CITY OF LARGO

MOVING LARGO

MULTIMODAL PLAN

Establishing a Community Network

Kimley-Horn and Associates, Inc.

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SECTION 1 – CITY OF LARGO MULTIMODAL FACILITY NETWORK

INTRODUCTION

The City of Largo's Community Street Network, referred to in this plan as the multimodal network consists of over 90 miles of interconnected streets, sidewalks, trails and unimproved rights-of-ways within Central Pinellas County. The City's goals for the multimodal network include:

- Improving community streets to provide safe and efficient routes from neighborhoods to local destinations;
- Accommodating growth by promoting the use of transit and addressing deficient bicycle and pedestrian facilities along community streets, in order to improve mobility within constrained rights-of-way that cannot be expanded to allow additional automobiles.

Currently, many of the streets within the multimodal network cannot adequately support bicycle and pedestrian activities due to a lack of sidewalks or bicycle lanes, gaps or obstacles along existing sidewalks, inadequate transit facilities and roadway crossings, or other safety hazards. According to an analysis of Citywide bicycle and pedestrian crash data between 2004 and 2009, a number of the streets within the network are among the roadways most in need of bicycle and pedestrian safety improvements. Investments in pedestrian and bicycle improvements along these roadways will expand transportation options for residents of the City as well as aid in the reduction of the number of bicycle and pedestrian related accidents that occur along these corridors.

The City of Largo's Community Street Multimodal Transportation Plan is intended to address the implementation initiatives outlined in the City's Strategic Plan[1] in support of, *Establish a Network of Community Streets,* strategic principle. The Strategic Plan supports the development of recommendations that encourage pedestrians, bicyclists, and recreational uses, in addition to supporting automobile and transit use within these corridors.

This Plan outlines a 25 year work program designed to guide funding and scheduling of multimodal improvements along the designated multimodal network of streets and trails. The Plan identifies both near and long-term planning horizons for projects and funding, which will require collaboration and partnerships with multiple stakeholders and agencies, including the Pinellas County Metropolitan Planning Organization (MPO), Pinellas County Traffic Operations, Pinellas County Public Works, Pinellas County Department of Health, and the Florida Department of Transportation (FDOT). The Plan was organized in three phases, with each phase building upon the efforts of the previous phase. The following is an overview of the tasks completed during each phase.

[1] *The City of Largo's Strategic Plan is used to align City Programs and capital improvements with the community's vision and long-range goals. An update report is drafted annually to measure the progress of this effort.*

Phase I

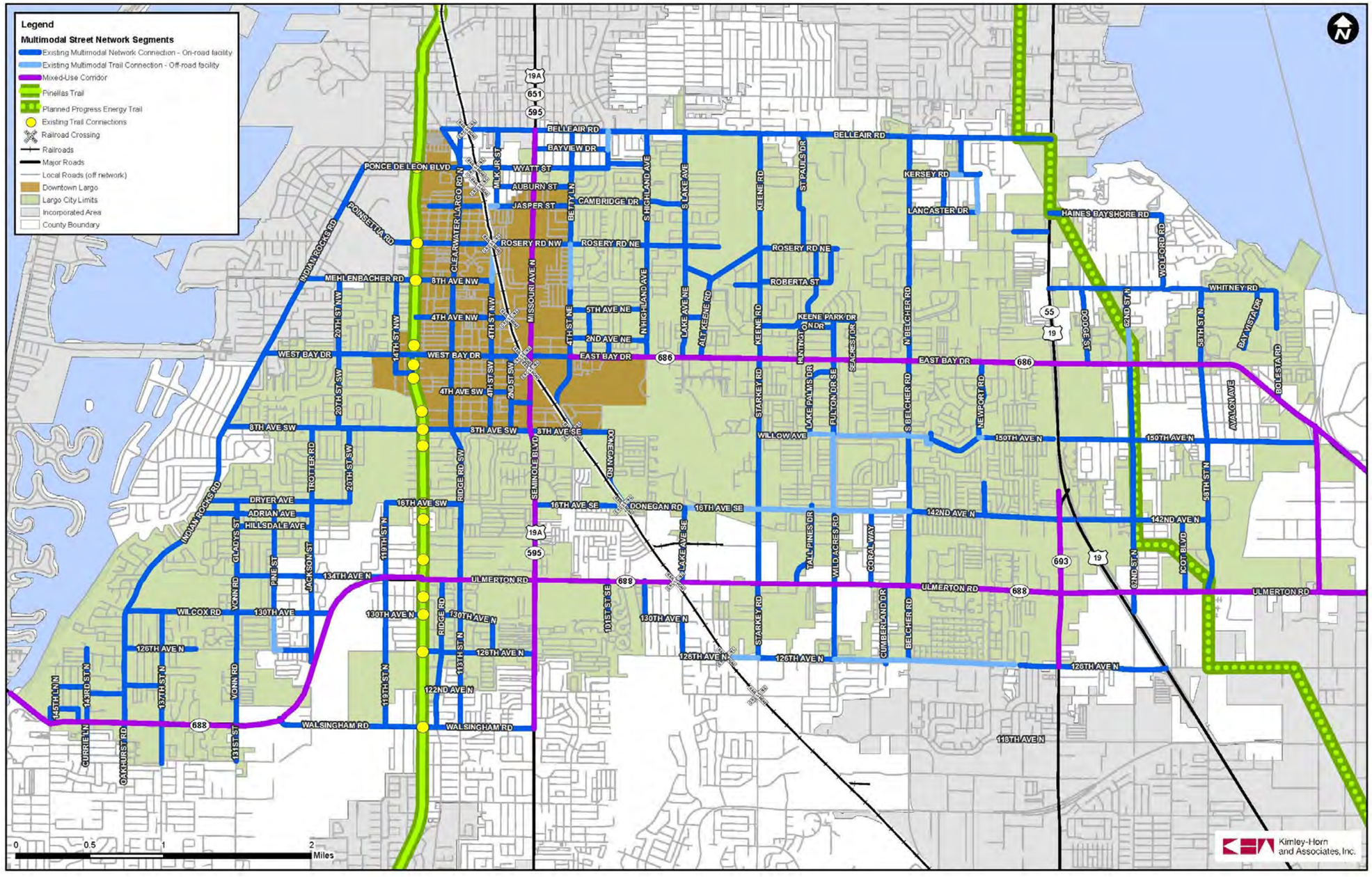
Phase I of the Plan started with an assessment of the existing multimodal network performed through site visits and through the use of Geographic Information Systems (GIS). The end product was an inventory of roadway characteristics along the Community Street network, used for both the analyzes performed in later phases and updating the multimodal network map. The assessment identified existing network gaps and provided recommendations for additional network connections that would enhance the multimodal mobility within the City. The recommendations support improving the level of accessibility between major land uses, such as residential, commercial, and recreational uses, while also extending the existing network across the City to allow for a continuous multimodal network. After further assessment and feedback from the City, some segments were removed from the proposed list of recommendations. Table 1 provides a summary of each recommended change to the multimodal network and Map 2 provides an illustration of the proposed segment changes, followed by a segment breakdown with brief descriptions of each recommendation.

Table 1: Proposed Changes to the Multimodal Network

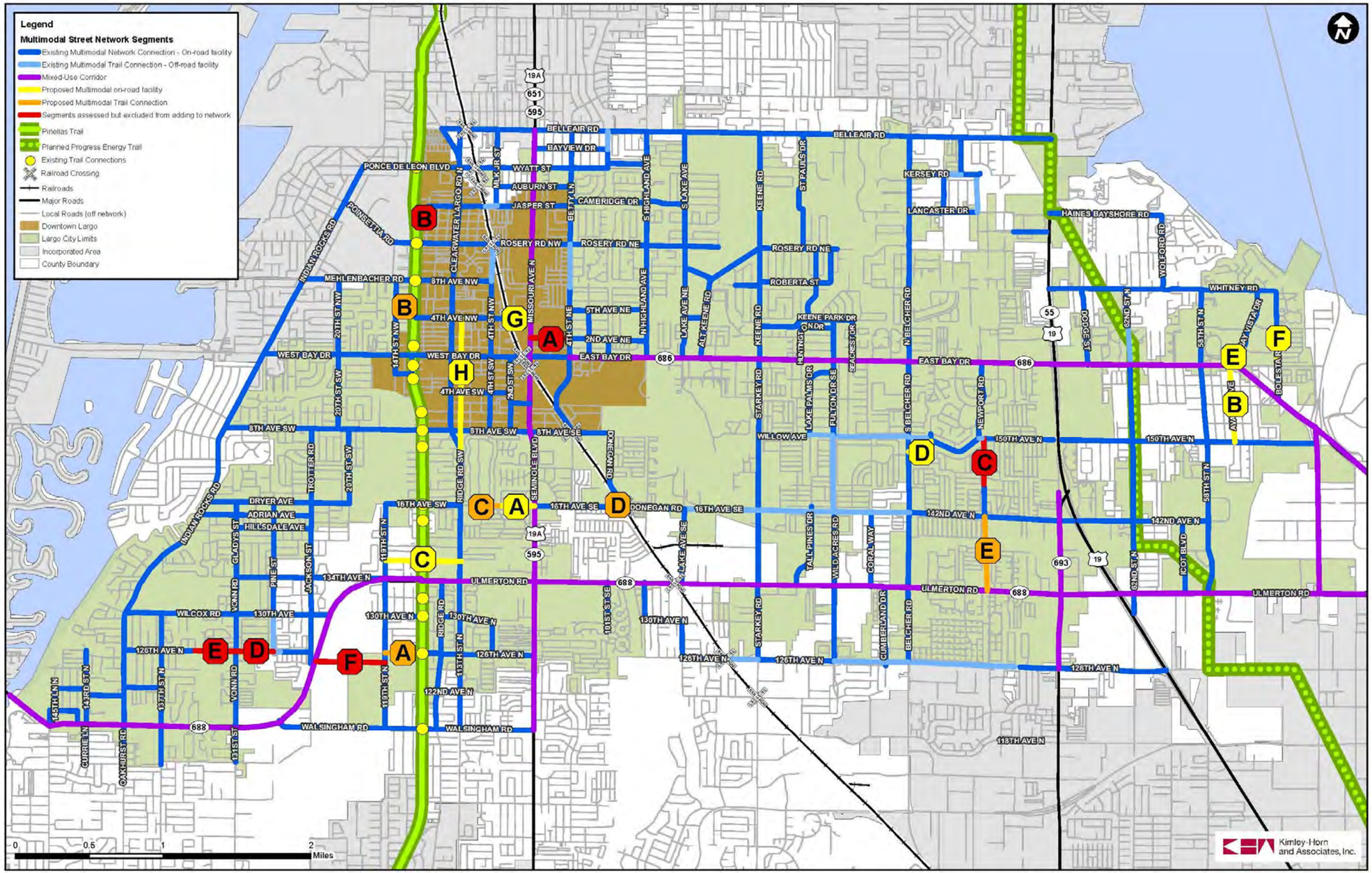
Map ID	Road	From	To
Proposed road additions to the multimodal network			
A	16th Ave SW	4th St SW	Seminole Blvd
B	Avalon Ave	150th Ave	Roosevelt Blvd
C	Gooden Crossing	119th St N	113th Ave N
D	Cromwell Dr/Portsmouth Rd	Newport Rd	Belcher Rd S
E	Bay Vista Dr	Tech Data Dr	Roosevelt Blvd
F	Bolesta Rd	Northern Ave	Cypress Ln
G	4th Ave NW	Railroad tracts	Missouri Ave
H	Ridge Rd SW	Clearwater-Largo Rd S	4th Ave NW
Proposed roads to be removed from the multimodal network			
A	2nd Ave NE	Missouri Ave	4th St NE
B	15th Ave NW	Pinellas Trail	11th St NW
C	71st St N	142nd Ave N	End

