

2040 Long Range Transportation Plan Needs Assessment: Real Choices When Not Driving

Prepared For:



601 East Kennedy Boulevard
Tampa, FL 33602

Prepared by:
Jacobs
One Tampa City Center
201 N. Franklin Street
Suite 1400
Tampa, FL 33602

Table of Contents

1.0	Investment Program Overview	1
2.0	Bus Service	1
2.1	Data Collection	1
2.2	Performance Measures Methodology.....	1
2.3	Investment Levels Methodology	2
	Benefits Analysis Results	6
3.0	Transportation Disadvantaged Services	8
3.1	Data Collection and Review	8
3.2	Service Analysis.....	8
	Forecast of Transportation Disadvantaged Population.....	8
3.3	Investment Levels Methodology	9
4.0	Trail and Sidepath Network	11
4.1	Data Collection and Review	11
4.2	Performance Measures Methodology.....	11
4.3	Investment Levels Methodology	12

List of Appendices

Appendix A:	Transit Performance Measures, Investment Impacts, and Costs	15
Appendix B:	Countywide Transportation Disadvantaged Service at Various Investment Levels	25
Appendix C:	Supporting Transit Data.....	28
Appendix D:	Existing and Future Trails	29
Appendix E:	Statewide Performance Measures	39

1.0 Investment Program Overview

The goal of the Real Choices for Non Drivers investment program is to expand mobility options in the form of bus services, paratransit services for the transportation disadvantaged (TD), and walk/bike facilities that are separated from motorized vehicle traffic.

Bus Service

This portion of the program evaluates the bus service that could be provided by Hillsborough Area Regional Transit (HART) under different levels of funding through 2040. The bus service analysis demonstrates how strategic increases in transit funding may improve the amount and quality of access to jobs and homes in the future.

Transportation Disadvantaged Services

This portion of the program evaluates the amount and cost of paratransit service that could be provided through the Sunshine Line to county residents who cannot transport themselves to life-sustaining activities due to age, disability, income, and/or lack of access to bus services. The amount of service needed in the future will vary in part with changes in the size and reach of the countywide bus network.

Trail and Sidepath Network

This portion of the program evaluates the availability of trails and sidepaths to the county population, based on varying levels of funding through 2040. Trails and sidepaths are paved facilities, typically eight to 12 feet wide, that allow for pedestrians and cyclists to pass each other in opposite directions. Sidepaths are located adjacent to a road but separated from motor vehicle lanes by a boulevard strip and/or a barrier, while trails typically are not located in road rights-of-way.

2.0 Bus Service

2.1 Data Collection

The primary source for this analysis was the most recent HART Transit Development Plan (TDP), dated September 2013. The TDP details the expansion of transit service by year and type of service through the horizon year of 2023, as well as the capital and operating costs by project, for a “Status Quo” funding scenario as well as a “Vision Plan” with expanded funding. In addition, HART staff identified potential transit improvements and associated costs for the fiscal years beyond the TDP time horizon, 2024-2040. HART staff also provided the unit costs for items such as fareboxes, Intelligent Transportation Systems (ITS), stations/shelters, Park-n-Ride lots, and a new bus maintenance facility.

2.2 Performance Measures Methodology

The performance measure used in this analysis is Transit Level of Service (TLOS), a measure of the quality of service from the passenger’s perspective, based on the frequency with which buses travel each road. The thresholds for the A (best) through F (worst) letter grade are consistent with the ARTPLAN methodology used by the Florida Department of Transportation (FDOT). For this analysis, the TLOS score for each road segment is based on the total number of buses of any route which travel that road each hour. Since HART typically is able to provide only a few trips per day on its express bus routes,

the express routes were not included in this analysis. The TLOS score is determined based on the following definition:

- **LOS A:** >6 buses per hour < 10 min. – *Passengers don't need schedules*
- **LOS B:** 4.01-6 buses per hour 10-14 min. – *Frequent service, passengers consult schedules*
- **LOS C:** 3-4 buses per hour 15-20 min. – *Maximum desirable time to wait if missed bus*
- **LOS D:** <3 buses per hour 21-30 min. – *Service unattractive to choice riders*
- **LOS E:** <2 buses per hour 31-60 min. – *Service available during hour*
- **LOS F:** <1 bus per hour >60 min. – *Service unattractive to all riders*

Using Geographic Information Systems (GIS), the existing and proposed bus routes were overlaid onto the roadway network, and the frequencies of the routes were summed to calculate the total number of buses per hour on each road. Each road was subsequently assigned a TLOS score, or no score if bus service was not provided.

2.3 Investment Levels Methodology

Three potential levels of investment were developed for the Long Range Transportation Plan (LRTP). A detailed list of the improvements in each investment level, including capital and operating costs, is provided in **Appendix A**.

- **Low Investment Level:** The low investment level is based on HART's "Status Quo" Plan as described in the TDP. The "Status Quo" is a financially constrained plan extrapolating today's funding levels into the future. Service improvements are limited to those which can be implemented without increasing the number of buses needed at peak hour, since HART's existing vehicle maintenance facility is very close to capacity. Therefore, the proposed improvements primarily include adding evening or weekend hours to existing routes and some higher frequencies. A map of the TLOS that would be provided under the low investment level is shown in **Figure 1**. The bus service areas shown in the map are a ¼-mile radius (about a 10-minute walk) around each route.
- **Medium Investment Level:** The medium investment level is a subset of HART's Vision Plan as described in the TDP. HART's Vision Plan identifies unfunded transit needs for Hillsborough County. For the LRTP, the medium investment level includes Vision Plan improvements that focus on the core urban area, where ridership potential is greatest. Specifically, the medium investment level consists of six new MetroRapid routes, plus 30 local routes that are new or improved in frequency and/or hours. A map of the TLOS that would be provided under the medium investment level is shown in **Figure 2**.
- **High Investment Level:** Similar to the medium investment level, the high investment level is also based on HART's Vision Plan. It adds the remaining service improvements identified as needed by HART, including 20 new or improved express bus routes, and at least 18 flex and circulator route improvements. These express and flex/circulator routes expand the bus service area and provide cost-effective service to lower density communities. A map of the TLOS that would be provided under the high investment level is shown in **Figure 3**.

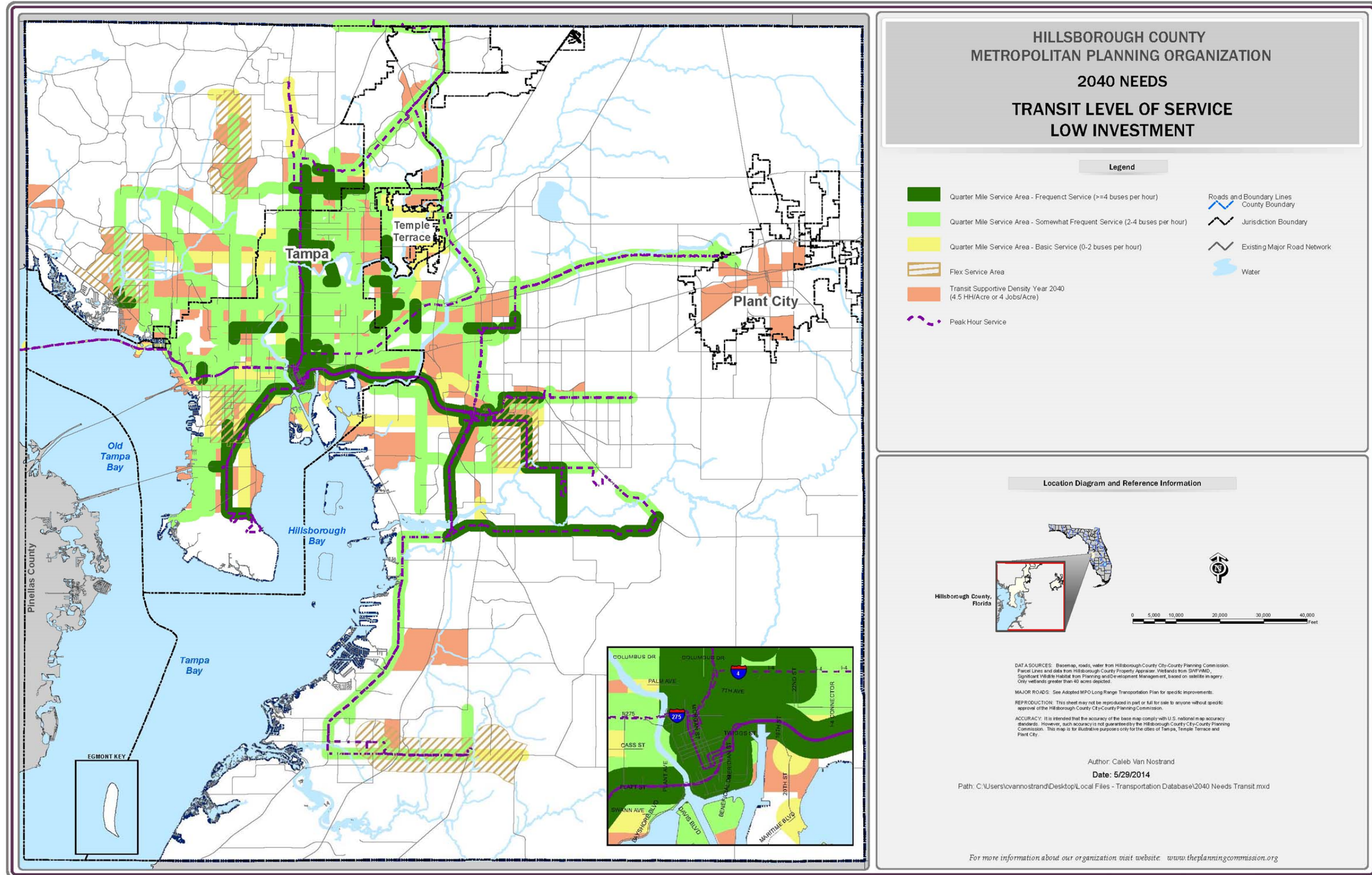


Figure 1. Low Investment Level of Service

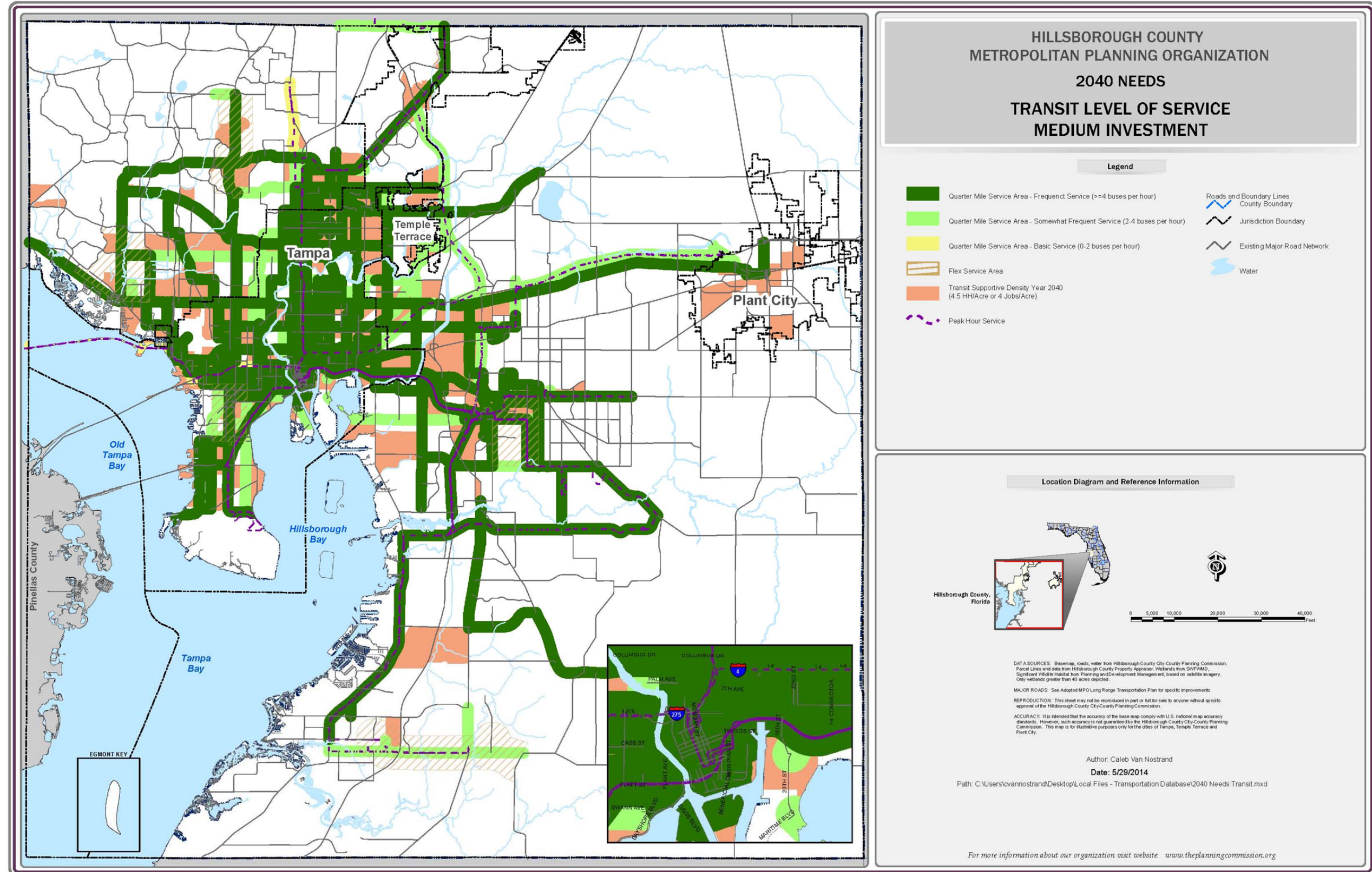


Figure 2. Medium Investment Level of Service

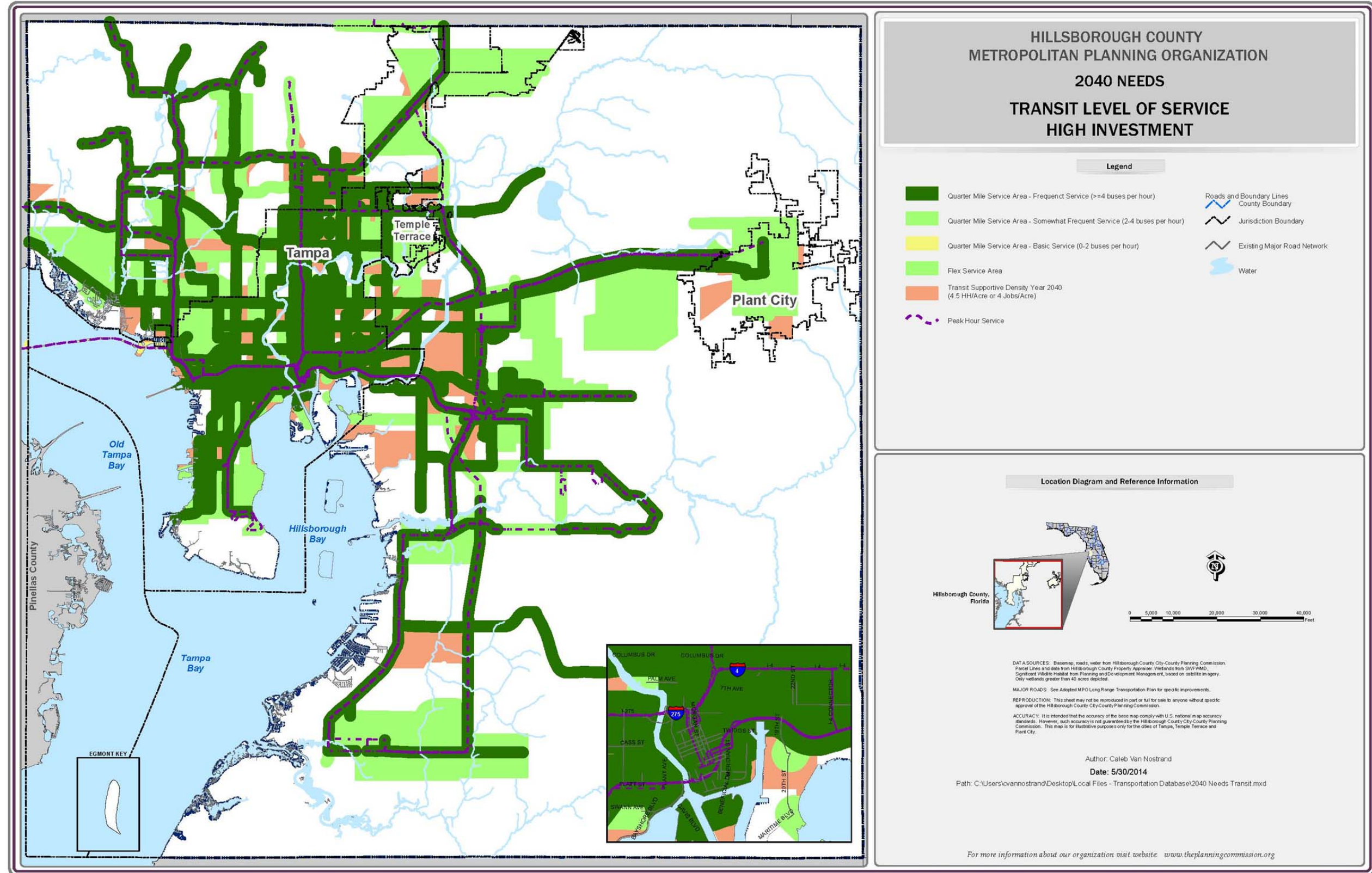


Figure 3. High Investment Level of Service

Benefits Analysis Results

The benefits of service improvements vary across scenarios; higher investments improve residential and employment access to transit service (**Table 1**). Please see **Appendix A** for further details and cost calculations.

