

System Redesign Work Plan

The System Redesign Work Plan is a step by step approach to examining the entire PSTA System in light of the **Community Bus Plan recommendations and current fiscal constraints**. Staff will review each route in the system through a four-step process:

- Route Performance Evaluation
- Route Redesign Concept Development
- Public and Board Engagement
- Recommended Action and Implementation

2015

Group 1 – Lowest Performing Route Adjustments

- Elimination of Routes 58, 444, ELC
- Realignment of Route 18 to replace Route 58 service to SPC
- Realignment of Routes 1/30

2016

Group 2 – Relocation of St. Petersburg Transfer Activity from Williams Park

- Coordinated with City of St. Petersburg
- Review of Downtown Circulation patterns: Route 32 and Looper
- Affects portion of 21 routes
- Split Route 19

Group 3 – Countryside/Safety Harbor/Oldsmar

- Streamline Route 62 to directly serve Countryside Mall via Belcher Road
- Realignment of Routes 67, 76, or the Oldsmar Connector Route to serve Safety Harbor
- Review ongoing funding alternatives for Jolley Trolley Safety Harbor Route
- Review Oldsmar service to reduce duplication between Route 67 and the Oldsmar Connector

Group 4 – Gateway Area

- Realignment of Routes 4/59, including alternative service on 16th Street
- Realignment of Routes 74 to serve MLK and Beach

Group 5 – St. Petersburg/Pinellas Park/Largo

- Streamline Route 79
- Streamline Route 75 and Route 5
- Realignment of Route 7 to serve Gulfport
- Truncate Route 38 at Northeast Shopping Center
- Evaluate Route 68 for possible combination with Route 38 for service to Madeira Beach

2017

Group 6 – Clearwater/Palm Harbor/Dunedin

- Combination of Routes 66/Jolley Trolley North Coastal Route and realignment of services in Downtown Dunedin area
- Procurement of Trolley Operations
- Realignment of Dunedin/Palm Harbor Connector Route and Route 61 to reduce duplication north of Main St.
- Realign Route 61, including alternative service from Park Street Terminal to Seminole Mall

Group 7 – Gulfport/Pinellas Point/South St. Petersburg

- Consolidate Routes 90/20 and realign
- Evaluate service to Gulfport and South St. Pete and realignment of Routes 7, 14, 15, 23, 79
- Reduce duplication of service in Pinellas Point area through realignment of Routes 4, 11, and 19

Group 8 – Regional Express

- Realignment of Route 100X over Howard Frankland Bridge to TIA
- New Route 60X from Clearwater Beach to TIA to Downtown Tampa
- Realignment of Route 300X to serve TIA/Westshore

Group 9 – Bus Rapid Transit and Beach Trolley Services

- New Central Avenue BRT Route
- Truncate Route 18 and Route 52 at Central Avenue
- Evaluation of Central Avenue Trolley Route as underlying local for BRT Route
- Clearwater Beach/Clearwater-Marine-Aquarium Jolley Trolley Route currently unchanged
- Consider extension of Suncoast Beach Trolley Route south to Pass-A-Grille

Group 10 – Route 52 and Carillon

- Streamline Route 52 and evaluate consolidation with Routes 97 and 98
- Evaluate service to Carillon via Routes 11, 97, and 98

System Redesign 2015-2017

Phase 1 Analysis

Prepared by Pinellas Suncoast Transit Authority

7/14/2015

Table of Contents

BACKGROUND.....	1
PSTA Today.....	1
2013 Community Bus Plan	2
SYSTEM REDESIGN	4
Approach.....	4
PROPOSED SERVICE MODIFICATIONS – PHASE I	8
ROUTE ANALYSIS.....	8
Routes 1 & 30.....	9
Route 58.....	14
Route 444.....	18
East Lake Connector (Route 811).....	21

Appendix A - Phase I Demographic and Bus Stop Ridership Maps

Appendix B -Phase I 2015 On-Board Survey Report

Appendix C - Phase I Public Outreach

List of Figures

Figure 1: System Performance Evaluation	6
Figure 3: Route 1 (Recommended Discontinuation)	9
Figure 2: Route 30 (Recommended Discontinuation)	9
Figure 4: Route 22 (Recommended Redesign)	9
Figure 5: Route 1 Alternatives	12
Figure 6: Route 30 Alternatives	13
Figure 7: Route 58 (Recommended Discontinuation)	14
Figure 8: Route 18 (Recommended Redesign to serve SPC Seminole Campus).....	14
Figure 9: Route 58 Alternatives	17
Figure 10: Route 444.....	18
Figure 11: Route 444 Alternatives	21
Figure 12: East Lake Connector (Recommended Discontinuation)	22
Figure 13: East Lake Connector Alternatives	25

List of Tables

Table 1: Demographic Analysis	10
Table 2: Demographic Analysis for Route 58	15
Table 3: Demographic Analysis for Route 444	19
Table 4: Demographic Analysis for the East Lake Connector	23

BACKGROUND

PSTA Today

PSTA provides multi-faceted transportation service throughout Pinellas County as well as regional service to Tampa and Hillsborough County. The PSTA system consists of the following transit services:

- 43 bus routes including 33 Local routes, 2 directly-operated Trolley routes, 3 contracted Trolley routes, 3 North County Connector routes, and 2 Regional Express routes serving approximately 5,100 stops across a 243 square mile service area.
- Contracted DART paratransit service.

PSTA utilizes 204 fixed-route vehicles (171 peak vehicles) and operates about 612,000 annual revenue vehicle hours, supporting approximately 14.5 million annual passenger boardings.

2013 Community Bus Plan

Overview

In August 2012, PSTA commissioned the *2013 Community Bus Plan (Bus Plan)* to identify the public transportation needs of Pinellas County. The *Bus Plan* included the following objectives:

- Evaluate PSTA's current bus transit system;
- Complete a detailed market, ridership, and operational review;
- Solicit feedback from elected officials, community stakeholders, the general public, PSTA bus riders, and PSTA Board and staff;
- Develop a scalable plan that can be implemented based on available resources in a financially sustainable manner; and
- Provide the basis for the bus element of the larger long range transit plan.

The *Bus Plan* team engaged the PSTA board as well as a wide variety of stakeholders to develop three goals for PSTA:

- **Build Transit Constituency** – Broaden PSTA's market penetration to attract more choice riders, increase the use of transit for more trip purposes, and support overall community mobility.
- **Improve Transit Competitiveness** – Create a transit network that is competitive with personal vehicle travel for the trip purpose needs of Pinellas County residents and visitors.

- **Build Financial Sustainability** – Use resources effectively and increase ridership by building efficiency into an integrated transit network, focusing resources where transit is most competitive and can create the greatest return, and maintaining performance and productivity standards.

As a result, the *Bus Plan* was developed to be dynamic and scalable with three primary scenarios:

- **Optimal** – A network designed to provide highly-performing and cost-effective transit service in an unconstrained financial scenario.
- **New Revenue** – A network designed to carry forward the design and service levels of the Optimal Scenario within the financial constraints of a potential countywide one-percent sales tax as the local funding source for transit.
- **No New Revenue** – A pair of network design alternatives that explore how to best create a streamlined transit system with the stricter financial constraints of PSTA's existing property tax-based local revenue stream.
 - *Core Preservation Alternative* – A network featuring reduced coverage with stronger investment in a core network of PSTA's highest-performing routes serving the greatest number of passengers.
 - *Coverage Preservation Alternative* – A network that distributes service investment more evenly across the service area with reduced focus on the core network.

Approach and Methodology

The *2013 Community Bus Plan* is the result of collaboration between PSTA and the community. The combination of the collaborative creation of goals and guiding principles, data-driven market assessment, service evaluation, and extensive public outreach drove the development of a comprehensive plan including network and route design recommendations, and a corresponding financial plan.

Data Driven Plan

To assess and evaluate current market conditions and PSTA's existing services, a wide variety of data was collected about the Tampa Bay Region, Pinellas County, and the PSTA system. Data and reports reviewed included the 2010 census, population and employment projections from the Pinellas County Metropolitan Planning Organization (MPO), travel demand data from the Florida Department of Transportation (FDOT), system-wide ridership counts, 2012 on-board survey results, and previous studies provided by PSTA.

Service

The service evaluation provided comprehensive analysis of the PSTA network in order to identify opportunities to efficiently serve travel to, from, and within Pinellas County increase

ridership, while maximizing revenue for PSTA and preparing for opportunities to expand service. As with any system of its size, PSTA has a number of routes that perform very well and a number that perform less well. By increasing investment in its best-performing routes while examining alternative means of providing mobility along its poorer performing routes, PSTA can move into the future with continued increases in ridership and increased operational efficiencies while remaining a responsible steward of taxpayer resources.

Key service analysis findings include:

The majority of system ridership continues to be generated by PSTA's local routes, carrying 86 percent of weekday ridership. Trolley services are responsible for 13 percent of weekday ridership while express services make up only one percent.

- PSTA's "core network" of just seven routes (Routes 4, 18, 19, 52, 60, and the Central Avenue and Suncoast Beach Trolleys) is responsible for 71 percent of the system's ridership.
- 48 percent of PSTA trips start in St. Petersburg, while 19 percent of trips start in Clearwater.
- Midday ridership is nearly equal to the total ridership for the morning and evening peak periods, suggesting demand for all-day service. It is likely that increased midday frequencies along higher-performing routes would increase ridership.
- Average trip length is over five miles on weekdays, indicating potential appeal for limited-stop service along major corridors. Increased frequencies will lead to more short distance transit travel with higher cost effective seat turnover.
- A wide variety of fare types are received regularly, with cash fares and 31-day passes being the most frequent methods of payment. The high proportion of cash fares may indicate a greater market for daily passes given their smaller relative share.
- Transfer activity is very well-distributed thanks to the large geographical size of the service area. Grand Central Station and Park Street Terminal lead the system in passenger boarding activity.
- Very few routes operate with frequencies conducive to spontaneous use. Increasing frequencies along strong transit corridors is a reliable way to increase ridership and customer satisfaction.

Outreach

Public outreach played a key role in the development and review of the *2013 2013 Community Bus Plan*. The outreach efforts were successful in revealing opinions on the current state of transit service in Pinellas County as well as collecting a number of suggestions for improvement from people familiar with the system and its impact on the community. Overall, PSTA participated in 65 meetings and events and reached more than 3,300 residents, students, and business and community leaders. PSTA continued to solicit comments on bus improvements after the Spring 2013 as part of the comprehensive *Greenlight Pinellas Plan* development, of which the bus plan was a component.

Specific highlights include the following:

- New partnerships and services with specific market and geographic focuses like the Jolley Trolley and North County Connector have been successful, and there is a desire to see tailored services like these expanded upon, particularly in North County.
- PSTA is seen as providing quality amenities; however, stakeholders would like to see more signage and bus shelters to enhance the customer experience.
- More “premium transit” featuring fast, direct service is desired.
- Frequency and span of service are the most desired improvements for PSTA transit service, followed by speed.
- Bundling frequency and speed improvements alongside improvements to infrastructure and passenger amenities as part of a premium BRT or rapid transit service is strongly supported by the community.

SYSTEM REDESIGN

Approach

PSTA is moving forward with implementation of the 2013 Community Bus Plan and will use the “No New Revenue” scenario recommendations as the framework for redesigning the PSTA system.

The System Redesign Work Plan will guide implementation of the 2013 Community Bus Plan in the context of current fiscal constraints. The work plan will occur in 10 phases, as shown below, organized based on a comprehensive performance evaluation analysis conducted in early 2015 and grouped by geography/interconnected routes.

System Redesign Work Plan

2015

Group 1 – Lowest Performing Route Adjustments

2016

Group 2 – Relocation of St. Petersburg Transfer Activity from Williams Park

Group 3 – Countryside/Safety Harbor/Oldsmar

Group 4 – Gateway Area

Group 5 – St. Petersburg/Pinellas Park/Largo

2017

Group 6 – Clearwater/Palm Harbor/Dunedin

Group 7 – Gulfport/Pinellas Point/South St. Petersburg

Group 8 – Regional Express

Group 9 – Bus Rapid Transit and Beach Trolley Services

Group 10 – Route 52 and Carillon

System Redesign Process

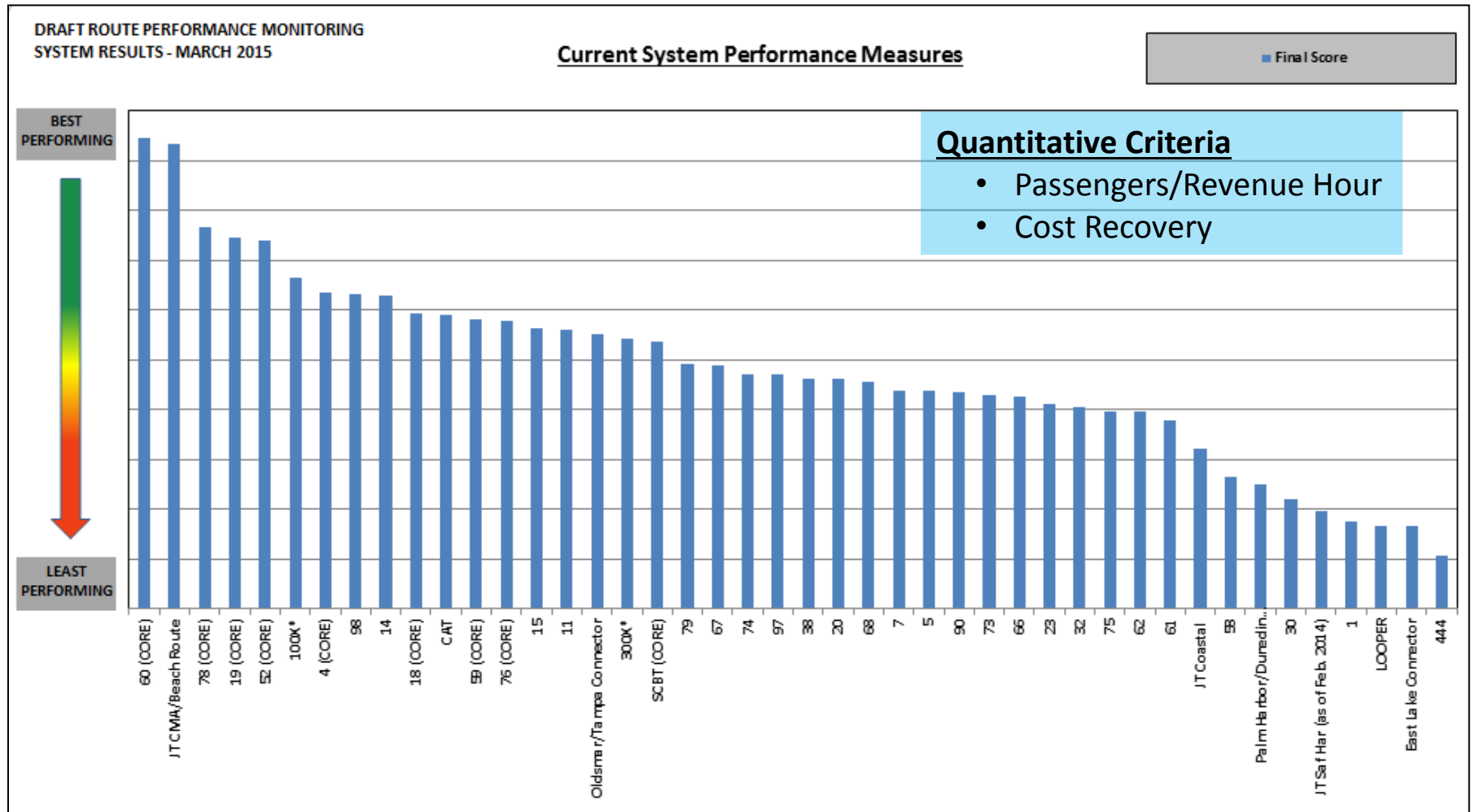
For each group/phase of the system redesign, PSTA will follow the following six step process:

1. Utilize the 2015 Route Performance Evaluation to identify performance of routes included in the phase.
2. Consult the 2013 Community Bus Plan recommendations.
3. Conduct a targeted technical analysis involving review of current demographic and ridership data and rider surveys.
4. Review financial implications of any proposed route modifications.
5. Identify transportation alternatives for any riders affected by route modifications.
6. Engage the public and present final recommendations for PSTA board action.

System Performance Evaluation

Step 1 of the system redesign process is to review the results of the System Performance Evaluation process. This process was designed by PSTA to evaluate individual route performance relative to its service category and the overall system. Routes are scored based on productivity (passengers/revenue hour) and cost recovery (revenue/cost) and ranked from best performing to least performing as shown in Figure 1.

Figure 1: System Performance Evaluation



Targeted Analysis

Step 3 of the system redesign process is to conduct a targeted analysis of the routes in each group/phase. This targeted analysis uses current data including demographics, ridership, major trip attractors, transfer data, on-time performance, rider surveys, and public comments. New data will be collected during each phase as needed.

Transportation Alternatives

In Step 4 of the system redesign process, PSTA will identify and communicate to the riding public other routes or services that could be used instead of a discontinued route or segment. In areas where routes are realigned, PSTA will communicate to the riding public how to use the modified service to continue to make their trips.

Public Engagement

For each phase of the system redesign, PSTA will engage the public through a three part public outreach process (Step 6). During the planning phase, PSTA will engage major stakeholders, local government staff, and riders to obtain information on usage and desired improvements. Comments received will inform the route redesign recommendations. Once recommendations have been developed, PSTA will engage the public through a public workshop phase, including at least one public workshop, and/or at least one public hearing as required by PSTA policy for major service changes. In the implementation phase, PSTA will inform riders and the public of upcoming service modifications through numerous channels including but not limited to ambassadors on buses; notifications signs at stops, transfer areas, and key locations along routes; notices in buses; and traditional and social media.

Recommendations

For each phase, a set of recommendations will be developed based on the system redesign process. PSTA will follow its public engagement plan to communicate with the public on the recommendations and final service modifications.

PROPOSED SERVICE MODIFICATIONS – PHASE I

Route	Proposed Service Change
1 & 30	Discontinue 30 and Redesign 1 (New Route 22)
58 & 18	Discontinue 58 and Redesign Segment of 18 to Serve SPC
444	Discontinue
East Lake Connector (811)	Discontinue

PHASE I ROUTE ANALYSIS

Phase I of the system redesign includes discontinuation of low performing Routes 30, 58, 444 and the East Lake Connector (811), redesign of low performing Route 1, and redesign of Route 18 to serve St. Petersburg College following the discontinuation of Route 58. The following analysis was conducted to inform development of these recommendations and to identify transportation alternatives for riders who will lose service from the discontinued routes.

Routes 1 & 30

As shown in Figure 2, Route 1 runs Monday through Saturday from approximately 7:15 am to 6:30 pm. As shown in Figure 3, Route 30 runs Monday through Saturday from approximately 6:30 am to 7:00 pm. During midday, Route 1 provides 90 minute service between Tyrone Square Mall and Gateway Mall via 22nd Ave N and 1st St N. It serves 1 major mall and 3 large shopping centers adjacent to primarily single-family residences. Route 30 provides 60 minute service between Tyrone Square Mall and Northeast Shopping Center via 30th Ave N/4th St N. Route 30 serves 1 major mall and 2 large shopping centers adjacent to primarily single-family residences along the 30th Avenue Corridor.

During morning and afternoon peak hours, Routes 1 & 30 are interlined, with Route 1 providing 60 minute service between Tyrone Square Mall and Northeast Shopping Center via 22nd Ave N and then converting to Route 30 for 60 minute service between Northeast Shopping Center and Tyrone Square Mall via 30th Ave N. During the morning and afternoon peak hours, there is no service to Gateway Mall via Route 1.

**Figure 2: Route 1
(Recommended for Redesign)**

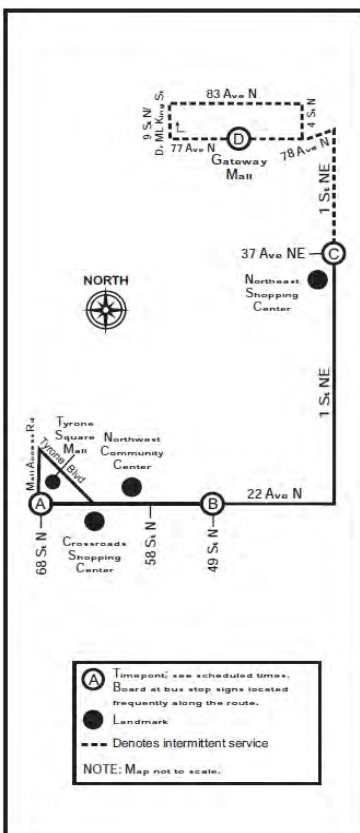


Figure 3: Route 30 (Recommend to Discontinue)

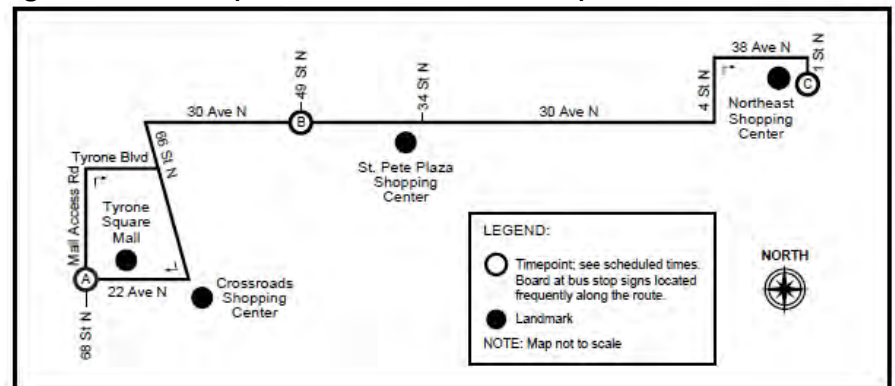
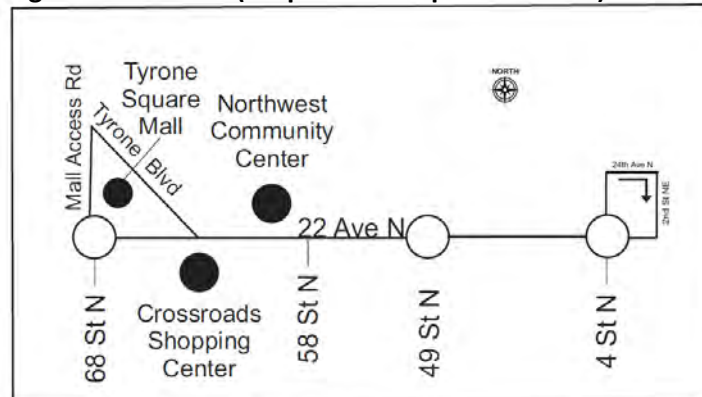


Figure 2: Route 22 (Proposed to Replace Route 1)



System Performance Evaluation

Routes 1 and 30 are the 4th and 6th lowest performing routes in PSTA's system.

2013 Community Bus Plan

The Bus Plan recommended that Route 30 be discontinued and Route 1 realigned to remove service on 1st St N north of 22nd Ave.

Targeted Analysis

Table 1 includes a comparison of demographic data associated with people who are more likely to be transit dependent that live within ¾ mile of a route, the entire PSTA network, and Pinellas County. Maps included in Appendix A show locations along the route that have larger populations of people and households that meet the criteria included in Table 1. Routes 1 and 30 have minority populations below the county average; however, larger concentrations of minority populations occur between 37th St N and 16th Street N, as shown in the maps included in Appendix A. The routes have a lower than average population of people over age 65, with a couple of areas of higher concentrations along 1st St N. Similarly, the routes have a slightly lower than average number of households within ¾ miles with zero vehicles. The largest concentration of households without a vehicle is between I-275 and 9th St N. Poverty levels are below average along the Route 1 and slightly above average for the Route 30. The largest concentrations of people with incomes below poverty are between 34th St N and 9th St N.

Table 1: Demographic Analysis For Routes 1 and 30

Geographic Area	% Pop Age 65 and Older	% Pop Below Poverty	% HH with Zero Vehicle Access	% Minority Population
Pinellas County	21.70%	12.94%	8.76%	23.58%
3/4 Mile PSTA System	21.71%	13.02%	8.83%	23.73%
3/4 Mile Route 1	15.99%	12.44%	8.76%	21.45%
3/4 Mile Route 30	16.10%	13.53%	7.92%	22.50%

Source: US Census Bureau 5-year 2013 American Community Survey

An on-board survey of riders on Routes 1 and 30 was conducted in June 2015. The report is included in Appendix B. Data from this survey, as well as the on-board survey conducted in 2012, was reviewed to identify origins and destinations, travel patterns, transfer activity, and preferred route modifications. Bus stop ridership data was also reviewed to identify specific locations with high usage. Key findings from this analysis include:

- Riders are using Routes 1 and 30 primarily for work and shopping trips. Top destinations include Tyrone Mall, Gateway Mall, and Publix.
- More than 75% of riders are using the routes to transfer to other routes to get to their final destination.
- The top preferred modifications were expanded service hours and frequency improvements.
- Over 75% of riders said they would still make their trip if Routes 1 and 30 weren't available, by another route, walking, biking, riding with someone, or taxi.
- Bus stops on 1st St N each have between 0-1 average daily boardings. With the proximity to better service on Route 4 on 4th St N, it is already likely residents are walking to that route.
- The majority of bus stops serving the neighborhoods along 22nd Ave N and 30th Ave N. have between 0 and 2 average daily boardings and alightings. A few stops at major intersections along 22nd Ave N have between 3 and 8 average daily boardings and alightings. These locations are where the Route 1 intersects with North-South routes including Routes 52, 19, 11, 74, 59, and 4. Ridership at bus stops serving these North-South routes is also much higher, indicating that people living in the neighborhoods served by Routes 1 and 30 are either walking or transferring to routes with greater frequency and longer hours of service.

Public Engagement

PSTA staff met with City of St. Petersburg staff in June to discuss proposed modifications to Routes 1 and 30. City staff indicated that if a reduction were to occur, it would be better to maintain service on 22nd Ave N than on 30th Ave N due to higher travel speeds and a greater mix of land uses on 22nd Ave N. City staff requested that communication with the neighborhood associations along the corridor be initiated by the City. Following final recommendations, various destinations along the corridor will be contacted and information will be disseminated to riders and the larger community.

Recommendation and Financial Implication

Discontinue Route 30 and Redesign Route 1. Utilize revenue hours from Route 1 to implement improved service on 22nd Ave N running every 45-50 minutes between Tyrone Square Mall and 4th St N. via 22nd Ave N from 7:15 am to 6:45 pm (New Route 22), as shown in Figure 4. Route 22 would also continue to provide connections for transfers to high frequency north-south routes that run along intersecting roadways and at Tyrone Square Mall. Access to demand response DART service will not be affected. Implementation of the recommendations will save approximately \$500,000 in bus capital (1 bus) and \$120,000 in net annual operating costs.

Transportation Alternatives

All bus stops along Route 30 are within 3/4 mile of better service, with most being within 1/2 mile or less as indicated in Figures 5. Core/frequent routes include Routes 4, 19, 52, and 75. These routes operate seven days a week and feature longer service hours and headways of 15-30 minutes on weekdays. Supporting local routes within walking distance include Routes 11, parallel Route 38, 59, and the new Route 22. As shown in Figure 6, all bus stops on Route 1 that are along 1st St N are approximately 1/4 miles from the Route 4, which operates 7 days/week with 15-20 minute service on weekdays from approximately 6 am to 11 pm.

By retaining service on 22nd Ave N, the areas with higher concentrations of low-income and minority populations as well as households without vehicles will continue to receive east-west service. Riders of Route 1 along 1st St N have access to much better service on Route 4 a few blocks away.

As indicated by the on-board survey, other viable transportation alternatives include walking, biking, driving, taxi, and carpooling. Use of a golf cart for shorter distance trips is also an option for some communities along 1st St N where residents already use them.

Figure 3: Route 30 Alternatives

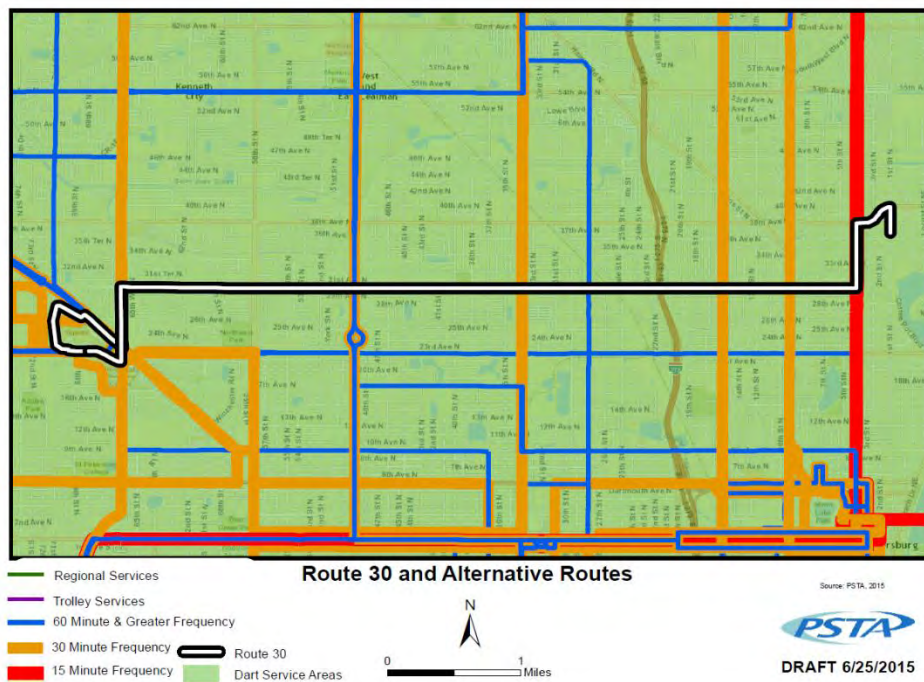
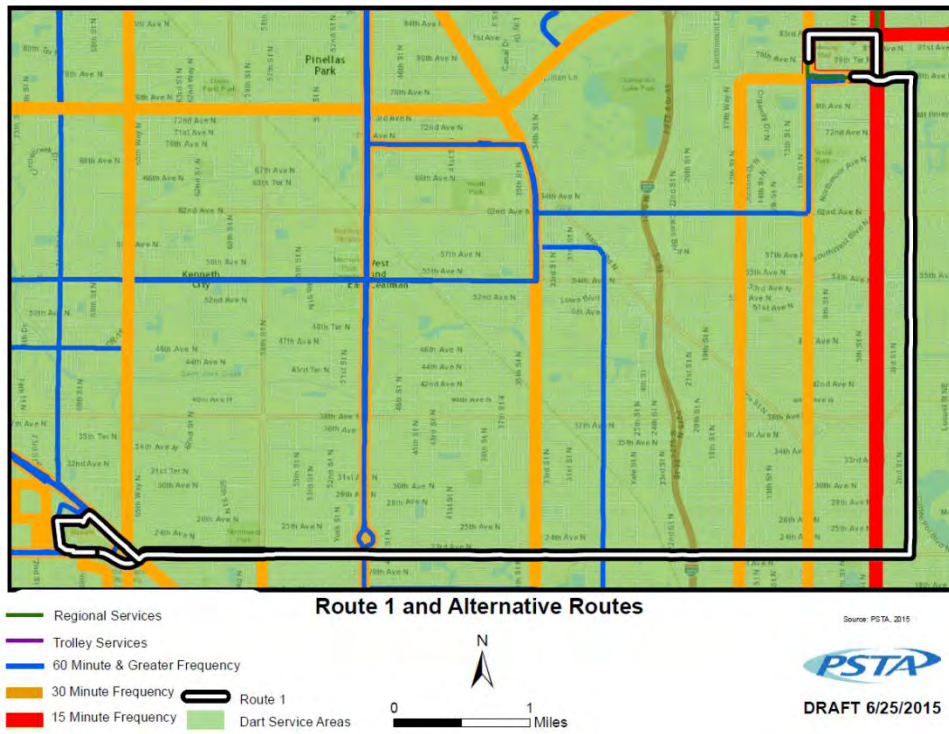


Figure 4: Route 1 Alternatives



Route 58

Route 58, shown in Figure 7, runs Monday through Friday from 5:35 am to 7:00 pm. In the morning and afternoon peak hours there is approximately 60 minute service. Between 9:35 am and 12:40 pm there is no service. Route 58 travels between Seminole and Gateway Malls, and also serves St. Petersburg College, and an employment center on Carillon Parkway between Roosevelt Blvd and Ulmerton Rd.

Figure 5: Route 58 (Recommend to Discontinue)

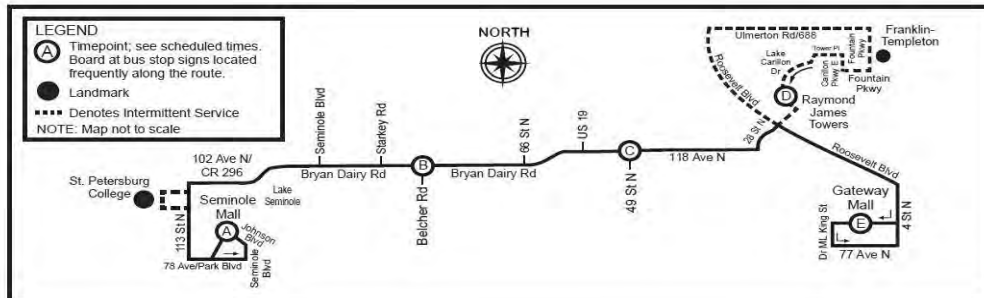
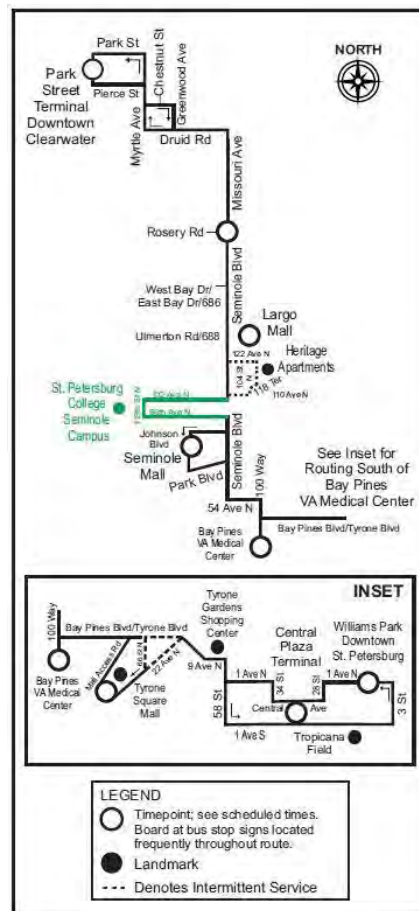


Figure 6: Proposed Route 18 (Recommended for Redesign to serve SPC Seminole Campus)



System Performance Evaluation

Route 58 is the 8th lowest performing route with the PSTA system.

2013 Community Bus Plan

Recommend Route 58 be discontinued for all scenarios.

