergoing substantial improvement may also be required to upgrade existing access connections. This is defined as any combination of repair, reconstruction, alteration or improvement of a structure, taking place during a one year period, in which the cumulative cost equals or exceeds 50 percent of the market value of the structure. The market value of the structure should be (1) the appraised value of the structure prior to the start of the initial repair or improvement, or (2) in the case of damage, the value of the structure prior to the damage occurring. This is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. Improvements to comply with existing health, sanitary, or safety code specifications solely to assure safe living conditions are exempted.

The County categorizes roadway connections into five types for purposes of design and permitting, using several factors, including expected traffic volume, property type, land use, and connection type, as shown in Table 17. The number of allowable driveways in development and redevelopment proposals is determined by calculating Peak Hour Total Project Traffic divided by Maximum Vehicle Flow, as rounded to the highest whole number.

**Table 17. Hillsborough County Connection Types**

CONNECTION TYPE	CONNECTION TYPE DESCRIPTION
Type I—Minimum Connection or Sidewalk	Low volume traffic generators with estimated ADT less than 50, such as driveway access to agricultural fields and sidewalk and bikeway connections
Type II—Minor Connection	Medium volume traffic generators with estimated ADT of 50 or more, but less than 1,500.
Type III—Major Connection	Highway volume traffic generators with ADT of 1,500 or more, such as shopping centers, industrial parks,

	office parks, colleges, apartment or condominium complexes, etc.
Type IV—Public/Private Roads	All new public or private roadways.
Type V—Special Corridors	Access to public roadways designated as Special Corridors by the Board of County Commissioners.

#### 4.2.2 Cross Access and Unified Access

Another strategy for network enhancement is to promote internal connections between adjacent developments. Interparcel cross access reduces the need to use the public street system while moving between adjacent and complementary land uses where vehicular and pedestrian trips are likely to occur. The County strongly emphasizes cross access in its comprehensive plan policies and land development code (see Table 18). County policies and regulations also promote consolidation of access and unified access and circulation plans.

**Table 18. Hillsborough County Cross Access and Shared Access Policies**

Transportation Element	
Policy 1.5.10	The County shall continue to encourage consolidation of site access points serving developments, and coordinate the issuance of permits for driveway curb cuts and median openings on the State Highway System with the FDOT, during the site plan review stage of development, prior to local government issuing construction permits for development which will impact the State Highway System.
Policy 1.5.13	Hillsborough County shall continue to implement standards for providing cross-access among parcels fronting arterial roads, consistent Hillsborough County Transportation Element 139 with access management policies and the need for safe, consolidated access points.
Future Land Use Element	
Policy 23.1	The County shall work to consolidate and reduce the number of curb cuts in strip commercial areas through such methods as cross access agreements.

The county regulates cross access according to the following requirements (Section 6.04.03(Q)). Vehicular and pedestrian cross-access must be provided if:

- The site is on at least one roadway with an Access Classification of 1 through 5, and

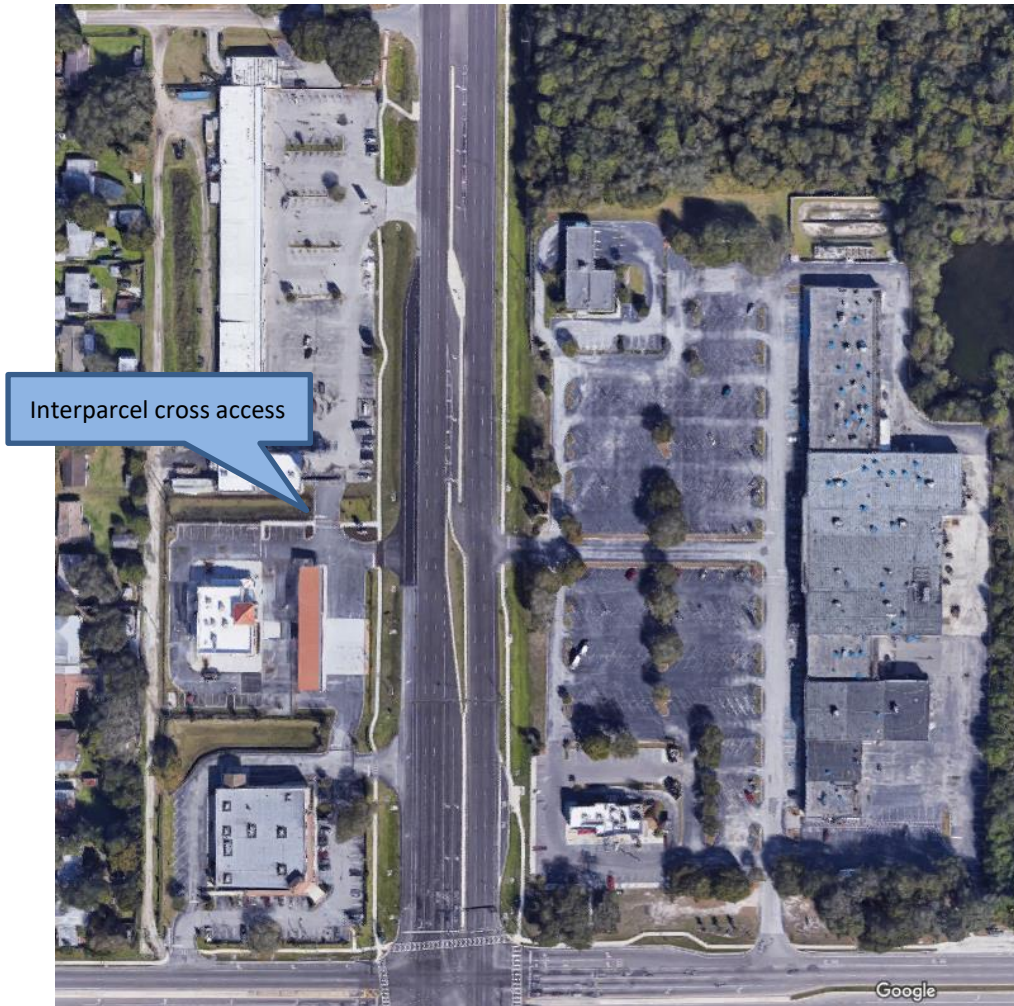


- The site has a commercial or office land use or zoning designation, and is adjacent to a parcel with a commercial or office land use designation or zoning that has access on the same roadway.

Pedestrian cross-access must also be provided between adjacent sites with a land use or zoning designation of commercial or office and/or those allowing 12 dwelling units per acre or more. Access Class 1 refers to Interstate highways, and therefore is not applicable.

When these criteria are met and in the opinion of Hillsborough County, cross-access is feasible, then cross-access must be designed and built to the property line of the adjacent parcel (whether it is developed or not). If the adjacent site is developed but, in the opinion of Hillsborough County, cross-access is not feasible at the time, then the applicant may simply design and designate the location of future cross access on the site plan. The owner must commit, in writing, to construct and allow cross-access “at such time as Hillsborough County determines that cross-access is feasible and desirable.” The minimum width of a vehicular cross-access is 24 feet, and the minimum width of a pedestrian cross-access is five feet.

Shared access facilities onto arterial and collector streets are also encouraged when two or more contiguous sites are planned for compatible uses. Shared access is noted as desirable where the trip generation from the anticipated land uses will not be large enough to warrant a traffic signal (Section 6.04.03(D)).



**Figure 64. Example of interparcel cross access at US 301 and Gibsonton Avenue.**

Some overlay criteria relative to cross access or service drives, as well as direct pedestrian access, were also identified in the land development code. For example, the Riverview Downton-Uptown Overlay District (Part 3.20.00(4) -Connectivity) provides that,

- a. Parking, service drives, and alleys shall be designed to allow for future connections to adjacent parcels and to allow all development along US Highway 301 to be accessible from a street with an intersection at US Highway 301.
- b. Direct pedestrian access in the form of pedestrian entrances, sidewalks, crosswalks, and other walkways from public sidewalks to building entrances and between parcels shall be provided.

#### ***4.2.3 Access Location and Design***

Access design requirements in the Hillsborough County code include location, operational characteristics, spacing, and throat width/length. Driveway width considerations include, but are not limited to, the number of lanes, driveway geometrics, internal obstructions, and traffic

safety. Driveway length is regulated to provide for uninterrupted traffic flow on the public street, based on anticipated required stacking lengths of entering and exiting vehicle during the peak period, as determined by a traffic study. County throat length guidelines for unsignalized driveways are shown in Table 19.

**Table 19. Minimum Lengths for Unsignalized Driveways**

LAND USE	DRIVEWAY LENGTH (IN FEET)
Any major entrance with 4 or more total lanes in the in the driveway. Typically malls, and "Super" retail centers.	300 or greater, based on traffic study
Regional Shopping Centers (over 150,000 sq. ft.)	250 (minimum)
Community Shopping Center (100-150,000 sq. ft.) (Supermarket, drug store, etc.)	150 (minimum)
Small Strip Shopping Center	50 (minimum)
Smaller Commercial Development (convenience store with gas pumps)	30 (minimum)
Residential Developments	250 (maximum)

A variety of substandard access designs were observed along arterial and collector routes in the study area, particularly along older commercial areas abutting US highway 41, US 301, and Sun City Center Boulevard. Figure 6 is an example of an older developed area along the Sun City Center Boulevard corridor in Wimauma with wide access connections and lack of a safe transition between parking areas and the highway, creating dangerous conditions for drivers, pedestrians and cyclists. Shared parking to the rear of the sites and side street access, with parking lot cross access, would improve safety as these sites redevelop or a change in use occurs.



**Figure 65. Poor transition between commercial sites and Sun City Center Blvd. in Wimauma.**

South County also has many examples of effective access location and design of suburban development. Near East Bay High School and Eisenhower Middle School, Old Big Bend Road serves as a service road for Big Bend Road. This provides access to parcels along Big Bend Road, while maintaining the safe and efficient operation of the arterial roadway. Old Big Bend Road also provides internal access for the residential subdivision just west of the two public schools, thereby helping to reduce use of Big Bend Road for short local trips.



**Figure 66. Service road provides access control along Big Bend Rd. near East Bay High School.**

Several developments in South County also provide internal cross access and circulation. The Lowes home improvement store in Gibsonton is an example of this access design, which also includes direct internal pedestrian access from Gibsonton Drive. These examples are provided later in the chapter.

#### 4.2.4 Corner Clearance

Corner clearance is a special case of connection spacing that refers to the separation of access connections from roadway intersections. Driveway spacing at intersections and corners should protect the functional area of the intersection with the goal of maintaining adequate sight distance, response times, and space for vehicles to queue without frequently blocking the access. The County code indicates that all connections near intersections, must meet or exceed the minimum connection spacing requirements for the abutting roadway, as provided in Table 15 above. Exceptions are provided for access to isolated corner properties as follows:

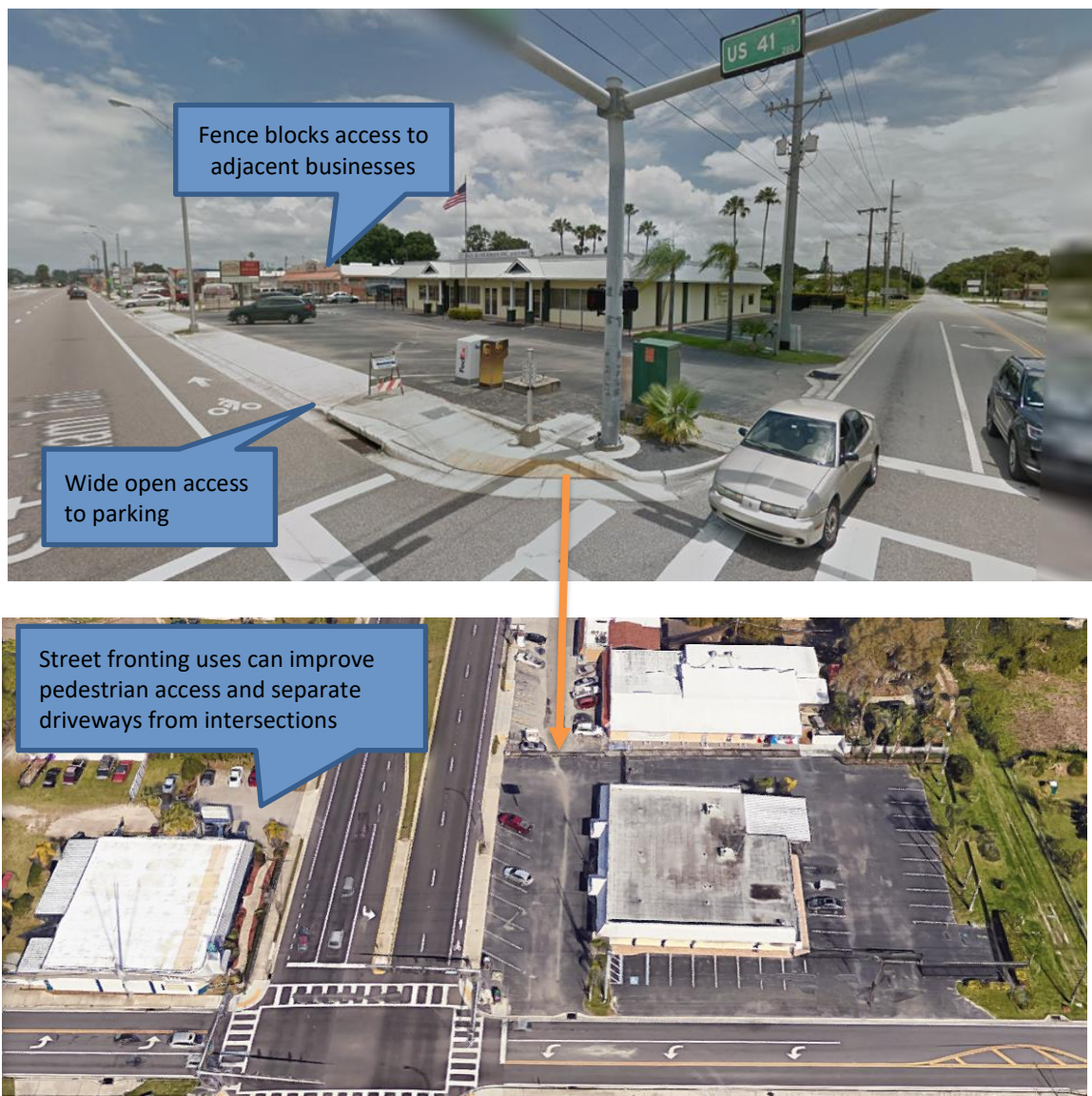
- For Type I connections (i.e., single family homes), minimum corner clearance is 10 feet.
- For all other Types, a single connection may be placed closer to the intersection if, due to property size, the minimum spacing standards in the Minimum Spacing table cannot be met, and where joint access which meets or exceeds the applicable connection spacing cannot be obtained with a neighboring property or, it is determined by the County that joint access is not feasible based on conflicting land uses or conflicting traffic volumes/characteristics, then the minimum corner clearance given in Table 20 can be used.