Table 1: Benefits and Costs by Investment Level

Investment Level ¹	Statistics				
Low	Costs ²				
	Total Cost (Capital and O&M over 20 years)			\$1,730,760,275	
	Performance Measures				
		Frequent	Somewhat Frequent	Basic	Minimal/None
		LOS A-B	LOS C-D	LOS E	LOS F
	Countywide population & jobs within ¼-mile of transit	16%	29%	4%	51%
	Roadway Centerline Miles	84	305	70	-
Medium	Costs ²				
	Total Cost (Capital and O&M over 20 years)			\$2,638,324,568	
	Performance Measures				
		Frequent	Somewhat Frequent	Basic	Minimal/None
		LOS A-B	LOS C-D	LOS E	LOS F
	Countywide population & jobs within ¼-mile of transit	44%	8%	0.5%	48%
	Roadway Centerline Miles	400	120	15	-
High	Costs ²				
	Total Cost (Capital and O&M over 20 years)			\$3,010,135,325	
	Performance Measures				
		Frequent	Somewhat Frequent	Basic	Minimal/None
		LOS A-B	LOS C-D	LOS E	LOS F
	Countywide population & jobs within ¼-mile of transit	48%	16%	0.2%	36%
	Roadway Centerline Miles	503	140	7	-

¹ Medium investment level includes low investment level; High investment level includes low and medium investment levels, minus the value of the low investment revenue growth over 20 years.

² Costs are presented in millions of 2014 dollars; total cost over 20 years

“Frequent” transit service is defined as a minimum of 15-minute headways, “somewhat frequent” transit service as between 15- and 30-minute headways, and “basic” transit service as longer than 30-minute headways in the peak periods. Roadway system miles without transit service are not included in these tallies. The percent of people and jobs served at each investment level would be as shown in **Figure 4**.

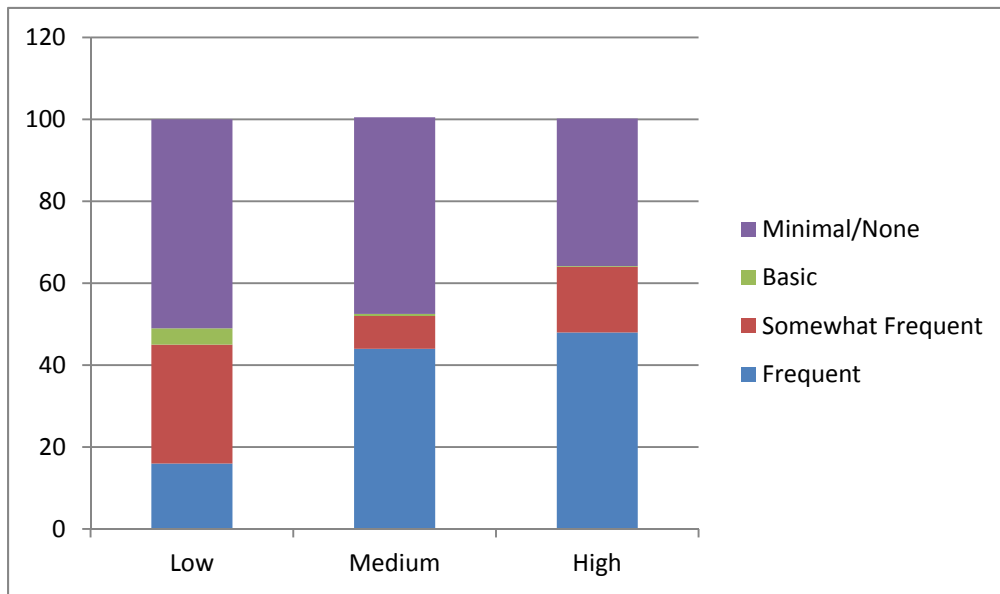


Figure 4. Percentage of countywide population & jobs within 1/4-mile of transit at each investment level

3.0 Transportation Disadvantaged (TD) Services

Persons who may be considered transportation disadvantaged include the elderly, disabled, low-income, or children considered “high risk” or “at-risk.” A fraction of each of these demographic groups is unable to transport themselves or to purchase transportation, and may be eligible for transportation provided by social service agencies.

As the Baby Boom generation moves into its golden years, the TD population in Hillsborough County is expected to increase from approximately 415,081 in 2014 to an estimated 591,664 by 2040.

Currently, Hillsborough County’s Sunshine Line provides door-to-door transportation and bus passes for elderly, low-income, and disabled persons without their own transportation. Transportation is provided primarily to medical appointments and Hillsborough County’s Aging Services day care and nutrition sites, but nonmedical trips are provided on a space-available basis.

3.1 Data Collection and Review

Door-to-door transportation services are primarily provided to persons who are unable to use HART’s transit or paratransit services. To estimate the future population without access to HART, transit population coverage was calculated using GIS and placing a ¼-mile buffer, as required by the American Disabilities Act, around local bus routes. Data on future population came from the 2040 Socioeconomic Data Forecasts of the Planning Commission and MPO. Data on local bus routes came from HART. The ¼-mile buffers that were calculated around the routes were intersected with the population zones to determine how much of the population was covered by the route service areas, and the analysis assumed an even distribution of population within the zones. For HART Flex routes, the Flex zone was used instead of the buffer.

3.2 Service Analysis

Forecast of Transportation Disadvantaged Population

The Florida Commission for the Transportation Disadvantaged (CTD) commissioned the Center for Urban Transportation Research (CUTR) to develop a new methodology to forecast paratransit services demand. The Forecasting Paratransit Services Demand – Review and Recommendations report was adopted by the CTD in 2013, and all counties were directed to use this methodology when forecasting TD populations and demand. The methodology uses several data sources to determine the current and projected TD population. The main source of data is the American Community Survey (ACS). ACS data is collected annually and is reported in one-year, three-year, and five-year datasets. The three-year estimate from 2009-2011 was used for this analysis. Other data sources included the 2009 National Household Transportation Survey (NHTS) and the 2010 Survey of Income and Program Participation (SIPP).

CUTR developed a spreadsheet model to forecast TD populations and trip demand. This model is available on the CTD website for download and was utilized in this analysis. There are required inputs to this model. First, utilizing the ACS three-year dataset for 2009-2011, the following basic population characteristics were input into the model:

- Total population by age
- Population below poverty level by age
- Total population with a disability by age
- Total population with a disability and below poverty level by age

Additional information entered into the model included the MPO population projections for 2015, 2020, 2025, 2030, 2035, and 2040, as well as the percent of transit coverage, based on the population within the HART service area divided by the total population of the county.

As shown in **Figure 5**, overlaps in the population characteristics make it necessary to eliminate duplications. Utilizing the inputs, the CUTR model eliminated duplicate populations. Using CUTR’s method, the estimated TD population for 2011 was 393,408 or 32.4 percent of the population. The TD population in 2040 is forecast to grow to 591,664, as shown in **Table 2**.

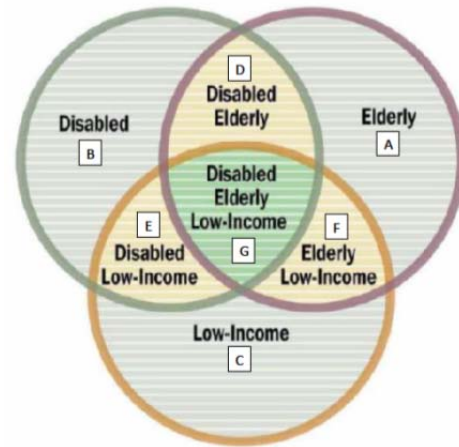


Figure 5. Overlap of Transportation Disadvantaged Population Characteristics

Of these, a portion do not have access to HART bus service, and are particularly in need of paratransit for transportation to medical and other life-sustaining activities. To estimate the number of trips these residents are likely to need in the future, the number of trips currently being provided per TD resident living outside the HART service area was calculated, and the resulting trip rate applied to the estimate of future TD population and bus system coverage.

3.3 Investment Levels Methodology

The investment levels for TD services are inversely related to the bus service investment levels. Therefore, as the bus system expands, the percent of the population lacking access to transit declines, as does the need for last-resort transportation services like Sunshine Line.

The population with access to bus service was defined as those living within ¼-mile of any non-express bus route. Cost estimates for these future paratransit trip needs were calculated using today’s costs per trip and trips per vehicle. **Table 2** summarizes the costs. **Appendix C** includes a detailed cost breakdown.

Table 2: Transportation Disadvantaged Services Needed Based On Bus Service Investment Levels

Investment Level	TD Population Unserved By Transit in 2040	Annual Paratransit Trips Needed in 2040	Annual Operating Cost in 2040 (2014\$)	Fleet Needed in 2040	Total Capital + Operating Cost, 2019-2040
Low Bus Investment	282,000	2.26 M	\$31.8 M	547	\$579.43 M
Medium Bus Investment	187,000	1.5 M	\$21.1 M	363	\$436.60 M
High Bus Investment	182,000	1.4 M	\$20.0 M	352	\$428.52 M

Table 2: Projected TD Population

General TD Population Forecast	2014	2015	2020	2025	2030	2035	2040
<i>Overlapping Circle Component</i>							
E - Estimate non-elderly/disabled/low income	27,296	27,789	30,387	32,806	34,997	37,016	38,909
B - Estimate non-elderly/disabled/not low income	66,126	67,318	73,612	79,474	84,781	89,672	94,257
G - Estimate elderly/disabled/low income	7,763	7,903	8,642	9,330	9,954	10,528	11,066
D - Estimate elderly/disabled/not low income	48,422	49,296	53,905	58,197	62,083	65,665	69,022
F - Estimate elderly/non-disabled/low income	8,263	8,413	9,199	9,932	10,595	11,206	11,779
A - Estimate elderly/non-disabled/not low income	87,381	88,957	97,274	105,019	112,033	118,496	124,554
C - Estimate low income/not elderly/not disabled	169,830	172,893	189,057	204,112	217,742	230,304	242,078
TOTAL GENERAL TD POPULATION	415,081	422,568	462,076	498,871	532,185	562,887	591,664
TOTAL POPULATION	1,281,403	1,304,515	1,426,481	1,540,071	1,642,915	1,737,697	1,826,535

4.0 Trail and Sidepath Network

Considerable progress has been made throughout Hillsborough County in providing sidewalks and on-road bicycling facilities, such as striped lanes and shared-lane arrows. In the last few years, demand has grown for protected bike lanes, which are physically separated from traffic. The separation could be a curb, flexible posts, planters, green boulevard areas, or some other means. National surveys point to 10 percent or less of the population feeling safe and comfortable bicycling on the paved shoulders of roads. Expanding the availability of protected walk/bike facilities could attract a much wider user base.

This analysis focuses on two types of protected walk/bike facilities: paved multi-use trails and paved sidepaths. Trails are completely separated from roads; an example is the Upper Tampa Bay Trail, built on a former rail corridor. A sidepath is also paved but is located in a road right-of-way, along one side; an example is the paved path along the south side of Bruce B. Downs Boulevard in New Tampa. Hillsborough County at present has approximately 80 miles of paved trails and sidepaths, which are mostly in parks.

4.1 Data Collection and Review

The MPO's GIS database of highway and trail segments was used as the basis for this analysis. The database integrates data from multiple sources, including the Hillsborough County and Tampa Greenways Plans, Tampa Walk-Bike Plans, Temple Terrace multimodal plans, recent traffic volume counts by FDOT and the MPO, and community plans prepared by the Planning Commission.

4.2 Performance Measures Methodology

Pedestrian Level of Service (PLOS) and Bicycle Level of Service (BLOS) are defined as quantitative measures that represent the pedestrian's or bicyclist's point of view. Trails and sidepaths are both typically considered high PLOS/BLOS facilities. The performance measures used in this analysis were the numbers of residents and workers with access to excellent or good PLOS and BLOS facilities.

For sidepaths, the PLOS and BLOS measures were calculated based on FDOT's *2013 Quality/Level of Service Handbook*. Four variables are considered for the pedestrian LOS along a roadway:

- Presence of a paved walkway;
- Amount of separation and presence of barriers between the walkway and vehicular traffic;
- Traffic volume on the adjacent road; and
- Posted speed limit for vehicles.

Five variables are considered for the bicyclist LOS:

- Average effective width of the outside through lane,
- Motorized vehicle volumes,
- Motorized vehicle speeds,
- Percent of heavy vehicles (trucks), and
- Pavement condition.

In this analysis, if both a sidewalk and sidepath are provided along a highway segment – one on one side, one on the other side, as on US 301 in Riverview – the higher score was used for that segment.

For off-road trails, the above methodology was also used, so as to remain comparable to the scoring of sidepaths; but the roadway traffic volume was set to one vehicle per day, and the posted speed to zero

miles per hour. In this analysis, trails received a PLOS/BLOS of “A” if they are 12 feet or wider, and grade “B” if less than 12 feet.

The number of residents and employees with access to a high LOS facility was defined as the population living or working within a ¼-mile of a PLOS/BLOS “A” or “B” facility in the year 2040. Future year population and employment by travel analysis zone (TAZ) were prepared by the MPO and can be found in the 2040 Socioeconomic Data Forecasting and Scenario Planning Technical Memorandum.

4.3 Investment Levels Methodology

Opportune locations for new trails and sidepaths are identified in the Hillsborough County and Tampa Greenways plans, community plans adopted by Hillsborough County, and the 2035 LRTP. Typical per-mile costs for trail and sidepath construction were estimated based on recent actual local project costs, and applied to these potential new trail and sidepath corridors, giving each a preliminary cost estimate.

The trail/sidepath investments were prioritized primarily based population density, with an eye to common-sense connectivity. The county’s 700+ zones were sorted into quintiles based on population density, and trails/sidepaths passing within ¼ mile of a higher density zone received a higher score.

The trails/sidepaths were then grouped into three investment levels, as listed and illustrated in **Appendix D**.