Targeted Analysis

Table 2 includes a comparison of demographic data associated with people who are more likely to be transit dependent that live within ¾ mile of a route, the entire PSTA network, and Pinellas County. Maps included in Appendix A show locations along the route that have concentrations of people and households that meet this criteria. The minority population within ¾ mile of Route 58 is less than the county average. The largest concentrations of minority population are near Starkey Rd and Gateway Mall. The route has lower than average populations of people over age 65, however a few concentrations exist near Seminole Mall, between 113th St N and Seminole Blvd. Similarly, within ¾ mile of Route 58, there are fewer than average households without a vehicle. The largest concentrations of households without vehicles are also near Seminole Mall. Poverty levels along the route are below the average for the county. The concentrations of poverty along the route are near Gateway Mall.

Table 2: Demographic Analysis for Route 58

Geographic Areas	% Pop Age 65 and Older	% Pop Below Poverty	% HH with Zero Vehicle Access	% Minority Population
Pinellas County	21.70%	12.94%	8.76%	23.58%
3/4 Mile PSTA System	21.71%	13.02%	8.83%	23.73%
3/4 Mile Route 58	19.31%	10.70%	7.33%	18.62%

Source: US Census Bureau 5-year 2013 American Community Survey

An on-board survey of riders on Route 58 was conducted in June 2015. The results are included in Appendix A. Data from this survey, as well as the on-board survey conducted in 2012, was reviewed to identify origins and destinations, travel patterns, transfer activity and preferred route modifications. Bus stop ridership data was also reviewed to identify specific locations with high usage. Key findings from this analysis include:

- Riders are using Route 58 primarily for trips to work and shopping. The top destinations are Seminole Mall and St. Petersburg College, which can be accessed via the modified Route 18.
- Over 65% of riders are using the route to transfer to other routes to reach their final destination.
- The top preferred modifications were expanded service hours and frequency improvements.
- Over 60% of riders said they would still make their trip by bus, biking, walking, taxi, riding with someone or driving, if Route 58 was not available.
- The highest ridership is at transfer points for Routes 19 and 79. Most other stops on Bryan Dairy Rd have between 0 and 3 total boardings and alightings on an average weekday. The few bus stops with higher ridership are within $\frac{3}{4}$ mile of stops for North-South bound routes such as, core/frequent Routes 4, 18, 19, 52, 59, 79, and 98 and local Routes 11, 62, 73, and 97. These alternate routes offer more frequent and expanded weekday and weekend service hours. Therefore service will still be provided to passengers accessing certain stops along Bryan Dairy Rd.
- Average daily ridership at bus stops on the current Route 18 along Seminole Boulevard between 86th Ave N and 102nd Ave N is 7. These bus stops are within $\frac{1}{2}$ mile of a stop served that would continue to be served by the realigned Route 18.

Public Engagement

PSTA staff met with local government staffs from the cities of Seminole and Pinellas Park in June and July 2015 to discuss proposed changes to the Route 58 service area. PSTA contacted retail businesses, the St. Pete college provost, apartment complexes and employers along the route. Businesses and city staff agreed that the bus service along the Route is underutilized but also indicated interest in more details to ensure that service is still available in specific locations. Both City staff and the St. Petersburg College Seminole Provost were satisfied with the proposed modification of Route 18 to serve the Seminole campus especially since it runs more frequently and has longer hours of service than the Route 58. Think Direct Marketing management was concerned about the effect on its employees that use the route.

Recommendations and Financial Implication

Consistent with the Bus Plan, the current recommendation is to discontinue Route 58. In addition, it is recommended that one short segment of Route 18 be redesigned to serve St. Petersburg College Seminole Campus. Access to demand response DART service will not be affected. Implementation of the recommendations will save approximately \$500,000 in bus capitol and \$242,000 in net annual operating costs.

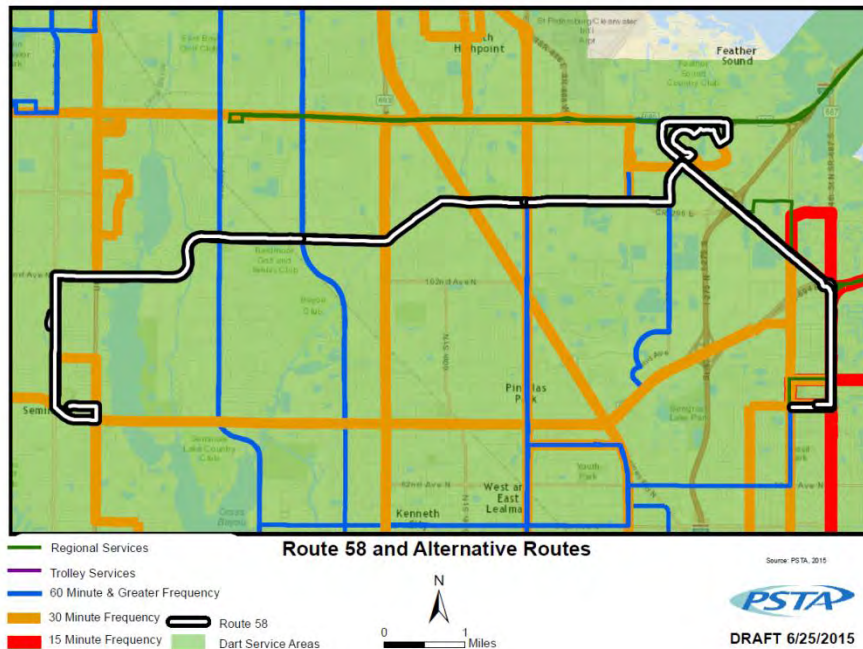
Transportation Alternatives

All stops for Route 58 are within ¾ mile of better service from seven other core or frequent routes and four local routes, as indicated in Figure 9. Core/frequent routes include the 4, 18, 19, 52, 59, 79 and 74. These routes operate seven days a week and feature longer service hours and headways of 15-35 minutes on weekdays. Supporting local routes within walking distance include Routes 11, 62, and 73. These local routes offer better hours of operation and frequencies than the Route 58.

Transit dependent populations near Seminole Mall have access to significantly better service via other routes including core/frequent Routes 18 and 74. Minority and low income populations in the middle of Route 58 have access to better service on Route 73, which can be used to make transfers to high frequency east-west routes on Ulmerton Rd and Park Blvd. Those traveling between 34th St and the Gateway Mall can utilize Route 59 which has the same alignment in that section.

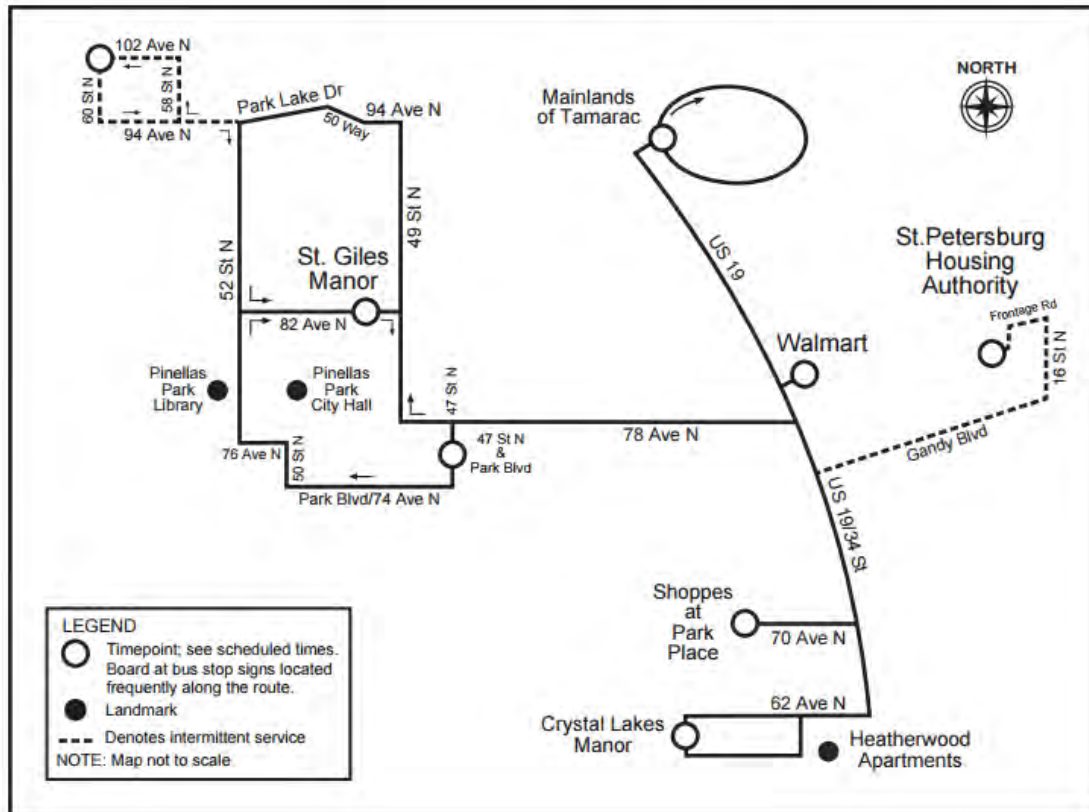
Other viable transportation, as indicated by the on-board survey includes biking, walking, taxi, carpooling, and driving. Transportation services provided through local non-profit organizations could be utilized to serve some trips, including shopping and medical.

Figure 7: Route 58 Alternatives



Route 444

Figure 8: Route 444 (Recommend to Discontinue)



Route 444, also called the Pinellas Park Shuttle, offers service Monday – Friday from 8:45 am to 5:55pm. Route 444 provides circulator service within Pinellas Park, primarily along the US 19 and 78th Avenue North Corridors, connecting riders to multiple municipal services, a Walmart Super Center, Shoppes at Park Place, and several large residential developments. Figure 10 shows Route 444.

The route makes 5 trips a day with service every 115 minutes, and intermittent service to the St. Pete Housing Authority and to 60th St & 102nd Ave. The route makes multiple backtracking loops, stopping at Walmart twice and the Shoppes at Park Place three times before completing one full route cycle. Compared to other routes, route 444 runs very infrequently and has limited hours of service.

System Performance Evaluation

Route 444 is the lowest performing route in PSTA's system.

2013 Community Bus Plan Recommendations

The Bus Plan recommends that PSTA discontinue Route 444 and replace it with an undefined new circulator to serve the general area.

Targeted Analysis

Table 3 includes a comparison of demographic data associated with people who are more likely to be transit dependent that live within ¾ mile of a route, the entire PSTA network, and Pinellas County. Maps included in Appendix A show locations along the route that have concentrations of people and households that meet this criteria. Route 444 has a population of people age 65 and older that is below the county and PSTA system averages, however, some concentrations exist along the route in 55+ communities and assisted living facilities. Poverty levels are above average along Route 444, with high concentrations along US 19 near Park Blvd N and to the south of 62nd Ave N. Route 444 also serves a higher percentage of households with zero vehicle access compared with the rest of the system and county, with high concentrations south of 62nd Ave N, similar to one of the areas of high poverty concentration. Minority populations are also higher along Route 444, with higher percentages near Park Blvd N between US 19 and 49th Street N as well as 102 Ave N and Park Lake Drive.

Table 3: Demographic Analysis for Route 444

Geographic Area	% Pop Age 65 and Older	% Pop Below Poverty	% HH with Zero Vehicle Access	% Minority Population
Pinellas County	21.70%	12.94%	8.76%	23.58%
3/4 Mile PSTA System	21.71%	13.02%	8.83%	23.73%
3/4 Mile Route 444	18.92%	15.27%	9.58%	25.38%

Source: US Census Bureau 5-year 2013 American Community Survey

An on-board survey of riders on Route 444 was conducted in June 2015. The results of this survey are included in Appendix B. Data from this and another on-board survey conducted in 2012 was reviewed to identify origins and destinations, travel patterns, transfer activity and preferred route modifications. Bus stop ridership data was also reviewed to identify specific locations with high usage. Key findings from bus stop ridership data and on board survey analysis include:

- Riders are using Route 444 mainly for shopping, with ridership highest at stops serving Crystal Lakes Manor and Walmart.
- Transfer activity is low with few riders connecting to/from other routes.

- The top preferred modifications were to provide more service on weekends (61.5%) followed by expanded service hours and improved frequency (38.5%).
- Riders on this route have other options; 100% of riders saying they would still make their trip if the route wasn't available by either walking, riding with someone, or taking a taxi.
- Stops serving Mainlands of Tamarac, 60th Street and 102 Ave, and along 52nd St N have between 0-2 average daily boardings.

Public Engagement

PSTA staff met with City of Pinellas Park planning staff in June 2015 and Pinellas County staff in July. Planning staff understand the need to cut the route and think that other routes, particularly Route 19, provide good alternatives for most people. Discussions with the bus operators confirmed that Route 19 is a good alternative for many riders. The city staff would like to be kept informed of any approved changes, public hearing schedules, and are interested in possible opportunities for alternative service for the area. In addition, both the City and County staff are interested in working with PSTA to develop and identify funding for a new circulator type service in the Pinellas Park and Lealman area.

One rider along the route contacted PSTA about the discontinuation of Route 444. Although Route 19 is nearby, the rider is concerned about crossing the intersection outside of the Mainlands. Staff has offered to provide assistance to the rider on using the Route 19.

PSTA staff discussed the discontinuation of Route 444 with the St. Petersburg Housing Authority. Although concerned about losing service to the stop adjacent to their building, staff recognized that better service is provided by the Route 74 on Gandy Boulevard, where the stop (serving 45 riders/day versus 0 at the Housing Authority stop) is located at a signalized intersection. To get from that intersection however, riders have to walk along a roadway with no sidewalks to the Housing Authority. The Housing Authority has requested a new Route 74 stop on the north side of Gandy Blvd. Staff is reviewing the request.

Recommendation and Financial Implication

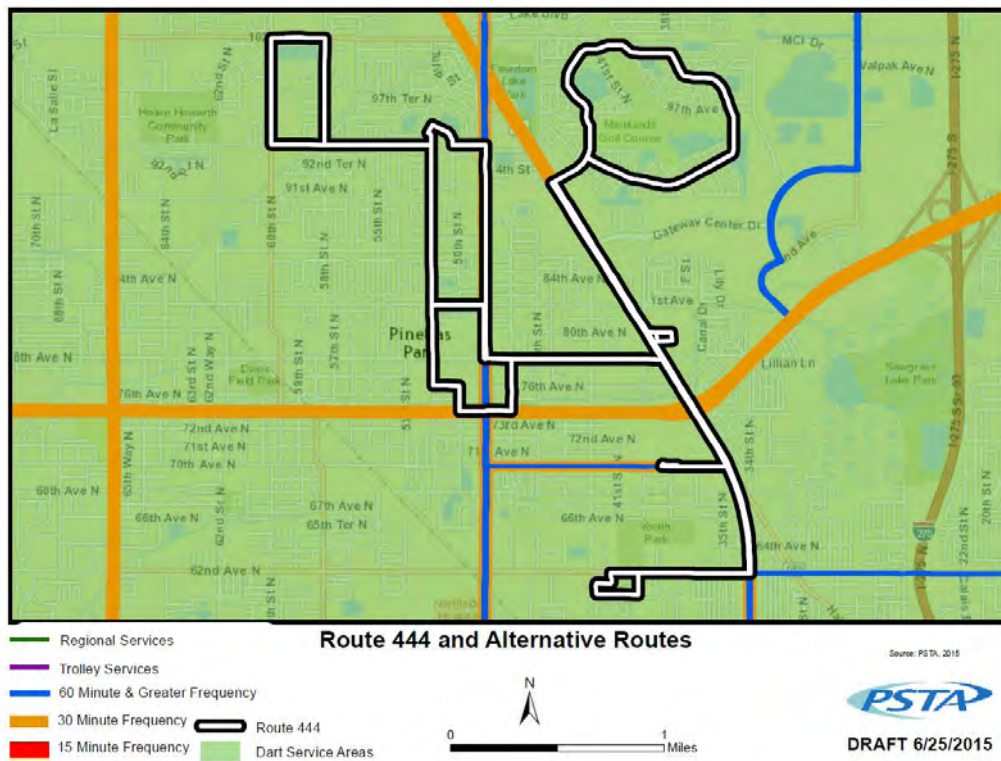
Discontinuation of Route 444 will result in approximately \$491,000 in bus capital savings and \$145,000 in net annual operating costs. PSTA-County-City partnership should be pursued to develop and fund a new service to areas in Pinellas Park/Lealman likely to use transit, including those with concentrations of zero car households, senior facilities and low income neighborhoods, and to connect people to shopping, employment, healthcare, and social services.

Transportation Alternatives

All stops along Route 444 are within 3/4 mile of more frequent service, as shown in Figure 11. Core/ frequent routes include Routes 19, 52, 74 and 79. These routes offer greatly improved frequency, with buses every 20-35 minutes, weekend and holiday service, and longer hours of service. Transit dependent populations along the route are primarily along US 19 and Park Blvd and have access to significantly better service via Routes 19 and 74. Supporting local routes within walking distance include route 75, which provides longer hours of service and a consistent schedule. Many of the stops with higher ridership are also shared with core Route 19. DART ridership will continue to be available for those who qualify.

As indicated by the on-board survey, viable transportation alternatives other than bus include walking, biking, driving, taxi, and carpooling. Transportation service provided by local non-profits could be utilized for certain trips including shopping and medical. Neighborly Care Network, for example, already offers twice monthly group shopping trips to St. Giles residents.

Figure 9: Route 444 Alternatives

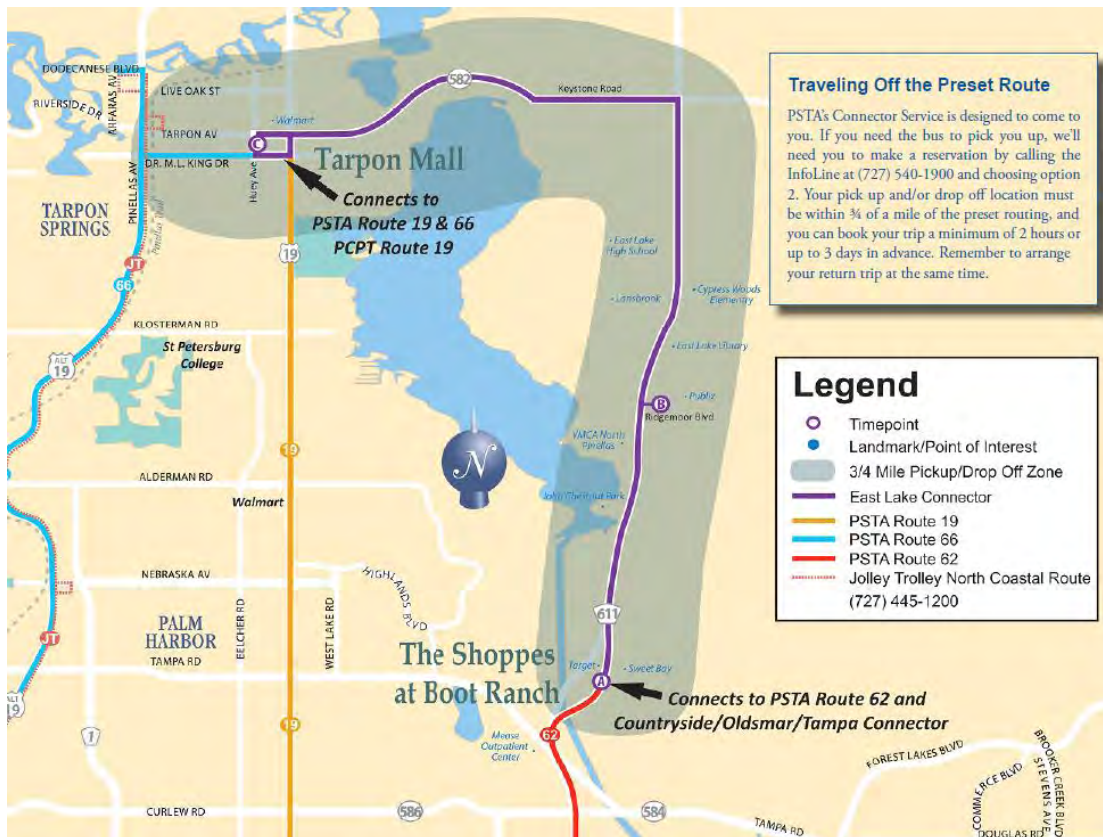


East Lake Connector (Route 811)

As shown in Figure 12, the East Lake Connector runs Monday through Friday from approximately 8:30 am to 6:35 pm with 70 minute service between the Shoppes at Boot Ranch and Tarpon Mall via East Lake Rd and Keystone Rd. It serves three major shopping centers adjacent to multifamily residences. Along the rest of the route, the main land use is single family residential.

The East Lake Connector utilizes smaller buses to provided scheduled deviations within ¼ mile of the preset route.

Figure 10: East Lake Connector (Recommended Discontinuation)



System Performance Evaluation

The East Lake Connector is the second lowest performing route in PSTA's system.

2013 Community Bus Plan Recommendation

The Bus Plan did not include any recommendations for the East Lake Connector, as it had only been operating for a few months at that time.

Targeted Analysis

Table 4 includes a comparison of demographic data associated with people who are more likely to be transit dependent that live within ¼ mile of a route, the entire PSTA network, and Pinellas County. Maps included in Appendix A show locations along the route that have concentrations of people and households that meet this criteria. The East Lake Connector has minority populations below the county average, however there is a concentration of minority populations by the Tarpon Mall between S Pinellas Ave and S Disston Ave. The route has a higher than average population of people over age 65, with concentrations in the area between Disston Ave and US 19, the Ridgemoor Area and East Lake Woodlands. The number of households without a vehicle is well below the county average. In fact, for most of the route, only 0-4% of households do not have a vehicle. Minority populations and poverty levels are also well below average in the ¼ mile area surrounding the East Lake Connector.

Table 4: Demographic Analysis for the East Lake Connector

Geographic Areas	% Pop Age 65 and Older	% Pop Below Poverty	% HH with Zero Vehicle Access	% Minority Population
Pinellas County	21.70%	12.94%	8.76%	23.58%
3/4 Mile PSTA System	21.71%	13.02%	8.83%	23.73%
3/4 Mile East Lake Connector	22.75%	9.82%	5.43%	14.74%

Source: US Census Bureau 5-year 2013 American Community Survey

An on-board survey for the East Lake Connector was conducted in June. The survey results are included in Appendix B. The origins, destinations, travel patterns, transfer activity and preferred route modifications were reviewed. Bus stop ridership data was also reviewed to identify specific locations with high usage. Key findings from the results of the June 2015 and 2012 on-board survey include:

- Riders are using the East Lake Connector for primarily shopping, recreational (North Pinellas YMCA) and work related trips.
- Over half of the riders are using the route to transfer to another route to reach their final destination.
- The top preferred modifications were expanding service hours and providing more service on weekend days.
- Over 75% of riders said they would still make their trip if the East Lake Connector was not available, by riding with someone, taking a taxi, walking, driving, or biking.

- Bus stops for Route 811 have an average of 0-3 daily boardings, with the exception of a stop in the middle of the route near the a commercial and business center at Ridgemoor Blvd, which has 13 average daily boardings.
- Bus stops serving multiple routes have the highest average daily boardings. Those bus stops are located near the Shoppes at Boot Ranch and Tarpon Mall. Those stops connect to the Oldsmar/Tampa connector, and Routes 19 and 66.

Public Engagement

Staff at PSTA met with several Tarpon Springs and northern Pinellas County community groups to discuss the proposed discontinuation of the East Lake Connector. Most indicated that they would like to be kept informed and were willing to display information about the changes. Following final recommendations, various destinations along the route will be contacted and information will be disseminated to riders and the larger community.

Recommendation and Financial Implication

Discontinue the East Lake Connector. Discontinuation of the East Lake Connector will result in approximately \$360,000 in bus capitol savings (2 cutaway buses) and \$422,000 in net annual operating costs.

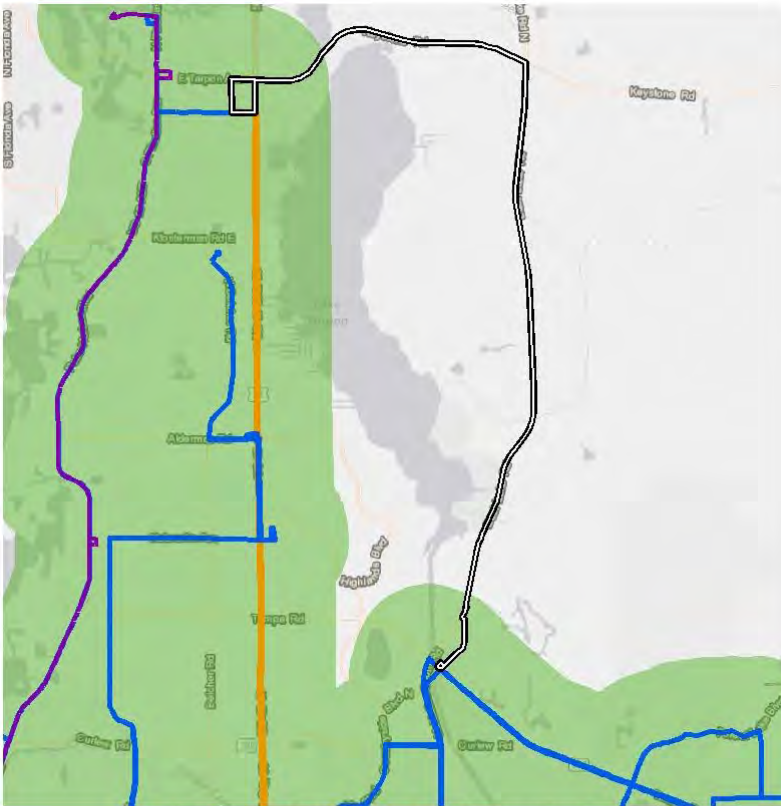
Transportation Alternatives

The East Lake Shuttle utilizes contracted taxis and wheelchair vans to transport people from their place of residence within the East Lake area to the Shoppes at Boot Ranch where they can shop or transfer to Routes 62 and 67 and the Oldsmar Connector, shown in Figure 13. DART service will still be available to those who qualify. With the East Lake Shuttle, riders currently using the East Lake Connector to travel to the to the shopping plaza at Ridgemoor Blvd will have access to similar businesses at the Shoppes at Boot Ranch.

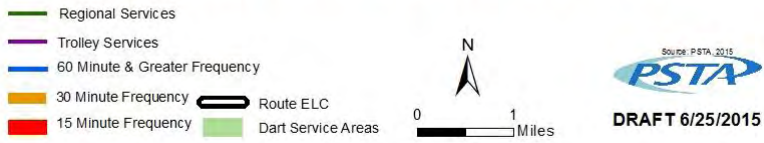
The East Lake Connector does not generate much ridership from the low income and minority population on the eastern end of the route. It is likely people from this area are primarily using core Route 19 or supporting local Route 66 for most of their trips.

The on-board survey indicated that other viable alternatives include carpooling, taxi, biking, driving, and walking. Various nonprofit organizations are also available to provide specific trips for medical and shopping purposes.

Figure 11: East Lake Connector Alternatives



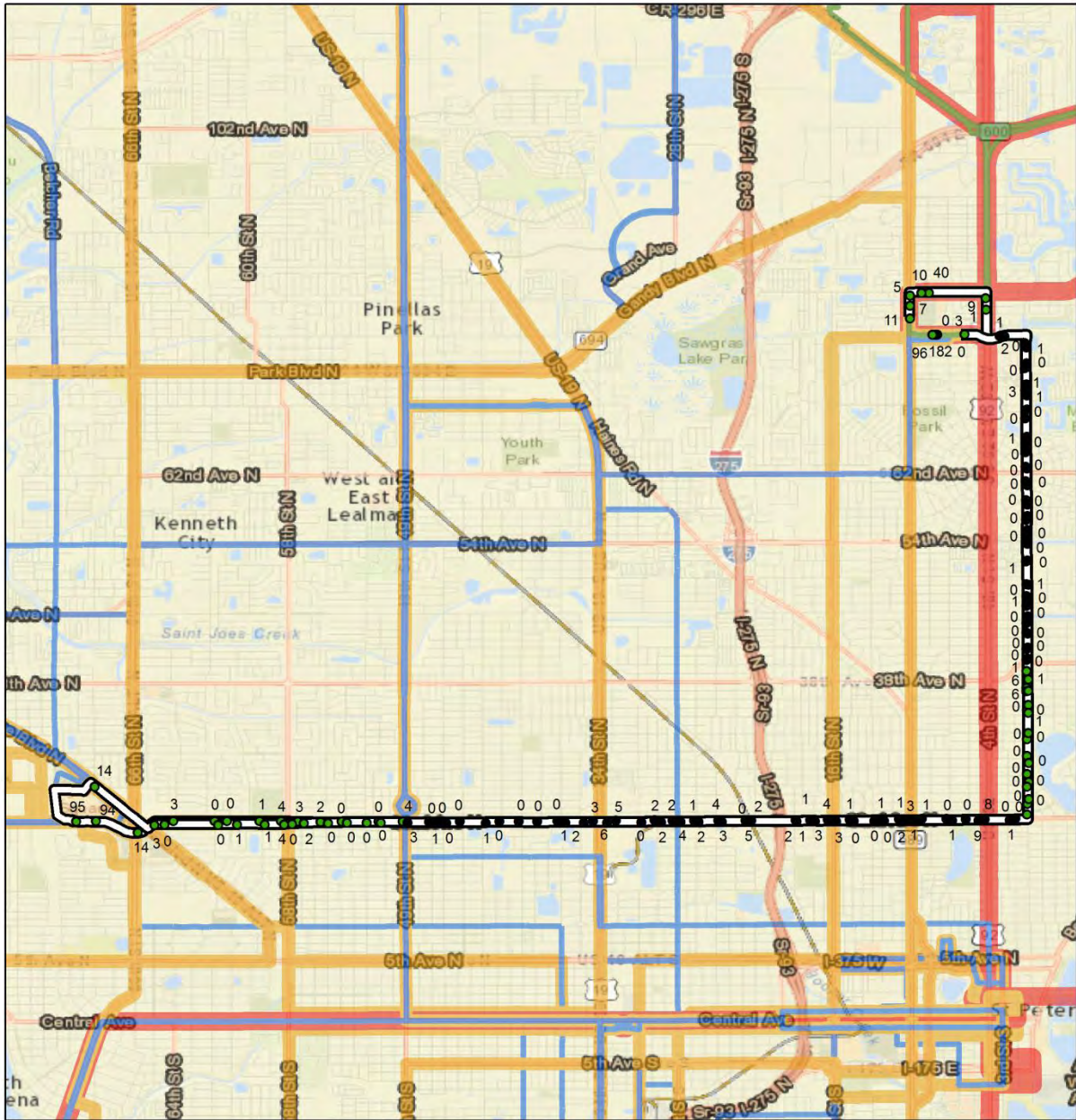
East Lake Connector and Alternative Routes



Appendix A

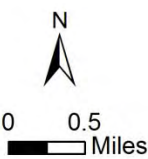
Phase 1 Demographic and Bus Stop Ridership Maps

Draft July 15, 2015

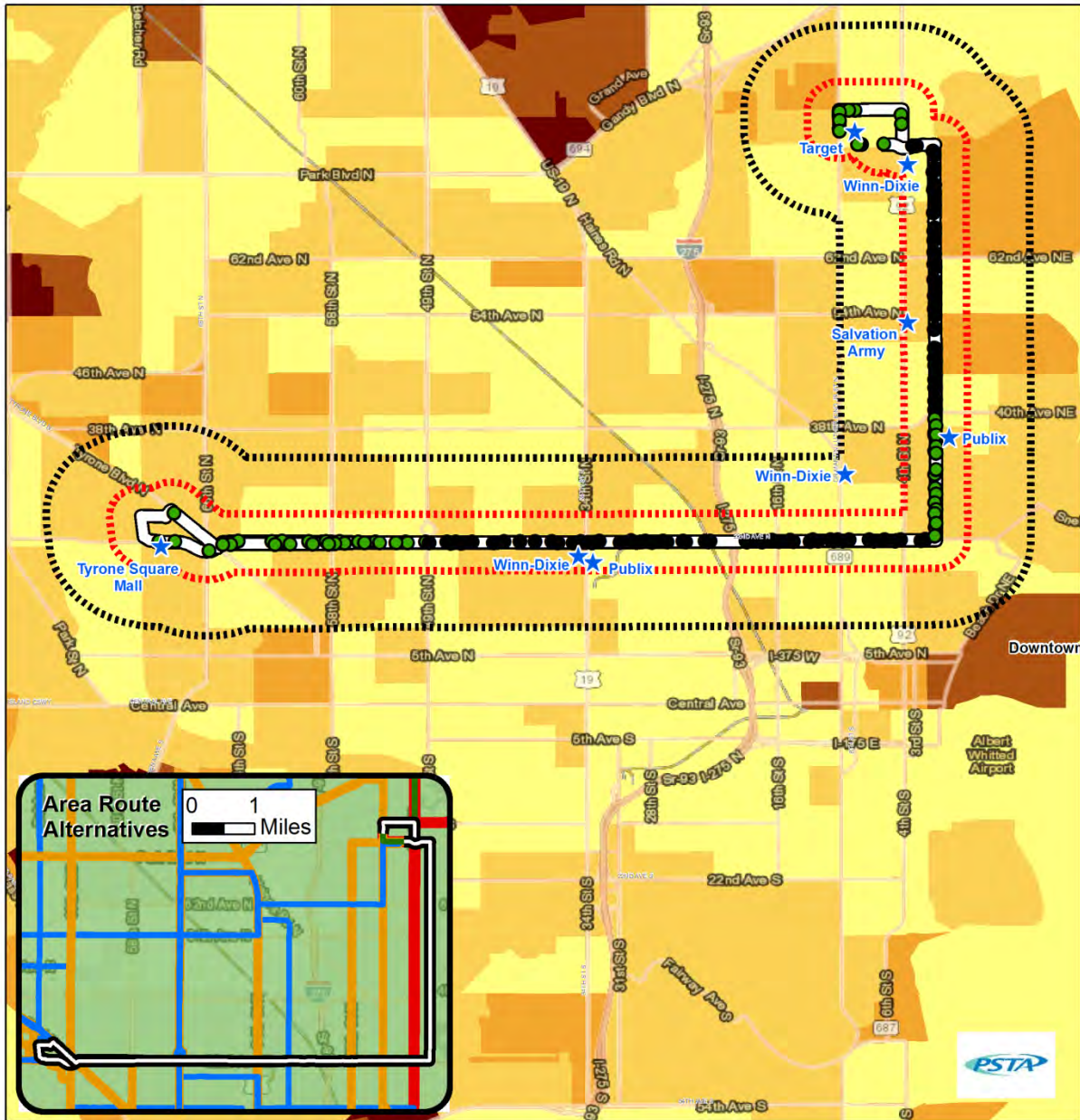


Route 1 - Average Weekday Total Ridership by Stop

- Legend**
- Route 1
 - Stop Served by Route 1 Only
 - Stop Served by Multiple Routes
 - 15 Minute Frequency
 - 30 Minute Frequency
 - 60 Minute & Greater Frequency