**Table 20. Corner Clearance for Isolated Corner Properties Only**

Position	Access Allowed	Minimum Clearance
With Restrictive Median		
Approaching Intersection	Right In/Out	115'
Approaching Intersection	Right In Only	75'
Departing Intersection	Right In Out	230' (125)*
Departing Intersection	Right Out Only	100'
Without Restrictive Median		
Approaching Intersection	Full Access	230' (125)*
Approaching Intersection	Right In Only**	100'
Departing Intersection	Full Access	230' (125)*
Departing Intersection	Right Out Only**	100'

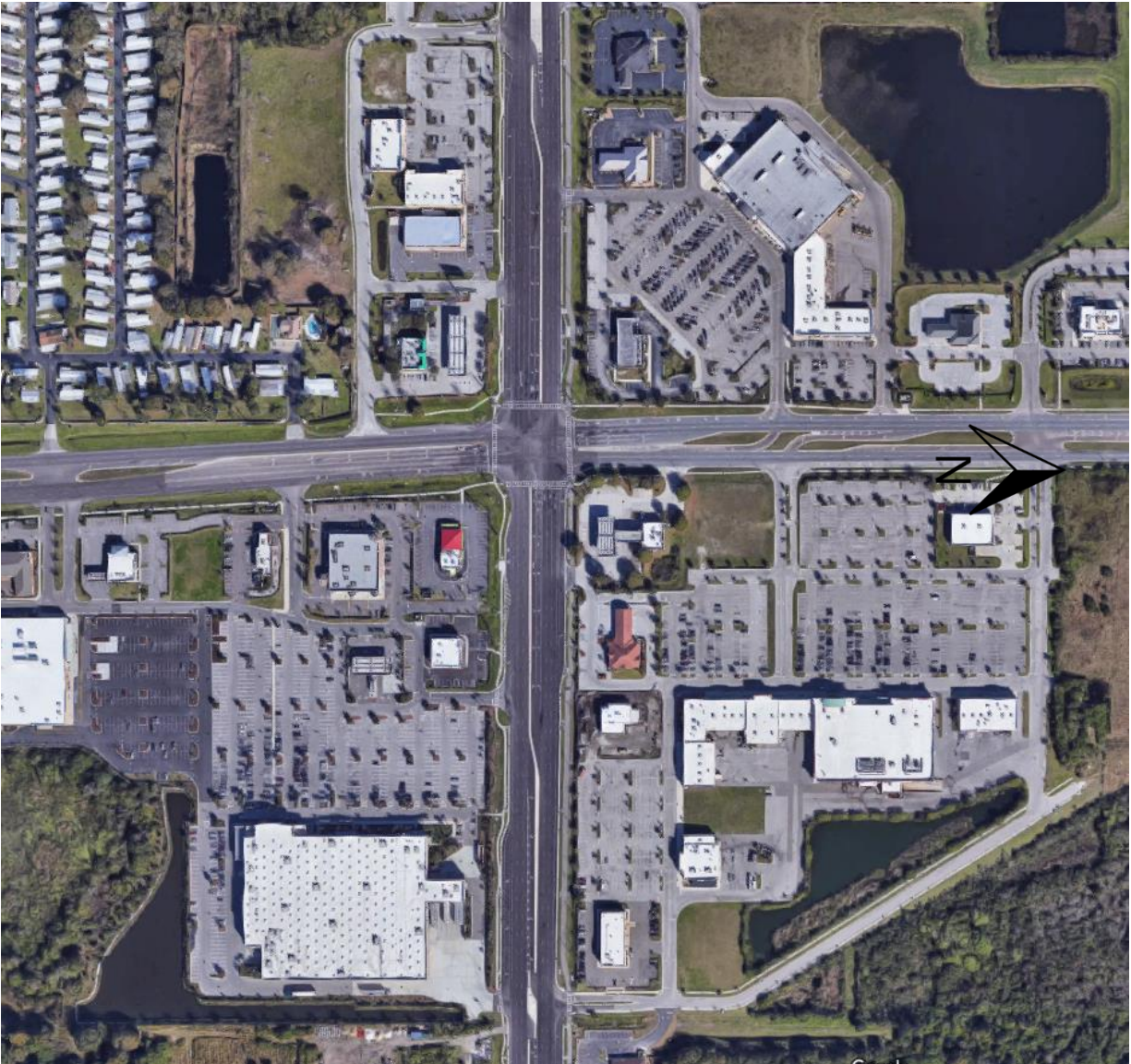
The code also prohibits construction of connections along acceleration or deceleration lanes, tapers connecting to interchange ramps, intersecting roadways, bus bays, or other driveways. However, the County administrator may grant a variance if access is unreasonably denied and the connection can be designed to function safely and efficiently.

Examples of both good and poor corner clearance were observed in the study area. Poor corner clearance was common in older commercial areas. An example of poor driveway design is in Ruskin near the intersection of US Highway 41 and 7<sup>th</sup> Avenue NE (Figure 67). This older strip development has numerous, closely spaced driveway connections and poor transition between the site and the highway, creating a potentially hazardous and unsafe environment for pedestrians. Development to the rear of the site creates a potential for improvements to the overall network and circulation system.



**Figure 67. Corner clearance examples at US 41 and Shell Point Road intersection.**

The County and FDOT are clearly working to improve corner clearance for newer suburban shopping center developments, as can be seen at the intersection of Big Bend Road and US 301 (Figure 68).



**Figure 68. Examples of good corner clearance & interparcel cross access at Big Bend Rd and US 301.**

#### ***4.2.5 Pedestrian and Bicycle Access***

County policies and regulations require consideration of pedestrian and bicycle access during the development process. Policy 23.3 of the Future Land Use Element states that “Commercial development should be designed to decrease the need for motorized vehicle trips by designing convenient, safe, non-motorized access.” Section 6.03.02 of the LDC states that sidewalks are

required to provide for safe pedestrian circulation and shall be constructed within rights-of-way, adjacent to or internal to the site.

Internal sidewalks are also required from public transportation stops, parking and passenger loading zones, and public streets or sidewalks to the building entrance they serve. Accessible routes shall connect buildings, facilities, elements and spaces that are on the same site. In the study area, many commercial sites along major roadways have pedestrian or bicycle connections from the sidewalk into the site, as illustrated in Figure 69.



**Figure 69. Pedestrian access from sidewalks along arterial roadways into stand alone commercial site (left) and Lowes shopping center (right).**

#### ***4.2.6 Lot Splits and Subdivision Requirements***

Hillsborough County regulates lot splits in Section 4.1.4 through administrative review procedures for “certified parcels” (a maximum of two lots, containing no improvement facilities are created from a parcel). These lots must meet basic access requirements. Flag lots to serve a single dwelling unit may be created in a Certified Parcel Subdivision as long as the subdivision is located within the rural service area and an agricultural zoning district. These lots must meet minimum lot size requirement and the private drive must be a minimum of 20 feet in width, not exceed 1000 feet in length, and only provide access for the single parcel.

Other types of subdivisions are governed through a platted subdivision review process. All lots within a platted subdivision are required to have adequate vehicular and pedestrian access,



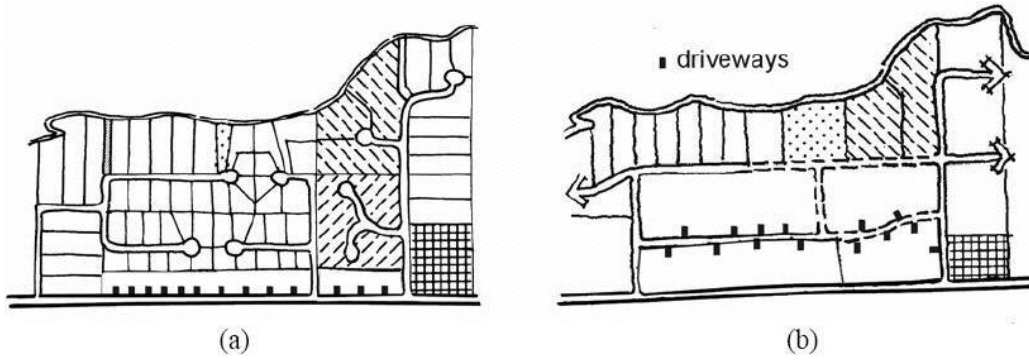
while local circulation systems and land-development patterns should not detract from the efficiency of bordering major streets (Section 6.02.00(A)). The code requires platted subdivisions to provide adequate vehicular and pedestrian access for each parcel and indicates that access management strategies (e.g., control of driveways, intersection placement, full or partial control of access) may be necessary to ensure that local circulation systems do not detract from the efficiency of major streets. It states that land development should occur so that no parcels require direct access to major streets (collector roads). Section 6.02.01(B(4))

### **4.3 Corridor Management and Street Network Development**

A balanced roadway network consists of a combination of major arterials, minor arterials, collectors and local streets. Ideally, arterial roadway networks are developed in a grid pattern with a general network spacing of ½ mile for continuous 4-lane roadways (Williams, et al., 2014, Levinson, 1996). This pattern improves traffic performance by distributing traffic across the network and reducing pressure at intersections. In addition, “street spacing and scale are interrelated. In general more continuous streets (i.e., closer spacing) is better than fewer,” (Levinson, 1996). Four-lane roadways are less intrusive than six lane roadways, better integrate into surrounding areas, and complement urban placemaking and complete streets concepts. Collector roadways round out the grid by connecting roadways of a similar or higher function.

Although some six-lane roadways may be needed to accommodate traffic, they have a number of issues. Long spacing of 6-lane arterials leads to high turning volumes at intersections. Wide arterial roadways are also less desirable for pedestrians and cyclists. Six-lane roadways in urban areas are generally the result of widening existing arterials to compensate for the absence of a balanced network of roadways with supporting circulation systems (Williams, et al., 2014). Long intersection delays occur where a six-lane arterial intersects another six-lane arterial, often requiring grade separation or alternative intersection designs to resolve.

Continuation and connectivity of the existing local street system along major roadways is also important to provide accessibility for all modes of transportation (see Figure 70). Dead end streets, cul-de-sacs, and gated communities force more traffic to use major roadways even for short local trips. Fragmented street systems also impede emergency access and local bus transit service, and increase the number and length of automobile trips.



- (a) Poor connectivity impedes walking, bicycling, and transit use. It also increases local trips on major roads and results in more properties requiring direct access to major roadways.
- (b) Improved connectivity shortens local trips and improves multimodal mobility. It also enhances local mobility and provides opportunities for internalizing site access off of major roadways.

**Figure 70. Street network connectivity and access**

Source: Model Regulations and Plan Amendments for Multimodal Districts, 2004.

Some policies specific to street network development in South County are provided in Table 21. Sec. 3.10.06.02 of the County land development code also regulates street connectivity.

**Table 21. Hillsborough County Policies for Street Network Development and Connectivity**

FLU Policy 12.4:	Protect the capacity and integrity of interstate highways as high volume interstate traffic corridors through the development of an adequate arterial and collector support system that meets the adopted levels of service of the Transportation and Capital Improvements Elements.
TE Policy 1.5.11	Hillsborough County shall strive to develop and adopt standards for the spacing of arterial, collector, and local roads, to supplement and complement the County Corridor Plan. These standards shall be implemented through the Land Development Code, Roadway Design Technical Manuals or other appropriate implementation regulations.
FLU Policy 19.2	In the mixed-use land use categories, when two or more uses are required on the same project, then the development shall be implemented through a zoning district that demonstrates street connectivity, description of land uses, and site placement, access locations and internal connections at a minimum.