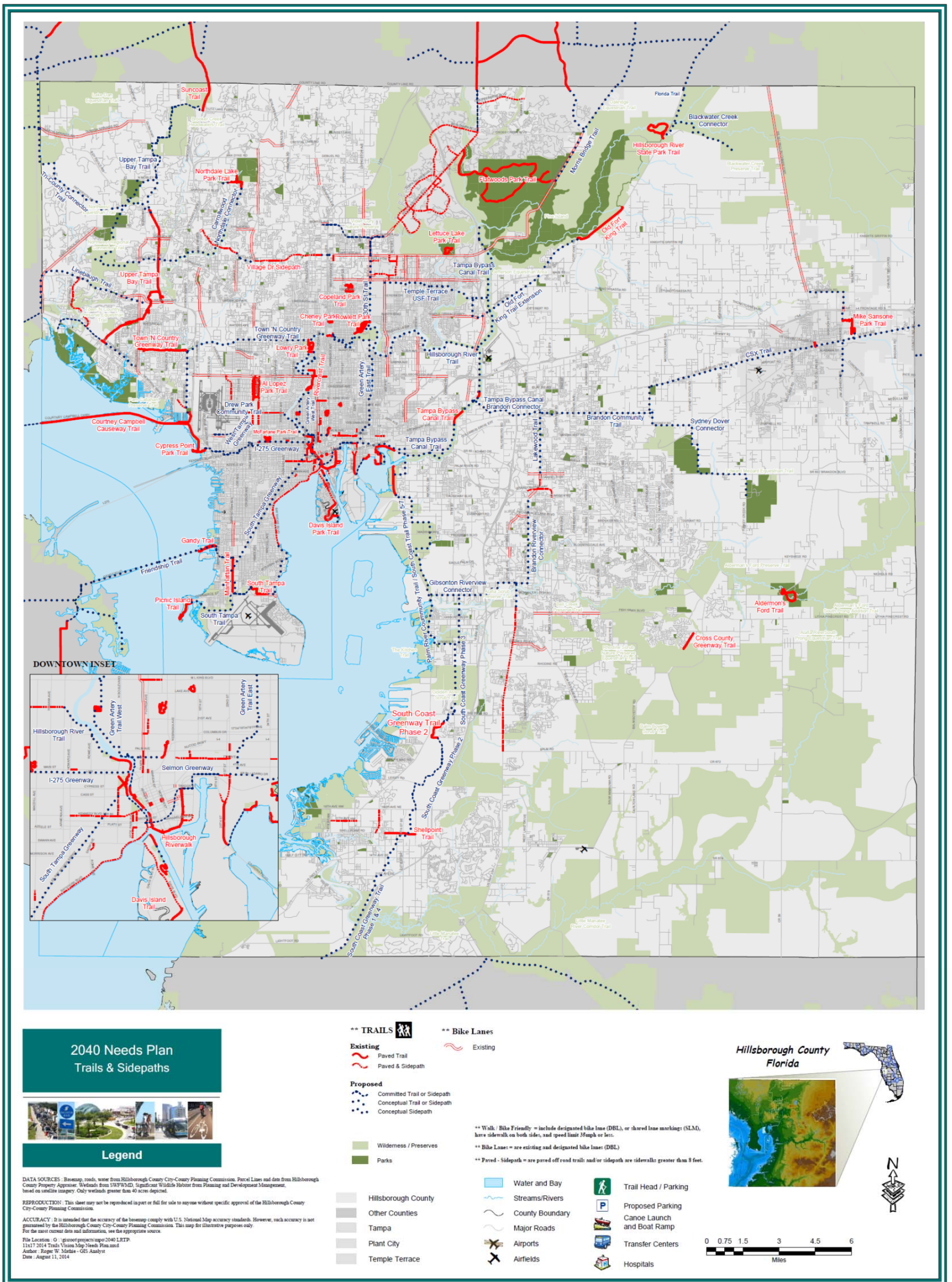


Figure 6. Trail and Sidepath Needs Assessment

Benefits Analysis Results

In summary, higher levels of investment increase residential and employee access to trails and sidepaths. The costs and benefits associated with each investment level are described below and in **Table 3**.

- **Low Investment Level:** maintains the current spending level of \$2 million annually (\$40 million over 20 years). Under this investment level, 40 more miles of paved trails and sidepaths will be added. Even if high density areas are prioritized, only 16 percent of the population will live near a good or excellent walk/bike facility (PLOS/BLOS “A” or “B”) in 2040. Because jobs tend to be more centrally located, 29 percent of future employees will be near a good or excellent walk/bike facility.
- **Medium Investment Level:** assumes an investment of \$7 million annually (\$140 million over 20 years) and results in the construction of 136 miles of paved trails and sidepaths. Based on this level of investment, 23 percent of the population will live near a good or excellent walk/bike facility and 35 percent of jobs will be located near a good or excellent walk/bike facility.
- **High Investment Level:** assumes an investment of \$12 million annually (\$240 million over 20 years) and results in the construction of 232 miles of paved trails and sidepaths. This level of investment expands the trail/sidepath network out into the rural and lower-density suburban areas. Based on this level of investment, 25 percent of the population will live near a good or excellent walk/bike facility. In addition, 37 percent of jobs will be located near a good or excellent walk/bike facility.

Table 3: Benefits and Costs of Investment Levels

Investment Level	Statistics					
Low	Capital Cost		\$39,902,854			
	Performance Measures					
	Level of Service		A-B		C-D	E-F
	Facility		PLOS	BLOS	Both	Both
	Countywide population near trails*		17%	16%	3%	81%
	Countywide jobs near trails		29%	27%	5%	69%
Medium	Capital Cost		\$140,406,778			
	Performance Measures					
	Level of Service		A-B		C-D	E-F
	Facility		PLOS	BLOS	Both	Both
	Countywide population near trails		23%	22%	3%	75%
	Countywide jobs near trails		35%	34%	2%	62%
High	Capital Cost		\$241,737,567			
	Performance Measures					
	Level of Service		A-B		C-D	E-F
	Facility		PLOS	BLOS		
	Countywide population near trails		25%	24%	2%	73%
	Countywide jobs near trails		37%	37%	2%	61%

Note: Includes sidepaths and trails; “near” defined as within ¼ mile

Appendix A: Transit Performance Measures, Investment Impacts, and Costs

Transit LOS	People within ¼ mile	Jobs within ¼ mile	People and Jobs with ¼ mile	% of countywide population	% of countywide jobs	% of countywide population and jobs	Roadway System Centerline Miles*	Roadway System Lane Miles*
Low Investment								
A	119,042	173,625	292,667	6.65%	15.61%	10.08%	49.37	265.86
B	102,511	69,346	171,857	5.73%	6.24%	5.92%	34.73	125.65
A-B	221,553	242,971	464,524	12.37%	21.85%	16.00%		
C	129,635	119,181	248,816	7.24%	10.72%	8.57%	91.18	390.09
D	337,152	260,653	597,805	18.83%	23.44%	20.60%	214.26	794.73
A-D	688,340	622,805	1,311,145	38.45%	56.00%	45.17%		
E	64,863	39,813	104,676	3.62%	3.58%	3.61%	69.84	264.13
F	1,037,179	449,520	1,486,699	57.93%	40.42%	51.22%	9.50	41.20
Medium Investment								
A	393,023	429,596	822,619	21.95%	38.63%	28.34%	196.27	894.32
B	262,615	194,359	456,974	14.67%	17.48%	15.74%	204.21	635.87
A-B	655,638	623,955	1,279,593	36.62%	56.10%	44.09%		
C	15,442	6,655	22,097	0.86%	0.60%	0.76%	19.58	90.75
D	134,576	63,321	197,897	7.52%	5.69%	6.82%	99.12	394.77
A-D	805,656	693,931	1,499,587	45.00%	62.40%	51.67%		
E	5,542	9,676	15,218	0.31%	0.87%	0.52%	14.76	75.53
F	979,184	408,531	1,387,715	54.69%	36.73%	47.81%	0.00	0.00
High Investment								
A	538,056	543,835	1,081,891	30.05%	48.90%	37.27%	286.86	1,333.72
B	184,348	122,236	306,584	10.30%	10.99%	10.56%	216.20	647.21
A-B	722,404	666,071	1,388,475	40.35%	59.89%	47.84%		
C	74,724	34,684	109,408	4.17%	3.12%	3.77%	34.96	145.82
D	247,215	110,581	357,796	13.81%	9.94%	12.33%	104.54	315.01
A-D	1,044,343	811,336	1,855,679	58.33%	72.95%	63.93%		
E	1,304	4,249	5,553	0.07%	0.38%	0.19%	6.74	30.68
F	744,735	296,553	1,041,288	41.60%	26.67%	35.88%	0.00	0.00

*The number of miles in LOS F does not include roadways without bus service.

*2040 Countywide Population: 1,790,382

*2040 Countywide Jobs: 1,112,138

Low Investment Level: Bus System Improvements

Legend

Improvements to existing local routes	New Local Service (Monday - Saturday)	New Express Service (Monday - Friday)
Improvements to existing express routes	Flex Service	MetroRapid

Years	Project	Capital Cost	Annual Operating Cost	Op. Cost Net of 20% Farebox
2014 - 2018 Improvements	Route 12 - 20 minute weekday off-peak frequency	\$ -	\$ 1,128,663	\$ 902,931
	Route 15 - 30 minute weekday off-peak frequency	\$ -	\$ 282,166	\$ 225,733
	Route 15 - Extend to 10:00 PM weekdays	\$ -	\$ 94,055	\$ 75,244
	Route 16 - Extend to 10:00 PM weekdays	\$ -	\$ 86,217	\$ 68,974
	Route 37 - 30 minute weekday off-peak frequency	\$ -	\$ 391,897	\$ 313,518
	Route 37 - Extend to 10:00 PM weekdays	\$ -	\$ 156,759	\$ 125,407
	Route 14 - Extend to 10:00 PM weekdays	\$ -	\$ 64,272	\$ 51,418
	Route 36 - 30 minute frequency on Saturday	\$ -	\$ 210,193	\$ 168,154
	Route 36 - 30 minute frequency on Sunday	\$ -	\$ 158,267	\$ 126,614
	Route 36 - Extend to 10:00 PM weekdays	\$ -	\$ 80,340	\$ 64,272
	Route 34 - 30 minute frequency on Sunday	\$ -	\$ 109,258	\$ 87,406
	Route 39 - 30 minute frequency on Sunday	\$ -	\$ 167,158	\$ 133,727
	Route 8 - 30 minute frequency on Saturday and Sunday	\$ -	\$ 275,638	\$ 220,510
	Route 9 - 30 minute frequency on Saturday and Sunday	\$ -	\$ 267,145	\$ 213,716
	Route 9 - Extend to 10:00 PM weekdays	\$ -	\$ 144,916	\$ 115,933
	Route 15 - 30 minute frequency on Saturday	\$ -	\$ 103,045	\$ 82,436
	Route 19 - 30 minute frequency on Saturday	\$ -	\$ 126,592	\$ 101,274
	Route 19 - 30 minute frequency on Sunday	\$ -	\$ 119,193	\$ 95,354
	Route 18 - 30 minute frequency on Saturday	\$ -	\$ 145,268	\$ 116,214
	Route 18 - 30 minute frequency on Sunday	\$ -	\$ 128,903	\$ 103,122
	Route 18 - Extend to 10:00 PM weekdays	\$ -	\$ 74,273	\$ 59,418
	Route 32 - 30 minute frequency on Saturday	\$ -	\$ 123,597	\$ 98,878
	Route 32 - 30 minute frequency on Sunday	\$ -	\$ 123,597	\$ 98,878
	Route 5 - 30 minute frequency on Saturday	\$ -	\$ 110,299	\$ 88,240
	Route 5 - 30 minute frequency on Sunday	\$ -	\$ 110,299	\$ 88,240
	Route 7 - 30 minute frequency on Saturday	\$ -	\$ 112,023	\$ 89,618
Route 7 - 30 minute frequency on Sunday	\$ -	\$ 112,023	\$ 89,618	
Route 7 - Extend to 10:00 PM weekdays	\$ -	\$ 60,559	\$ 48,447	
	Transit Development Plan (TDP) First 5-Year Total	\$ -	\$ 5,066,618	\$ 4,053,294
2019 - 2023	Route 45 - 30 minute frequency on Saturday	\$ -	\$ 160,164	\$ 128,132
	Route 45 - 30 minute frequency on Sunday	\$ -	\$ 163,894	\$ 131,115
	Route 45 - Extend to 10:00 PM weekdays	\$ -	\$ 88,677	\$ 70,941
	Route 10 - Extend to 8:00 PM weekdays	\$ -	\$ 36,356	\$ 29,085

Years	Project	Capital Cost	Annual Operating Cost	Op. Cost Net of 20% Farebox	
	Route 31 - Extend to 10:00 PM weekdays	\$ -	\$ 79,983	\$ 63,987	
2019 - 2023 Improvements (cont.)	Route 41 - Extend to 9:00 PM weekdays	\$ -	\$ 72,712	\$ 58,170	
	Route 4 - Extend to 8:00 PM weekdays	\$ -	\$ 55,900	\$ 44,720	
	Route 46 - Extend to 8:00 PM weekdays	\$ -	\$ 74,534	\$ 59,627	
	Route 57 - Extend to 10:00 PM weekdays	\$ -	\$ 55,900	\$ 44,720	
	Route 4 - Saturday service	\$ -	\$ 131,685	\$ 105,348	
	Route 16 - Sunday service	\$ -	\$ 124,160	\$ 99,328	
	Route 31 - Saturday service	\$ -	\$ 101,459	\$ 81,167	
	Route 41 - Saturday service	\$ -	\$ 129,360	\$ 103,488	
	Route 46 - Saturday service	\$ -	\$ 115,113	\$ 92,091	
	Transit Development Plan (TDP) Second 5-Year Total	\$ -	\$ 1,389,897	\$ 1,111,918	
	Long Range Transportation Plan 2021-2023 Total	\$ -	\$ 6,456,515	\$ 5,165,212	
	2024 to 2040 Improvements	Route 1 - SRO + schedule relief	\$ 874,000	\$ 561,215	\$ 448,972
		Route 9 - SRO + schedule relief	\$ 895,850	\$ 276,109	\$ 220,887
Route 12 - SRO + schedule relief		\$ 874,000	\$ 596,291	\$ 477,033	
Route 18 - SRO		\$ 895,850	\$ 276,109	\$ 220,887	
Route 19 - Schedule relief		\$ 447,925	\$ 138,055	\$ 110,444	
Route 34 - SRO + schedule relief		\$ 874,000	\$ 473,525	\$ 378,820	
Route 39 - Schedule relief		\$ 874,000	\$ 315,683	\$ 252,547	
Route 45 - Schedule relief		\$ 895,850	\$ 214,751	\$ 171,801	
Route 33 - 30 minute frequency on Saturday		\$ -	\$ 32,616	\$ 26,093	
Route 33 - 30 minute frequency on Sunday		\$ -	\$ 49,444	\$ 39,555	
Route 37 - 30 minute frequency on Saturday		\$ -	\$ 93,059	\$ 74,447	
Route 37 - 30 minute frequency on Sunday		\$ -	\$ 93,059	\$ 74,447	
Route 41 - 30 minute frequency on weekdays		\$ 1,013,572	\$ 479,682	\$ 383,746	
Express Expansion - 28LX		\$ 470,601	\$ 191,873	\$ 153,498	
Express Expansion - 61LX		\$ 506,786	\$ 335,464	\$ 268,371	
Fare Boxes		\$ 340,000			
ITS Upgrades		\$ 157,318			
Long Range Transportation Plan 2024-2040 Total		\$ 9,119,752	\$ 4,126,934	\$ 3,301,547	

Low Investment Level Summary

	Capital Cost	Annual Op. Cost Net of 20% Farebox	Average No. Years Operated	Total Net Operating Cost for Period	TOTAL
2021-2023 Improvements	\$ -	\$5,165,212	19.5	\$ 103,304,234	\$ 103,304,234
2024-2040 Improvements	\$9,119,752	\$3,301,547	13	\$ 42,920,112	\$ 52,039,864
<i>Value of TDP improvements afforded by HART revenue stream natural growth over period</i>					\$ 155,344,098
Typical HART Annual Budget (average of FY12, FY13 and FY14)*					\$ 86,538,014
Continuation of Existing HART Bus System for 20 Years: LOW INVESTMENT LEVEL					\$ 1,730,760,275

* Does not include expenses associated with bus replacements, which are summarized in the 2040 Plan Needs Assessment System Preservation Technical Memo, or expenses associated with the Tampa Historic Streetcar.

