

SOUTHSHORE

Transit Study Reevaluation



December 2018

Table of Contents

Executive Summary	6
Introduction.....	6
Study Area	6
Study Coordination/Outreach	7
Existing Conditions	10
Demographics.....	10
Existing Roadway Network.....	12
Existing Transit Network	13
Existing and Proposed Activity Centers.....	16
Development of Alternatives.....	17
Preferred Alternative Year 2014 SouthShore Circulator Study.....	18
Roadway and Transit Network	20
Roadway Network.....	20
Transit Network.....	21
Transit Needs and Market Assessment.....	23
Proposed Alternatives.....	28
Implementation Phase 1.....	31
Implementation Phase 2.....	32
Implementation Phase 3.....	33
Implementation Phase 4.....	34
Implementation Phase 5.....	35
Service Characteristics	35
Ridership Estimation	36
Cost Estimation.....	39
Capital Cost	39
Operating Costs.....	39
Alternative Mobility Options.....	42
Types of Alternative Mobility Services.....	42



Mobility Service Providers	42
Mobility as a Service.....	44
Alternative Mobility Areas	45
Mobility Hubs.....	45
Mobility Zones.....	48
Benefits and Challenges	49
Funding Sources.....	50
Public Sector Funding.....	50
Federal Programs	51
State Programs.....	52
Local Resources	53
Private Funding Sources.....	54
Public Private Partnerships	55
Corporate Transit Program	55
Advertising.....	55
Home Owner Associations (HOA) and Condominium Owner Association Fees (COA)	56
University Programs	56
Alternative Financing Methods.....	57
Conclusion	57
Appendix	59
Public Meeting Summary – May 31, 2018 Meeting.....	59
Public Meeting Summary - June 28, 2018 Meeting	61
Public Meeting Summary – September 13, 2018 Meeting	64
Public Meeting Summary – November 15, 2018 Meeting	66
Ridership Estimation Details.....	68
Year 2025 and 2035 Operating Cost per Passenger and Passenger per Revenue Hour and Mile.	70

Tables

Table 1 Permitted Residential Units (SouthShore)	11
Table 2 Summary of APC Data (2018) within SouthShore	15
Table 3 Service Characteristics	36
Table 4 Route Characteristics.....	36
Table 5 Implementation Phase 1 – Year 2025 and 2035 Estimated Ridership.....	37



Table 6 | Implementation Phase 2 – Year 2025 and 2035 Estimated Ridership..... 37

Table 7 | Implementation Phase 3 – Year 2025 and 2035 Estimated Ridership 38

Table 8 | Implementation Phase 4 – Year 2025 and 2035 Estimated Ridership 38

Table 9 | Implementation Phase 5 – Year 2025 and 2035 Estimated Ridership 38

Table 10 | Annual Operation and Capital Cost – Implementation Phase 1..... 40

Table 11 | Annual Operation and Capital Cost – Implementation Phase 2..... 40

Table 12 | Annual Operation and Capital Cost – Implementation Phase 3..... 40

Table 13 | Annual Operation and Capital Cost – Implementation Phase 4..... 41

Table 14 | Annual Operation and Capital Cost – Implementation Phase 5..... 41

Table 15 | Year 2025 Operating Cost per Passenger and Passenger Cost per Mile and Hour 41

Table 16 | Year 2035 Operating Cost per Passenger and Passenger Cost per Mile and Hour 42

Figures

Figure 1 | SouthShore Study Area..... 8

Figure 2 | 2010-2015 Population Growth (Includes; Balm, Little Manatee, and South Rural)..... 10

Figure 3 | 2010-2015 Dwelling Units (Includes; Balm, Little Manatee, and South Rural)..... 11

Figure 4 | 2010-2015 Retiree Households (Includes; Balm, Little Manatee, and South Rural)..... 12

Figure 5 | Existing Roadway Network 13

Figure 6 | Existing Transit Network..... 14

Figure 7 | 2018 SouthShore Routes APC Average Daily Boardings by stop location 16

Figure 8 | Existing and Future Activity Centers..... 17

Figure 9 | Alternative 4..... 19

Figure 10 | Proposed Roadway Network (Source: Hillsborough MPO & Hillsborough County Public Works Department) 21

Figure 11 | HART – 2018 Transit Development Plan – Funded (Source: HART TDP, FY 2019 -2028) 22

Figure 12 | HART – 2018 Transit Development Plan – Unfunded (Source: HART TDP, FY 2019 -2028) 23

Figure 13 | Year 2015 Dwelling Units by Acre (Source: 2040 LRTP) 24

Figure 14 | Year 2040 Dwelling Units by Acre (Source: 2040 LRTP) 24

Figure 15 | Year 2015 Employment by Acre (Source: 2040 LRTP) 25

Figure 16 | Year 2040 Employment by Acre (Source: 2040 LRTP) 25

Figure 17 | Year 2010 and 2040 Person Work Trips from SouthShore to Downtown Tampa (Source: 2040 LRTP)..... 26

Figure 18 | Year 2010 and 2040 Person HBO Trips from SouthShore to Downtown Tampa along the different Route Corridors (Source: 2040 LRTP)..... 27

Figure 19 | Year 2010 and 2040 Person Trips within SouthShore (Source: 2040 LRTP) 28

Figure 20 | Implementation Phase 1 – Add US 301 Service 31

Figure 21 | Implementation Phase 2 – Add I-75 Express – Gibsonton Park-N-Ride 32

Figure 22 | Implementation Phase 3 – I-75 – Downtown & South Loop 33

Figure 23 | Implementation Phase 4 – North Loop 34

Figure 24 | Implementation Phase 5 – HSF Fishhawk..... 35

Figure 25 | Example Mobility Hub 46



Figure 26 | Proposed Mobility Hub Locations 47
Figure 27 | Public Parcels along Routes and Park-N-Ride lots..... 48
Figure 28 | Mobility Zones 49



Executive Summary

This study is to reevaluate the year 2014 *SouthShore Transit Circulator Study* due to the tremendous growth in SouthShore and the accompanying increased congestion since then.

The reevaluation study builds on the services outlined in the previous study, documents the recommended transit service for SouthShore, and outlines the implementation phases for recommended service. In addition, the reevaluation study analyzed mobility hubs and mobility zones to accommodate other forms of transportation, such as Uber and/or Lyft, bike-sharing, car-sharing, and to address first-mile and last-mile connections.

The public input into the development of the recommended service and implementation phases is documented in the Appendix. The recommendations were developed in close coordination with the Hillsborough Metropolitan Planning Organization (MPO) and the Hillsborough Area Regional Transit Authority (HART) agency. The findings of the study will be presented to the Hillsborough MPO for approval. Once approved, the study will be presented to the HART Board. Following the approval of the HART Board, the recommendations are to be incorporated into the Transit Development Plan (TDP) so that they can be considered for implementation.

Introduction

SouthShore is the fastest growing area in Hillsborough County. This area has experienced significant growth and development over the last ten years and this high rate of growth and development is expected to continue. In 2014, the Hillsborough County MPO and HART conducted a SouthShore Transit Circulator Study to evaluate the need for transit service to connect the existing and future residential, employment, and activity centers within SouthShore and develop the best alternative and provide input into the Hillsborough County MPO and HART plans.

The purpose of this study was to reevaluate the preferred alternative from the previous study. The reevaluation was based on renewed public input and the recent growth patterns. The public input was coordinated with the MPO, HART, and local Stakeholders. Four public meetings were held, which are summarized in the Appendix of this report. Based on the previously developed alternative and the public input, five additional alternatives were presented and discussed. These alternatives and the public input were used to develop the proposed transit services. Projections for the horizon years of 2025 and 2035 were presented, as were the operational and financial implications associated with the proposed transit service.

Study Area

SouthShore refers to the southern part of unincorporated Hillsborough County, generally south of the Alafia River. Within that area the study boundary encompasses six (6) individual community plan areas: Apollo Beach, Gibson, Ruskin, Riverview, Sun City Center, and Wimauma; and one community planning



area Boyette. The community plan areas are adopted in the Livable Communities Element of the Hillsborough County Future of Hillsborough Comprehensive Plan. The Comprehensive Plan discusses the special and unique characteristics of the areas and examines the issues and problems facing the areas and provides strategies for solutions. The community plans in the Livable Communities Element are meant to portray a vision for the future and may have an impact on zoning. Each community plan is intended to provide specific recommendations on issues in a particular area of the county, e.g., they may specify certain locations for commercial development, and may define the form (or character) of commercial development, such as a Main Street, town center, strip or shopping center.

Hillsborough County, Planning and Growth Management uses community planning areas in their analysis of infrastructure and development of services, and where adopted community plan areas exist the boundaries have been applied to coincide to the highest degree possible. As pointed out, Boyette is not an adopted community plan area, it is a community planning area.

Two adopted community plan areas (Little Manatee South and Balm) located south of Alafia River but outside of Urban Service Area (USA) were not included in the study area.¹ The study area, shown in Figure 1, coincides with the adopted SouthShore Areawide Systems Plan, in the County's Livable Communities Element. The Areawide Systems Plan establishes a framework for decisions about growth and development, to be implemented over time by both public and private actions as resources become available for all eight of the adopted community plans in SouthShore. One of its findings is that compatibility and interconnectivity of various systems among individual community planning efforts should be supported in SouthShore. The objectives, policies and strategies respond to regional issues divided into four distinct subsections: transportation, environment, cultural/historical, and economic development.

The approximate 384 square miles of the study area are bounded by Bloomingdale Avenue to the north, the Urban Service Area to the east, Manatee County to the south, and Tampa Bay to the west.

Study Coordination/Outreach

The study coordination and public outreach was organized by the MPO. A series of weekly meetings were held with the MPO and HART to provide project progress and obtain input and direction. The Stakeholders were identified by the MPO in the previous and current study and include representatives from communities and businesses in SouthShore.

Four public meetings were held through the course of this project to present information to the public and to obtain their input. The first three public meetings were held at the SouthShore Regional Library, while the last meeting was held at the SouthShore Regional Service Center. The meeting summaries are included in the Appendix of this report. The meetings were as follows:

¹ The USA designates on the adopted Future Land Use Map the location for urban level development through 2025 (80% of all population growth is envisioned to occur with its boundary).

- 🚌 May 31, 2018 – Introduced the study, presented the existing conditions and alternatives from the previous study, and obtained input on priority activity centers and input on the proposed transit system.
- 🚌 June 28, 2018 – Presented preliminary transit alternatives and obtained comments.
- 🚌 September 13, 2018 – Presented the refined transit alternatives and other mobility alternatives and obtained comments.

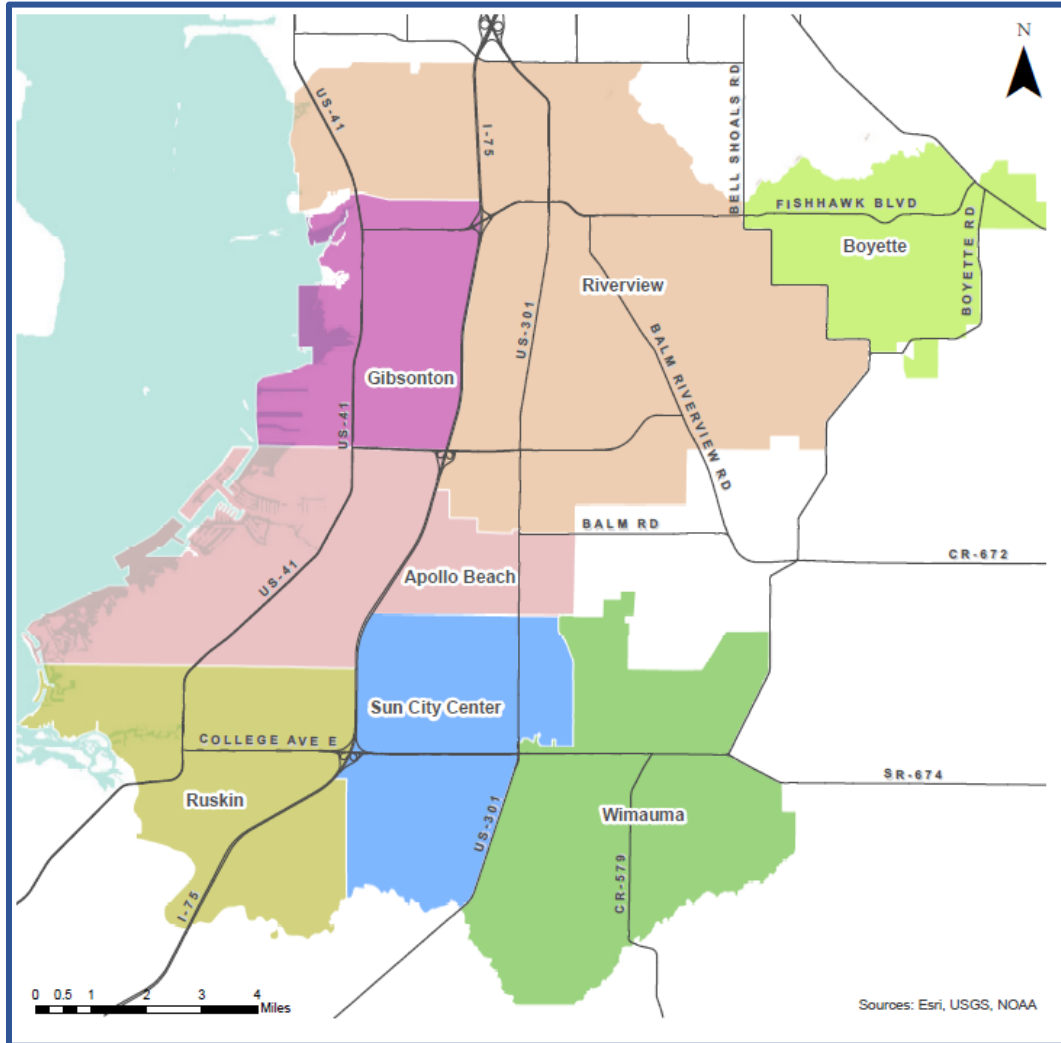


Figure 1 | SouthShore Study Area

- 🚌 November 15, 2018 – Presentation of operational and financial data associated with the implementation plan.

The following businesses and organizations were invited to participate in the study through the public involvement (or outreach) meetings. Not all of these organizations participated in the meetings. In

addition, the MPO maintained an email list of over 600 individuals who participated in past meetings. These individuals were notified of all the meetings as well.

-  Akerman LLP
-  All Bay Insurance Group
-  Alvarez CPA
-  BayCare Health System
-  Bele Avenue Teas
-  Beth-El Farmworker Ministry
-  Century 21 Beggins
-  Christ Community Church
-  Dedicated Transportation Solutions, Inc.
-  Enterprising Latinas
-  Firehouse Cultural Center
-  First Citrus Bank
-  Florida Home Partnership, Inc.
-  H & R Block, Ruskin
-  Haley Veteran's Hospital
-  Hillsborough Community College SouthShore
-  Hillsborough County Hispanic Liaison
-  Hillsborough County School Board
-  Hispanic Services Council
-  Homes by Westbay
-  Kaeser & Blair, Inc.
-  Kennco Manufacturing
-  Kids R Kids
-  Legal Shred
-  Miller Florida Homes
-  Mosaic
-  Newland Real Estate Group
-  P.F. Auto Glass, Inc.
-  PTL Group
-  Redlands Christian Migrant Association
-  Riverview Chamber
-  Ruskin Chamber
-  Ryan Companies
-  ServiceMaster 24 Hr. Clean
-  SI Solutions
-  South Shore Chamber
-  South Shore Yachts
-  SouthBay Hospital
-  Stearns We Avenuer Miller Weissler Alhadeff & Sitterson
-  Sun City Center Chamber
-  Technical Systems Integrators
-  TECO
-  Titan America, LLC.
-  TSI
-  U.S. Department of Veteran's Affairs
-  United Yacht Sales
-  Victoria's 5th Avenue Salon
-  Weichert Realtors SouthShore
-  Wholesome Community Ministries
-  Wimauma Community Development Corporation
-  Zipperer's Funeral Home

Existing Conditions

SouthShore is the fastest growing suburban area within Hillsborough County and is home to several communities. The existing conditions consist of demographics (showing both growth and characteristics), existing roadway network, and existing transit network.

Demographics

SouthShore has seen significant growth and development between 2010 and 2015. SouthShore is a rapidly developing suburban area that is substantiated by a population growth of 11 percent and an 8 percent growth in dwelling units between 2010 and 2015. Figure 2 depicts the SouthShore Population Growth between 2010 and 2015 as compared to all of Hillsborough County.

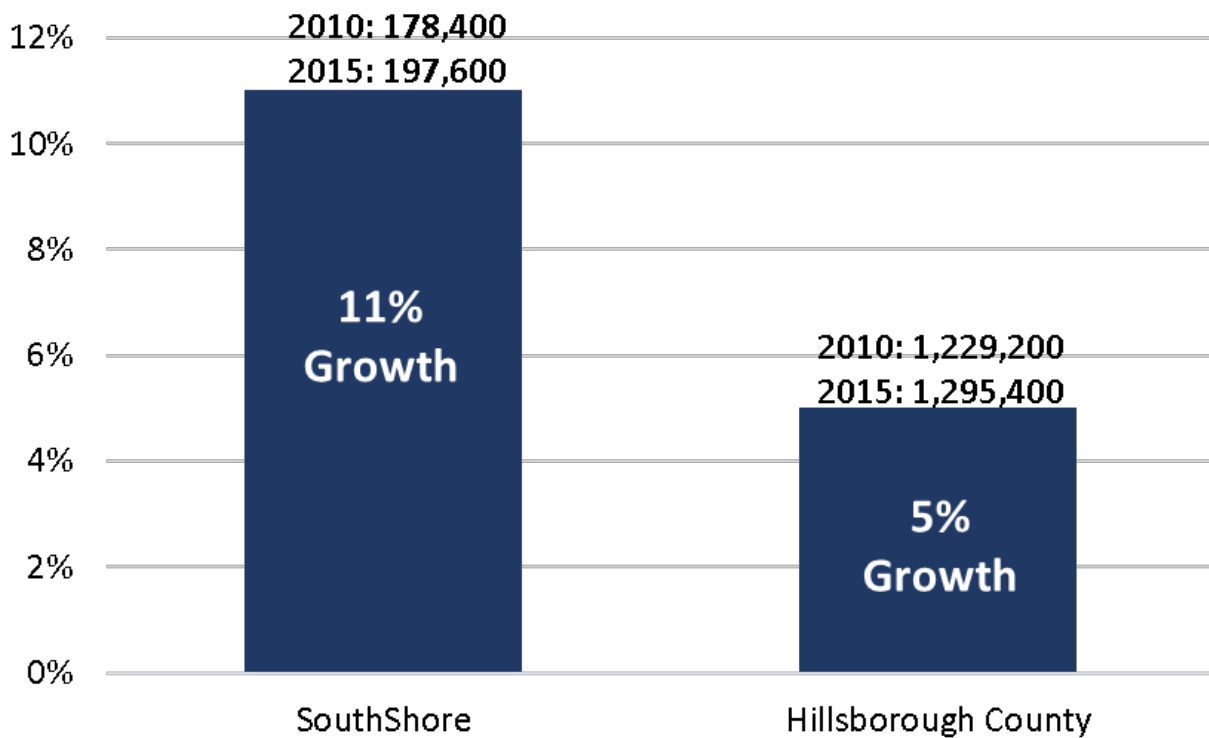


Figure 2 | 2010-2015 Population Growth (Includes; Balm, Little Manatee, and South Rural²)

Figure 3 depicts SouthShore’s Dwelling Unit Growth between 2010 and 2015 as compared to all of Hillsborough County.

² The data summary was based on the traffic analysis zones of the Tampa Bay Regional Planning Model (TBRPM).

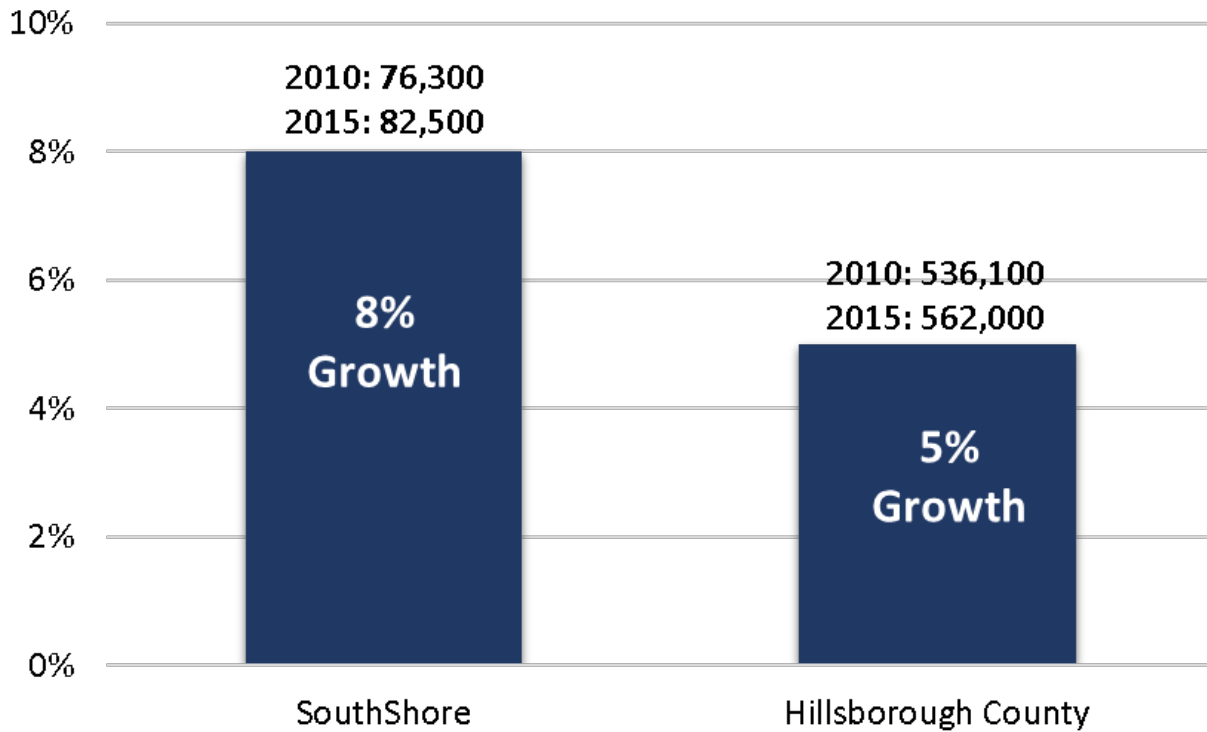


Figure 3 | 2010-2015 Dwelling Units (Includes; Balm, Little Manatee, and South Rural³)

To further depict the growth, Table 1 shows the number of permitted residential units in the SouthShore from 2011 to May, 2018. As can be seen from the table, there is a steady increase over the last several years.

Table 1 | Permitted Residential Units (SouthShore)

Permit Issue Year	Number of Units
2011	1,557
2012	2,215
2013	2,647
2014	2,715
2015	3,156
2016	3,689
2017	4,002
2018 (Jan-May)	1,039

³ The data summary was based on the traffic analysis zones of the Tampa Bay Regional Planning Model (TBRPM).

Figure 4 depicts that in SouthShore the number of retiree households has increased by approximately 5 percent between 2010 and 2015, as compared to all of Hillsborough County, which has decreased overall by approximately 6 percent over the same period.