County subdivision regulations require new subdivisions to provide for the continuation of existing arterial and collector streets from adjoining areas, or for their projection where adjoining land is not subdivided. Direct pedestrian access to adjacent subdivisions, school properties, or commercial areas is also required, where feasible (6.02.00(G)(1)). Provisions include the following:

1. Residential neighborhoods shall be designed to include an efficient system of internal circulation and street stub-outs to connect into adjacent developments to link neighborhoods together. (6.02.00(G)(1))
2. Direct access to arterial roads shall be restricted when access can be provided via a collector facility. Unless otherwise approved by the Administrator, residential lots in subdivisions shall not have direct access to a collector or arterial road. Residential lots in subdivisions that abut a collector or arterial road shall not front on said road and access shall be blocked by a vegetative buffer, wall, or other suitable buffer. (6.02.00(G)(2))
3. Unless otherwise approved by the Administrator, residential lots in subdivisions shall front on and have direct access to local, interior streets only. Local streets shall be arranged and designed so as to restrict their use by through and high speed traffic. (6.02.00(G)(3))

Network connectivity is critical and must be handled carefully in residential environments to minimize through traffic concerns. Residential areas can be designed on a grid or modified grid with through movement limited by use of narrow cartways, on-street parking, T-intersections, nontraversable medians, traffic diverters, and occasional jogs in the network as appropriate. Continuity of pedestrian and bicycle networks can often be maintained for safe and convenient bicycle and pedestrian circulation even where street network connections are not provided. For example, bicycle pedestrian connections can be provided between cul-de-sacs or development sites and with the abutting sidewalk system.

In addition to these requirements, the County is updating its corridor management plan for preservation of right-of-way needed for future transportation corridors. Objective 1.5 of the Hillsborough County Transportation Element calls for right of way protection and other measures to preserve corridors for transportation use. Policy 1.5.1 references an adopted list of corridors (Appendix G of the plan, and Appendix J, which includes Map 25), Map 25 identifies right-of-way requirements, general alignments, and standards for all transportation corridors, primarily within the Urban Service Area, needed to support development defined in the Future Land Use Element for a 30-year timeframe.

Policy 1.5.2 indicates that this “corridor plan” will be reviewed and updated as necessary based on County growth and mobility needs by September 30th of each year following adoption. Policy 1.5.3 establishes that “all applications for development approval shall be reviewed for consistency with the adopted Corridor Plan and shall be approved only if they are consistent with the Corridor Plan.”

Part 5.11.00: Transportation Corridor Management of the Hillsborough County Land Development Code implements provisions of the Corridor Plan. It requires all development on or adjacent to planned future corridors to be consistent with the transportation functions of those corridors and to avoid encroachment, except under certain circumstances and within the guidelines of Florida law. Provisions include those necessary for determination of alignment and setbacks, density/intensity credits and clustering provisions to accommodate development rights, and right-of-way dedication (Sec. 5.11.08). The code also provides for interim use of

reserved land (Sec 5.11.09) and allows the County to waive certain provisions to ensure economically beneficial use of property (Sec. 5.11.10).

Section 6.04.02 (P) Right-of-Way Protection and Acquisition of the access management provisions also prohibits development activity within existing right-of-way corridors, per “Hillsborough County Thoroughfare Plan Regulations”. It further requires applicants on these corridors to reserve or dedicate right-of-way in accordance with “an adopted Hillsborough County Transportation Corridor Map” or “the current MPO Long Range Transportation Needs Assessment Map” in effect at the time of the request for reservation or conveyance.

#### 4.4 Key Findings

Hillsborough County has a comprehensive access management and corridor management program supported by a variety of policies and regulations. Efforts to manage arterial access in South County were widely observed with regard to newer commercial development. Substandard access conditions were primarily observed in older commercial strip areas along arterials that likely predated access management efforts of FDOT and the County. South County is also characterized by low density residential areas with winding, fragmented residential street networks, placing pressure on the limited arterial system.

Below are some specific considerations for expanding or updating the requirements, as the County moves forward to establish a more robust thoroughfare plan for the study area.

1. Emphasize local street network connectivity in the development and subdivision review process and require bicycle, pedestrian, and local street connections from activity areas to surrounding residential areas. See the following model regulations as examples (Williams and Barber, 2017):

*Example 1. Subdivision and development plans shall employ site design strategies and bicycle/pedestrian access ways that seek to shorten walking distances and increase accessibility between residential areas and surrounding destinations, such as community facilities, transportation options, and employment centers. The following shall also apply:*

- a) *Sidewalks connecting residential developments to the sidewalk system of surrounding roadways shall be designed to meet the accessibility requirements of the Americans with Disabilities Act.*
- b) *New developments shall provide a direct pedestrian connection to existing or proposed transit stops within and at the edge of the development site.*
- c) *A 20-foot wide bicycle/pedestrian easement may be required in residential subdivisions where needed to connect cul-de-sacs, to pass through gated or walled areas or blocks in excess of 660 feet, or where needed for purposes of traffic safety or access to nearby schools, recreational areas, trails, transit stops, shopping, employment centers, or other community facilities and services.*

*Example 2. All subdivision and development plans shall contribute to developing and/or enhancing a street system that will allow access to and from the proposed development, as well as access to all existing and future development within a ¼ mile radius of the proposed development, via at least three arterial or major collector streets upon development of the remaining parcels within the ¼ mile radius.*

2. As the County continues to update its corridor plan, a more detailed thoroughfare plan is suggested that identifies desirable cross section designs, based on functional categories and modal priority, and access classifications for each key corridor in South County (see also 4 and 5 below).
3. Incorporate network spacing guidelines into the corridor plan. The sparsity of the arterial and collector network in South County is a concern in light of the extensive development already planned and approved in the area. One-half mile spacings of 4-lane continuous streets result ensure that residents can access a collector or arterial within ¼ mile. This spacing helps reduce congestion by distributing trips across the network and supports walking, cycling and transit use. The resulting 160-acre cells can be developed with a variety of internal roadway circulation patterns. Although a perfect grid is not feasible, due to waterways and other barriers, flexible application of network spacing guidelines forms an essential foundation for an effective thoroughfare plan.
4. Currently, the County relies on staff interpretations of roadway type and access classification based on general descriptions in code. Access management standards should be assigned to roadway segments for clarity in application and administration. This may be accomplished through a planning process (that identifies the access classification by milepost based on existing and planned roadway function), or based on posted speeds.
5. Update the County access classifications to better reflect the type and function of county arterials and collectors based on an overall thoroughfare plan. The current classifications are reactive to existing subdivision and land use conditions, rather than the long term planned function of the roadway. A model approach that builds on recent updates to access classes in the City of Orlando that are also being considered by FDOT includes the following provisions (Williams and Barber, 2017):

*The following access categories have been assigned to major roadways as shown in Table 4, based upon the primary role of the roadway in the overall thoroughfare system and the nature of the land use context:*

*Category A: These are highly access-controlled roadways that function as principal arterials and have the greatest continuity in the thoroughfare system. Direct access to abutting land is controlled to preserve safe and efficient through traffic movement. Posted speeds are typically 45 mph or greater. They shall include existing or planned restrictive medians, but some sections may have alternating painted left-turn lanes or be undivided. This Access Category provides the greatest separation between connections and traffic signals. It applies to controlled access SIS roadways, and designated arterials in rural, less developed or suburban areas (e.g., FDOT context classification C1, C2, C3R, C3C). The street network along these roadways shall be planned to support access to development and signal locations will be carefully managed to maintain efficient traffic progression.*

*Category B: These roadways support mobility within and across urban areas and typically have somewhat less continuity and/or operate at lower speeds than Access Category A roadways. They should include existing or planned restrictive medians, but*

some sections may have alternating painted left-turn lanes or be undivided. Separation between connections is less than that required for Category A, but is still sufficiently controlled to create a safe environment for vehicular and non-vehicular travel modes. This Category generally applies to both arterial and collector roadways that lie outside the urban core (e.g., FDOT context classification C5, C4, C3R, C3C, C2T) or similarly developed neighborhoods.

Category C: These roadways support mobility in dense urban contexts and operate at lower speeds. Driveway connections may be discouraged in favor of block patterns. Control of access is the least restrictive due to lower speeds and to accommodate compact development. Access Category C generally applies to segments of the thoroughfare system within denser urban areas that often have higher levels of non-auto traffic and community activity (e.g., FDOT context classification C2T, C4, C5, C6), including segments designated as pedestrian or transit priority streets.

**Table 22. Example Access Category System**

Access Category	Connection Spacing (feet)		Median Opening Spacing <sup>(1)</sup> (feet)
	>45 mph	≤45mph	Full Movement
A	1320	660	1320 <sup>(2)</sup> /2640
B	660	440 <sup>(3)</sup>	1320 <sup>(2)</sup> /2640
C	NA	245 <sup>(3)</sup>	660 <sup>(3)</sup>

<sup>(1)</sup> Applies to full movement median openings where a "restrictive" (nontraversable) median is present that physically prevents vehicle crossing. Full openings could potentially be signalized in the future and spacing should be maintained for progression and signal coordination. Greater distances may be required to provide for sufficient turn lane storage. Directional median openings may be allowed at any location on the roadway where the (city/county) engineer determines that U-turns or left-turn movements can be safely accommodated.

<sup>(2)</sup> For roads with posted speed limits ≤45mph.

<sup>(3)</sup> Or per existing block spacing or block spacing as identified in the local comprehensive plan or an approved development plan. Densely developed areas with a block pattern that accommodates community activities, bicyclists, and pedestrians should not have posted speeds higher than 35 mph.

6. Use of lower spacing standards for isolated corner properties in effect reduces access spacing at intersections, which have the highest potential for conflicts and crashes. FDOT discontinued this practice for this reason. Contemporary practice is to regulate corner clearance based on adopted access spacing of the impacted roadways, and allow deviation where spacing cannot be met. A model approach calls for the following provisions (Williams and Barber, 2017):
  - 1) *Corner clearance for connections within the functional area of an intersection shall meet or exceed the minimum connection spacing requirements for the subject roadways. New connections shall not be permitted within this functional area, unless:*
    - d) *No other reasonable access to the property is available, and*

- e) *The (permitting authority) determines that the connection does not create a safety or operational problem upon review of a site-specific study of the proposed connection prepared by a registered engineer and submitted by the applicant.*
  - 2) *Where no other alternatives exist, the (permitting department) may allow construction of an access connection along the property line farthest from the intersection. In such cases, directional controls (i.e. right-in/out, right-in only, or right-out only) may be required.*
  - 3) *In addition to the required minimum lot size, all corner lots created on arterial or collector roadways shall have adequate street frontage to comply with corner clearance requirements, unless access is internalized or shared with abutting properties.*
7. The County determines the number of entrances per site based on the maximum desirable vehicle flow rate at entrances for residential and non-residential land uses based on the street characteristics. Consider evaluating if this approach has worked well in practice. Common practice is to limit the number of access points to one per site frontage, with additional accesses provided based on spacing for the abutting roadways. A thoroughfare plan generally defines the appropriate level of access to roadways based on their function in the overall system and the land use context. Access connections to large developments may be designed to accommodate high volumes, with secondary minor access drives as appropriate to avoid congestion at the entrance or connect to sides streets.
- Consider including requirements specific to control of access to outparcels for large development sites (see Williams and Barber, 2017, Section 11).

## References

- Hillsborough Area Regional Transit Agency. (2017). Transit Development Plan. Retrieved from [http://www.gohart.org/Style%20Library/goHART/pdfs/transit\\_development\\_plan/FY2018%20HART%20TDP%20-%20Final%20Report.pdf](http://www.gohart.org/Style%20Library/goHART/pdfs/transit_development_plan/FY2018%20HART%20TDP%20-%20Final%20Report.pdf)
- Hillsborough County City-County Planning Commission. (2008). Comprehensive Plan for Unincorporated Hillsborough County: Livable Communities Element. Retrieved from <http://www.planhillsborough.org/wp-content/uploads/2012/10/Livable-Communities-Element-1.pdf>
- Hillsborough County Land Development Code, Article V – Development Options, Part 5.11.01 – Transportation Corridor Management. Accessed online [https://library.municode.com/fl/hillsborough\\_county/codes/land\\_development\\_code?nodeId=ARTVDEOP\\_PT5.11.00TRCOMA](https://library.municode.com/fl/hillsborough_county/codes/land_development_code?nodeId=ARTVDEOP_PT5.11.00TRCOMA)
- Hillsborough County Land Development Code, Article VI – Design Standards and Improvement Requirements, Part 6.04.00 – Access Management. Accessed online [https://library.municode.com/fl/hillsborough\\_county/codes/land\\_development\\_code?nodeId=ARTVIDESTIMRE\\_PT6.04.00ACMA](https://library.municode.com/fl/hillsborough_county/codes/land_development_code?nodeId=ARTVIDESTIMRE_PT6.04.00ACMA)
- Hillsborough County Land Development Code, Article III – Special Districts, Part 3.01.02 – SB-Show Business Overlay District. Accessed online [https://library.municode.com/fl/hillsborough\\_county/codes/land\\_development\\_code?nodeId=ARTIIISPDI\\_PT3.01.00SPPUINDI\\_S3.01.02OWBUOVDI](https://library.municode.com/fl/hillsborough_county/codes/land_development_code?nodeId=ARTIIISPDI_PT3.01.00SPPUINDI_S3.01.02OWBUOVDI)
- Hillsborough Metropolitan Planning Organization (MPO). (2019). 2014-2018 serious injury and fatal crashes – heat map. Retrieved from [http://www.planhillsborough.org/wp-content/uploads/2019/03/2019\\_Vision\\_Zero\\_Top\\_20\\_Corridors.pdf](http://www.planhillsborough.org/wp-content/uploads/2019/03/2019_Vision_Zero_Top_20_Corridors.pdf)
- Hillsborough Metropolitan Planning Organization (MPO). (2018). 2017 Level of Service Report. Retrieved from <http://www.planhillsborough.org/level-of-service-report/>
- Hillsborough Metropolitan Planning Organization (MPO). (2017). Vision zero action plan severe crash corridor profiles (2012-2016). Retrieved from <http://www.planhillsborough.org/wp-content/uploads/2017/08/VisionZeroCorridorProfiles.pdf>
- Hillsborough County, Economic Development Department. (n.d.). Competitive sites. Retrieved from <http://www.hillsboroughcounty.org/en/businesses/land-development/competitive-sites>
- Institute of Transportation Engineers. (1992). Transportation Planning Handbook. Section 2.2.3.5 Spacing. p. 37.
- Levinson, H. (2000). “Street Spacing and Scale.” TR Circular E-C019: Urban Street Symposium Conference Proceedings. Washington D.C.: Transportation Research Board of the National Academies.