DRAFT JULY 2015
Source: PSTA Feb 8 - June 6 2015 Booking



Population Over Age 65 - Route 1

Legend

- 3/4-mi buffer
- 1/4-mi buffer
- Stop Served by Route 1 Only
- Stop Served by Multiple Routes
- 15 - Minute Frequency (Inset Map)
- 30 Minute Frequency (Inset Map)
- 60 Minute & Greater Frequency (Inset Map)
- Key Destinations
- Route 1

% Population Age 65+ By Block Group

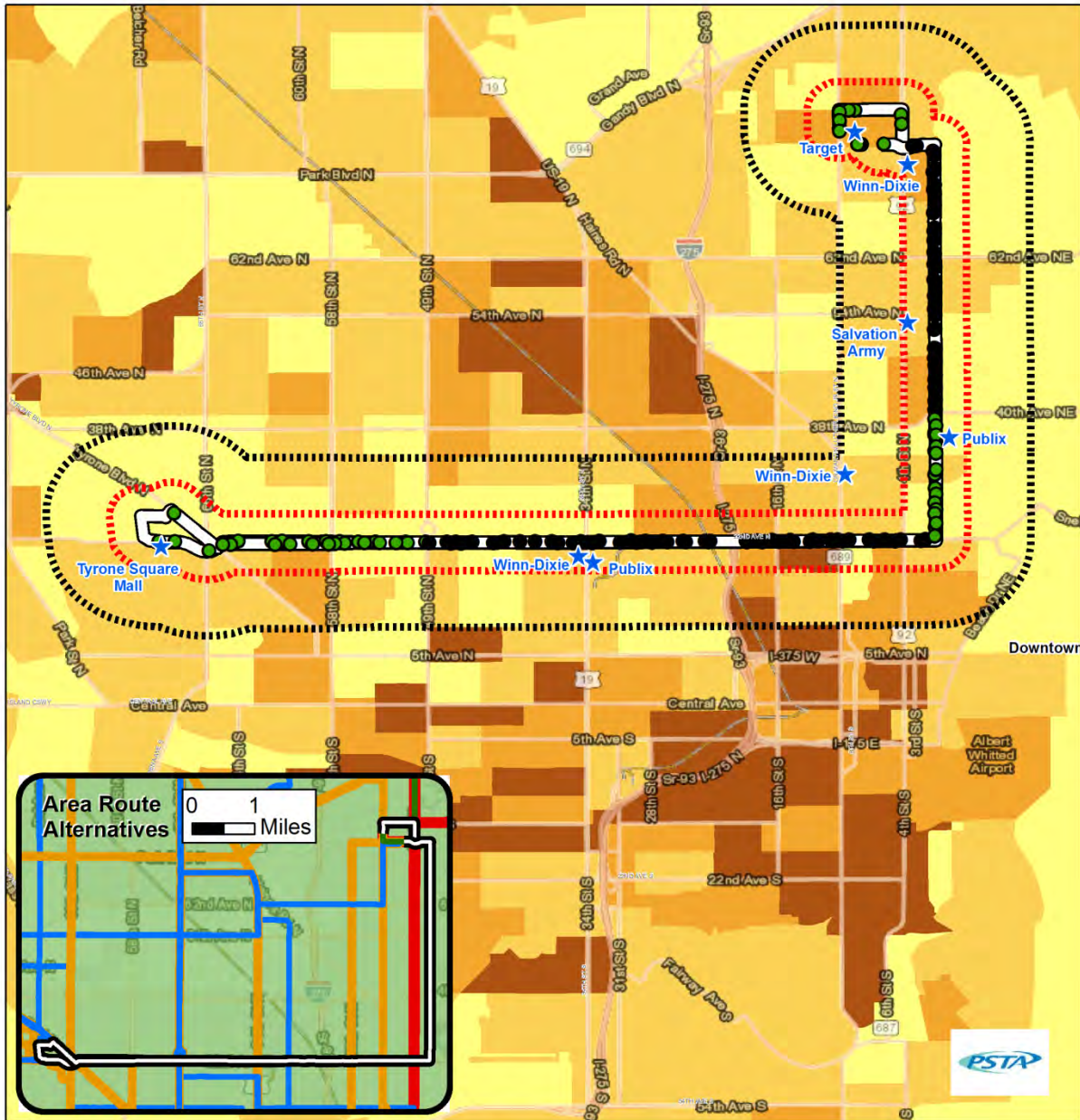
0% - 15%	47% - 63%
15% - 31%	> 63%
31% - 47%	

- DART Service Area Phase 1 (Inset Map)
- Regional Services (Inset Map)
- Trolley Services (Inset Map)

% POPULATION AGE 65 AND OVER	
Pinellas County	21.70%
3/4 Mile of PSTA System (FY15)	21.71%
3/4 Mile of ROUTE 1	15.99%

Source: U.S. Census Bureau ACS, 2013 5-Year PSTA, 2015

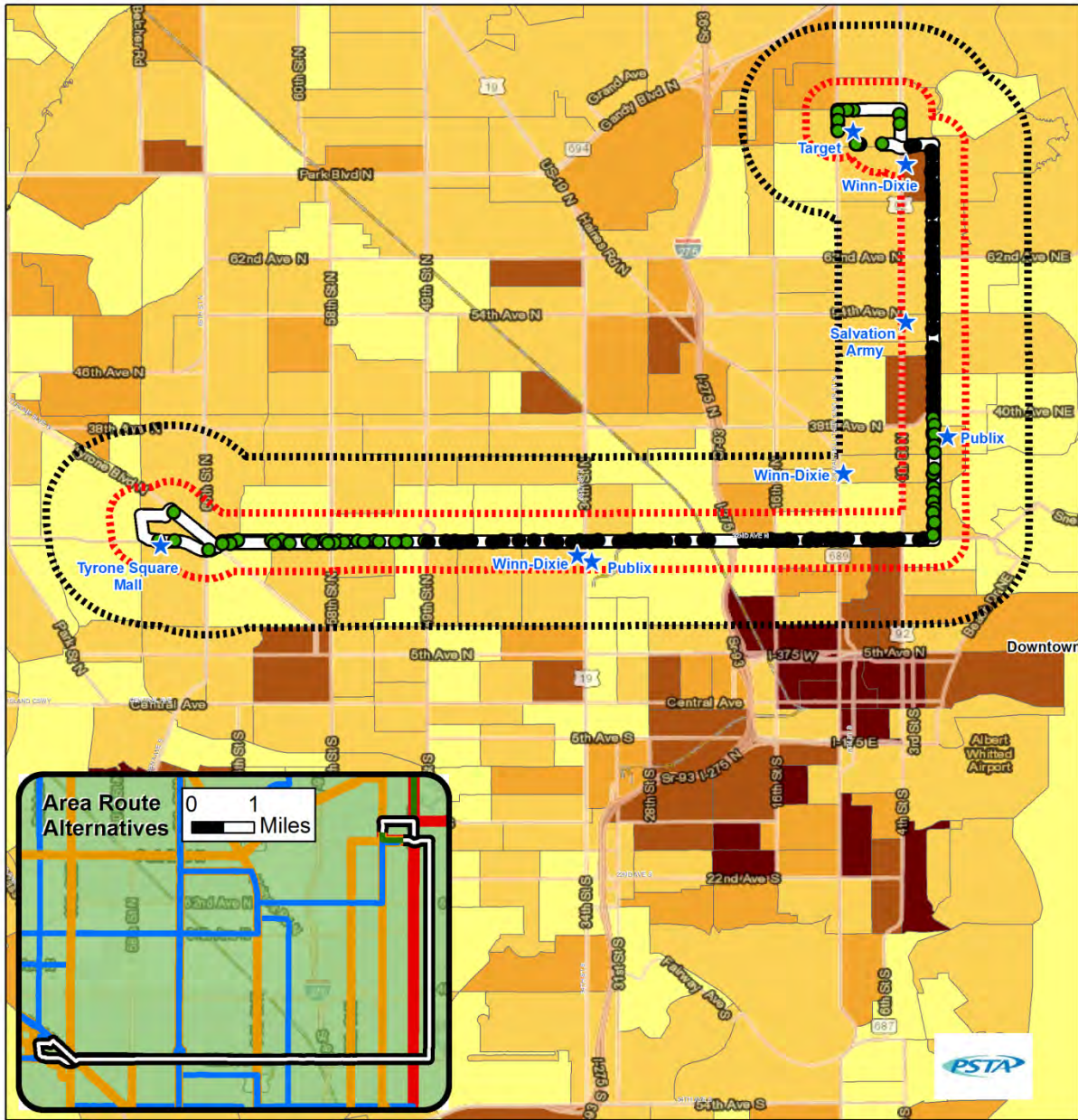
DRAFT JULY 2015



Population Below Poverty - Route 1

<p>Legend</p> <ul style="list-style-type: none"> 3/4-mi buffer 1/4-mi buffer Stop Served by Route 1 Only Stop Served by Multiple Routes 15 Minute Frequency (Inset Map) 30 Minute Frequency (Inset Map) 60 Minute & Greater Frequency (Inset Map) Key Destinations Route 1 		<p>% Population Below Poverty by Block Group</p> <ul style="list-style-type: none"> 0% - 8% 8% - 19% 19% - 30% > 30% DART Service Area Phase 1 (Inset Map) Regional Services (Inset Map) Trolley Services (Inset Map) 	<table border="1"> <thead> <tr> <th colspan="2">% POPULATION BELOW POVERTY</th> </tr> </thead> <tbody> <tr> <td>Pinellas County</td> <td>12.94%</td> </tr> <tr> <td>3/4 Mile of PSTA System (FY15)</td> <td>13.02%</td> </tr> <tr> <td>3/4 Mile of ROUTE 1</td> <td>12.44%</td> </tr> </tbody> </table> <p><small>Source: U.S. Census Bureau ACS, 2013 5- Year PSTA, 2015</small></p> <p>0 1 Miles</p> <p></p>	% POPULATION BELOW POVERTY		Pinellas County	12.94%	3/4 Mile of PSTA System (FY15)	13.02%	3/4 Mile of ROUTE 1	12.44%
% POPULATION BELOW POVERTY											
Pinellas County	12.94%										
3/4 Mile of PSTA System (FY15)	13.02%										
3/4 Mile of ROUTE 1	12.44%										

DRAFT JULY 2015



Households with Zero Vehicle Access - Route 1

Legend

- 3/4-mi buffer
- 1/4-mi buffer
- Stop Served by Route 1 Only
- Stop Served by Multiple Routes
- 15 Minute Frequency (Inset Map)
- 30 Minute Frequency (Inset Map)
- 60 Minute & Greater Frequency (Inset Map)
- Key Destinations
- Route 1

Households with Zero Vehicle Access by Block Group

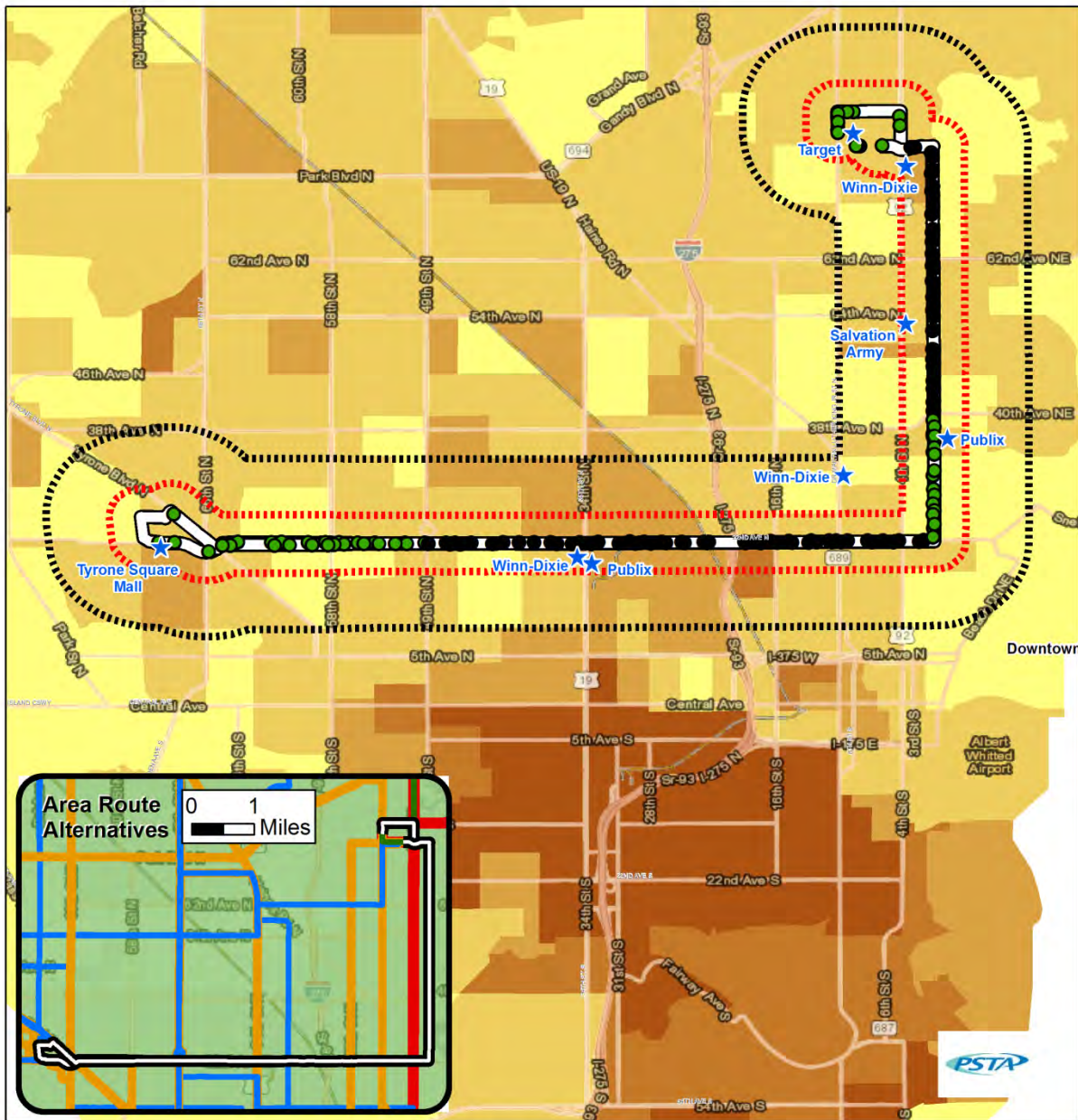
- 0% - 4%
- 4% - 14%
- 14% - 24%
- 24% - 33%
- > 33%
- DART Service Area Phase 1 (Inset Map)
- Regional Services (Inset Map)
- Trolley Services (Inset Map)

% HOUSEHOLDS WITH ZERO VEHICLE ACCESS	
Pinellas County	8.76%
3/4 Mile of PSTA System (FY15)	8.83%
3/4 Mile of ROUTE 1	8.76%

Source: U.S. Census Bureau ACS, 2013 5-Year PSTA, 2015

0 1 Miles

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Minority Population - Route 1

Legend

- 3/4-mi buffer
- 1/4-mi buffer
- Stop Served by Route 1 Only
- Stop Served by Multiple Routes
- 15 Minute Frequency (Inset Map)
- 30 Minute Frequency (Inset Map)
- 60 Minute & Greater Frequency (Inset Map)
- Key Destinations
- Route 1

% Minority Population By Block Group

0% - 12%	60% - 80%
12% - 35%	> 80%
35% - 60%	

DART Service Area Phase 1 (Inset Map)

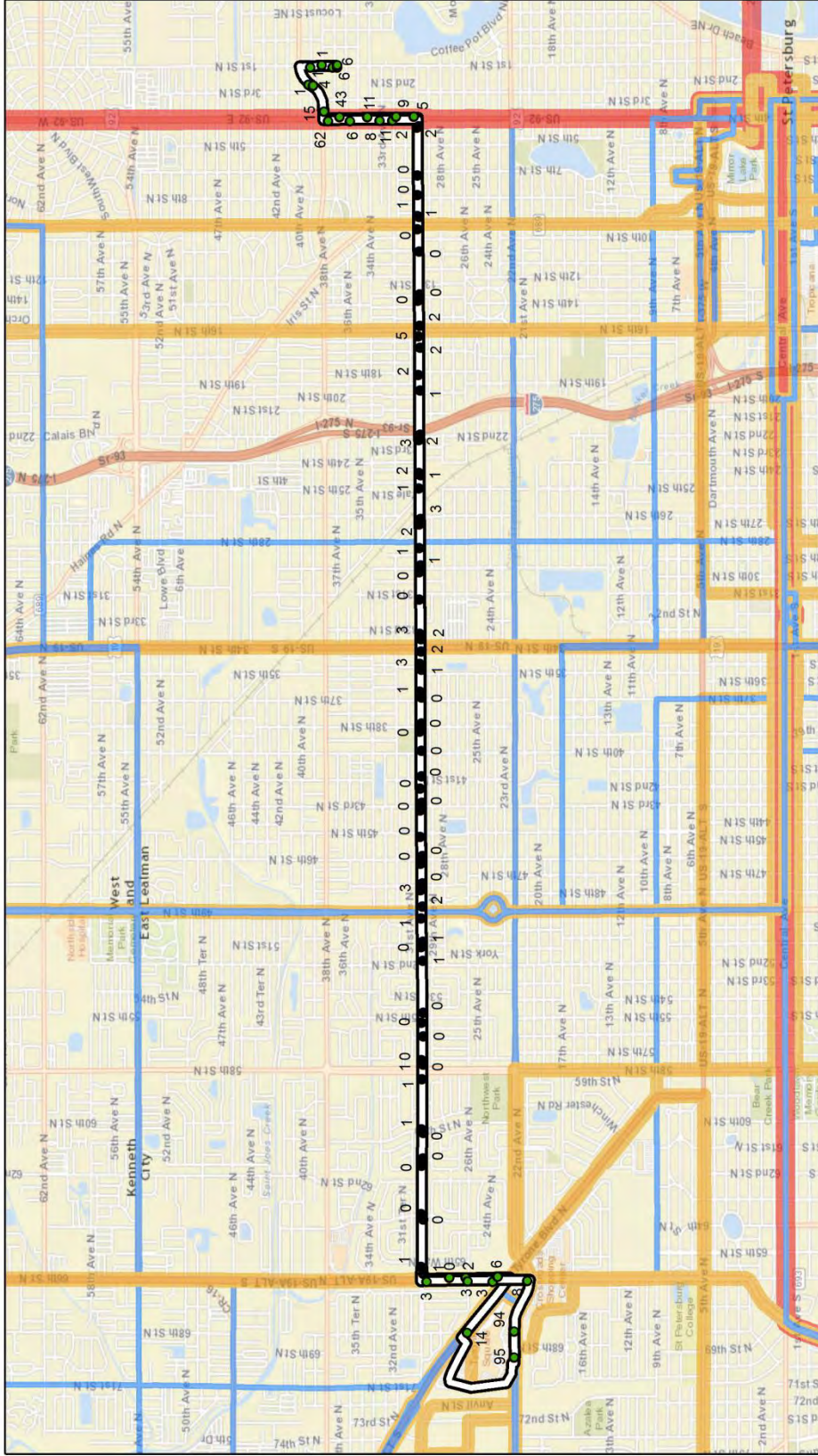
Regional Services (Inset Map)

Trolley Services (Inset Map)

% MINORITY POPULATION	
Pinellas County	23.58%
3/4 Mile of PSTA System (FY15)	23.73%
3/4 Mile of ROUTE 1	21.45%







Source: U.S. Census Bureau ACS, 2013 5-Year PSTA, 2015

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Route 30 - Average Weekday Total Ridership by Stop

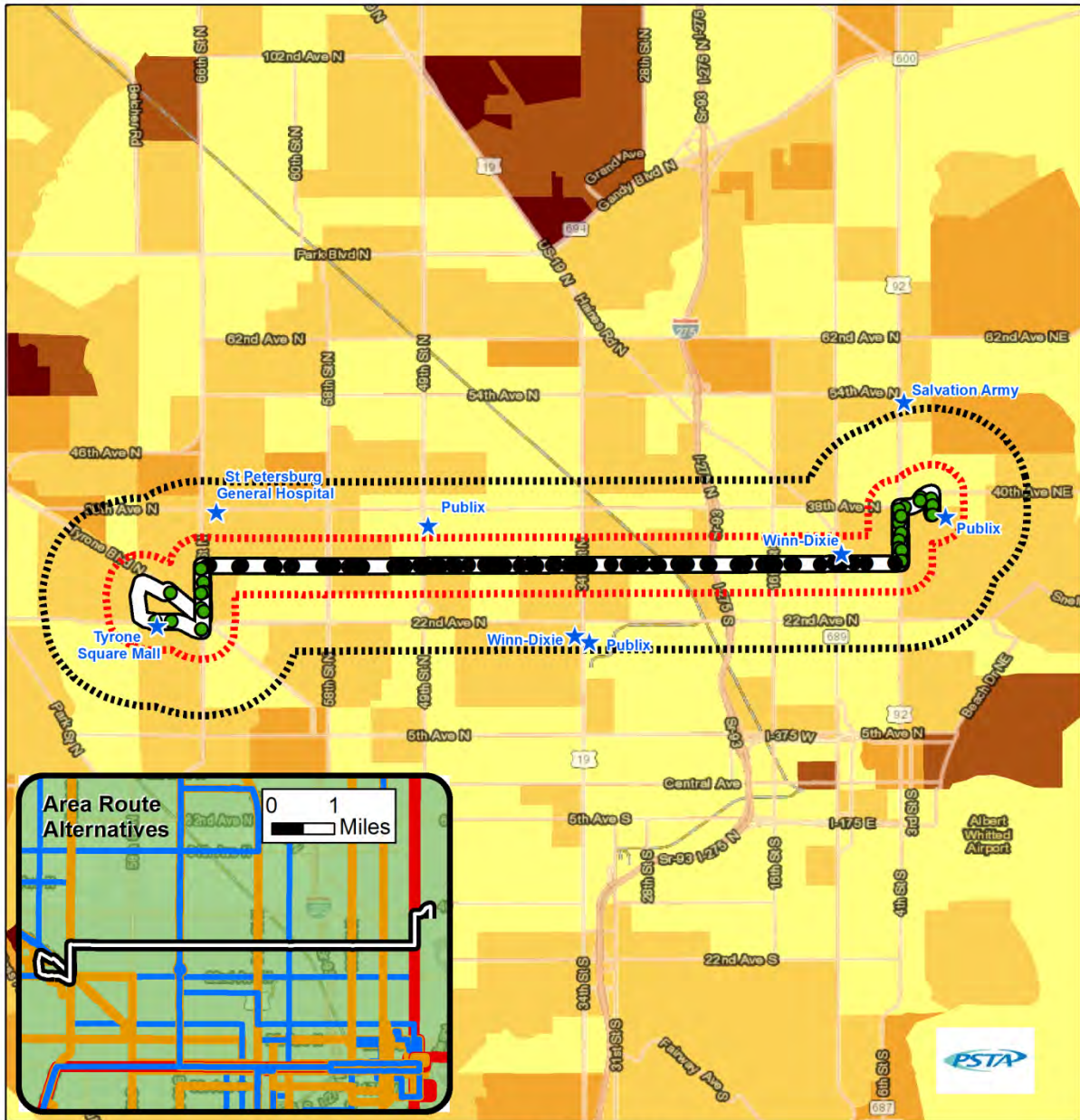
Legend

-  Route 30
-  Stop Served by Route 30 Only
-  Stop Served by Multiple Routes
-  15 Minute Frequency
-  30 Minute Frequency
-  60 Minute & Greater Frequency



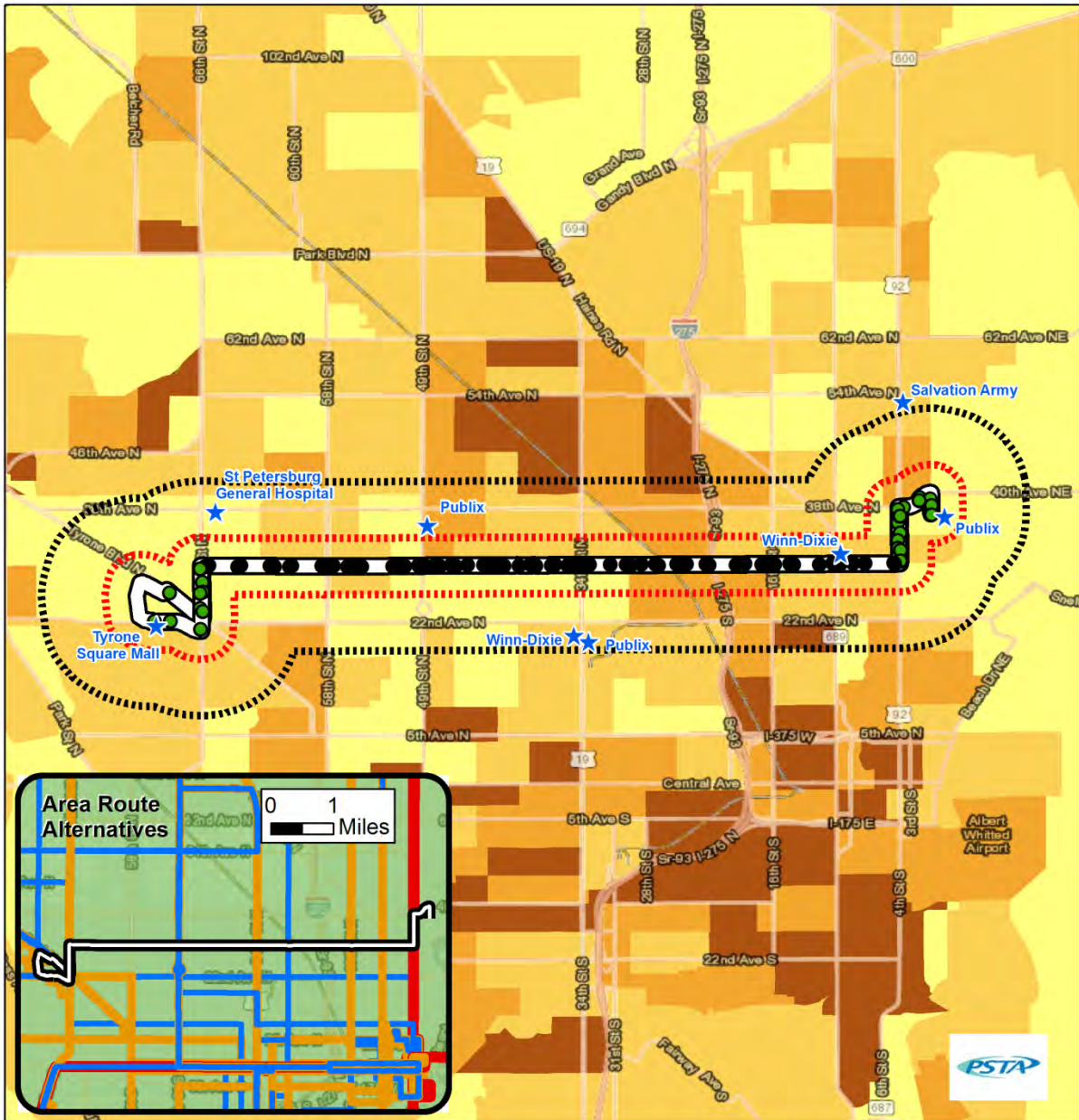
DRAFT JULY 2015

Source: PSTA Feb. 8 - June 6 2015 Booking



Population Over Age 65 - Route 30

<p>Legend</p> <ul style="list-style-type: none"> 3/4-mi buffer 1/4-mi buffer Stop Served by Route 30 Only Stop Served by Multiple Routes 15 Minute Frequency (Inset Map) 30 Minute Frequency (Inset Map) 60 Minute & Greater Frequency (Inset Map) Key Destinations Route 30 	<p>% Population Age 65+ By Block Group</p> <ul style="list-style-type: none"> 0% - 15% 15% - 31% 31% - 47% DART Service Area Phase 1 (Inset Map) 47% - 63% > 63% Regional Services (Inset Map) Trolley Services (Inset Map) 	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">% POPULATION AGE 65 AND OVER</th> </tr> </thead> <tbody> <tr> <td>Pinellas County</td> <td style="text-align: right;">21.70%</td> </tr> <tr> <td>3/4 Mile of PSTA System (FY15)</td> <td style="text-align: right;">21.71%</td> </tr> <tr> <td>3/4 Mile of ROUTE 30</td> <td style="text-align: right;">16.10%</td> </tr> </tbody> </table> <p style="font-size: small;">Source: U.S. Census Bureau ACS, 2013 5- Year PSTA, 2015</p> <div style="display: flex; align-items: center;"> </div> <p style="text-align: right; font-weight: bold; font-size: 1.2em;">DRAFT JULY 2015</p>	% POPULATION AGE 65 AND OVER		Pinellas County	21.70%	3/4 Mile of PSTA System (FY15)	21.71%	3/4 Mile of ROUTE 30	16.10%
% POPULATION AGE 65 AND OVER										
Pinellas County	21.70%									
3/4 Mile of PSTA System (FY15)	21.71%									
3/4 Mile of ROUTE 30	16.10%									

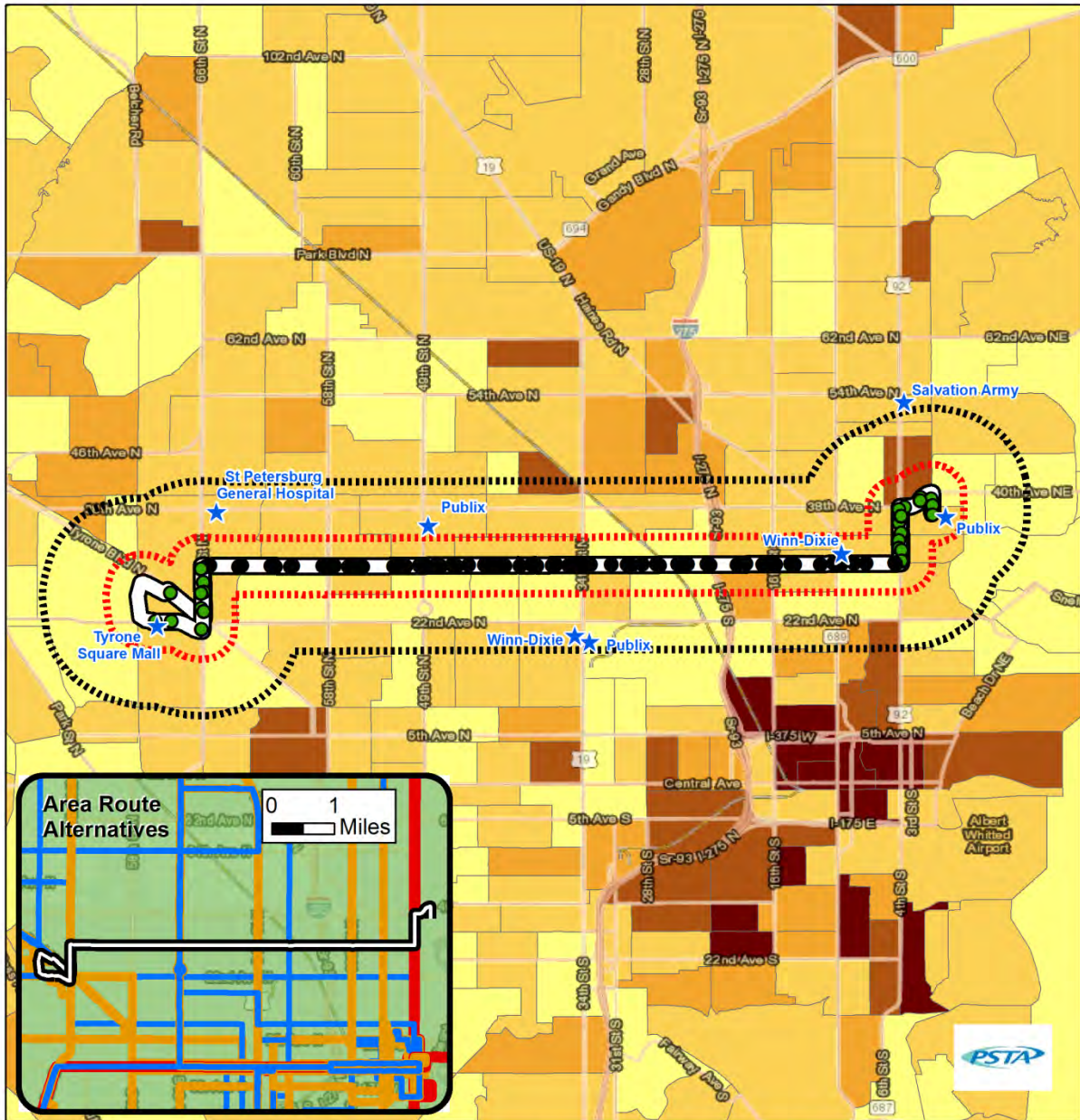


Population Below Poverty - Route 30

<p>Legend</p> <ul style="list-style-type: none"> 3/4-mi buffer 1/4-mi buffer Stop Served by Route 30 Only Stop Served by Multiple Routes 15 - Minute Frequency (Inset Map) 30 Minute Frequency (Inset Map) 60 Minute & Greater Frequency (Inset Map) Key Destinations Route 30 		<p>% Population Below Poverty by Block Group</p> <ul style="list-style-type: none"> 0% - 8% 8% - 19% 19% - 30% > 30% DART Service Area Phase 1 (Inset Map) Regional Services (Inset Map) Trolley Services (Inset Map) 	<table border="1"> <thead> <tr> <th colspan="2">% POPULATION BELOW POVERTY</th> </tr> </thead> <tbody> <tr> <td>Pinellas County</td> <td>12.94%</td> </tr> <tr> <td>3/4 Mile of PSTA System (FY15)</td> <td>13.02%</td> </tr> <tr> <td>3/4 Mile of ROUTE 30</td> <td>13.53%</td> </tr> </tbody> </table> <p><small>Source: U.S. Census Bureau ACS, 2013 5- Year PSTA, 2015</small></p>	% POPULATION BELOW POVERTY		Pinellas County	12.94%	3/4 Mile of PSTA System (FY15)	13.02%	3/4 Mile of ROUTE 30	13.53%
% POPULATION BELOW POVERTY											
Pinellas County	12.94%										
3/4 Mile of PSTA System (FY15)	13.02%										
3/4 Mile of ROUTE 30	13.53%										

0 1 Miles

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Households with Zero Vehicle Access - Route 30

Legend

- 3/4-mi buffer
- 1/4-mi buffer
- Stop Served by Route 30 Only
- Stop Served by Multiple Routes
- 15 Minute Frequency (Inset Map)
- 30 Minute Frequency (Inset Map)
- 60 Minute & Greater Frequency (Inset Map)
- Key Destinations
- Route 30

Households with Zero Vehicle Access by Block Group

- 0% - 4%
- 4% - 14%
- 14% - 24%
- 24% - 33%
- > 33%
- DART Service Area Phase 1 (Inset Map)
- Regional Services (Inset Map)
- Trolley Services (Inset Map)