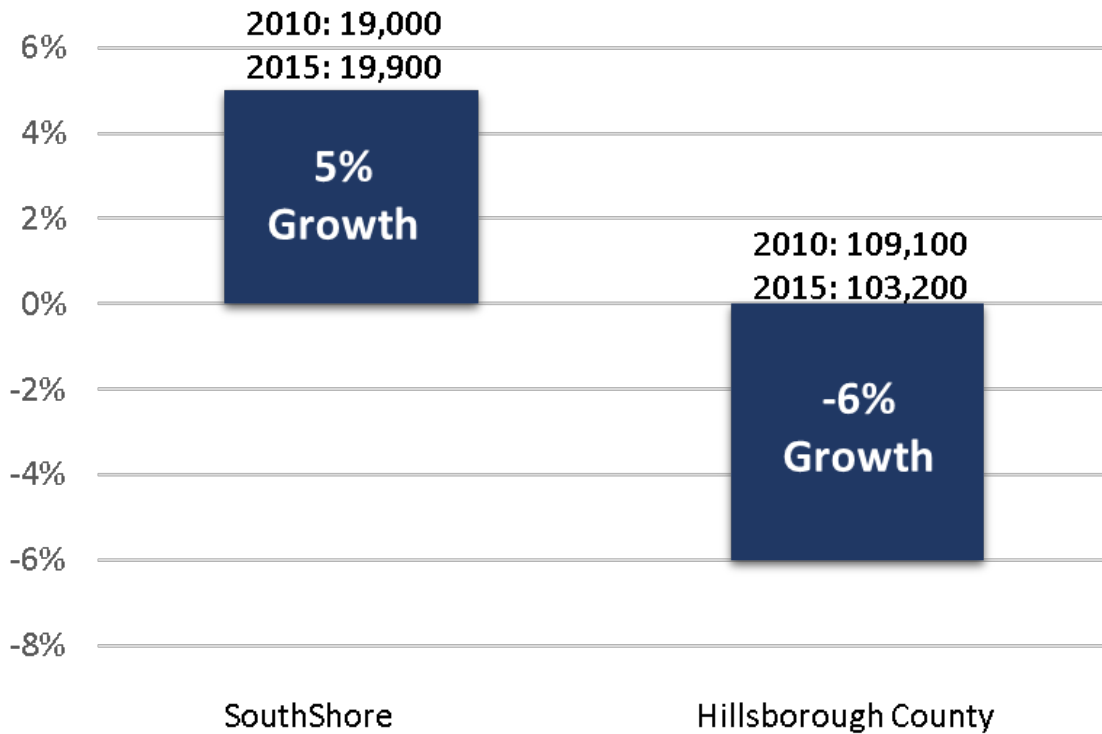






Figure 4 | 2010-2015 Retiree Households (Includes; Balm, Little Manatee, and South Rural⁴)

Existing Roadway Network

The SouthShore study area presents a network of roadways that could support new or expanded transit service. The existing roadway network is shown in Figure 5. From west to east, US-41, I-75, and US-301 are the major north/south thoroughfares that run the length of the study area. From north to south, the major east/west thoroughfares in the study area include:

-  Progress Boulevard / Bloomingdale Avenue
-  Gibsonton Drive / Boyette Road
-  SR 672 – Big Bend Road
-  SR 674 – College Avenue / Sun City Boulevard

In addition, there are many local streets that run from the major arterials in to residential subdivisions. All transit routes operate along almost all major roadways.

⁴ The data summary was based on the traffic analysis zones of the Tampa Bay Regional Planning Model (TBRPM)

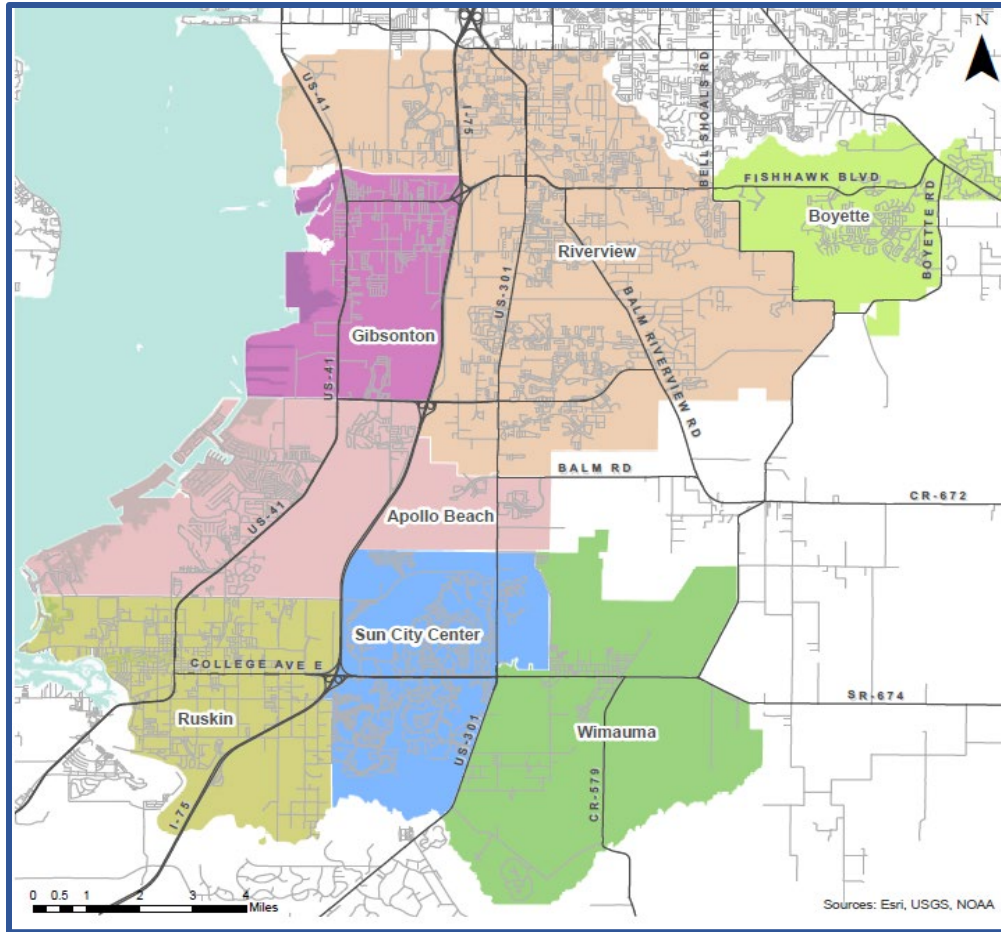




Figure 5 | Existing Roadway Network

Existing Transit Network

There are currently four HART fixed routes that serve SouthShore including routes 31, 8, 24 Limited Express (LX), and 75 LX, as shown in Figure 6. In addition, there are two Flex routes. Flex routes operate as a fixed route but may deviate up to one mile from its fixed route to pick-up/drop-off passengers. Reservations for FLEX service may be made up to two hours or three days in advance. This allows for additional flexibility in routing where necessary.

-  Route 570, Brandon Flex - provides service on Monday through Friday between 6:00 AM and 7:50 PM and between 8:00 AM and 8:50 PM on Saturday. The service covers the area between Brandon Boulevard, Jon Moore Road, Bloomingdale Avenue and Providence Road.
-  Route 571, South County Flex - provides service on Monday through Friday between 6:00 AM and 8:00 PM. The service area runs along State Road 674 from 21st St Street on the west to County Road 579 on the east.

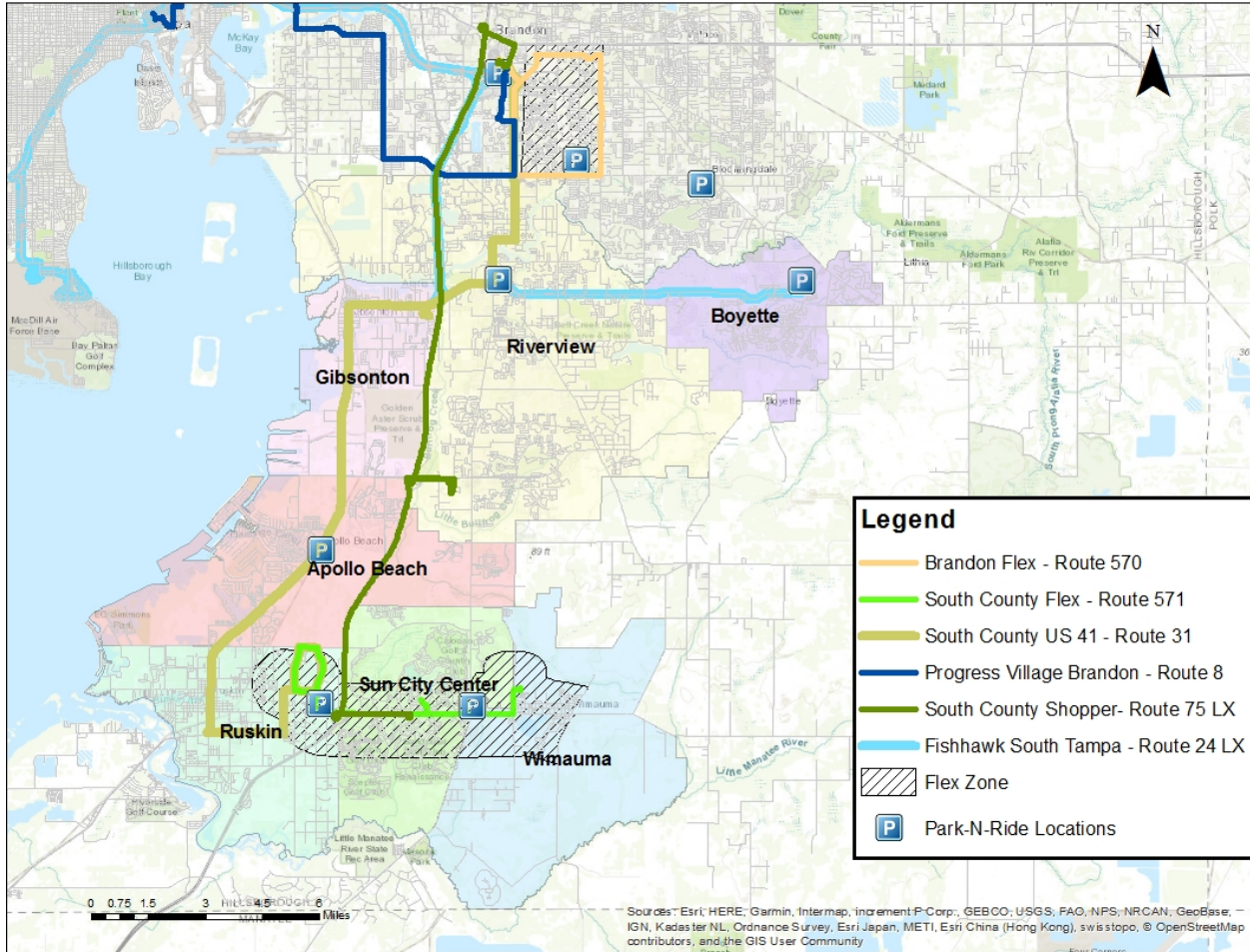





Figure 6 | Existing Transit Network

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Route 31 (South Hillsborough County/ US 41) – provides Monday through Friday service connecting Hillsborough Community College (HCC) SouthShore Campus to Westfield Brandon Mall (Brandon Mall) along US-41, Gibsonton Drive, and Providence Road. Service is provided from 6:15 AM to 7:50 PM, with 75-minute frequency of service.
- 

Route 8 (Progress Village Brandon) – provides daily service connecting the Brandon Mall to the Marion Transit Center via Bloomingdale Avenue, 78th Street, Palm River Road, 50th Street, 7th Avenue, Nuccio Parkway, Channelside Drive, Kennedy Boulevard, Meridian Avenue, Jefferson Street, Whiting Street, and Morgan Street. Service is provided from 4:40 AM to 11:38 PM, Monday through Friday, 6:15 AM through 11:40 PM on Saturday, and 6:15 AM through 11:38 PM on Sunday, with 30-minute frequency during the week and one-hour frequency during the weekend.
- 

Route 75 LX (South County Shopper) – provides Tuesday and Thursday service connecting Sun City Center to the Brandon Mall via Sun City Center Boulevard, I-75, Big Bend Road, Brandon Boulevard, and Gornto Lake Road. Service runs in the morning northbound, leaving at 9:00 AM

and 11:00 AM, and southbound, leaving at 8:00 AM and 10:00 AM; and in the afternoon northbound, leaving at 1:00 PM, 3:00 PM, and 5:00 PM, and southbound, leaving at 12:00 PM, 2:00 PM, and 4:00 PM, with 2-hour frequency.


-  **Route 24 LX (Fishhawk/South Tampa)** – The Fishhawk 24 LX serves the northern part of the study area on Boyette Road. It provides weekday express service to Downtown Tampa and South Tampa from the Fishhawk Sports Complex Park-N-Ride to Florida Keys Avenue. Service runs westbound from 5:10 AM through 7:54 AM and eastbound from 3:15 PM through 5:52 PM, with 20-minute frequency.

Table 2 summarizes March ridership data from the 2018 Automated Passenger Count (APC) system for the routes currently operation in SouthShore. Based on HART’s service ridership summary, Routes 570, 8, and 24 LX perform 75 percent or higher above the system averages. Routes 570, 31 and 75 LX perform 60 percent or lower than the system averages.

Table 2 | Summary of APC Data (2018) within SouthShore

Route	FY 2018 March Monthly Ridership	FY 2018 March Average Daily Ridership	Route productivity, Passengers per Revenue Hour & Mile FY 2018 Jan-March	
			Passengers per Revenue Hour	Passengers per Revenue Mile
Brandon FLEX - Route 570	1,608	73	4.29	0.36
Progress Vilage Brandon - Route 8	34,330	1,107	15.56	1.13
FishHawk South Tampa - Route 24 LX	5,620	255	24.38	0.85
South County FLEX - Route 571	704	32	2.31	0.14
South Hillsborough County - Route 31	6,125	278	9.09	0.44
South County Shopper Tues. & Thurs. - Route 75 LX	346	31	4.40	0.18

Black = Routes performing 75% or higher above the local system average

Red = Routes performing 60% or lower than the local system average

Figure 7 depicts the route boardings per stop, for stops within SouthShore for Routes 8, 31, 24 LX and 75 LX. The data reflects the average daily boarding data (ons) from February, 2018.

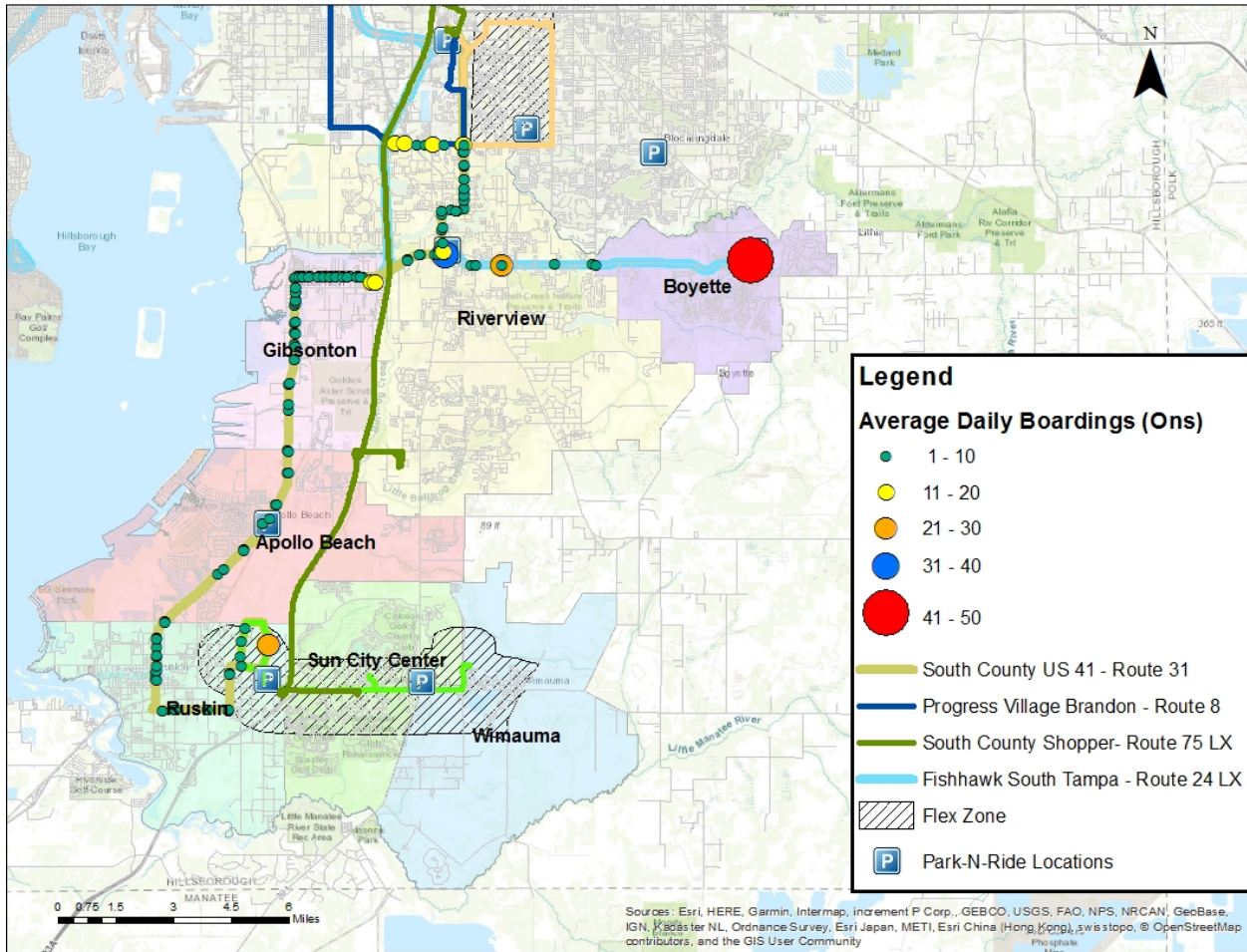


Figure 7 | 2018 SouthShore Routes APC Average Daily Boardings by stop location

Existing and Proposed Activity Centers

The existing and proposed activity centers were identified and are shown in Figure 8. These activity centers are likely to be the primary destinations for transit passengers. The existing activity centers were identified as commercial centers, educational facilities, or health facilities and community centers. Proposed activity centers were identified based on proposed development plans.

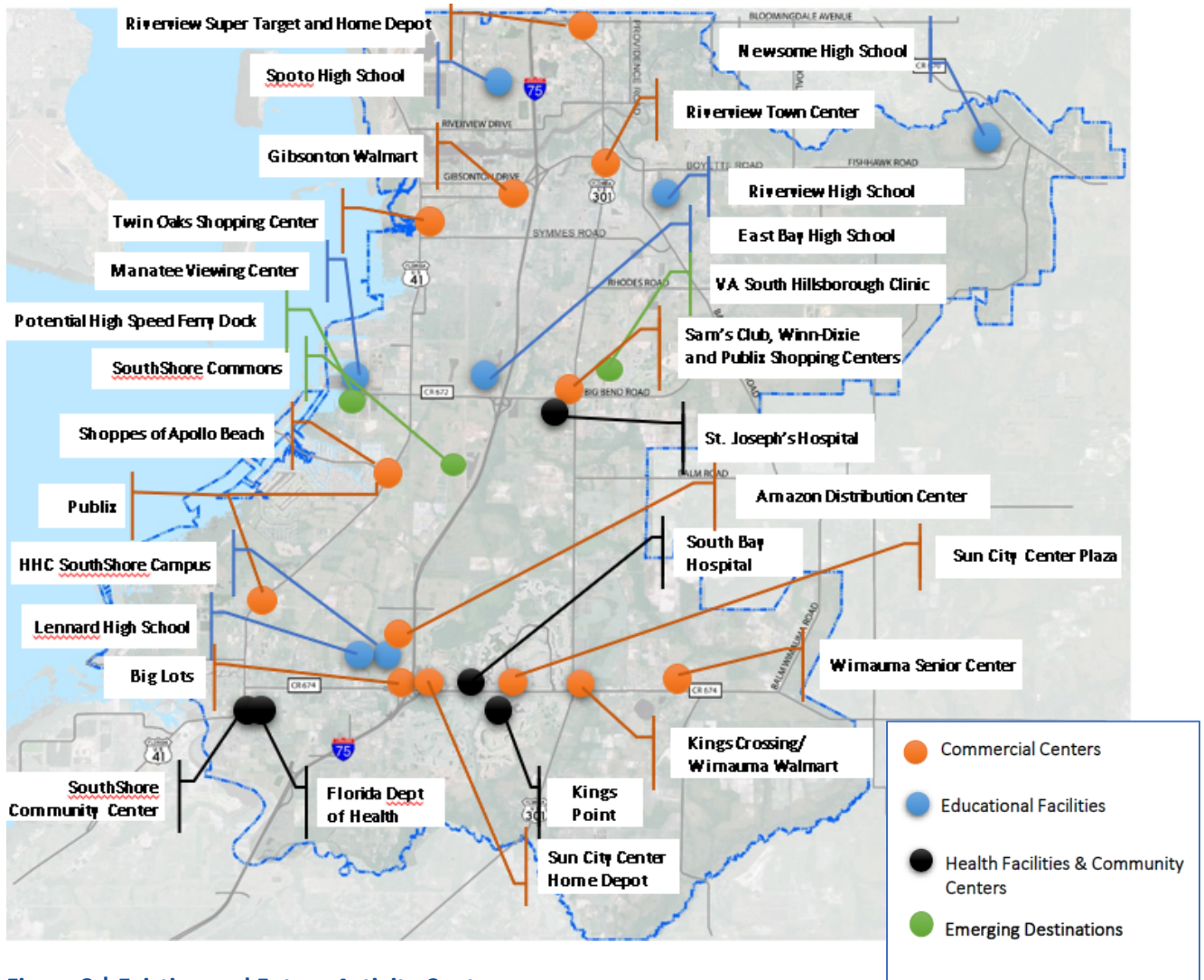


Figure 8 | Existing and Future Activity Centers

Development of Alternatives




With the housing market increasing in the southern portion of the county and the job market primarily located in Downtown Tampa, Westshore and University business areas, additional pressure is being placed on an already overloaded roadway network. This trend is likely to continue due to a general increase in housing cost in Downtown Tampa, resulting in a large segment of the labor force residing further out, where mobility options are limited.

In the 2014 *SouthShore Transit Circulator Study*, four preliminary alternatives were developed based on growth patterns, activity centers and input from the Stakeholders. These preliminary alternatives were presented to the Stakeholders and further refined based on their input. Alternative 4 was selected as the preferred alternative in the previous study and is summarized below.

Preferred Alternative Year 2014 SouthShore Circulator Study

Alternative 4 – 2 Two-Way Loops with Local Service to Brandon Mall

Alternative 4 (see Figure 9) provided clockwise and counter clockwise (two-way) North and South loops. These loops were framed by routes on US-301 and US-41. A north-south route along US-301 connected the loops to the Brandon Mall.

-  Route 1 connected Brandon Mall via south on Gornto Lake Road to US-301 traversing south on US-301 to SR 674, east on SR 674 to serve Wimauma, west on SR 674 to SE 30th Street, north on SE 30th Street to the Amazon Distribution Center and continuing along NE 19th Avenue and SE 24th Street to the HCC SouthShore Campus.
-  Route 2, the north loop, served Gibsonton, Riverview and Apollo Beach with service along Gibsonton Drive, the north portion of US-301, Big Bend Road, and the north portion of US-41. This route operated in both the clockwise and counter clockwise directions.
-  Route 3, the south loop, provided service to Apollo Beach, Riverview, Sun City Center, Wimauma, and Ruskin with service along Big Bend Road, the south portion of US-301, SR 674 with service to Amazon and HCC SouthShore Campus, and the south portion of US-41. This route was also bi-directional in operation.

The future high speed ferry (HSF) were served in both directions by Route 2 (North Loop) and Route 3 (South Loop).

Alternative 4 was refined to include the South County Flex Zone, the extended Big Bend Flex Zone, and the Gibsonton Flex Zone was extended to Riverview High School. Figure 9 depicts Alternative 4.

SouthShore Transit Circulator Study

Alternative 4* - 2 Two-Way Loops, Extended Flex to Riverview High School

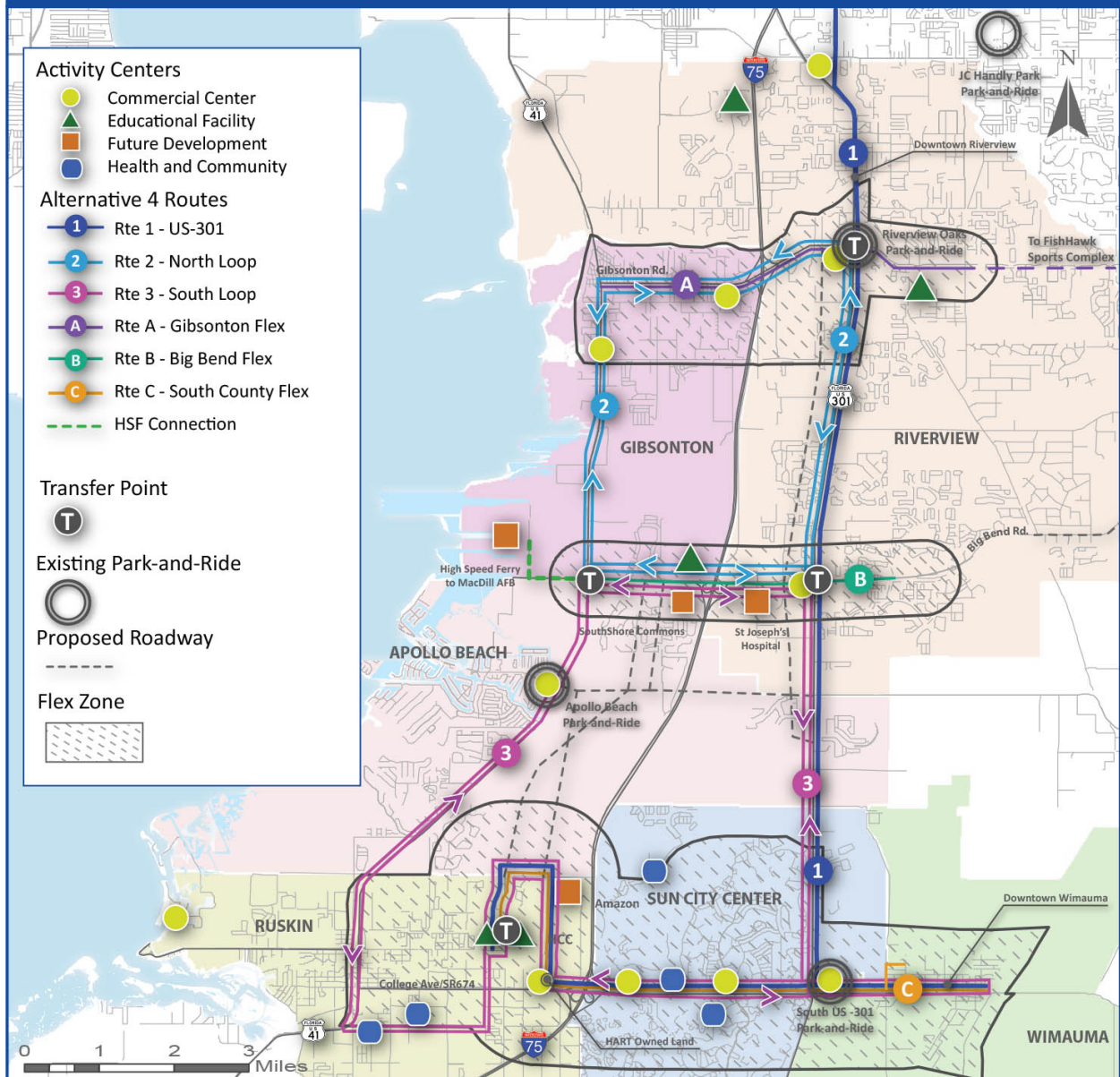









Figure 9 | Alternative 4

Roadway and Transit Network





Roadway Network

New roads are planned for the growing SouthShore as identified in the Hillsborough County MPO Fiscal Year 2019-2023 Transportation Improvement Program (TIP) and the 2040 Long Range Transportation Plan (LRTP) and are shown in Figure 10. Three new roads and a multi-use trail are planned for 2025 in addition to major interchange improvements along I-75 at Big Bend Road and Gibsonton Drive. For 2040 two high speed ferry docks (HSF) are proposed as well as three new roads.