- Smart Growth America. (2019) 2019 Dangerous by design. Retrieved from <https://smartgrowthamerica.org/app/uploads/2019/01/Dangerous-by-Design-2019-FINAL.pdf>
- TBARTA. (2015). Regional transportation master plan: activity centers and travel markets technical memorandum. Retrieved from [http://tbarta.com/files/TM\\_ActivityCentersTravelMarkets.pdf](http://tbarta.com/files/TM_ActivityCentersTravelMarkets.pdf)
- U.S. Census Bureau (2017). 2013-2017 American Community Survey 5-Year Estimates. Retrieved from <https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>
- University of Florida-Geoplan Center. Signal Four Analytics. Retrieved on April 2019 from <http://s4.geoplan.ufl.edu/>
- Urban Observatory. (n.d.). Transit Access Maps. Retrieved from <https://urbanobservatory.maps.arcgis.com/apps/Embed/index.html?appid=9e93666a15e74fa78ca4154609e8ea35>
- Williams, K, and Barber, J. (2017). *Model Access Management Policies and Regulations for Florida Cities and Counties, 2nd Edition*. Prepared for the Florida Department of Transportation.
- Williams, K., Stover, V.G., Dixon, K., Demosthenes, P., Broen, F., Brown, L., Huntington, D. Layton, R. & Seggerman, K. (2014). *Access Management Manual, 2nd Edition*. Washington D.C.: Transportation Research Board of the National Academies.

## Appendix A Community Profiles

This appendix contains statistical community profiles for the seven study area communities and Hillsborough County. Profiles offer insights into the travel needs of each unique community and help inform the multimodal analysis. Community profiles identify geographic data, socioeconomic data, and the commute patterns of residents using data from the 2017 American Community Survey (ACS) 5-year estimates and the sociocultural data report compiled by Plan Hillsborough. Profiles can be seen in Table A- 1.

**Table A- 1. Community Profiles**

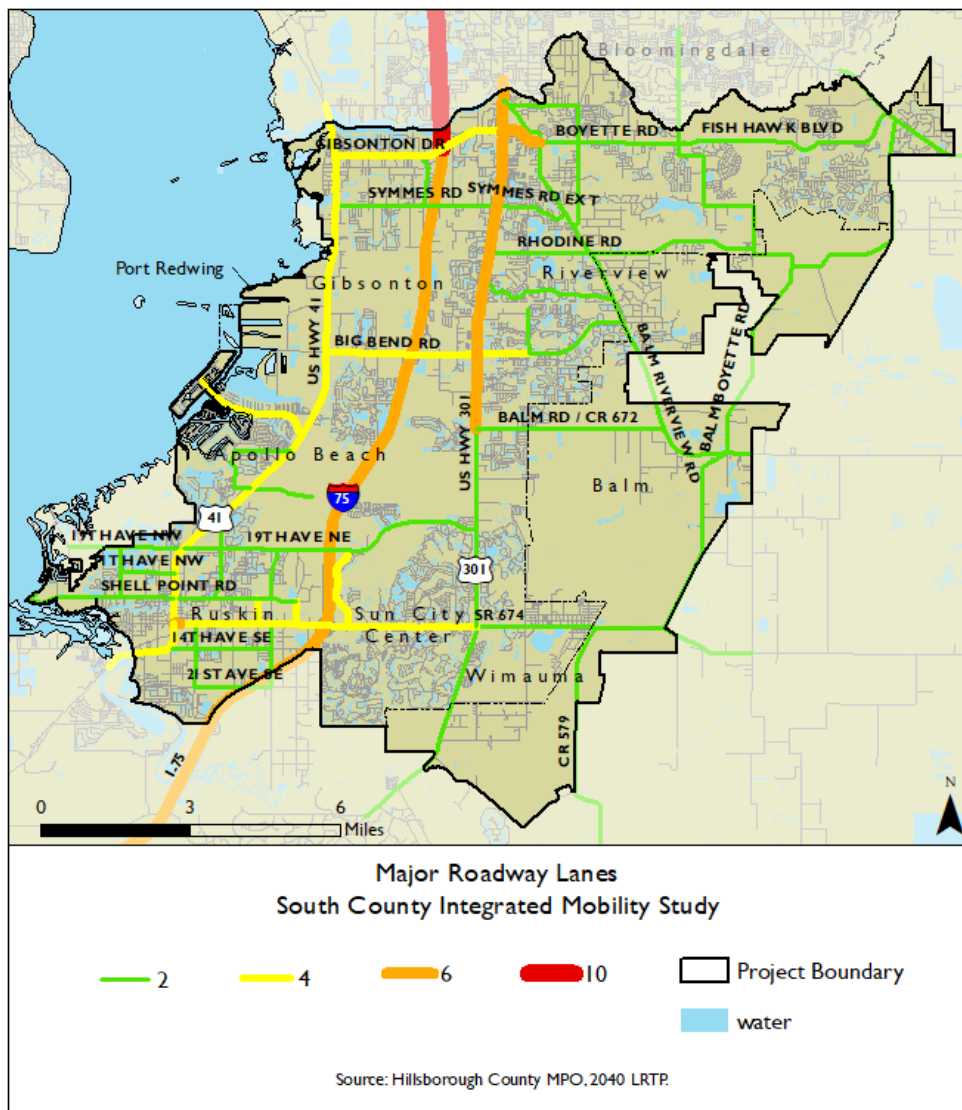
	Hillsborough County	Apollo Beach	Gibsonton	Riverview	Ruskin	Sun City Center	Wimauma Village	Balm
<b>Size (square miles)</b>	1,266	21.919	16.772	55.989	20.392	13.817	25.419	29.142
<b>Total Population</b>	1,351,087	17,929	18,273	88,191	22,162	21,986	6,373	2,664
<b>Total Housing Units</b>	563,638	7,952	6,109	32,295	8,323	15,100	2,151	912
<b>Median Age</b>	37	45	32	35	32	72	29	33
<b>Median Household Income</b>	\$53,742	\$80,140	\$48,320	\$68,442	\$52,218	\$47,285	\$35,741	\$63,382
<b>Individuals Below Poverty Level</b>	15.7%	8.0%	18.1%	8.6%	19.48	7.0%	31.5%	8.6%
<b>Unemployment Rate</b>	6.8%	5%	7.2%	6.3%	5.2%	5.2%	7.6%	6.2%
<b>Educational Attainment: % High School Graduate or Higher</b>	88.2%	94.0%	80.3%	92.2%	81.1%	94.9%	52.0%	82.3%
<b>Average Commute Time for Residents (minutes)</b>	27.3	33.4	30.0	31	29.2	30.2	27.5	35.7
<b>Drove Alone</b>	80.1%	80.8%	83.3%	82.6%	81.8%	80.2%	70.4%	80.8%
<b>Carpooled</b>	8.8%	7.5%	9.4%	8.4%	11%	4.4%	21.9%	12.4%
<b>Public Transportation</b>	1.5%	0%	1.4%	0.8%	0.5%	0.2%	1.5%	0%
<b>Walked</b>	1.5%	0.8%	1%	1%	0.1%	1.5%	2.0%	0%
<b>Other Means</b>	1.9%	0.9%	0.9%	1.4%	2.1%	4.3%	1.9%	0.7%
<b>Worked at home</b>	6.2%	10%	3.9%	5.9%	4.4%	9.4%	2.3%	6.1%

Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates.

## Appendix B Roadway Capacity

This appendix provides a brief summary of the operational conditions of roadways in the study area using data from Hillsborough MPO. Existing and future LOS and roadway width are identified. Operational conditions from existing reports are summarized, including roadway segments in critical condition.

The number of lanes for each major roadway in the study area are identified in Figure C- 1. Most roadways in the study area are between 2 and 4 lanes except I-75 and a segment of US 301 between the study area boundary and CR 672 and a segment of Boyette Road between US 301 and Balm Riverview Road



**Figure C- 1. Major roadway lanes**

LOS variables and LOS definitions can be found in Table C- 3 and Figure C-5. LOS standards for State and County roads are identified in Table C- 1 and Table C- 2. Existing and future LOS in the study area can be seen in Figure C- 2 and Figure C- 3. Figure C- 4 demonstrates the traffic volumes (AADT) in the study area. Roadways in the study area have a LOS between B and F. Roadways with a LOS of F are characterized by long queues, low speeds, and frequent stops. Existing roadway segments in critical condition with an existing LOS of F are listed below (see Table C- 4):

- Bell Shoals Road (**Segment:** From Boyette Rd to Bloomingdale Ave)
- Big Bend Road (**Segment:** From I-75 to US 301)
- Boyette Road (**Segment:** From Balm Riverview to Bell Shoals RD)
- Fish Hawk Boulevard (**Segment:** From Bell Shoals Rd to Lithia Pinecrest)
- Gibsonton Drive (**Segment:** From I-75 to US 301)
- Lithia Pinecrest Road (**Segment:** From SR 60 to Bloomingdale Ave)
- Lithia Pinecrest Road (**Segment:** From Bloomingdale Ave to Boyette Rd)

Roadway segments in critical condition with a future LOS of F are listed below (Figure C- 3):

- Segments of I-75
- Segments of US 41
- Segments of US 301
- Segments of SR 674

**Table C- 1. Level of Service Standards for County Roads**

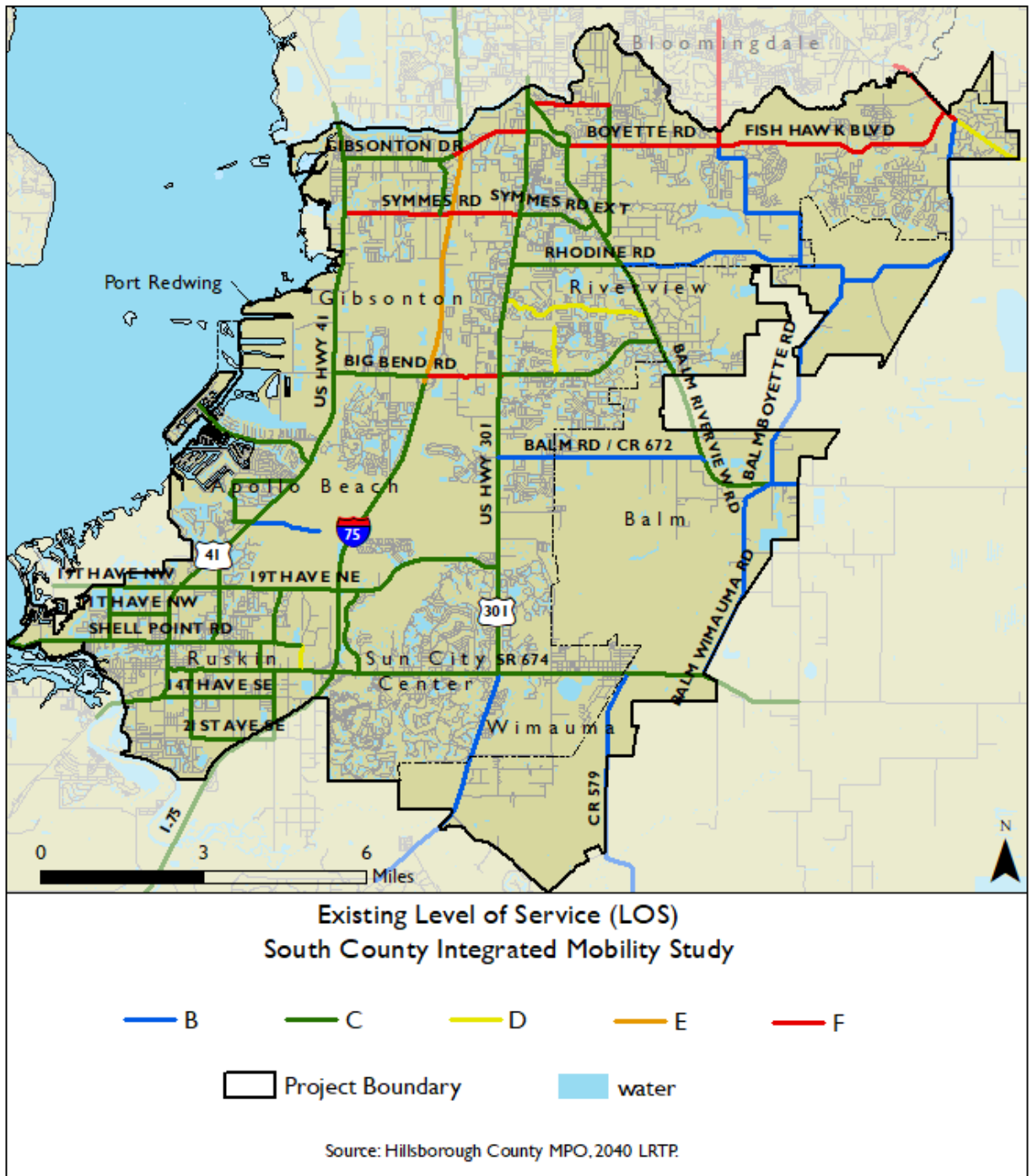
	Urban Service Area	Outside of Urban Service Area	Constrained and Deficient Roads	High Transit LOS Corridor	High Transit LOS Corridor on Constrained Roads
Arterials	D	D	E	E	120% of LOS E
Collectors	D	C	E	E	120 % of LOS E