Map ID	Road	From	To
Proposed non-vehicular trail additions to the multimodal network			
A	Whitesell Softball Complex Trail	119th St N	Pinellas Trail
B	Pine Ave NW, alternative 5th Ter NW	14th St NW	Pinellas Trail
C	16th Ave SW	4th St SW	Sable Palm Dr
D	16th Ave SE	16th Ave SE	Donegan Rd
E	N/S 142nd Ave	142nd Ave N	Ulmerton Rd
Proposed non-vehicular trails to be removed from the multimodal network			
D	126th Ave N	Vonn Rd	Pine St
E	126th Ave	134th St	Vonn Rd
F	126th Ave N	Ulmerton Rd	119th St N

Map 1: Existing Multimodal Network



Map 2: Multimodal Network Proposed Changes



Map Key

A *Existing road segment proposed to be added to the multimodal network*

A *Existing right-of-way proposed to be added to the multimodal network as a trail (non-motorized uses)*

A *Segments originally proposed but excluded from the final recommendation*

Proposed road additions to the multimodal network

The following segments are existing roads that were not originally designated as part of the multimodal network. A breakdown of each proposed recommendation shown in Table 1, is provided below and illustrated in Map 2.

A 16th Ave SW, from 4th St SW to Seminole Blvd

This proposed network addition provides a direct alternative bicycle and pedestrian connection for residence of the Palm Hill Mobile Home development to Seminole Blvd. This connection would cut the distance a resident would need to make in half (from a half mile to a quarter mile) starting at the same location and connecting to Seminole Blvd. Additional assessment of the intersection of 16th Ave SW and Seminole is recommended if this connection were to be fully adopted. Coordination with the Palm Hill Mobile Home development would need to be made as it would run through their property. This segment was identified as a high priority corridor in the public workshop as an alternative proposed east/west connection across Largo along 16th Ave.

B Avalon Ave, from 150th Ave N to Roosevelt Blvd

Avalon Avenue, between Roosevelt Blvd and 15th Avenue N was proposed as an addition to the multimodal network as it provides an alternative north/south connection to 58th St N. The segment provides a connection between the major employment area north of Roosevelt Boulevard and the residential area south of Roosevelt Blvd. The connection is also served by PSTA's bus Route 52.

C Gooden Crossing, from 119th St N to 113th Ave N

The proposed connection would add the segment of Gooden Crossing between 119th St N to 113th Street/Ridge Road S. The segment provides an alternative east/west route to Ulmerton and provides access to Pinellas Trail. The portion of the segment between Railroad Ave and 119th St N is also served by PSTA's bus Route 61.

D Cromwell Dr/Portsmouth Rd, from Newport Rd to Belcher Rd S

Newport Rd is currently an existing multimodal network connection between Cromwell and Frontier Elementary School. The proposed segment would extend the existing connection starting at the corner of Newport Rd and Cromwell Dr, south along Cromwell Dr to Portsmouth Rd, continuing west to Belcher Road.

An alternative trail option to Portsmouth Road followed the existing drainage easement between Cromwell Dr and Belcher Rd but after further assessment that connection was found to be unfeasible.

E Bay Vista Dr extension, from Tech Data Dr to Roosevelt Blvd

Bay Vista Drive from Whitney Road to Tech Data Drive is currently part of the multimodal network. The recommendation would be to include the segment between Tech Data Drive and Roosevelt Blvd into the network to complete the existing connection.

F Bolesta Rd, from Northern Ave to Cypress Ln

Bolesta Road from Whitney Road to Northern Ave, and Cypress Lane to Roosevelt Blvd are currently part of the multimodal network. The recommendation would be to include the segment between Northern Avenue and Cypress Lane into the network to complete the existing connection.

G 4th Ave NW, from Railroad to Missouri Ave

The proposed trail would require crossing the railroad tracks between 4th Ave NW, west of the tracks and 4th Ave NW, east of the tracks. Proper coordination with CSX would need to be made before pursuing the addition of this segment to the network. If no restrictions are given by CSX to cross the tracks proper treatments for crossing the tracks will need to be applied. The main objective of this recommendation is to improve the safety of either crossing the tracts if approved by CSX or reinforcing a "no crossing" area. If crossing at this location is prohibited additional improvements either through landscaping or fencing should be added to address safety at this location. If improved to be used as a crossing point it would provide access between the school and the neighborhood east of the tracks. Currently pedestrians are required to travel either 0.5 miles north to cross or 0.25 south to reach an existing intersection. Additional improvements along this segment would be minimal as it is a dead end street with low speeds and traffic.

H Ridge Rd SW, from Clearwater-Largo Rd S to 4th Ave NW

Ridge Rd SW south of 9th Ave SW is currently part of the multimodal network. The recommendation is to continue the segment north of 9th Ave SW, along Ridge Rd S to 4th Ave NW.

A 2nd Ave NE, from Missouri Ave to 4th St NE

This segment was originally proposed as an optional enhancement through the Largo High School property. After further assessment of the area the segment was not included in the final multimodal network recommendations as it was determined that there were appropriate existing pedestrian and bicycle facilities in place.

B 15th Ave NW, From Pinellas Trail to 11th St NW

This segment was originally proposed as an alternative route to the 16th Ave NW existing multimodal segment from 11th Ave NW to Pinellas Trail. After further assessment because the segment is a local residential road that dead ends at the trail the need to include the full segment as part of the multimodal network was determined unnecessary. Though the segment was not included as part of the multimodal network there were several recommended improvements that were identified.

1) Access to Pinellas Trail from 15th Ave NW should be improved

2) An existing vacant lot adjacent to the Pinellas Trail on 15th Ave NW should be assessed further for the purposes of using it as a potential trailhead.

C 71st St N, from 142nd Ave N to End

This segment was assessed as a potential north/south connection to be added to the multimodal network between 142nd Avenue N and 150th Ave N. After further evaluation it was determined that this segment was not feasible as the needed portion north of where the road currently ends is a main drainage area for the surrounding neighborhoods. The northern portion of this recommendation was intended to be constructed as a trail for non-motorized uses.

Proposed non-vehicular trail additions to the multimodal network

The following are segment recommendations to be added to the multimodal network as a trail, intended for non-vehicular uses. A breakdown of each proposed recommendation provided in Table 1, is provided below and illustrated in Map 2.

A Whitesell Softball Complex Trail, between 119th St N and Pinellas Trail

The proposed connection would extend the existing sidewalks that run along the north side of the softball fields to complete the connection between both the Pinellas Trail and 119th St N. Future expansion is recommended to follow the existing powerline easement west of the complex to the north south drainage easement right-of-way. Coordination with the County would be needed as this segment would be out of the City's jurisdiction but would provide access to Ulmerton Rd directly to the softball complex.

B Pine Ave NW alternative, 5th Ter NW between 14th St NW to Pinellas Trail

An alternative connection to Pine Ave NW between 14th St NW to Pinellas Trail was evaluated after evidence that this connection was already being used. The end of 5th Ter NW is a cul-de-sac neighborhood street that ends at the Pinellas Trail right-of-way. A cut through from the road to the trail was noted. It is recommended that improvements be made to the Pine Street access point to the trail to encourage use by residence as well as a better defined access point at the end of 5th Ter NW to guide users off private property.

Note: An additional connection was also proposed connecting 14th St NW and Pinellas Trail, located along an easement between 5th Ter NW and Belle Meade Circle. When improvements are made to the 5th Terrace NW and the Pine Ave NW streets the need to create an additional connection would not be necessary.