Constructed by 2023:

-  A new two lane road (Big Bend Road) will be extended from Balm-Riverview Road to Balm-Boyette Road.
-  A new two-lane road (Waterset Boulevard) from 19th Avenue NE to Paseo Al Mar Boulevard
-  A new four lane road; Apollo Beach Boulevard I-75 Overpass.
-  Widening of Big Bend Road to a 6-lane divided road from US-41 to I-75 including enhanced pedestrian, bicycle and bus facilities.
-  Interchange operational improvement at I-75 and 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)
-  Interchange operational improvement at I-75 and Gibsonton Drive to provide an additional EB left turn land and NB entrance lane
-  Widening US 301

Constructed by 2040:

-  A new four-lane road (30th Street) from 19th Avenue to Apollo Beach Boulevard.
-  A new four-lane road (Apollo Beach Road) from US-41 to US-301.
-  A new two-lane road (South County North-South Road) from the Apollo Beach Extension to Big Bend Road.
-  Two proposed HSF docks, one at the end of Kracker Avenue and one near the Williams Park Boat ramp.

The proposed roads were not considered for future bus service because of uncertainty in construction scheduling and the density and land use of the surrounding area. As new roadways are constructed, or existing corridors are widened, route configurations should be reevaluated. However, the HSF dock at Kracker Avenue was taking into consideration in the last implementation phase.

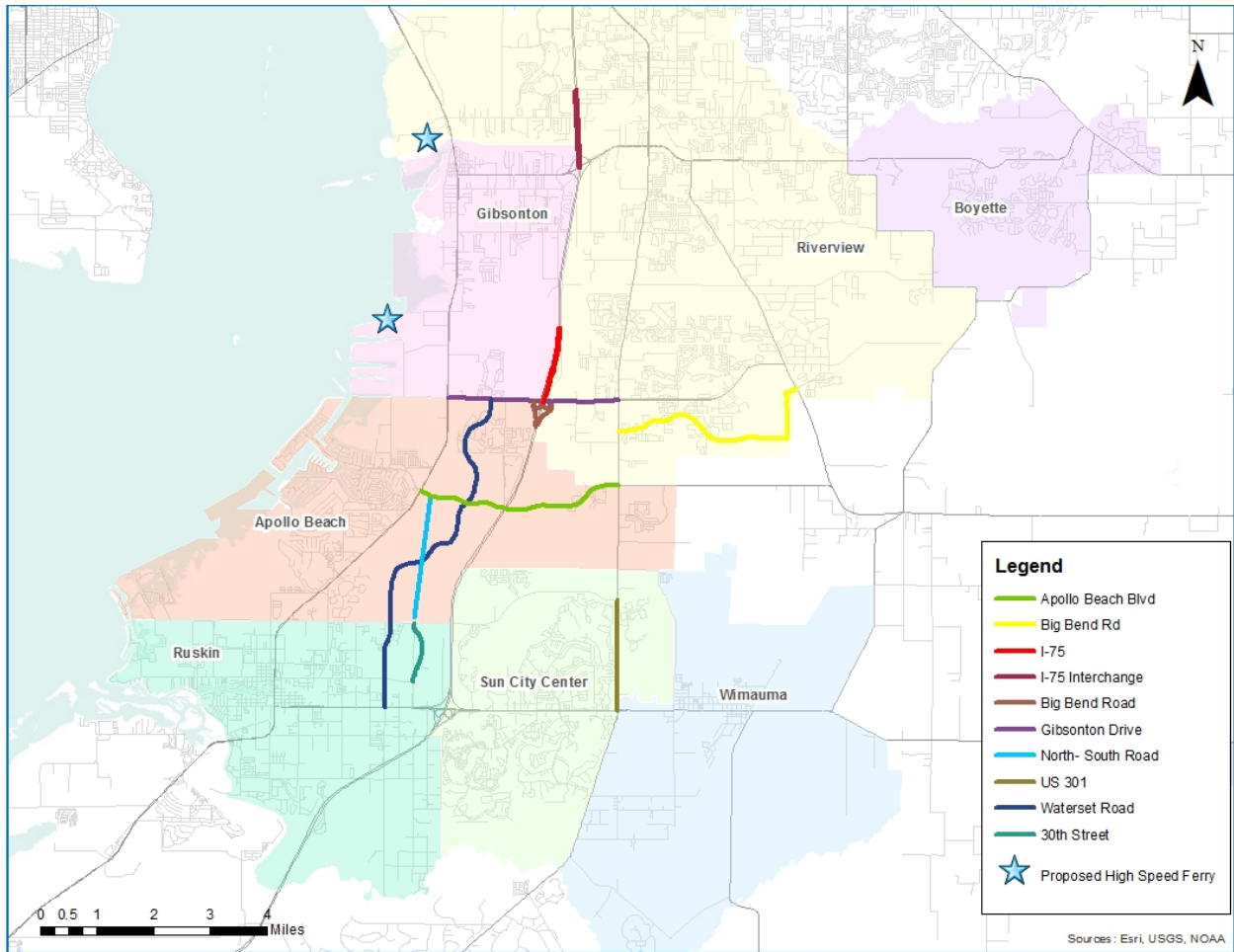


Figure 10 | Proposed Roadway Network (Source: Hillsborough MPO & Hillsborough County Public Works Department)

Transit Network

Planned enhancements for transit service identified in HART’s Transit Development Plan (TDP) Update, Fiscal Year 2019 – Fiscal Year 2028 are categorized as part of the Action Plan (funded) or the Vision Plan (unfunded). The Action plan, depicted in Figure 11, provides for current service levels and non-peak enhancements to the current system as funding becomes available. The Vision Plan, depicted in Figure 12, provides for enhancements in bus rapid transit (BRT) projects, new local bus routes, frequency improvements, innovative solutions and on-demand services. These enhancements were recommended in the 2014 SouthShore Study.

Of particular interest in SouthShore is a long term ground lease agreement which the County and HART entered into with the Hillsborough Tax Collector for the new South County Tax Collector Branch Office. The Tax Collector has committed to provide a reimbursement to HART of up to \$60,000 for the construction of a bus stop on 30th Street adjacent to the South County Regional Service Center and up to \$60,000 for the construction of any sidewalk necessary for pedestrian access from the bus stop to the South County Regional Service Center.

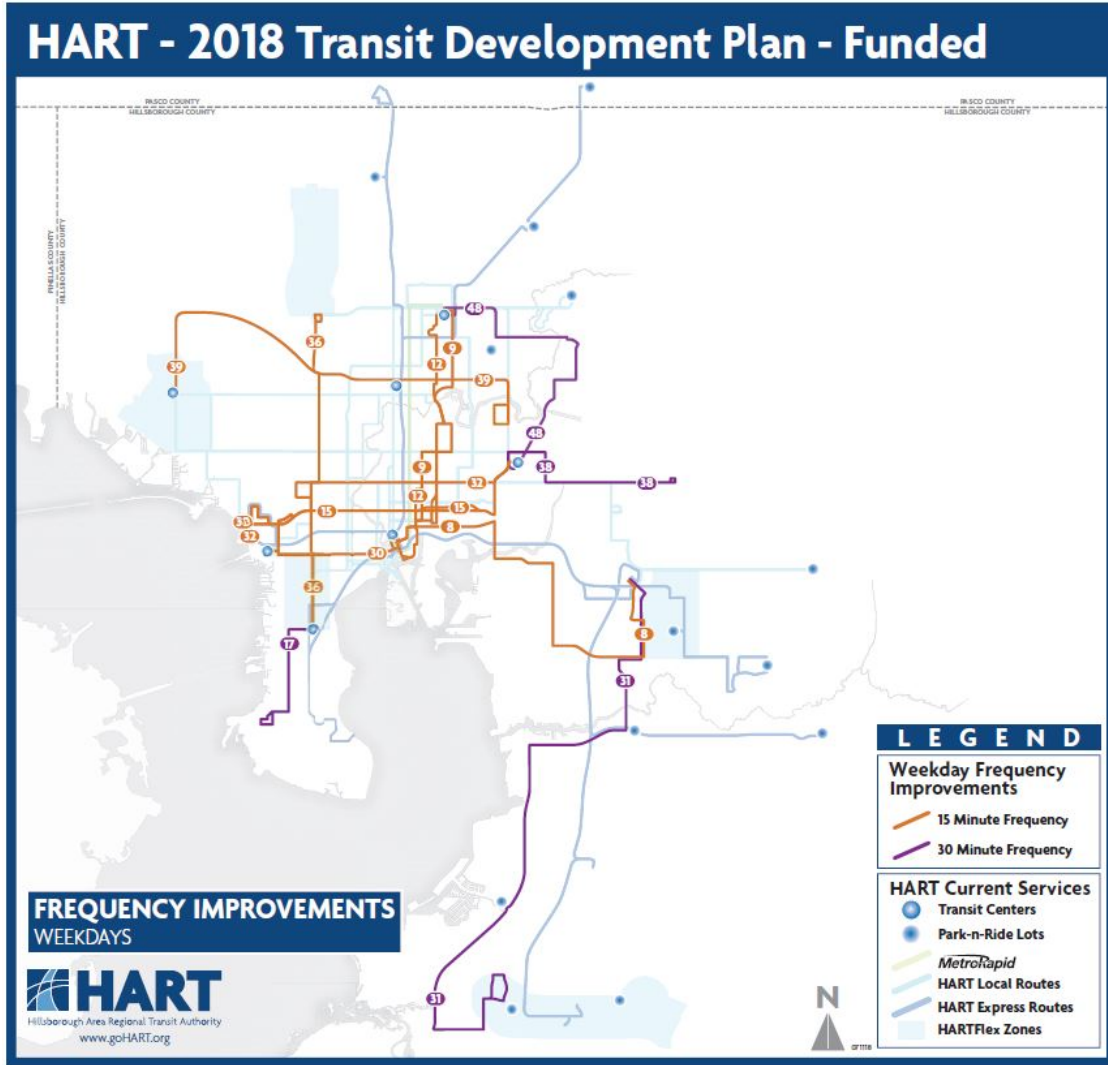


Figure 11 | HART – 2018 Transit Development Plan – Funded (Source: HART TDP, FY 2019 -2028)

As part of the Action Plan, Route 31 will increase weekday frequency to 30 minutes and add weekend service with a frequency of 60 minutes. The TDP has a place holder for an on-demand circulator in the South County area to be operated as a public-private agreement.

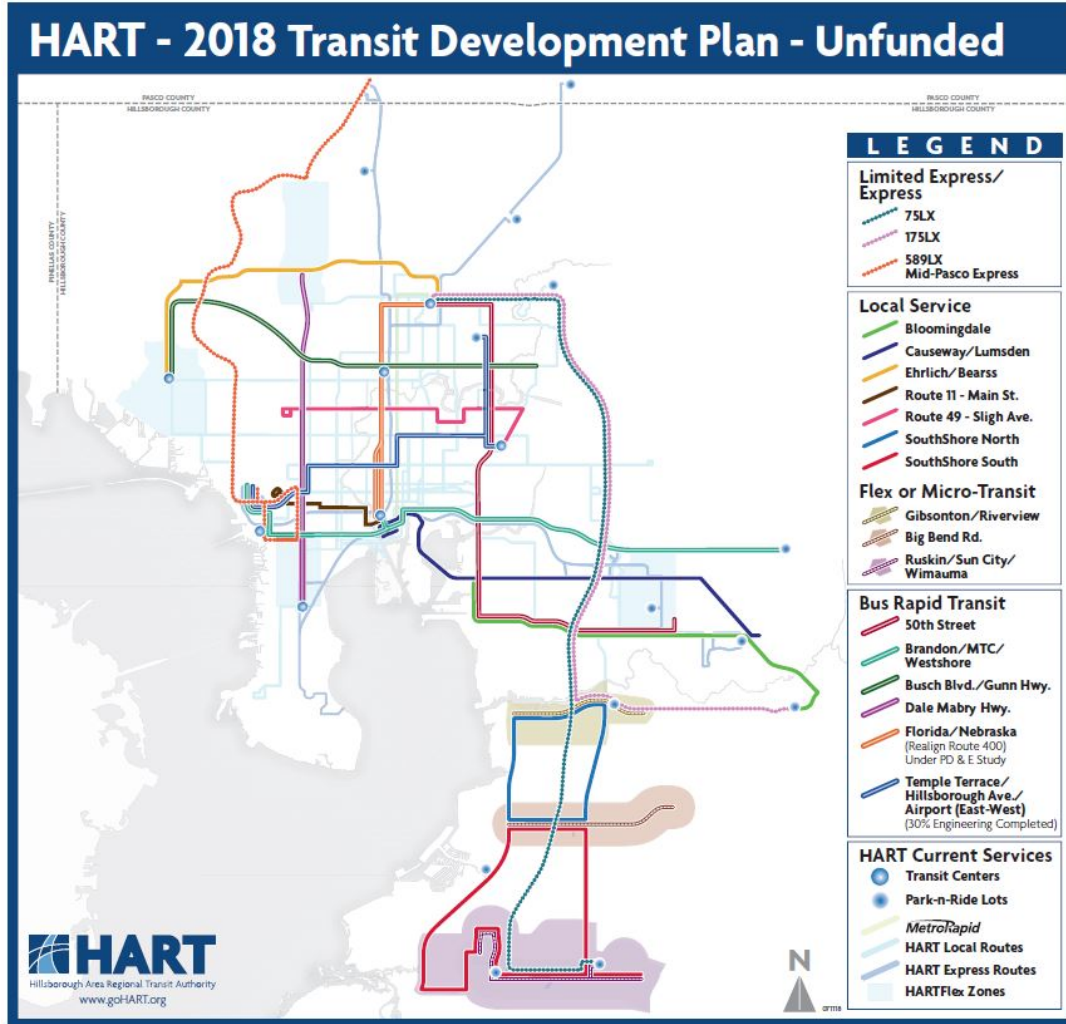


Figure 12 | HART – 2018 Transit Development Plan – Unfunded (Source: HART TDP, FY 2019 -2028)

Transit Needs and Market Assessment

To assess the transit needs and market, dwelling units and employment density, the distribution of travel trips, mean travel time, and key existing and emerging destinations were analyzed.

Figures 13 through 16 provide both employment and dwelling units per acre for both 2015 and projected for 2040. These densities are shown by TAZ boundary and within half a mile of potential routes. The density for both employment and dwelling units is expected to increase substantially along the potential routes, particularly in the area surrounding Big Bend Road with the opening of St. Joseph’s Hospital and a new mall expected to open by 2025. The bright green and bright blue colors in the dwelling unit and employment maps, respectively indicate areas where the density has reached accepted minimum density thresholds for fixed route, local bus service.

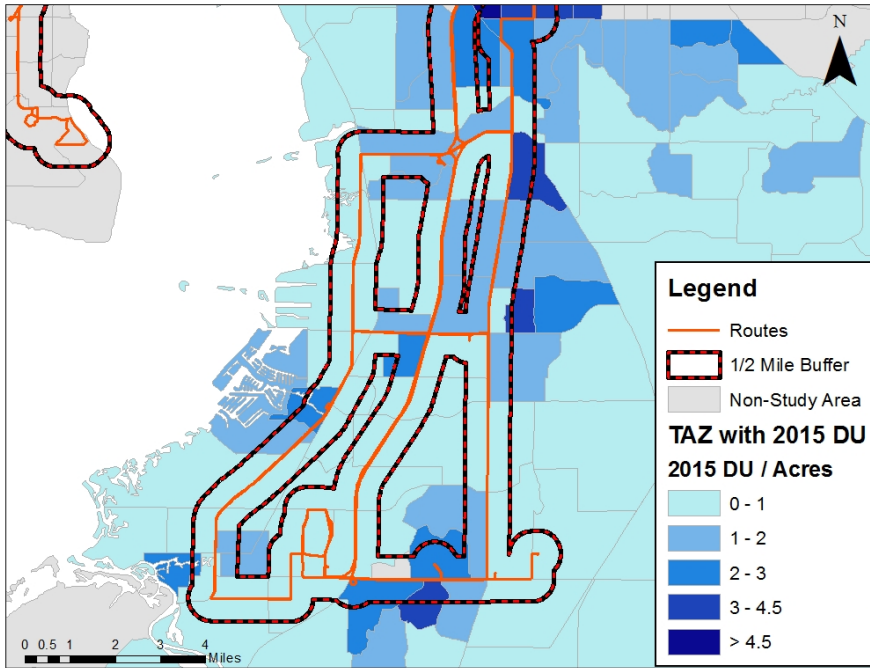


Figure 13 | Year 2015 Dwelling Units by Acre (Source: 2040 LRTP)

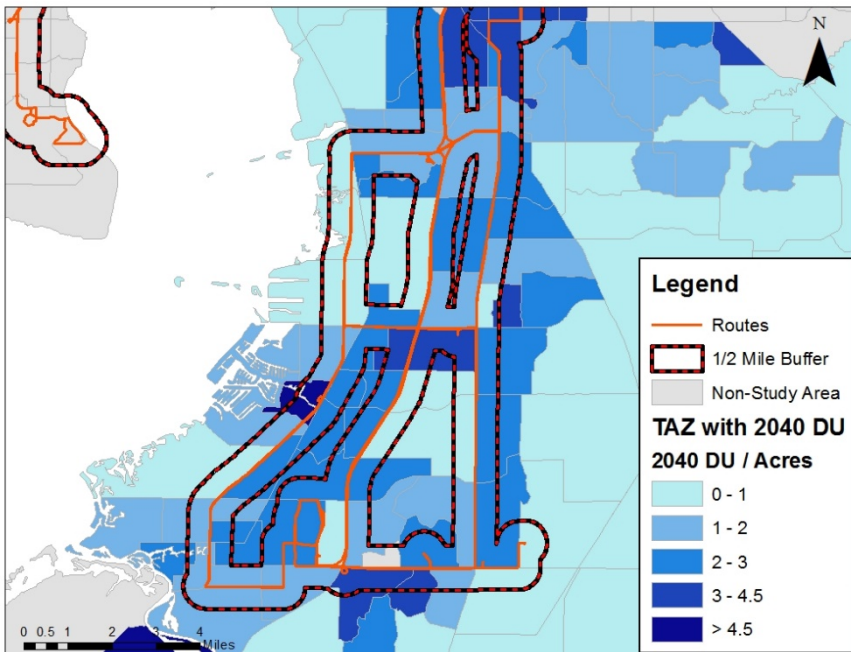


Figure 14 | Year 2040 Dwelling Units by Acre (Source: 2040 LRTP)

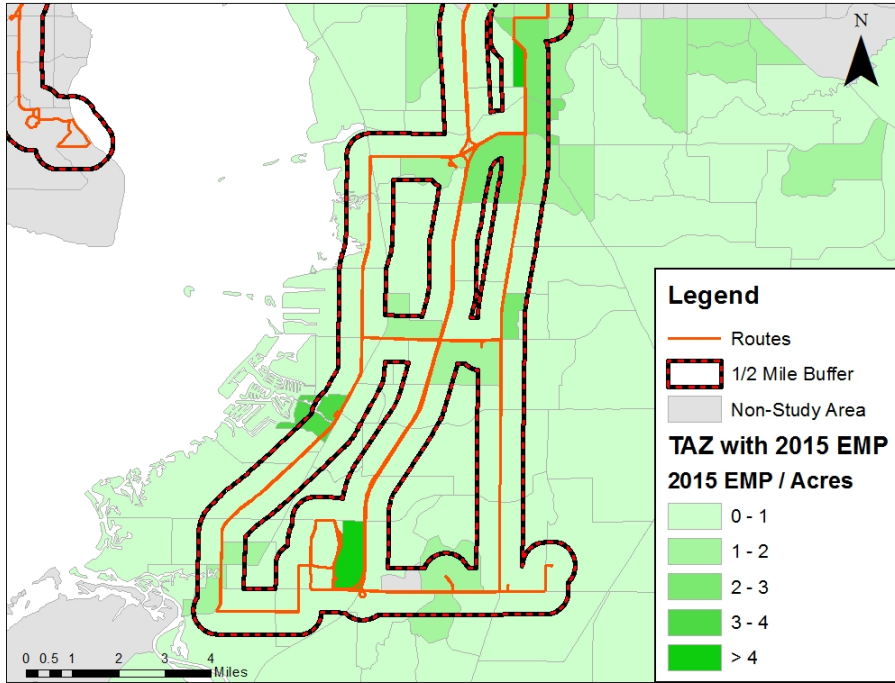


Figure 15 | Year 2015 Employment by Acre (Source: 2040 LRTP)

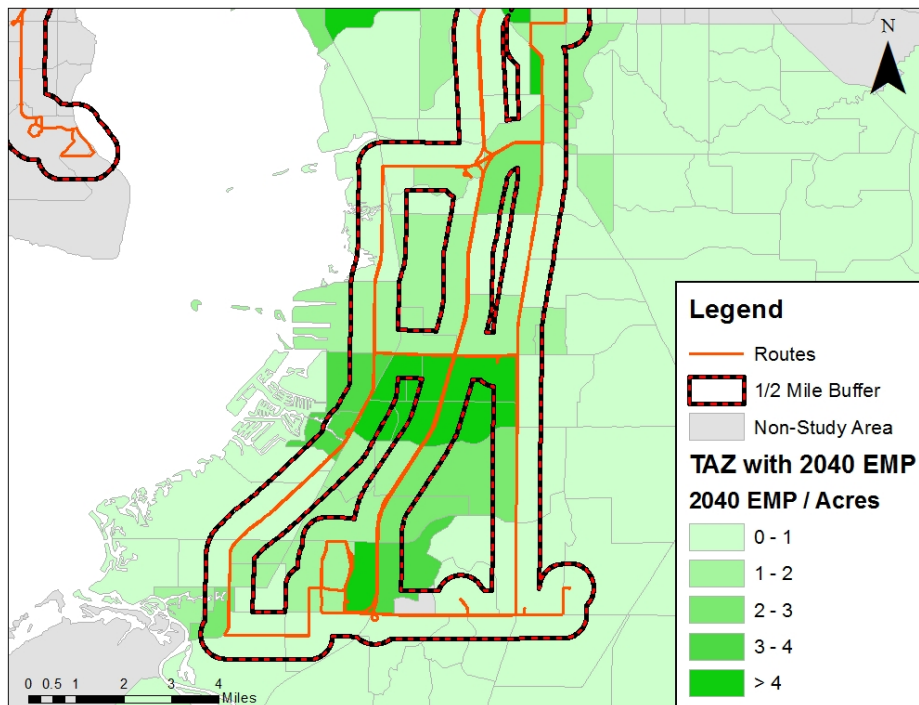


Figure 16 | Year 2040 Employment by Acre (Source: 2040 LRTP)

The total person trip distribution, including the highway and transit trips, were analyzed using data from the 2010 Tampa Bay Regional Planning Model (TBRPM). The TBRPM is a travel demand model covering the Tampa Bay Region (Hillsborough, Pinellas, Pasco, Hernando and Citrus counties) and simulates the travel patterns in the region using local socioeconomic data estimates and the transit and highway networks. From this model, the person trip distribution patterns were analyzed for the two markets that were discussed at the four public meetings which were held during the study. (The meeting summaries are included in the Appendix of this report.) The two markets are the work trip market from SouthShore to Downtown Tampa and MacDill Air Force Base (AFB) and the internal trips within SouthShore. Figure 17 lists the average weekday work trips that originate along the different corridors in SouthShore and have a destination in Downtown Tampa. The person trips are listed for the year 2010 and 2040. As depicted in the figure, currently the US 41 corridor carries the most work trips. The increase in work trips along the US 301 corridor from 2010 to 2040 is expected to be around 1,300 person trips or 54 percent and the increase in work trips along the US 41 corridor is expected to be around 3,000 or close to 60 percent. Also depicted are the work trips which originate along the South Loop corridors and the North Loop Corridors and have a Downtown Tampa destination.