Source: Hillsborough MPO, 2018

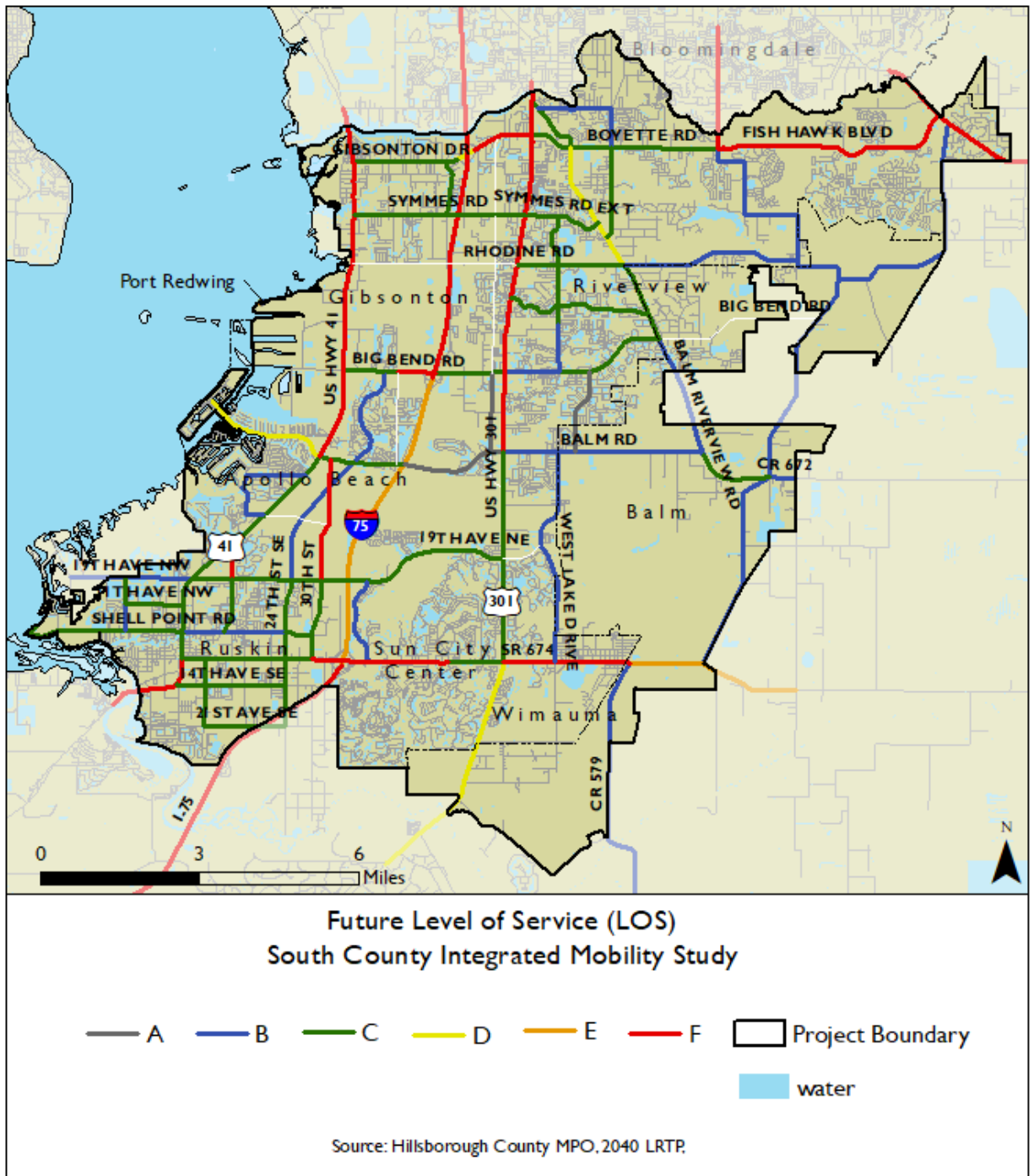
**Table C- 2. Level of Service Standards for State Roads**

	Rural Areas	Transitioning Urbanized Areas, Urban Areas, or Communities	Urbanized Areas over 500,000	High Transit LOS Corridor	Roadways Parallel to Exclusive Transit Facilities	Backlogged Roadway on FHHS	Constrained And Deficient Roadways	High Transit LOS & Constrained and Deficient Corridors
INTERSTATE / INTRASTATE								
Limited Access Highway (Freeways)	B	C	D(E)	N/A	D(E)	Maintain	Maintain	Maintain
Controlled Access Highway	B	C	D	N/A	E	Maintain	Maintain	Maintain
OTHER STATE ROADS								
Other Multilane	B	C	D	E	E	N/A	E	120% of LOS "E"
Two lane	C	C	D	E	E	N/A	E	120% of LOS "E"

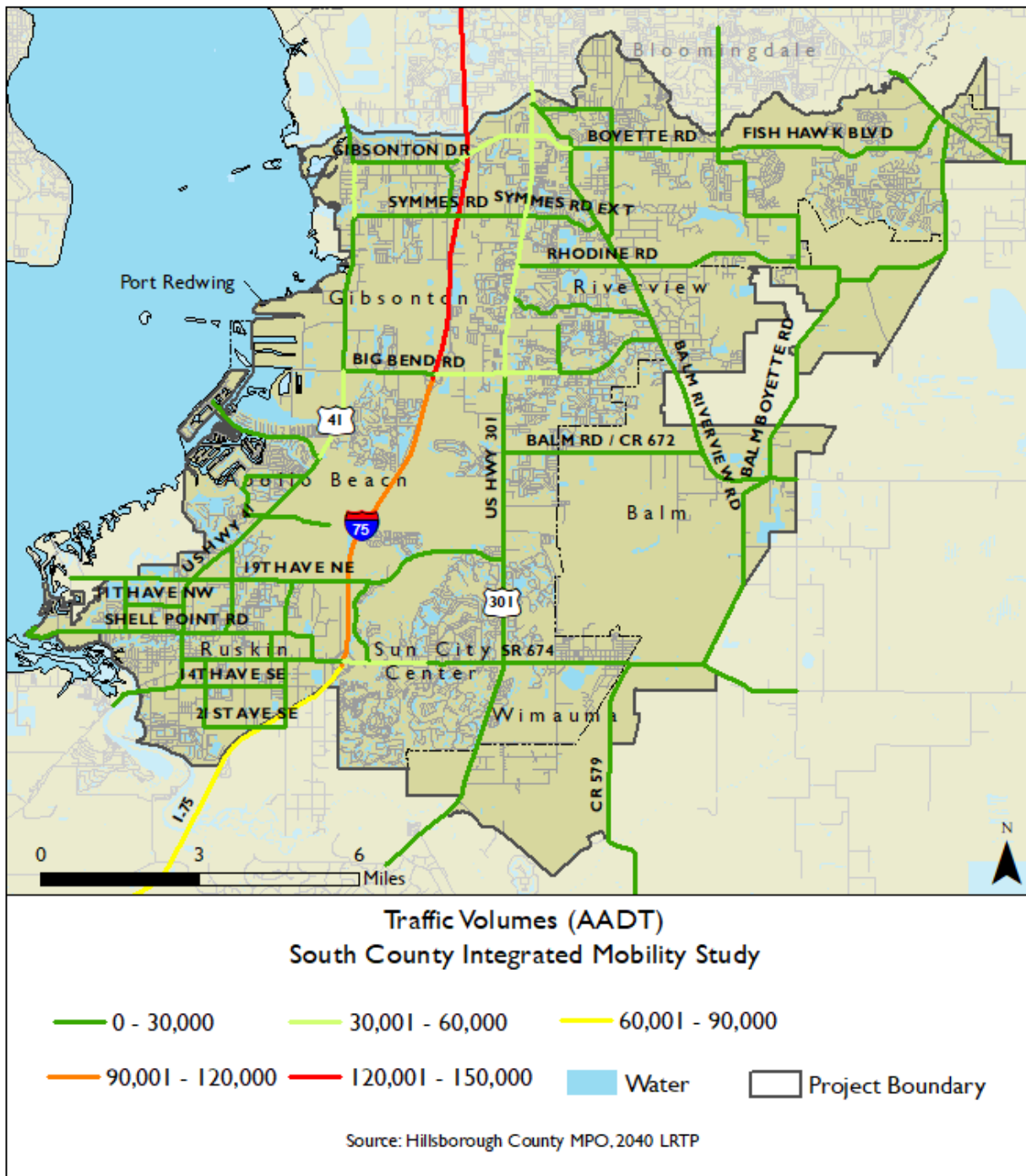
Source: Hillsborough MPO, 2018



**Figure C- 2. Existing level of service (LOS)**



**Figure C- 3. Future level of service (LOS)**



**Figure C- 4. Traffic Volumes (AADT)**

**Table C- 3. Definitions of Level of Service Variables**

1	Section Description	The common name assigned to the road segment (street name), the cross street or location at which the segment begins, and the crossing street or location at which the segment ends.
2	Jurisdiction	Regulating authority of the segment.
3	SIS	Strategic Intermodal System facility, managed and regulated by Florida Department of Transportation.
4	Lanes	Number of lanes per direction. – U – Undivided, D – Divided, O – Oneway, F - Freeway
5	Length	Length of the segment in miles.
6	Speed	Current posted speed of the segment.
7	LOS Std	Standard Level of Service for the particular roadway as adopted and documented in the Hillsborough County Comprehensive Plan. The LOS for roadways within incorporated areas is governed by the jurisdiction's Comprehensive Plan and may differ from this report.
8	Local Func Class	Local Functional Class - The assignment of roads into systems according to the character of service they provide in relation to the road network. The abbreviations are: PA - Principal Arterial, A - Arterial, C - Collector.
9	AADT	Average Annual Daily Traffic - The AADT is the number of vehicles that travel on a specified segment of a road on an average day. For aggregated segments, traffic counts may be weighted according to the length of each individual link and may not match a specific count.
10	PkHrDir Vol	Peak Hour Peak Direction Volume - The 100th highest hour traffic volume determined by (AADT x K100 x Directional Factor).
11	MSV	Maximum Service Volume (Daily Capacity) - The maximum rate of flow at which vehicles can traverse a point or uniform segment roadway and maintain the performance standard as measured by speed for interrupted flow facilities and V/C ratio for uninterrupted flow facilities during the daily (AADT) period.
12	PkHrDir MSV	Peak Hour Peak Direction Maximum Service Volume (Capacity) - The Peak Hr Dir Cap is the maximum rate of flow at which vehicles can traverse a point or uniform segment roadway and maintain the performance standard as measured by speed for interrupted flow facilities and V/C ratio for uninterrupted flow facilities during the peak hour period for the peak direction.
13	V/C	Volume over Capacity - PM Peak Hour Directional Volume to capacity of the roadway. V/C greater than 1.0 indicates a roadway exceeds the available capacity.
14	LOS	Current Level of Service for the roadway.

Source: Hillsborough MPO, 2018



## Definition of Level of Service (LOS)

Levels of Service (LOS) are qualitative measures describing operational conditions of highways. Six LOS are defined for each facility type and are given designations ranging from "A" (the best) to "F" (the worst). LOS indicates quality of flow measured by a scale of driver satisfaction.

- **Level of Service A** represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream. Freedom to select desired speeds and to maneuver within the traffic stream is extremely high. The general level of comfort and convenience provided to drivers is excellent.
- **Level of Service B** allows speeds at or near free-flow speeds, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver within the traffic stream relative to LOS A.
- **Level of Service C** speeds at or near free-flow speeds, but the freedom to maneuver is noticeably restricted (lane changes require careful attention on the part of drivers). The general level of comfort and convenience declines significantly at this level. Disruptions in the traffic stream, such as an incident (for example, vehicular accident or disablement), can result in significant queue formation and vehicular delay. In contrast, the effect of incidents at LOS A or LOS B are minimal, and cause only minor delay in the immediate vicinity of the event.
- **Level of Service D** conditions where speeds begin to decline slightly with increasing flow. The freedom to maneuver becomes more restricted and drivers experience reductions in physical and psychological comfort. Incidents can generate lengthy queues because the higher density associated with this LOS provides little space to absorb disruption in the traffic flow.
- **Level of Service E** represents operating conditions at or near the roadway's capacity. Even minor disruptions to the traffic stream, such as vehicles entering from a ramp or 2 vehicles changing lanes, can cause delays as other vehicles give way to allow such maneuvers. In general, maneuverability is extremely limited and drivers experience considerable physical and psychological discomfort.
- **Level of Service F** describes a breakdown in vehicular flow. Queues form quickly behind points in the roadway where the arrival flow rate temporarily exceeds the departure rate, as determined by the roadway's capacity. Vehicles typically operate at low speeds in these conditions and are often required to come to a complete stop, usually in a cyclic fashion. The cyclic formation and dissipation of queues is a key characterization of LOS F.