Medium Investment Level: Bus System Improvements

Legend

Improvements to existing local routes	New Local Service (Monday - Saturday)	New Express Service (Monday - Friday)
Improvements to existing express routes	Flex Service	MetroRapid

Years	Project	Capital Cost	Annual Operating Cost	Op. Cost Net of 20% Farebox
2014 – 2018 Improvements	Route 7 - 1hr. Segments restored to 30 min	\$ 874,000	\$ 284,204	\$ 227,363
	Route 32 - 1hr. Segments restored to 30 min	\$ 874,000	\$ 299,253	\$ 239,402
	Plant City - to NetPark (Mon - Sat. 60 min)	\$ 874,000	\$ 612,660	\$ 490,128
	Route 24X - Expand to 9 morning and 9 evening trips	\$ -	\$ -	\$ -
	Route 25X - Expand to 9 morning and 9 evening trips	\$ -	\$ -	\$ -
	Route 1 - 10/20 weekday frequency	\$ 1,411,803	\$ 336,143	\$ 268,915
	Route 12 - Increase weekday frequency to 15/20	\$ 941,202	\$ 1,160,359	\$ 928,287
	Route 30 - 15 minute frequency on weekdays	\$ 1,882,404	\$ 1,526,463	\$ 1,221,170
	SR-60 Brandon Local (Monday - Saturday) - assume no Rt. 46 expansion	\$ 895,850	\$ 581,625	\$ 465,300
	Bearss-Ehrlich local (Monday - Saturday)	\$ 1,343,775	\$ 726,110	\$ 580,888
	Route 10 - Saturday service	\$ -	\$ -	\$ -
	Route 10 - Extend to Rocky Point	\$ 459,123	\$ 281,579	\$ 225,263
	Route 10 - 30 minute frequency on weekdays	\$ 918,246	\$ 253,110	\$ 202,488
	Route 10 - Sunday service	\$ -	\$ -	\$ -
	Route 15 - 30 minute weekday off-peak frequency	\$ -	\$ 315,683	\$ 252,547
	Brandon to MacDill via Downtown Local	\$ 2,754,738	\$ 1,070,405	\$ 856,324
	New Tampa local (Monday - Saturday)	\$ 1,377,369	\$ 797,222	\$ 637,778
	Temple Terrace/TIA MetroRapid (E/W)	\$ 21,200,000	\$ 2,705,325	\$ 2,164,260
	Route 5 - 20/30 weekday frequency	\$ 941,202	\$ 141,016	\$ 112,813
	Route 34 - extend segment to Oldsmar	\$ 941,202	\$ 472,399	\$ 377,919
	Route 39 - 20/30 weekday frequency	\$ 1,597,326	\$ 656,414	\$ 525,131
	Express Expansion - 20X	\$ -	\$ -	\$ -
	Express Expansion - 51X	\$ -	\$ -	\$ -
	Bloomingtondale Local (Monday - Saturday)	\$ 941,202	\$ 535,976	\$ 428,781
	Route 8 - Weekday midnight service	\$ -	\$ -	\$ -
	Route 57 - 30 minute frequency on weekdays	\$ 1,013,572	\$ 596,942	\$ 477,554
	TIA/Kennedy Blvd MetroRapid	\$ 17,903,000	\$ 1,557,240	\$ 1,245,792
	Route 30 Reduction to 30 minutes for TIA/Kennedy Overlay	\$ (1,882,404)	\$ (1,643,754)	\$ (1,315,003)
	Additional Bus Maintenance Facility	\$ 33,000,000	\$ -	\$ -
	Temple Terrace Park and Ride	\$ 4,000,000	\$ -	\$ -
	Shelters and Stops (BRT)	\$ 140,950,000	\$ -	\$ -
	Fare Boxes	\$ 1,500,000	\$ -	\$ -
ITS Upgrades	\$ 694,050	\$ -	\$ -	
Transit Development Plan (TDP) First 5-Year Total	\$ 237,405,660	\$ 13,266,375	\$ 9,656,207	

Years	Project	Capital Cost	Annual Operating Cost	Op. Cost Net of 20% Farebox
2019 – 2023 Improvements	Route 14 - 30 minute frequency on weekdays	\$ 1,013,572	\$ 598,212	\$ 478,569
	Route 16 - 30 minute frequency on weekdays	\$ 988,850	\$ 534,187	\$ 427,350
	Route 39 - Weekday service to midnight	\$ -	\$ -	\$ -
	Downtown Circulator - 10 minute frequency	\$ -	\$ -	\$ -
	Westshore Circulator - 10 minute frequency	\$ -	\$ -	\$ -
	USF area Circulator - 10 minute frequency	\$ -	\$ -	\$ -
	Southshore Circulator	\$ -	\$ -	\$ -
	New Tampa MetroRapid	\$ 14,305,000	\$ 1,596,177	\$ 1,276,942
	Route 7 - Weekday midnight service	\$ -	\$ -	\$ -
	Route 46 - 30 minute frequency on weekdays	\$ 1,013,572	\$ 494,988	\$ 395,991
	Express Expansion - 22X	\$ -	\$ -	\$ -
	Express Expansion - 47LX	\$ -	\$ -	\$ -
	Brandon /Downtown MetroRapid	\$ 19,610,000	\$ 2,478,249	\$ 1,982,599
	Route 4 - 30 minute weekday frequency	\$ 1,064,884	\$ 580,432	\$ 464,346
	Route 41 - 30 minute frequency on weekdays	\$ 1,013,572	\$ 570,184	\$ 456,147
	SR 60 Brandon local - 30 minute frequency on weekdays	\$ 1,038,912	\$ 559,004	\$ 447,203
	Bearss-Ehrlich local - 30 minute frequency on weekdays	\$ 1,558,368	\$ 689,438	\$ 551,550
	Dale Mabry Hwy./MacDill AFB MetroRapid	\$ 38,450,000	\$ 2,890,310	\$ 2,312,248
	Route 4 - Saturday service	\$ -	\$ -	\$ -
	Route 4 - Sunday service	\$ -	\$ -	\$ -
	Route 14 - Sunday Service	\$ -	\$ -	\$ -
	Route 16 - Sunday service	\$ -	\$ -	\$ -
	Route 31 - Saturday service	\$ -	\$ -	\$ -
	Route 31 - Sunday Service	\$ -	\$ -	\$ -
	Route 41 - Saturday service	\$ -	\$ -	\$ -
	Route 41 - Sunday service	\$ -	\$ -	\$ -
	Route 46 - Saturday service	\$ -	\$ -	\$ -
	Route 46 - Sunday Service	\$ -	\$ -	\$ -
	Route 57 - Sunday Service	\$ -	\$ -	\$ -
	Thonotosassa local	\$ 1,091,506	\$ 702,591	\$ 562,073
	Big Bend Local (Monday - Saturday)	\$ 1,091,506	\$ 729,535	\$ 583,628
	Gunn Hwy- Busch Blvd MetroRapid	\$ 29,865,500	\$ 4,421,412	\$ 3,537,129
	New Tampa Park and Ride	\$ 4,000,000	\$ -	\$ -
	Brandon Park and Ride	\$ 4,000,000	\$ -	\$ -
	Dale Mabry Park and Ride	\$ 4,000,000	\$ -	\$ -
	Shelters and Stops (BRT)	\$ 260,550,000	\$ -	\$ -
	Fare Boxes	\$ 1,760,000	\$ -	\$ -
	ITS Upgrades	\$ 814,352	\$ -	\$ -
	Transit Development Plan (TDP) Second 5-Year Total	\$ 510,229,594	\$ 16,844,718	\$ 13,475,774
	Long Range Transportation Plan 2021-2023 Total	\$ 510,229,594	\$ 30,111,093	\$ 24,088,874

Years	Project	Capital Cost	Annual Operating Cost	Op. Cost Net of 20% Farebox
2024 – 2040 Improvements	Route 1 - SRO + schedule relief	\$ 874,000	\$ 561,215	\$ 448,972
	Route 9 - SRO + schedule relief	\$ 895,850	\$ 276,109	\$ 220,887
	Route 12 - SRO + schedule relief	\$ 874,000	\$ 596,291	\$ 477,033
	Route 18 - SRO	\$ 895,850	\$ 276,109	\$ 220,887
	Route 19 - Schedule relief	\$ 447,925	\$ 138,055	\$ 110,444
	Route 34 - SRO + schedule relief	\$ 874,000	\$ 473,525	\$ 378,820
	Route 37 - Schedule relief (30 min midday freq.)	\$ 874,000	\$ 438,449	\$ 350,759
	Route 39 - Schedule relief	\$ 874,000	\$ 315,683	\$ 252,547
	Route 45 - Schedule relief	\$ 895,850	\$ 214,751	\$ 171,801
	Route 5 - 30 minute frequency on Saturday and Sunday	\$ -	\$ -	\$ -
	Route 7 - 30 minute frequency on Saturday and Sunday	\$ -	\$ -	\$ -
	Route 8 - 30 minute frequency on Saturday and Sunday	\$ -	\$ -	\$ -
	Route 9 - 30 minute frequency on Saturday and Sunday	\$ -	\$ -	\$ -
	Route 15 - 30 minute frequency on Saturday	\$ -	\$ -	\$ -
	Route 18 - 30 minute frequency on Saturday and Sunday	\$ -	\$ -	\$ -
	Route 19 - 30 minute frequency on Saturday and Sunday	\$ -	\$ -	\$ -
	Route 32 - 30 minute frequency on Saturday and Sunday	\$ -	\$ -	\$ -
	Route 33 - 30 minute frequency on Saturday and Sunday	\$ -	\$ -	\$ -
	Route 34 - 30 minute frequency on Sunday	\$ -	\$ -	\$ -
	Route 36 - 30 minute frequency on Saturday and Sunday	\$ -	\$ -	\$ -
	Route 37 - 30 minute frequency on Saturday and Sunday	\$ -	\$ -	\$ -
	Route 39 - 30 minute frequency on Sunday	\$ -	\$ -	\$ -
	Route 45 - 30 minute frequency on Saturday and Sunday	\$ -	\$ -	\$ -
	Express Expansion - 28LX	\$ -	\$ -	\$ -
	Express Expansion - 61LX	\$ -	\$ -	\$ -
	Expansion of Paratransit for Local Bus ADA-Complementary Service (80 vehicles)	\$5,200,000	\$ 6,966,130	\$ 5,572,904
	Fare Boxes	\$ 340,000	\$ -	\$ -
	ITS Upgrades	\$ 157,318	\$ -	\$ -
	Long Range Transportation Plan 2024-2040 Total	\$ 13,202,793	\$ 10,256,317	\$ 8,205,053

Medium Investment Level Summary

	Capital Cost	Annual Op. Cost Net of 20% Farebox	Average No. Years Operated	Total Net Operating Cost for Time Period	TOTAL
2021-2023 Improvements	\$ 510,229,594	\$ 24,088,874	19.5	\$ 469,733,051	\$ 979,962,645
2024-2040 Improvements	\$ 13,302,793	\$ 8,205,053	8.5	\$ 69,742,953	\$ 82,945,746
Adjustment to 2014 Costs (value of TDP improvements afforded by HART revenue stream natural growth)					(\$ 155,344,098)
Continuation of Existing HART Bus System for 20 Years					\$ 1,730,760,275
Total Cost for Medium Investment Level, 2021-2040, in present day dollars					\$ 2,638,324,568

High Investment Level: Bus System Improvements

Legend

Improvements to existing local routes	New Local Service (Monday - Saturday)	New Express Service (Monday - Friday)
Improvements to existing express routes	Flex Service	MetroRapid

Years	Project	Capital Cost	Annual Operating Cost	Op. Cost Net of 20% Farebox
2014 – 2018 Improvements	Route 7 - 1hr. Segments restored to 30 min	\$ 874,000	\$ 284,204	\$ 227,363
	Route 32 - 1hr. Segments restored to 30 min	\$ 874,000	\$ 299,253	\$ 239,402
	Plant City - to NetPark (Mon - Sat. 60 min)	\$ 874,000	\$ 612,660	\$ 490,128
	Plant City Express - 2 AM + 2 PM trips	\$ 874,000	\$ 101,893	\$ 81,515
	Plant City - 3 Local Flex Zones (Mon. - Sat.)	\$ 582,000	\$ 1,093,934	\$ 875,147
	Flex - Temple Terrace	\$ 388,000	\$ 727,841	\$ 582,273
	Flex - Seffner	\$ 194,000	\$ 363,921	\$ 291,136
	Route 24X - Expand to 9 morning and 9 evening trips	\$ 918,246	\$ 348,788	\$ 279,031
	Route 25X - Expand to 9 morning and 9 evening trips	\$ 1,377,369	\$ 333,112	\$ 266,490
	Route 1 - 10/20 weekday frequency	\$ 1,411,803	\$ 336,143	\$ 268,915
	Route 12 - Increase weekday frequency to 15/20	\$ 941,202	\$ 1,160,359	\$ 928,287
	Route 30 - 15 minute frequency on weekdays	\$ 1,882,404	\$ 1,526,463	\$ 1,221,170
	SR-60 Brandon Local (Monday - Saturday) - assume no Rt. 46 expansion	\$ 895,850	\$ 581,625	\$ 465,300
	Bearss-Ehrlich local (Monday - Saturday)	\$ 1,343,775	\$ 726,110	\$ 580,888
	South County to MacDill AFB Express via US 301	\$ 1,343,775	\$ 208,884	\$ 167,108
	Brandon to USF area Express	\$ 1,343,775	\$ 224,952	\$ 179,962
	Brandon to Westshore Express	\$ 1,343,775	\$ 208,884	\$ 167,108
	Flex - New Tampa	\$ 407,644	\$ 745,933	\$ 596,747
	Route 10 - Saturday service	\$ -	\$ 56,024	\$ 44,819
	Route 10 - Extend to Rocky Point	\$ 459,123	\$ 281,579	\$ 225,263
	Route 10 - 30 minute frequency on weekdays	\$ 918,246	\$ 253,110	\$ 202,488
	Route 10 - Sunday service	\$ -	\$ 56,024	\$ 44,819
	Route 15 - 30 minute weekday off-peak frequency	\$ -	\$ 315,683	\$ 252,547
	Brandon to MacDill via Downtown Local	\$ 2,754,738	\$ 1,070,405	\$ 856,324
	New Tampa local (Monday - Saturday)	\$ 1,377,369	\$ 797,222	\$ 637,778
	Temple Terrace/TIA MetroRapid (E/W)	\$ 21,200,000	\$ 2,705,325	\$ 2,164,260
	Route 5 - 20/30 weekday frequency	\$ 941,202	\$ 141,016	\$ 112,813
	Route 34 - extend segment to Oldsmar	\$ 941,202	\$ 472,399	\$ 377,919
	Route 39 - 20/30 weekday frequency	\$ 1,597,326	\$ 656,414	\$ 525,131
	Express Expansion - 20X	\$ 482,366	\$ 182,815	\$ 146,252
	Express Expansion - 51X	\$ 470,601	\$ 282,999	\$ 226,399
	Bloomington Local (Monday - Saturday)	\$ 941,202	\$ 535,976	\$ 428,781
	New Tampa to Westshore via USF Express	\$ 941,202	\$ 161,161	\$ 128,929
	Flex - Airport Industrial Area	\$ 417,832	\$ 783,745	\$ 626,996
Route 8 - Weekday midnight service	\$ -	\$ 69,211	\$ 55,369	