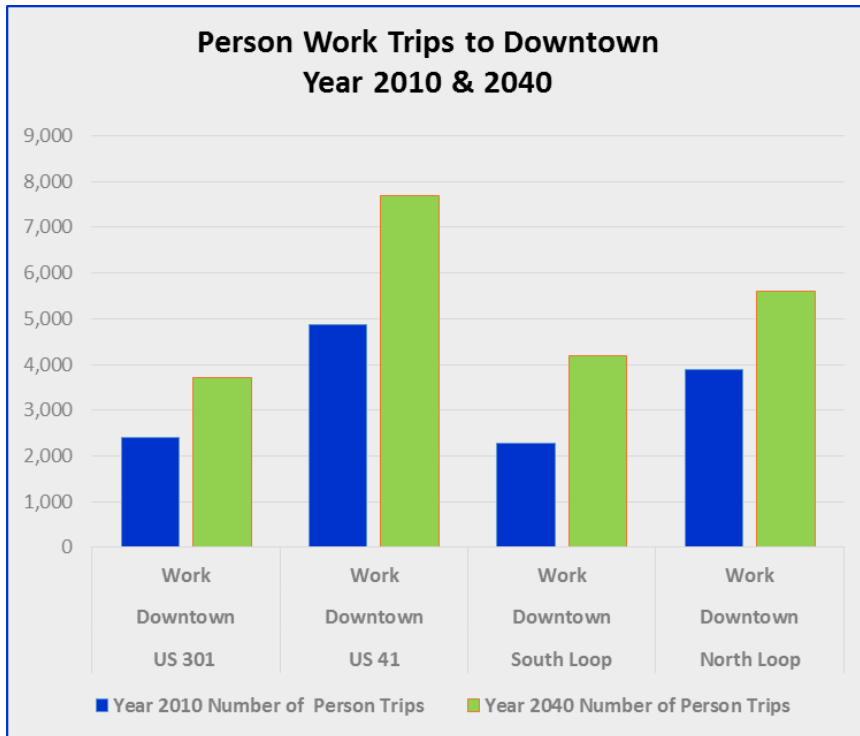


Figure 17 | Year 2010 and 2040 Person Work Trips from SouthShore to Downtown Tampa (Source: 2040 LRTP)

Figure 18 shows the relationship between the SouthShore and Downtown Tampa for the home based other trip purpose. The home base other trip represent all the other trip purposes besides work. These can be medical trips, social recreational trips, school trips, etc. The pattern for the home based other trip

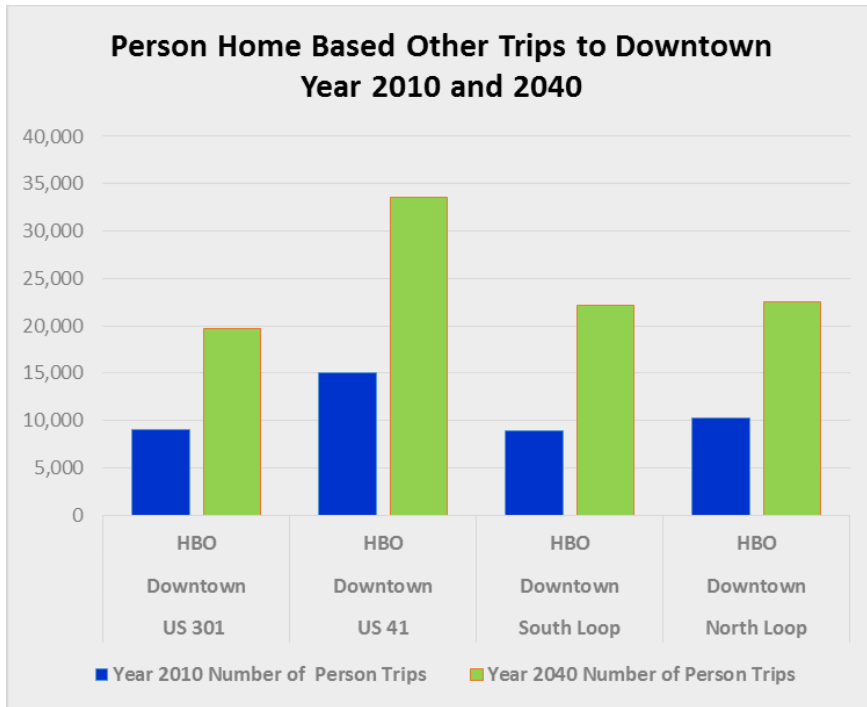


Figure 18 | Year 2010 and 2040 Person HBO Trips from SouthShore to Downtown Tampa along the different Route Corridors (Source: 2040 LRTP)

is similar to the work trip in that the US 41 corridor carries the most trips, with 15,000 trips in 2010 and an increase to around 34,000 in 2040. The US 301 corridor is expected to more than double the number of home based other person trips between 2010 and 2040, with an increase from 9,000 to 19,000 respectively.

Figure 19 reflects the patterns for both the work and the home based other trips within SouthShore. The internal person trips within SouthShore are expected to increase significantly by 144 percent or 230,000 person trips.

The data reflect the two markets at play within the SouthShore. Therefore, the proposed alternative in the previous and in this study focus on providing improved connections to Downtown Tampa and also providing a circulation system within SouthShore.

The Sunshine Line provides door-to-door transportation and bus passes for the elderly, low-income, and people with disabilities who do not have or cannot afford their own transportation.⁵ A comparison of SouthShore Sunshine Line ridership data between October-September 2016-2017 and October-September 2017-2018 show an increase in riders from 480 to 543 (13%) and an increase in door-to-door trips from 10,481 to 14,597 (39%). During this same period the overall door to door trips for the Sunshine

⁵ <https://www.hillsboroughcounty.org/government/departments/sunshine-line>

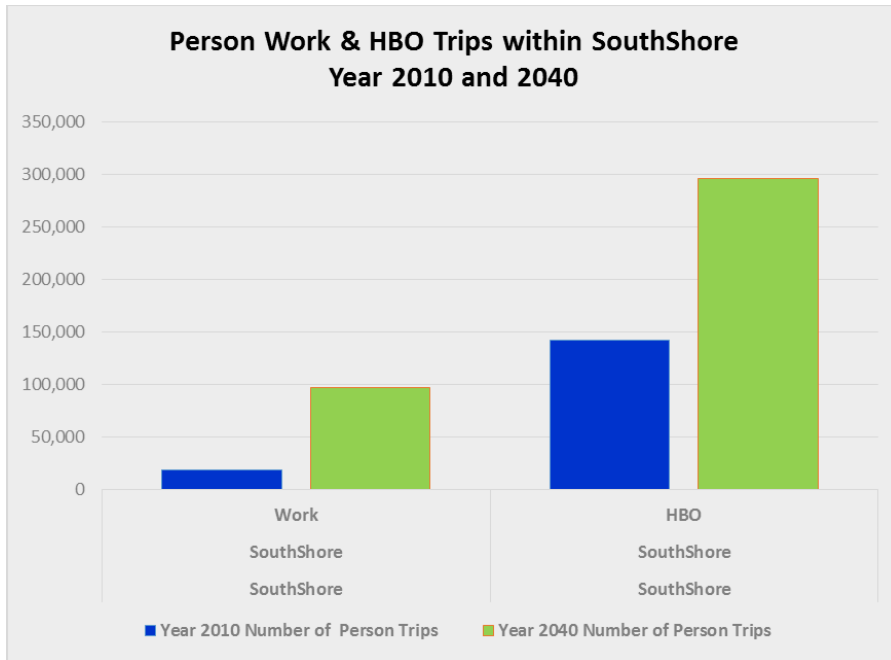


Figure 19 | Year 2010 and 2040 Person Trips within SouthShore (Source: 2040 LRTP)

Line countywide increased by 3%. This more recent data show a big increase in demand for door-to-door service in SouthShore.

Proposed Alternatives

The reevaluation of Alternative 4 from the year 2014 *SouthShore Transit Circulator Study* was based on public input, previous research, and updated socioeconomic and transit data. In this study, public input was obtained at four public meetings which were held in SouthShore. At the kick-off meeting, held on May 31, 2018, the public was reintroduced to the alternatives which were studied during the year 2014 *SouthShore Transit Circulator Study*. In particular, the previously selected Alternative 4 was discussed. Based on the comments received during the kick-off meeting, five alternative scenarios were developed and presented to the public on June 28, 2018. Both meeting summaries are included in the Appendix of this report.

The five scenarios were developed based on the input received during the May 31, 2018 meeting. The reoccurring public comments were the need for a local circulation system and the need for better access to Downtown Tampa.

Add US 301 Route to I-75 & Gibsonton Drive Interchange Scenario

The first scenario added a route on US 301 from the SouthShore Regional Service Center Park-N-Ride lot (located on 30th Street just north of East College Avenue) to the interchange at I-75 & Gibsonton Drive where a proposed Park-N-Ride lot, known as the Gibsonton Park-N-Ride, is proposed. It is recommended not to use the Riverview Oaks Park-N-Ride lot (located at US 301 and Boyette Road) because of the loss in time to reach the lot and the pedestrian safety concerns. Instead, it is recommended that another transfer location be developed at the southwest corner of the I-75 & Gibsonton Drive interchange,

referred to as the proposed Gibsonton Park-N-Ride. There is currently a Walmart with a parking lot at this location. In this scenario, Route 31 South County/US 41 stopped at the Gibsonton Park-N-Ride and continued on to the Brandon Mall. The existing Fishhawk 24 LX also stops at the Gibsonton Park-N-Ride and continues on to Downtown Tampa. The proposed route along US 301 had a transfer with Route 31 South County/US 41 to provide service to the Brandon Mall and a timed transfer with the existing Fishhawk 24 LX to provide timely service to Downtown Tampa and MacDill AFB.

Add US 301 Route to Brandon Mall Scenario

The second scenario added a route on US 301 from the SouthShore Regional Service Center Park-N-Ride lot (located on 30th Street just north of East College Avenue) to the Brandon Mall. The US 301 route stopped at the proposed Gibsonton Park-N-Ride lot (located southwest corner of the I-75 & Gibsonton Drive interchange) providing a transfer point with Route 31 South County/US 41 and a timed transfer with the existing Fishhawk 24 LX providing service to Downtown Tampa and MacDill AFB. In this scenario, Route 31 South County/US 41 ended at the proposed Gibsonton Park-N-Ride.

Add US 301 Route to Downtown Scenario

In this scenario the US 301 route started at the SouthShore Regional Service Center Park-N-Ride (located on 30th Street just north of East College Avenue) and continued to downtown, stopping at the proposed Big Bend Park-N-Ride (located at Big Bend Road and Simmons Loop) and the proposed Gibsonton Park-N-Ride (located southwest corner of the I-75 & Gibsonton Drive interchange) and continued to Downtown Tampa via the Selmon Expressway. Due to the level of congestion on the US 301 corridor it does not lend itself to providing timely express service in its current configuration. However, this scenario offered a one seat ride from the SouthShore Regional Service Center Park-N-Ride to Downtown Tampa. Route US 301 had a transfer point at the proposed Gibsonton Park-N-Ride with the existing Fishhawk 24 LX, and Route 31 South County/US 41.

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

Instead of adding the US 301 route, this scenario proposed an I-75 Connector along I-75 connecting with three main transfer points in the study area including:

- SouthShore Regional Service Center Park-N-Ride (located on 30th Street just north of East College Avenue)
- Big Bend Park-N-Ride (located at Big Bend Road and Simmons Loop)
- Gibsonton Park-N-Ride (located southwest corner of the I-75 & Gibsonton Drive interchange)

At the SouthShore Regional Service Center Park-N-Ride, the I-75 Connector connected with the South Loop. At the Big Bend Park-N-Ride, the I-75 Connector connected with the South and North Loops. At the Gibsonton Park-N-Ride, the I-75 Connector had a timed transfer to the existing Fishhawk 24 LX, providing timely service to Downtown Tampa and MacDill AFB. The I-75 Connector had a transfer at Gibsonton Park-N-Ride with Route 31 South County/US 41 to provide service to Brandon Mall.

I-75 Connector to Downtown Tampa Scenario

This I-75 alternative provided service via an I-75 Express route from the SouthShore Regional Service Center Park-N-Ride to Downtown Tampa using the Selmon Expressway. The I-75 Express used I-75 with three main stops in the study area, while continuing downtown. The main stops were:

- SouthShore Regional Service Center Park-N-Ride (located on 30th Street just north of East College Avenue)
- Big Bend Park-N-Ride (located at Big Bend Road and Simmons Loop)
- Gibsonton Park-N-Ride (located southwest corner of the I-75 & Gibsonton Drive interchange)

At the SouthShore Regional Service Center Park-N-Ride the I-75 Express connected with the South Loop. At the Big Bend Park-N-Ride, the I-75 Express connected with the South and North Loops. At the Gibsonton Park-N-Ride, the I-75 Express had a timed transfer to the existing Fishhawk 24 LX, providing a connection to MacDill AFB and with Route 31 South County/US 41 to provide service to Brandon Mall.

Based on the public input received at the June 28th meeting, four implementation phases were developed. These phases build on each other and have been costed out by route. Having a per-route cost allows for a clear understanding what the difference in cost per route is. The idea behind the phases is that as funding becomes available and ridership increases, additional expansion of the service can take place.

Implementation Phase 1

As shown in Figure 20, Phase 1 adds a local route on US 301 from the SouthShore Park-N-Ride to a proposed Gibsonton Park-N-Ride. The US 301 route and the Route 31 on US 41 are proposed to run every 30 minutes during the AM peak (6:00 AM - 9:00 AM) so that the user can experience a timed transfer at the Gibsonton Park-N-Ride to the existing Fishhawk 24LX route which goes to Downtown Tampa and MacDill AFB every 30 minutes during the AM and PM peak. Both routes will run 60 minutes the rest of the day (9:00 AM- 8:00 PM). The scenario also proposes to have Route 31 and the US 301 route run service on Saturday between 9:00 AM and 8:00 PM every 60 minutes. The South County Flex currently runs every 60 minutes from 9:00 AM till 8:00 PM.

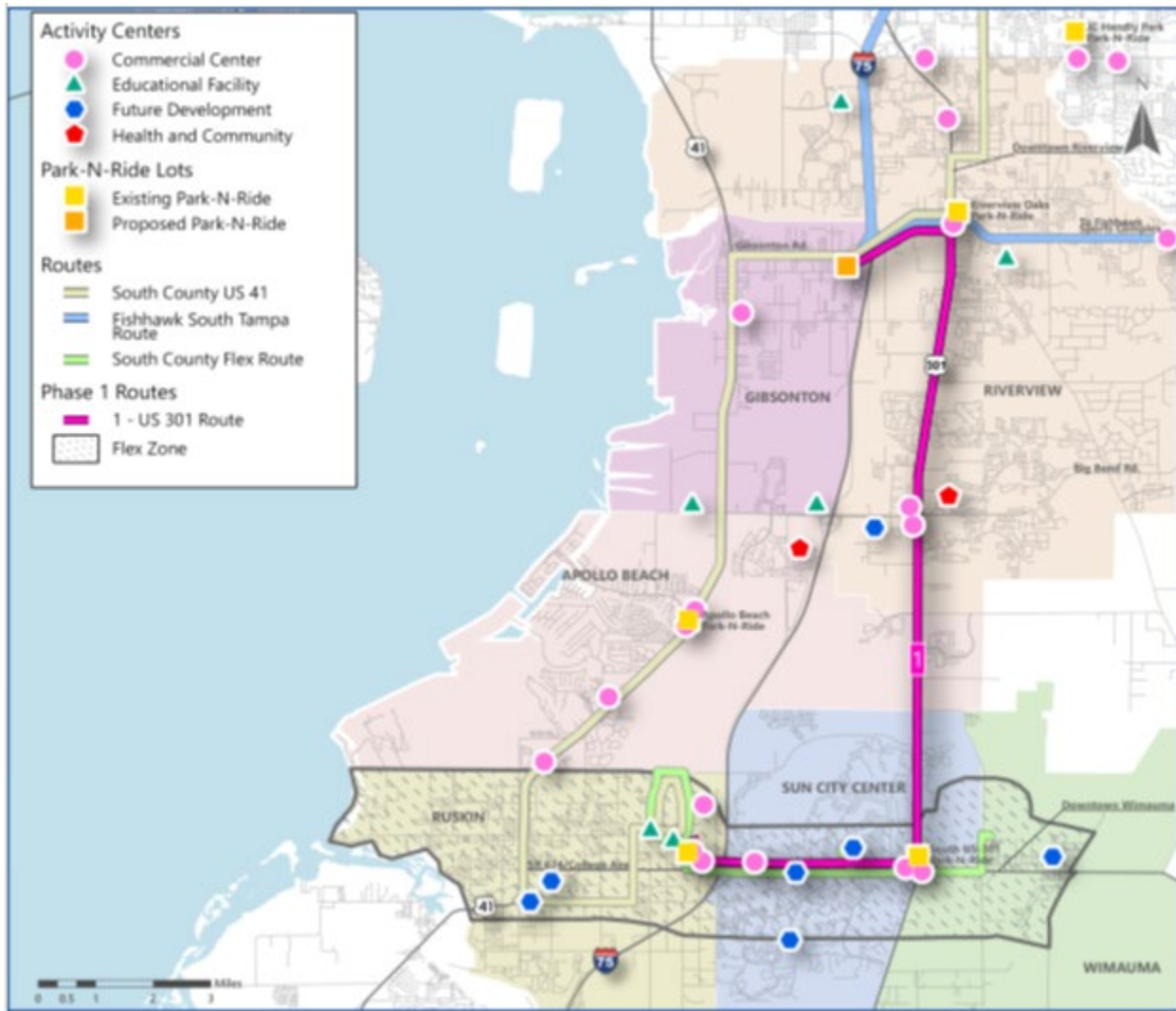


Figure 20 | Implementation Phase 1 – Add US 301 Service

Implementation Phase 2

Phase 2 builds on Phase 1. The service as discussed in Phase 1 for the routes on US 301, US 41 and in the South County Flex zone, remain the same. As shown in Figure 21, in this scenario, an express route connecting to Downtown Tampa utilizing I-75 is added. This service is proposed to start at the South County Park-N-Ride lot to the proposed Gibsonton Park-N-Ride lot running every 60 minutes in the AM Peak (5:00 AM – 9:00 AM) and in the PM Peak (4:00 PM – 8:00 PM). The route will have a timed transfer with the existing Fishhawk 24 LX route at the Gibsonton Park-N-Ride lot to provide improved service to Downtown Tampa and MacDill AFB.

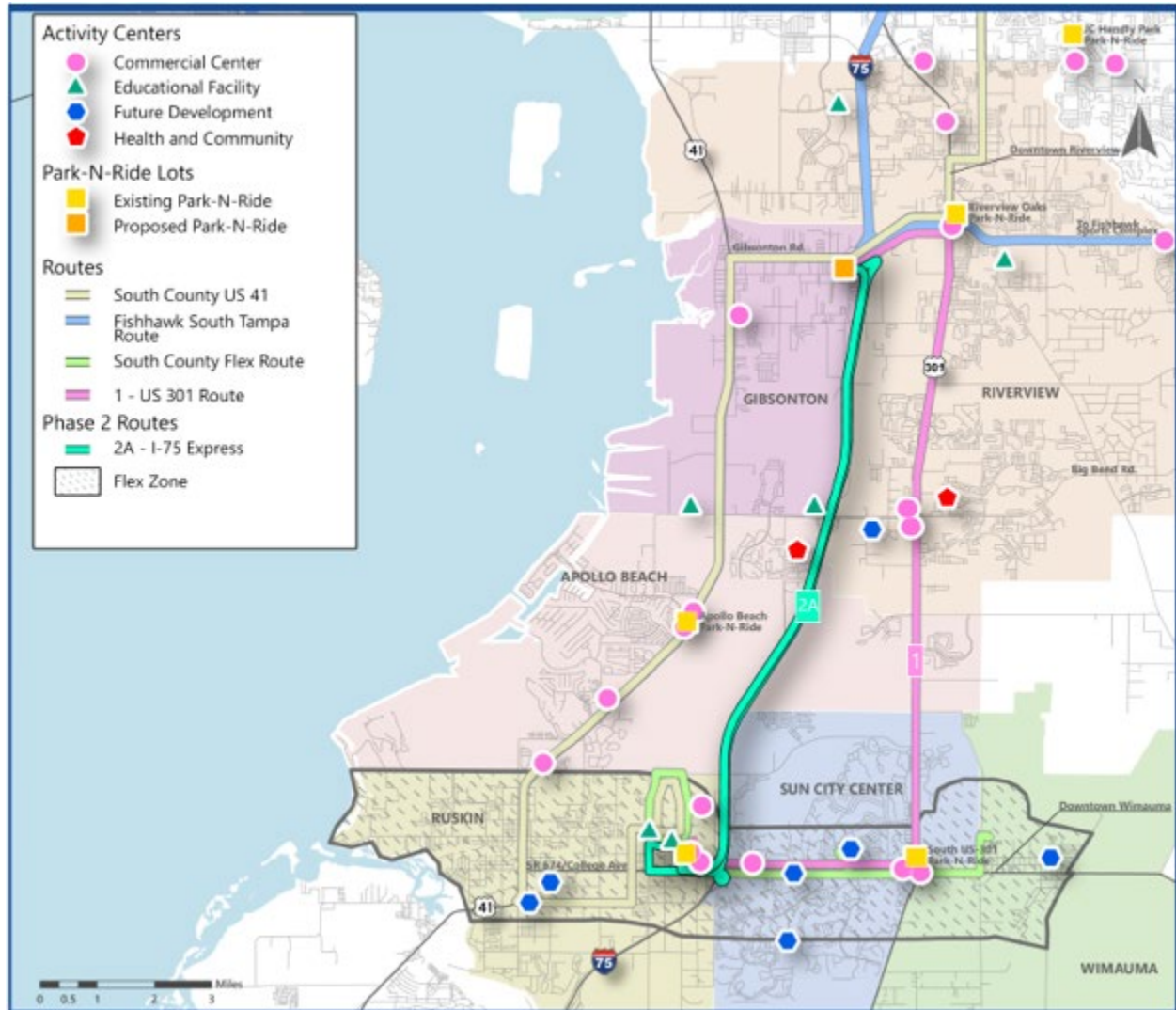


Figure 21 | Implementation Phase 2 – Add I-75 Express – Gibsonton Park-N-Ride

Implementation Phase 3

The difference between Phase 2 and Phase 3 is the extension of the I-75 express route to Downtown Tampa and the addition of the South Loop. As shown in Figure 22, in this phase, the I-75 express route starts at the South County Park-N-Ride, stops at the Big Bend Park-N-Ride, the Gibsonton Park-N-Ride and continues to downtown providing a one seat ride from SouthShore to Downtown Tampa. The South Loop will circulate clockwise from the South County Park-N-Ride to the proposed Big Bend Park-N-Ride and back to South County Park-N-Ride, providing service on SR 674, US 41, Big Bend Road, and US 301 (including the VA hospital). The South Loop is proposed to operate every 30 minutes between 9:30 AM and 3:30 PM and targets the local non-work trips within SouthShore.