### Figure C- 5. Definition of LOS

Source: Hillsborough MPO, 2018

**Table C- 4. Major Roadway Operational Conditions**

Street Name	Section Description	Jurisdiction	SIS	Lanes	Length	Posted Speed	Std_LOS	Local_Func_class	AADT	PkHrDir_Vol	MSV	PkHrDir MSV	V/C	LOS
6TH ST SE	6TH ST SE: (21ST AVE SE -to- SR 674)	Hillsborough County	N	2 / U	1.26	40	D	C	3,891	232	16,815	836	0.28	C
11TH AVE NW	11TH AVE NW: (14TH ST NW -to- US 41)	Hillsborough County	N	2 / U	1.09	35	D	C	3,195	220	14,060	712	0.31	C
12TH ST NE / INTERCHANGE ST	12TH ST NE / INTERCHANGE ST: (19TH AVE NE -to- US 41)	Hillsborough County	N	2 / U	1.67	40	D	C	2,499	138	16,815	836	0.17	C
14TH AVE SE	14TH AVE SE: (US 41 -to- 24TH ST SE)	Hillsborough County	N	2 / U	2.05	45	D	C	2,080	109	16,815	836	0.13	C
14TH ST NW	14TH ST NW: (SHELL POINT RD -to- 19TH AVE NW)	Hillsborough County	N	2 / U	1.00	40	D	C	1,078	62	15,390	760	0.08	C
19TH AVE NE	19TH AVE NE: (US HWY 41 -to- US HWY 301)	Hillsborough County	N	2 / U	6.09	45	D	A	12,147	578	22,990	1,130	0.51	C
19TH AVE NW	19TH AVE NW: (EG SYMMONS PARK -to- US HWY 41)	Hillsborough County	N	2 / U	2.32	45	D	C	3,369	186	16,815	836	0.22	C
21ST AVE SE	21ST AVE SE: (6TH ST SE -to- 24TH ST SE)	Hillsborough County	N	2 / U	1.53	45	D	C	3,370	163	16,815	836	0.2	C
24TH ST SE	24TH ST SE: (21ST AVE SE -to- SR 674)	Hillsborough County	N	2 / U	1.25	45	D	C	3,724	193	16,815	836	0.23	C
24TH ST SE	24TH ST SE: (SR 674 -to- BIG BEND RD)	Hillsborough County	N	2 / D	1.01	35	D	C	3,432	218	14,060	712	0.31	C
30TH ST SE	30TH ST SE: (SR 674 -to- SHELL POINT RD)	Hillsborough County	N	4 / D	0.46	40	D	C	14,501	996	30,780	1,548	0.64	D
21ST ST SE	21ST ST SE: (SR 674 -to- SHELL POINT RD)	Hillsborough County	N	4 / U	0.51	35	D	C	3,541	189	30,780	1,548	0.12	C
APOLLO BEACH BLVD	APOLLO BEACH BLVD: (SURFSIDE BLVD -to- US HWY 41)	Hillsborough County	N	4 / D	2.47	35	D	C	7,997	429	30,780	1,548	0.28	C
BALM BOYETTE RD	BALM BOYETTE RD: (CR 672 -to- BOYETTE RD)	Hillsborough County	N	2 / U	4.19	50	C	C	4,135	189	16,435	808	0.23	B
BALM RD / CR 672	BALM RD / CR 672: (US HWY 301 -to- BALM RIVERVIEW)	Hillsborough County	N	2 / U	3.80	55	D	C	6,567	309	23,180	1,140	0.27	B
BALM RIVERVIEW RD	BALM RIVERVIEW RD: (BALM WIMAUMA RD -to- BALM RD / CR 672)	Hillsborough County	N	2 / U	1.48	55	D	C	7,037	364	16,815	836	0.44	C
BALM RIVERVIEW RD	BALM RIVERVIEW RD: (BALM RD / CR 672 -to- BIG BEND RD)	Hillsborough County	N	2 / U	2.35	55	C	C	2,600	139	15,960	788	0.18	C
BALM RIVERVIEW RD	BALM RIVERVIEW RD: (BIG BEND RD -to- BOYETTE RD)	Hillsborough County	N	2 / U	4.05	45	D	C	11,487	616	16,815	836	0.74	C
BALM RIVERVIEW RD	BALM RIVERVIEW RD: (BOYETTE RD -to- US HWY 301)	Hillsborough County	N	2 / U	1.22	35	D	C	11,225	547	16,815	836	0.65	C
BALM WIMAUMA RD	BALM WIMAUMA RD: (SR 674 -to- CR 672)	Hillsborough County	N	2 / U	3.97	45	C	C	3,036	150	15,580	808	0.19	B

Source: Hillsborough MPO, 2018

### Major Roadway Operational Conditions (Continued)

Street Name	Section Description	Jurisdiction	SIS	Lanes	Length	Posted Speed	Std_LOS	Local_Func_class	AADT	PkHrDir_Vol	MSV	PkHrDir MSV	V/C	LOS
BELL SHOALS RD	BELL SHOALS RD: (BOYETTE RD -to- BLOOMINGDALE AVE)	Hillsborough County	N	2 / U	2.76	45	D	C	22,779	1,275	16,815	836	1.53	F
BELL SHOALS RD	BELL SHOALS RD: (BLOOMINGDALE AVE -to- LITHIA PINECREST)	Hillsborough County	N	2 / U	1.99	35	D	C	4,934	273	14,060	712	0.38	C
BIG BEND RD	BIG BEND RD: (US HWY 41 -to- I-75)	Hillsborough County	C	4 / D	1.75	45	D	A	23,500	1,255	37,810	1,900	0.66	C
BIG BEND RD	BIG BEND RD: (I-75 -to- US HWY 301)	Hillsborough County	N	4 / D	1.32	45	D	A	41,871	2,696	37,810	1,900	1.42	F
BIG BEND RD	BIG BEND RD: (US HWY 301 -to- SUMMERFIELD BLVD)	Hillsborough County	N	4 / D	1.02	45	D	C	31,560	1,532	37,810	1,900	0.81	C
BIG BEND RD	BIG BEND RD: (US-301 -to- BALM RIVERVIEW)	Hillsborough County	N	2 / U	2.12	45	D	C	11,631	625	16,815	836	0.75	C
BOYETTE RD	BOYETTE RD: (US HWY 301 -to- BALM RIVERVIEW)	Hillsborough County	N	6 / D	0.83	45	D	C	35,418	2,147	56,905	2,869	0.75	C
BOYETTE RD	BOYETTE RD: (BALM RIVERVIEW -to- BELL SHOALS RD)	Hillsborough County	N	2 / U	2.77	45	D	C	26,500	1,414	16,815	836	1.69	F
BOYETTE RD	BOYETTE RD: (BELL SHOALS RD -to- BALM BOYETTE RD)	Hillsborough County	N	2 / U	4.63	45	D	C	4,135	189	22,990	1,130	0.17	B
BOYETTE RD	BOYETTE RD: (BALM BOYETTE RD -to- LITHIA PINECREST RD)	Hillsborough County	N	2 / U	4.69	40	D	C	5,303	267	22,990	1,130	0.24	B
CR 579	CR 579: (MANATEE COUNTY -to- SR 674)	Hillsborough County	N	2 / U	5.05	55	C	A	929	47	15,580	808	0.06	B
CR 672	CR 672: (BALM BOYETTE RD -to- CR 39)	Hillsborough County	N	2 / U	6.57	45	D	A	6,098	304	21,945	1,140	0.27	B
CYPRESS VILLAGE BLVD	CYPRESS VILLAGE BLVD: (SR 674 -to- 19TH AVE NE)	Hillsborough County	N	4 / D	1.71	35	D	C	8,722	472	30,780	1,548	0.31	C
E BAY DR	E BAY DR: (SYMMES RD -to- GIBSONTON DR)	Hillsborough County	N	2 / U	1.05	45	D	C	12,172	776	16,815	836	0.93	C
FISH HAWK BLVD	FISH HAWK BLVD: (BELL SHOALS RD -to- LITHIA PINECREST)	Hillsborough County	N	2 / U	4.60	45	D	C	22,182	1,303	16,815	836	1.56	F
GIBSONTON DR	GIBSONTON DR: (US HWY 41 -to- I-75)	Hillsborough County	N	4 / D	2.00	45	D	A	14,367	811	37,810	1,900	0.43	C
GIBSONTON DR	GIBSONTON DR: (I-75 -to- US HWY 301)	Hillsborough County	N	4 / D	1.50	45	D	A	42,516	2,512	37,810	1,900	1.32	F

Source: Hillsborough MPO, 2018

### Major Roadway Operational Conditions (Continued)

Street Name	Section Description	Jurisdiction	SIS	Lanes	Length	Posted Speed	Std_LOS	Local_Func_class	AADT	PkHrDir_Vol	MSV	PkHrDir MSV	V/C	LOS
LITHIA PINECREST RD	LITHIA PINECREST RD: (SR 60 -to- BLOOMINGDALE AVE)	Hillsborough County	N	2 / U	3.81	40	D	A	17,426	1,020	16,815	836	1.22	F
LITHIA PINECREST RD	LITHIA PINECREST RD: (BLOOMINGDALE AVE -to- BOYETTE RD)	Hillsborough County	N	2 / U	3.70	45	D	A	20,731	1,057	16,815	836	1.26	F
LITHIA PINECREST RD	LITHIA PINECREST RD: (BOYETTE RD -to- CR 39)	Hillsborough County	N	2 / U	3.44	45	D	A	16,910	832	21,945	1,140	0.73	D
LITHIA PINECREST RD	LITHIA PINECREST RD: (CR 39 -to- KEYSVILLE RD)	Hillsborough County	N	2 / U	3.53	45	D	C	5,172	287	21,945	1,140	0.25	B
LITHIA PINECREST RD	LITHIA PINECREST RD: (KEYSVILLE RD -to- POLK COUNTY)	Hillsborough County	N	2 / U	2.00	45	D	C	5,172	287	21,945	1,140	0.25	B
MCMULLEN LOOP RD	MCMULLEN LOOP RD: (BALM RIVERVIEW RD -to- MCMULLEN RD)	Hillsborough County		2 / U	1.40	35	D	C	12,549	629	14,060	712	0.88	D
MCMULLEN RD	MCMULLEN RD: ( BALM RIVERVIEW RD -to- MCMULLEN LOOP RD)	Hillsborough County		2 / U	2.48	45	D	C	12,549	629	16,815	836	0.75	C
MILLER MAC RD	MILLER MAC RD: (GULF AND SEA BLVD -to- US 41)	Hillsborough County	N	2 / U	1.40	35	D	C	1,214	60	14,060	712	0.08	C
PANTHER TRACE BLVD	PANTHER TRACE BLVD: (US HWY 301 -to- BALM RIVERVIEW RD)	Hillsborough County	N	2 / D	2.81	35	D	C	9,813	622	14,060	712	0.87	D
RHODINE RD	RHODINE RD: (US HWY 301 -to- BALM RIVERVIEW)	Hillsborough County	N	2 / U	2.03	45	D	C	5,104	282	16,815	836	0.34	C
RHODINE RD	RHODINE RD: (BALM RIVERVIEW -to- BOYETTE RD)	Hillsborough County	N	2 / U	3.37	45	D	C	5,104	262	22,990	1,130	0.23	B
SHELL POINT RD	SHELL POINT RD: (DEAD END -to- US HWY 41)	Hillsborough County	N	2 / U	3.15	45	D	C	4,828	262	16,815	836	0.31	C
SHELL POINT RD	SHELL POINT RD: (US HWY 41 -to- 24TH ST SE)	Hillsborough County	N	2 / U	1.94	40	D	C	8,902	430	16,815	836	0.51	C
SHELL POINT RD	SHELL POINT RD: (24TH ST SE - to - 30TH ST SE) (REMOVED THIS SECTION)	Hillsborough County	N	2 / U	0.50	40	D	C	8,902	399	22,990	1,130	0.35	C
SUMMERFIELD BLVD	SUMMERFIELD BLVD: (BIG BEND RD -to- DIXON DR)	Hillsborough County	N	2 / U	0.90	35	D	C	9,571	550	14,060	712	0.77	D
SYMMES RD	SYMMES RD: (US HWY 41 -to- US HWY 301)	Hillsborough County	N	2 / U	3.24	45	D	C	12,855	768	16,815	836	0.92	C
SYMMES RD EXT	SYMMES RD EXT: (US 301 -to- BALM RIVERVIEW)	Hillsborough County	N	2 / U	1.49	40	D	C	11,866	702	16,815	836	0.84	C

Source: Hillsborough MPO, 2018




### Major Roadway Operational Conditions (Continued)

Street Name	Section Description	Jurisdiction	SIS	Lanes	Length	Posted Speed	Std_LOS	Local_Func_class	AADT	PkHrDir_Vol	MSV	PkHrDir_MSV	V/C	LOS
I-75	I-75: (MANATEE COUNTY -to- SR 674)	Hillsborough County	H	6 / F	6.32	70	B	PA	67000	3904	52800	2610	1.27	C
I-75	I-75: (SR 674 -to- BIG BEND RD)	Hillsborough County	H	6 / F	5.81	70	D	PA	91500	4254	116600	5500	0.79	C
I-75	I-75: (BIG BEND RD -to- GIBSONTON DR)	Hillsborough County	H	6 / F	4.31	70	D	PA	120500	5603	116600	5500	1.03	E
I-75	I-75: (GIBSONTON DR -to- US HWY 301)	Hillsborough County	H	10 / F	3.59	70	D	PA	147500	6858	194500	9220	0.76	C
SR 674	SR 674: (US HWY 41 -to- I-75)	Hillsborough County	N	4 / D	3.04	50	D	A	23115	1165	39800	2000	0.58	C
SR 674	SR 674: (I-75 -to- US HWY 301)	Hillsborough County	N	4 / D	3.03	45	D	A	33026	1664	39800	2000	0.83	C
SR 674	SR 674: (US HWY 301 -to- CR 579)	Hillsborough County	N	2 / U	2.4	45	D	PA	15000	743	24200	1190	0.62	C
US HWY 301	US HWY 301: (MANATEE COUNTY -to- SR 674)	Hillsborough County	N	2 / U	5.69	60	D	PA	4500	223	24200	1190	0.19	B
US HWY 301	US HWY 301: (SR 674 -to- BALM RD)	Hillsborough County	N	2 / U	3.96	55	D	PA	14600	723	17700	880	0.83	C
US HWY 301	US HWY 301: (BALM RD -to- RHODINE RD)	Hillsborough County	N	6 / D	3.57	55	D	PA	31101	1568	59900	3020	0.52	C
US HWY 301	US HWY 301: (RHODINE RD -to- GIBSONTON DR)	Hillsborough County	N	6 / D	2.47	45	D	PA	45583	2297	59900	3020	0.76	C
US HWY 301	US HWY 301: (GIBSONTON DR -to- I-75)	Hillsborough County	N	6 / D	3.44	45	D	PA	50182	2530	59900	3020	0.84	C
US HWY 301	US HWY 301: (I-75 -to- CROSSTOWN W RAMP)	Hillsborough County	N	6 / D	2.08	50	D	PA	52621	2652	59900	3020	0.88	C
US HWY 41	US HWY 41: (19TH AVE NE -to- APOLLO BEACH BLVD)	Hillsborough County	N	4 / D	3.33	55	D	PA	30000	1512	39800	2000	0.75	C
US HWY 41	US HWY 41: (APOLLO BEACH BLVD -to- BIG BEND RD)	Hillsborough County	N	4 / D	1.74	55	D	PA	31000	1562	39800	2000	0.78	C
US HWY 41	US HWY 41: (BIG BEND RD -to- SYMMES RD)	Hillsborough County	C	4 / D	2.95	55	D	PA	24500	1235	39800	2000	0.62	C
US HWY 41	US HWY 41: (SYMMES RD -to- RIVERVIEW DR)	Hillsborough County	N	4 / D	2.05	50	D	PA	28967	1459	39800	2000	0.73	C
US HWY 41	US HWY 41: (RIVERVIEW DR -to- MADISON AVE)	Hillsborough County	N	4 / D	2.77	55	D	PA	25500	1285	39800	2000	0.64	C