Years	Project	Capital Cost	Annual Operating Cost	Op. Cost Net of 20% Farebox
2014 – 2018 Improvements (cont.)	Route 57 - 30 minute frequency on weekdays	\$ 1,013,572	\$ 596,942	\$ 477,554
	TIA/Kennedy Blvd MetroRapid	\$ 17,903,000	\$ 1,557,240	\$ 1,245,792
	Route 30 reduce to 30 minutes for TIA/Kennedy Overlay	\$ (1,882,404)	\$ (1,643,754)	\$ (1,315,003)
	Plant City - Park and Ride	\$ 4,000,000	\$ -	\$ -
	Temple Terrace - Park and Ride	\$ 4,000,000	\$ -	\$ -
	Additional Bus Maintenance Facility	\$ 33,000,000	\$ -	\$ -
	Shelters and Stops (BRT)	\$ 140,950,000	\$ -	\$ -
	Shelters and Stops (Express Bus)	\$ 539,350	\$ -	\$ -
	Fare Boxes	\$ 1,880,000	\$ -	\$ -
	ITS Upgrades	\$ 869,876	\$ -	\$ -
	Transit Development Plan (TDP) First 5-Year Total	\$ 220,585,421	\$ 19,216,499	\$ 15,373,199
2019 - 2023 Improvements	Route 14 - 30 minute frequency on weekdays	\$ 1,013,572	\$ 598,212	\$ 478,569
	Route 16 - 30 minute frequency on weekdays	\$ 988,850	\$ 534,187	\$ 427,350
	Route 39 - Weekday service to midnight	\$ -	\$ 159,618	\$ 127,694
	Downtown Circulator - 10 minute frequency	\$ 2,966,550	\$ 1,525,236	\$ 1,220,189
	Westshore Circulator - 10 minute frequency	\$ 2,966,550	\$ 815,824	\$ 652,659
	USF area Circulator - 10 minute frequency	\$ 2,966,550	\$ 851,294	\$ 681,036
	Southshore Circulator	\$ 4,701,000	\$ 378,000	\$ 302,400
	NW County to Westshore Express	\$ 988,850	\$ 159,618	\$ 127,694
	New Tampa MetroRapid	\$ 14,305,000	\$ 1,596,177	\$ 1,276,942
	Route 7 - Weekday midnight service	\$ -	\$ 145,424	\$ 116,340
	Route 46 - 30 minute frequency on weekdays	\$ 1,013,572	\$ 494,988	\$ 395,991
	New Tampa to MacDill AFB Express	\$ 1,520,358	\$ 181,781	\$ 145,424
	Express Expansion - 22X	\$ 447,925	\$ 227,953	\$ 182,362
	Express Expansion - 47LX	\$ 447,925	\$ 317,025	\$ 253,620
	Brandon /Downtown MetroRapid	\$ 19,610,000	\$ 2,478,249	\$ 1,982,599
	Route 4 - 30 minute weekday frequency	\$ 1,064,884	\$ 580,432	\$ 464,346
	Route 41 - 30 minute frequency on weekdays	\$ 1,013,572	\$ 570,184	\$ 456,147
	SR 60 Brandon local - 30 minute frequency on weekdays	\$ 1,038,912	\$ 559,004	\$ 447,203
	Bears-Ehrlich local - 30 minute frequency on weekdays	\$ 1,558,368	\$ 689,438	\$ 551,550
	Flex - Gibsonton	\$ 230,606	\$ 427,152	\$ 341,722
	Dale Mabry Hwy./MacDill AFB MetroRapid	\$ 38,450,000	\$ 2,890,310	\$ 2,312,248
	Route 4 - Saturday service	\$ -	\$ 131,685	\$ 105,348
	Route 4 - Sunday service	\$ -	\$ 131,685	\$ 105,348
	Route 14 - Sunday Service	\$ -	\$ 142,592	\$ 114,073
	Route 16 - Sunday service	\$ -	\$ 124,160	\$ 99,328
	Route 31 - Saturday service	\$ -	\$ 101,459	\$ 81,167
	Route 31 - Sunday Service	\$ -	\$ 101,459	\$ 81,167
	Route 41 - Saturday service	\$ -	\$ 129,360	\$ 103,488
	Route 41 - Sunday service	\$ -	\$ 129,360	\$ 103,488

Years	Project	Capital Cost	Annual Operating Cost	Op. Cost Net of 20% Farebox	
2019 - 2023 Improvements (cont.)	Route 46 - Saturday service	\$ -	\$ 115,113	\$ 92,091	
	Route 46 - Sunday Service	\$ -	\$ 115,113	\$ 92,091	
	Route 57 - Sunday Service	\$ -	\$ 145,847	\$ 116,677	
	Thonotosassa local	\$ 1,091,506	\$ 702,591	\$ 562,073	
	Big Bend Local (Monday - Saturday)	\$ 1,091,506	\$ 729,535	\$ 583,628	
	NW County to USF	\$ 1,064,884	\$ 152,792	\$ 122,233	
	NW County to Brandon	\$ 1,064,884	\$ 190,990	\$ 152,792	
	Gunn Hwy- Busch Blvd MetroRapid	\$ 29,865,500	\$ 4,421,412	\$ 3,537,129	
	New Tampa Park and Ride	\$ 4,000,000	\$ -	\$ -	
	Brandon Park and Ride	\$ 4,000,000	\$ -	\$ -	
	Dale Mabry Park and Ride	\$ 4,000,000	\$ -	\$ -	
	Shelters and Stops (BRT)	\$ 260,550,000	\$ -	\$ -	
	Shelters and Stops (Express Bus)	\$ 242,700	\$ -	\$ -	
	Fare Boxes	\$ 1,960,000	\$ -	\$ -	
	ITS Upgrades	\$ 906,892	\$ -	\$ -	
	Transit Development Plan (TDP) Second 5-Year Total	\$ 530,130,916	\$ 23,745,254	\$ 18,996,204	
	Long Range Transportation Plan 2021-2023 Total		\$ 530,130,916	\$ 42,961,753	\$ 34,369,403
	2024 – 2040 Improvements	Route 1 - SRO + schedule relief	\$ 874,000	\$ 561,215	\$ 448,972
Route 9 - SRO + schedule relief		\$ 895,850	\$ 276,109	\$ 220,887	
Route 12 - SRO + schedule relief		\$ 874,000	\$ 596,291	\$ 477,033	
Route 18 - SRO		\$ 895,850	\$ 276,109	\$ 220,887	
Route 19 - Schedule relief		\$ 447,925	\$ 138,055	\$ 110,444	
Route 34 - SRO + schedule relief		\$ 874,000	\$ 473,525	\$ 378,820	
Route 37 - Schedule relief (30 min midday freq.)		\$ 874,000	\$ 438,449	\$ 350,759	
Route 39 - Schedule relief		\$ 874,000	\$ 315,683	\$ 252,547	
Route 45 - Schedule relief		\$ 895,850	\$ 214,751	\$ 171,801	
Route 5 - 30 minute frequency on Saturday & Sunday		\$ -	\$ 199,858	\$ 159,886	
Route 7 - 30 minute frequency on Saturday & Sunday		\$ -	\$ 202,980	\$ 162,384	
Route 8 - 30 minute frequency on Saturday & Sunday		\$ -	\$ 262,383	\$ 209,907	
Route 9 - 30 minute frequency on Saturday & Sunday		\$ -	\$ 254,299	\$ 203,439	
Route 15 - 30 minute frequency on Saturday		\$ -	\$ 98,090	\$ 78,472	
Route 18 - 30 minute frequency on Saturday		\$ -	\$ 134,904	\$ 107,923	
Route 18 - 30 minute frequency on Sunday		\$ -	\$ 119,707	\$ 95,765	
Route 19 - 30 minute frequency on Saturday		\$ -	\$ 120,505	\$ 96,404	
Route 19 - 30 minute frequency on Sunday		\$ -	\$ 113,461	\$ 90,769	
Route 32 - 30 minute frequency on Saturday & Sunday		\$ -	\$ 229,560	\$ 183,642	
Route 33 - 30 minute frequency on Saturday		\$ -	\$ 32,616	\$ 26,093	
Route 33 - 30 minute frequency on Sunday	\$ -	\$ 49,444	\$ 39,555		
Route 34 - 30 minute frequency on Sunday	\$ -	\$ 106,591	\$ 85,273		
Route 36 - 30 minute frequency on Saturday	\$ -	\$ 205,063	\$ 164,050		

Years	Project	Capital Cost	Annual Operating Cost	Op. Cost Net of 20% Farebox
2024 – 2040 Improvements (cont.)	Route 36 - 30 minute frequency on Sunday	\$ -	\$ 154,404	\$ 123,523
	Route 37 - 30 minute frequency on Saturday	\$ -	\$ 93,059	\$ 74,447
	Route 37 - 30 minute frequency on Sunday	\$ -	\$ 93,059	\$ 74,447
	Route 39 - 30 minute frequency on Sunday	\$ -	\$ 163,079	\$ 130,463
	Route 45 - 30 minute frequency on Saturday	\$ -	\$ 141,566	\$ 113,253
	Route 45 - 30 minute frequency on Sunday	\$ -	\$ 144,862	\$ 115,890
	Express Expansion - 28LX	\$ 470,601	\$ 191,873	\$ 153,498
	Express Expansion - 61LX	\$ 506,786	\$ 335,464	\$ 268,371
	Flex - Northdale Expansion	\$ 198,850	\$ 363,921	\$ 291,136
	Flex - Temple Terrace expansion	\$ 215,494	\$ 363,921	\$ 291,136
	Flex - South Tampa expansion	\$ 215,494	\$ 363,921	\$ 291,136
	Flex - Seffner expansion	\$ 215,494	\$ 363,921	\$ 291,136
	Flex - Brandon expansion	\$ 208,916	\$ 363,921	\$ 291,136
	Flex - Town N' Country expansion	\$ 230,606	\$ 363,921	\$ 291,136
	Flex - Airport Industrial Area expansion	\$ 236,370	\$ 363,921	\$ 291,136
	Flex - New Tampa expansion	\$ 242,280	\$ 363,921	\$ 291,136
	USF-Downtown-Westshore in I-275 Express Lanes	\$ 34,200,000	\$ 2,100,000	\$ 1,680,000
	S County-MacDill AFB (US 301) Express- expand to 6 AM & 6 PM trips	\$ 506,786	\$ 407,573	\$ 326,058
	Expand Carrollwood Flex	\$ 220,438	\$ 363,921	\$ 291,136
	Linebaugh Ave. WIC Express	\$ 1,960,000	\$ 555,162	\$ 444,130
	N. Dale Mabry WIC Express	\$ 1,960,000	\$ 555,162	\$ 444,130
	Citrus Park WIC Express	\$ 1,960,000	\$ 555,162	\$ 444,130
	N. Gunn Hwy WIC Express	\$ 2,450,000	\$ 634,470	\$ 507,576
	Express expansion Brandon-USF	\$ 462,204	\$ 268,079	\$ 214,463
	Express expansion NW-Brandon	\$ 462,204	\$ 268,079	\$ 214,463
	Downtown Tampa to Brandon Exp. Bus on Selmon Expwy	\$ 5,390,000	\$ 2,314,826	\$ 1,851,861
	Expansion of Paratransit for Local Bus ADA-Complementary Service (80 vehicles)	\$5,200,000	\$ 6,966,130	\$ 5,572,904
	Shelters and Stops (Express Bus)	\$ 168,200	\$ -	\$ -
	Fare Boxes	\$ 1,140,000	\$ -	\$ -
	ITS Upgrades	\$ 527,478	\$ -	\$ -
Long Range Transportation Plan 2024-2040 Total		\$ 66,853,676	\$ 24,636,942	\$ 19,709,554

High Investment Level Summary

	Capital Cost	Annual Op. Cost Net of 20% Farebox	Average No. Years Operated	Total Net Op. Cost for Period	TOTAL
2021-2023 Improvements	\$ 530,130,916	\$ 34,369,403	19.5	\$ 670,203,350	\$ 1,200,334,266
2024-2040 Improvements	\$ 61,653,676	\$ 48,506,052	8.5	\$ 167,531,206	\$ 234,384,882
Adjustment to 2014 Costs (value of TDP improvements afforded by HART revenue stream natural growth)					(\$ 155,344,098)
Continuation of Existing HART Bus System for 20 Years					\$ 1,730,760,275
Total Cost for High Investment Level, 2021-2040, in present day dollars					\$ 3,010,135,325

** Source: TBARTA

Appendix B: Countywide Transportation Disadvantaged Service at Various Investment Levels

Low Transit Investment Level

General TD Population Forecast	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Overlapping Circle Component														
E - Estimate non-elderly/disabled/ low income	26,813	27,296	27,789	28,290	28,800	29,320	29,848	30,387	30,856	31,332	31,816	32,307	32,806	33,233
B - Estimate non-elderly/ disabled/not low income	64,954	66,126	67,318	68,533	69,769	71,027	72,308	73,612	74,749	75,903	77,075	78,266	79,474	80,508
G - Estimate elderly/disabled/low income	7,626	7,763	7,903	8,046	8,191	8,339	8,489	8,642	8,776	8,911	9,049	9,189	9,330	9,452
D- Estimate elderly/ disabled/not low income	47,564	48,422	49,296	50,185	51,090	52,012	52,950	53,905	54,737	55,582	56,441	57,312	58,197	58,954
F - Estimate elderly/non-disabled/low income	8,117	8,263	8,413	8,564	8,719	8,876	9,036	9,199	9,341	9,485	9,632	9,781	9,932	10,061
A - Estimate elderly/non-disabled/not low income	85,832	87,381	88,957	90,561	92,194	93,857	95,550	97,274	98,776	100,301	101,850	103,422	105,019	106,386
C - Estimate low income/not elderly/not disabled	166,821	169,830	172,893	176,011	179,186	182,418	185,708	189,057	191,977	194,941	197,951	201,008	204,112	206,768
TOTAL TD POPULATION	407,727	415,081	422,568	430,190	437,949	445,848	453,889	462,076	469,211	476,457	483,814	491,285	498,871	505,362
TD Population Not Served by Transit							171,314	176,604	181,564	186,636	191,821	197,122	202,540	207,581
Percent served by Transit	65%	65%	64%	64%	63%	63%	62%	62%	61%	61%	60%	60%	59%	59%
Trips Needed by Year*							1,370,324.67	1,412,634.85	1,452,314.06	1,492,881.86	1,534,356.23	1,576,755.48	1,620,098.30	1,660,422.74
Total Vehicles Required*							332	342	352	361	371	382	392	402
O&M Cost projected present day dollars*							\$19,280,782	\$19,876,096	\$20,434,391	\$21,005,189	\$21,588,743	\$22,185,310	\$22,795,154	\$23,362,528
Capital Cost required for needed vehicles based on present day dollars							\$4,026,195	\$706,350	\$706,350	\$635,715	\$706,350	\$776,985	\$706,350	\$706,350