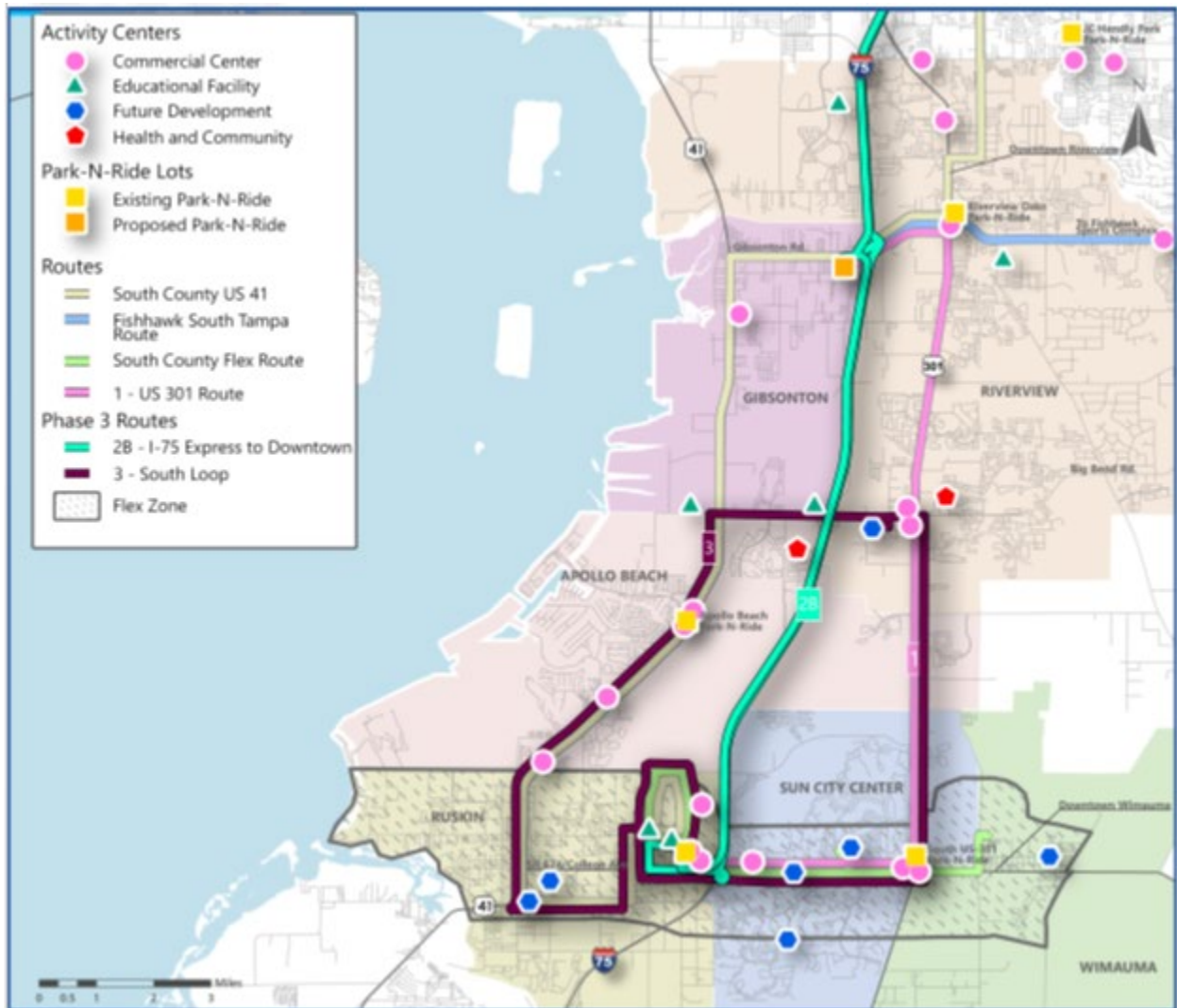


Figure 22 | Implementation Phase 3 – I-75 – Downtown & South Loop

Implementation Phase 4

Implementation Phase 4, shown in Figure 23, adds the North Loop to Phase 3. Like the South Loop, it will operate between 9:30 AM and 3:30 PM every 30 minutes. The North Loop will circulate clockwise from the Big Bend Park-N-Ride to the Gibsonton Park-N-Ride and back to the Big Bend Park-N-Ride, providing service on Big Bend Road, US 41, Gibsonton Drive and US 301 (including the VA hospital).

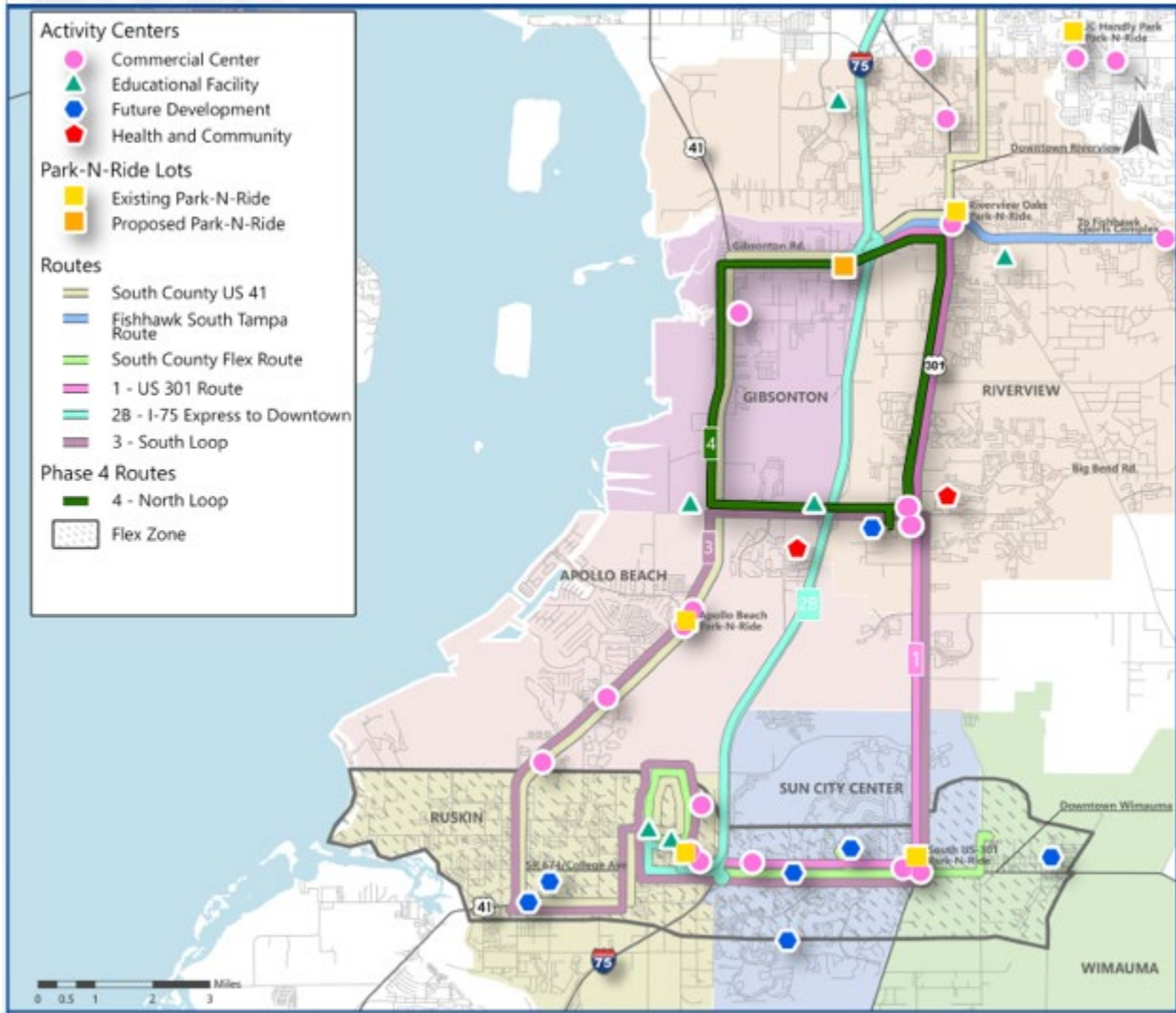


Figure 23 | Implementation Phase 4 – North Loop

As described in the proposed network section, FDOT will be making improvements to I-75 in SouthShore over the next several years. During the construction phase, it might be necessary to run the services proposed to run on I-75 on the US 301 corridor. The ultimate plan will utilize the proposed express lanes along I-75 to provide rapid bus service to Downtown Tampa.

Implementation Phase 5

Implementation phase 5 takes into consideration the proposed HSF service by rerouting the existing Fishhawk 24 LX service from the Sports Complex Park-N-Ride to the HSF dock at the end of Kracker Avenue. In addition, the Bloomingdale Route 8 would extend to the Sports Complex Park-N-Ride to provide a connection with the Fishhawk route and therefore providing a more direct connection to the MacDill AFB from the Bloomingdale area. Other connections with the Route 31 and the North and South Loop should be considered as well when the HSF services comes on line.

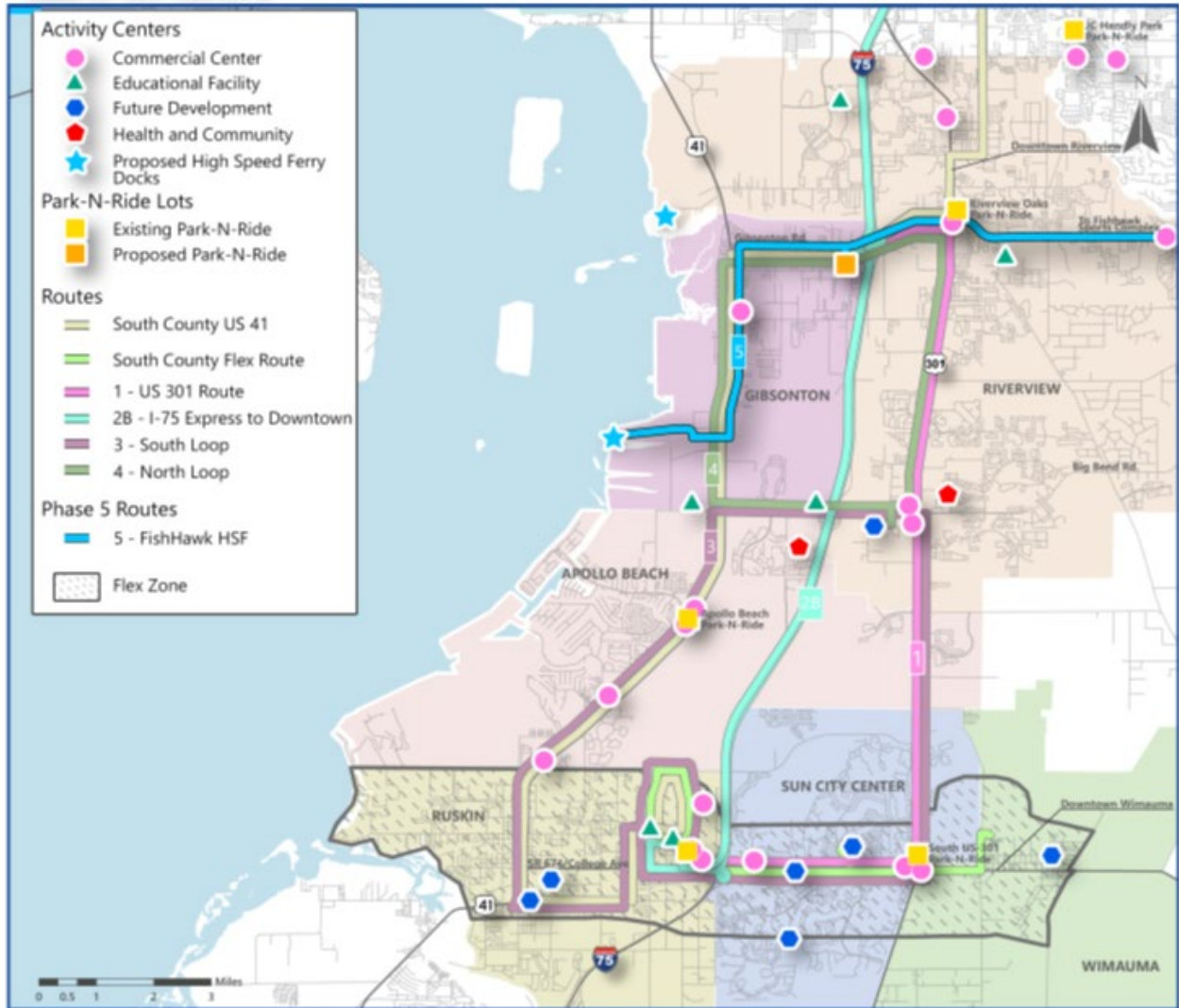


Figure 24 | Implementation Phase 5 – HSF Fishhawk

Service Characteristics

The same service characteristics were assumed for each implementation phase and used to determine cost estimates of the phases. These service characteristics were established in coordination with HART, and consistent with HART’s policies, as appropriate. Table 3 summarizes the service characteristics. Sunday service was not included in this analysis.

Table 3 | Service Characteristics

Express Service Characteristics	Definition
Operation Hours	5:00 AM - 9:00 AM & 4:00 PM - 8:00 PM
Weekdays	255 Weekdays
Frequency	60 Minutes
Local Service Characteristics (US 301 & US 41)	Definition
Operation Hours	6:00 AM - 8:00 PM
Weekdays & Saturdays	255 Weekdays and 58 Saturdays
Frequency	30 minutes 6:00 AM -9:00 AM & 60 minutes 9:00 AM - 8:00 PM
North & South Loop Service Characteristics	Definition
Operation Hours	9:30 AM - 3:30 PM
Weekdays & Saturdays	255 Weekdays and 58 Saturdays
Frequency	30 minutes
South County Flex	Definition
Operation Hours	9:00 AM - 8:00 PM
Weekdays	255 Weekdays
Frequency	60 minutes

In addition to the service characteristics, other attributes were determined for each route and include: frequency of route, round trip route miles, round trip route time, number of vehicles needed, and number of round trips. The characteristics are listed in Table 4.

Table 4 | Route Characteristics

Route Name	Frequency	Round Trip Route Miles	Total Round Trip Route Time Weekday & Saturday (min)	Vehicles Needed	Number of Trips
South County US 41 - Route 31	30 & 60	54	216	6	17
US 301	31 & 60	33	130	5	17
South County Flex	60	16	47	1	13
I-75 Connector Gibsonton Park-N-Ride	60	25	101	2	7
I-75 Express to Downtown	60	56	227	5	7
South Loop	30	54	216	8	12
North Loop	30	32	127	5	12
HSF - Fishhawk - Route 24 LX	30	41	164	7	28
HSF - Bloomingdale - Route 8	30	62	122	5	18

Ridership Estimation

The ridership was projected for the years 2025 and 2035 using a linear regression model. The linear regression model is based on the number of dwelling units (DU) and employment within a half mile buffer along the different route segments. Several additional factors were used to adjust the ridership estimation. These include frequency of service, overlap of routes, and the percentage of person work trips from SouthShore to Downtown Tampa.

Dwelling units and employment socio-economic (SE) data for the years 2015 and 2040 were prepared by the Hillsborough MPO. The 2040 SE data reflects the planned growth projected by the MPO and adopted as part of the Year 2040 LRTP. The DUs and employment data were disaggregated to individual parcels and business addresses using the 2015 parcel data from the Hillsborough County Property Appraiser and the 2015 InfoGroup employment data, respectively.

Linear regression was used to assess the relationship between ridership and the SE data using the current Route 31 APC data. The average daily ridership for South County US 41/Route 31 was approximately 285 riders based on the year 2015 APC data. The route was divided into 12 segments and the DUs and employment within a half a mile buffer of each segment were summarized.

The regression factors were applied to the 2015 and 2040 dwelling unit and employment data to estimate the ridership for the years 2015 and 2040. The ridership for the years 2025 and 2035 were based on a straight line interpolation between the years 2015 and 2040.

Tables 5 through 8 show the daily and annual estimated ridership for weekdays and Saturdays by route and implementation phase.

Table 5 | Implementation Phase 1 – Year 2025 and 2035 Estimated Ridership

Implementation Phase 1	Year 2025 Projected Ridership*				Year 2035 Projected Ridership*			
	Daily		Annual		Daily		Annual	
	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday
Route Name								
South County US 41 -Route 31	415	140	104,165	8,120	500	170	125,500	9,860
US 301	180	60	45,180	3,480	200	70	50,200	4,060
South County Flex	140		35,140		160		40,160	
<i>Total</i>	<i>735</i>	<i>200</i>	<i>184,485</i>	<i>11,600</i>	<i>860</i>	<i>240</i>	<i>215,860</i>	<i>13,920</i>

* Rounded to the nearest 5.

Table 6 | Implementation Phase 2 – Year 2025 and 2035 Estimated Ridership

Implementation Phase 2	Year 2025 Projected Ridership*				Year 2035 Projected Ridership*			
	Daily		Annual		Daily		Annual	
	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday
Route Name								
South County US 41 -Route 31	360	125	90,360	7,250	425	145	106,675	8,410
US 301	140	50	35,140	2,900	160	55	40,160	3,190
South County Flex	130		32,630		145		36,395	
I-75 Gibsonton Park-N-Ride	140		35,140		180		45,180	
<i>Total</i>	<i>770</i>	<i>175</i>	<i>193,270</i>	<i>10,150</i>	<i>910</i>	<i>200</i>	<i>228,410</i>	<i>11,600</i>

* Rounded to the nearest 5.

Table 7 | Implementation Phase 3 – Year 2025 and 2035 Estimated Ridership

Implementation Phase 3	Year 2025 Projected Ridership*				Year 2035 Projected Ridership*			
	Daily		Annual		Daily		Annual	
	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday
South County US 41 -Route 31	290	100	72,790	5,800	330	110	82,830	6,380
US 301	115	40	28,865	2,320	125	45	31,375	2,610
South County Flex	105		26,355		115		28,865	
I-75 Downtown	195		48,945		230		57,730	
South Loop	250	85	62,750	4,930	310	105	77,810	6,090
Total	955	225	239,705	13,050	1,110	260	278,610	15,080

* Rounded to the nearest 5.

Table 8 | Implementation Phase 4 – Year 2025 and 2035 Estimated Ridership

Implementation Phase 4	Year 2025 Projected Ridership*				Year 2035 Projected Ridership*			
	Daily		Annual		Daily		Annual	
	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday
South County US 41 -Route 31	255	90	64,005	5,220	290	100	72,790	5,800
US 301	100	35	25,100	2,030	110	40	27,610	2,320
South County Flex	95		23,845		100		25,100	
I-75 Downtown	170		42,670		200		50,200	
South Loop	220	75	55,220	4,350	275	95	69,025	5,510
North Loop	125	45	31,375	2,610	150	50	37,650	2,900
Total	965	245	242,215	14,210	1,125	285	282,375	16,530

* Rounded to the nearest 5.

Table 9 | Implementation Phase 5 – Year 2025 and 2035 Estimated Ridership

Implementation Phase 5	Year 2025 Projected Ridership*				Year 2035 Projected Ridership*			
	Daily		Annual		Daily		Annual	
	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday
South County US 41 -Route 31	260	90	65,260	5,220	295	100	74,045	5,800
US 301	100	35	25,100	2,030	110	40	27,610	2,320
South County Flex	95		23,845		100		25,100	
I-75 Downtown	170		42,670		200		50,200	
South Loop	220	75	55,220	4,350	275	95	69,025	5,510
North Loop	125	45	31,375	2,610	150	50	37,650	2,900
HSF - Fishhawk - Route 24 LX	490		122,990		590		148,090	
HSF - Bloomingdale - Route 8	275		69,025		320		80,320	
Total	1,735	245	435,485	14,210	2,040	285	512,040	16,530

* Rounded to the nearest 5.

Cost Estimation

The cost per implementation phase is based on both the capital cost and the operating cost. Capital costs are an up-front cost at the time of implementation and include shelters and vehicles. Operating costs are a reoccurring annual cost based on the number of revenue hours operated for each route and alternative.

Capital Cost

The number of vehicles required per route and alternative is calculated based on the time it takes to traverse the route plus layover and the frequency of the route. The cost per vehicle varies depending on the size and equipment installed. Fixed routes typically use a 40' coach bus. They can run on compressed natural gas (CNG) or diesel. HART's preference is to purchase CNG buses which cost approximately \$525,980. The life expectancy is 12 years.

The van service is referred to as a paratransit vehicle because it can handle two wheelchairs. It can run on CNG or gasoline. HART's preference is to purchase gasoline paratransit vehicles which cost approximately \$73,394.00. The life expectancy is 5 years.

HART's requirement for the number of spare vehicles is equivalent to 20 percent of the fleet at peak service. Therefore, an additional cost of 20 percent of the recommended number of vehicles rounded up is included in the capital cost of vehicles for each implementation phase.

The capital cost also includes the cost of additional stops at a 1,700' spacing. The estimated cost for each stop is \$12,500 and includes the landing pad, surveys and permits, Americans with Disability Act (ADA) curb cuts, 3 three-seat benches, an information kiosk, and a trash receptacle.

The cost of the Park-N-Ride lots were not included in the cost estimates. At this point in the study there is not enough information to develop an estimate. However, as with bus service there is one-time capital cost and a recurring annual cost. The capital costs are related to land acquisitions, engineering costs, and construction costs. The recurring annual cost are related to the maintenance of the lot. The capital cost in particular, can vary greatly depending on the site. The typical cost of a parking space ranges from \$5,000 to \$10,000.⁶ The *2012 Florida Department of Transportation State Park-and-Ride Guide* estimated a cost of \$9,000 per parking space. This unit cost was based on the Park-N-Ride lot along the Sun Rail commuter rail line in Orlando.

Operating Costs

Operating costs are based on the number of vehicle revenue hours required by each route/alternative. Based on future cost projections provided by HART, the cost is \$52.06 per operating hour for the van service and \$105.00 per operating hour for the bus service. Operating costs are calculated for both weekday and Saturday service.

The ADA cost is difficult to estimate and is based on the new service miles as well as the additional population that might need this particular service within a three-quarter mile buffer from the route. The phases add approximately 23 additional new service miles, which adds a potential population served of approximately 50,000 based on year 2015 data. The ADA cost was based on the estimate which was

⁶ <http://www.vtpi.org/tca/tca0504.pdf>, page 5. 4-7

provided by HART for use in the previous study. In the previous study this cost ranged between 11 percent and 14 percent of the operating budget. The average of 12 percent was applied to new service miles of the fixed routes in this study.

Tables 9 through 12 list the annual operations and capital cost for the different implementation phases.

Table 10 | Annual Operation and Capital Cost – Implementation Phase 1

Route Name	Number of Vehicles	Annual Operation Cost *		ADA Cost **	Total Annual Operation Cost	Capital Cost*		Total Capital Cost
		Weekday	Saturday			Vehicles	Stops	
South County US 41 - Route 31***	2	\$1,120,500	\$164,900		\$1,285,400	\$1,262,400	\$164,200	\$1,426,600
US 301	5	\$1,285,200	\$201,000	\$44,600	\$1,530,800	\$3,155,900	\$600,400	\$3,756,300
South County Flex ****	1							
Total	8	\$2,405,700	\$365,900	\$44,600	\$2,771,600	\$4,418,300	\$764,600	\$5,182,900

*Rounded to nearest hundred.

**ADA Cost based on 12% additional operating cost for new fixed route service miles.

***Cost associated with the increase in service.

****South County Flex is currently in service.

Table 11 | Annual Operation and Capital Cost – Implementation Phase 2

Route Name	Number of Vehicles	Annual Operation Cost *		ADA Cost **	Total Annual Operation Cost	Capital Cost*		Total Capital Cost
		Weekday	Saturday			Vehicles	Stops	
South County US 41 - Route 31***	2	\$1,120,500	\$164,900		\$1,285,400	\$1,262,400	\$164,200	\$1,426,600
US 301	5	\$1,285,200	\$201,000	\$44,600	\$1,530,800	\$3,155,900	\$600,400	\$3,756,300
South County Flex ****	1							\$0
I-75 Gibsonton Park-N-Ride	2	\$428,400			\$428,400	\$1,262,000		\$1,262,000
Total	10	\$2,834,100	\$365,900	\$44,600	\$3,200,000	\$5,680,300	\$764,600	\$6,444,900

*Rounded to nearest hundred.

**ADA Cost based on 12% additional operating cost for new fixed route service miles.

***Cost associated with the increase in service.

****South County Flex is currently in service.

Table 12 | Annual Operation and Capital Cost – Implementation Phase 3

Route Name	Number of Vehicles	Annual Operation Cost *		ADA Cost **	Total Annual Operation Cost	Capital Cost*		Total Capital Cost
		Weekday	Saturday			Vehicles	Stops	
South County US 41 - Route 31*	2	\$1,120,500	\$164,900		\$1,285,400	\$1,262,400	\$164,200	\$1,426,600
US 301	5	\$1,285,200	\$201,000	\$44,600	\$1,530,800	\$3,155,900	\$600,400	\$3,756,300
South County Flex **	1							
I-75 Downtown Express	5	\$1,071,000			\$1,071,000	\$3,155,900		\$3,155,900
South Loop	8	\$637,200	\$145,000	\$23,500	\$805,700	\$704,600	\$118,700	\$823,300
Total	21	\$4,113,900	\$510,900	\$68,100	\$4,624,800	\$8,278,800	\$883,300	\$9,162,100

*Rounded to nearest hundred.

**ADA Cost based on 12% additional operating cost for new fixed route service miles.

***Cost associated with the increase in service.

****South County Flex is currently in service.

Table 13 | Annual Operation and Capital Cost – Implementation Phase 4

Route Name	Number of Vehicles	Annual Operation Cost *		ADA Cost **	Total Annual Operation Cost	Capital Cost*		Total Capital Cost
		Weekday	Saturday			Vehicles	Stops	
South County US 41 - Route 31*	2	\$1,120,500	\$164,900		\$1,285,400	\$1,262,400	\$164,200	\$1,426,600
US 301	5	\$1,285,200	\$201,000	\$44,600	\$1,530,800	\$3,155,900	\$600,400	\$3,756,300
South County Flex **	1							
I-75 Downtown Express	5	\$1,071,000			\$1,071,000	\$3,155,900		\$3,155,900
South Loop	8	\$637,200	\$144,900	\$23,500	\$805,600	\$704,600	\$118,700	\$823,300
North Loop	5	\$398,300	\$90,600		\$488,900	\$440,400		\$440,400
Total	26	\$4,512,200	\$601,400	\$68,100	\$5,181,700	\$8,719,200	\$883,300	\$9,602,500

*Rounded to nearest hundred.