C 16th Ave SW, 4th St SW to Sable Palm Dr

This connection runs along an easement within the Palm Hill Mobile home community and garden club. Coordination would need to be made with the community. This connection would be dependent upon adoption of the proposed existing roadway segment previously discussed. If the proposed roadway segment along 16th Ave, between 4th St NW and Seminole Blvd is removed then the proposed segment along the existing roadway would be removed as well.

D 16th Ave SE, east over railroad crossing connecting to Donegan Rd

The 16th Avenue corridor was identified as a potential east/west connection across the City, going from 58th Street N to Indian Rocks Road. The proposed trail connection was identified as a segment that could be extended across the railroad tracks connecting 16th Avenue SE to Donegan Road. The proposed east/west connection starting at 58th Street N and 142nd Ave N, extending west to 16th Ave SE has two alternatives; one takes 16th Ave SE west to Donegan Road, continuing north to 8th SE Avenue; the second alternative takes 16th Avenue SE past Donegan Road, over the railroad tracks, continuing to Indian Rocks Road.

The proposed trail would require proper railroad crossing treatments for crossing the tracks and coordination with CSX would need to be made.

E North/South 142nd Ave Connection, between 142nd Ave N and Ulmerton Rd

This connection runs along an existing drainage easement parallel to San Miguel Dr. The proposed trail segment would provide a connection between Ulmerton Road, Nicole Lane, and the Florida Beacon Bible College on 142nd Ave N. The 142nd Ave corridor was identified as a potential east/west corridor across the city, an alternative to traveling along Ulmerton Road. This segment would provide an additional access point for non-motorized modes to get between 142nd Ave and Ulmerton Road without the need to use 66th St N or Belcher Road S.

D 126th Ave N, from Vonn Rd to Pine St.

A connection starting at the corner of 126th Ave and Pine Street, was intended to connect west to Vonn Road. Field verification concluded that the available right-of-way would not provide enough space to provide a trail connection without encroachment onto the properties of existing residents.

E 126th Ave, between 134th St and Vonn Rd

The 126th Ave corridor was identified as a potential east/west connection across the city. After further assessment the 126th Ave corridor was determined to have several areas where the cost to improve the segments outweighed the benefit. This connection was found to be one of those unfeasible segments. 126th Ave dead ends into a ditch with significant drainage issues and any work to this area would require significant drainage modifications and permitting. The connection continues through the Largo Golf Course where there is limited right-of-way to provide a connection through the course without having conflicts with stormwater retention areas.

F 126th Ave N Connection, between Ulmerton Rd and 119th St N

This trail connection would run along an existing drainage easement connecting to 119th St N, an unconstructed existing multimodal street and Ulmerton Road. The area surrounding this proposed trail connection is fully developed and may be unfeasible due to available right-of-way. Further evaluation of this connection is recommended as a future connection.

Phase I Continued

Phase I also included the development of a preliminary set of bicycle, pedestrian, and transit facility design guidelines based upon the latest national, state, and local standards. Recommendations provided in the *Downtown Largo Multimodal Plan* were incorporated where appropriate. Supplemental to the design guidelines, a preliminary set of target bicycle, pedestrian, and transit Level of Service (LOS) standards were developed for the City. The target level of service standards provides a measurable feature along each roadway that can be used to identify specific facility design guidelines suitable to maintain or improve the existing LOS. The recommended design guidelines and target LOS are provided in more detail in later sections of this plan.

Phase II

Phase II of the Plan development consisted of the collection and assessment of data obtained both in the field, from the City of Largo, as well as other relevant plans and initiatives. A public outreach process was one of the other major tasks preformed during this phase which provided the local stakeholders and citizens an opportunity to identify facility needs and opportunities as well as vote on their projects of choice.

The data collected was used to assess the existing conditions of bicycling, walking, and public transportation facilities along the multimodal network in Largo. The information was used to conduct a baseline level of service (LOS) assessment of all network segments and identify recommended facility improvements to improve the LOS along the corridors.

An online survey was also created, with assistance from City staff and launched on the City's website from June 28 – July 27, 2012. The survey provided the City with additional information regarding the current use of multiple modes of transportation by its residents and was later used during Phase III in the project prioritization. A summary of the survey results are provided under the Public Involvement section of this plan along with a summary of the Technical Stakeholder Meeting and Public Workshop.

In addition to the collection of existing facility types along the multimodal corridors, bicycle and pedestrian crash reports were obtained from Pinellas County MPO for the last five years (2007-2011). The crash data was evaluated to identify possible high hazard locations and to develop safety countermeasure recommendations.

A preliminary list of potential corridor recommendations along with the existing level of service evaluations was created in this phase and assessed further for prioritization in Phase III. Segment LOS evaluations, crash data assessments, and project recommendations are provided in more detail in later sections of this plan.

Phase III

The final project phase consisted of compiling cost estimates developed for the multiple facility recommendations and applying a slightly revised version of the methodology used in the *Downtown Largo Multimodal Plan* to prioritize the proposed transportation system improvements. The prioritization methodology used in this plan took a larger scale, citywide approach to assessing the project corridors rather than a block by block assessment performed in the Downtown Plan. The prioritized project list was used to develop a phased implementation schedule for the multimodal improvements. The prioritized projects were phased over a 25-year planning horizon in 5-year incremental planning phases. A limited feasibility study was performed for the top five ranked (prioritized) projects.

EXISTING CONDITIONS

The primary goal of the Multimodal Plan is to address areas of deficiencies related to biking, walking, and using transit services along the multimodal network. A key step in reaching this goal is to determine how well or poorly the network currently meets the needs of these uses, and then to establish the appropriate level of accommodation which should be sought for each facility type. This section describes the existing conditions evaluation, the established facility performance targets, and approaches to meeting those targets through recommended facility improvements.

Existing Level of Service Assessment

Bicycle and Pedestrian Level of Service (LOS)

The methodology used for evaluating bicycling and walking conditions along roadways, both within the State of Florida and throughout the United States, is known as link (or segment) bicycle and pedestrian level of service (BLOS and PLOS). Level of service for these non-motorized modes represents a quantified measurement of how safe and comfortable bicyclists and pedestrians feel within the network with respect to motor vehicle traffic. As shown in Table 2, bicycle and pedestrian level of service results are portrayed in an, A through F grading scale, with "A" representing the best conditions and "F" representing the worst.

Table 2: Level of Service Grades and Scores

Level of Service	Score
A	≤ 1.5
B	> 1.5 and ≤ 2.5
C	> 2.5 and ≤ 3.5
D	> 3.5 and ≤ 4.5
E	> 4.5 and ≤ 5.5
F	> 5.5

Source: FDOT Quality/Level of Service Handbook, 2009

This type of existing conditions analysis is based on numerous roadway geometry and traffic characteristics, the same characteristics that are important to Largo's existing and future non-motorized transportation users. The procedures developed were based on real-time feedback of a cross section of bicyclists and pedestrians in metropolitan Florida communities similar to the City of Largo.

It is important to consider that interaction between these characteristics can lead to very different types of streets producing similar bicycling or walking condition scores, with regard to perceived safety and comfort. For example, a low-volume, low-speed local street with no sidewalks, (shown on the left in Figure 1) may produce a relatively good walking condition LOS score similar to a mid-volume collector street that includes a sidewalk and a sufficiently wide buffer (shown on the right in Figure 1: Two sets of roadway characteristics with similar pedestrian level of service). Similarly, a relatively low-volume road in a rural area with high speeds and higher volumes of trucks (while not common to Largo) can have a poor bicycle level of service similar to a very high-volume urban principal arterial.

Figure 1: Two sets of roadway characteristics with similar pedestrian level of service scores
*Photos taken from Sherbrook Road and Belcher Road

In this manner, bicycle and pedestrian level of service provide a convenient way to both set targets for the accommodation that should be provided on Largo's multimodal street network, and to ultimately identify either standard or roadway specific facility types that can help achieve those established targets. A summary of each roadway classification is provided in Table 3 and a sample of each functional class is illustrated using Largo roads in Figure 2. It was recommended that the establishment of level of service targets, as discussed under the Level of Service Assessment section of this Plan, be tied to this classification system.

Table 3: Functional Roadway Classification Table

Functional System	Services Provided
Arterial	Provides the highest level of service at the greatest speed for the longest uninterrupted distance, with some degree of access control.
Collector	Provides a less highly developed level of service at a lower speed for shorter distances by collecting traffic from local roads and connecting them with arterials.
Local	Consists of all roads not defined as arterials or collectors; primarily provides access to land with little or no through movement.