General TD Population Forecast	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Overlapping Circle Component														
E - Estimate non-elderly/disabled/ low income	33,666	34,104	34,548	34,997	35,392	35,791	36,195	36,603	37,016	37,387	37,762	38,140	38,523	38,909
B - Estimate non-elderly/ disabled/not low income	81,556	82,617	83,692	84,781	85,738	86,705	87,683	88,672	89,672	90,571	91,479	92,396	93,322	94,257
G - Estimate elderly/disabled/low income	9,575	9,700	9,826	9,954	10,066	10,179	10,294	10,410	10,528	10,633	10,740	10,848	10,956	11,066
D- Estimate elderly/ disabled/not low income	59,721	60,499	61,286	62,083	62,784	63,492	64,208	64,933	65,665	66,323	66,988	67,659	68,337	69,022
F - Estimate elderly/non-disabled/low income	10,192	10,324	10,459	10,595	10,714	10,835	10,957	11,081	11,206	11,318	11,432	11,546	11,662	11,779
A - Estimate elderly/non-disabled/not low income	107,770	109,173	110,593	112,033	113,296	114,574	115,867	117,174	118,496	119,683	120,883	122,094	123,318	124,554
C - Estimate low income/not elderly/not disabled	209,459	212,184	214,945	217,742	220,199	222,683	225,195	227,735	230,304	232,612	234,943	237,298	239,676	242,078
TOTAL TD POPULATION	511,939	518,600	525,349	532,185	538,189	544,260	550,399	556,608	562,887	568,529	574,226	579,981	585,794	591,664
TD Population Not Served by Transit	212,720	217,956	223,293	228,732	233,874	239,104	244,421	249,828	255,325	260,591	265,936	271,362	276,870	282,461
Percent served by Transit	58%	58%	57%	57%	57%	56%	56%	55%	55%	54%	54%	53%	53%	52%
Trips Needed by Year*	1,701,522.31	1,743,410.35	1,786,100.43	1,829,606.33	1,870,738.13	1,912,565.11	1,955,097.71	1,998,346.53	2,042,322.31	2,084,437.86	2,127,192.43	2,170,594.61	2,214,653.08	2,259,376.64
Total Vehicles Required*	412	422	432	443	453	463	473	483	494	504	515	525	536	547
O&M Cost projected present day dollars*	\$23,940,808	\$24,530,183	\$25,130,842	\$25,742,980	\$26,321,714	\$26,910,229	\$27,508,672	\$28,117,193	\$28,735,942	\$29,328,518	\$29,930,084	\$30,540,763	\$31,160,676	\$31,789,946
Capital Cost required for needed vehicles based on present day dollars	\$706,350	\$706,350	\$706,350	\$776,985	\$706,350	\$706,350	\$706,350	\$706,350	\$776,985	\$706,350	\$776,985	\$706,350	\$776,985	\$776,985
Total Cost for Imagine 2040 (2021-2040)												\$535,540,040		
Total Cost for LRTP (2019-2040)												\$579,429,463		
Average Annual Cost for LRTP												\$26,337,703		

*Based on 2013 AOR

Medium Transit Investment Level

General TD Population Forecast	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Overlapping Circle Component														
E - Estimate non-elderly/disabled/ low income	26,813	27,296	27,789	28,290	28,800	29,320	29,848	30,387	30,856	31,332	31,816	32,307	32,806	33,233
B - Estimate non-elderly/ disabled/not low income	64,954	66,126	67,318	68,533	69,769	71,027	72,308	73,612	74,749	75,903	77,075	78,266	79,474	80,508
G - Estimate elderly/disabled/low income	7,626	7,763	7,903	8,046	8,191	8,339	8,489	8,642	8,776	8,911	9,049	9,189	9,330	9,452
D- Estimate elderly/ disabled/not low income	47,564	48,422	49,296	50,185	51,090	52,012	52,950	53,905	54,737	55,582	56,441	57,312	58,197	58,954
F - Estimate elderly/non-disabled/low income	8,117	8,263	8,413	8,564	8,719	8,876	9,036	9,199	9,341	9,485	9,632	9,781	9,932	10,061
A - Estimate elderly/non-disabled/not low income	85,832	87,381	88,957	90,561	92,194	93,857	95,550	97,274	98,776	100,301	101,850	103,422	105,019	106,386
C - Estimate low income/not elderly/not disabled	166,821	169,830	172,893	176,011	179,186	182,418	185,708	189,057	191,977	194,941	197,951	201,008	204,112	206,768
TOTAL TD POPULATION	407,727	415,081	422,568	430,190	437,949	445,848	453,889	462,076	469,211	476,457	483,814	491,285	498,871	505,362
TD Population Not Served by Transit							156,532	158,739	160,564	162,407	164,269	166,149	168,049	169,561
Percent served by Transit	65%	65%	65%	65%	65%	65%	66%	66%	66%	66%	66%	66%	66%	66%
Trips Needed by Year*							1,252,087	1,269,736	1,284,331	1,299,075	1,313,968	1,329,011	1,344,205	1,356,300
Total Vehicles Required*							303	307	311	314	318	322	325	328
O&M Cost projected present day dollars*							\$17,617,154	\$17,865,473	\$18,070,838	\$18,278,285	\$18,487,830	\$18,699,488	\$18,913,275	\$19,083,451
Capital Cost required for needed vehicles based on present day dollars							\$1,977,780	\$282,540	\$282,540	\$211,905	\$282,540	\$282,540	\$211,905	\$211,905

General TD Population Forecast	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Overlapping Circle Component														
E - Estimate non-elderly/disabled/ low income	33,666	34,104	34,548	34,997	35,392	35,791	36,195	36,603	37,016	37,387	37,762	38,140	38,523	38,909
B - Estimate non-elderly/ disabled/not low income	81,556	82,617	83,692	84,781	85,738	86,705	87,683	88,672	89,672	90,571	91,479	92,396	93,322	94,257
G - Estimate elderly/disabled/low income	9,575	9,700	9,826	9,954	10,066	10,179	10,294	10,410	10,528	10,633	10,740	10,848	10,956	11,066
D- Estimate elderly/ disabled/not low income	59,721	60,499	61,286	62,083	62,784	63,492	64,208	64,933	65,665	66,323	66,988	67,659	68,337	69,022
F - Estimate elderly/non-disabled/low income	10,192	10,324	10,459	10,595	10,714	10,835	10,957	11,081	11,206	11,318	11,432	11,546	11,662	11,779
A - Estimate elderly/non-disabled/not low income	107,770	109,173	110,593	112,033	113,296	114,574	115,867	117,174	118,496	119,683	120,883	122,094	123,318	124,554
C - Estimate low income/not elderly/not disabled	209,459	212,184	214,945	217,742	220,199	222,683	225,195	227,735	230,304	232,612	234,943	237,298	239,676	242,078
TOTAL TD POPULATION	511,939	518,600	525,349	532,185	538,189	544,260	550,399	556,608	562,887	568,529	574,226	579,981	585,794	591,664
TD Population Not Served by Transit	171,084	172,618	174,162	175,718	176,982	178,252	179,528	180,810	182,098	183,164	184,233	185,305	186,380	187,458
Percent served by Transit	67%	67%	67%	67%	67%	67%	67%	68%	68%	68%	68%	68%	68%	68%
Trips Needed by Year*	1,368,482	1,380,751	1,393,108	1,405,553	1,415,661	1,425,818	1,436,025	1,446,280	1,456,584	1,465,110	1,473,660	1,482,235	1,490,834	1,499,456
Total Vehicles Required*	331	334	337	340	343	345	348	350	353	355	357	359	361	363
O&M Cost projected present day dollars*	\$19,254,853	\$19,427,485	\$19,601,349	\$19,776,449	\$19,918,673	\$20,061,588	\$20,205,194	\$20,349,487	\$20,494,463	\$20,614,427	\$20,734,737	\$20,855,388	\$20,976,374	\$21,097,691
Capital Cost required for needed vehicles based on present day dollars	\$211,905	\$211,905	\$211,905	\$211,905	\$211,905	\$141,270	\$211,905	\$141,270	\$211,905	\$141,270	\$141,270	\$141,270	\$141,270	\$141,270

Total cost for Imagine 2040 (2021-2040)	\$398,856,886
Total cost for LRTP (2019-2040)	\$436,599,833
Average annual cost for LRTP	\$19,845,447

*Based on 2013 AOR

High Transit Investment Level

General TD Population Forecast	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Overlapping Circle Component														
E - Estimate non-elderly/disabled/ low income	26,813	27,296	27,789	28,290	28,800	29,320	29,848	30,387	30,856	31,332	31,816	32,307	32,806	33,233
B - Estimate non-elderly/ disabled/not low income	64,954	66,126	67,318	68,533	69,769	71,027	72,308	73,612	74,749	75,903	77,075	78,266	79,474	80,508
G - Estimate elderly/disabled/low income	7,626	7,763	7,903	8,046	8,191	8,339	8,489	8,642	8,776	8,911	9,049	9,189	9,330	9,452
D- Estimate elderly/ disabled/not low income	47,564	48,422	49,296	50,185	51,090	52,012	52,950	53,905	54,737	55,582	56,441	57,312	58,197	58,954
F - Estimate elderly/non-disabled/low income	8,117	8,263	8,413	8,564	8,719	8,876	9,036	9,199	9,341	9,485	9,632	9,781	9,932	10,061
A - Estimate elderly/non-disabled/not low income	85,832	87,381	88,957	90,561	92,194	93,857	95,550	97,274	98,776	100,301	101,850	103,422	105,019	106,386
C - Estimate low income/not elderly/not disabled	166,821	169,830	172,893	176,011	179,186	182,418	185,708	189,057	191,977	194,941	197,951	201,008	204,112	206,768
TOTAL TD Population	407,727	415,081	422,568	430,190	437,949	445,848	453,889	462,076	469,211	476,457	483,814	491,285	498,871	505,362
TD Population Not Served by Transit							155,987	157,999	159,624	161,262	162,913	164,576	166,251	167,538
Percent served by Transit	65%	65%	65%	65%	65%	65%	66%	66%	66%	66%	66%	67%	67%	67%
Trips Needed by Year*							1,247,726.48	1,263,816.54	1,276,818.17	1,289,919.98	1,303,121.96	1,316,424.10	1,329,826.33	1,340,115.54
Total Vehicles Required*							302	306	309	312	315	319	322	324
O&M Cost projected present day dollars*							\$17,555,797	\$17,782,188	\$17,965,124	\$18,149,469	\$18,335,224	\$18,522,388	\$18,710,961	\$18,855,732
Capital Cost required for needed vehicles based on present day dollars							\$1,907,145	\$282,540	\$211,905	\$211,905	\$211,905	\$282,540	\$211,905	\$141,270

General TD Population Forecast	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Overlapping Circle Component														
E - Estimate non-elderly/disabled/ low income	33,666	34,104	34,548	34,997	35,392	35,791	36,195	36,603	37,016	37,387	37,762	38,140	38,523	38,909
B - Estimate non-elderly/ disabled/not low income	81,556	82,617	83,692	84,781	85,738	86,705	87,683	88,672	89,672	90,571	91,479	92,396	93,322	94,257
G - Estimate elderly/disabled/low income	9,575	9,700	9,826	9,954	10,066	10,179	10,294	10,410	10,528	10,633	10,740	10,848	10,956	11,066
D- Estimate elderly/ disabled/not low income	59,721	60,499	61,286	62,083	62,784	63,492	64,208	64,933	65,665	66,323	66,988	67,659	68,337	69,022
F - Estimate elderly/non-disabled/low income	10,192	10,324	10,459	10,595	10,714	10,835	10,957	11,081	11,206	11,318	11,432	11,546	11,662	11,779
A - Estimate elderly/non-disabled/not low income	107,770	109,173	110,593	112,033	113,296	114,574	115,867	117,174	118,496	119,683	120,883	122,094	123,318	124,554
C - Estimate low income/not elderly/not disabled	209,459	212,184	214,945	217,742	220,199	222,683	225,195	227,735	230,304	232,612	234,943	237,298	239,676	242,078
TOTAL TD POPULATION	511,939	518,600	525,349	532,185	538,189	544,260	550,399	556,608	562,887	568,529	574,226	579,981	585,794	591,664
TD Population Not Served by Transit	168,829	170,126	171,428	172,735	173,750	174,765	175,782	176,799	177,816	178,611	179,405	180,196	180,986	181,773
Percent served by Transit	67%	67%	67%	68%	68%	68%	68%	68%	68%	69%	69%	69%	69%	69%
Trips Needed by Year*	1,350,447.36	1,360,821.15	1,371,236.25	1,381,691.97	1,389,807.37	1,397,930.04	1,406,059.10	1,414,193.68	1,422,332.85	1,428,694.93	1,435,041.67	1,441,372.13	1,447,685.35	1,453,980.33
Total Vehicles Required*	327	329	332	334	336	338	340	342	344	346	347	349	350	352
O&M Cost projected present day dollars *	\$19,001,103	\$19,147,065	\$19,293,608	\$19,440,722	\$19,554,908	\$19,669,195	\$19,783,573	\$19,898,029	\$20,012,549	\$20,102,065	\$20,191,365	\$20,280,436	\$20,369,264	\$20,457,836
Capital Cost required for needed vehicles based on present day dollars	\$211,905	\$141,270	\$211,905	\$141,270	\$141,270	\$	\$141,270	\$141,270	\$141,270	\$141,270	\$70,635	\$141,270	\$70,635	\$141,270
Total Cost for Imagine 2040 (2021-2040)												\$390,989,826		
Total Cost for LRTP (2019-2040)												\$428,517,496		
Average Annual Cost for LRTP												\$19,478,068		

*Based on 2013 AOR

Appendix C: Supporting Transit Data

Data from 2013 Annual Operating Report of the Hillsborough County Community Transportation Coordinator	
Trips Performed in 2013	1,137,809
Total Vehicles	275
Total Trips Per Vehicle	4,137
Total Trips per TD Pop	2.79
Vehicle Cost Per Sunshine Line Estimate quote date 12/13	\$ 70,635
Total Expenses	\$ 16,009,233
Cost Per Trip	\$ 14.07
Data based on FTA National Transit Database	
HART Service Area Population, 2012	822,404
Percent coverage of Hillsborough County population	65%
TD Population unserved by transit	142,246
Total trips per TD Pop unserved by transit	8

Appendix D: Existing and Future Trails

Existing Trail Conditions

Trail Name	Surface	Uses	Jurisdiction	Type	Category	Highest Density	Miles
MERIDIAN TRAIL	Paved	Multi-Use	Tampa	Off Road	Existing	5	0.63
HILLSBOROUGH RIVER TRAIL	Paved	Multi-Use	Tampa	Off Road	Existing	5	0.95
JOE CHILLURA COURT HOUSE SQUARE PARK	Paved	Multi-Use	Tampa	Off Road	Existing	5	0.15
JULIAN B LANE RIVERFRONT PARK	Paved	Multi-Use	Tampa	Off Road	Existing	5	0.44
LYKES GASLIGHT SQUARE PARK	Paved	Multi-Use	Tampa	Off Road	Existing	5	0.09
RIVERWALK	Paved	Multi-Use	Tampa	Off Road	Existing	5	0.6
RIVERWALK	Paved	Trails	Tampa	Off Road	Existing	5	0.18
MANHATTAN TRAIL	Paved	Multi-Use	Tampa	Off Road	Existing	4	1.42
ROWLETT PARK	Paved	Multi-Use	Tampa	On Road	Existing	4	0.9
TAMPA HEIGHTS TRAIL	Paved	Multi-Use	Tampa	Off Road	Existing	4	0.42
TOWN 'N COUNTRY GREENWAY	Paved	Multi-Use	Hillsborough	Off Road	Existing	4	2.17
UPPER TAMPA BAY TRAIL PHASE II	Paved	Multi-Use	Hillsborough	Off Road	Existing	4	0.36
MCFARLANE PARK	Paved	Multi-Use	Tampa	Off Road	Existing	4	1.19
ROBLES PARK	Paved	Multi-Use	Tampa	Off Road	Existing	4	0.8
W GANDY BLVD	Paved	Multi-Use	Tampa	Off Road	Existing	4	1.25
COURTNEY CAMPBELL TRAIL	Paved	Multi-Use	Tampa	On Road	Existing	3	6.01
LOWRY PARK	Paved	Multi-Use	Tampa	On Road	Existing	3	0.7
RIVERCREST TRAIL	Paved	Multi-Use	Tampa	Off Road	Existing	3	1.18
UPPER TAMPA BAY PARK PHASE II	Paved	Multi-Use	Hillsborough	Off Road	Existing	3	4.24
CHENEY PARK	Paved	Multi-Use	Tampa	Off Road	Existing	3	0.3
DAVIS ISLAND PARK	Paved	Multi-Use	Tampa	Off Road	Existing	3	0.45
OAKDALE PLAYGROUND	Paved	Multi-Use	Tampa	Off Road	Existing	3	0.57
OLD TAMPA BAY	Paved	Multi-Use	Tampa	Off Road	Existing	3	1.92
RIVERCREST PARK	Paved	Multi-Use	Tampa	Off Road	Existing	3	0.56