**ADA Cost based on 12% additional operating cost for new fixed route service miles.

***Cost associated with the increase in service.

** **South County Flex is currently in service.

Table 14 | Annual Operation and Capital Cost – Implementation Phase 5

Route Name	Number of Vehicles	Annual Operation Cost ***		ADA Cost **	Total Annual Operation Cost	Capital Cost***		Total Capital Cost
		Weekday	Saturday			Vehicles	Stops	
South County US 41 - Route 31*	2	\$1,120,500	\$164,900		\$1,285,400	\$1,262,400	\$164,200	\$1,426,600
US 301	5	\$1,285,000	\$201,000	\$44,600	\$1,530,600	\$3,155,900	\$600,400	\$3,756,300
South County Flex **	1							
I-75 Downtown Express	5	\$1,071,000			\$1,071,000	\$3,155,900		\$3,155,900
South Loop	8	\$637,200	\$144,900	\$23,500	\$805,600	\$704,600	\$118,700	\$823,300
North Loop	5	\$398,300	\$90,600		\$488,900	\$440,400		\$440,400
HSF - FishHawk - Route 24 LX*	4	\$2,570,400			\$2,570,400	\$2,524,700		\$2,524,700
HSF - Bloomingdale - Route 8*	2	\$1,807,300			\$1,807,300	\$1,262,400		\$1,262,400
Total	32	\$8,889,700	\$601,400	\$68,100	\$9,559,200	\$12,506,300	\$883,300	\$13,389,600

*Rounded to nearest hundred.

**ADA Cost based on 12% additional operating cost for new fixed route service miles.

***Cost associated with the increase in service.

** **South County Flex is currently in service.

The following tables provide information regarding the cost per estimated passenger for the years 2025 and 2035.

Table 15 | Year 2025 Operating Cost per Passenger and Passenger Cost per Mile and Hour

Implementation Phase	Annual Revenue*		Total Annual Operating Cost*	Annual Ridership*	Passenger per Revenue Hour	Passenger per Revenue Mile	Operating Cost per Passenger
	Miles	Hours					
1	474,355	33,910	\$2,962,195	196,085	5.8	0.41	\$18.98
2	525,520	37,670	\$3,390,595	203,420	5.4	0.39	\$16.67
3	791,005	52,990	\$4,838,810	252,755	1.3	0.32	\$23.13
4	910,295	61,453	\$5,287,655	256,425	1.3	0.28	\$26.66
5	1,119,821	72,159	9,665,369	449,695	6.2	0.40	\$23.81

*Rounded to nearest five.

Table 16 | Year 2035 Operating Cost per Passenger and Passenger Cost per Mile and Hour

Implementation Phase	Annual Revenue*		Total Annual Operating Cost*	Annual Ridership*	Passenger per Revenue Hour	Passenger per Revenue Mile	Operating Cost per Passenger
	Miles	Hours					
1	474,355	33,910	\$2,962,195	229,780	6.8	0.48	\$16.19
2	525,520	37,670	\$3,390,595	240,010	6.4	0.46	\$14.13
3	791,005	52,990	\$4,838,810	293,690	1.5	0.37	\$19.77
4	910,295	61,453	\$5,287,655	298,905	1.5	0.33	\$22.87
5	1,119,821	72,159	9,665,369	528,570	7.3	0.47	\$20.25

*Rounded to nearest five.

As is to be expected, the operating cost reduces in 2035 due to an expected increase in ridership as SouthShore becomes more developed. The route on US 301 cost estimate is based on a coach bus service. Once service is introduced on I-75, the US 301 might be able to be served with a smaller bus making the route more cost effective. In the Appendix the individual tables for each of the route by implementation phase are included. These table provide insight in how the different routes operate within the implementation phases

Alternative Mobility Options

In this section, alternative types of transportation are explored to offer additional mobility options within SouthShore, and improve access to the existing and proposed bus service. The proposed alternative mobility options were developed based on the characteristics of SouthShore, the trip making characteristics that currently exist within the area, public input and close coordination with the MPO, HART, and Hillsborough County.

Types of Alternative Mobility Services

The technology related to the offering of mobility services is rapidly changing. Transit agencies are looking towards working together with private companies to enhance the mobility options of the users through the use of mobility services providers (MSP), also referred to as transportation network companies (TNC). The future of mobility is working towards a more one-stop-system through the use of mobility as a service (MaaS). The challenges with the implementation of MaaS are complex. However, it is the direction in which the mobility service is heading.

Mobility Service Providers

MSP or TNC are the link between the user and the provider of transportation. This service is offered through the use of websites and mobile applications. As of August 1, 2018, close to 30 partnerships have been formed between public and private transportation providers in the United States, three of which exist in Florida.⁷ Most of these partnerships have been set up where the user can make use of Uber or

⁷ Joseph P. Schwieterman and Stijn van der slot, *Partners in Transit* (Chicago: Chaddick Institute for Metropolitan Development, 2018), 1.

Lyft and obtain a discount based on restrictions which the transit agency establishes. The three programs currently in place in Florida are:

- Altamonte Springs, Lake Mary, Longwood, Maitland and Sanford, FL | March 2016 – July 2018

These five Florida communities joined forces to launch a pilot program that enabled each of the participating cities to subsidize 20 percent of the intercity Uber fares within their respective city limits. The cities will pay 25 percent of the cost of rides that begin or end at the SunRail station inside of their city. As part of the pilot extension, each city will also pay 20 percent of Uber fares of a trip that begins in another city and ends in their city. Data showed a 74 percent increase in Uber trips during the first year of the program in Altamonte Springs, Longwood, Lake Mary, Maitland, and Sanford.⁸ The pilot program ended in July, 2018 and the cities are now working on a more open-ended discount program that would be available through any TNC.
- St. Petersburg, FL | February 2016 – Present

The Pinellas Suncoast Transit Authority (PSTA) has created the Direct Connect program, which offers discounts on Uber and United Taxi and a \$25 discount on Wheelchair Transport to and from 24 bus stops in the St. Petersburg-Clearwater area. Direct Connect uses Uber and United Taxi to pick up bus-stop-bound riders within eight specific zones throughout the county. Riders who remain within their embarking zone and either begin or end at a bus stop will receive a \$5 discount off their ride.

The program provides easy access to bus stops in an area that is about 15 square miles. It is a first and last mile program since the user has to start or end a trip at the hub. PSTA also offers the option for people without a smart-phone and/or credit card, to call in and request a ride. The United Taxi service can be called to obtain service to or from a Direct Connect location. A telephone number has also been set up for Wheelchair transport.⁹ The Direct Connect program saves PSTA more than \$100,000 a year, based on estimates from 2016.¹⁰

- Royal Palm Beach, FL | June 2018 – Present

Residents age 65 and older who live in this village of 38,000 and register for its recreation center will pay half the cost of each Lyft ride, up to \$40 per month per registered member. Rides must begin and end either within Royal Palm Beach or at the Wellington Regional Medical Center. Lyft provides a monthly report that includes how much the village spent and where each trip was taken. The annual budget for the program is \$40,000, which is estimated to provide 3,000 rides at about \$12 per ride.

⁸ *Uber Pilot Project*. City of Sanford, Florida. <http://www.sanfordfl.gov/residents/uber-pilot-project>

⁹ *Direct Connect*. Pinellas Suncoast Transit Authority. <https://psta.net/riding-psta/direct-connect>

¹⁰ Irwin, Janelle. *PSTA Widens Its Reach with Taxi, Uber Partnership*. January 19, 2017.

<https://www.bizjournals.com/tampabay/news/2017/01/19/psta-widens-its-reach-with-taxi-uber-partnership.html>

In 2016, Hillsborough Area Regional Transit (HART) rolled out HyperLINK, a pilot program offering door-to-door service within set zones for \$3 per ride using both small van type vehicles and four Tesla Model X vehicles paid for by sponsors in coordination with the Tampa Innovation District. The program began by linking riders to a bus station to access the broader HART system. HART paid \$9 a trip for this service. The program evolved into a program by which users could also take direct point-to-point rides. HART paid \$7 per trip for this service.¹¹ While the pilot program was considered a success, the cost of continuing the program based on extended contract proposals, was not feasible. HART continues to explore options for implementing a similar type of system, working with a variety of mobility providers.

Currently, the Enterprising Latinas group is working with HART and Hillsborough County to provide a van service in Wimauma and Ruskin. The Ariba service will focus on creating an alternative system that connects people who live north and south of SR 674 to the transit system. It will run six days a week with a 25 to 30 minute frequency. The goal is to provide connectivity between the neighborhoods of Wimauma and Ruskin, communities with highest concentration to poverty, to the transit system. Two loops are planned, one in Wimauma and one in Ruskin, connecting to the HART routes at the South County Park-N-Ride lot.

Mobility as a Service

MaaS allows for the combination of different transportation services, providing the user with door to door service. This type of service is typically based on a public private partnership that shares a unified gateway allowing for the planning of a seamless trip regardless of the provider. The user pays through a single account or ticket either per trip or based on a time period, such as weekly or monthly.

An example of such service was launched on September 5, 2016 by PSTA and HART. These agencies launched the Flamingo app which allows riders on both sides of the bay to purchase a single fare for travel between both Hillsborough and Pinellas counties.¹² The Flamingo app started as a test of the technology. To pay with Flamingo Fares Tampa Bay customers download an app similar to the one Starbucks uses to enable its customers to pay quickly and digitally. Patrons simply purchase a ticket on the app and show the screen to the bus operator upon boarding the vehicle. Cash will continue to be accepted on both transit system. Hernando, Pasco, Manatee and Sarasota Counties are also implementing the new technology in the future. Both agencies will continue to analyze all the data to determine what concerns need to be addressed before the full system is implemented.¹³

¹¹ Descent, Skip. *Transit and Ride-Sharing Partnerships on the Rise, Despite Growing Pains*. August 20, 2018.

<http://www.govtech.com/fs/transportation/Transit-and-Ride-Sharing-Partnerships-on-the-Rise-Despite-Growing-Pains.html>

¹² *Flamingo Fares is Here!* Hillsborough Area Regional Transit. August 31, 2016. <http://gohart.blogspot.com/2016/08/flamingo-fares-is-here.html>

¹³ *PSTA and HART Offering Flamingo Fares Tampa Bay*. April 2, 2017. https://www.tbnweekly.com/pinellas_county/psta-and-hart-offering-flamingo-fares-tampa-bay/article_e15c3604-5e0b-5132-affc-eb5549c45cfa.html

There are different levels of integration associated with MaaS. The majority of the transit agencies find themselves at Level 1, while many transit agencies have pilot programs with the intent to implement Level 2¹⁴.

Level 1 allows the user to obtain information about the services that are available to them in their community through one call or through one website. The Federal Transit Administration's (FTA) Veterans Transportation and Community Living Initiative grants (2010-2012) was the impetus for this type of service.¹⁵

Level 2 allows the user not just to obtain information about their mobility options, but also allows them to book and pay for the services. At this level, the user makes one payment regardless of how many service providers are associated with the particular trip.

Level 3 builds on the one trip, one payment concept in level 2. The third level provides different packages of service. It allows the user to make a payment for a certain time period (weekly or monthly) which would be associated with a certain amount of travel. Instead of paying as you go, the user would open their application and use the transportation service miles they already bought.

Level 4, in comparison with level 3, requires the full integration of different technologies and payment systems into a general public policy and governance structure.¹⁶ The California's Department of Transportation (CalTrans) is in the process of creating a mobility system statewide.

Alternative Mobility Areas

The restrictions the transit agency places on the use of Uber or Lyft to qualify for a discount differ by transit agency and area. Based on the findings in the previous SouthShore transit study and the public input received during the reevaluation of the study, it is clear that there are two distinct travel markets within SouthShore. These are the morning and late afternoon commuter trips to Downtown Tampa and the internal trips within SouthShore. The trips within SouthShore take place throughout the day and are primarily to commercial areas and medical facilities. To address these two different markets, two types of approaches are proposed.

Mobility Hubs

The idea behind mobility hubs is to identify locations where people can obtain access to the transit services offered in SouthShore. The mobility hub could have designated locations where the user can obtain on-demand service to and from the mobility hub and/or transfer to the transit network. The hub areas could also provide the opportunity for bike-sharing, car-sharing, and ride-sharing.

¹⁴ *Mobility as a Service: Concept and Practice*, National Center of Mobility Management, March 2018, 2.

¹⁵ *Ibid*, 3 - 9.

¹⁶ *Ibid*, 5.

Figure 25 depicts an example of a mobility hub. The amount of options or services offered at the mobility hub would be dependent on the amount of space, type of development, as well as the demand in the area. In addition, the mobility hub could function as a typical Park-N-Ride transfer point for the commuter to transfer to the bus to Downtown Tampa. As with a Park-N-Ride lot, the cost associated with the development of the hub would vary greatly depending on the location, size, and services provided. As with a Park-N-Ride lot, there will be a one-time capital cost and a recurring annual cost. The capital costs are related to land acquisitions, engineering costs, and construction costs. The recurring annual cost are related to the maintenance of the lot and the operation of the services provided.



Figure 25 | Example Mobility Hub¹⁷

Coordination with developers in the zoning application stage presents an opportunity to develop mobility hubs within the different developments which are being proposed in SouthShore. This early coordination would allow for the accommodation of different types of transit services at key destinations within SouthShore. Figure 26 shows the proposed locations of the mobility hubs at the shopping plazas within SouthShore. Thirteen mobility hubs were identified based on their location and current land-uses. Further analysis of the different locations is necessary to optimize the use of the hubs. In addition, different design standards will need to be applied to accommodate better access to transit. The Florida Department of Transportation (FDOT) recently updated the Design Handbook for Florida Bus Transit Facilities, in which different standards and issues related to accessing transit facilities are discussed.¹⁸

In Figure 26, the number of residential units within a two mile radius from the mobility hub location are identified. The number of residential units were obtained from the Property Appraisers database. One possible approach could be to offer the users located within a two mile radius of the mobility hub a discounted fare with Uber and/or Lyft. Because of the increase in residential and commercial development in Ruskin and Wimauma specifically, the incorporation of mobility hubs will play a role in

¹⁷ Source: New Integrated Smart Transport Options (NISTO). <http://www.nisto-project.eu/de/nisto.html>

¹⁸ *Accessing Transit: Design Handbook for Florida Bus Passenger Facilities, Version III, 2013. Interim Updates Since 2013 Publication.* Florida Department of Transportation. April 2017. http://www.fdot.gov/transit/Pages/FDOTAccessingTransit2017InterimUpdatesTechMemo_Final.pdf

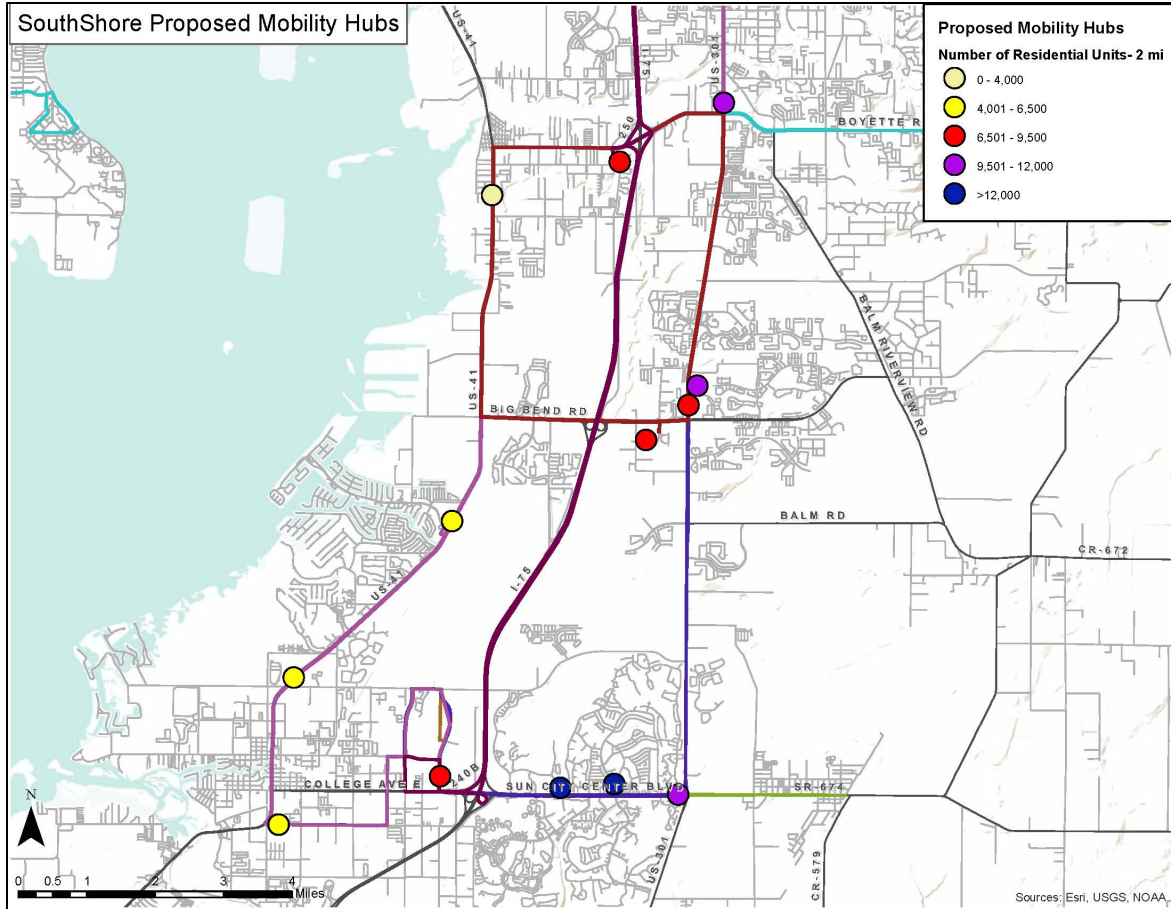


Figure 26 | Proposed Mobility Hub Locations

providing access for the communities located in these areas. Development is growing further and further east, and connectivity between hubs and within the South County Flex Zone will be essential to provide linkages to the rest of the County and Downtown Tampa.

In the long term, public land could potentially be used to develop the mobility hubs accommodating a variety of mobility options. Other mobility options to consider are zip cars, bicycles, and golf carts, which are a well-used mode in the area. Amenities such as bicycle parking and/or bicycle rental facilities, bike-sharing, golf cart parking/charging and/or rental could also be planned. The development of the mobility hubs could be done in partnership with the private sector, allowing for the creation of these and other commercial amenities.

As shown in Figure 27, there are several parcels within SouthShore owned by the County and/or the State. Ten parcels were identified as publicly owned based on the Property Appraisers database. As with the mobility hubs, further analysis will need to be undertaken to identify the possible uses associated with these parcels.



Figure 27 | Public Parcels along Routes and Park-N-Ride lots

Mobility Zones

The proposed mobility zone concept would provide enhanced mobility within specific zones and address the need of the travel within SouthShore. The service provider, either public or private, could offer services within a particular zone at a set price. This service could be set up to order a trip through an application or through a call service.

Figure 28 shows the proposed zones for SouthShore. The proposed zones divide SouthShore into two areas. The Northern zone is approximately 23 square miles, while the Southern Zone is approximately 38 square miles. A price structure could be developed either on a per-trip basis or a time period (daily, weekly, and/or monthly) for trips within one of the zones. Key destinations within each of the zones could be identified to and from which service would be provided.

The Sacramento Regional Transit District is using a software application through which the user can arrange for a “share-n-ride” van service within particular zones.¹⁹

¹⁹ SMART Ride On-Demand Transit. Sacramento Regional Transit District. <https://smartride.sacrt.com/>

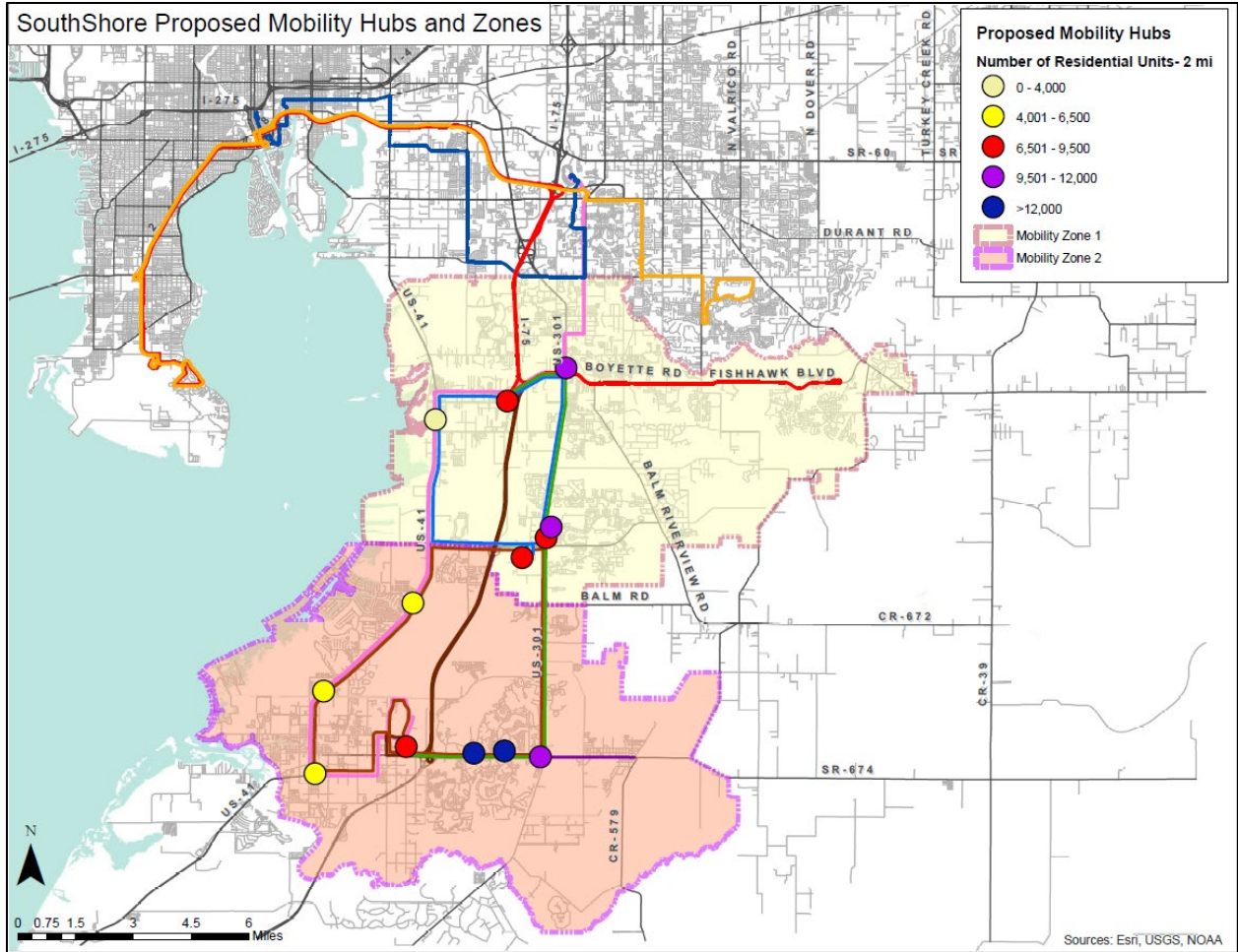


Figure 28 | Mobility Zones

Benefits and Challenges

The greatest benefit is clearly the ability to address the first and last mile access to the transit service. The SouthShore’s suburban development patterns are not conducive for transit. Offering door-to-door service will greatly improve the access to the transit service. In addition, it will allow HART to increase their service-area at a potentially lower cost and provide a more attractive transit service. The cost associated with the service would have to be negotiated between the providers. In the pilot program HART implemented, HART subsidize the trips within the range of \$7 and \$9 a trip.

The implementation of the proposed mobility hubs and mobility zones could also potentially reduce the number of vehicles on the road. If people can obtain service to and from designated areas with a timed transfer to a fixed route service both at the start and the end of the trip, this might be a more convenient and cost-effective way to travel, in comparison to a trip in their own vehicle. It is important to keep in mind, that for the car owner the ease of planning the trip and the elimination of having to make multiple decisions will be of great importance.

The greatest challenge with these types of services is making accommodations for those individuals without mobile devices, credit card, older adults, and people with disabilities. For this segment of the population it is important to maintain a call-center and some type of ticket system.

Funding Sources

Potential funding for the expanded service in SouthShore may be obtained from the traditional funding sources that currently finance HART services including capital and operating costs. Capital cost for fixed assets (e.g., buses, station infrastructure, and ancillary facilities such as maintenance facilities) generally comes from different sources than funds applied to operations and maintenance of the service. The specific funding mechanism generally differs even if both the capital and operating costs come from the same general category (e.g., federal funds).