Source: Hillsborough MPO, 2018

## Appendix C Gibsonton Crash Data

### US 41 and Nundy Ave

-  Pedestrian fatality
-  Pedestrian travel direction
-  Vehicle travel direction

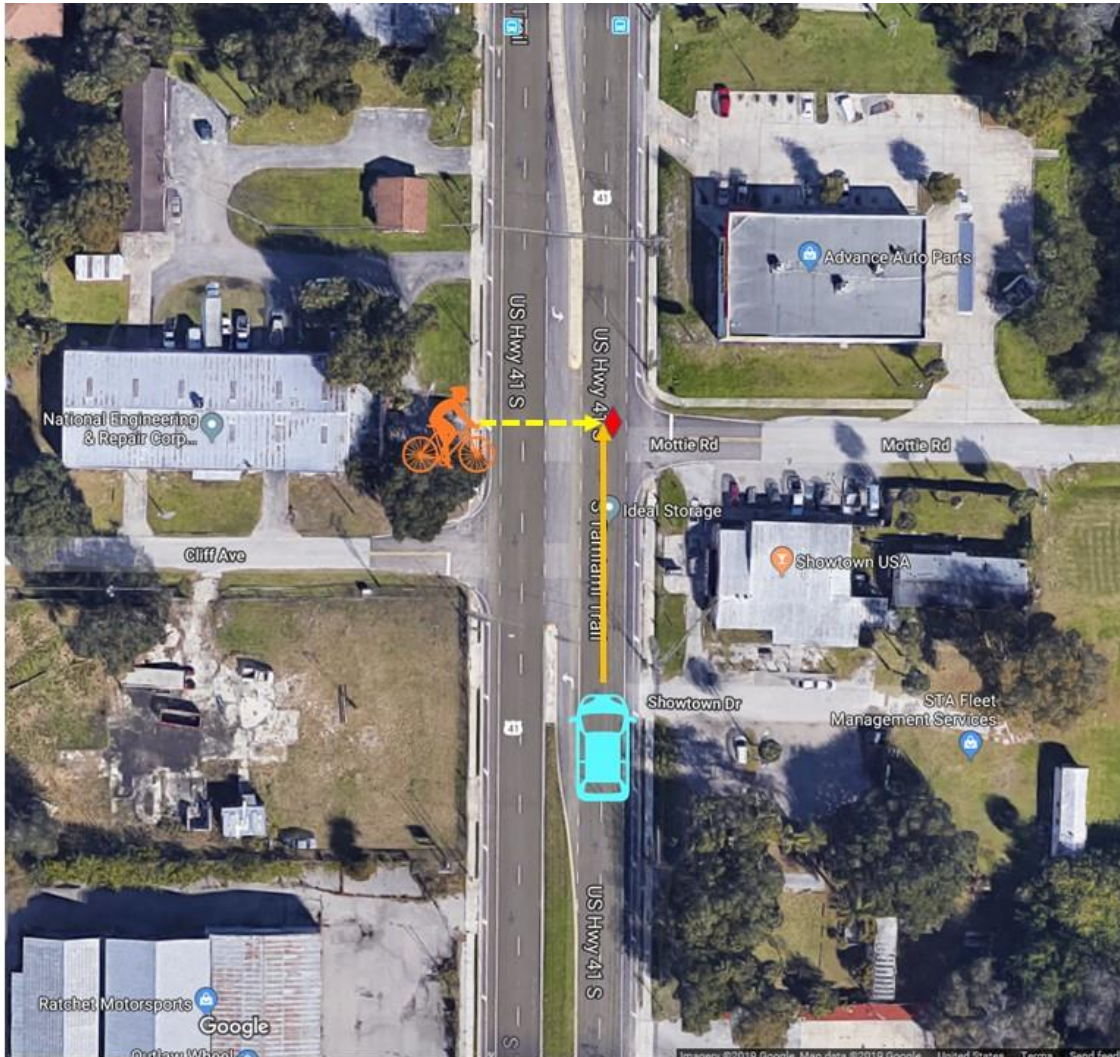
Pedestrian traveling west  
across US 41 was struck by a  
car traveling south.



## US 41 and Mottie Road

- ◆ Bicycle Fatality
- 🚲 → Bicycle travel direction
- 🚗 → Vehicle travel direction

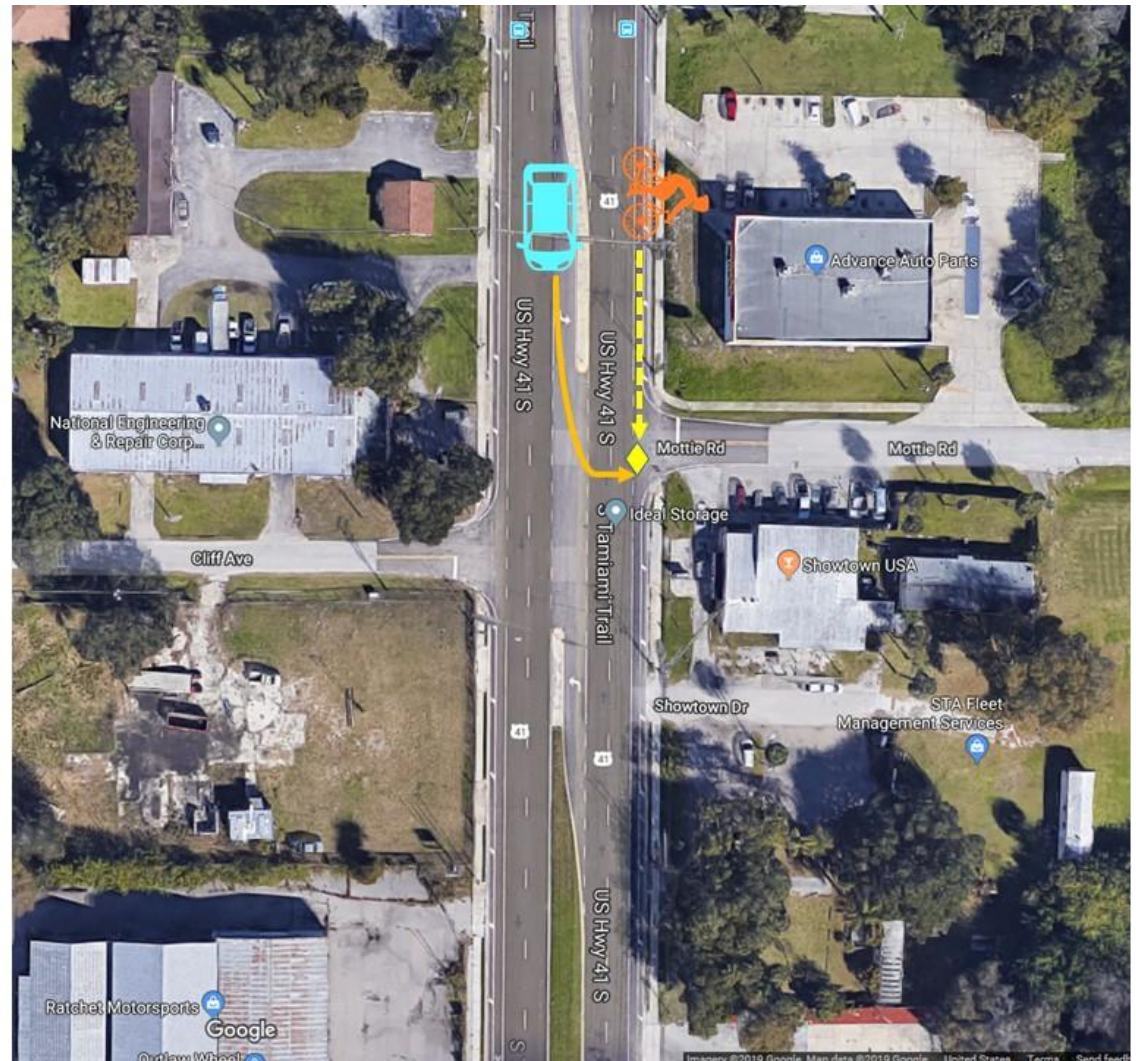
Bicyclist traveling east across US 41 was struck by a car traveling north.



## US 41 and Mottie Road

- ◆ Bicycle Injury
- 🚲 Bicycle travel direction
- 🚗 Vehicle travel direction

Bicyclist traveling south on US 41 struck by a car making a left turn onto Mottie Rd.