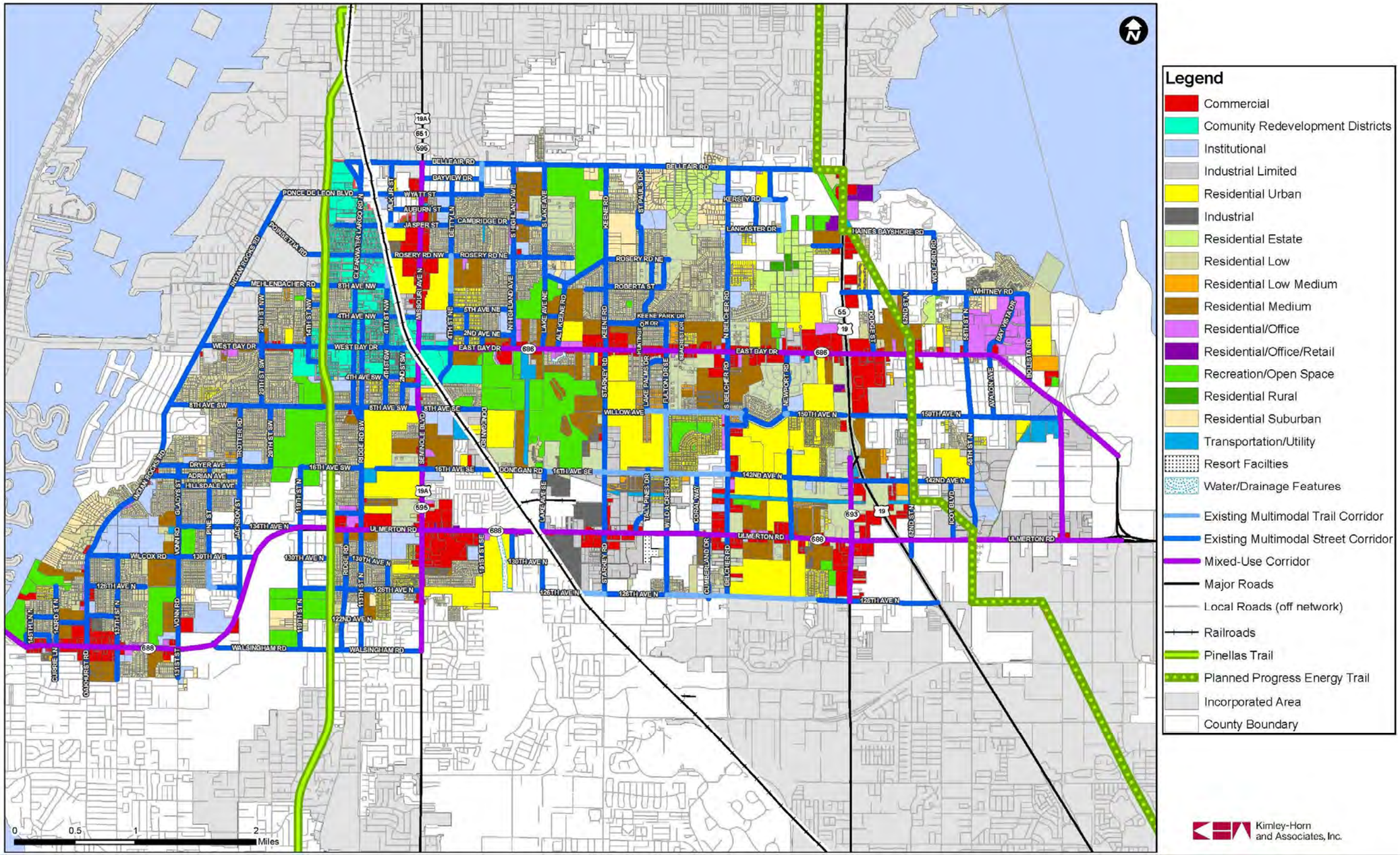
Source: U.S. DOT Federal Highway Administration

Figure 2: Sample Roadway Classification (Largo)

The map series on the following pages provides an overview of the data that was collected along the multimodal network for the existing conditions assessment. The map series includes:

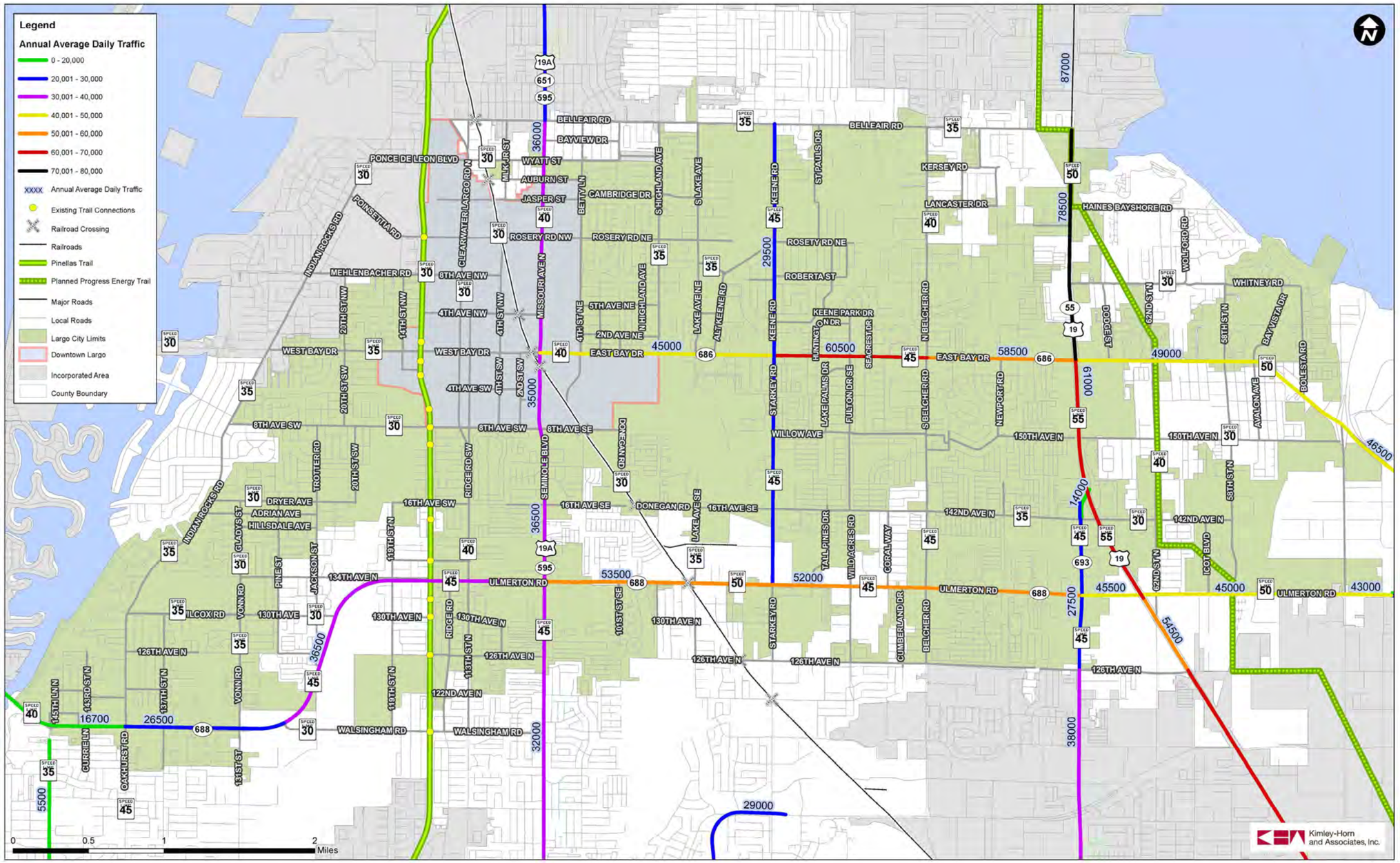
Map 3 – Future Land Use
This map illustrates the future land uses categories within the City of Largo.
Map 4 – Existing Traffic Volumes and Speed Limits
This map shows the annual average daily traffic volumes for 2011 and the existing posted speed limits.
Map 5 – Multimodal Functional Roadway Classification
This map shows the roadway classification breakdown of the multimodal street network.
Map 6 – Existing Transit Routes
This map shows where the existing transit routes are located throughout the city.
Map 7 – Designated Urban Trails Corridors
This map was created by the City and shows the urban trail corridors, regional trails, and parks in the City of Largo.
Map 8 – Existing and Planned Bicycle Facilities
This map shows both the existing and planned bicycle facilities. It shows where the on road facilities will be located, as well as where there will be sharrows, or shared lane markings.
Map 9 – Existing Sidewalk Coverage
This map shows the recorded sidewalk coverage along the multimodal street network. Sidewalk coverage is shown in percentage covered.