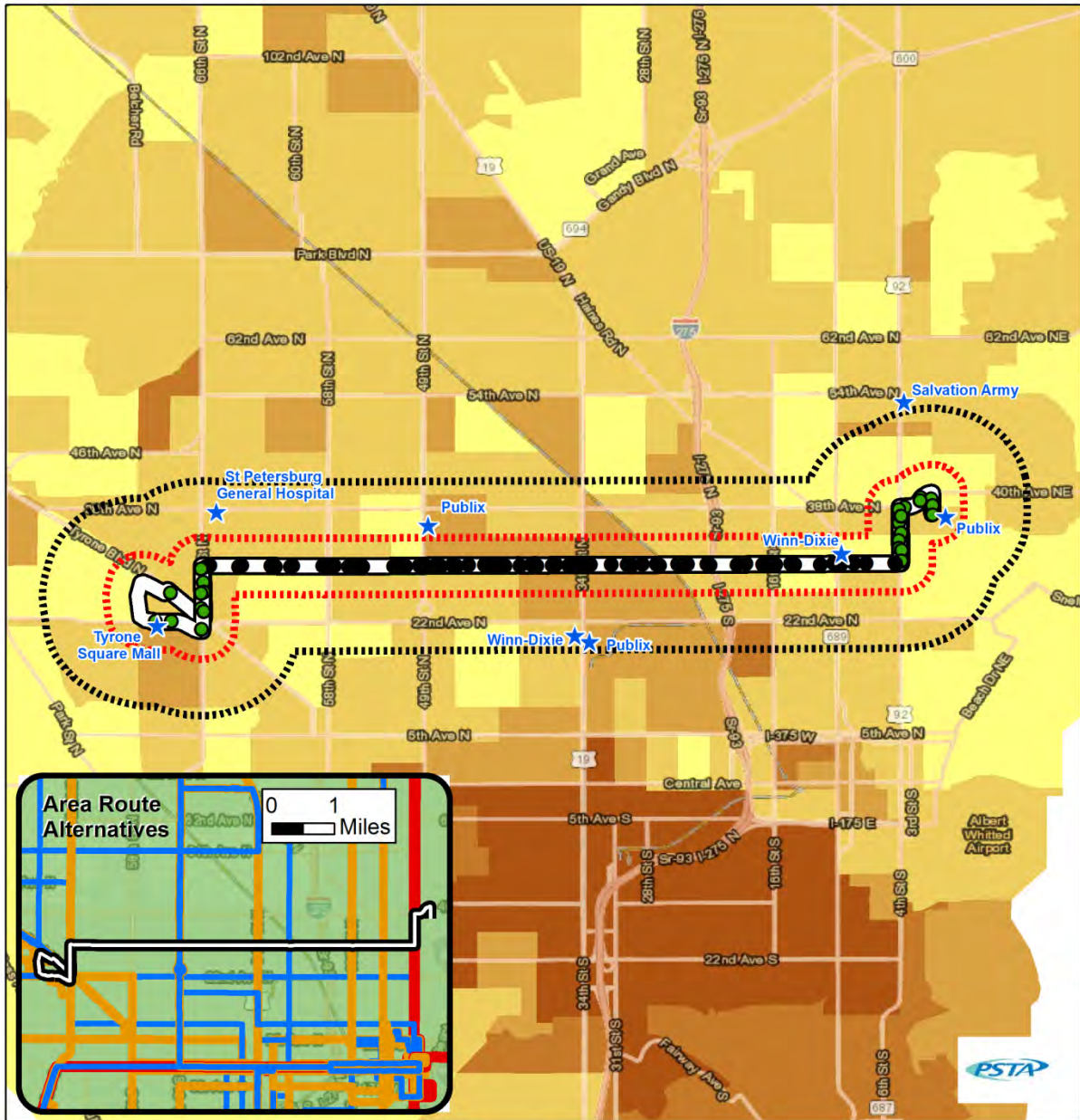
% HOUSEHOLDS WITH ZERO VEHICLE ACCESS

Pinellas County	8.76%
3/4 Mile of PSTA System (FY15)	8.83%
3/4 Mile of ROUTE 30	7.92%

Source: U.S. Census Bureau ACS, 2013 5- Year PSTA, 2015

0 1 Miles

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Minority Population - Route 30

Legend

- 3/4-mi buffer
- 1/4-mi buffer
- Stop Served by Route 30 Only
- Stop Served by Multiple Routes
- 15 Minute Frequency (Inset Map)
- 30 Minute Frequency (Inset Map)
- 60 Minute & Greater Frequency (Inset Map)
- Key Destinations
- Route 30

% Minority Population By Block Group

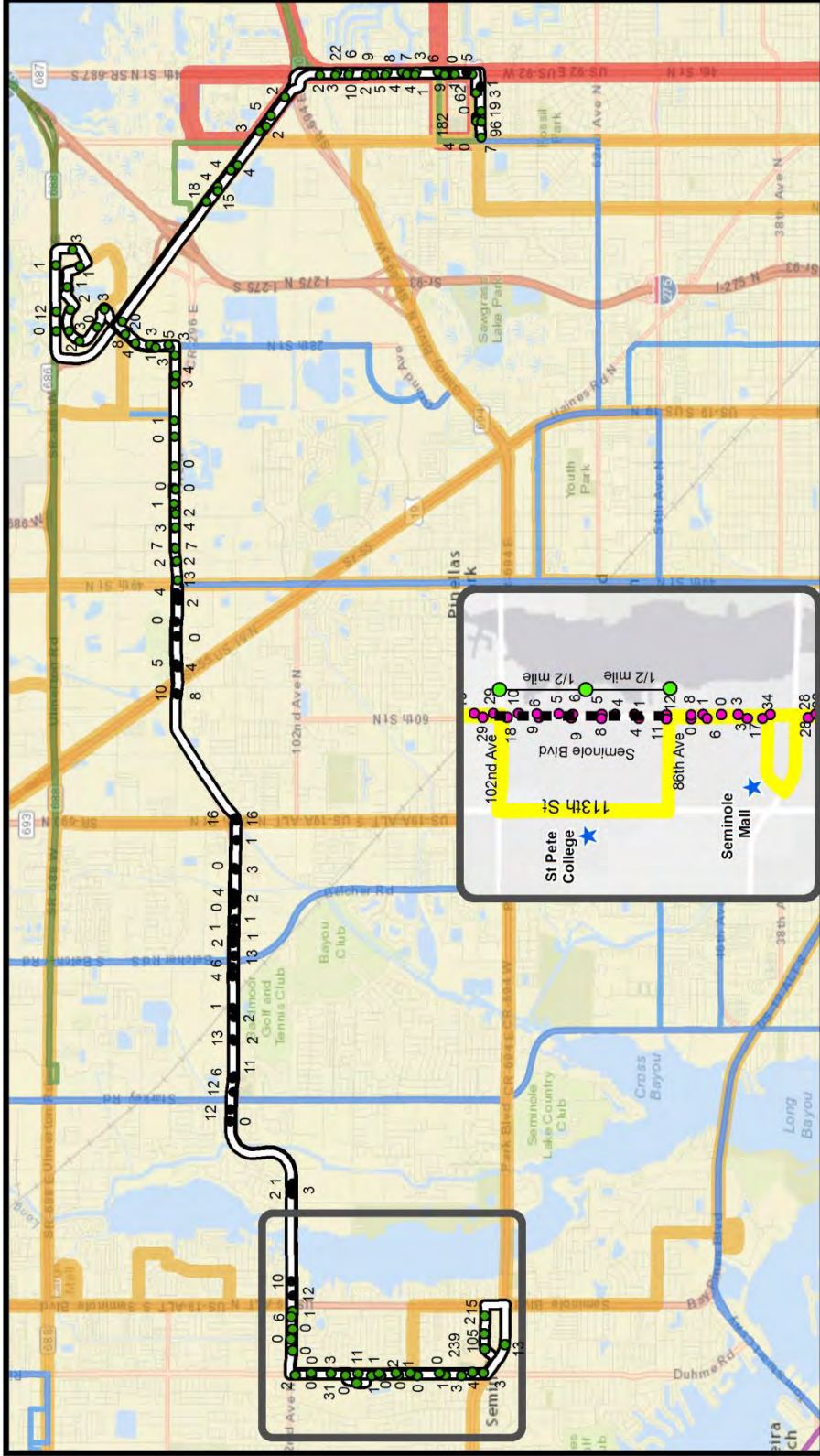
- 0% - 12%
- 12% - 35%
- 35% - 60%
- DART Service Area Phase 1 (Inset Map)
- 60% - 80%
- > 80%
- Regional Services (Inset Map)
- Trolley Services (Inset Map)

% MINORITY POPULATION	
Pinellas County	23.58%
3/4 Mile of PSTA System (FY15)	23.73%
3/4 Mile of ROUTE 30	22.50%

Source: U.S. Census Bureau ACS, 2013 5- Year PSTA, 2015

0 1 Miles

DRAFT JULY 2015



Route 58 - Average Weekday Total Ridership by Stop

Legend

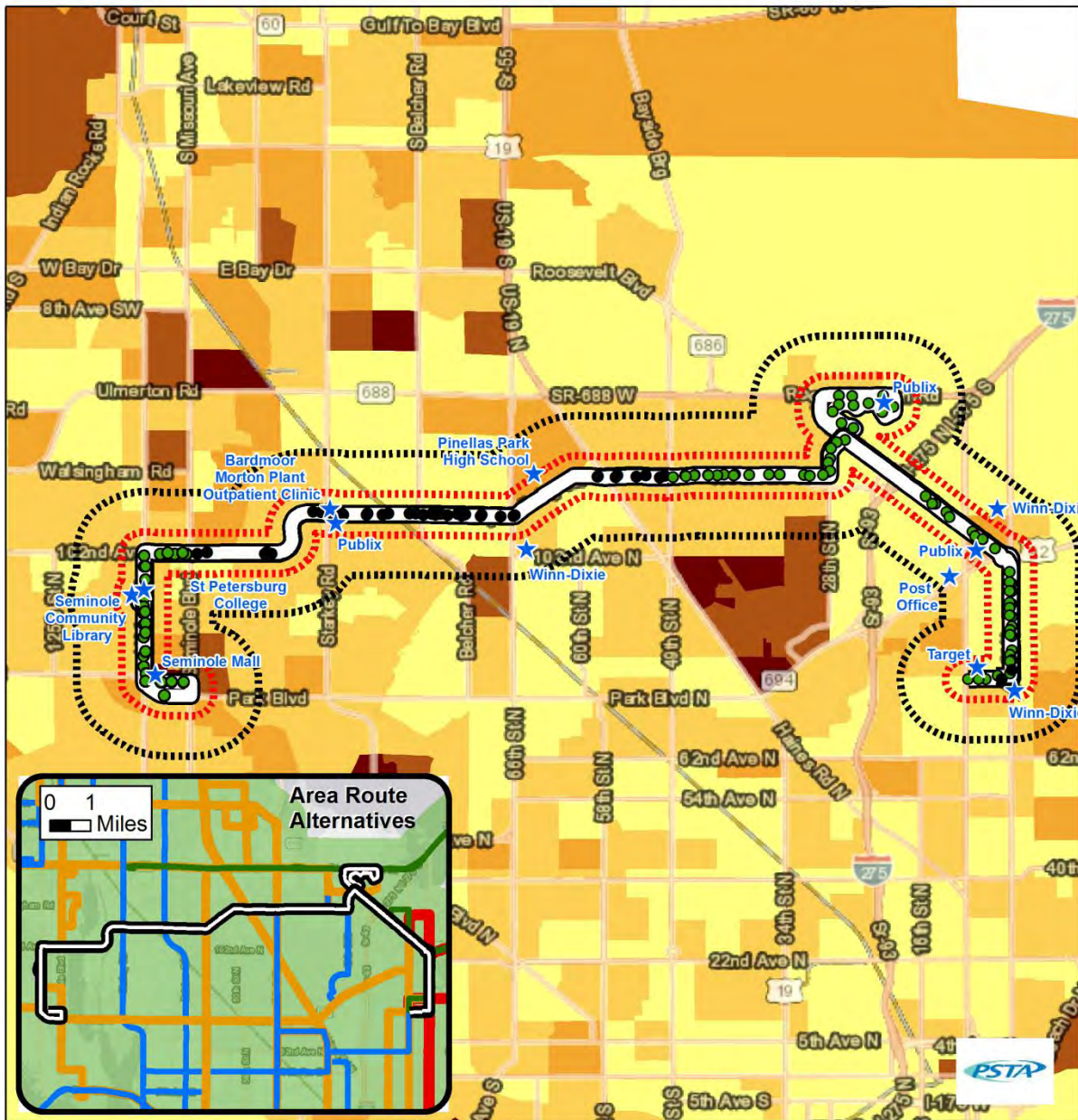
- Route 58
- Stop Served by Route 58 Only
- Stop Served by Multiple Routes
- 15 Minute Frequency
- 30 Minute Frequency
- 60 Minute & Greater Frequency
- Regional Services
- Existing Route 18 (Inset Map)
- Route 18 Redesigned (Inset Map)
- Stops Served by Existing Route 18 (Inset Map)

N

0 0.5 Miles

PSTA

DRAFT JULY 2015
Source: PSTA Feb 8 - June 6 2015 Booking



Population Over Age 65 - Route 58

Legend

- 3/4-mi buffer
- 1/4-mi buffer
- Stop Served by Route 58 Only
- Stop Served by Multiple Routes
- 15 Minute Frequency (Inset Map)
- 30 Minute Frequency (Inset Map)
- 60 Minute & Greater Frequency (Inset Map)
- Key Destinations
- Route 58

% Population Age 65+ By Block Group

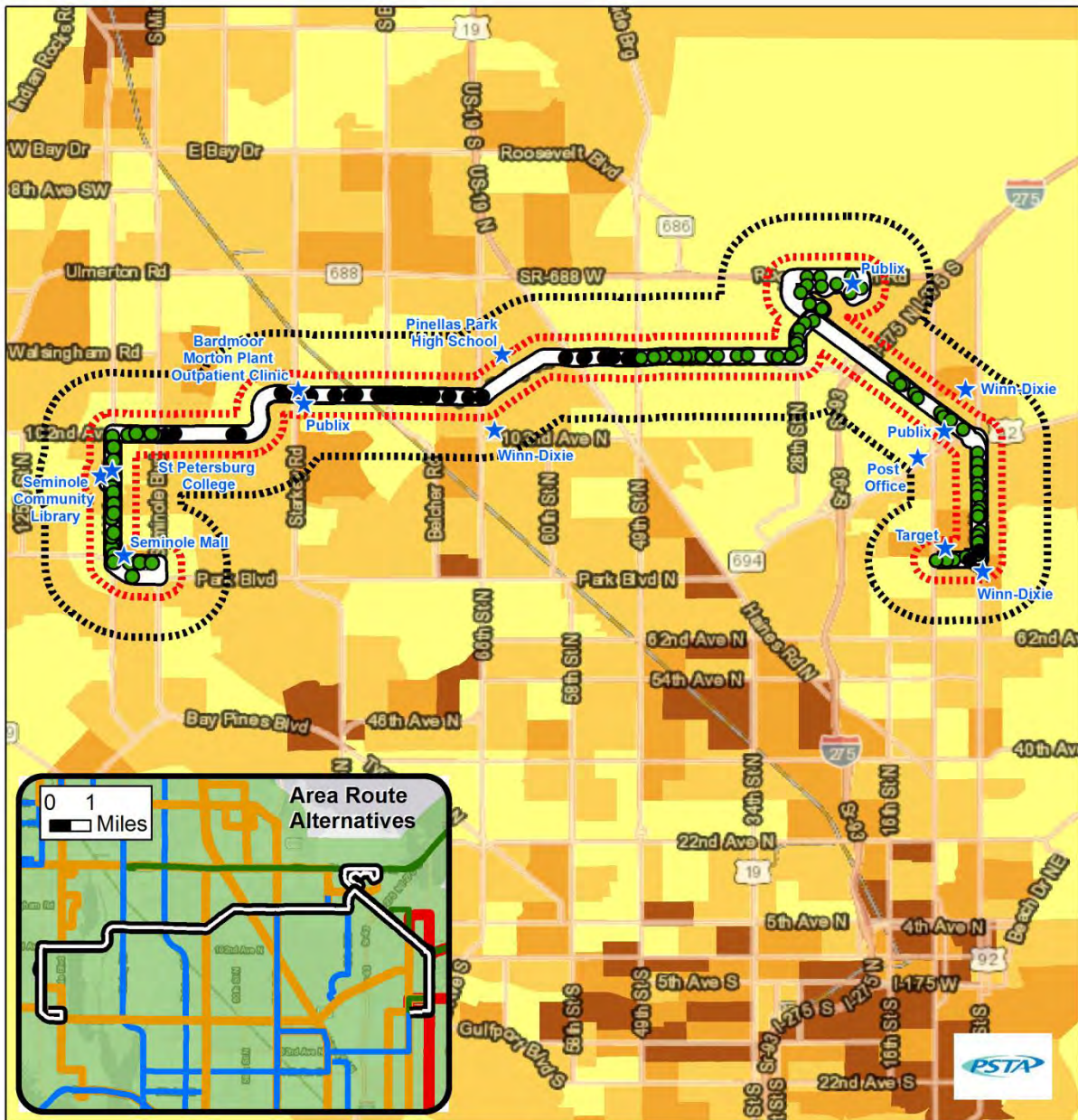
- 0% - 15%
- 15% - 31%
- 31% - 47%
- 47% - 63%
- > 63%
- DART Service Area Phase 1 (Inset Map)
- Regional Services (Inset Map)
- Trolley Services (Inset Map)

% POPULATION AGE 65 AND OVER	
Pinellas County	21.70%
3/4 Mile of PSTA System (FY15)	21.71%
3/4 Mile of ROUTE 58	19.82%

Source: U.S. Census Bureau ACS, 2013 5- Year
PSTA, 2015

0 1 Miles

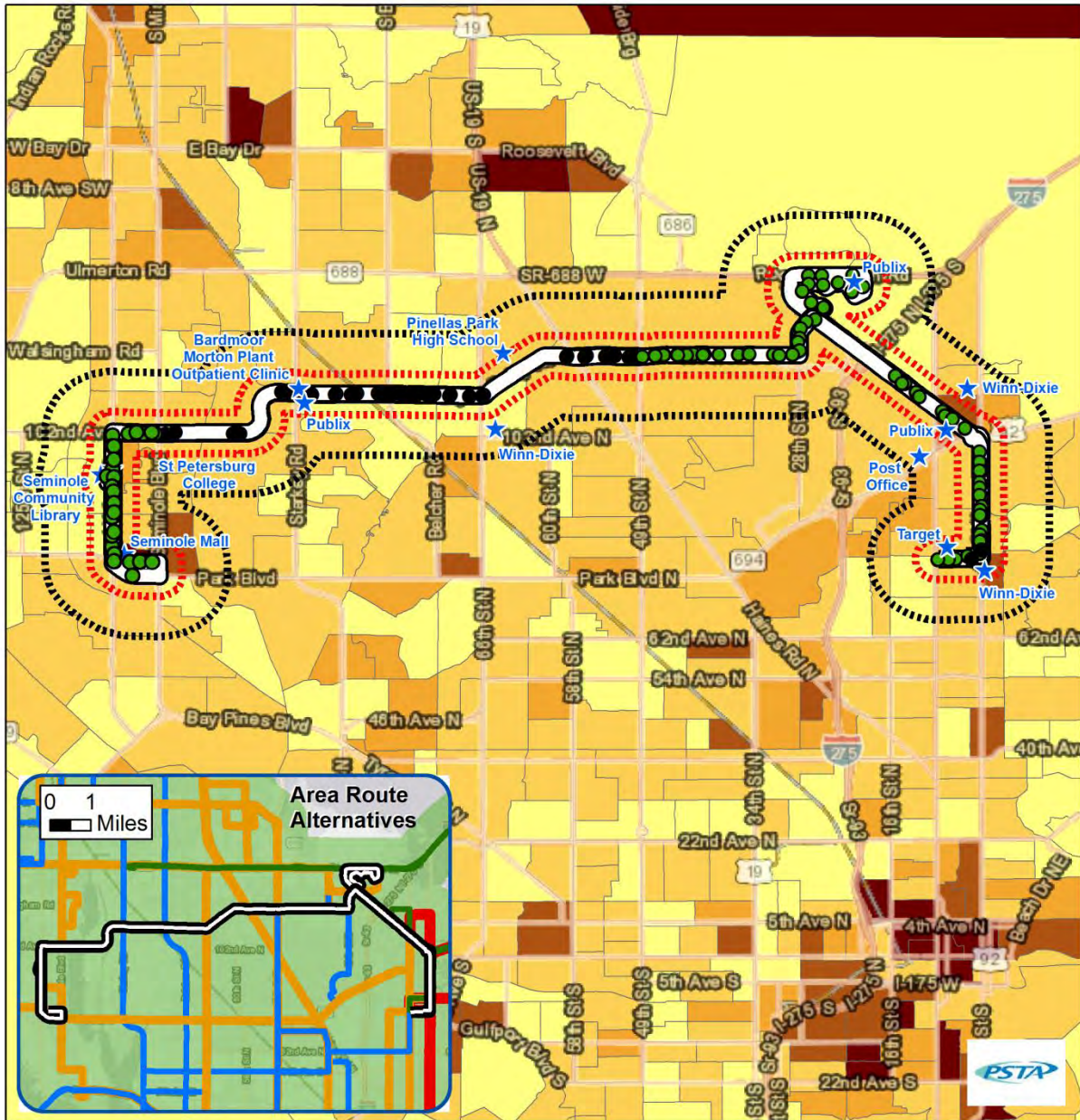
DRAFT JULY 2015



Population Below Poverty - Route 58

<p>Legend</p> <ul style="list-style-type: none"> 3/4-mi buffer 1/4-mi buffer Stop Served by Route 58 Only Stop Served by Multiple Routes 15 Minute Frequency (Inset Map) 30 Minute Frequency (Inset Map) 60 Minute & Greater Frequency (Inset Map) Key Destinations Route 58 		<p>% Population Below Poverty by Block Group</p> <ul style="list-style-type: none"> 0% - 8% 8% - 19% 19% - 30% > 30% DART Service Area Phase 1 (Inset Map) Regional Services (Inset Map) Trolley Services (Inset Map) 	<table border="1"> <thead> <tr> <th colspan="2">% POPULATION BELOW POVERTY</th> </tr> </thead> <tbody> <tr> <td>Pinellas County</td> <td>12.94%</td> </tr> <tr> <td>3/4 Mile of PSTA System (FY15)</td> <td>13.02%</td> </tr> <tr> <td>3/4 Mile of ROUTE 58</td> <td>10.70%</td> </tr> </tbody> </table> <p><small>Source: U.S. Census Bureau ACS, 2013 5-Year PSTA, 2015</small></p> <p>0 1 Miles</p> <p></p>	% POPULATION BELOW POVERTY		Pinellas County	12.94%	3/4 Mile of PSTA System (FY15)	13.02%	3/4 Mile of ROUTE 58	10.70%
% POPULATION BELOW POVERTY											
Pinellas County	12.94%										
3/4 Mile of PSTA System (FY15)	13.02%										
3/4 Mile of ROUTE 58	10.70%										

DRAFT JULY 2015



Households with Zero Vehicle Access - Route 58

Legend

- 3/4-mi buffer
- 1/4-mi buffer
- Stop Served by Route 58 Only
- Stop Served by Multiple Routes
- 15 Minute Frequency (Inset Map)
- 30 Minute Frequency (Inset Map)
- 60 Minute & Greater Frequency (Inset Map)
- Key Destinations
- Route 58

Households with Zero Vehicle Access by Block Group

- 0% - 4%
- 4% - 14%
- 14% - 24%
- DART Service Area Phase 1 (Inset Map)
- Regional Services (Inset Map)
- Trolley Services (Inset Map)
- 24% - 33%
- > 33%

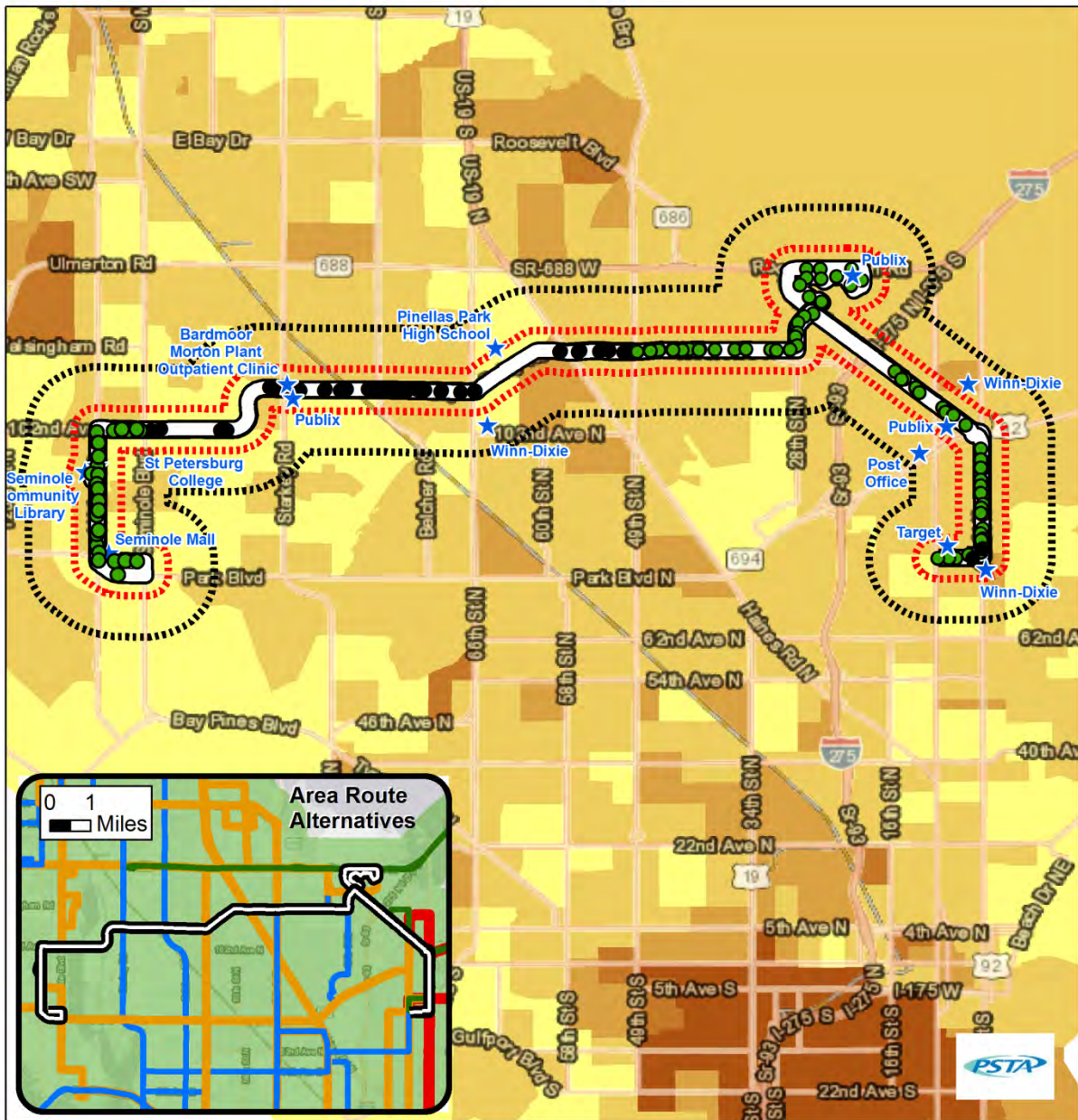
% HOUSEHOLDS WITH ZERO VEHICLE ACCESS

Pinellas County	8.76%
3/4 Mile of PSTA System (FY15)	8.83%
3/4 Mile of ROUTE 58	7.33%

Source: U.S. Census Bureau ACS, 2013 5-Year PSTA, 2015

0 1 Miles

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Minority Population - Route 58

- Legend**
- 3/4-mi buffer
 - 1/4-mi buffer
 - Stop Served by Route 58 Only
 - Stop Served by Multiple Routes
 - 15 Minute Frequency (Inset Map)
 - 30 Minute Frequency (Inset Map)
 - 60 Minute & Greater Frequency (Inset Map)
 - Key Destinations
 - Route 58
- % Minority Population By Block Group**
- 0% - 12%
 - 12% - 35%
 - 35% - 60%
 - DART Service Area Phase 1 (Inset Map)
 - 60% - 80%
 - > 80%
 - Regional Services (Inset Map)
 - Trolley Services (Inset Map)

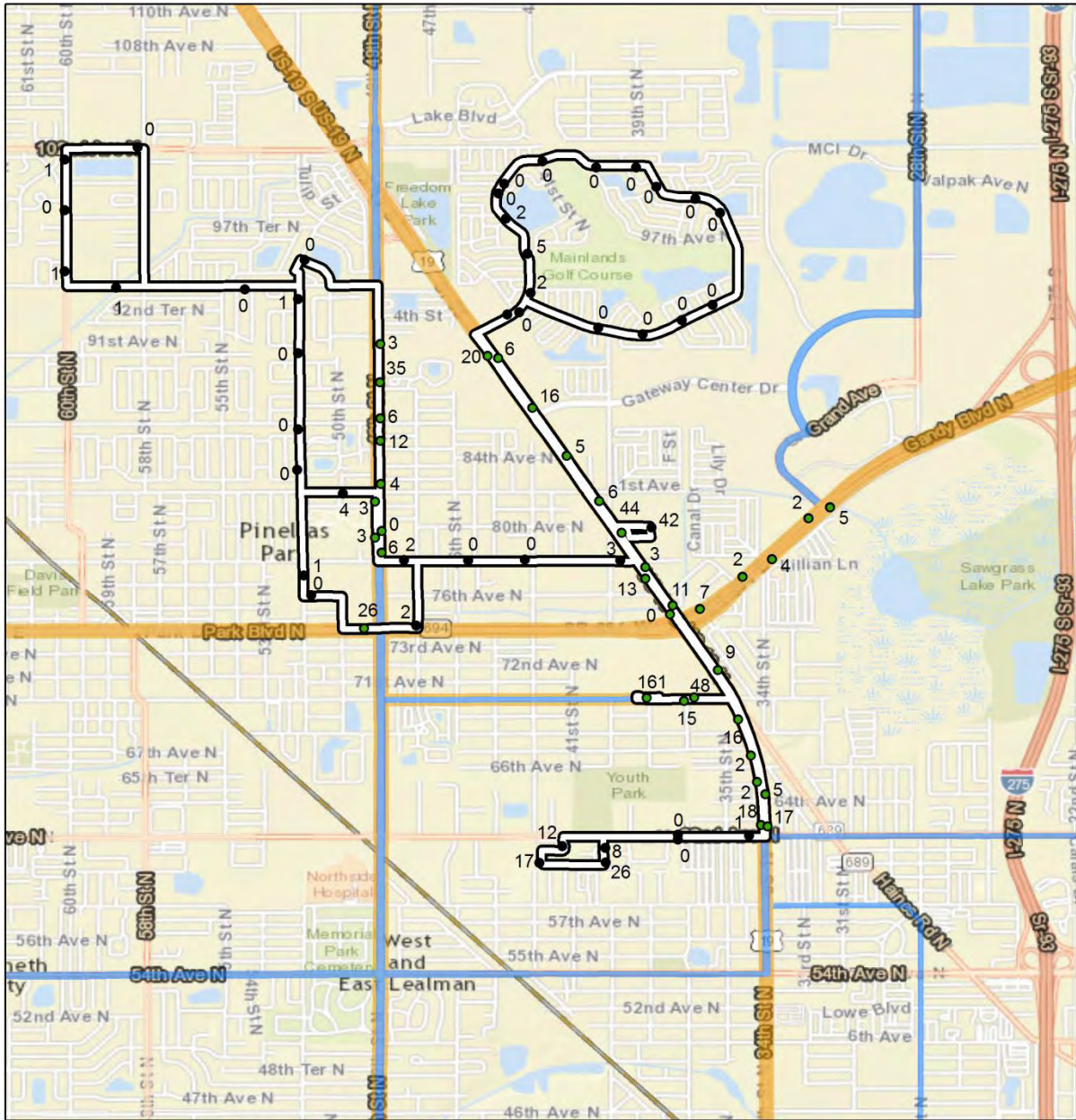
% MINORITY POPULATION	
Pinellas County	23.58%
3/4 Mile of PSTA System (FY15)	23.73%
3/4 Mile of ROUTE 58	18.62%

Source: U.S. Census Bureau ACS, 2013 5- Year
PSTA, 2015

0 1 Miles







N


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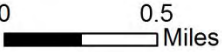
Route 444 - Average Weekday Total Ridership by Stop

Legend


-  Route 444
-  Stop Served by Route 444 Only
-  Stop Served by Multiple Routes
-  15 Minute Frequency
-  30 Minute Frequency
-  60 Minute & Greater Frequency