It is important to recognize that the cost of public transit service throughout the United States is not covered solely by revenues received from fares collected for the service. Fare revenues typically cover a portion of the operating and maintenance costs of the transit service, with capital costs frequently covered through federal grants and programs.

Funding for transit is derived from two general categories: public sector and private sector. Public sector funding is derived from public tax dollars allocated through federal, state, and local funding mechanisms.

Public Sector Funding

The federal government has historically been an important source of funding for transit. Prior to 1991, highway and transit money were allocated separately. Starting with the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), and through subsequent legislation, transportation funding has become increasingly flexible and less mode specific. Today, funding can be used either for highway or transit with fewer restraints. One element that has remained largely unchanged is that state and local funding is required to complement federal funding under various matching formulae.

FTA Grants – Funds for urban mass transit are available from the FTA to qualified transit authorities pursuant to procedures set forth in the Fixing America’s Surface Transportation Act (FAST Act). The FAST Act was enacted by President Obama in December 2015 to further several important goals, including safety, state of good repair, performance, program efficiency, and to provide long-term funding for surface transportation projects. The process of obtaining federal capital assistance is initiated by a recipient designated by state and local officials, and by publicly owned operators of mass transportation services. Generally, the designated recipient for a service area prepares and submits a regional program of projects to the FTA for approval. Additionally, the recipient is required to file an application with the FTA regional office to be eligible for any FTA program grant. Federal grants can generally reimburse up to 80 percent of the cost of capital programs and a portion of operating expenses to improve or continue mass transportation service.

Federal, state, and local resources provide funding to the HART system. Federal and most of the state programs are not for specific bus transit corridors or routes unless specifically stated.

Federal Programs

Available FTA and Federal Highway Administration (FHWA) funding programs, as identified in FAST Act are listed below²⁰:

Surface transportation Block Grant Program (STBG)

The STBG provides flexible funding that may be used by States and localities for projects to preserve and improve the conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals.

Urbanized Area Formula Program: Section 5307 - Urbanized Area Formula Grants, Section 5336 - Apportionment of Appropriations for Formula Grants

The Urbanized Area Formula Funding program (49 U.S.C. 5307) makes Federal resources available to urbanized areas and to Governors for transit capital and operating assistance and for transportation related planning in urbanized areas. An urbanized area is a Census-designated area with a population of 50,000 or more as determined by the U.S. Department of Commerce, Bureau of the Census. Eligible activities include planning, engineering, design and evaluation of transit projects and other technical transportation-related studies; capital investments in bus and bus-related activities such as replacement of buses, overhaul of buses, rebuilding of buses, crime prevention and security equipment and construction of maintenance and passenger facilities; and capital investments in new and existing fixed guideway systems including rolling stock, overhaul and rebuilding of vehicles, track, signals, communications, and computer hardware and software. All preventive maintenance and some ADA complementary paratransit service costs are considered capital costs. For urbanized areas with populations less than 200,000, operating assistance is an eligible expense.

For urbanized areas with 200,000 in population and over, funds are apportioned and flow directly to a designated recipient selected locally to apply for and receive Federal funds. For urbanized areas under 200,000 in population, the funds are apportioned to the Governor of each state for distribution.

Chapter 53 Section 5337 State of Good Repair Grants

The State of Good Repair grants program provides financial assistance to public transit agencies that operate rail fixed-guideway and high-intensity motorbus systems for the maintenance, replacement, and rehabilitation of capital assets, along with the development and implementation of transit asset management plans. These funds reflect a commitment to ensuring that public transit operates safely,

²⁰ *Grant Programs*. United States Department of Transportation, Federal Transit Administration.

<https://www.transit.dot.gov/grants>

&

Surface Transportation Block Grant Program (STBG). United States Department of Transportation, Federal Highway Administration. <https://www.fhwa.dot.gov/specialfunding/stp/>

efficiently, reliably, and sustainably so that communities can offer balanced transportation choices that help to improve mobility, reduce congestion, and encourage economic development.

Section 5339 – Bus and Bus Facilities Formula Grant

The Grants for Buses and Bus Facilities program (49 U.S.C. 5339) makes Federal resources available to States and designated recipients to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities including technological changes or innovations to modify low or no emission vehicles or facilities. Funding is provided through formula allocations and competitive grants. A sub-program provides competitive grants for bus and bus facility projects that support low and zero-emission vehicles.

Section 5310 – Formula Grants for the Enhanced Mobility of Seniors and Individuals with Disabilities

This program (49 U.S.C. 5310) provides formula funding to states for the purpose of assisting private nonprofit groups in meeting the transportation needs of older adults and people with disabilities when the transportation service provided is unavailable, insufficient, or inappropriate to meeting these needs. Funds are apportioned based on each state’s share of the population for these two groups. The program aims to improve mobility for seniors and individuals with disabilities by removing barriers to transportation service and expanding transportation mobility options. This program supports transportation services planned, designed, and carried out to meet the special transportation needs of seniors and individuals with disabilities in all areas – large urbanized (over 200,000), small urbanized (50,000-200,000), and rural (under 50,000). Eligible projects include both “traditional” capital investment and “nontraditional” investment beyond the ADA complementary paratransit services.

Discretionary Grants

Congress establishes discretionary grant programs through authorizing legislation and appropriations legislation. The Rehabilitation Services Administration (RSA) then usually writes program regulations based on the authorizing legislation, which describe how the programs are to be administered.

State Programs

Available sources from the State of Florida, as identified in the Florida Statutes and/or Florida Department of Transportation Procedures are listed below²¹:

Park and Ride Lot Program

As part of the commuter assistance program to encourage transit and carpools, the Park and Ride Lot Program provides funding to purchase or lease land to construct park and ride lots based on FDOT criteria.

Public Transit Block Grant Program

²¹Office of Freight Logistics and Passenger Operations- Grants. Florida Department of Transportation. <http://www.fdot.gov/multimodal/grants.shtml>

Established by the Florida Legislature, the Public Transit Block Grant Program provides funds for eligible transit capital and operating costs, consistent with local government comprehensive plans. Funds are awarded to public transit providers eligible to receive funding from the FTA's Sections 5307 and 5311 and to Community Transportation Coordinators.

Public Transit Service Development Program

This grant program is designed to provide start-up funding for new public transit projects that provide new or innovative techniques to improve system efficiencies, ridership, or revenues. The Public Transit Service Development Program, also enacted by the Florida Legislature, provides initial funding for special projects that incorporate new or innovative techniques to improve or expand public transit services. Projects may include: new technologies, routes, services, or the purchase of special transportation services. HART received funding through two joint participation agreements to implement circulator service in the Tampa Innovation District and a new local route in the Temple Terrace area. Similar agreements could be considered for SouthShore.

Transit Corridor Program

This program is designed to support projects that relieve congestion and improve capacity in identified transportation corridors by improving the people-carrying capacity of the system through the use of high-occupancy conveyances. The funds may be used for transit capital or operating expenses identified in a TDP, Congestion Management System Plan, or other formal study undertaken by a public agency.

Intermodal Development Program

The Intermodal Development Program provides funding to projects that are designed to improve multimodal movement of people and freight. Qualifying projects can include construction of transit or transfer centers, and other major capital projects designed to promote mobility.

Additional state resources may be available to local governments and transit agencies to provide for the local share of project costs.

Local Resources

At the local level, HART is dependent on a millage levy generated from property taxes. HART's millage rate is currently 0.5 mils in the City of Tampa, City of Plant City and the City of Temple Terrace.

Other possible taxes that can be enacted or earmarked at the local level to benefit transit are portions of motor vehicle registration fees, portions of local sales tax, and document stamp taxes for registration of public documents (e.g., deeds and mortgages, licenses, etc.). Several counties around Florida, including Hillsborough County in 2010, have considered a sales tax surcharge for application to transit service.

In November, 2018 the residents of Hillsborough County adopted a penny sales tax increase.²² The referendum is estimated to raise about \$280 million per year through the sales tax hike starting in 2019, off which 45 percent of the funds raised would go to HART and the rest of the money to Hillsborough County, Tampa, Temple Terrace and Plant City. The agencies would then decide on what projects to fund, with guidance from the long-term transportation plan created by the MPO.

Another funding source is the one-cent Local Gas Tax. In 2012 Hillsborough County levied a one-cent gas tax which can be used for maintaining bus stops and service. This tax could be used to fund improvements in SouthShore.

Some jurisdictions make use of road and bridge tolls, and potentially managed lane tolls, to support public transportation²³. While these tolls are generally implemented to cover the cost of constructing, operating, and maintaining the roads and bridges, some areas have used the toll revenues for bus transit and shuttles to Park-N-Ride lots²⁴. As FDOT is planning to add managed lanes on I-75 through SouthShore, the potential for using tolls to finance Park-N-Ride lots and/or to use managed lanes for transit services exists.

Private Funding Sources

In addition to the traditional funding sources, funds from one or more private sources may be used to fund some or part of the necessary resources needed to implement additional transit services to SouthShore.

Private sector funding generally comes in the form of direct payment by private entities to the transit agency in return for the benefits received from a transit service. Residential communities, major industries and businesses, and large-scale developments may offer funding to the public transit agency to enhance mobility and as a means of mitigating potential traffic congestion. As with tax increment financing (TIF), governments hold tax rates constant and use expected bumps in tax revenues from increased property values to finance the debt for a project.

Private organizations may also operate their own transit service as a benefit to their employees and to make the organization a more attractive place to work. Reductions in infrastructure to support the employees (e.g., parking lots) and reduced commuting costs are among the benefits to both the employer and the employee. Google is an example of an organization that provides their own transit service as a benefit to their employees.

²² O'Donnell, Christopher. *Hillsborough Group Pushing New Referendum on Raising Sales Tax for Transportation*. June 14, 2018. https://www.tampabay.com/news/transportation/Hillsborough-group-pushing-new-referendum-on-raising-sales-tax-for-transportation_169141372

²³ *I-405 Express Toll Lanes: 27 Months of Operations*. Washington State Department of Transportation. October 2015-December 2017. <https://www.wsdot.wa.gov/sites/default/files/2018/05/14/Toll-405-ETL-27-Month-Report.pdf>

²⁴ Dawid, Irvin. *Express Lanes Toll Revenue Benefits Bus Riders, Carpoolers, and Bike Riders*. May 6, 2018. <https://www.planetizen.com/news/2018/05/98548-express-lanes-toll-revenue-benefits-bus-riders-carpoolers-and-bike-riders>

Opportunities for private funding within SouthShore may be possible for new businesses specifically Amazon and St. Joseph’s Hospital. Under typical partnership arrangements, the organization pays the transit provider a fixed sum in exchange for unlimited use by all members of the organization (e.g., employees, students, etc.). HART is currently working with Amazon to use a portion of their parking lot as a Park-N-Ride lot.

Various development fees are often implemented by local governments and generally make use of the public sector power to tax in combination with the financial resources of the private sector and the benefits that it accrues. On April 26, 2016, Hillsborough County adopted a Mobility Fee Ordinance to replace transportation impact fees on new development. Mobility fees are assessed on new development as a one-time fee under the logic that these developments will require new transportation infrastructure and mobility facility capital improvements to meet the travel demand of these developments and to offset the roadway congestion that would occur if no new transportation infrastructure is added.

Developers may find that being located in proximity to a transit service increases the value of the property proposed for development. In effect, the mobility fees paid by these developers simply returns some portion of that increased value where the benefit is initially generated. The Dulles-Tysons Corner corridor in Northern Virginia many years ago recognized the benefit and increased value that would accrue to land near the proposed rail line. The land owners voluntarily increased property taxes and dedicated those funds to the public sector to advance a transit project that otherwise might have been many years in the future, if at all.

Public Private Partnerships

A Public-Private Partnership (PPP) is a contractual agreement between a public agency and a private entity as a way to accelerate delivery of transportation projects. The private partner may contribute to the design, construction, financing, and operations and maintenance of project or any combination thereof. PPPs are usually reserved for large infrastructure projects. Central to the success of PPPs is a revenue stream that can repay any initial cost incurred by the private entity. Transit has traditionally found this arrangement challenging as the revenue source, fares, is typically insufficient to provide the necessary revenue. Toll roads built under a PPP arrangement use the tolls as repayment. In some cases, the public sector may simply pay an annual availability pay in lieu of tolls, in effect paying the tolls on behalf of the users.

Corporate Transit Program

HART offers the Corporate Transit Program to encourage the use of public transportation. This program provides nontaxable fare subsidies up to \$255 per employee per month toward the cost of public transportation. Federal law entitles all US employees to this tax-deductible business expense.

Advertising

Advertising at bus stops and on buses will produce some revenue. Some companies may supply infrastructure (bus shelters) in exchange for the right to advertise on them and even provide a portion back to the agency. HART currently incorporates these policies.

Home Owner Associations (HOA) and Condominium Owner Association Fees (COA)

HOA and COA fees may be collected from an HOA and/or COA to fund service to a specific area. HART currently has agreements with Sun City Center and Kings Point to allow residents to ride HART buses with a valid ID.

University Programs

Many institutes of higher learning have found it advantageous to support a public transit agency by applying student activity fees and other charges to students and then offering unlimited, free use of the transit service. In this way the educational institution can give mobility to students who may not have access to automobiles and yet avoid the staffing, infrastructure, liability, and specialized knowledge needed to run a transit operation. Service can be scalable, allowing the institution to “purchase” only as much service as is needed while capitalizing on the economies of scale of the existing transit provider.

HART provides an Adult Student Fare Program that several universities and colleges take part in through the sale of HART farecards to students for a 25 percent discount. Schools served by this program include:

- University of Tampa
- Art Institute of Tampa
- Southwest Florida College
- Sanford Brown Institute
- Remington College
- Hillsborough Community College (HCC) Ybor, Brandon, Dale Mabry, and SouthShore Campuses
- Everest University Tampa and Brandon Campuses
- Erwin Technical Institute
- Concorde Career College
- Brewster Technical Institute
- International Academy of Design
- Ultimate Medical Academy
- Argosy University
- Florida Career College
- Fortis College
- Keiser University
- Shear Excellence International Hair Academy
- Springfield College

Additionally, HART sponsors the U-PASS Program with the University of South Florida (USF). With valid USF ID cards, USF students can ride all HART services for free and USF faculty and staff can ride for fifty cents. Students pay for this service through an activity fee and HART invoices USF each month based on the number of passengers. HART also offers a semester pass to students of the Hillsborough County Community College for \$110. The pass provides students with four months of rides for the price of two months.

HART's current HOA/COA and U-PASS programs provide a needed service but are not revenue generators. These programs may be restructured or renegotiated to generate some revenue. Private funding sources would be the most flexible to support the implementation of the recommendations for the SouthShore Transit Reevaluation Study since they can be targeted for SouthShore.

Alternative Financing Methods

While the contributions that services such as Uber and Lyft could offer to improve the first and last mile connectivity to the proposed mobility hubs are significant, their effect on transit service in general have not been established. The City of Chicago recently approved an additional 15-cent increase to a 52-cent fee to every ridesharing trip. The 52-cent fee was established in 2015 to contribute to the city's general fund, and the new 15-cent increase to that fee will go directly to funding public transit. The City has not decided how they will use the funds, however, it is likely they will be used to fund infrastructure improvements. A similar fee could be levied in Hillsborough County to offset similar issues.²⁵

Conclusion

As stated earlier, this study reevaluated the 2014 *SouthShore Transit Circulator Study*. After extensive public input, which is documented in the Appendix, a recommended alternative and implementation phases were developed. The recommended alternative addresses the transit needs of SouthShore in providing mobility options for work trips from SouthShore to Downtown Tampa and MacDill AFB and for local shopping, medical, and recreational trips within the SouthShore area.

This was accomplished by first focusing on service from the southern end of SouthShore along US 301 to the proposed Gibsonton & I-75 Park-N-Ride lot. This service accomplished better access to Downtown Tampa through a timed transfer with the existing Fishhawk 24 LX route at the proposed Gibsonton Park-N-Ride and better access to local destinations by running service on SR 674, US 301, and Gibsonton Drive.

The five implementation phases build on each other and as ridership increases, additional services to Downtown Tampa as well as local circulation are proposed. In the final implementation phase, there are several options to obtain service to Downtown Tampa. These are through the Fishhawk 24 LX reroute to the HSF, assumed to be providing service between Apollo Beach and MacDill AFB, and an express route on I-75 to Downtown Tampa. In this final phase, the North Loop and South Loop are proposed to provide access to all local key destination and transfers to the routes on US 41 and US 301.

The annual operational cost of the final phase is \$9,452,200, while a capital cost of \$15,914,100 has been estimated. The operational cost are driven by the amount of service and the frequency of the service,

²⁵ Small, Andrew. *How Should Chicago Spend its Uber Tax?* November 27, 2017. <https://www.citylab.com/transportation/2017/11/how-should-chicago-spend-its-uber-tax/546233/>

while the capital cost is driven by the type and amount of vehicles purchased. This cost could be curtailed by providing service with smaller vehicles or working with other service providers, such as Uber or Lyft.

As the services are implemented, it is important for HART to engage in a public outreach program to make the residence aware of any new or revised services. Several residents notes during the public meetings that not enough information was made available about the transit service in SouthShore. In addition, it will be important to refine the service plans as actual ridership data becomes available. Analyzing the ridership data will allow for the refinement of the service plan to address the actual demand and to optimize the cost effectiveness of the routes.

The study identified possible mobility hubs and zones within SouthShore to not only address an option to improve the access to the transit service but to also introduce possible other means of transportation such bike sharing, car sharing and identify locations for on-demand service drop off and pick-up areas.

The study also analyzed the publicly owned parcel within SouthShore and coordinated with Hillsborough County Public Works to examine the potential of using the publicly owned parcels as mobility hubs. Although this would be a more long term approach, it was deemed beneficial to start discussing the idea to use public land to better accommodate transit service. In addition, the possibility of HART using publicly owned land at Big Bend as a bus storing facility was discussed.

Since the referendum for an additional penny sales tax passed in November, 2018, HART will obtain 45 percent of the penny sales tax. This additional funding could provide an opportunity for the implementation of the recommended service in SouthShore.

The recommendations in the study were developed in close coordination with HART and, after approval from the Hillsborough MPO, the study will be presented to the HART Board for approval to be incorporated into the TDP and considered for implementation.

Appendix

Public Meeting Summary – May 31, 2018 Meeting

Location: SouthShore Regional Library
15816 Beth Shields Way,
Ruskin, FL 33573

Date: May 31, 2018

Time: 5:30 PM – 7:00 PM

Subject: Kick-off Meeting

Meeting Summary:

Introduction

Guests were welcomed, introductions were made, and study purpose was outlined by Sarah McKinley, Hillsborough MPO

Year 2014 Study Recommendations

The transit alternatives developed in the previous study were presented by Jeanette Berk, Gannett Fleming, Inc.

SouthShore Growth

The current 10-year plan related to the transportation needs in Hillsborough County were reviewed by John Patrick, Hillsborough County

Community & Agency Updates

- Steve Feigenbaum from HART provided an update on HART's Evolving Services
- Liz Gutierrez from Enterprising Latinas provided an update on the Arriba Transportation Proposal
- Edigo Ryan and Shayna Rodriguez from Haley Veteran's Hospital provided an update on the VA South Hillsborough Clinic and Veteran Transportation Services
- Karen Smith from Sunshine Line provided an update on the Sunshine Line On-Demand Services.

Brainstorming Session

A facilitated brainstorming was conducted to identify new transit needs in the SouthShore region, conducted by Jeanette Berk. Comments received relevant to study include:

- SouthShore Library should be added to list of key destinations and should be transit accessible.
- Flex Services should be extended to the area west of US 41 in Ruskin and Apollo Beach.
- Some emphasis should be on speed. It shouldn't take 90 minutes to get from Ruskin to Sun City Center as it can now.

- People in Sun City Center need to be able to access St. Joseph’s Hospital on Big Bend Road, as do the retired veterans to the VA Medical Center.
- Direct access to the Brandon Mall would be appreciated if possible.
- There is a need to coordinate bus times to meet and take people downtown in a timely manner; or to the airport. Stop referring to Routes 24 and 25.
- Riverview Oaks is the world’s most dangerous Park-and-Ride.
- Please consider access to downtown, the airport, and MacDill Air Force Base. There is a huge population that work in downtown and need to get to Tampa for many reasons. The 47 LX used to be standing room only. Recommend a South County to Downtown Tampa express route. HART connection times and stops do not match. Commute times must be reasonable-not 2 hours long.
- There is a need for bus service directly to Tampa from Apollo Beach without going through Brandon.
- There is a need to focus on route connectivity:
 - Route 31 to Route 24
 - More connections to Marion Transfer Center
- There is a need to focus on express service:
 - Express bus lacking (today)
- There are too many studies conducted, and no action.
- There is a need to plan for Amazon as a key destination.
- For HART: The expansion of South County includes a working population. We are primarily interested in an Express Bus from Sun City Center to MacDill and the MacDill Ferry. There is a huge population in South County of military and civilian workers who would use the express bus and ferry.
- Additional comments received include:
 - There are two free newspapers that are delivered to all households in Sun City Center. The Sunshine Line should place articles in these to make residents aware of this service.
 - There is a need for crosswalks.
 - FDOT and 674- need to explore use of mobility fees.
 - For John at Public Works:
 - The Riverview stop at US 301 and Boyette is unsafe requiring bus riders to run across 6 lanes of traffic to get to their cars. Same at the previous stop at Publix. The bus should be the one crossing road/mall rather than bus riders. Note: we have also tried walking to the corner crosswalk, but that is unsafe as well because of the right-turn-on-red drivers.
 - Golf cart traffic needs to be addressed on Pebble Beach Boulevard and Sun City Center Boulevard. Consider including a golf cart overpass.

Public Meeting Summary - June 28, 2018 Meeting

Location: SouthShore Regional Library
15816 Beth Shields Way
Ruskin, FL 33573

Date: June 28, 2018

Time: 5:30 PM – 7:00 PM

Subject: 2nd Meeting – Draft Alternatives Input Request/Open Discussion

Meeting Summary:

Introduction

Guests were welcomed, introductions were made, and study purpose was outlined by Sarah McKinley, Hillsborough MPO.

Year 2014 Study Recommendations

The preferred transit alternative developed in the previous SouthShore Circulator Study was presented by Jeanette Berk, Gannett Fleming, Inc.

Draft Alternatives/Scenarios

Jeanette Berk outlined the proposed alternatives for discussion. The alternatives are:

- Add US 301 route to I-75 & Gibsonton Drive Interchange
- Add US 301 route to Brandon Mall
- Add US 301 route to Downtown
- Replace 75 LX with I - 75 Connector to Gibsonton Drive Interchange
- Replace 75 LX with I - 75 Express to Downtown

Input and Open Discussion

An open discussion took place regarding the different alternatives. Comments received include:

- Semi-direct route from Ruskin to Downtown same seat rides will help those who need transportation and those willing to take the bus instead of driving a personal vehicle.
- Comments about specific alternatives include:
 - US 301 to Brandon Mall:
 - US 301 service could go to downtown in the AM and PM peak and provide service to the Brandon Mall during the off-peak hours. This would address the commuter market and the midday shop trip market.
 - US 301 to Brandon Mall makes sense
 - US 301 to Downtown:
 - Preferred mid-term solution for Downtown Tampa commuters
 - Express service on US 41 seems to be better than US 301- considering number of traffic lights
 - US 301 on I-75 is a long-term solution
 - South loop should be implemented first
 - US 301 to I-75 and Gibsonton Drive

- North Loop needs to stop often- route does not
- Consider extending Flex zone north to Balm Road near US 301. To provide better access to the transit routes.
- I-75 Connector to Gibsonton Park-N-Ride:
 - Consider “need” riders versus “choice” riders
 - I-75 route should go along US 301
 - A Park-N-Ride lot is needed at the east end of the Sun City Center Boulevard flex zone
- I-75 Express to Downtown:
 - This is a preferred long-term alternative assuming I-75 improvements are incorporated

General ideas that were discussed were for the North and South Loop service to stop often and provide the local service. The routes on US 41, US 301 and/or I-75 should be express service with limited stops. Also, the I-75 route should run on US 301 between Sun City Center and Big Bend Road. Starting at Big Bend Road, it should run on I-75.

Scenarios Presented:

Add US 301 Route to I-75 & Gibsonton Drive Interchange Scenario

The first scenario adds a route on US 301 from the SouthShore Regional Service Center Park-N-Ride lot (located on 30th Street just north of East College Avenue) to the interchange at I-75 & Gibsonton Drive where a proposed park and ride lot, known as the Gibsonton Park-N-Ride, will be located. It is recommended not to use the Riverview Oaks Park-N-Ride lot (located at US 301 and Boyette Road) because of the loss in time to reach the lot and the pedestrian safety concerns. Instead, it is recommended that another transfer location be developed on the southwest corner of the I-75 & Gibsonton Drive interchange, referred to as the proposed Gibsonton Park-N-Ride. There is currently a Walmart with a parking lot at this location. In this scenario, Route 31 South County/US 41 stops at the Gibsonton Park-N-Ride and continues on to the Brandon Mall. Fishhawk 24 LX also stops at the Gibsonton Park-N-Ride and continues on to Downtown Tampa. The proposed route along US 301 will have a transfer with Route 31 South County/US 41 to provide service to the Brandon Mall and a timed transfer with existing Fishhawk 24 LX to provide timely service to Downtown Tampa and increase frequency of service.