Map 3: City of Largo Future Land Use



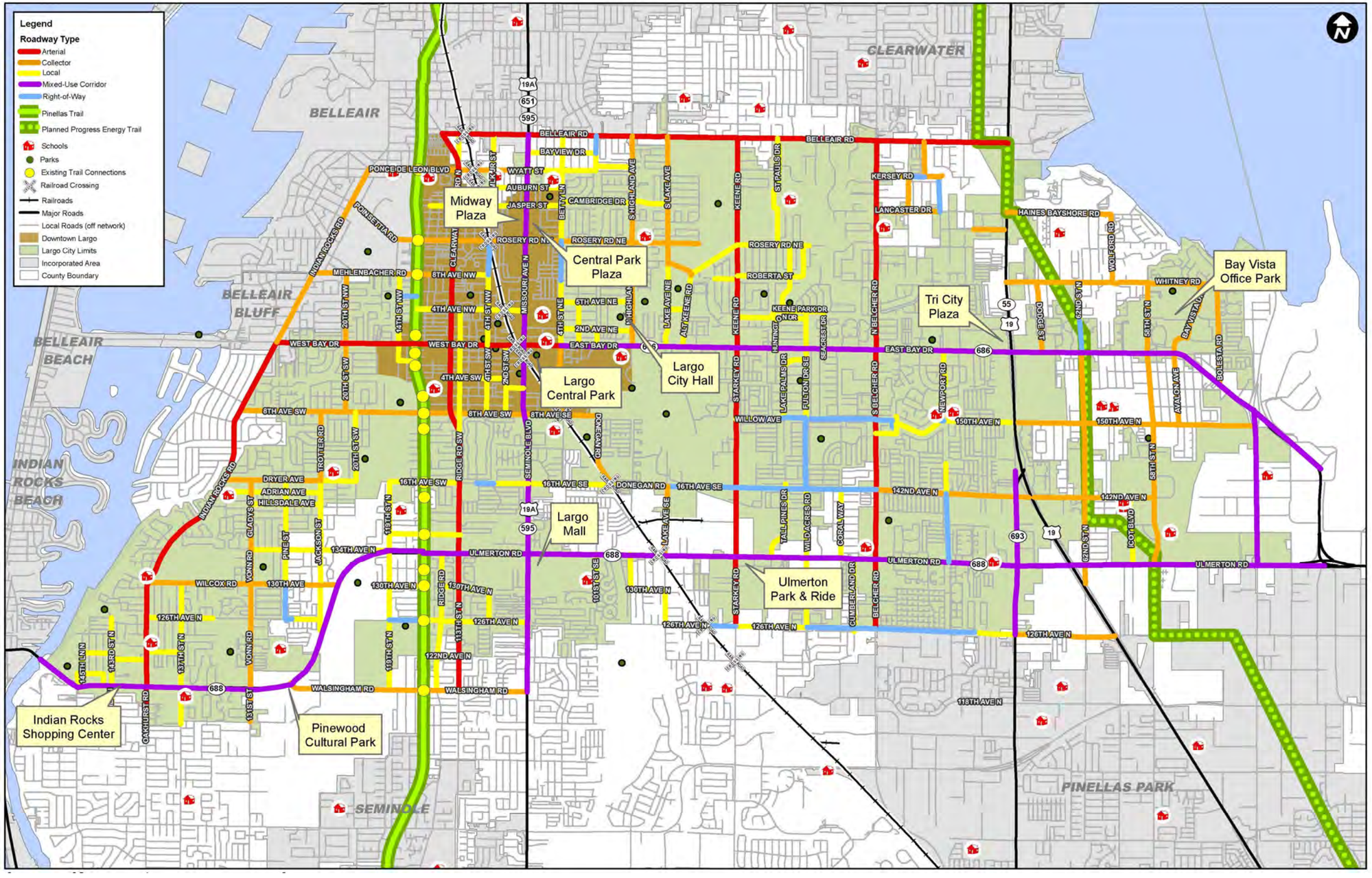
Source: City of Largo

Map 4: Existing Traffic Volumes and Posted Speed Limits



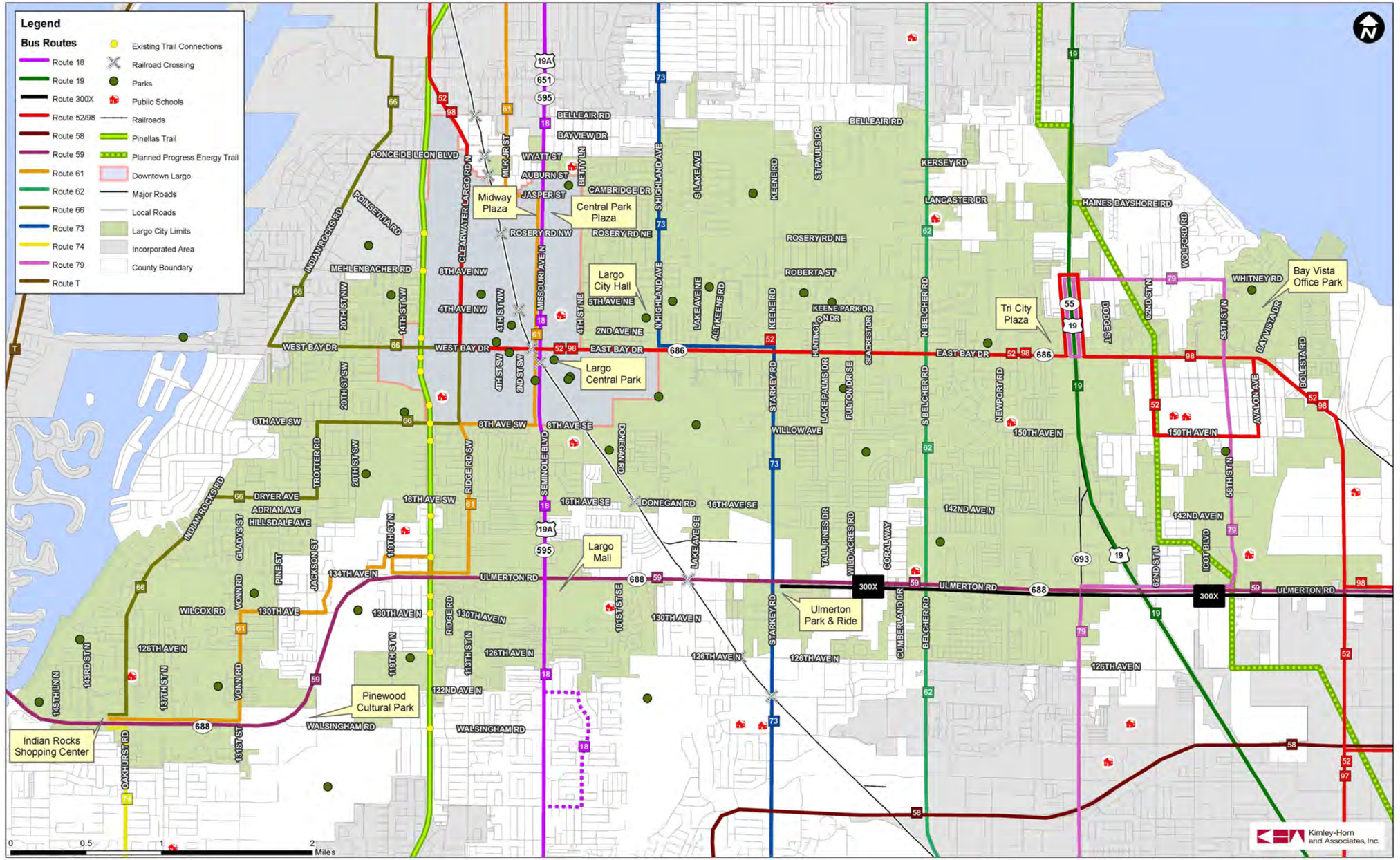
Source: FDOT AADT and RCI data. Roads in this map without identified speeds are less than 30 MPH.