N

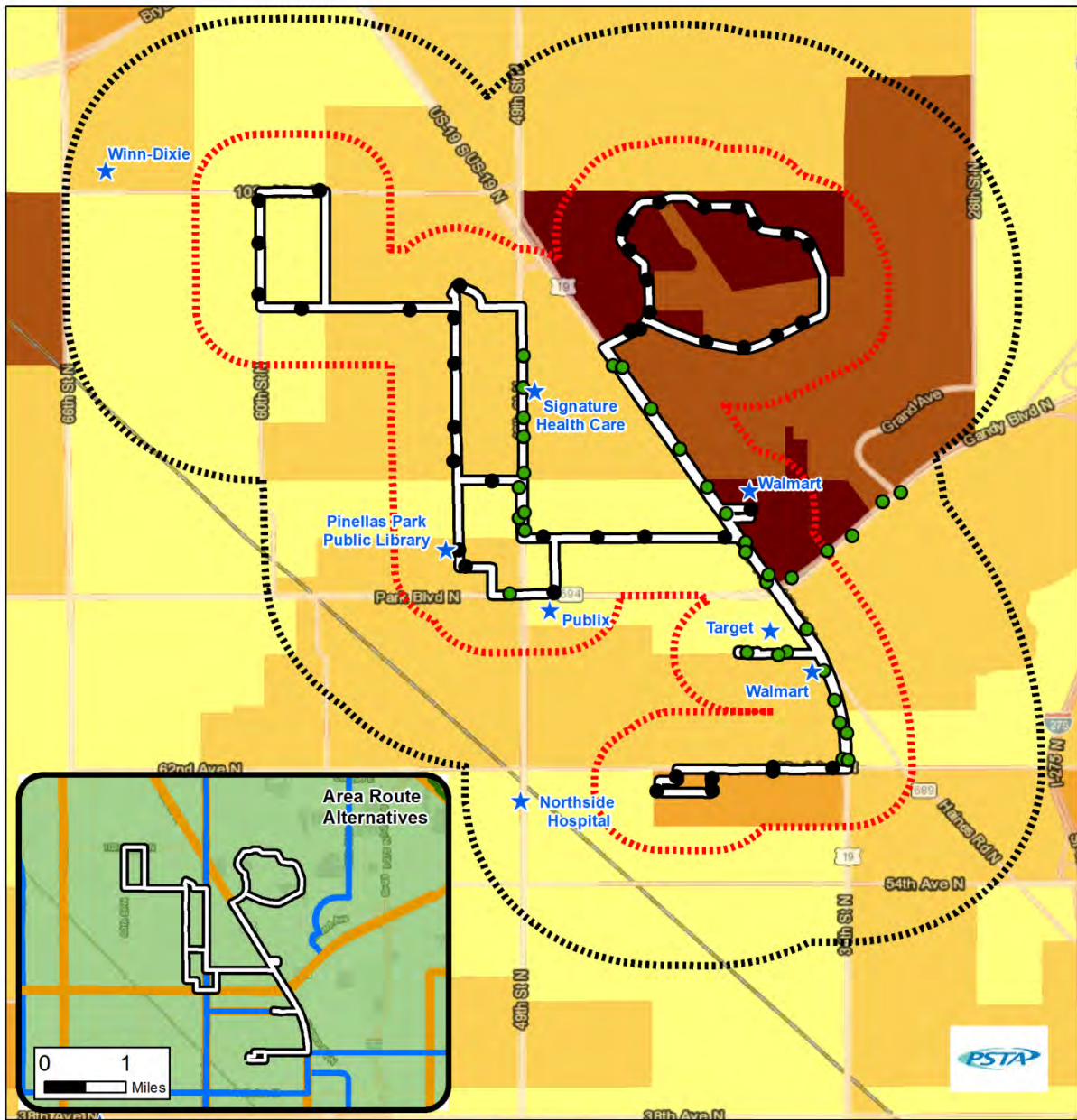


0 0.5 Miles



DRAFT JULY 2015

Source: PSTA Feb 8 - June 6 2015 Booking

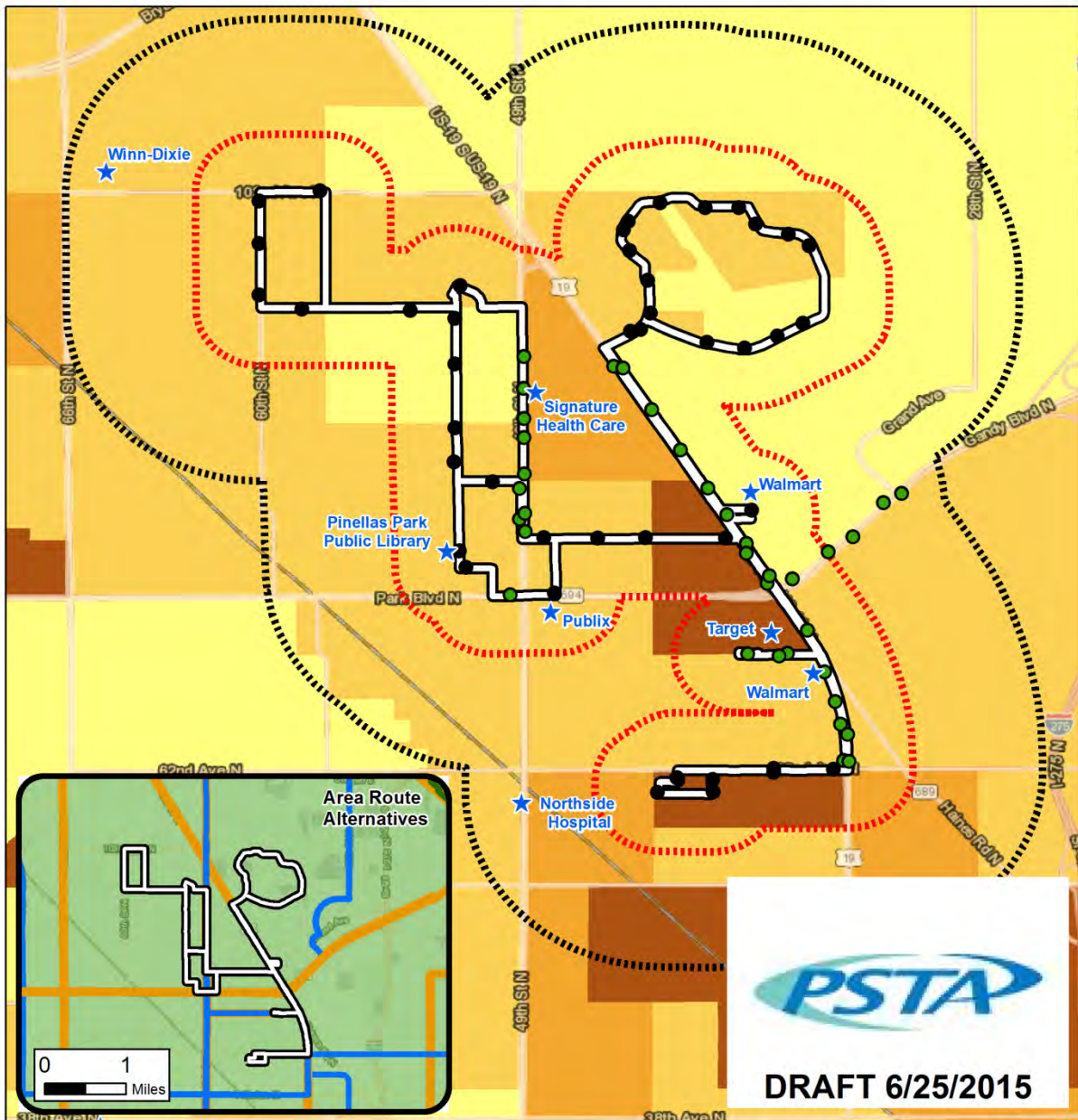


Population Over Age 65 - Route 444

Legend 3/4-mi buffer ★ Key Destinations 1/4-mi buffer = Route 444 Stop Served by Route 444 Only Stop Served by Multiple Routes 15 Minute Frequency (Inset Map) 30 Minute Frequency (Inset Map) 60 Minute & Greater Frequency (Inset Map)		% Population Age 65+ By Block Group 0% - 15% 47% - 63% 15% - 31% > 63% 31% - 47% DART Service Area Phase 1 (Inset Map) Regional Services (Inset Map) Trolley Services (Inset Map)		<table border="1"> <thead> <tr> <th colspan="2">% POPULATION AGE 65 AND OVER</th> </tr> </thead> <tbody> <tr> <td>Pinellas County</td> <td>21.70%</td> </tr> <tr> <td>3/4 Mile of PSTA System (FY15)</td> <td>21.71%</td> </tr> <tr> <td>3/4 Mile of ROUTE 444</td> <td>18.92%</td> </tr> </tbody> </table> <p>Source: U.S. Census Bureau ACS, 2013 5-Year PSTA, 2015</p>	% POPULATION AGE 65 AND OVER		Pinellas County	21.70%	3/4 Mile of PSTA System (FY15)	21.71%	3/4 Mile of ROUTE 444	18.92%
% POPULATION AGE 65 AND OVER												
Pinellas County	21.70%											
3/4 Mile of PSTA System (FY15)	21.71%											
3/4 Mile of ROUTE 444	18.92%											

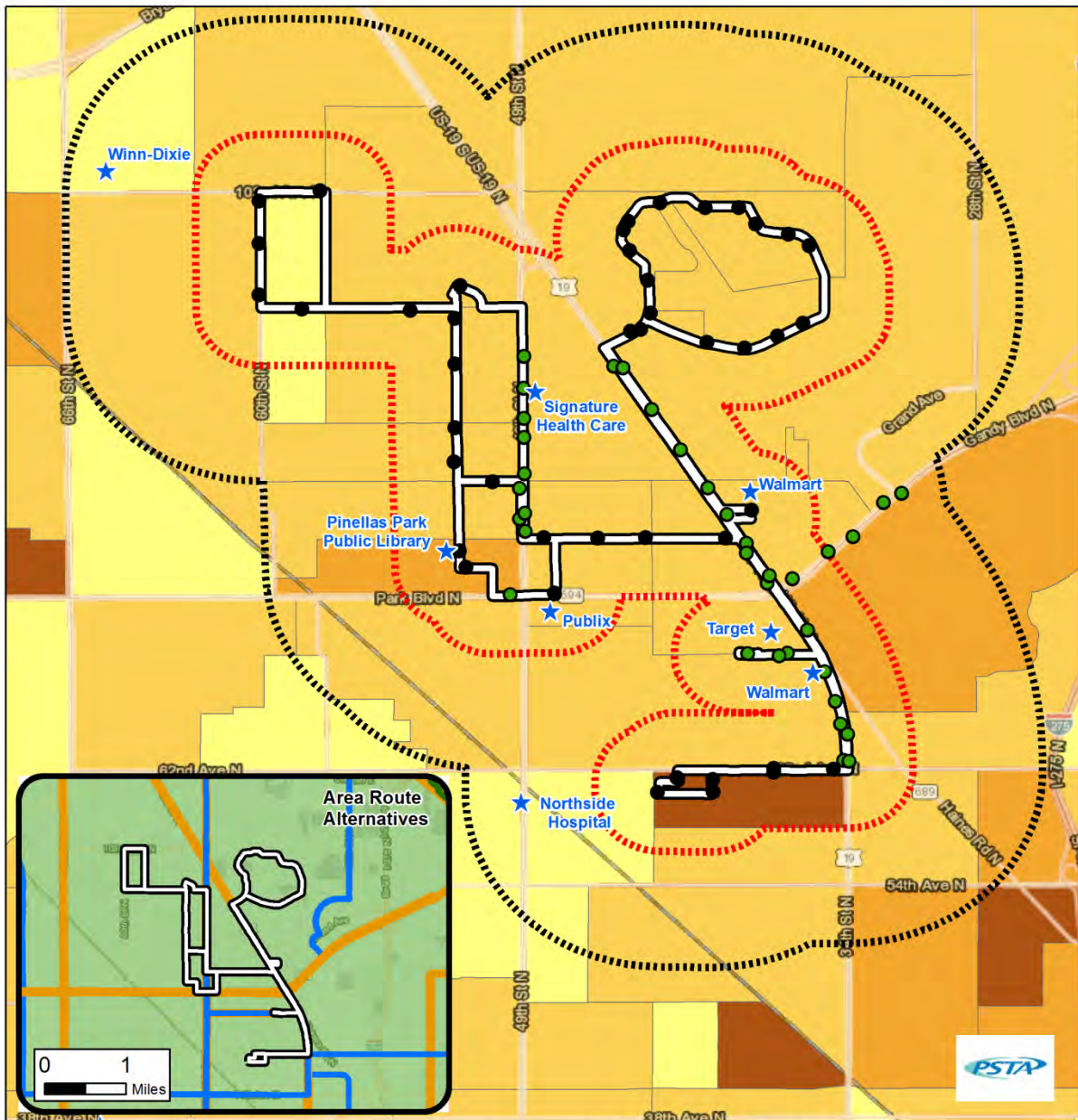
0 0.5 Miles

DRAFT JULY 2015



Population Below Poverty - Route 444

<p>Legend</p> <ul style="list-style-type: none"> 3/4-mi buffer 1/4-mi buffer Stop Served by Route 444 Only Stop Served by Multiple Routes 15 Minute Frequency (Inset Map) 30 Minute Frequency (Inset Map) 60 Minute & Greater Frequency (Inset Map) Key Destinations Route 444 		<p>% Population Below Poverty by Block Group</p> <ul style="list-style-type: none"> 0% - 8% 8% - 19% 19% - 30% > 30% 	<table border="1"> <thead> <tr> <th colspan="2">% POPULATION BELOW POVERTY</th> </tr> </thead> <tbody> <tr> <td>Pinellas County</td> <td>12.94%</td> </tr> <tr> <td>3/4 Mile of PSTA System (FY15)</td> <td>13.02%</td> </tr> <tr> <td>3/4 Mile of ROUTE 444</td> <td>15.27%</td> </tr> </tbody> </table> <p><small>Source: U.S. Census Bureau ACS, 2013 5- Year PSTA, 2015</small></p>	% POPULATION BELOW POVERTY		Pinellas County	12.94%	3/4 Mile of PSTA System (FY15)	13.02%	3/4 Mile of ROUTE 444	15.27%
% POPULATION BELOW POVERTY											
Pinellas County	12.94%										
3/4 Mile of PSTA System (FY15)	13.02%										
3/4 Mile of ROUTE 444	15.27%										
<ul style="list-style-type: none"> DART Service Area Phase 1 (Inset Map) Regional Services (Inset Map) Trolley Services (Inset Map) 		<p>0 0.5 Miles</p>									



Households with Zero Vehicle Access - Route 444

Legend

- 3/4-mi buffer
- 1/4-mi buffer
- Stop Served by Route 444 Only
- Stop Served by Multiple Routes
- 15 Minute Frequency (Inset Map)
- 30 Minute Frequency (Inset Map)
- 60 Minute & Greater Frequency (Inset Map)
- Key Destinations
- Route 444

Households with Zero Vehicle Access by Block Group

- 0% - 4%
- 4% - 14%
- 14% - 24%
- DART Service Area Phase 1 (Inset Map)
- Regional Services (Inset Map)
- Trolley Services (Inset Map)
- 24% - 33%
- > 33%

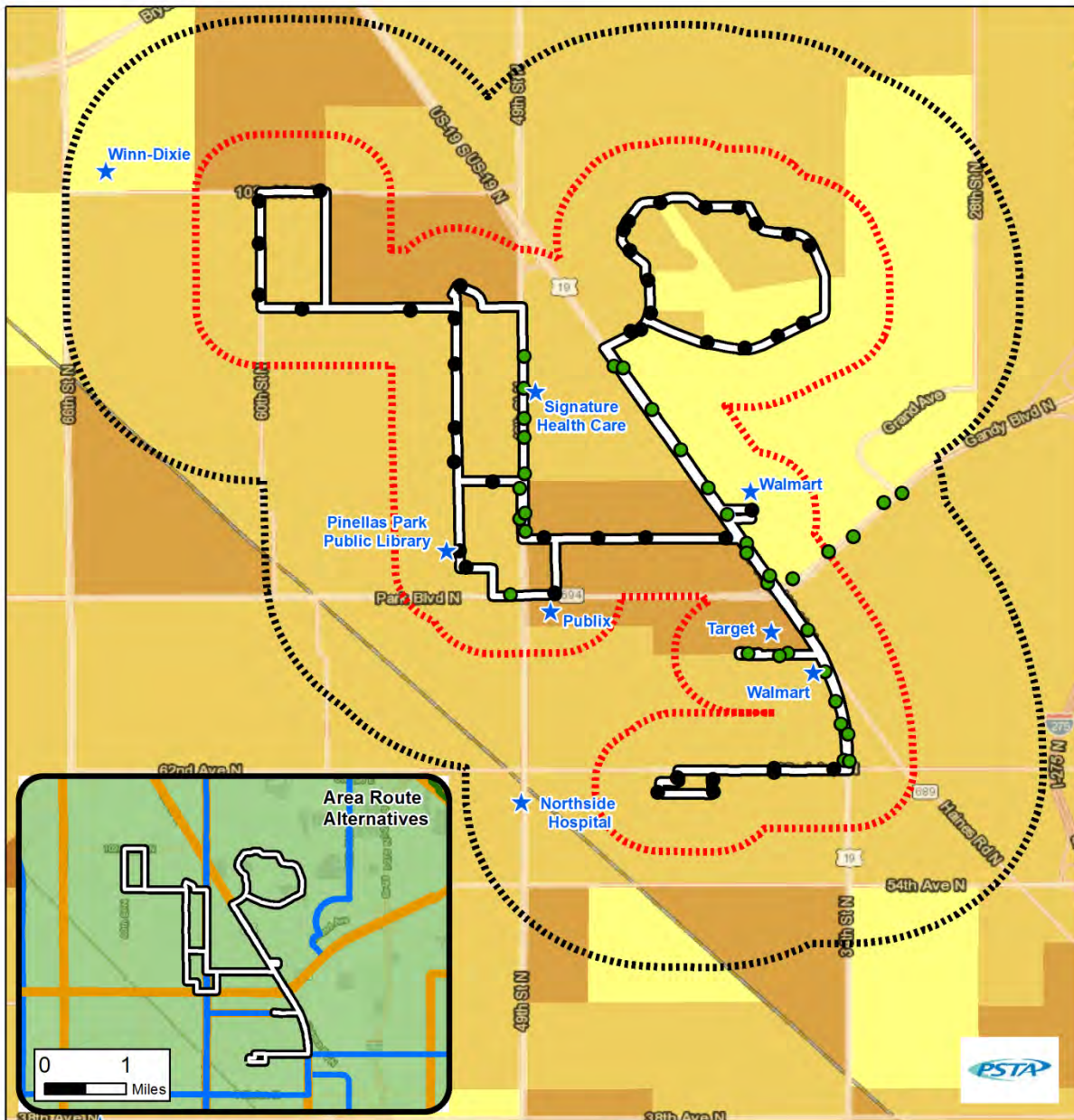
% HOUSEHOLDS WITH ZERO VEHICLE ACCESS

Pinellas County	8.76%
3/4 Mile of PSTA System (FY15)	8.83%
3/4 Mile of ROUTE 444	9.58%

Source: U.S. Census Bureau ACS, 2013 5-Year PSTA, 2015

0 0.5 Miles

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Minority Population - Route 444

Legend

- 3/4-mi buffer
- 1/4-mi buffer
- Stop Served by Route 444 Only
- Stop Served by Multiple Routes
- 15 Minute Frequency (Inset Map)
- 30 Minute Frequency (Inset Map)
- 60 Minute & Greater Frequency (Inset Map)
- Key Destinations
- Route 444

% Minority Population By Block Group

0% - 12%	60% - 80%
12% - 35%	> 80%
35% - 60%	

DART Service Area Phase 1 (Inset Map)

Regional Services (Inset Map)

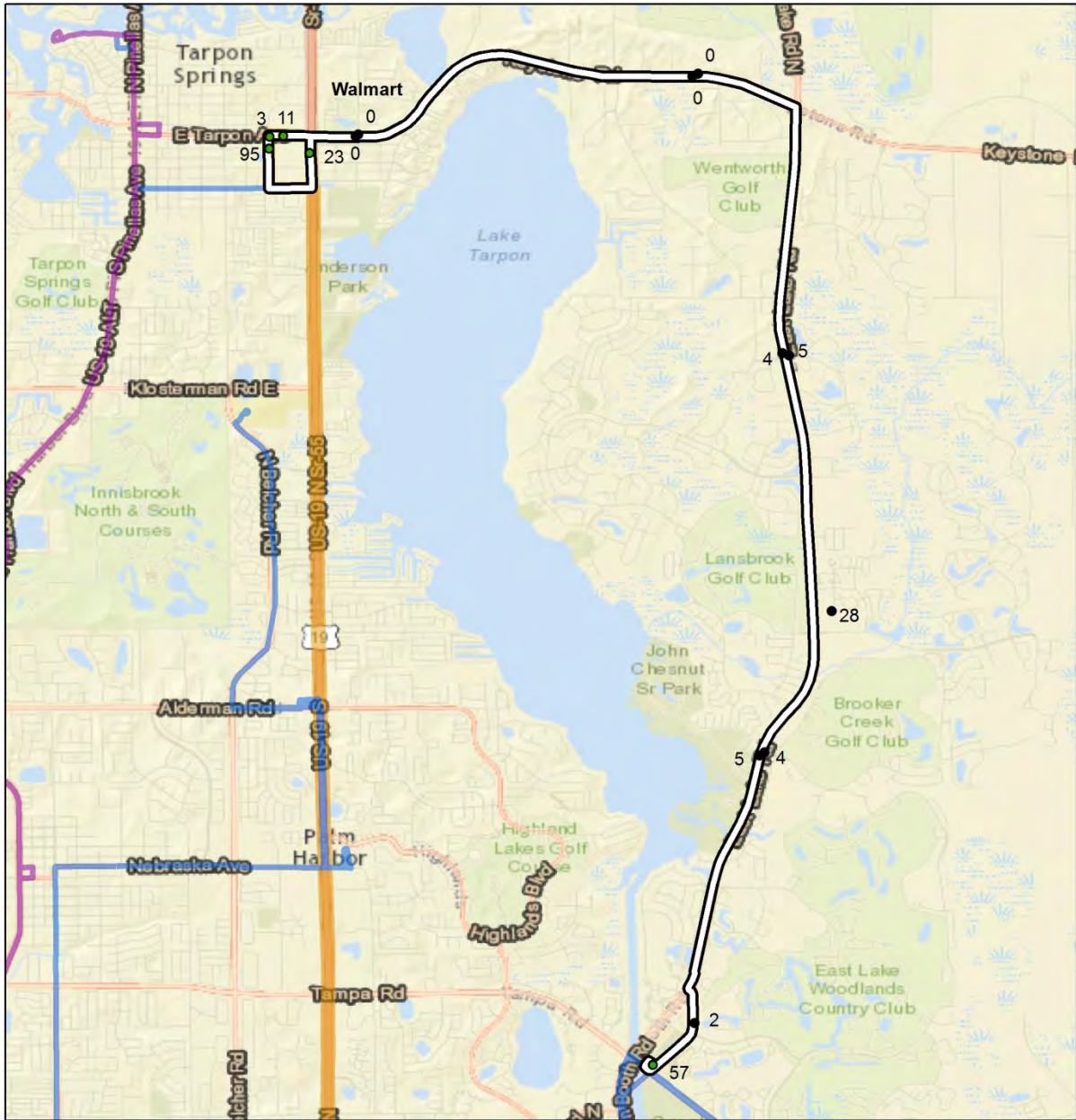
Trolley Services (Inset Map)

% MINORITY POPULATION

Pinellas County	23.58%
3/4 Mile of PSTA System (FY15)	23.73%
3/4 Mile of ROUTE 444	25.38%

Source: U.S. Census Bureau ACS, 2013 5- Year PSTA, 2015

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East Lake Connector - Average Weekday Total Ridership by Stop

Legend

-  Route 811
-  Stop Served by Route 811 Only
-  Stop Served by Multiple Routes
-  Trolley Services
-  30 Minute Frequency
-  60 Minute & Greater Frequency

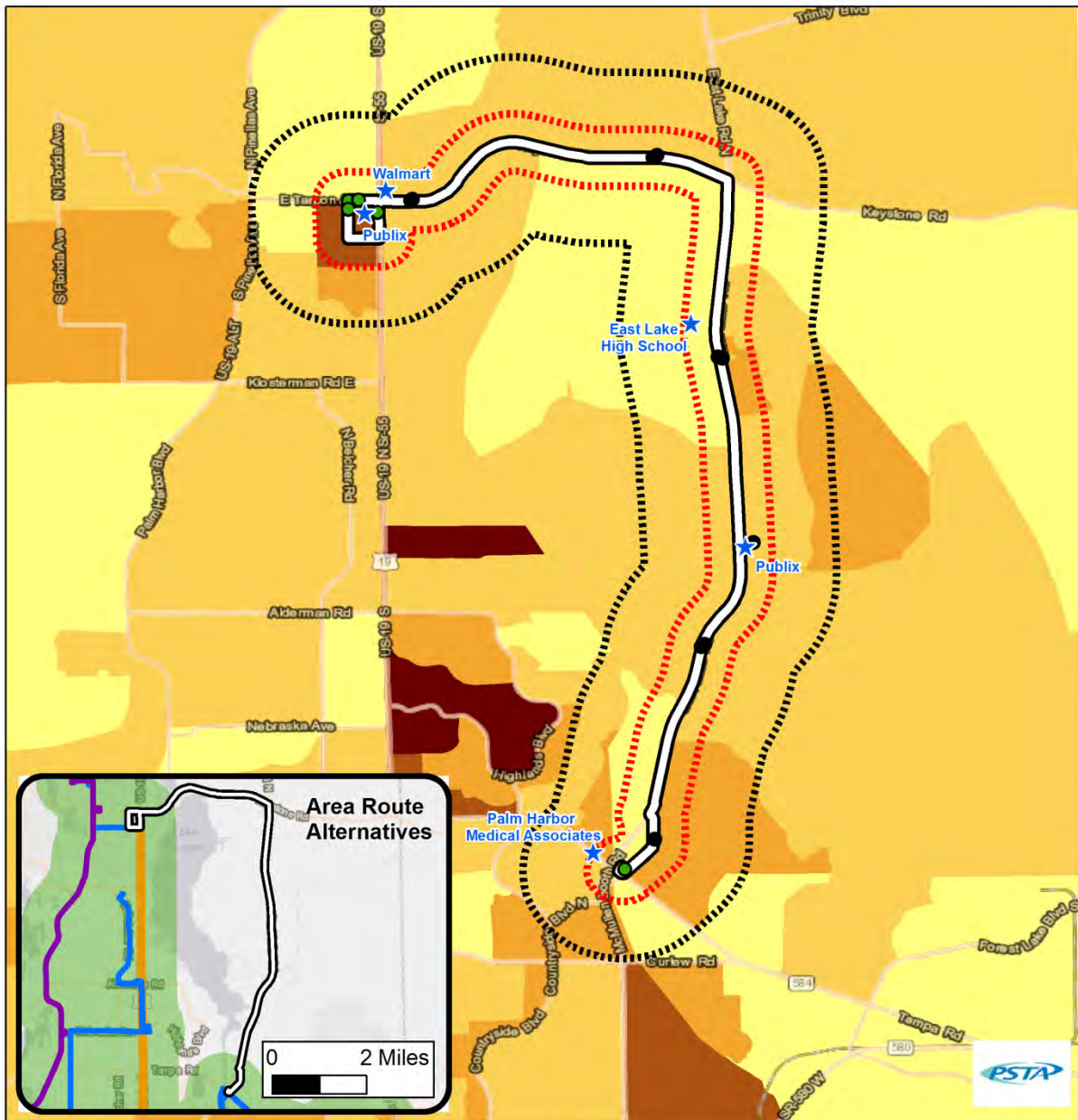


0 0.5
Miles



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Source: PSTA Feb 8 - June 6 2015 Booking



Population Over Age 65 - Route East Lake Connector (ELC)

Legend

- 3/4-mi buffer
- Route ELC
- Stop Served by Route ELC Only
- Stop Served by Multiple Routes
- 15 Minute Frequency (Inset Map)
- 30 Minute Frequency (Inset Map)
- 60 Minute & Greater Frequency (Inset Map)
- Key Destinations
- Route ELC

% Population Age 65+ By Block Group

- 0% - 15%
- 15% - 31%
- 31% - 47%
- DART Service Area Phase 1 (Inset Map)
- 47% - 63%
- > 63%
- Regional Services (Inset Map)
- Trolley Services (Inset Map)

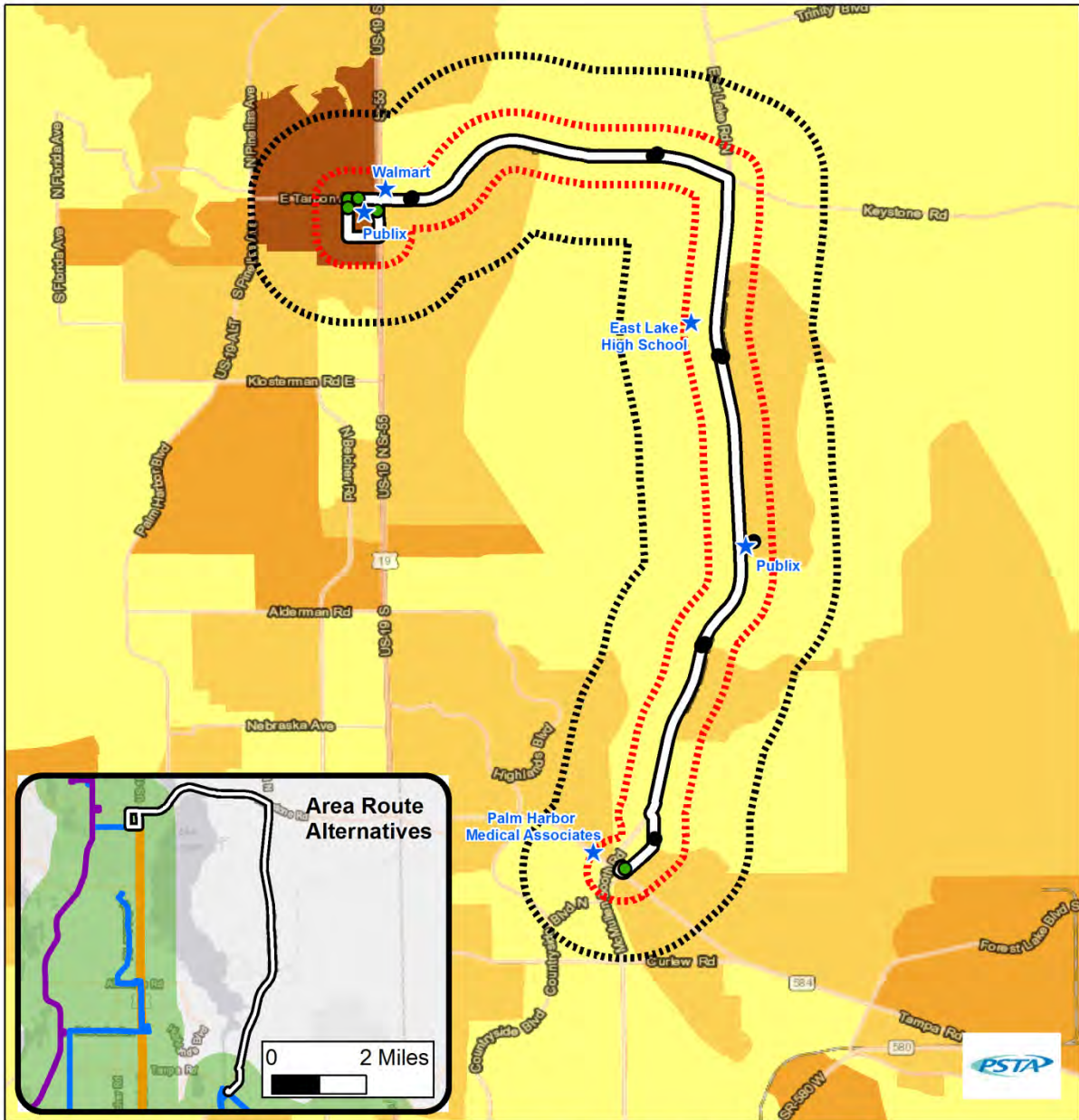
% POPULATION AGE 65 AND OVER

Pinellas County	21.70%
3/4 Mile of PSTA System (FY15)	21.71%
3/4 Mile of ROUTE ELC	22.75%

Source: U.S. Census Bureau ACS, 2013 5-Year PSTA, 2015

0 1 Miles

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Population Below Poverty - Route East Lake Connector (ELC)

Legend

- 3/4-mi buffer
- 1/4-mi buffer
- Stop Served by Route ELC Only
- Stop Served by Multiple Routes
- 15 Minute Frequency (Inset Map)
- 30 Minute Frequency (Inset Map)
- 60 Minute & Greater Frequency (Inset Map)
- Key Destinations
- Route ELC
- DART Service Area Phase 1 (Inset Map)
- Regional Services (Inset Map)
- Trolley Services (Inset Map)

% Population Below Poverty by Block Group

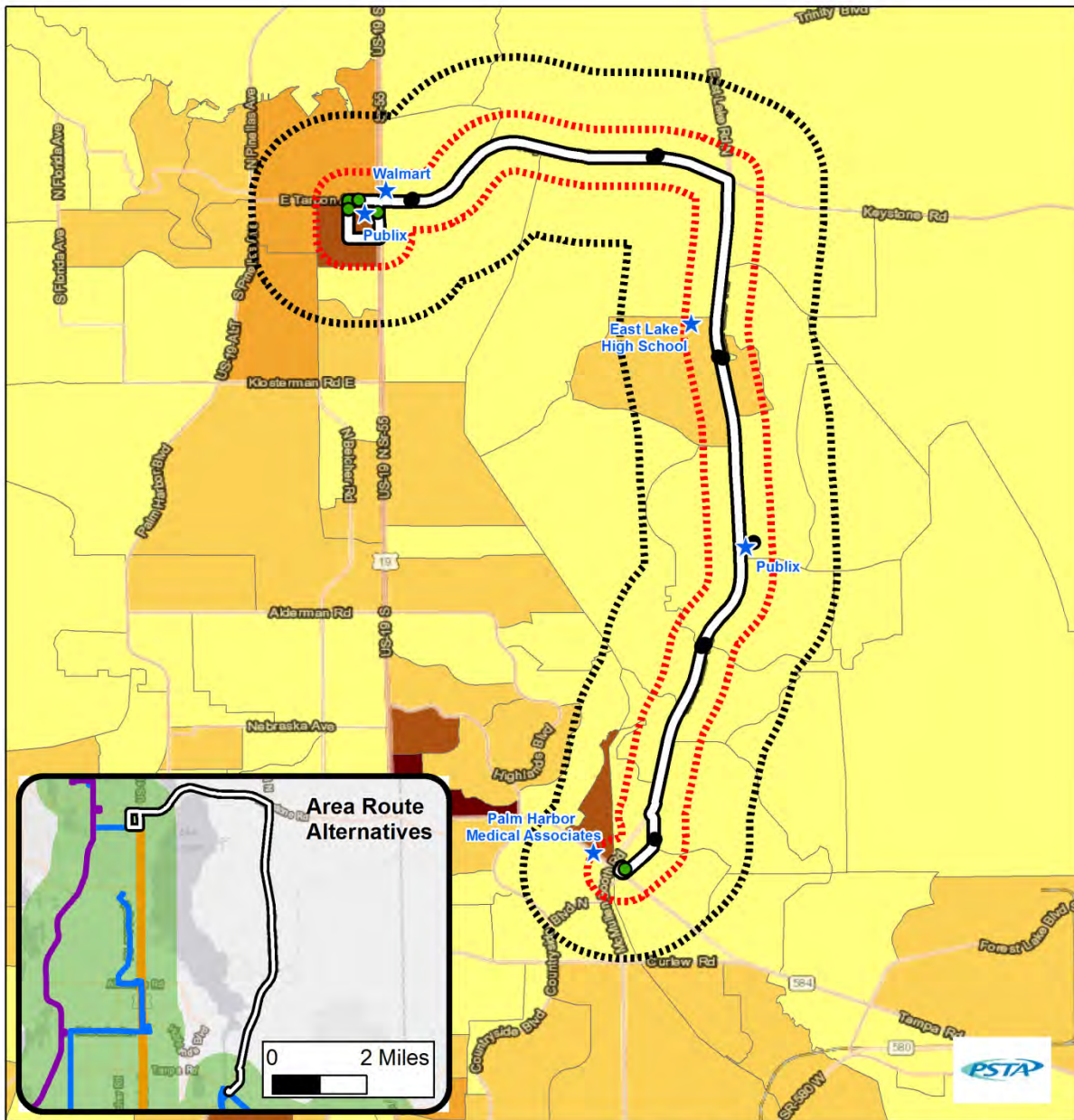
- 0% - 8%
- 8% - 19%
- 19% - 30%
- > 30%

% POPULATION BELOW POVERTY	
Pinellas County	12.94%
3/4 Mile of PSTA System (FY15)	13.02%
3/4 Mile of ROUTE ELC	9.82%

Source: U.S. Census Bureau ACS, 2013 5- Year PSTA, 2015

0 1 Miles

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Households with Zero Vehicle Access - Route East Lake Connector (ELC)