Add US 301 Route to Brandon Mall Scenario

The second scenario adds a route on US 301 from the SouthShore Regional Service Center Park-N-Ride lot (located on 30th Street just north of East College Avenue) to the Brandon Mall. The US 301 route stops at the proposed Gibsonton Park-N-Ride lot (located southwest corner of the I-75 & Gibsonton Drive interchange) providing a transfer point with Route 31 South County/US 41 and a timed transfer with existing Fishhawk 24 LX. Fishhawk 24 LX provides service to Downtown Tampa. Route 31 South County/US 41 ends at the proposed Gibsonton Park-N-Ride.

Add US 301 Route to Downtown Scenario

In this scenario the US 301 route starts at the SouthShore Regional Service Center Park-N-Ride (located on 30th Street just north of East College Avenue) and continues to downtown, stopping at the proposed Big Bend Park-N-Ride (located at Big Bend Road and Simmons Loop) and the proposed Gibsonton Park-N-Ride (located southwest corner of the I-75 & Gibsonton Drive interchange) to continue to Downtown Tampa via the Selmon Expressway. Due to the level of congestion on the US 301 corridor it does not lend itself to providing timely express service in its current configuration. However, this scenario offers a one seat ride from the SouthShore Regional Service Center Park-N-Ride to Downtown Tampa.

Route US 301 will have a transfer point at the proposed Gibsonton Park-N-Ride with existing Fishhawk 24 LX, and Route 31 South County/US 41.

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

Instead of adding the US 301 route, this scenario proposes an I-75 Connector along I-75 connecting with three main transfer points in the study area including:

- SouthShore Regional Service Center Park-N-Ride (located on 30th Street just north of East College Avenue)
- Big Bend Park-N-Ride (located at Big Bend Road and Simmons Loop)
- Gibsonton Park-N-Ride (located southwest corner of the I-75 & Gibsonton Drive interchange)

At the SouthShore Regional Service Center Park-N-Ride, the I-75 Connector connects with the South Loop. At the Big Bend Park-N-Ride, the I-75 Connector connects with the South and North Loops. At the Gibsonton Park-N-Ride, the I-75 Connector will have a timed transfer to the existing Fishhawk 24 LX, providing timely service to Downtown Tampa and r increase frequency of service. The I-75 Connector will also have a transfer with Route 31 South County/US 41 to provide service to Brandon Mall.

I-75 Connector to Downtown Tampa Scenario

Another I-75 alternative provides service via an I-75 Express route from the SouthShore Regional Service Center Park-N-Ride to Downtown Tampa using the Selmon Expressway. The I-75 Express uses I-75 with three main stops in the study area, while continuing downtown. The main stops are:

- SouthShore Regional Service Center Park-N-Ride (located on 30th Street just north of East College Avenue)
- Big Bend Park-N-Ride (located at Big Bend Road and Simmons Loop)
- Gibsonton Park-N-Ride (located southwest corner of the I-75 & Gibsonton Drive interchange)

At the SouthShore Regional Service Center Park-N-Ride the I-75 Express connects with the South Loop. At the Big Bend Park-N-Ride, the I-75 Express connects with the South and North Loops. At the Gibsonton Park-N-Ride, the I-75 Express will have a timed transfer to the existing Fishhawk 24 LX, providing a connection to MacDill AFB and with Route 31 South County/US 41 to provide service to Brandon Mall.

Public Meeting Summary – September 13, 2018 Meeting

Location: SouthShore Regional Library
15816 Beth Shields Way
Ruskin, FL 33573

Date: September 13, 2018

Time: 5:30 PM – 7:00 PM

Subject: 3rd Meeting – Alternatives Operational & Cost Characteristics

Meeting Summary:

Introduction

Guests were welcomed, introductions were made, and study purpose was outlined by Sarah McKinley, Hillsborough MPO.

Year 2014 Study Recommendations

The preferred transit alternative developed in the previous SouthShore Circulator Study was presented by Jeanette Berk, Gannett Fleming, Inc.

Operational Characteristics & Costs of Alternatives/Scenarios

Jeanette Berk outlined the service within each of the alternatives and the costs associated with the service for discussion. The alternatives are:

- Add US 301 route to I-75 & Gibsonton Drive Interchange
- Add US 301 route to Brandon Mall
- Add US 301 route to Downtown
- Replace 75 LX Connector to Gibsonton Drive Interchange
- Replace 75 LX Express to Downtown
- SouthShore Downtown Express with S-Loop

Input and Open Discussion

An open discussion took place regarding the different alternatives. Comments received include:

- Comments about specific alternatives include:
 - US 301 to Brandon Mall:
 - Important to confirm that the timing of the US 41 route is synced with Fishhawk 24 LX and US 301 route.
 - If there is a US 301 route and a US 41 route, before the loops are even implemented, those areas would still be served, and that would be a way to phase in that service.
 - US 301 to Downtown:
 - Discussion on how many people take the bus to Brandon Mall and how many people take the bus to downtown- same service is offered, however the routes are switched. The advantage is a one-seat ride to downtown.
 - US 301 to I-75 and Gibsonton Drive

- The timing issue on US 301 and US 41 is key to confirm connectivity to downtown and to Brandon Mall.
- I-75 Connector to Gibsonton Park-N-Ride:
 - While we like the I-75 routes, currently, getting on and off the interstate is difficult until those interchanges are repaired. This route is great in the long term, however, in the interim, usage of the US 301 and US 41 routes may be more practical.
- I-75 Express to Downtown:
 - While we like the I-75 routes, currently, getting on and off the interstate is difficult until those interchanges are repaired. This route is great in the long term, however, in the interim, usage of the US 301 and US 41 routes to be able to get to Gibsonton may be more practical.
- SouthShore Downtown Express with S-Loop:
 - There is no US 301 route and no US 41 route with this scenario, and now the only way to get to the park-n-ride is through these S-routes. It is a cheaper service, but it is also confusing. With the loops, at least people know which direction they are going.
- General comments include:
 - How do we serve people who live here that need local bus service? Discussion of how the loops provide service within the area.
 - The idea of selection 4 in the previous study was to use the loops to provide local service and they will also serve as a feeder to the routes into town and to the Brandon Mall. Want to make sure that we don't lose that concept of local service offered through this area.

Proposed Mobility Hubs

Jeanette Berk and Sarah McKinley outlined the concept of mobility hubs for discussion. The proposed mobility hubs would function as an access point to the transit system. The concept would allow riders to use an on-demand system such as a van, Uber or Lyft to get back and forth from their residence to the mobility hub. This type of service would address the first-last mile problem. General comments include:

- The on-demand service should not replace the local loop service, rather the on-demand service should provide access to the local loop service. The system should be set up so that it is easy to understand.
- The problem is that there isn't a lot of ridership down here because people don't believe that they will be getting effective service. Until they see that they are receiving effective service, there won't be an increase in ridership. Starting with the US 301 route is an idea, since that is a route that they are familiar with. Even without the loops, ridership would increase, then build the system through the implementation of the South Loop and then the North Loop. Hold the I-75 on reserve until I-75 and the interchanges are completed.

Questions/Comments

- When you calculate the cost of the routes, are you considering the expected ridership?
 - We have not at this point, that will be conducted in the next phase of the study. It will still be a heavily subsidized service.

- Do you find that the charge now discourages some people from riding?
 - It's a pretty modest charge, and we don't really get any negative comments about the charge. I don't think that it is so expensive that it is going to discourage people from riding.
- Will there be any new interchanges to help relieve so of the pressure that the Big Bend interchange is experiencing?
 - We've been working with the County on trying to prioritize improvements to US 19, and we have been working with FDOT and the County on possibly incorporating an additional interchange in this area, so that is something that could possibly come in the future.
- With voters being asked to vote on a transportation tax increase, please address whether builder fees have been increased?
 - The County has now been collecting mobility fees, which is what they are using today.
- Does the mobility fee help with the subsidizing of the bus route?
 - The subsidy for transit largely comes from the Ad Valorem property tax, and some of it comes from the Farebox, and from various grant funding.
- Any idea how these will be implemented?
 - Now that we have formulated these scenarios, we will send these out to our mailing list to get more input and we are hoping to have our final meeting the first or second week in November.
- Do you have an idea when this study will be implemented?
 - This study will be incorporated into HART's Transit Development Plan, and it also relies on the availability of funding, however the van service could be implemented quite quickly.

Public Meeting Summary – November 15, 2018 Meeting

Location: SouthShore Regional Service Center
410 30th St. SE, Suite 104
Ruskin, FL 33570

Date: November 15, 2018

Time: 5:30 PM – 7:00 PM

Subject: 4th Meeting – Implementation Phases

Meeting Summary:

Introduction

Guests were welcomed, introductions were made, and study purpose was outlined by Sarah McKinley, Hillsborough MPO.

Year 2014 Study Recommendations

The preferred transit alternative developed in the previous SouthShore Transit Circulator Study was presented by Jeanette Berk, Gannett Fleming, Inc.

Preliminary Scenarios

Jeanette Berk outlined the preliminary scenarios which were presented at the previous meeting. The preliminary scenarios focused on service along US 301 and I-75.

Implementation Phases

Jeanette Berk outlined the service within each of the implementation phases and the costs and ridership estimates associated with the phases. The phases built on each other and are:

- Add US 301 route to Gibsonton Park-N-Ride
- Add I-75 route to Gibsonton Park-N-Ride
- Extend I-75 route to Downtown Tampa & add South Loop
- Add North Loop
- Provide connections to the proposed High Speed Ferry (HSF) service

Proposed Mobility Hubs/Zones

Jeanette Berk outlined the concept of mobility hubs. The proposed mobility hubs would function as an access point to the transit system. Commercial centers and publicly owned parcels were discussed as possible mobility hubs. The concept would allow riders to use an on-demand system such as a van, Uber or Lyft to get back and forth from their residence to the mobility hub. This type of service would address the first-last mile problem. In addition, the concept of mobility zones was discussed. Zones could be identified as a service area within which service could be set at a fixed price.

Input and Open Discussion

An open discussion took place regarding the implementation phases and the mobility hub/zone concept. Comments received include:

- Comments about specific implementation phases include:
 - Park-N-Ride Lots:
 - It is important to make sure the Park-N-Ride lots are the right size to handle the demand. Particularly the South County Park-N-Ride where the one-seat ride to downtown would be offered needs to be addressed appropriately.
 - Implementation Phase 5:
 - When the HSF service comes online, the route on US 41, North Loop and the South Loop route should provide service to the HSF as well.
- General comments include:
 - Were school busses included in the analysis? No, traffic simulation was not part of this study.
 - Were the sizes of the buses included in this study and are they ADA compliant? Two size buses were included in the study, these were the 40' feet coach bus and a 23' cut away bus. All HART service is ADA compliant.

- Do you consider electric vehicles in this study? No, not at this point. The 40' coach bus runs on compressed natural gas (CNG), while the cutaway bus runs on gasoline.
- How does the Ariba service fit into the study? The Ariba service focuses on creating an alternative system that connects people who live north and south of SR 674 to the transit system. It will run six days a week with a 25 to 30 minute frequency. The goal is to provide connectivity between the neighborhoods of Wimauma and Ruskin, communities with highest concentration to poverty, to the transit system. Two loops are planned, one in Wimauma and one in Ruskin, connecting to the South County Park-N-Ride lot.
- Who will pay for the hubs? At this point, the mobility hubs are concepts. No details have been worked out.
- Does HART have a way of subsidizing transit service for different organizations? HART currently has an agreement with the University of South Florida (USF). Typically, the employer provides the financial incentive.
- HART promised a bus station outside the SouthShore Regional Service Center 20 years ago. They should also have a bus stop at the SouthShore Library. When are we going to see this bus station? Funding for HART has been constrained. Now that the penny sales tax has passed, HART will be able to analyze their system, bring it up to standard, and analyze the service levels.
- To what extent have the funds been guaranteed to HART and can any funds be pulled back if HART does not deliver? The penny sales tax passed and forty-five percent of the penny sales tax will go to HART.
- Information needs to be provided to the Hillsborough Community College regarding the HART service. In general, people in SouthShore are not aware of the transit service that is being offered.

Ridership Estimation Details

The ridership was projected for the years 2025 and 2035 using a linear regression model. The linear regression model is based on the number of dwelling units (DU) and employment along the different route segments. Several additional factors were used to adjust the ridership estimation. These include frequency of service, overlap of routes, and the percentage of person work trips from SouthShore to Downtown Tampa.

Dwelling units and employment socio-economic (SE) data for the years 2015 and 2040 were developed at the traffic analysis zone (TAZ) level for the Tampa Bay Regional Planning Model (TBRPM). Both the 2015 and 2040 SE data sets were prepared by the Hillsborough MPO. The 2040 SE data reflects the planned growth projected by the MPO and adopted as part of the Year 2040 Long Range Transportation Plan (LRTP). The DUs and employment data were disaggregated to individual parcels and business addresses using the 2015 parcel data from the Hillsborough County Property Appraiser and the 2015 InfoGroup employment data, respectively. For each TAZ, a weight for each parcel or business was calculated based on the number of DUs from the parcel data or number of employees from the InfoGroup data. The weight was then applied to the SE data at the TAZ level. This allowed for the verification of the TAZ level DU and employment data and the disaggregation of the TAZ level data.

Linear regression was used to assess the correlation between ridership and the SE data using the current Route 31 Automated Passenger Count (APC) data. The route was divided into 12 segments and the DUs and employment within ½ mile of each segment were summarized. The linear regression of the ridership versus the DUs and the employment data for the 12 segments, with an intercept set to 0, gives a R² value of 0.77.

In addition to this regression, several off-model adjustments were developed to enhance the ridership estimation. These are discussed below.

Difference in Frequency of service

The change in frequency of service or headway on a route is adjusted using an elasticity of negative 0.5. This adjustment is based on research done in this area. (Valuing Transit Service Quality Improvements, Todd Litman, p. 55). The increase in ridership is based on this elasticity. For example, if a frequency decreases from 75 to 60 minutes, the result is a 20 percent increase in frequency. This translates in a 10 percent increase in ridership. For Route 31 (South County US 41), the frequency of service increased from 75 minutes to 40 effective minutes (30 minutes in peak hour and 60 minutes in off-peak hour). The 47 percent increase in frequency results in a 23.5 percent increase in ridership.

Overlap of Routes

In all alternatives there are several segments where multiple bus routes serve the same population. An effective frequency was used to factor the ridership along these segments to account for the increase in service. For the estimated ridership an effective frequency was re-computed for these segments. Using an elasticity for ridership with respect to frequency of -0.5, an additional amount of ridership was computed.

SouthShore to Downtown Tampa Work Trip Adjustment

An adjustment to the ridership number for the routes serving the US 41 and the US 301 corridors was made to better estimate the distribution of the work trip. According to the person trip distribution in the TBRPM, approximately 17 percent of the work trips originating in Wimauma are destined to downtown in 2010, while for Ruskin this number is approximately 4 percent. In 2040 these percentages are projected to be 13 percent and 9 percent respectively. The assumption was made that the work trip from Wimauma and Ruskin would switch from the routes on the US 41 and US 301 corridors to the I-75 route to make use of the interstate modernization and improve service to Downtown Tampa.

Ridership Estimation

The regression factors were applied to the 2015 and 2040 dwelling unit and employment data to estimate the ridership for the years 2015 and 2040. The ridership for the years 2025 and 2035 were based on a straight line interpolation between the years 2015 and 2040.

To avoid double counting dwelling unit and employment data where the ½ mile buffer around transit route overlaps, a target ridership based on all employment within ½ mile of the transit system was

computed. The amount of dwelling units and employment within ½ mile of each individual route was used to create weights for each route which were applied to the target ridership for the system.

Year 2025 and 2035 Operating Cost per Passenger and Passenger per Revenue Hour and Mile

Year 2025 Estimates

Implementation Phase 1	Route Name	Annual Revenue*		Total Annual Operating Cost*	Annual Ridership*	Passenger per Revenue Hour	Passenger per Revenue Mile	Operating Cost per Passenger
		Miles	Hours					
	South County US 41 - Route 31	268,195	19,700	\$1,285,410	112,285	5.7	0.42	\$11.45
	US 301	161,475	11,860	\$1,530,755	48,660	3.0	0.22	\$31.46
	South County Flex	44,685	2,350	\$146,030	35,140	14.9	0.79	\$4.16
	Total	474,355	33,910	\$2,962,195	196,085	5.8	0.41	\$18.98

*Rounded to nearest five.

Implementation Phase 2	Route Name	Annual Revenue*		Total Annual Operating Cost*	Annual Ridership*	Passenger per Revenue Hour	Passenger per Revenue Mile	Operating Cost per Passenger
		Miles	Hours					
	South County US 41 - Route 31	268,195	19,700	\$1,285,410	97,610	5.0	0.36	\$13.17
	US 301	161,475	11,860	\$1,530,755	38,040	3.2	0.24	\$40.24
	South County Flex	44,685	2,350	\$146,030	32,630	13.9	0.73	\$4.48
	I-75 Gibsonton Park-N-Ride	51,165	3,760	\$428,400	35,140	54.1	3.98	\$12.19
	Total	525,520	37,670	\$3,390,595	203,420	5.4	0.39	\$16.67

*Rounded to nearest five.

Implementation Phase 3	Route Name	Annual Revenue*		Total Annual Operating Cost*	Annual Ridership*	Passenger per Revenue Hour	Passenger per Revenue Mile	Operating Cost per Passenger
		Miles	Hours					
	South County US 41 - Route 31	268,195	19,700	\$1,285,410	78,590	4.0	0.29	\$16.37
	US 301	161,475	11,860	\$1,530,755	31,185	2.6	0.19	\$50.49
	South County Flex	44,685	2,350	\$146,030	26,355	0.2	0.59	\$5.54
	I-75 Downtown Express	114,650	4,245	\$1,071,000	48,945	11.4	0.42	\$22.11
	South Loop	202,000	14,835	\$805,615	67,680	4.6	0.34	\$11.90
	Total	791,005	52,990	\$4,838,810	252,755	1.3	0.32	\$23.13

*Rounded to nearest five.

Implementation Phase 4	Route Name	Annual Revenue*		Total Annual Operating Cost*	Annual Ridership*	Passenger per Revenue Hour	Passenger per Revenue Mile	Operating Cost per Passenger
		Miles	Hours					
	South County US 41 - Route 31	268,195	19,700	\$1,285,410	69,225	3.5	0.26	\$18.57
	US 301	161,475	11,860	\$1,530,755	27,130	2.3	0.37	\$25.70
	South County Flex	44,685	2,350	\$146,030	23,845	0.2	0.53	\$6.12
	I-75 Downtown Express	114,650	4,243	\$1,071,000	42,670	10.1	0.37	\$25.10
	South Loop	202,000	14,835	\$805,615	59,570	4.0	0.29	\$13.53
	North Loop	119,290	8,465	\$448,845	33,985	3.9	0.28	\$14.39
	Total	910,295	61,453	\$5,287,655	256,425	1.3	0.28	\$26.66

*Rounded to nearest five.

	Route Name	Annual Revenue*		Total Annual Operating Cost*	Annual Ridership*	Passenger per Revenue Hour	Passenger per Revenue Mile	Operating Cost per Passenger
		Miles	Hours					
Implementation Phase 5	South County US 41 - Route 31	268,195	19,700	\$1,285,410	70,480	3.6	0.26	\$18.24
	US 301	161,475	11,860	\$1,530,755	27,130	2.3	0.17	\$56.42
	South County Flex	44,685	2,350	\$146,030	23,845	10.1	0.53	\$6.12
	I-75 Downtown Express	114,648	4,243	\$1,071,000	42,670	10.1	0.37	\$25.10
	South Loop	201,998	14,836	\$805,614	59,570	4.0	0.29	\$13.53
	North Loop	119,290	8,465	\$448,845	33,985	3.9	0.28	\$14.39
	HSF - FishHawk - Route 24 LX	83,560	6,140	\$2,570,400	122,990	20.0	1.47	\$20.90
	HSF - Bloomingdale - Route 8	125,970	4,565	\$1,807,315	69,025	15.0	0.55	\$26.18
	Total	1,119,821	72,159	9,665,369	449,695	6.2	0.40	\$23.81

*Rounded to nearest five.

Year 2035 Estimates

	Route Name	Annual Revenue*		Total Annual Operating Cost*	Annual Ridership*	Passenger per Revenue Hour	Passenger per Revenue Mile	Operating Cost per Passenger
		Miles	Hours					
Implementation Phase 1	South County US 41 - Route 31	268,195	19,700	\$1,285,410	135,360	6.9	0.50	\$9.50
	US 301	161,475	11,860	\$1,530,755	54,260	3.4	0.25	\$28.21
	South County Flex	44,685	2,350	\$146,030	40,160	17.1	0.90	\$3.64
	Total	474,355	33,910	\$2,962,195	229,780	6.8	0.48	\$16.19

*Rounded to nearest five.

	Route Name	Annual Revenue*		Total Annual Operating Cost*	Annual Ridership*	Passenger per Revenue Hour	Passenger per Revenue Mile	Operating Cost per Passenger
		Miles	Hours					
Implementation Phase 2	South County US 41 - Route 31	268,195	19,700	\$1,285,410	115,085	5.8	0.43	\$11.17
	US 301	161,475	11,860	\$1,530,755	43,350	3.7	0.23	\$35.11
	South County Flex	44,685	2,350	\$146,030	36,395	15.5	0.81	\$4.01
	I-75 Gibsonton Park-N-Ride	51,165	3,760	\$428,400	45,180	63.8	4.69	\$9.48
	Total	525,520	37,670	\$3,390,595	240,010	6.4	0.46	\$14.13

*Rounded to nearest five.

	Route Name	Annual Revenue*		Total Annual Operating Cost*	Annual Ridership*	Passenger per Revenue Hour	Passenger per Revenue Mile	Operating Cost per Passenger
		Miles	Hours					
Implementation Phase 3	South County US 41 - Route 31	268,195	19,700	\$1,285,410	89,210	4.5	0.33	\$14.35
	US 301	161,475	11,860	\$1,530,755	33,985	2.9	0.21	\$44.88
	South County Flex	44,685	2,350	\$146,030	28,865	0.2	0.64	\$5.10
	I-75 Downtown Express	114,650	4,245	\$1,071,000	57,730	13.5	0.50	\$18.63
	South Loop	202,000	14,835	\$805,615	83,900	5.7	0.42	\$9.57
	Total	791,005	52,990	\$4,838,810	293,690	1.5	0.37	\$19.77

*Rounded to nearest five.

	Route Name	Annual Revenue*		Total Annual Operating Cost*	Annual Ridership*	Passenger per Revenue Hour	Passenger per Revenue Mile	Operating Cost per Passenger
		Miles	Hours					
Implementation Phase 4	South County US 41 - Route 31	268,195	19,700	\$1,285,410	78,590	4.0	0.29	\$16.36
	US 301	161,475	11,860	\$1,530,755	29,930	2.5	0.46	\$20.54
	South County Flex	44,685	2,350	\$146,030	25,100	0.2	0.56	\$5.82
	I-75 Downtown Express	114,650	4,243	\$1,071,000	50,200	11.8	0.44	\$21.33
	South Loop	202,000	14,835	\$805,615	74,535	5.0	0.37	\$10.81
	North Loop	119,290	8,465	\$448,845	40,550	4.6	0.34	\$12.06
	Total	910,295	61,453	\$5,287,655	298,905	1.5	0.33	\$22.87

*Rounded to nearest five.

	Route Name	Annual Revenue*		Total Annual Operating Cost*	Annual Ridership*	Passenger per Revenue Hour	Passenger per Revenue Mile	Operating Cost per Passenger
		Miles	Hours					
Implementation Phase 5	South County US 41 - Route 31	268,195	19,700	\$1,285,410	79,845	4.1	0.30	\$16.10
	US 301	161,475	11,860	\$1,530,755	29,930	2.5	0.19	\$51.15
	South County Flex	44,685	2,350	\$146,030	25,100	10.7	0.56	\$5.82
	I-75 Downtown Express	114,648	4,243	\$1,071,000	50,200	11.8	0.44	\$21.33
	South Loop	201,998	14,836	\$805,614	74,535	5.0	0.37	\$10.81
	North Loop	119,290	8,465	\$448,845	40,550	4.6	0.34	\$12.06
	HSF - FishHawk - Route 24 LX	83,560	6,140	\$2,570,400	148,090	24.1	1.77	\$17.36
	HSF - Bloomingdale - Route 8	125,970	4,565	\$1,807,315	80,320	17.6	0.64	\$22.50
	Total	1,119,821	72,159	9,665,369	528,570	7.3	0.47	\$20.25

*Rounded to nearest five.