Trail Name	Surface	Uses	Jurisdiction	Type	Category	Highest Density	Miles
COPELAND PARK	Paved	Multi-Use	Tampa	Off Road	Existing	3	2.26
RAGAN PARK	Paved	Multi-Use	Tampa	Off Road	Existing	3	0.32
TAMPA BYPASS CANAL TRAIL	Paved	Multi-Use	Hillsborough	Off Road	Existing	3	1.02
SOUTH COAST GREENWAY	Paved	Multi-Use	Hillsborough	Paved	Existing	3	1.31
DAVIS ISLAND TRAIL	Paved	Multi-Use	Tampa	Off Road	Existing	2	0.91
DAVIS ISLAND TRAIL	Paved	Multi-Use	Tampa	Off Road	Existing	2	0.24
MIKE SANSONE TRAIL	Paved	Multi-Use	Plant City	Off Road	Existing	2	0.97
UPPER TAMPA BAY TRAIL PHASE III	Paved	Multi-Use	Hillsborough	Off Road	Existing	2	1.17
UPPER TAMPA BAY TRAIL PHASE I	Paved	Multi-Use	Hillsborough	Off Road	Existing	2	2.99
PICNIC ISLAND PARK	Paved	Multi-Use	Tampa	Off Road	Existing	2	1.4
LOWRY PARK	Paved	Multi-Use	Tampa	Off Road	Existing	2	1.13
DAVIS ISLAND PARK	Paved	Multi-Use	Tampa	Off Road	Existing	2	0.66
RIVERWALK	Paved	Multi-Use	Tampa	Off Road	Existing	2	0.85
SOUTH TAMPA TRAIL	Paved	Multi-Use	Tampa	Off Road	Existing	2	1.04
FLATWOODS PARK TRAIL	Paved	Multi-Use	Hillsborough	Off Road	Existing	2	8.98
ROWLETT PARK	Paved	Multi-Use	Tampa	Off Road	Existing	2	2.01
MCKAY BAY	Paved	Multi-Use	Hillsborough	Off Road	Existing	2	1.22
E SHELL POINT RD	Paved	Multi-Use	Hillsborough	Off Road	Existing	2	1.21
CROSS COUNTY GREENWAY	Paved	Multi-Use	Hillsborough	Off Road	Existing	2	0.78
MCKAY BAY	Soft Path	Trails	Tampa	Off Road	Existing	2	0.11
ELLIS-METHVIN PARK TRAIL	Paved	Multi-Use	Plant City	Off Road	Existing	1	1.38
SELMON GREENWAY TRAIL	Paved	Multi-Use	Tampa	Off Road	Existing	1	0.79
SULPHER SPRINGS PARK	Paved	Multi-Use	Tampa	Off Road	Existing	1	0.29
OLD TAMPA BAY	Paved	Multi-Use	Tampa	Off Road	Existing	1	0.52
NORTHDALE LAKE PARK TRAIL	Paved	Multi-Use	Hillsborough	Off Road	Existing	1	1.12
SUNCOAST TRAIL	Paved	Multi-Use	Hillsborough	Off Road	Existing	1	1.22
AL LOPEZ PARK TRAIL	Paved	Multi-Use	Tampa	Off Road	Existing	1	3.29

Trail Name	Surface	Uses	Jurisdiction	Type	Category	Highest Density	Miles
CYPRESS POINT PARK	Paved	Multi-Use	Tampa	Off Road	Existing	1	1.04
LETTUCE LAKE PARK	Paved	Multi-Use	Hillsborough	Off Road	Existing	1	0.85
DESOTTO PARK	Paved	Multi-Use	Tampa	Off Road	Existing	1	0.32
MCKAY BAY	Paved	Multi-Use	Tampa	Off Road	Existing	1	1.17
S 20TH ST	Paved	Multi-Use	Tampa	Off Road	Existing	1	0.81
FLATWOODS PARK TRAIL	Paved	Multi-Use	Hillsborough	Off Road	Existing	1	1
FLATWOODS STATION LN	Paved	Multi-Use	Hillsborough	Off Road	Existing	1	0.52
OLD FORT KING TRAIL	Paved	Multi-Use	Hillsborough	Off Road	Existing	1	2.43
HILLSBOROUGH RIVER STATE PARK	Paved	Multi-Use	Hillsborough	Off Road	Existing	1	2.45
ALDERMANS FORD PARK	Paved	Multi-Use	Hillsborough	Off Road	Existing	1	1.92
NORTHDALE LAKE PARK TRAIL	Soft Path	Multi-Use	Hillsborough	Off Road	Existing	1	0.27
Total Miles							79.45

Per-Mile Cost Based on Actual Project Costs: Trails and Sidepaths

Trails	Cost Per Mile	Project Cost	Miles	Source
UTBT, VAN DYKE ROAD TO SUNCOAST TRAIL	\$892,740	\$3,838,781	4.3	Transportation Improvement Program Fiscal Years 2013-2017
BYPASS CANAL TRAIL, FLETCHER AVENUE TO BYPASS CANAL TRAIL	\$1,482,921	\$4,671,200	3.15	Tampa Bypass Canal Trail Feasibility Study
BYPASS CANAL TRAIL, I-75 TO MAPLE LANE	\$340,078	\$867,200	2.55	Tampa Bypass Canal Trail Feasibility Study
BYPASS CANAL TRAIL, GARDEN LANE TO ADAMO DRIVE	\$1,832,308	\$5,955,000	3.25	Tampa Bypass Canal Trail Feasibility Study
BYPASS CANAL TRAIL, ADAMO DRIVE TO WASHINGTON STREET	\$487,346	\$916,211	1.88	Tampa Bypass Canal Trail Feasibility Study
ALT 2 SWEETWATER CREEK ALIGNMENT	\$1,407,520	\$5,250,050	3.73	George Road Corridor Trail Feasibility Study
ALT 4 WEBB/MEMORIAL ALIGNMENT	\$729,575	\$2,830,750	3.88	George Road Corridor Trail Feasibility Study
SOUTH COAST GREENWAY III, BIG BEND ROAD TO SYMMES ROAD	\$1,437,500	\$4,600,000	3.2	South County Greenways Update, May 2014, Hillsborough County
Average	\$1,076,248			
Sidepaths	Cost Per Mile	Project Cost	Miles	Source
ALT 1 GEORGE ROAD ALIGNMENT	\$1,407,520	\$5,250,050	3.73	George Road Corridor Trail Feasibility Study
ALT 3 KELLY/HANLEY ALIGNMENT	\$585,000	\$2,082,600	3.56	George Road Corridor Trail Feasibility Study
SOUTH COAST GREENWAY I, COLLEGE AVENUE TO 19 TH AVENUE	\$909,091	\$2,000,000	2.2	South County Greenways Update, May 2014, Hillsborough County
GREEN ARTERY	\$260,401	\$4,296,610	16.5	Tampa Walk-Bike Plan Phase III
Average	\$790,503			

Future Trails: Low Investment Level

This level focuses investments in the highest density areas first. Population density of each zone in the county was rated on a 1 to 5 scale.

Needs Assessment Trails	Surface	Uses	Jurisdiction	Type	Category	Highest Density Area Crossed	Miles	Cost/Mile	Cost
I-275 GREENWAY	Paved	Multi-Use	Tampa	Off Road	Needs - Conceptual	5	2.71	\$1,076,248	\$2,916,633
HILLSBOROUGH RIVER GREENWAYS	Paved	Trails	Tampa	On Road	Needs - Conceptual	5	0.92	\$790,503	\$727,263
GREEN ARTERY EAST TRAIL	Paved	Multi-Use	Tampa	On Road	Needs - Planned Unfunded	5	4.89	\$790,503	\$3,865,559
SOUTH TAMPA GREENWAY	Paved	Multi-Use	Tampa	Off Road	Needs - Planned Unfunded	5	6.75	\$1,076,248	\$7,264,677
30TH STREET TRAIL	Paved	Multi-Use	Tampa	On Road	Needs - Conceptual	4	2.79	\$790,503	\$2,205,503
30TH TRAIL	Paved	Multi-Use	Tampa	On Road	Needs - Conceptual	4	0.47	\$790,503	\$371,536
FRIENDSHIP TRAIL	Paved	Multi-Use	Tampa	Off Road	Needs - Conceptual	4	2.36	\$1,076,248	\$2,539,946
HILLSBOROUGH RIVER TRAIL	Paved	Multi-Use	Tampa	Off Road	Needs - Conceptual	4	7.9	\$1,076,248	\$8,502,363
TOWN N COUNTRY GREENWAY CONNECTOR	Paved	Multi-Use	Hillsborough	Off Road	Needs - Conceptual	4	1.73	\$1,076,248	\$1,861,910
GREEN ARTERY TRAIL NORTH	Paved	Multi-Use	Tampa	Off Road	Needs - Planned Unfunded	4	3.52	\$1,076,248	\$3,788,395
STETSON LAW TRAIL	Paved	Multi-Use	Tampa	On Road	Needs - Planned Unfunded	4	0.55	\$790,503	\$434,777
SULPHUR SPRINGS ROWLETT PARK CONNECTOR	Paved	Multi-Use	Tampa	Off Road	Needs - Planned Unfunded	4	1.38	\$1,076,248	\$1,485,223
SOUTH TAMPA TRAIL	Paved	Multi-Use	Tampa	Off Road	Needs - Planned Unfunded	4	3.66	\$1,076,248	\$3,939,069
Total for Low Investment Level									\$39,902,854

Future Trails: Medium Investment Level

This level expands investments to medium density areas. Population density of each zone in the county was rated on a 1 to 5 scale.

Needs Assessment Trails	Surface	Uses	Jurisdiction	Type	Category	Highest Density Area Crossed	Miles	Cost/Mile	Cost
CSX TRAIL	Paved	Multi-Use	Tampa	Off Road	Needs-Conceptual	5	7.12	\$1,076,248	\$7,662,889
FUTURE US 92 TRAIL	Paved	Multi-Use	Plant City	Off Road	Needs Conceptual	5	4.57	\$1,076,248	\$4,918,455
ADAMO DRIVE TRAIL	Paved	Multi-Use	Tampa	Off Road	Needs - Conceptual	3	2.07	\$1,076,248	\$2,227,834
BRANDON COMMUNITY TRAIL	Paved	Multi-Use	Hillsborough	Off Road	Needs - Conceptual	3	4.75	\$1,076,248	\$5,112,180
BRANDON RIVERVIEW CONNECTOR	Paved	Multi-Use	Tampa	Off Road	Needs - Conceptual	3	4.07	\$1,076,248	\$4,380,331
FUTURE LAKEWOOD TRAIL	Paved	Multi-Use	Tampa	Off Road	Needs - Conceptual	3	2.68	\$1,076,248	\$2,884,346
FUTURE SLIGH TRAIL CONNECTOR	Paved	Multi-Use	Tampa	Off Road	Needs - Conceptual	3	0.23	\$1,076,248	\$247,537
FUTURE SLIGH TRAIL CONNECTOR	Paved	Multi-Use	Tampa	On Road	Needs - Conceptual	3	5	\$790,503	\$3,952,515
GIBSONTON RIVERVIEW CONNECTOR	Paved	Multi-Use	Hillsborough	Off Road	Needs - Conceptual	3	4.07	\$1,076,248	\$4,380,331
LINEBAUGH AVE TRAIL	Paved	Multi-Use	Tampa	Off Road	Needs - Conceptual	3	4.73	\$1,076,248	\$5,090,655
STRAWBERRY STADIUM TRAIL	Paved	Multi-Use	Plant City	Off Road	Needs - Conceptual	3	1.67	\$1,076,248	\$1,797,335
TAMPA BAY BYPASS CANAL BRANDON CONNECTOR	Paved	Multi-Use	Hillsborough	Off Road	Needs - Conceptual	3	3.46	\$1,076,248	\$3,723,820
VETERANS TRAIL	Paved	Multi - Use	Tampa	Off Road	Needs - Conceptual	3	2.62	\$1,076,248	\$2,819,771
CARROLLWOOD NORTHDALE CONNECTOR	Paved	Multi-Use	Hillsborough	Off Road	Needs - Planned Unfunded	3	6.78	\$1,076,248	\$7,296,965
GEORGE ROAD TRAIL	Paved	Multi-Use	Tampa	On Road	Needs - Planned Unfunded	3	2.5	\$790,503	\$1,976,257