Legend

- 3/4-mi buffer
- 1/4-mi buffer
- Stop Served by Route ELC Only
- Stop Served by Multiple Routes
- 15 Minute Frequency (Inset Map)
- 30 Minute Frequency (Inset Map)
- 60 Minute & Greater Frequency (Inset Map)
- Key Destinations
- Route ELC

Households with Zero Vehicle Access by Block Group

- 0% - 4%
- 4% - 14%
- 14% - 24%
- 24% - 33%
- > 33%
- DART Service Area Phase 1 (Inset Map)
- Regional Services (Inset Map)
- Trolley Services (Inset Map)

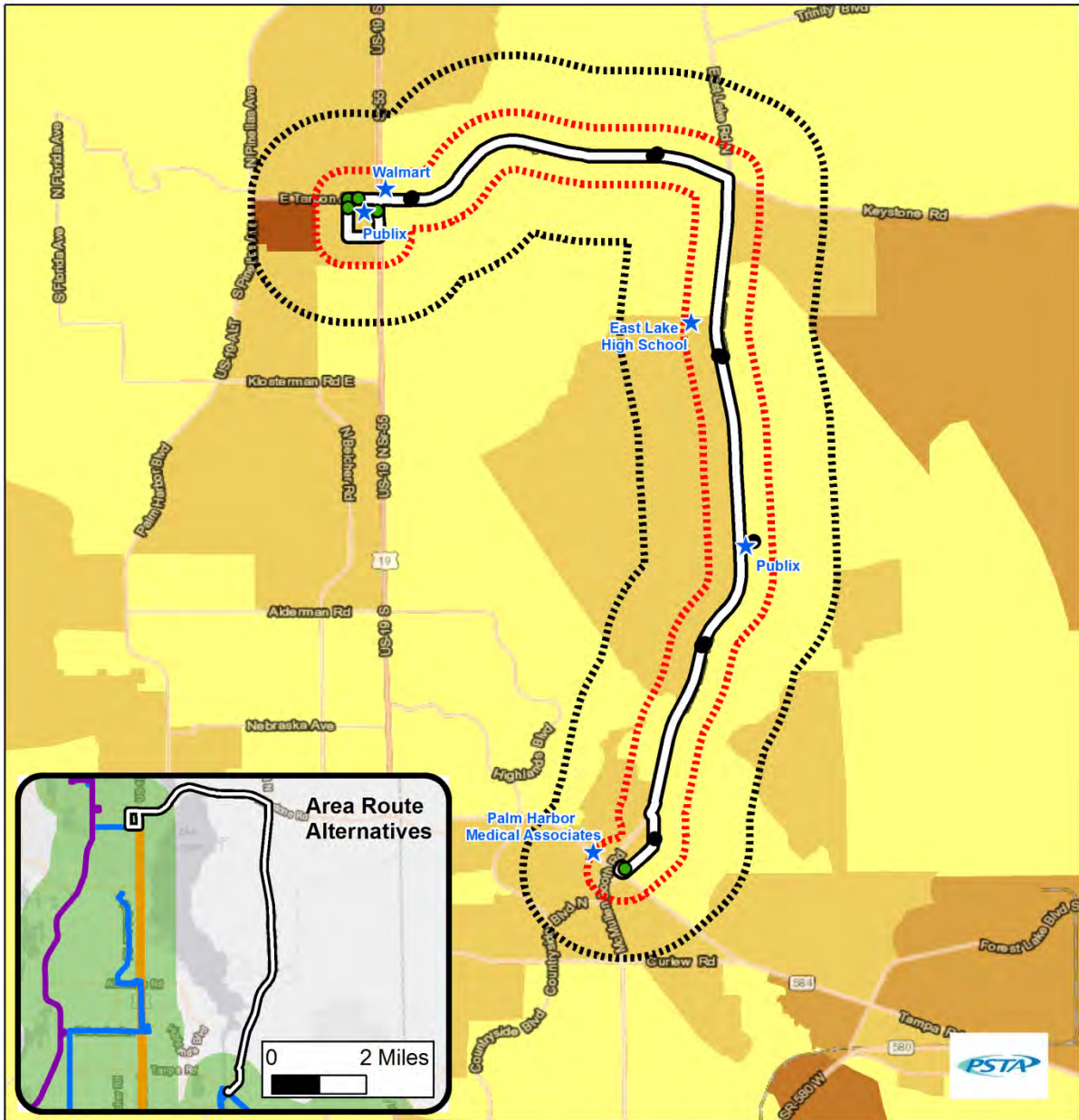
% HOUSEHOLDS WITH ZERO VEHICLE ACCESS

Pinellas County	8.76%
3/4 Mile of PSTA System (FY15)	8.83%
3/4 Mile of ROUTE ELC	5.43%

Source: U.S. Census Bureau ACS, 2013 5-Year PSTA, 2015

0 1 Miles

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Minority Population - Route East Lake Connector (ELC)

Legend

- 3/4-mi buffer
- 1/4-mi buffer
- Stop Served by Route ELC Only
- Stop Served by Multiple Routes
- 15 Minute Frequency (Inset Map)
- 30 Minute Frequency (Inset Map)
- 60 Minute & Greater Frequency (Inset Map)
- Key Destinations
- Route ELC

% Minority Population By Block Group

- 0% - 12%
- 12% - 35%
- 35% - 60%
- DART Service Area Phase 1 (Inset Map)
- Regional Services (Inset Map)
- Trolley Services (Inset Map)
- 60% - 80%
- > 80%

% MINORITY POPULATION

% MINORITY POPULATION	
Pinellas County	23.58%
3/4 Mile of PSTA System (FY15)	23.73%
3/4 Mile of ROUTE ELC	14.74%

Source: U.S. Census Bureau ACS, 2013 5-Year PSTA, 2015

0 1 Miles

DRAFT JULY 2015

Appendix B

2015 On-Board Survey Summary

Draft June 23, 2015

Appendix B

Section 1 – Introduction..... 3

 Purpose of Survey 3

 Report Organization..... 3

Section 2 – Survey Design and Implementation 3

 Survey Instrument..... 3

 Survey Method..... 4

 Survey Implementation 4

 On-Board Survey Overall Results Summary..... 4

Section 3 – Data Processing 5

 Data Cleaning and Editing..... 5

 Geocoding..... 5

Section 4 – On-Board Survey Results..... 7

 Travel Characteristics..... 7

 Route 1..... 9

 Route 30..... 15

 Route 58..... 21

 Trip Origins and Destinations..... 22

 Route 444..... 27

 East Lake Connector (Route 811)..... 33

Section 1 – Introduction

As part of the data collection effort for development of the 2015 PSTA Transit Development Plan (TDP), an on-board survey of PSTA bus passengers on select routes was conducted in May 2015. The survey was designed to collect trip origin-destination information and limited rider travel behavior input on the selected routes. Information collected for this on-board survey effort will be used to identify route adjustment possibilities for better route performance efficiency. This report documents the approach and results of the on-board survey effort.

Purpose of Survey

PSTA staff indicated the need to obtain the information and opinions of passengers riding Routes 1, 30, 58, 444, and 811 (East Lake Connector). These routes have been exhibiting lower ridership productivity compared to the system average level according to historical statistical records. This on-board survey will provide PSTA with passenger information on these routes, which will be used to develop and support potential service adjustments and/or route alignment changes. The on-board survey effort specifically will assist PSTA in tracking key travel behavior aspects of bus riders (i.e., trip origin and destination questions) on these routes and in soliciting information on possible route modifications.

Report Organization

This on-board survey report is organized into four major sections, including this introduction.

Section 2 presents the **Survey Design and Methodology**. This section documents the process used to develop the survey instrument, develop the survey work plan, and survey implementation. A summary of the overall survey effort is also included in this section.

Section 3 outlines the **Data Processing** steps used to prepare the on-board survey data for analysis. Steps include data cleaning and editing, and data geocoding.

Section 4 documents the **On-Board Survey Results**. Survey data are presented in tabular, graphical, and/or map format. Route transfer information for this survey effort is compared with the similar question included in PSTA 2012 system-wide on-board survey effort.

Section 2 – Survey Design and Implementation

This section documents the steps used to develop the on-board survey instrument and survey implementation process. In addition, a summary of the survey results for each selected route is provided at the end of this section.

Survey Instrument

A list of draft survey questions was prepared by Tindale-Oliver (TO) and submitted to PSTA staff for review. Survey questions focus on identifying trip purposes, trip origins and destinations, and passenger

opinions on series of potential service improvements. After several rounds of discussions with PSTA staff, the list of survey questions were finalized and are included in Appendix A.

Survey Method

The on-board survey was conducted in an interview style and data were recorded using an electronic tablet. The final draft survey instrument was stored in a tablet application so that it could be filled out properly by trained surveyors during the interview process. Most of the trained surveyors used were bilingual so that both English and Spanish speaking riders could be accommodated during the survey process.

Before placing the surveyors on a bus for the full on-board survey effort, each surveyor was required to attend a surveyor orientation session to ensure satisfactory survey completion rates and survey results from each surveyor. The orientation session was conducted to instruct surveyors about their duties and responsibilities and to address any issues or concerns that they may have about the survey process. Specific to this orientation session was instruction on how to perform an on-board survey via a personal interview and how to use the tablet to record data. To facilitate the surveyor orientation, a hands-on and interactive training session was held by TO at PSTA. A surveyor orientation manual was prepared to facilitate the session and was provided to each surveyor for reference.

Survey Implementation

According to the requirements from PSTA staff, at least one full run needed to be surveyed for each individual selected route on a weekday and a Saturday, respectively. The final survey work plan was prepared based on this requirement to ensure the satisfaction of this requirement. The final on-board survey was conducted on one weekday (05/28/2015) and one Saturday (05/30/2015).

On-Board Survey Overall Results Summary

The survey effort returned 185 completed surveys: 121 on the weekday and 64 on Saturday. Table 2-1 lists the number of surveys completed on each selected route for weekday and Saturday.

Table 2-1: Survey Results Summary

Route	Number of Weekday Surveys Completed	Number of Saturday Surveys Completed	Total
1	32	41	73
30	22	23	45
58	31	N/A	31
444	17	N/A	17
811	19	N/A	19
Total	121	64	185

N/A = no Saturday service

Section 3 – Data Processing

This section documents the process by which data were prepared for analysis. For this PSTA on-board survey, data processing mainly includes two steps: data cleaning and editing, and data geocoding. Data cleaning and editing ensures that information collected with the completed on-board surveys is valid and accurately reflected in the database for analysis. Data geocoding ensures that data collected for trip origin and destination questions can be presented in ArcGIS map format.

Data Cleaning and Editing

One of the major advantages of using an interview style to conduct the on-board survey is that surveyors were specifically trained prior to survey implementation to ensure that valid answers were obtained for each survey question and were input correctly into a tablet. Data stored in the tablet were then transmitted to an on-line, computer-based Microsoft Access database for cleaning and editing purposes. Although personal interviews help avoid commonly-experienced response data errors, the data cleaning and editing step was still taken to eliminate inconsistent or invalid responses and to make necessary adjustments to the raw data. Table 3-1 presents a summary of the various data cleaning and editing actions that were typically taken for applicable survey questions.

Table 3-1: Data Cleaning and Editing Summary

Question Number	Action Taken
1, 5, 6, 10, 11, 12	<ul style="list-style-type: none">• Recode responses that correspond to an existing response category.• Identify possible new categories as necessary.• Combine similar answers together with one standard answer.• Make sure answers to transfer follow-up question for Q2 and Q10 make sense.• Confirm logical number of blocks/miles for Q5 and Q10.
2, 3, 4, 7, 8, 9	<ul style="list-style-type: none">• Find address for the answers to the name of place questions.• Confirm logical connections between answers to Q3 and answers to Q8.

Geocoding

One of the key aspects of this PSTA on-board survey effort was to provide travel behavior information for the origin-destination analysis. To support that objective, answers to trip origin (Q2 and Q3) and trip destination (Q7 and Q8) questions were used for further analysis.

After the data cleaning and editing process, a geocoding run was performed for trip origin and trip destination questions, respectively. Geocoding is the process of assigning geographic coordinates to data records using ArcGIS software. The geocoding run included the following steps:

- Perform an automatic geocoding address match. For each location question, this initial geocoding run resulted in approximately 40- to 50-percent valid address matches for the 185 survey records collected.
- Correct address and spelling errors. For the addresses that could not be automatically matched, each of the unmatched records was reviewed manually to correct mistakes like misspelled road names, misspelled/missed road prefixes and suffixes, etc., in order to improve the number of matching records. Further research was completed for records with valid place names to collect more precise address information.
- Conduct further research for place names. Records with valid place names were researched on Google Maps and/or MapQuest to obtain specific addresses. The specific addresses were then manually applied to unmatched records after the automatic geocoding run to improve the address matches.

After performing the geocoding run steps described above, the number of valid survey records for trip origin question is 155, while the number of valid survey records for trip destination question is 151. These valid records were used to develop the trip origin and destination maps for each individual route and identify the top 10 trip origins and destinations, which are presented in the next section.

Section 4 – On-Board Survey Results

This section documents the results of the PSTA on-board survey analysis. For most of questions, an overall survey result was provided, along with weekday and Saturday survey results presented individually. For some applicable questions, survey results were further refined to show each individual route’s characteristics. In addition, when applicable, results from PSTA 2012 on-board survey were obtained in order to facilitate a comparison between 2012 and 2015 analysis results. The following is a summary of the on-board survey analysis results. On-board survey questions in this chapter are organized into two major categories:

- **Travel Characteristics** – questions about individual trip attributes.
- **Service Improvements** – questions about potential service improvements and customer service preferences.

Travel Characteristics

Travel characteristics questions were designed to ask respondents about their individual trip attributes and their travel behavior. Topics covered by the travel characteristics questions on the survey include:

- Trip origin type
- Trip destination type
- Trip origin-destination pattern
- Transit stop/station access and egress travel mode
- Transfers
- Mode choice

Questions 1 and 6 asked respondents about the type of place they were coming from to start their one-way trip and the type of place they are going to on the same one-way trip, respectively. Figures 4-1, 4-2, and 4-3 present the answers to Question 1 by overall results, weekday, and Saturday. As can be seen in the figures, trips originating from “Home” had the largest proportion of responses among all trip origins, followed by “Work.” “Shopping/Errands” ranked third among all responses, and approximately 72 percent more respondents indicating “Shopping/Errands” as their trip origin on Saturday than those on weekday. In addition, no “Medical/Doctor,” “Social/Personal/Church,” “School (K-12),” or “College/University/Tech” can be found for Saturday trip origins.

Figure 4-1: Overall Trip Origins Summary

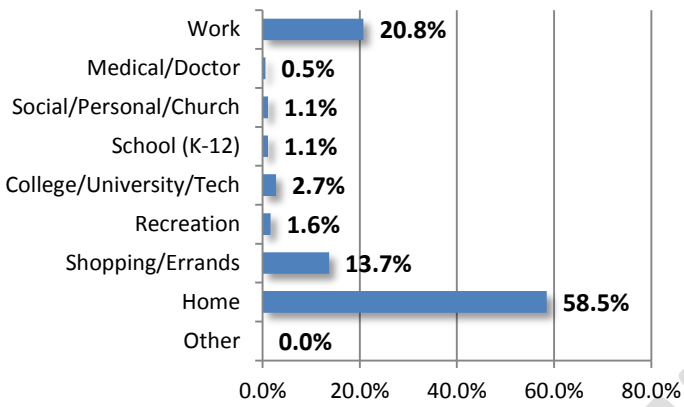


Figure 4-2: Trip Origins Summary (Weekday)

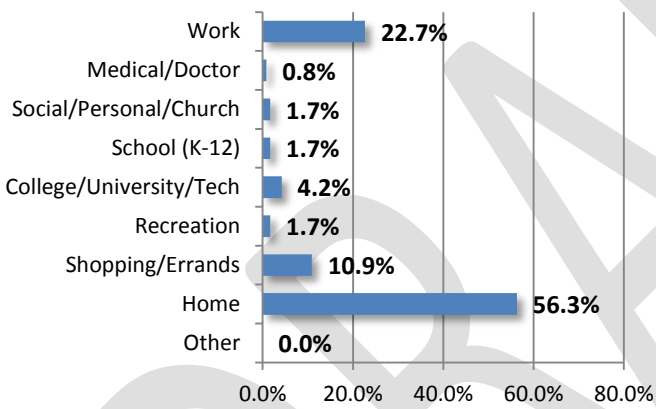
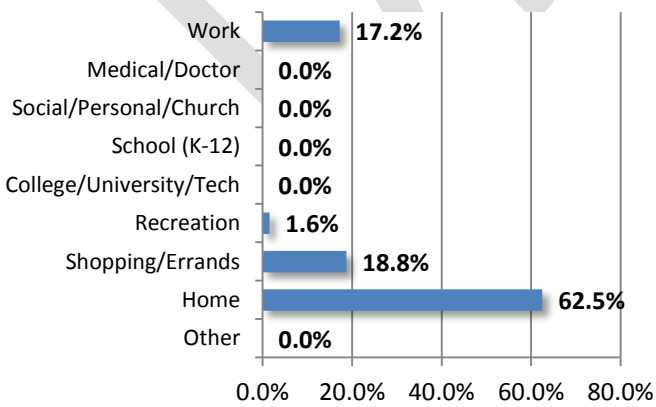


Figure 4-3: Trip Origins Summary (Saturday)



Route 1

Route 1 provides connectivity between Tyrone Square Mall and Northeast Shopping Center via 22nd Ave N./4th St N. and intermittent service to Gateway Mall via 1st Ave N. Route 1 serves 1 major mall and 3 major shopping centers adjacent to primarily single-family residences along the 22nd Avenue Corridor.

Key Points from On-Board Survey

- Trips originating from “Home” make up the largest proportion of responses (65.8%) among trip origins for Route 1. “Shopping/Errands” is the next largest with 20.5% followed by 8.2% of “Work” trip origins.
- “Work, Shopping/Errands, and Home” are the main responses for trip purposes with around 25 to 30 percent responses for each purpose. There were no respondents indicating “School (K-12)” for trip purposes.
- The main trip origins and destinations are located at the Tyrone mall, with a total of 14 origin and destination trip counts from the survey.
- Over 75 percent of respondents indicated that walking is their main access mode. Approximately 11 percent transferred from another bus, almost 8 percent biked and 3 percent were dropped off.
- Similar to the stop access mode, approximately 70 percent of respondents indicated they would walk from the bus stop to their final destination. Over 20 percent transferred to another bus to their final destination.
- The most desired improvement to Route 1 is the “expansion of service hours” (46.2% of responses). This is followed by “improved frequency” (36.9%), “other” (32.3%), and “more service on weekends” (13.8%).
- If the bus were no longer an option, 25 percent of respondents indicated they would not make this trip. The remaining 75 percent of respondents would find an alternate form of transportation such as: “ride with someone” (17.5%), “taxi” (15.9%), “bike” or “drive” (12.7% each), “walk” (11.1%), and “other” (48%).

Trip Origins and Destinations

Questions 1 and 6 asked respondents about the type of place they were coming from to start their one-way trip and the type of place they are going to on the same one-way trip, respectively. Figure 4-4 and 4-5 show the survey responses.

Figure 4-4: Route 1 Trip Origins

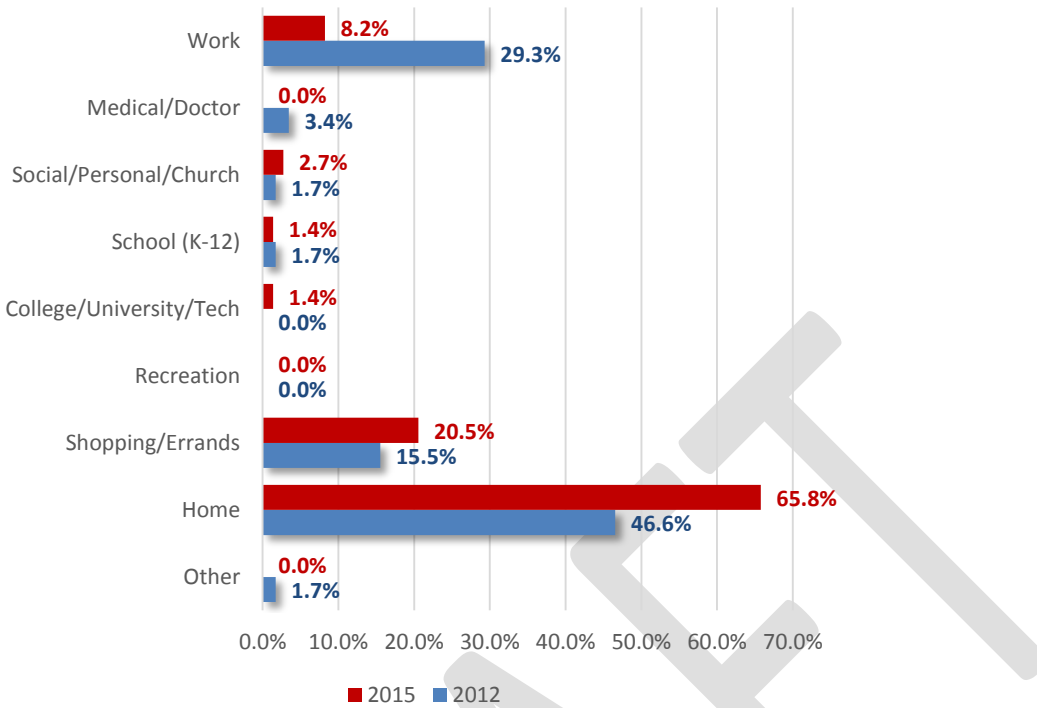
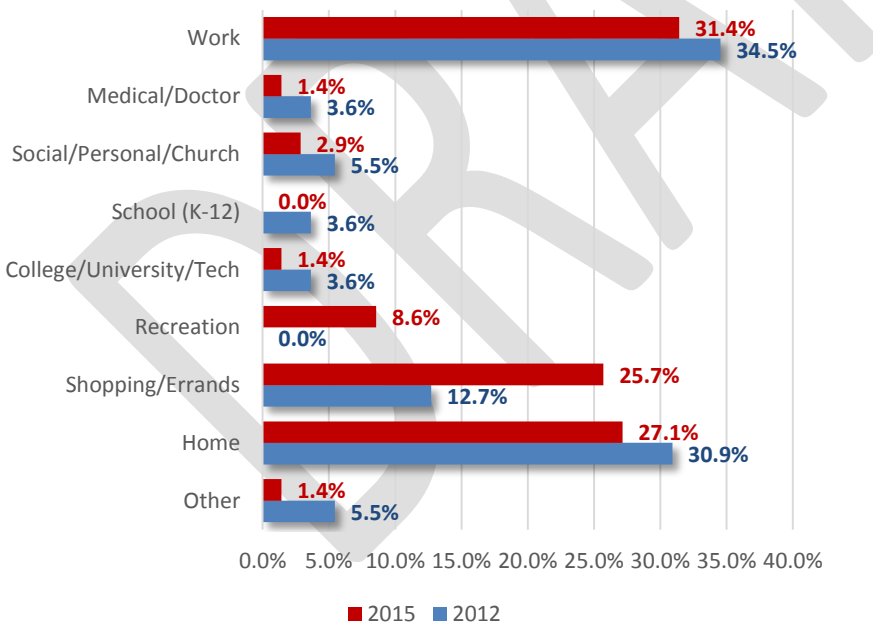


Figure 4-5: Route 1 Trip Destination



An examination of the geocoded data results in a list of the top referenced origins and destinations. These origins and destinations include major commercial developments, local restaurants, and medical facilities, among others. Figure 4-6 presents the list of major activity

centers, with counts for them as either trip origins or trip destinations, and in combination as a total, for each individual route, respectively.

Figure 4-6: Route 1 Major Trip Origins and Destinations Counts

Activity Point	Origin Counts	Destination Counts	Total Counts
Tyrone Mall	4	10	14
Gateway Mall	2	3	5
Publix (250 3rd St S, St. Petersburg)	2	0	3
Publix (3700 4 th St N, St Petersburg)	0	3	2
Northeast Park Shopping Center	2	0	2
Mazzaros	0	2	2
St. Pete College	1	0	1
Gold's Gym	0	1	1

Figure 4-7: Trip Origins and Destinations of Route 1 Riders

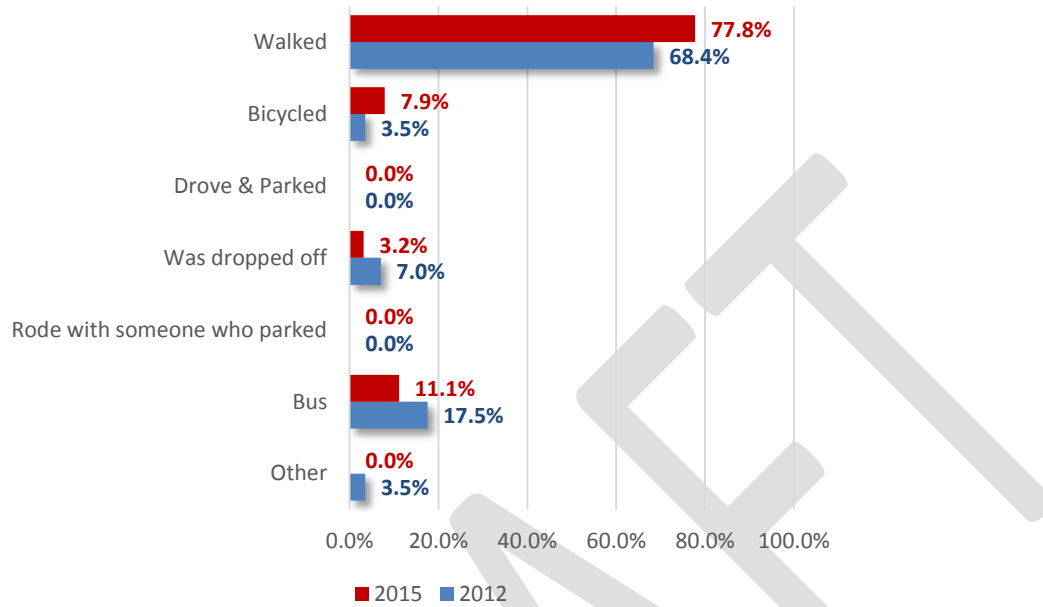


Author: Tindale-Oliver
 Date: June 23, 2015
 Source: Phase 1 2015 On-Board Survey

Access Mode

Question 5 in the survey asks how an individual gets to the bus stop, indicated as bus stop access mode in the following figure.

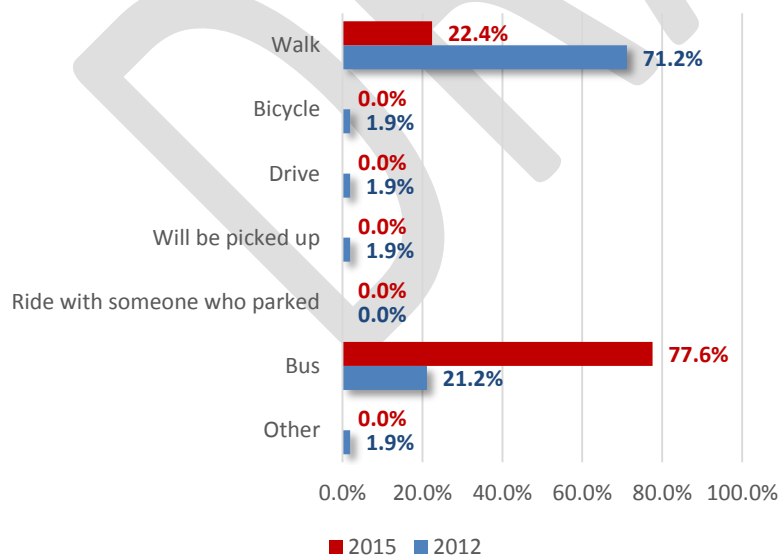
Figure 4-8: Route 1 Stop Access Mode



Stop Egress Mode

Survey Question 10 asks how an individual will get from the bus stop they are going to now, to their final destination. The results for Route 1 are show in Figure 4-9.

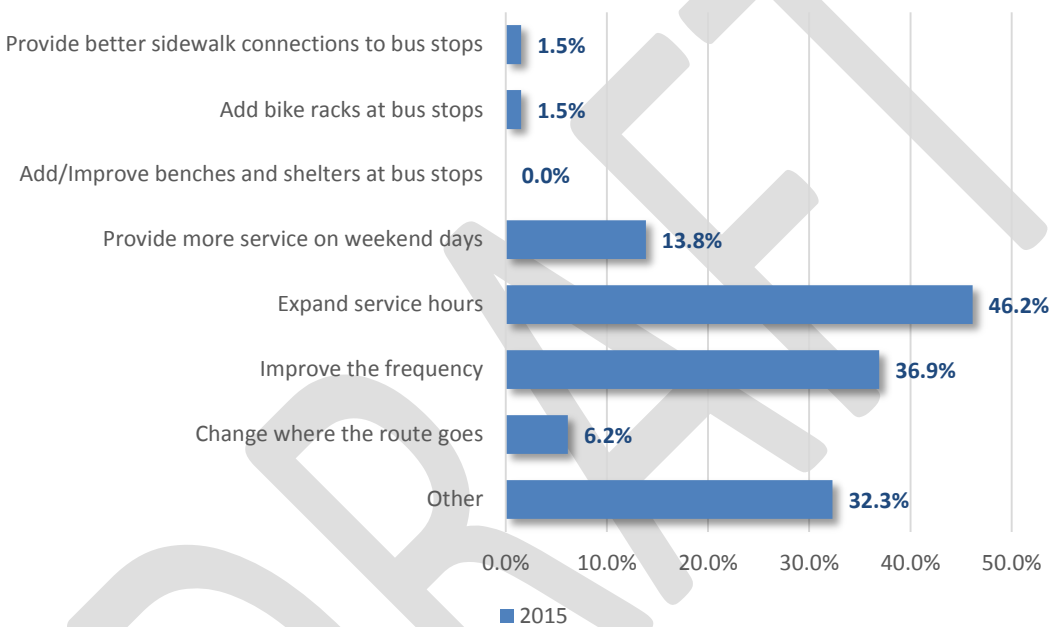
Figure 4-9: Route 1 Stop Egress Mode



Route 1 Preferred Modifications

Question 12, the last question of the on-board survey, asked respondents what aspects of the route that they would modify to improve the route for their travel needs. A list of potential modifications was provided with additional opportunities for respondents to present their own opinions in follow-up questions and an “Other” category. Respondents were allowed to select more than one potential modification. Figure 4-10 presents the results to this question for Route 1. Because the riders could select multiple responses, it is important to note that the indicated percentages will not sum to 100 percent.

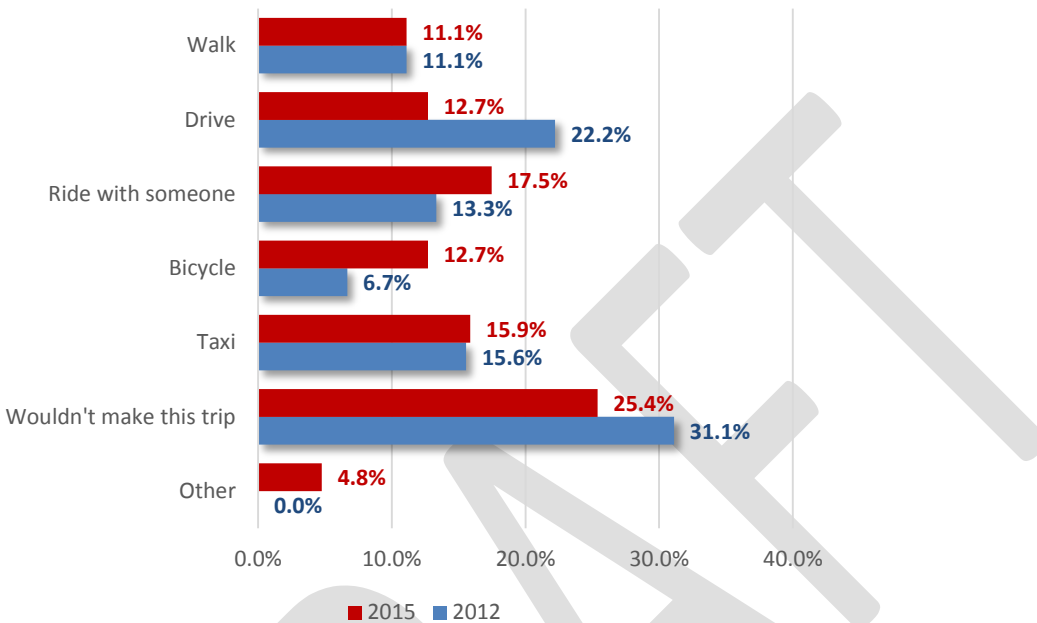
Figure 4-10: Route 1 Preferred Modifications



Route 1 Transportation Alternatives

Question 11 of the on-board survey asked respondents how they would make the trip if not by bus. Figure 4-11 illustrates the results of this question

Figure 4-11: Route 1 Transportation Alternatives



Route 30

Route 30 provides connectivity between Tyrone Square Mall and Northeast Shopping Center via 30th Ave N./4th St N. Route 30 serves 1 major mall and 2 major shopping centers adjacent to primarily single-family residences along the 30th Avenue Corridor.

Key Points From On-Board Survey

- **Origin:** Trips originating from “Home” make up the largest proportion of responses with almost 60 percent. “Work” and “Shopping/Errands” follow with approximately 30 and 10 percent respectively. Trips originating from “Recreation” also made up over 2 percent of responses.
- **Destination:** The main destinations for trips on Route 30 are “Home” (33.3%), “Work” (31.0%) and “Shopping/Errands” (23.8%). Recreation, Medical/Doctor, Social/Personal/Church and Other purposes were each less than 5 percent.
- **Origin and Destination Activity Centers:** Tyrone Mall is the main trip generator and destination for Route 30 riders.
- **Stop Access Mode:** Almost 80 percent of survey respondents indicated that they walked to the stop. Twelve percent transferred from another bus, and about 5 percent either biked or were dropped off.

- Stop Egress Mode: The majority (76.5%) of respondents indicated they would transfer to another bus to get to their final destination, the remaining 23.5 percent of respondents would walk.
- Modification Preferences: Main adjustments to Route 30 services that respondents would like to see are improved frequency, expansion of service hours, other, more service on weekends, and added or improved benches and shelters at bus stops
- Alternate Transportation: 77% of those surveyed said they would still make this trip if the route was not available.