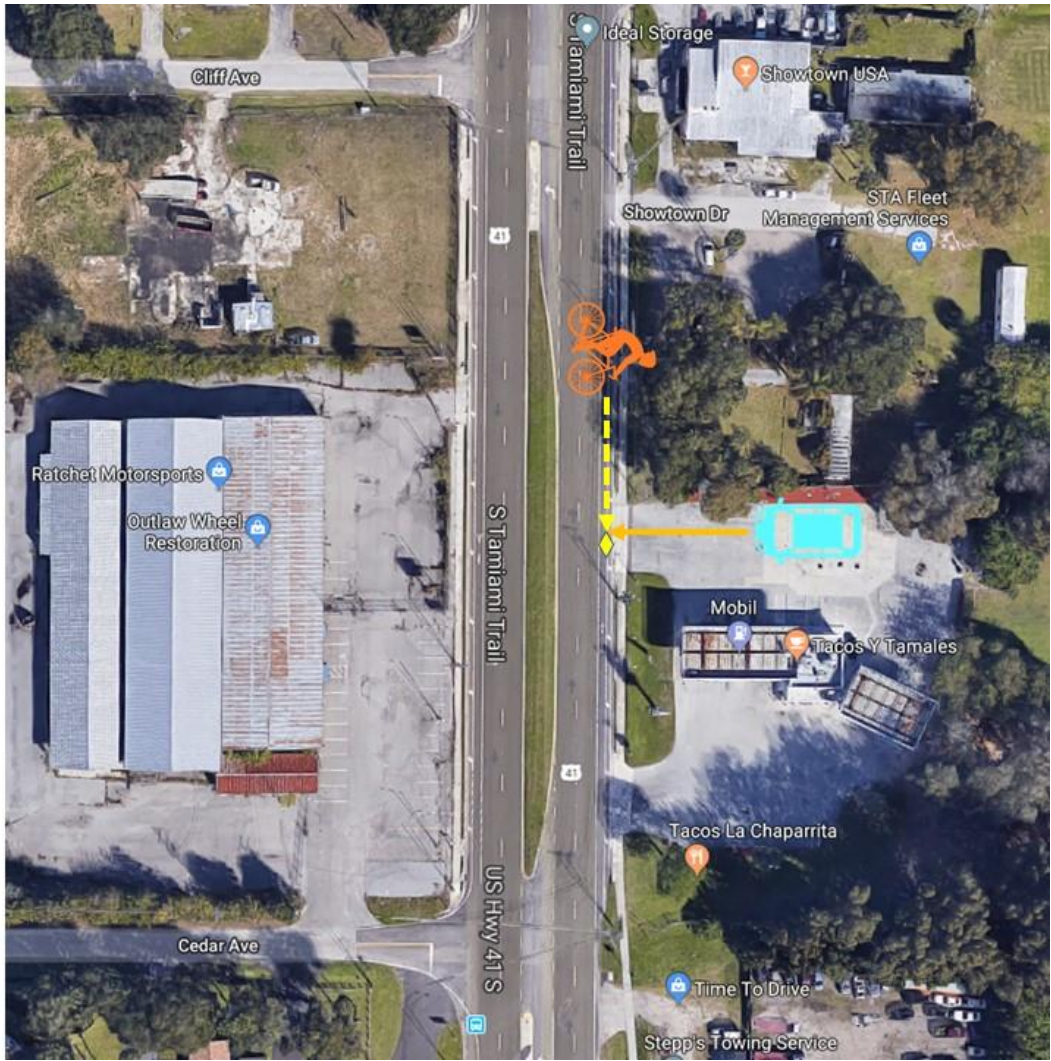







**US 41 (Driveway-Related)**

- ◆ Bicycle Injury
- 🚲 → Bicycle travel direction
- 🚗 → Vehicle travel direction

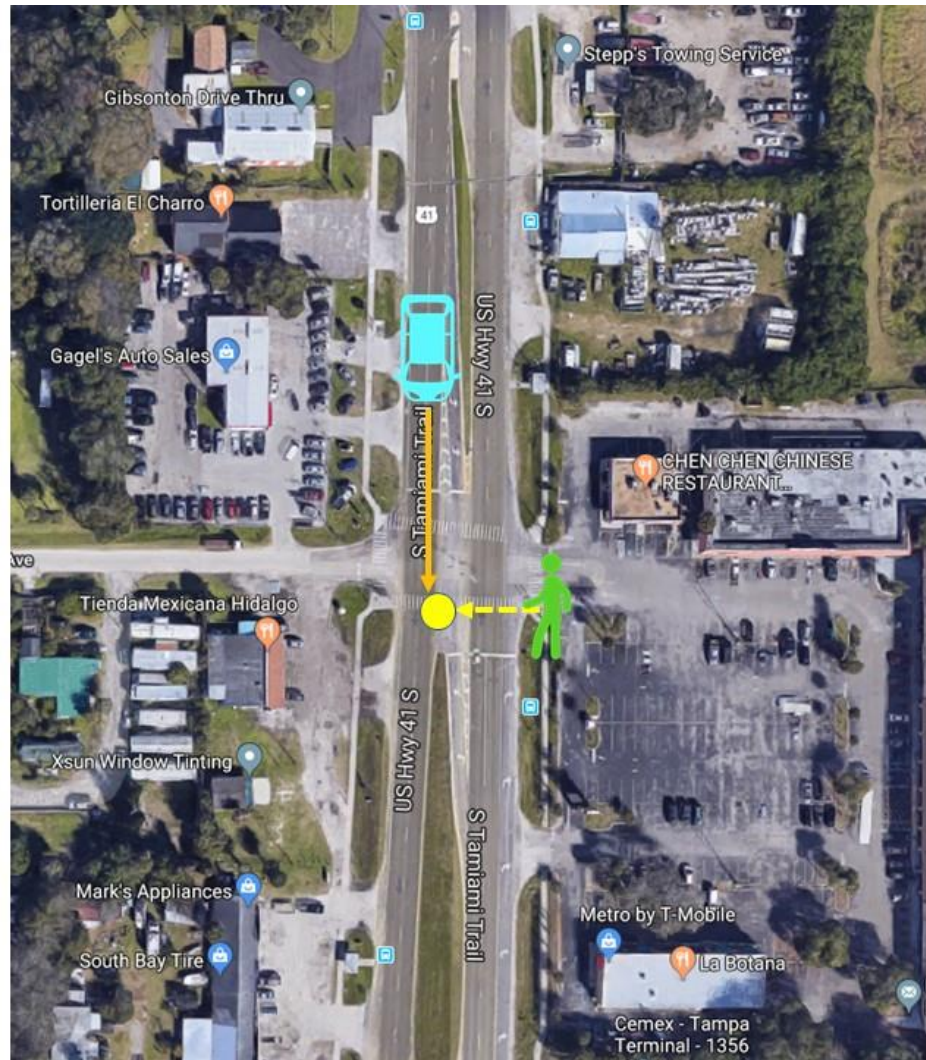
Bicyclist and car collided in a driveway.



## US 41 and Palm Ave


-  Pedestrian injury
-  Pedestrian travel direction
-  Vehicle travel direction

Car traveling south failed to comply with the red light and struck a pedestrian in the crosswalk.



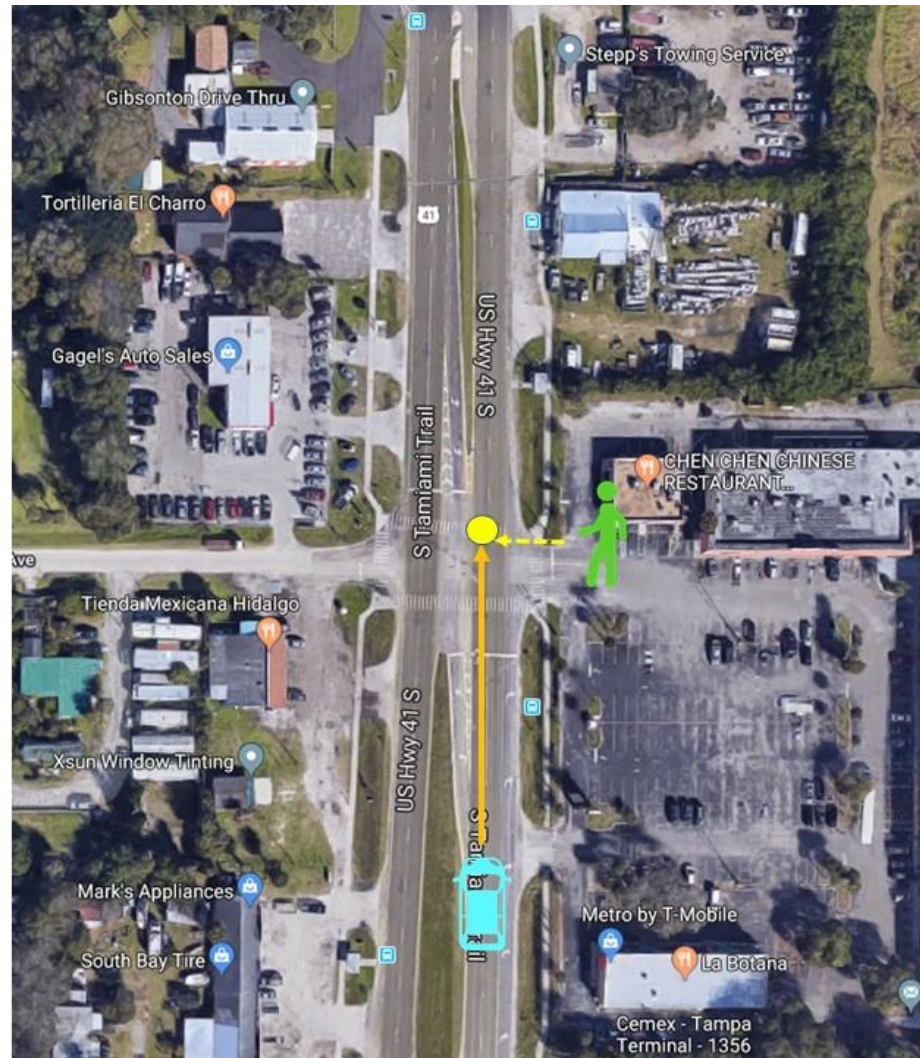
## US 41 and Palm Ave

 Pedestrian injury




 Pedestrian travel direction

 Vehicle travel direction

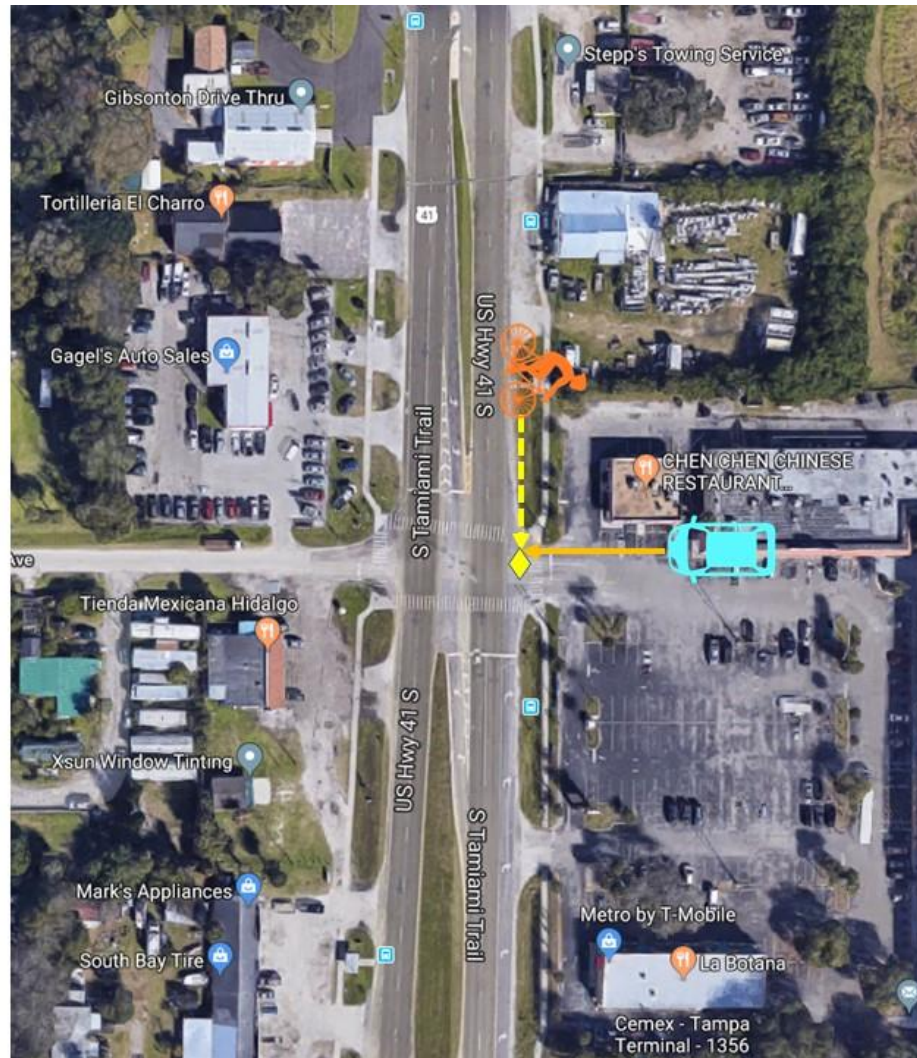
Pedestrian traveling west on the crosswalk failed to comply with the pedestrian signal and was struck by a vehicle traveling north.






## US 41 and Palm Ave

-  Bicycle Injury
-  Bicycle travel direction
-  Vehicle travel direction

A bicyclist traveling south on the sidewalk collided with a vehicle attempting to make a right turn on red.

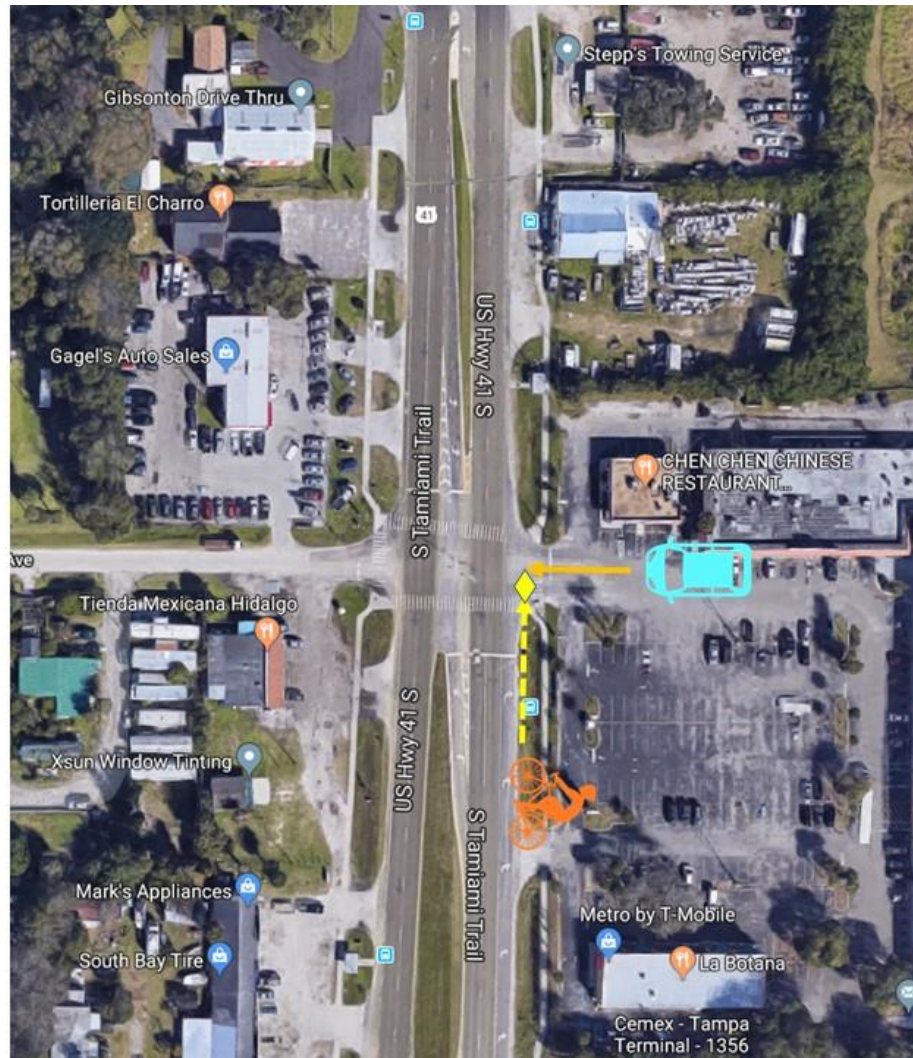


## US 41 and Palm Ave

-  Bicycle Injury
-  Bicycle travel direction
-  Vehicle travel direction

### Issues:

Bicyclist traveling north in the bicycle lane collided with a vehicle attempting to make a left turn onto US 41.



## US 41 and Beach Avenue

- Pedestrian fatality
- ➡ Pedestrian travel direction
- ➡ Vehicle travel direction

Pedestrian traveling west across US 41 was struck by a vehicle travelling south.