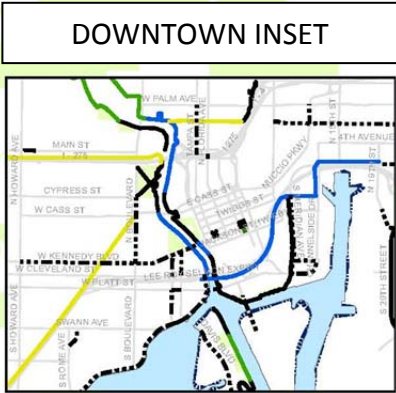
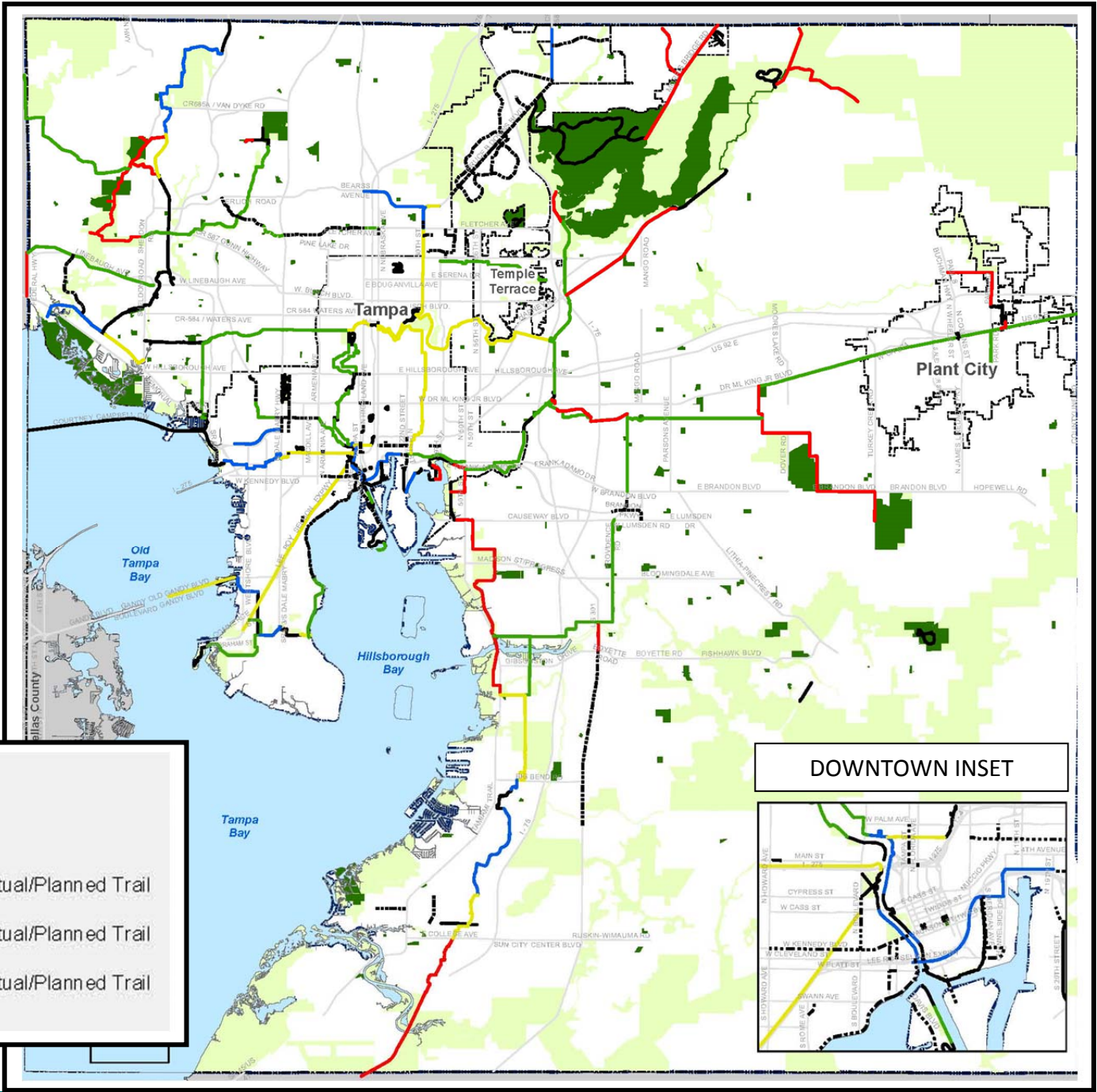
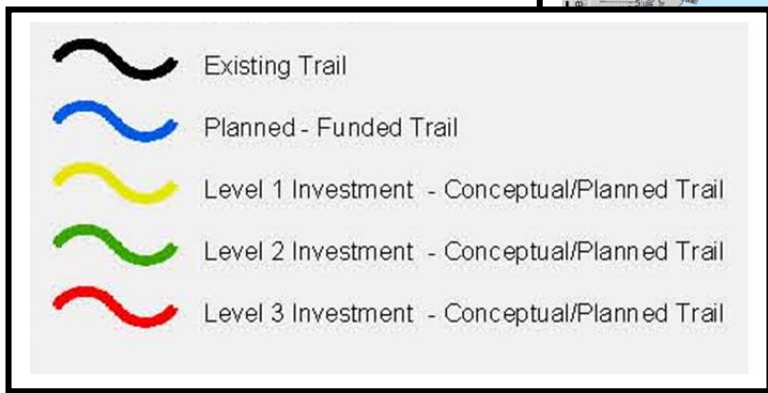
Needs Assessment Trails	Surface	Uses	Jurisdiction	Type	Category	Highest Density Area Crossed	Miles	Cost/Mile	Cost
GIBSONTON COMMUNITY TRAIL	Paved	Multi-Use	Hillsborough	Off Road	Needs - Planned Unfunded	3	2.17	\$1,076,248	\$2,335,459
GREEN ARTERY TRAIL NORTHWEST	Paved	Multi-Use	Tampa	Off Road	Needs - Planned Unfunded	3	2.02	\$1,076,248	\$2,174,022
GREEN ARTERY TRAIL WEST	Paved	Multi-Use	Tampa	On Road	Needs - Planned Unfunded	3	2.43	\$790,503	\$1,920,922
RIVERCREST TRAIL	Paved	Multi-Use	Tampa	Off Road	Needs - Planned Unfunded	3	1.62	\$1,076,248	\$1,743,522
TAMPA BYPASS CANAL TRAIL	Paved	Multi-Use	Tampa	Off Road	Needs - Planned Unfunded	3	11.5	\$1,076,248	\$12,376,857
WEST RIVER GREENWAY	Paved	Multi-Use	Tampa	Off Road	Needs - Planned Unfunded	3	1.45	\$1,076,248	\$1,560,560
SOUTH TAMPA TRAIL	Paved	Trails	Tampa	Off Road	Needs - Planned Unfunded	3	0.39	\$1,076,248	\$419,737
SOUTH COAST GREENWAY	Paved	Multi-Use	Hillsborough	Off Road	Needs - Planned Unfunded	3	4.8	\$1,076,248	\$5,165,993
SOUTH COAST GREENWAY	Paved	Multi-Use	Hillsborough	Off Road	Needs - Planned Unfunded	3	3.97	\$1,076,248	\$4,272,706
CROSS COUNTY GREENWAY	Paved	Trails	Hillsborough	Off Road	Needs - Planned Unfunded	3	9.35	\$1,076,248	\$10,062,923
Total for Medium Investment Level									\$140,406,778

Future Trails: High Investment Level

This level expands investments to all areas of the county. Population density of each zone in the county was rated on a 1 to 5 scale.

Needs Assessment Trails	Surface	Uses	Jurisdiction	Type	Category	Highest Density Area Crossed	Miles	Cost/Mile	Cost
MORRIS BRIDGE RD TRAIL	Paved	Multi-Use	Tampa	On Road	Needs - Conceptual	2	4.67	\$790,503	\$3,691,649
PEBBLE CREEK TRAIL	Paved	Multi-Use	Tampa	Off Road	Needs - Conceptual	2	1.95	\$1,076,248	\$2,098,684
SAM ALLEN RD PARK RD CONNECTOR	Paved	Multi-Use	Plant City	Off Road	Needs - Conceptual	2	2.74	\$1,076,248	\$2,948,921
SOUTH COAST PALM RIVER CONNECTOR	Paved	Multi-Use	Tampa	Off Road	Needs - Conceptual	2	3.43	\$1,076,248	\$3,691,532
SOUTHCOAST GREENWAY	Paved	Multi-Use	Hillsborough	Off Road	Needs - Conceptual	2	3.8	\$1,076,248	\$4,089,744
SYDNEY DOVER TRAIL CONNECTOR	Paved	Multi-Use	Hillsborough	Off Road	Needs - Conceptual	2	3.95	\$1,076,248	\$4,251,181
CROSS COUNTY GREENWAY	Paved	Multi-Use	Hillsborough	Off Road	Needs - Conceptual	2	5.1	\$1,076,248	\$5,488,867
CROSS COUNTY GREENWAY	Paved	Trails	Hillsborough	Off Road	Needs - Conceptual	2	17.11	\$1,076,248	\$18,414,611
CAUSEWAY BLVD TRAIL	Paved	Multi-Use	Tampa	Off Road	Needs - Planned Unfunded	2	2.13	\$1,076,248	\$2,292,409
DAVIS ISLAND TRAIL	Paved	Multi-Use	Tampa	Off Road	Needs - Planned Unfunded	2	0.38	\$1,076,248	\$408,974
HARNEY ROAD TRAIL	Paved	Multi-Use	Hillsborough	Off Road	Needs - Planned Unfunded	2	4.9	\$1,076,248	\$5,273,617
RACE TRACK RD TRAIL	Paved	Multi-Use	Hillsborough	On Road	Needs - Planned Unfunded	2	1.5	\$790,503	\$1,185,754
SELMON BYPASS CONNECTOR	Paved	Multi-Use	Tampa	Off Road	Needs - Planned Unfunded	2	1.18	\$1,076,248	\$1,269,973
NW REGIONAL CONNECTOR TRAIL	Paved	Multi-Use	Hillsborough	Off Road	Needs - Planned Unfunded	2	5.35	\$1,076,248	\$5,757,929
DAVIS ISLAND PARK	Paved	Multi-Use	Tampa	Off Road	Needs - Planned Unfunded	2	0.44	\$1,076,248	\$473,549
S US HIGHWAY 301 TRAIL	Paved	Multi-Use	Hillsborough	Off Road	Needs - Planned Unfunded	2	1	\$1,076,248	\$1,076,248

Needs Assessment Trails	Surface	Uses	Jurisdiction	Type	Category	Highest Density Area Crossed	Miles	Cost/Mile	Cost
SOUTH COAST GREENWAY	Paved	Multi-Use	Hillsborough	Off Road	Needs - Planned Unfunded	2	4.71	\$1,076,248	\$5,069,130
BLACKWATER CREEK CONNECTOR	Paved	Multi-Use	Hillsborough	Off Road	Needs - Conceptual	1	3.05	\$1,076,248	\$3,282,558
SYDNEY DOVER MEDARD PARK CONNECTOR	Paved	Multi-Use	Hillsborough	Off Road	Needs - Conceptual	1	4.67	\$1,076,248	\$5,026,080
UPPER TAMPA BAY TRAIL CONNECTOR	Paved	Multi-Use	Hillsborough	Off Road	Needs - Conceptual	1	6.33	\$1,076,248	\$6,812,653
WILDER RD CONNECTOR	Paved	Multi-Use	Plant City	Off Road	Needs - Conceptual	1	0.35	\$1,076,248	\$376,687
CROSS COUNTY GREENWAY	Paved	Multi-Use	Hillsborough	Off Road	Needs - Conceptual	1	1.65	\$1,076,248	\$1,775,810
FUTURE TRAIL	Paved	Multi-Use	Tampa	Off Road	Needs - Planned Unfunded	1	1.47	\$1,076,248	\$1,582,085
SOUTHCOAST GREENWAY	Paved	Multi-Use	Hillsborough	Off Road	Needs - Planned Unfunded	1	5.29	\$1,076,248	\$5,693,354
UPPER TAMPA BAY TRAIL PHASE	Paved	Multi-Use	Tampa	Off Road	Needs - Planned Unfunded	1	1.63	\$1,076,248	\$1,754,285
US HWY 301 TRAIL	Paved	Multi-Use	Tampa	Off Road	Needs - Planned Unfunded	1	2.17	\$1,076,248	\$2,335,459
UPPER TAMPA BAY PARK SEGMENT A ALT ALIGNMENT	Paved	Multi-Use	Hillsborough	Off Road	Needs - Planned Unfunded	1	3.34	\$1,076,248	\$3,594,670
NORTHDALE LAKE PARK TRAIL	Paved	Multi-Use	Hillsborough	Off Road	Needs - Planned Unfunded	1	0.28	\$1,076,248	\$301,350
TROUT CREEK PARK	Paved	Multi-Use	Hillsborough	Off Road	Needs - Planned Unfunded	1	1.22	\$1,076,248	\$1,313,023
Total for High Investment Level									\$241,737,567



Appendix E: Statewide Performance Measures

Following are excerpts of the 2014 Florida Multimodal Mobility Performance Measures Source Book that relate to the performance measures discussed in this technical memorandum.

People -> Quality -> Pedestrian ->
Pedestrian Level of Service (LOS)



Methodology

Pedestrian LOS measures a roadway's quality of service to pedestrians with LOS A being the highest quality, and LOS F the lowest quality.

Reporting Period

Peak hour

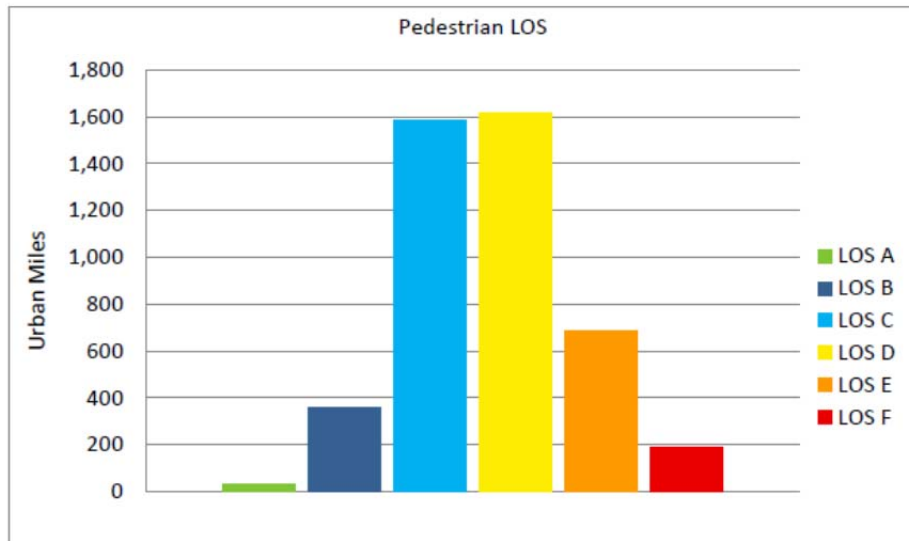
Sources

- FDOT Traffic Characteristics Inventory
- FDOT Roadway Characteristics Inventory
- FDOT Pedestrian LOS Model

LOS	Urban Miles
A	33
B	356
C	1,587
D	1,619
E	684
F	190
Total	4,469

Calculation

Σ Miles of Each LOS Letter Grade



People -> Quality -> Bicycle ->
Bicycle Level of Service (LOS)



Methodology

Bicycle LOS measures a roadway's quality of service to bicyclists with LOS A being the highest quality, and LOS F the lowest quality.

Reporting Period

Peak hour

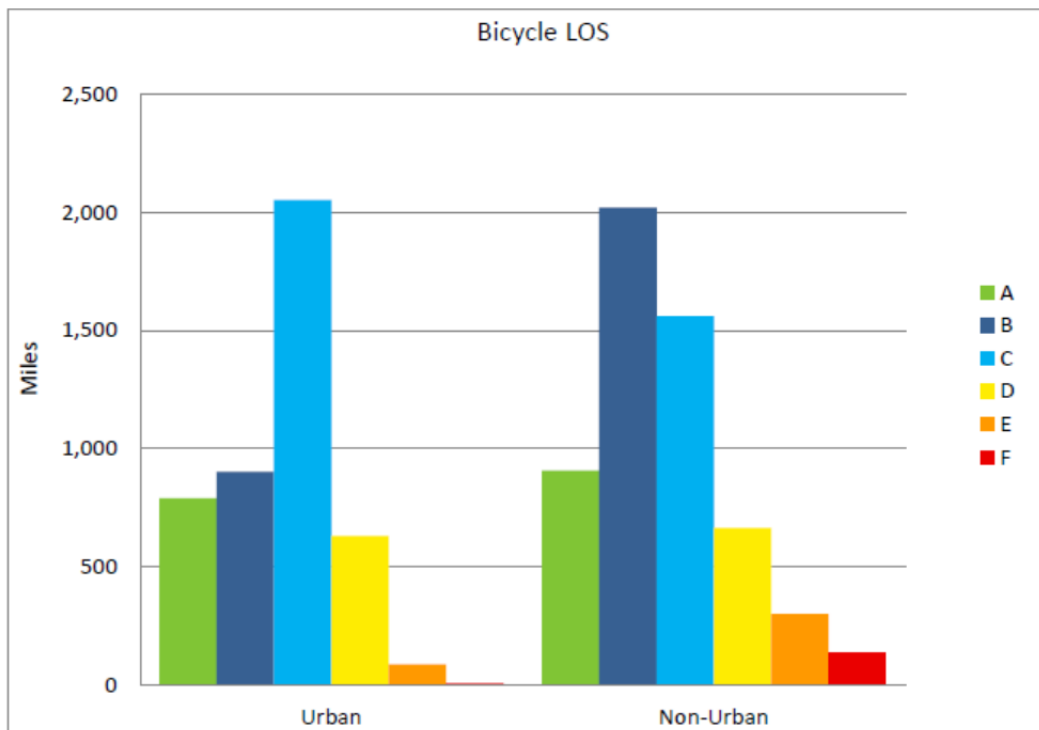
Sources

- FDOT Traffic Characteristics Inventory
- FDOT Roadway Characteristics Inventory
- FDOT Bicycle LOS Model

LOS	Urban	Non-Urban
A	790	907
B	901	2,020
C	2,052	1,561
D	631	663
E	87	299
F	8	136
Total	4,469	5,586

Calculation

Σ Miles of Each LOS Letter Grade



People -> Quality -> Transit ->

Transit Average Headway



Methodology

The measure of time between operating transit vehicles.

Reporting Period

Yearly

Sources

FDOT Transit Office

Calculation

$(\text{Route Miles/Speed}) \div (\text{Peak Hour Vehicles}) \times 60$

Year	Average Headway (Minutes)
2003	29.2
2004	25.3
2005	22.4
2006	22.2
2007	19.2
2008	18.2
2009	19.2
2010	20.0
2011	20.9
2012	25.3