Trip Origins and Destinations

Figure 4-12: Route 30 Trip Origins

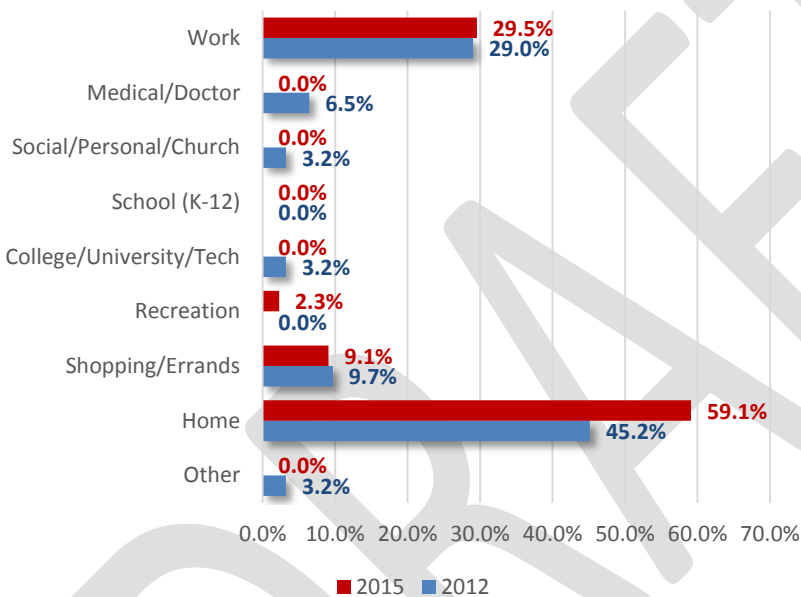


Figure 4-13: Route 30 Trip Destinations

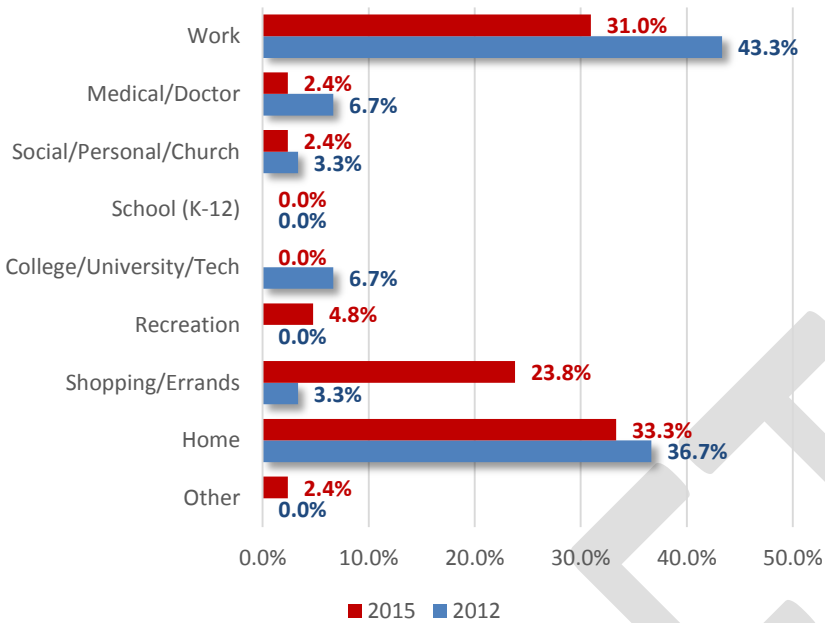
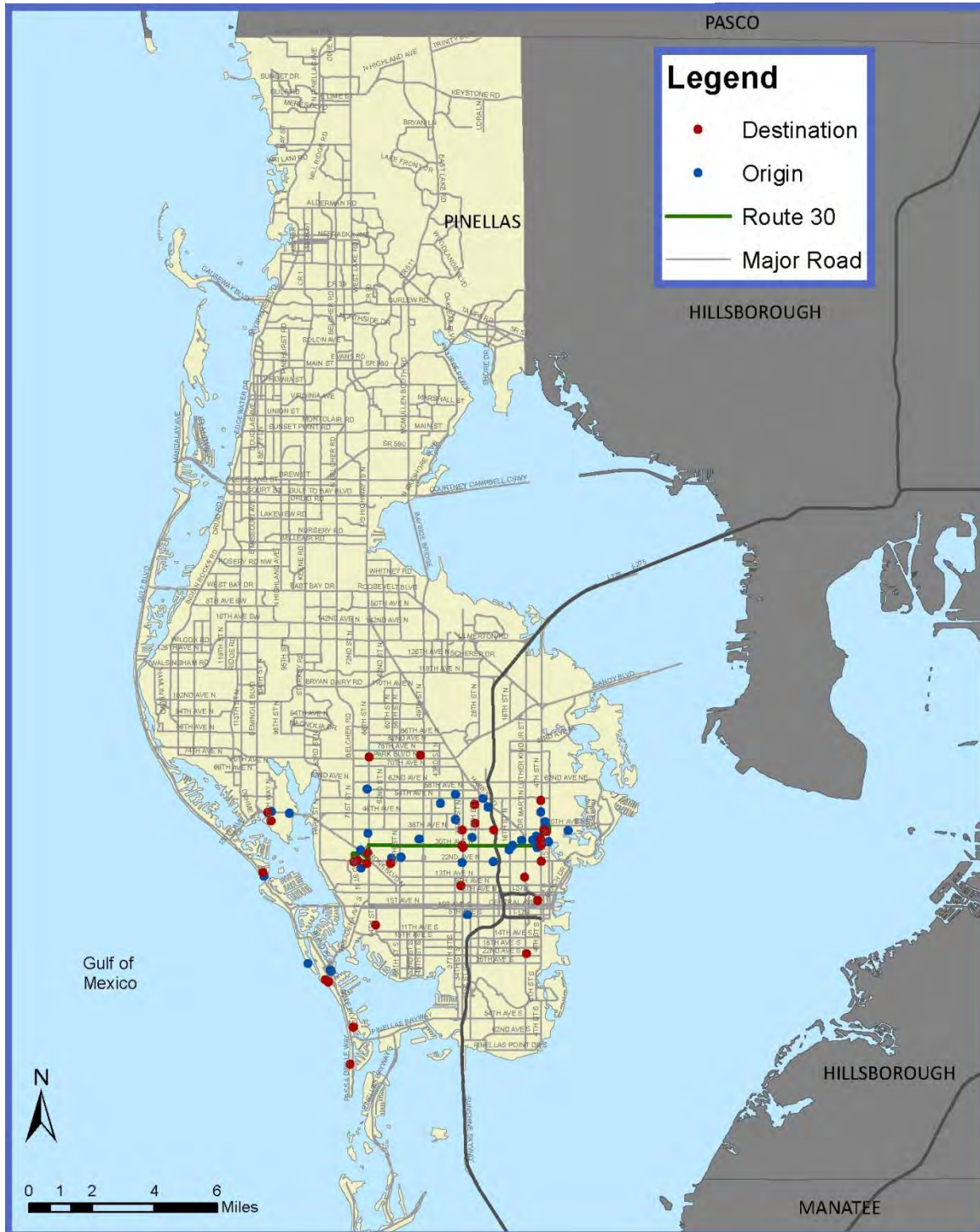


Figure 4-14: Route 30 Major Trip Origins and Destinations Counts

Activity Point	Origin Counts	Destination Counts	Total Counts
Tyrone Mall	3	2	5
Joannes (66 th St N & 26 th Ave N)	0	3	3
Bay Pines Medical Hospital	0	2	2
Carrabba's Italian Grill (US 19 & Highlands Blvd)	1	1	2
Racetrac Gas Station (54 th Ave N & 55 th Ave N)	1	0	1
Winn Dixie (16th and 28th Ave)	1	0	1
Elks Lodge	1	0	1
Salvation Army	0	1	1

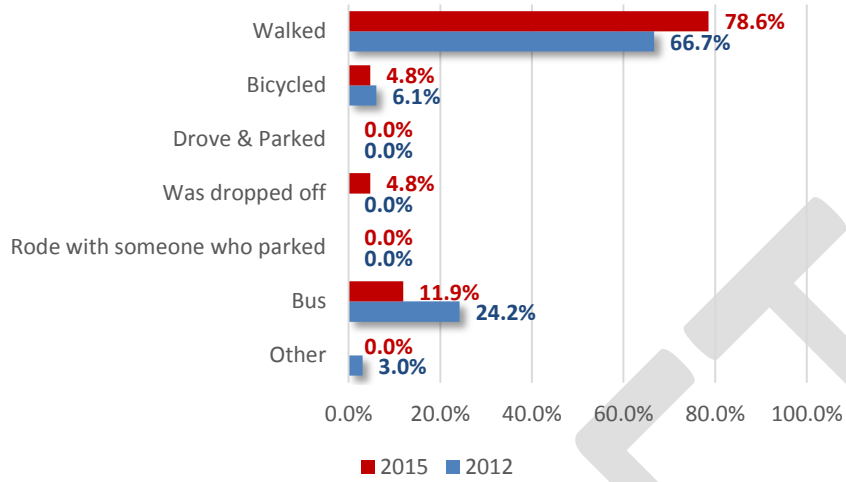
Figure 4-15: Trip Origins and Destinations of Route 30 Riders



Author: Tindale-Oliver
 Date: June 23, 2015
 Source: Phase 1 2015 On-Board Survey

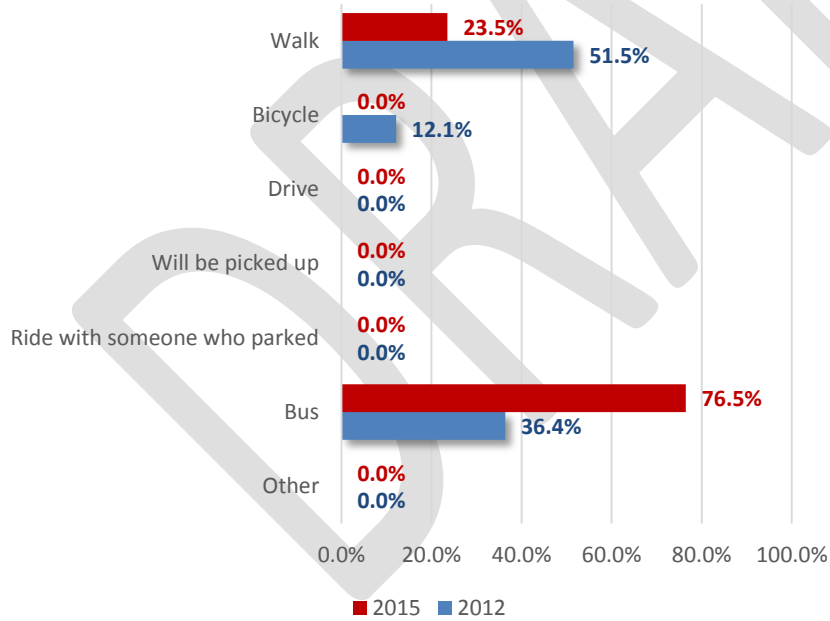
Stop Access Mode

Figure 4-16: Route 30 Bus Stop Access Mode



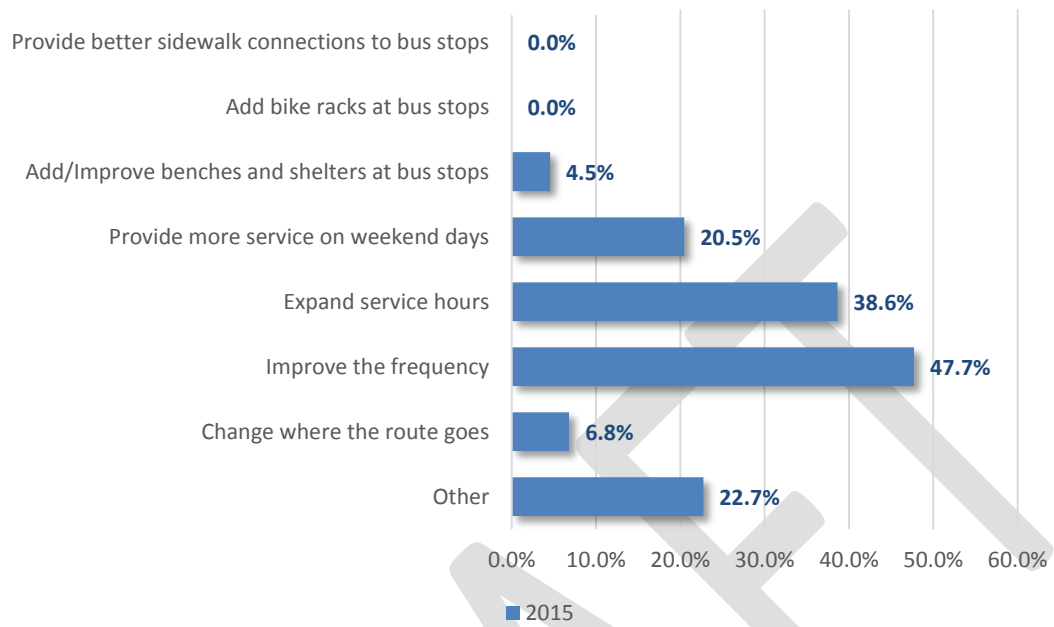
Stop Egress Mode

Figure 4-17: Route 30 Bus Stop Egress Mode



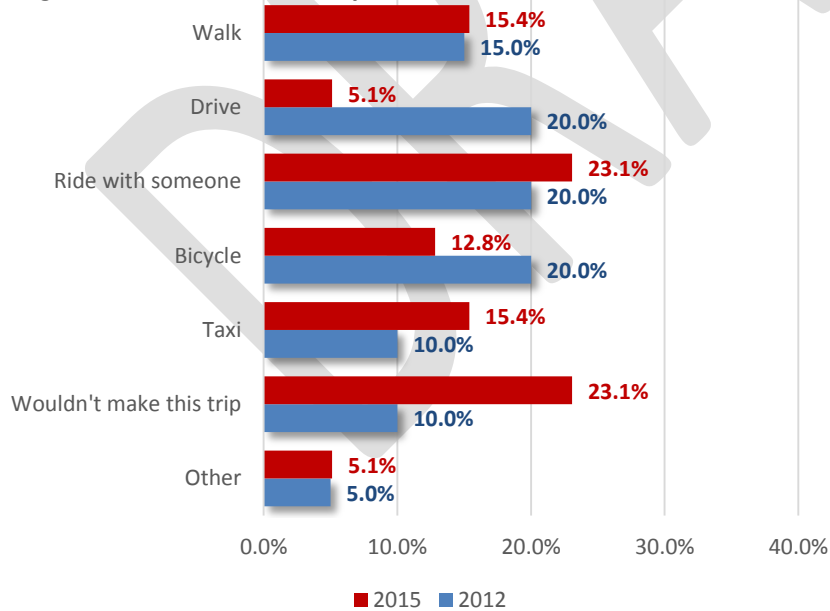
Route 30 Preferred Modifications

Figure 4-18: Preferred Modifications for Route 30



Route 30 Transportation Alternatives

Figure 4-19: Route 30 Transportation Alternatives



Route 58

Route 58 provides connectivity between Seminole Mall and Gateway Mall via Bryan Dairy Rd/Roosevelt Blvd N. Route 58 serves 2 major malls, 1 University, and 3 Schools adjacent to primarily light industrial/commercial land uses.

Key Points from On-Board Survey

- Origin: Just over half of respondents indicated they are making the trip from “Work” and one quarter of respondents responded their trip origin was “Home”. The remaining responses indicate trips are originating from “College/University/Tech” (12.9%) and “Shopping/Errands” (9.7%).
- Destination: The main trip destination for survey respondents was “Home” with 45 percent of respondents. The next major trip destination was “Work” with 25 percent. Other destinations included “Shopping/Errands” (16.1%), “College/University/Tech” (3.2%) and “Recreation” (3.2%).
- Origin and Destination Activity Centers: Most of the trip purposes of riders along this route are most work-to-home, work-to-shopping/errands or home-to-work. The most common origin location for surveyed riders on Route 58 was St. Pete College.
- Stop Access Mode: The main access mode is “Walk” with just over 60 percent followed by transfers from another bus (25%), six percent of respondents biked, three percent were dropped off and three percent accessed their stop by some other access mode.
- Stop Egress Mode: Of the riders surveyed, almost 70% would have to transfer to another bus to get to their final destination. The remaining responses indicated that 20% of people would walk, 6% would bike, and 3% would find some other way to get to their final destination.
- Modification Preferences: Survey respondents indicated that the main modifications they would like to see are an expansion of service hours, frequency improvement and other changes.
- Alternate Transportation: Results from the 2015 survey indicate that if Route 58 was eliminated, over 60% of riders would find an alternate form of transportation that includes bike (20%), taxi (13.3%), walk (13.3%), ride with someone (10%), and drive (6%).

Trip Origins and Destinations

Figure 4-20: Route 58 Trip Origins

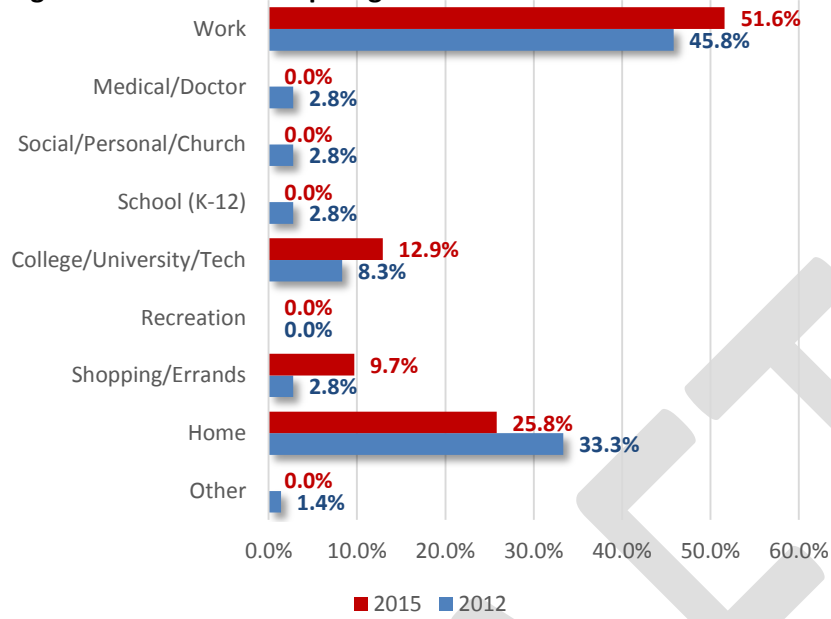


Figure 4-21: Route 58 Trip Destinations

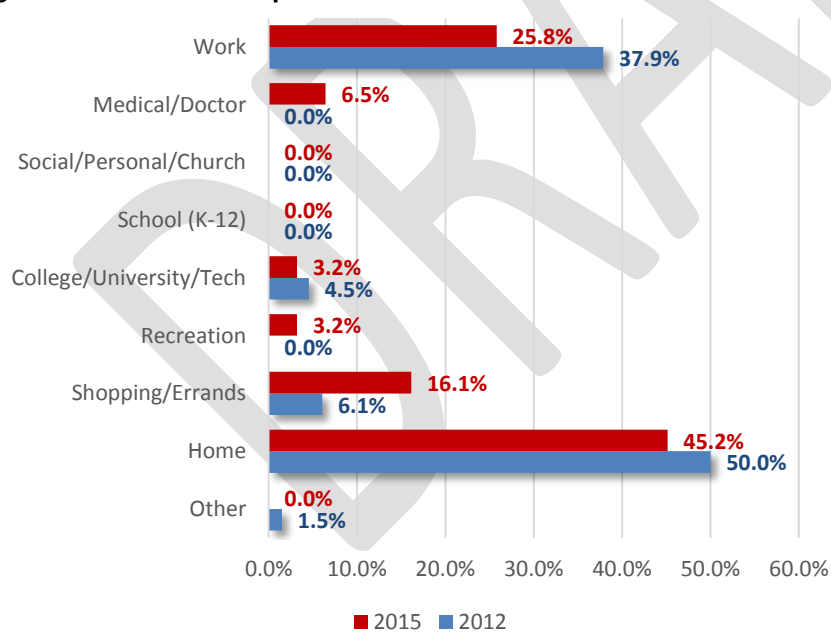
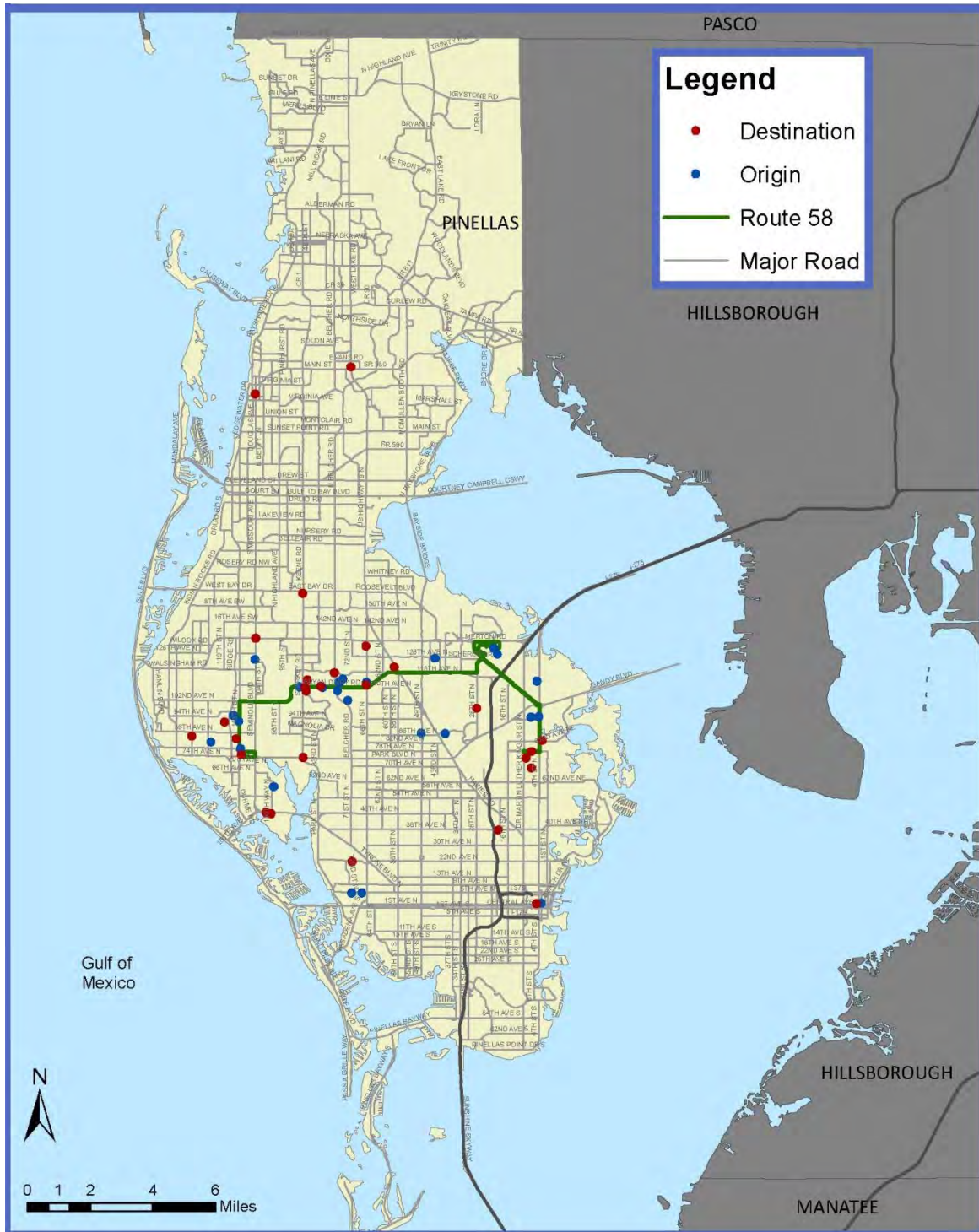


Figure 4-22: Route 58 Major Trip Origins and Destinations Counts

Activity Point	Origin Counts	Destination Counts	Total Counts
St. Pete College	4	0	4
Bay Pines Medical Hospital	1	1	2
Internal Revenue Service	1	0	1
Bardmoor Medical	1	0	1
Largo Healthcare	1	0	1
Tyrone Mall	0	1	1
Seminole Mall	0	1	1
Williams Park	0	1	1
Largo mall	0	1	1

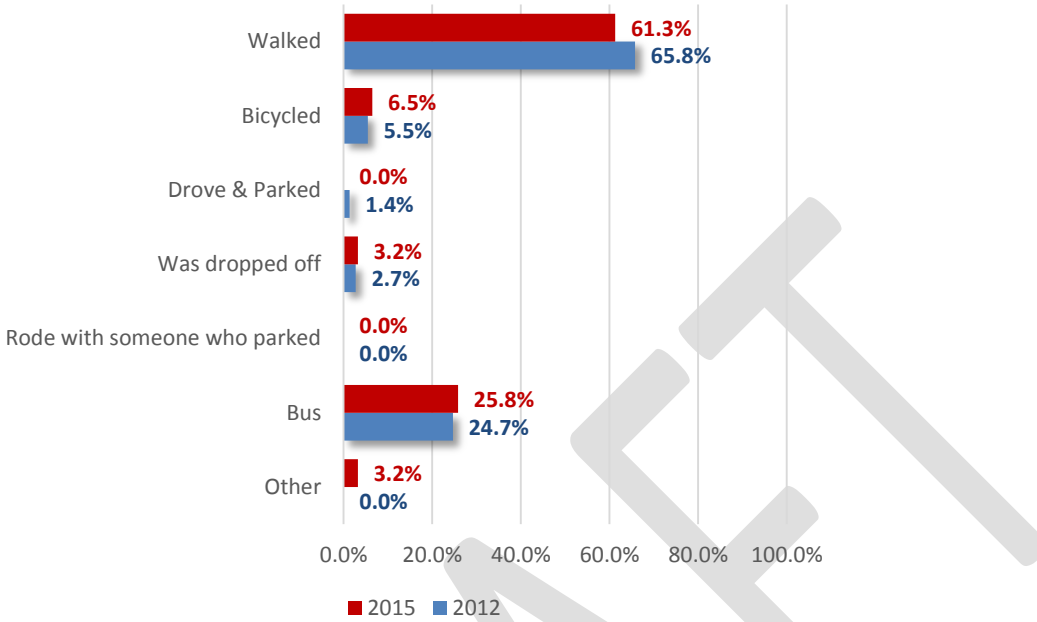
Figure 4-23: Route 58 Trip Origins and Destinations



Author: Tindale-Oliver
 Date: June 23, 2015
 Source: Phase 1 2015 On-Board Survey

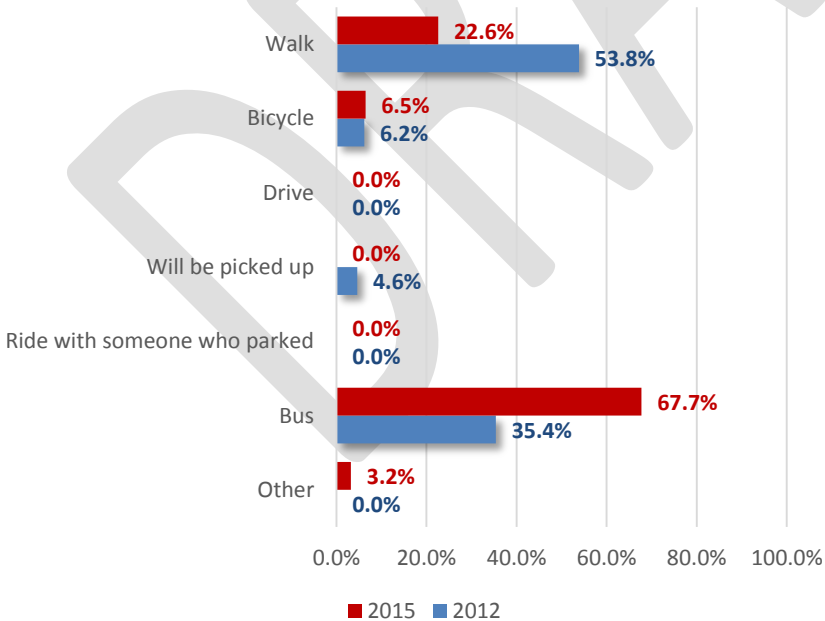
Access Mode

Figure 4-24: Route 58 Bus Stop Access Mode



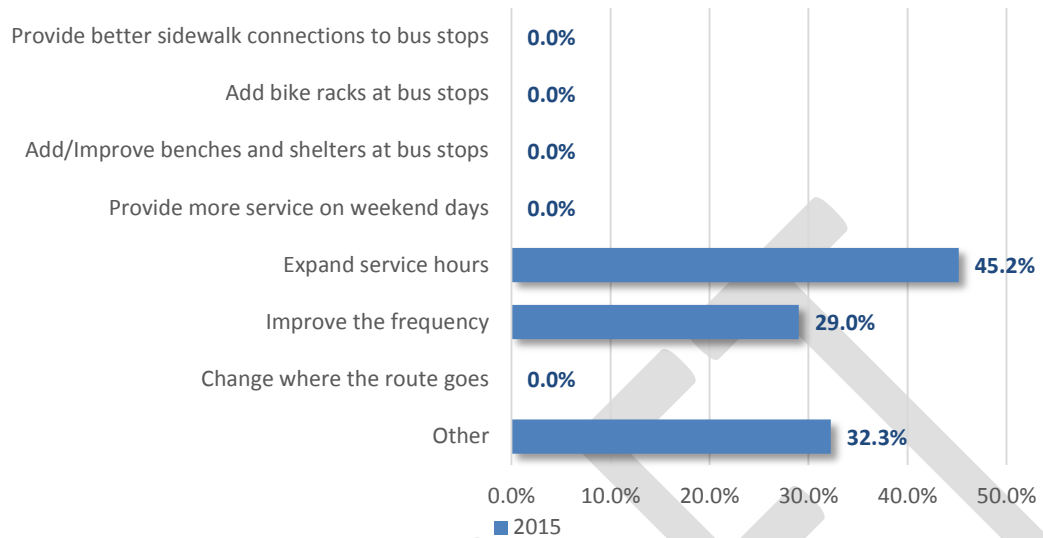
Stop Egress Mode

Figure 4-25: Route 58 Stop Egress Mode



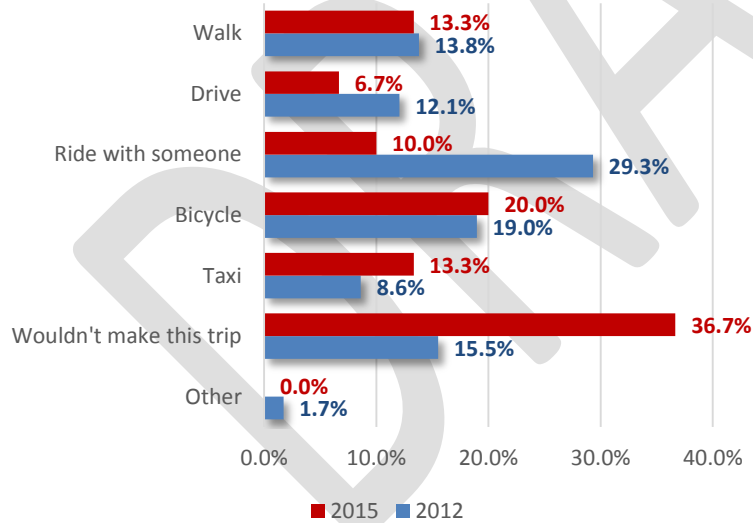
Route 58 Preferred Modifications to Bus Route

Figure 4-26: Route 58 Preferred Modifications



Transportation Alternatives

Figure 4-27: Route 58 Bus Alternatives



Route 444

The route 444 provides circulator service within Pinellas Park, primarily along the US19 and 78th Avenue North Corridors between connecting riders to multiple municipal services, a Walmart Super Center, Shoppes at Park Place, and several large residential developments.

Key Points from On-Board Survey

- Origin: Most trip origins for the 444 begin at “Home”, with 75% of responses indicating that as their origin. Other responses indicated “Shopping/Errands” as a significant origin with 12.5% and “Recreation” and “Medical/Doctor
- Destination: The main trip purpose for just over 40% of respondents is “Shopping/Errands”. The remaining responses indicate “Home” as a destination for 28.6%, and “Work” and “School” were each 14.3% of trip purposes.
- Origin and Destination Activity Centers: Crystal Lake Manor and Walmart are the main activity centers with the most trip origins and destinations at those locations.
- Stop Access Mode: Access to the stop is overwhelmingly achieved by walking, with over 90% of respondents indicating this. The only other access mode indicated was by bus transfer with 6.7%.
- Stop Egress Mode: From their current stop to the final destination, 71.4% of respondents indicated “Walk”. The remaining respondents indicated “Bus” as their egress mode, meaning they were transferring to another bus.
- Modification Preferences: The most desired modification was that more service be provided on weekend (61.5%). Followed by the expanded service hours, frequency improvements (38.5%), changes to where the route goes (30.8%), provision of better sidewalks, and additions/improvements to benches and shelters at the stops (23.1%).
- Alternate Transportation: If the 444 route were eliminated, 61.5% of respondents indicated they would walk to their destination. “Ride with someone” or “Taxi” were the two other alternatives indicated with 23.1 and 15.4 percent of responses respectively. Interestingly, according to the 2012 survey, in response to the same question 42.1 percent of surveys indicated they would no longer make their trip if the route was eliminated.