Map 5: Multimodal Network by Functional Roadway Classification



Source: FDOT

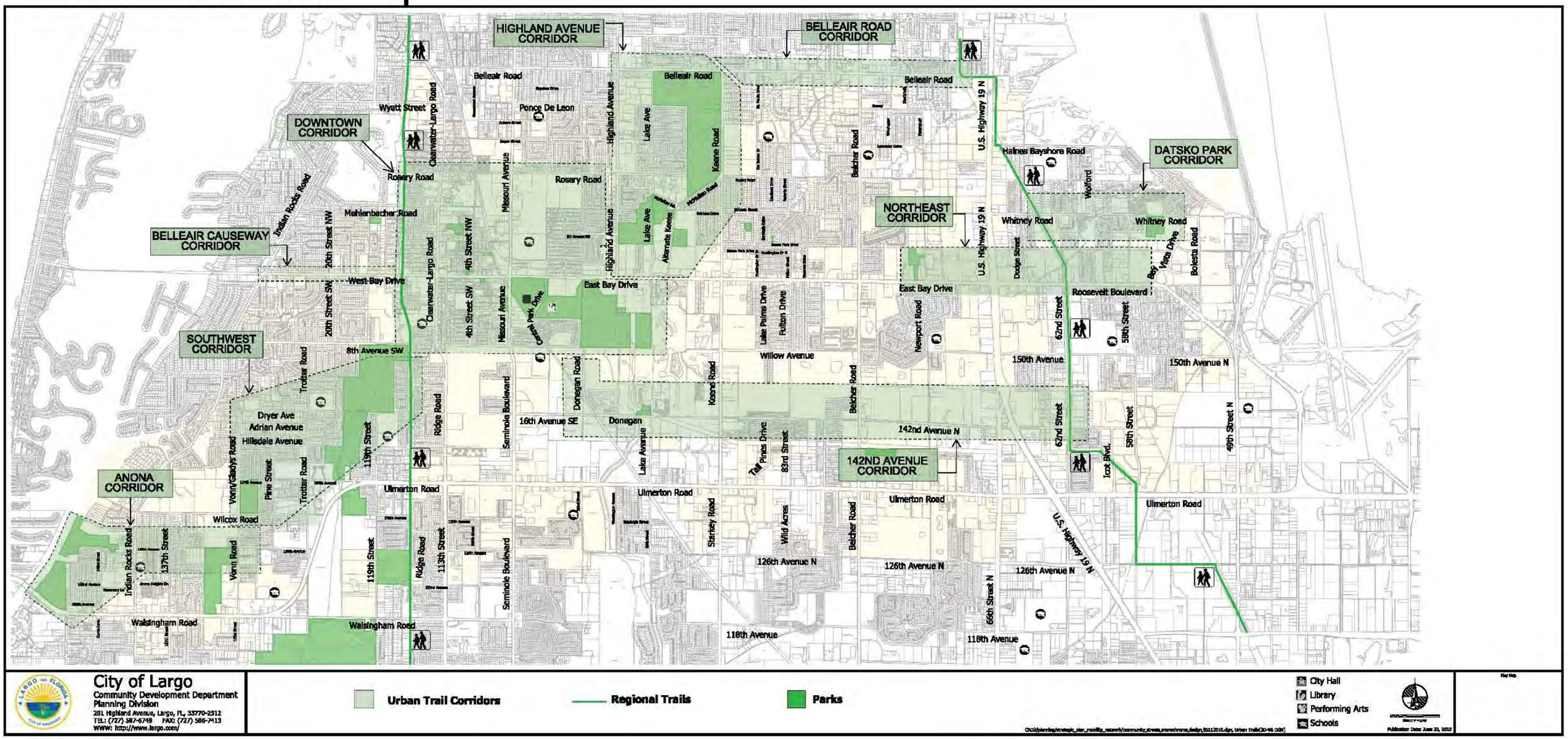
Map 6: Existing PSTA Bus Routes



Source: PSTA Bus Route Map

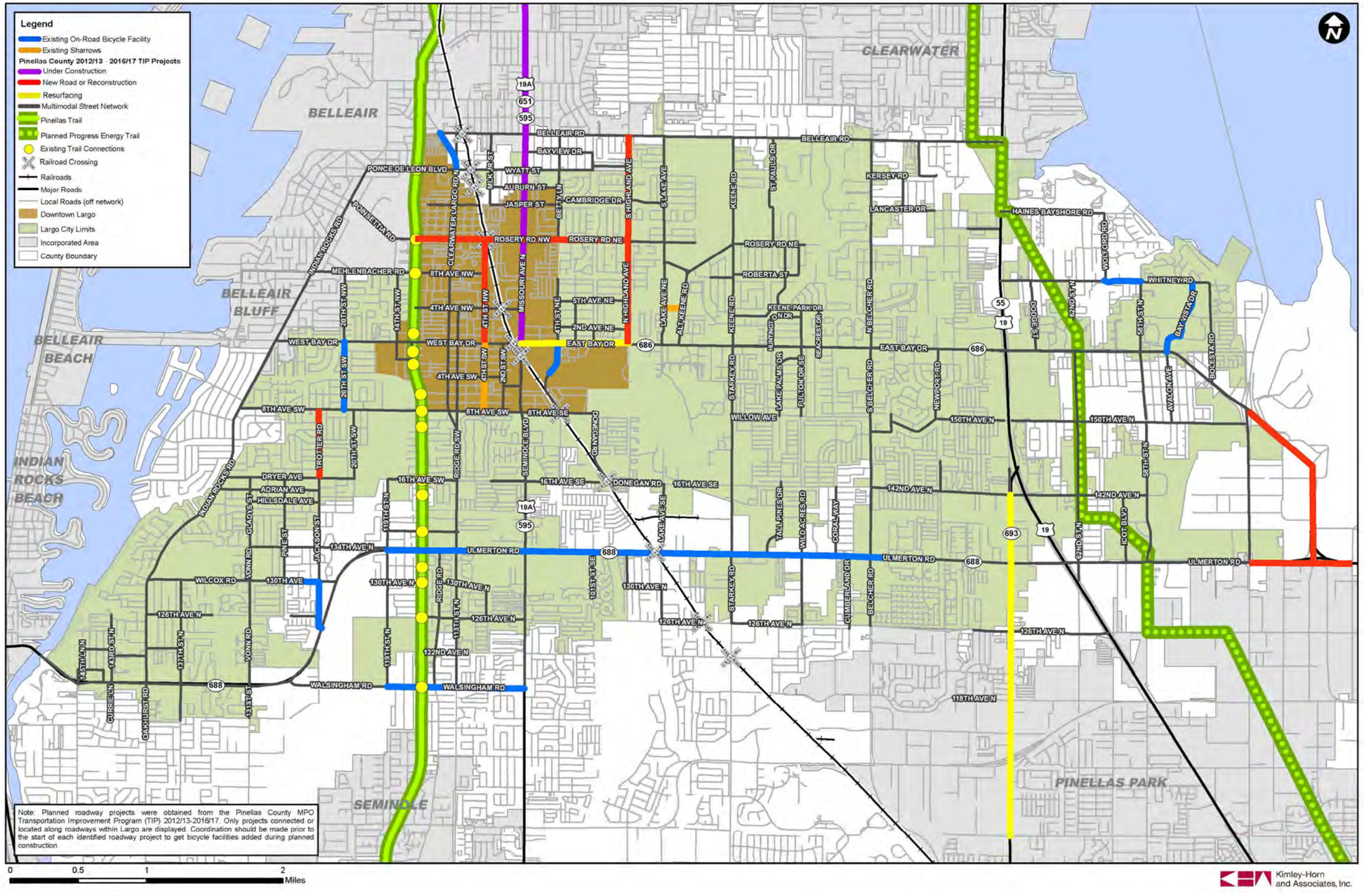
Map 7: City of Largo Designated Urban Trail Corridors

Urban Trails Corridor Map



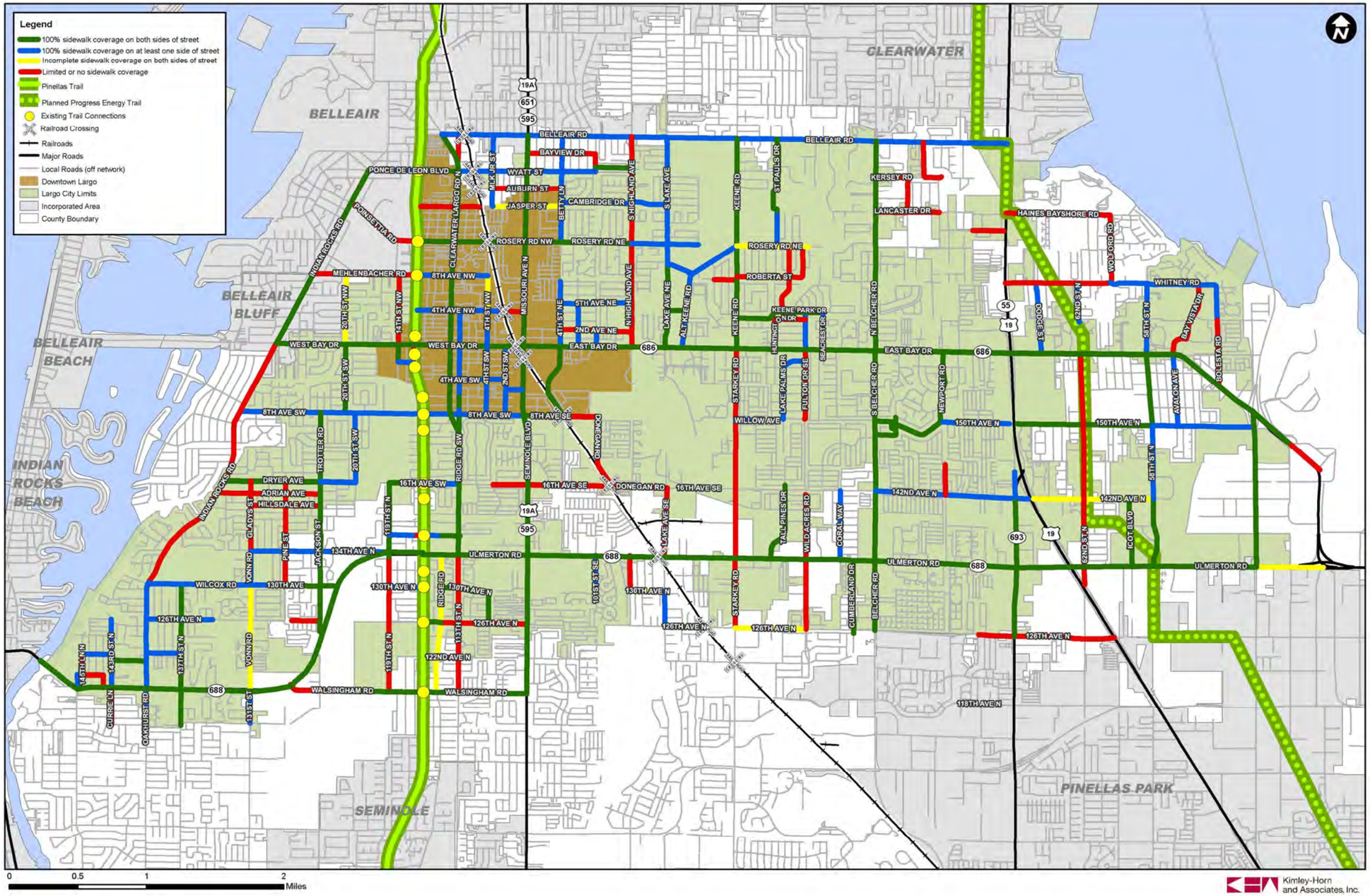
Source: City of Largo

Map 8: Existing and Planned Bicycle Facilities



Source: Pinellas County TIP (2012/13-2016/17) with proposed recommendations from this plan.

Map 9: Existing Sidewalk Coverage



Source: Sidewalk conditions collected during field work.

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SECTION 2 – PUBLIC INVOLVEMENT

INTRODUCTION

A strong emphasis on public involvement and input was placed on the development of this plan throughout the planning process. The information collected though past public involvement workshops and surveys conducted by the City for similar planning processes were merged with the information collected for this plan. However, to obtain input and feedback from the public and major stakeholders specific to multimodal facility improvements, several additional public involvement exercises were performed as part of this plan.

During Phase II of the planning process, the project team held both a Technical Stakeholder Meeting with local and regional agency representatives attended, as well as a separate public workshop where the public was asked to rank and prioritize the predefined recommendations. An online survey was also developed and administered through the City's website. The results and recommendations gathered from each meeting and survey are provided within this section. The feedback received from the public and stakeholders was used to rank the overall project prioritization in accordance with the methodology outlined in Section 6.

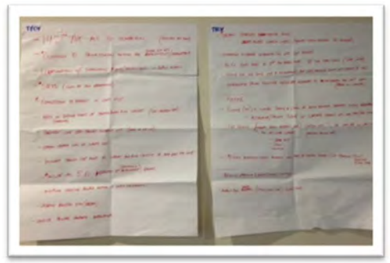
TECHNICAL STAKEHOLDER MEETING

A Technical Stakeholder meeting was held on July 19, 2012 at the City of Largo Commission Chambers. Those in attendance included representatives from Pinellas County Engineering Department, Pinellas County Health Department, Florida Department of Transportation (FDOT), Pinellas County MPO, Pinellas County Planning Department, as well as City staff.