Trip Origins and Destinations

Figure 4-28: Route 444 Trip Origins Summary

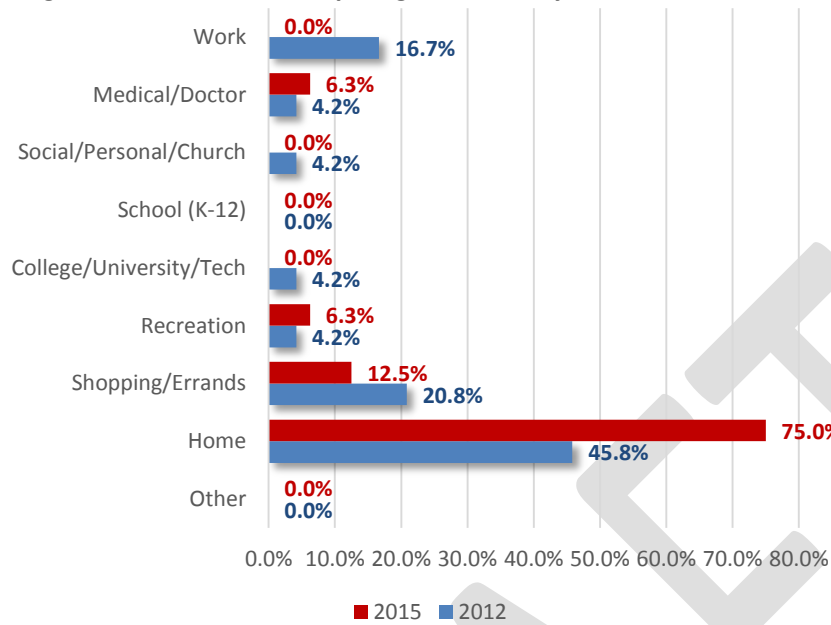


Figure 4-29: Route 444 Trip Destination Summary

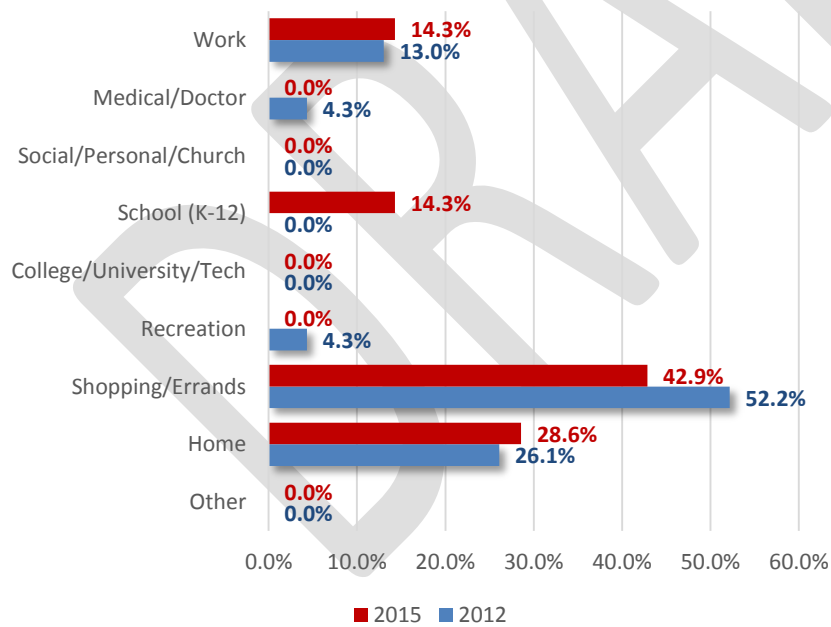
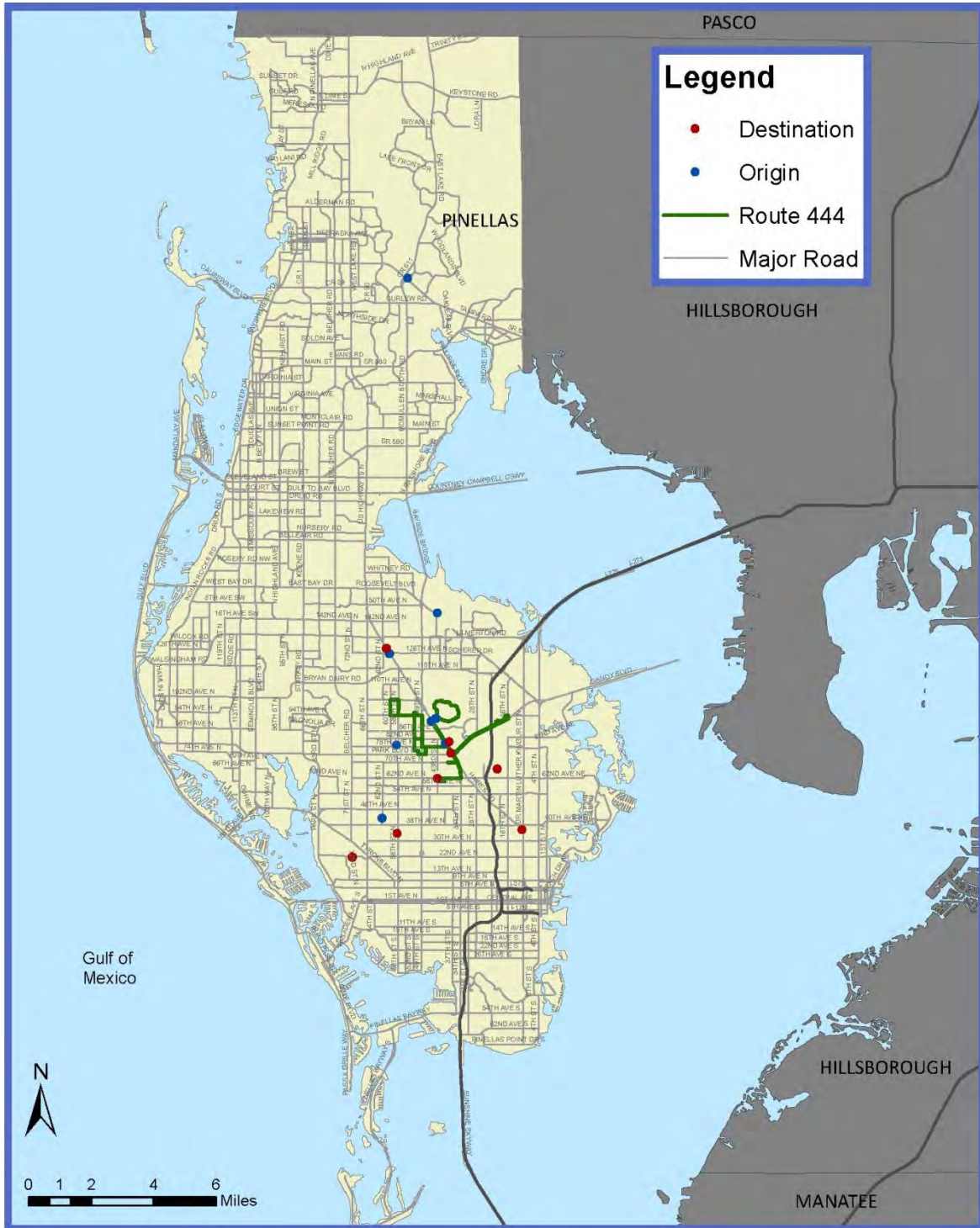


Figure 4-30: Route 444 Major Trip Origins and Destinations Summary

Activity Point	Origin Counts	Destination Counts	Total Counts
Crystal Lake Manor	5	1	6
Walmart (US 19/Gandy Blvd)	1	4	5
Mainlands of Tamarac	3	0	3
Tyrone Mall	0	2	2
Westgate Elementary	0	2	2
Shoppes at Park Place	1	0	1
East Lake Manor	1	0	1
Lakeside Terrace	0	1	1

DRAFT

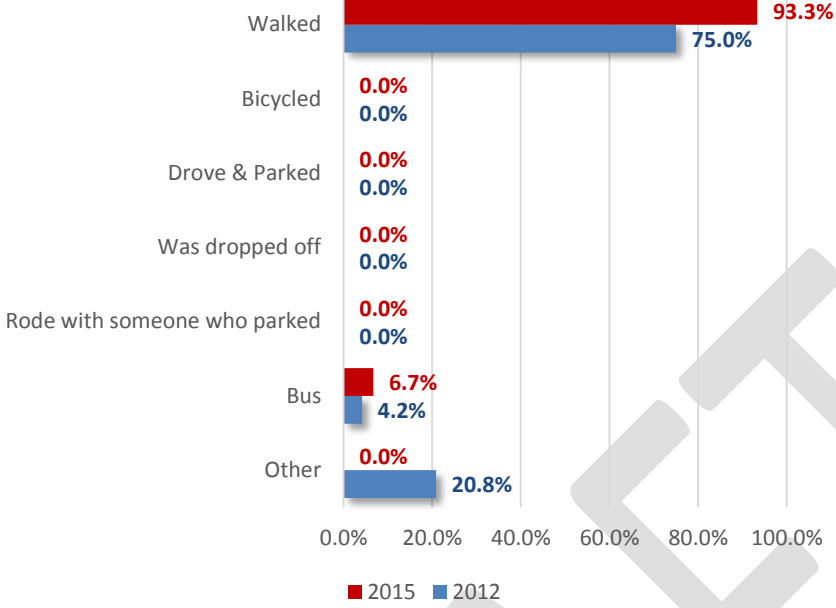
Figure 4-31: Route 444 Trip Origins and Destinations



Author: Tindale-Oliver
 Date: June 23, 2015
 Source: Phase 1 2015 On-Board Survey

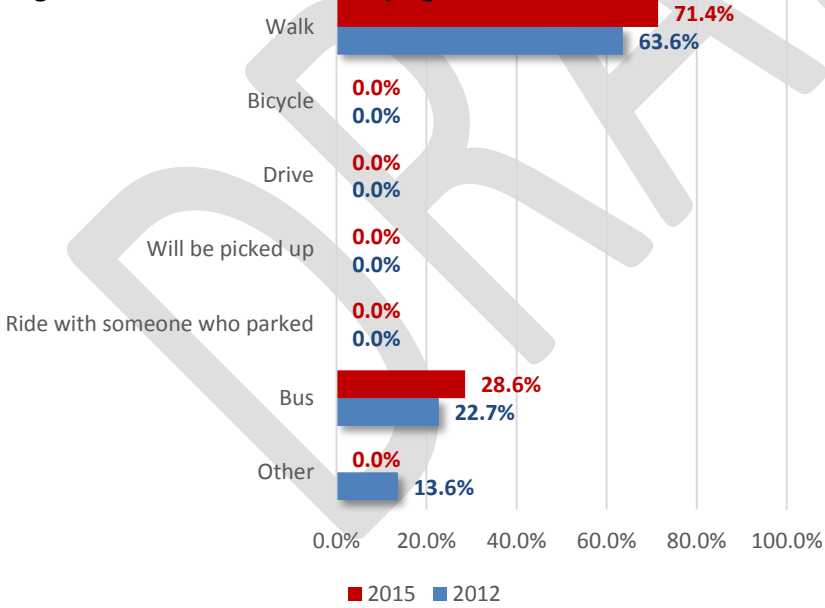
Stop Access Mode

Figure 4-32: Route 444 Bus Stop Access Mode



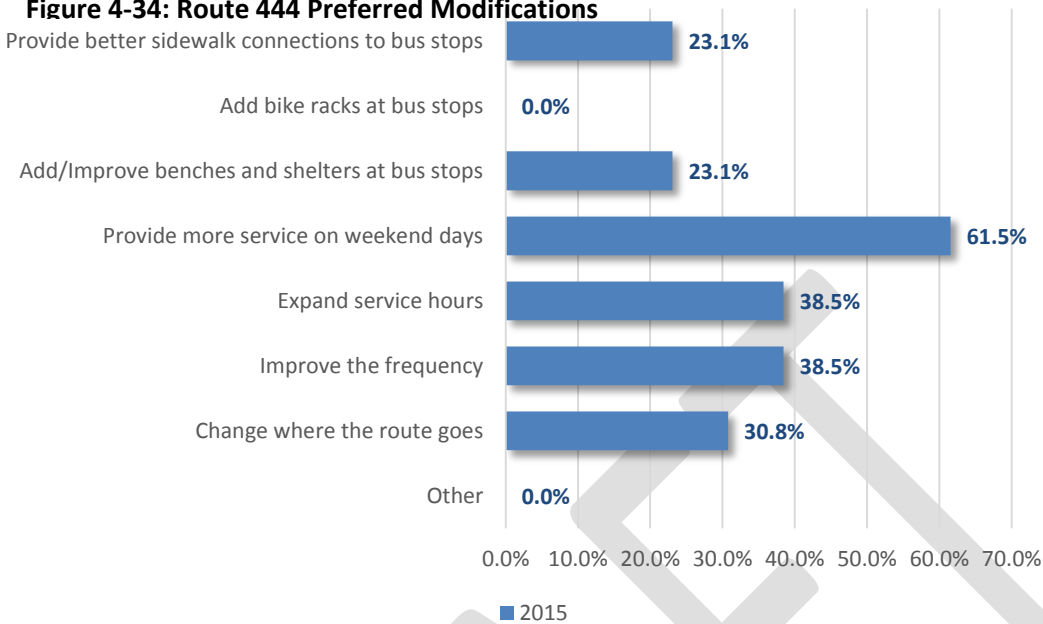
Stop Egress Mode

Figure 4-33: Route 444 Bus Stop Egress Mode



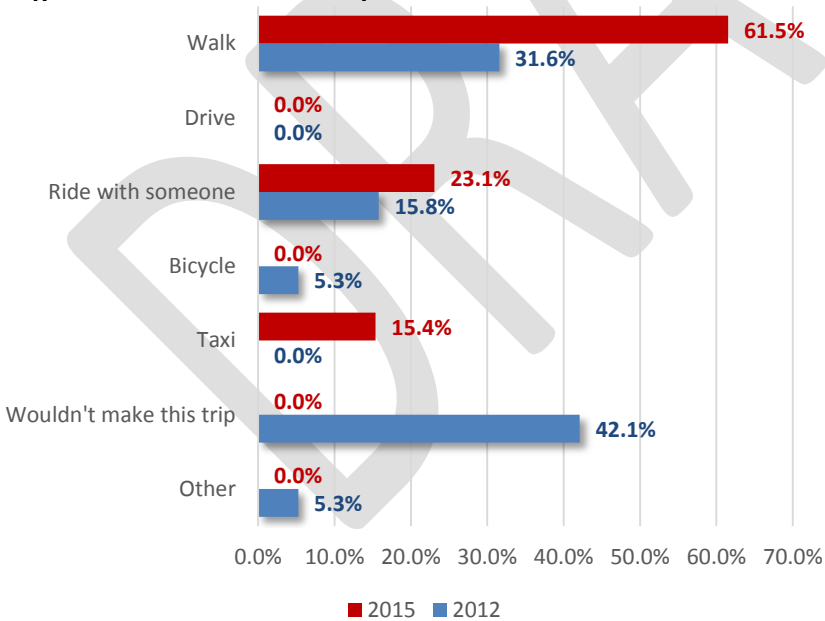
Preferred Modifications to Bus Route

Figure 4-34: Route 444 Preferred Modifications



Transportation Alternatives

Figure 4-35: Route 444 Transportation Alternatives



Portions of Routes 19 and 52 run along Route 444 for three quarters of a mile and 2 miles respectively, which may provide alternate bus transit to individuals accessing those stops, especially for riders whose trip purpose is “Shopping/Errands” (42%) as Routes 19 and 52 transfer at the Shoppes at Park Place in Pinellas Park.

East Lake Connector (Route 811)

Key Points from On-Board Survey

- **Origin:** According to the survey data, Route 811 provides services for several people traveling from home to work. Almost 70% of surveys indicated they begin their trip from home, 15% from work, and 5% each from school, recreation, and shopping/errands.
- **Destination:** The main destinations for riders are to work (50%), home (40%) or recreation (5%).
- **Stop Access Mode:** Almost 70% of people walked to their bus stop, 25% transferred from another bus, and 5% were dropped off.
- **Stop Egress Mode:** To reach their final destinations, over 50% of survey respondents indicated that they would transfer to another bus while other respondents indicated they would walk to their final destination.
- **Modification Preferences:** The major modification to Route 811 that survey respondents want to see is an expansion of service hours, and more service on weekends. Additionally, 35% of respondents would like more frequent bus service, additional or improved benches and shelters (15%), adding bike racks (10%), changes to the route (5%), and other changes (5%).
- **Alternate Transportation:** Almost 80% of survey respondents indicated that they would find another form of transportation to get to their final destination. This included riding with someone (27.8%), taking a taxi (16.7%), and 11% each would walk, drive, or bike.

Trip Origins and Destinations

Figure 4-36: East Lake Connector Trip Origins

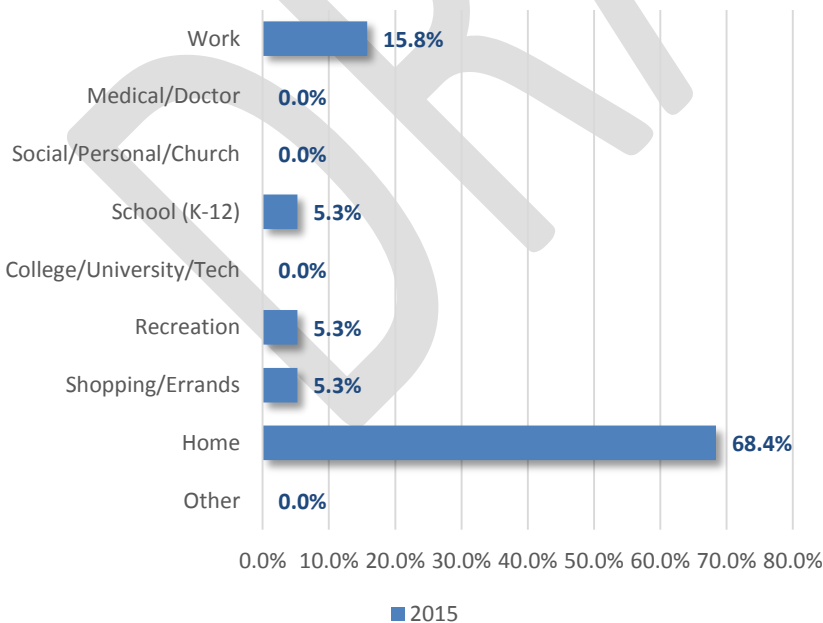


Figure 4-37: East Lake Connector Trip Destinations

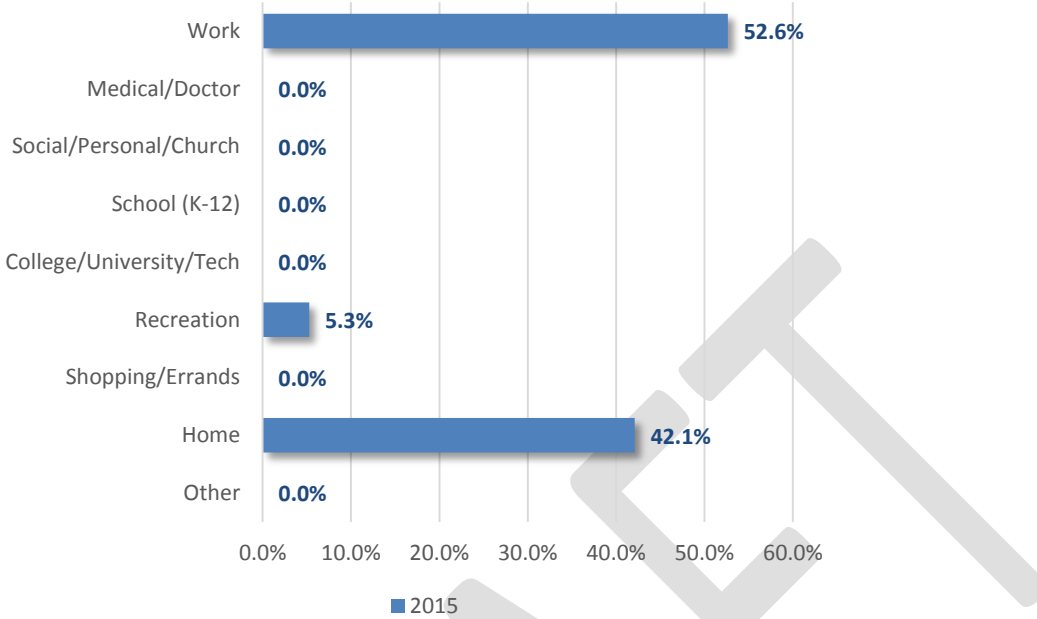


Figure 4-38: East Lake Connector Trip Origins and Destinations Summary

Activity Point	Origin Counts	Destination Counts	Total Counts
Tarpon Springs Apartments	3	0	3
East Lake Car Wash	0	2	2
Enterprise High School	1	1	2
Park Place Apartments	1	0	1
Nationwide Carpet Cleaning	1	0	1
John Chestnut Senior Park	1	0	1
Ridgemoor Plaza	0	1	1
Publix at Boot Ranch	0	1	1
Creekside Manor	0	1	1

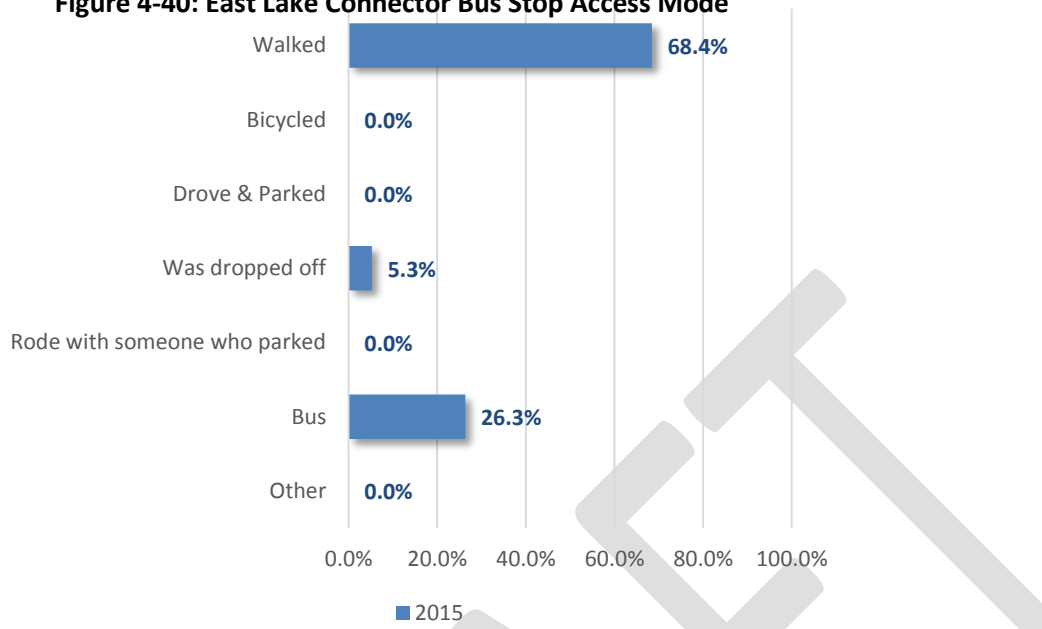
Figure 4-39: East Lake Connector Trip Origins and Destinations



Author: Tindale-Oliver
 Date: June 23, 2015
 Source: Phase 1 2015 On-Board Survey

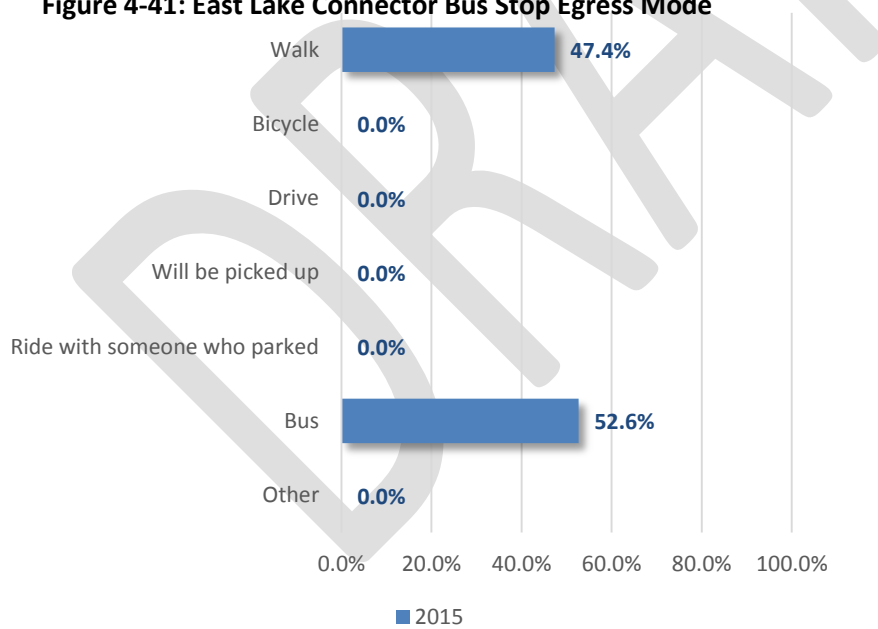
Stop Access Mode

Figure 4-40: East Lake Connector Bus Stop Access Mode



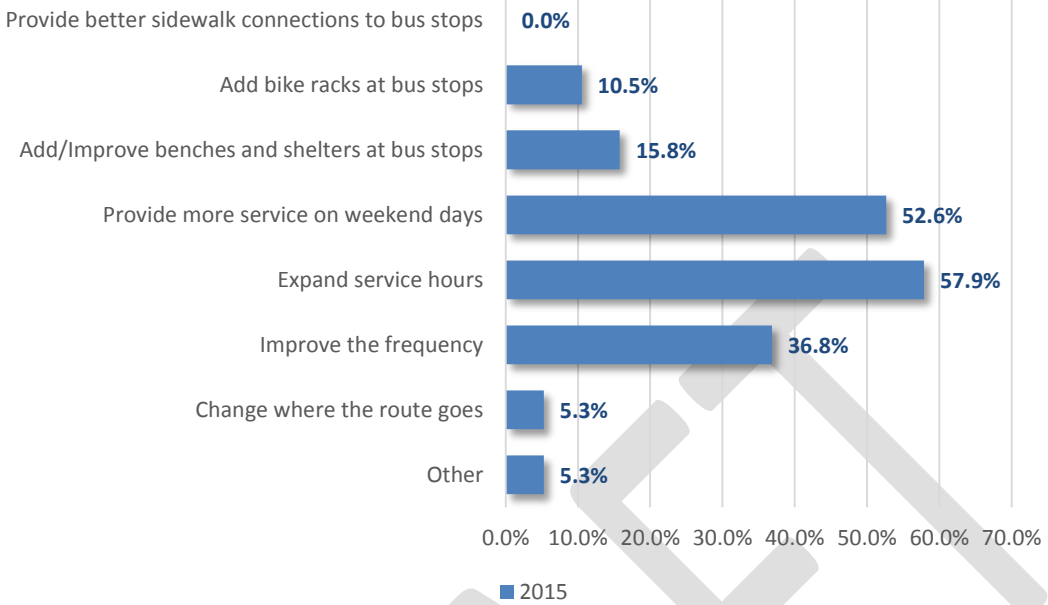
Stop Egress Mode

Figure 4-41: East Lake Connector Bus Stop Egress Mode



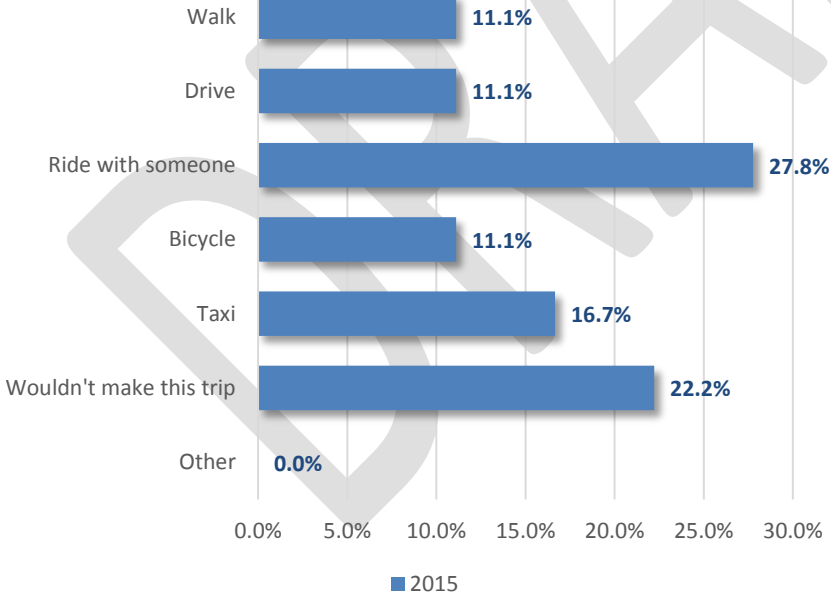
Preferred Modifications to Bus Route

Figure 4-42: East Lake Connector Preferred Modifications



Route 811 Transportation Alternatives

Figure 4-43: East Lake Connector Transportation Alternatives



PSTA Service Redesign Public Outreach Summary

Three part public engagement to ensure open communication and community dialogue, which will allow PSTA to better help riders understand the proposed changes and find alternative transportation:

- Engagement Phase
- Public Workshop Phase
- Information Phase

ENGAGEMENT PHASE

Routes 1 & 30:

- **Areas served:** Route 1 runs from Tyrone Square Mall to the Northeast Shopping Center on 1st Street in St. Petersburg primarily along 22nd Avenue and 1st Street. Route 30 operates between the same two end points, but primarily along 30th Avenue North.
- **Alternatives for riders:**
 - Core/frequent routes 4, 19, 52, 59, 74
 - Supporting local routes 11, 23, 38, 79
 - New Route 22 and Route 38 parallel to Route 30 and within ½ mile
 - Dart for those who qualify
 - Carpool, taxi, bike, drive, walk, golf cart

Key Contacts

- City of St. Petersburg Planning Dept. – 6/16/15
- Northeast Shopping Center – Pending
- Palmway Village – Pending
- Northwest Elementary – Pending
- Tyrone Middle School – Pending
- Gladden Park Recreation Center – Pending
- St. Petersburg Commission on Aging

- Public Comments:
 - City staff said they would communicate the proposed changes with the neighborhood associations along the corridor.
 - City staff also thinks 22nd Avenue North is a better fit for bus service than 30th Avenue North due to higher speed limits and a greater mix of uses.

Routes 58 & 18:

- **Areas Served:** Route 58 runs from Gateway Mall to Seminole Mall, primarily along Bryan Dairy Road, Roosevelt Boulevard and, 118th Avenue, serving SPC Seminole campus and City Hall on 113th Street.

PSTA Service Redesign Public Outreach Summary

- Route 18 runs from downtown Clearwater to downtown St. Petersburg along Seminole Boulevard and is proposed to be diverted from Seminole Boulevard to 113th Street, between 102nd and 86th Avenues, to maintain service to SPC Seminole Campus.
- **Alternatives for riders:**
 - Core/frequent Routes 4, 18, 19, 52, 59, 98, 79
 - Local Routes 11, 62, 73, 97
 - Closed stops along redesigned Route 18 all within ½ mile of new route configuration
 - Bike, walk, taxi, carpool, drive
 - Dart for those who qualify

Key Contacts:

- Think Direct - 6/17/15
- Provost, SPC Seminole - 6/11/15
- Seminole Planning Dept. - 6/18/15
- Seminole City Hall/Council - Pending
- Freedom Square –6/18/15
- Business owners along affected portion of Seminole Blvd. – Pending
- Lake Seminole Presbyterian Church – Pending
- Seminole Garden Apartments (Will need special Handout or posters) 11100 86th Ave. N. – Pending
- Lutheran Church of the Good Shepherd (LCGS) 10891 102nd Ave N – Pending
- Little Lamb Preschool, 10891 102nd Ave – Pending
- Seminole Oaks Condos, 9881 113th St. – Pending
- Seminole Library – Pending
- Seminole Recreation Complex – Pending
- New to You Thrift Center- 6/25/15
- SPC Student Govt. – Pending
- Publix on 113th – 6/18/15
- Superior Uniform Group – 6/25/15
- Bon Secours – 6/25/15
- "Home 1 Bank - 7/13/15
- Crown Care - 7/13/15
- Napa Auto Parts - 7/13/15
- AAA - 7/13/15
- Snyder's Auto Repair - 7/13/15
-
- **Public Comments:**
 - Think Direct Marketing on Bryan Dairy Road is concerned about the potential impact to employees. However, they have been unwilling to discuss funding support for continued service. (Location is approximately 2600 feet west of Belcher Road, which is served by Route 62, and about 3000 feet to the east of Starkey Road, which is served by Route 73.) Directors from the firm told PSTA TRAC that 20 employees currently use PSTA, mostly one-way, to get to work and that eliminating the route would hurt those

PSTA Service Redesign Public Outreach Summary

employees as well as the businesses recruiting. Think Direct has agreed to provide PSTA will the home addresses of riders (without corresponding names) to help assist with researching other transportation options.

- Enthusiasm from Seminole City and SPC staff at prospect of significant service increases to essential venues along 113th Street.
- Relief that DART service will not be affected.
- Lack of sidewalk and pedestrian friendly infrastructure along these routes in Pinellas Park and Seminole present a challenge for riders who would otherwise walk to another route.
 - o Staff is working with Pinellas Park and Seminole to address the crossing issues. (e.g. 113th Street at 102nd Avenue)

Route 444:

- **Area served:** The 444 is an irregularly scheduled looping route which encompasses portions of Pinellas Park, St. Petersburg and Lealman, including facilities such as The Mainlands, Walmart, Crystal Lakes Manor, Pinellas Park Transit Center, and St. Giles Manor.
- **Alternatives for riders:**
 - Core/Frequent routes 19, 52, 74, 79
 - Supporting Local Route 75
 - Route 19
 - Walk, carpool, taxi/rideshare, golf cart
 - Neighborly Care Network
 - DART for those who qualify

Key Contacts:

- Housing Authority - 6/18/15
- Mainlands - Pending
- City of Pinellas Park Planning Dept. – 6/30/15
- St. Giles Manor - 6/17/15
- Wal-Mart - Pending
- Shoppes at Park Place - 6/18/15
- Crystal Lakes Manor - 6/18/15
- Heatherwood Apartments - 6/18/15
- Magnolia Gardens - 6/18/15
- Lealman Elementary- 6/18/15
- Pinellas Park Library - 6/18/15
- Pinellas Park City Leaders along with city and county community development staff – Pending

• **Public Comments:**

- Concerns about crossing major thoroughfares such as Park Blvd. and U.S. 19
 - o PSTA staff followed up by investigating issue and contacting rider

PSTA Service Redesign Public Outreach Summary

- Housing Authority representatives were more concerned about continuing service on Route 74 (Gandy), which will not be affected
- Relief that DART clients will still receive service
- Concerns from Crystal Lakes Manor that residents will be unable to walk to the Route 19 and even if they were to qualify for DART, couldn't afford the \$4 DART fare.

East Lake Connector:

- **Area Served:** The Connector services East Lake and Keystone Roads between Shoppes at Boot Ranch and PSTA transfer facility at Tarpon and Huey Avenues.

- **Alternatives for Riders:**
 - East Lake Shuttle
 - Carpool, taxi, bike, drive, walk
 - Various nonprofit organizations for specific trip types
 - DART for those who qualify

Key Contacts:

- Don Ewing/CNCN –7/10/15
- Tarpon Rec. Center on Walton –6/30/15
- Carmen Wilson, Program Director, Citizens Alliance for Progress, Inc. –6/18/15
- Tarpon Springs City Hall/Mayor Archie – Pending
- East Lake YMCA – 7 /10/15

- **Public Comments:**
 - Interest in East Lake Shuttle
 - Relief that DART clients will still receive service

PUBLIC WORKSHOP

- Four public workshops throughout the county. All routes in Phase I Service Redesign will be discussed at each of the events.

Date	Location	Affected Route(s)	Time of Day	Routes Serving Venue
8/10/15	East Lake Library: 4125 East Lake Road South, (727) 773-2665	East Lake Connector	10:00-12:00	East Lake Connector & East Lake Shuttle
8/11/15	Seminole Library: 9200 113th Street North (727) 394-6905	58/18, 1/30	2:30-4:30 pm	58

**PSTA Service Redesign
Public Outreach Summary**

8/17/15	Pinellas Park Library: 7770 52nd Street (727) 541-0718	444, 1/30	10:00-12:00	74, 52, 444
8/18/15	PSTA Administrative Building		5:30-8:00 pm	11, 52, 59

- A formal public Hearing will be held at the PSTA Board of Directors Meeting August 26, 2015

INFORMATION PHASE

After the Board decisions are finalized, staff will work with the riders to ensure they are prepared for the adjustments.

Outreach Activities may include:

- Ambassadors on buses for at least a week prior to change with a goal of letting every affected rider know about impending route changes
- Notify groups and organizations along routes, which may be impacted
- Signs of closure at stops
- “Behind the Driver”
- Handouts for drivers to disseminate to riders
- Driver & Customer Service Representative engagement
- Messaging for PSTA Board members
- Signs at shelters and major transfer points along lines e.g. Gateway, Boot Ranch etc.
- Notices in Libraries/government facilities along routes
- Social Media/Press Release/website/text/e-mail blast
- Removal/replacement of printed schedules