A short presentation was given that provided a brief overview of the project objectives and preliminary existing conditions analysis. Following the presentation, stakeholders were lead through an open discussion on a broad range of topics. Attendees were asked to provide feedback and examples of best practices used involving multimodal transportation facility improvements as well as potential funding opportunities available. Some of the topics discussed included;

- What existing or on-going projects should the City be aware of pertaining to bicycle, pedestrian and transit planning?
- Are there any constraints or challenges the City should be aware of pertaining to State and County roadway improvements?
- What funding opportunities are available, or are you pursuing that Largo could apply for alone or in conjunction with other projects?
- What type of bicycle, pedestrian, or transit facilities does the City lack or do you feel are needed to encourage biking as a desirable mode of transportation?

Figure 1: Snapshot of the notes recorded during the technical stakeholder meeting



PUBLIC WORKSHOP

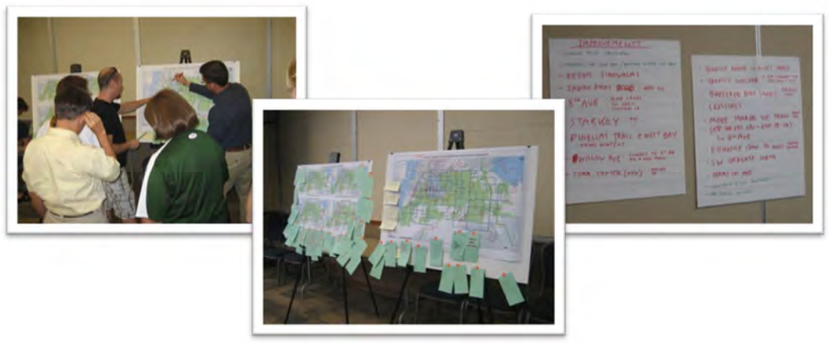
The public was invited to attend a public workshop on July 20, 2012, held at the City of Largo Public Library. The meeting provided an opportunity for the public to provide recommendations and feedback on the existing conditions of bicycle, pedestrian, and transit facilities within the City as well as provide input as to what improvements they would like to see implemented.

As attendees arrived and signed in at the door they were given six (6) 'Largo Dollars' that they were instructed to use during the breakout session to prioritize, "fund" the recommendations they felt were most important for the City to consider.

The meeting began with a short presentation providing a brief overview of the project objectives and preliminary existing conditions analysis. Following the presentation the public was asked to split into four (4) working groups. Each group's work station provided two boards containing large maps of the City, illustrating the existing conditions of sidewalk coverage, speed limits and traffic volumes, existing transit routes, as well as the existing and planned bicycle facilities.

The groups were each lead by two members of the consulting staff, one facilitating the group and the other recording on a flip chart the group's feedback and comments. Each group was asked a series of discussion topics used to encourage additional feedback. Comments and recommendations were gathered throughout the exercise and recorded on the maps and/or flip charts. Once the group completed the facilitated discussion portion of the breakout session the members of the group were then asked to write on the backs of their "Largo Dollars' a project or recommendation they felt was highest priority. They were given the option to place all six (6) Largo dollars towards one project or they could spread their funds out across multiple recommendations. The result of the exercise provided a public influenced list of prioritized projects that was used in the overall project prioritization methodology completed in Phase III.

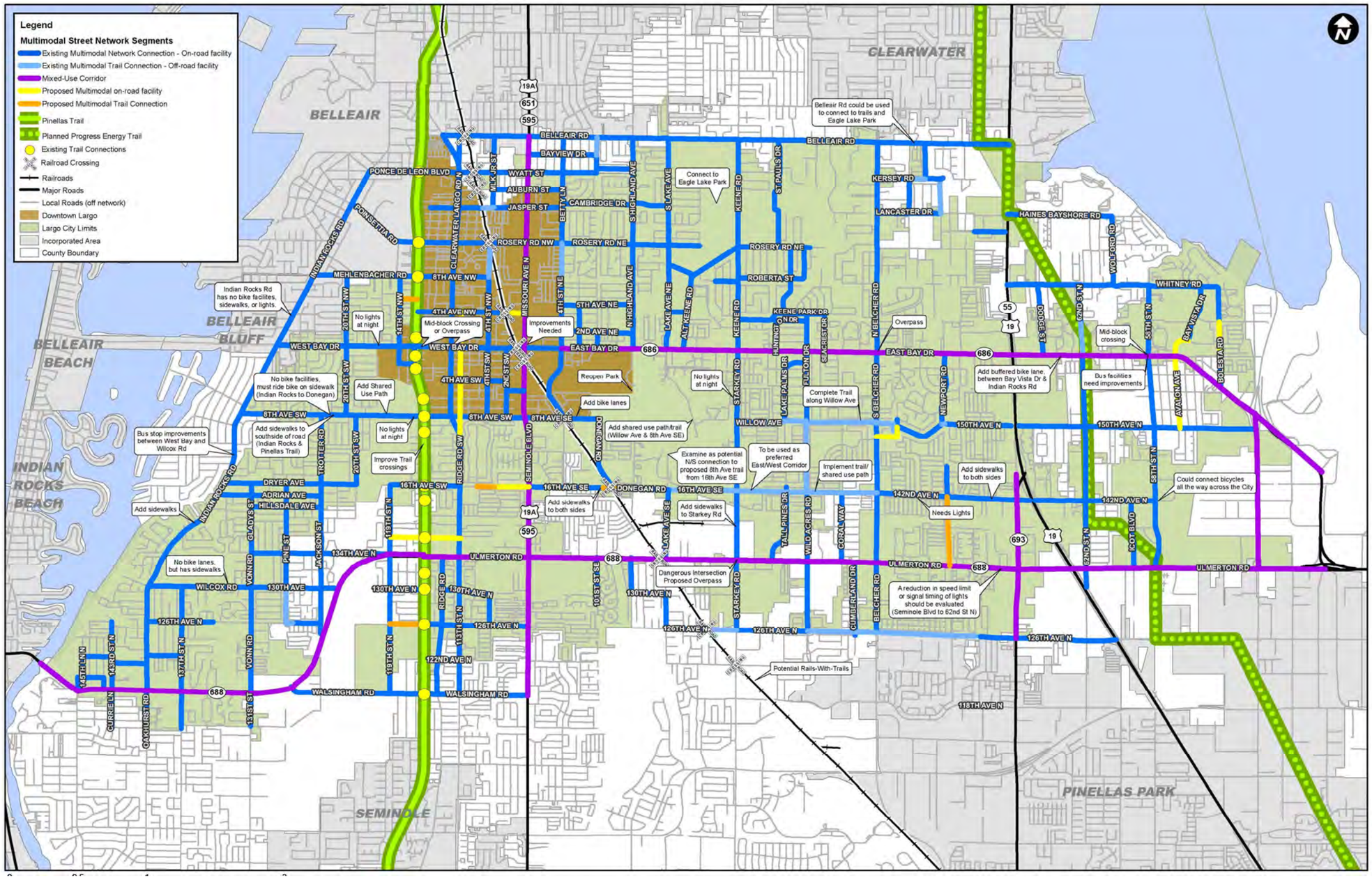
Figure 2: Pictures from the public workshop



Map 1 provides a summary of the public feedback collected at the meeting. Some of the high priority improvements that received the highest number of votes (Largo Dollars) included;

- The addition of sidewalks along Indian Rocks Rd
- The construction of sidewalks connecting McMullan Rd to Alt. Keene Rd
- The construction of a shared use path along 8th Ave, between Indian Rocks Rd and Belcher Rd
  (An alternative route was suggested along 16th SE Ave/142nd Ave N)
- The addition of on-road bike facilities (bike lanes) along East and West Bay Dr
- The addition of on-road bike facilities (bike lanes) along Indian Rocks Rd

Map 1: Public Comment Summary Map



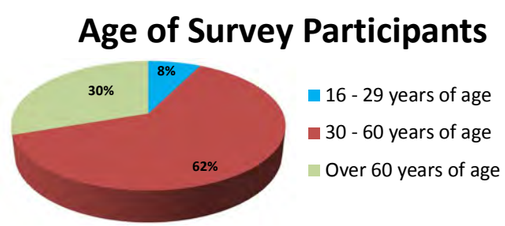
ONLINE SURVEY RESULTS

An online survey was conducted as part of the public outreach efforts to gather information on multimodal transportation travel patterns from the public in and around the City of Largo. Participants of the survey were asked a total of thirty-two (32) multiple choice questions as well as an opportunity at the end to write any additional comments or concerns. A total of 166 participants logged onto the City's website and completed the survey. A summary of the results and findings are provided below.

Basic Demographic Information

Over half (62%) of the total number of participants of the online survey were between the ages of 30 and 60 years of age, followed by thirty-percent (30%) being over the age of 60, and only eight-percent (8%) being between the ages of 16-29 years old. No one 15 years old or younger was recorded as taking the survey. The total number of male and female participants of the survey was close to a fifty-percent (50%) split. Figure 3 provides an age range breakdown of the survey participants while Table 1 provides a breakdown of the average household statitiscs recorded in the survey.

Figure 3: Age of Survey Participants



	Average
Number of automobiles:	1.67
Number of bicycles:	1.95
Number of adults (18 & over):	1.86
Number of children (17 & under):	0.4
Number of drivers:	1.82

Table 1: Household Breakdown

Areas Represented

Of the participants that completed the survey, over seventy-five percent (75%) were residents of Largo, while only thirty-four percent (34%) claiming place of employment within the City of Largo. Map 2 provides a breakdown of the zip codes recorded by the participants when asked what zip code they lived in and worked in. Only three (3) participants that took the survey recorded living in zip codes outside Pinellas County, while eight (8) recorded working in zip codes outside Pinellas County. Zip codes outside Pinellas County are not illustrated on the map.

Modes of Travel and Use

A significant portion of the survey focused on identifying the specific modes of transportation used in and around the City. To gain a better understanding of what transportation amenities are being used, and for what reasons, participants of the survey were asked to provide information on their travel patterns and the occurrences of each use. The three (3) modes of transportation evaluated were: biking, walking, and the use of public transportation. In the survey the participants were asked to record the average number of days and round trip miles they traveled for specific trips/destinations using each specific mode (biking, walking, and riding the bus).

The following is a list of the specific trips/destinations provided for participants to record their travel patterns to and from each location:

- Access to transit
- Leisure (no specific destination)
- Travel to event/social destination
- Physical exercise
- Travel to school
- Travel to shopping
- Travel to work

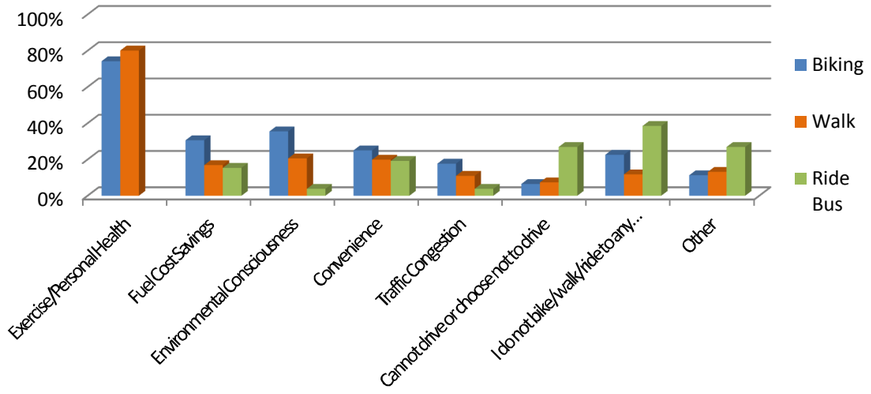
Another element evaluated was the purpose for using each specific mode. Participants were provided a list of common reasons for choosing a specific mode of transportation over another and they were asked to select all options under each category they felt matched their motive.

The following is a list of the common reasons provided in the survey for participants to select from specifying the reasons of why they chose to use each specific mode of transportation, the other category allowed participants to add additional reasons if theirs were not listed:

- Exercise/Personal Health
- Fuel Cost Savings
- Environmental Consciousness
- Convenience
- Traffic Congestion
- Cannot drive or choose not to drive a car
- I do not bike/walk/ride a bike
- Other

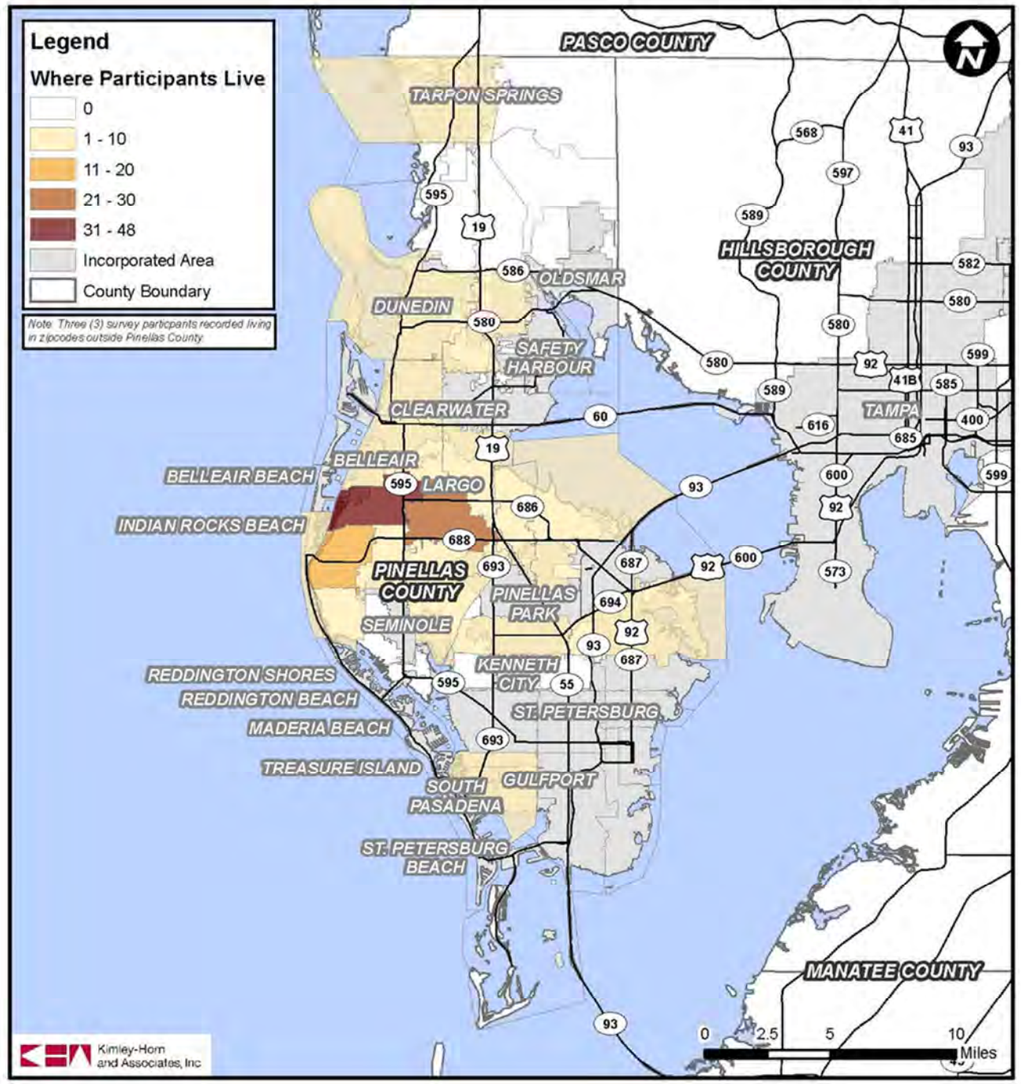
Figure 4 provides a percentage summary of each mode showing the ranking of reasoning for using each form of transportation.

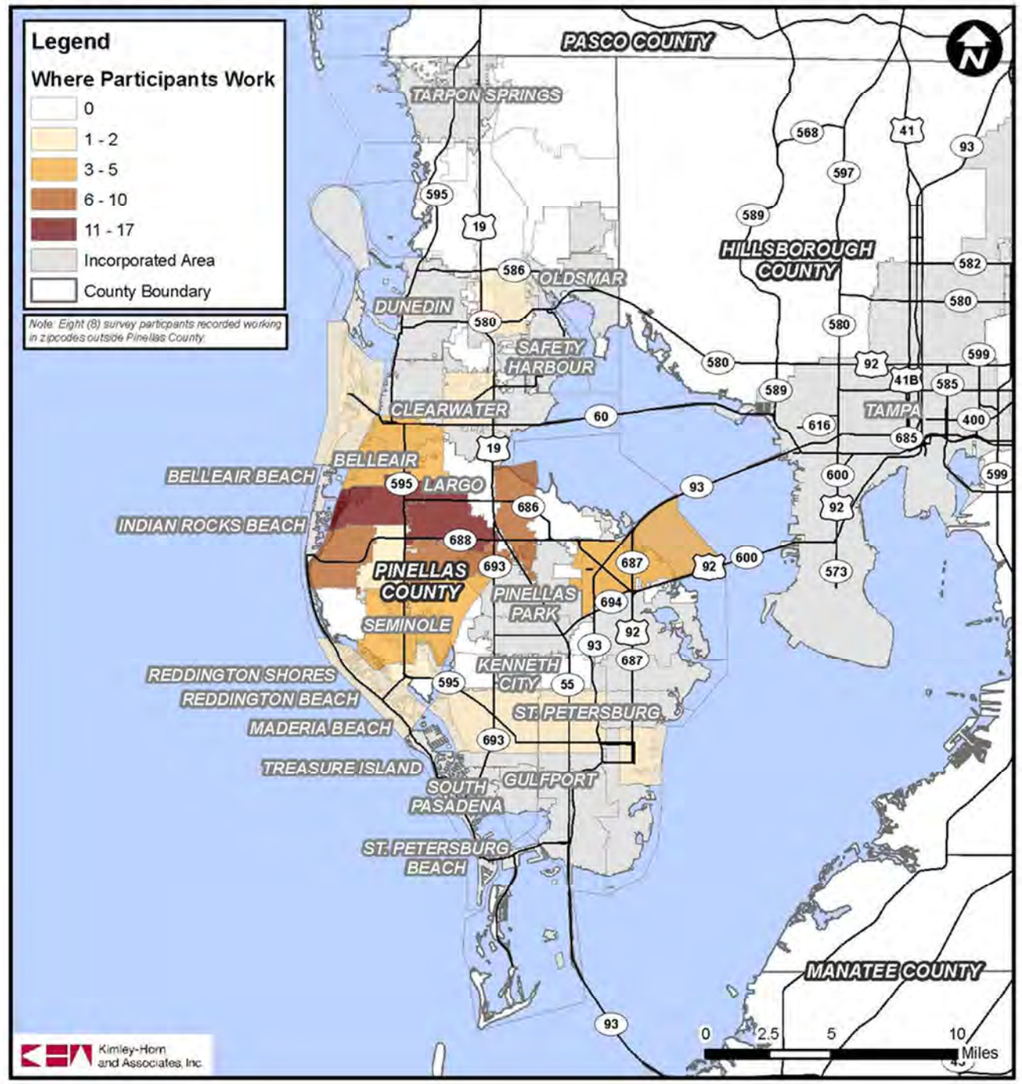
Figure 4: Reasons for using each transportation mode



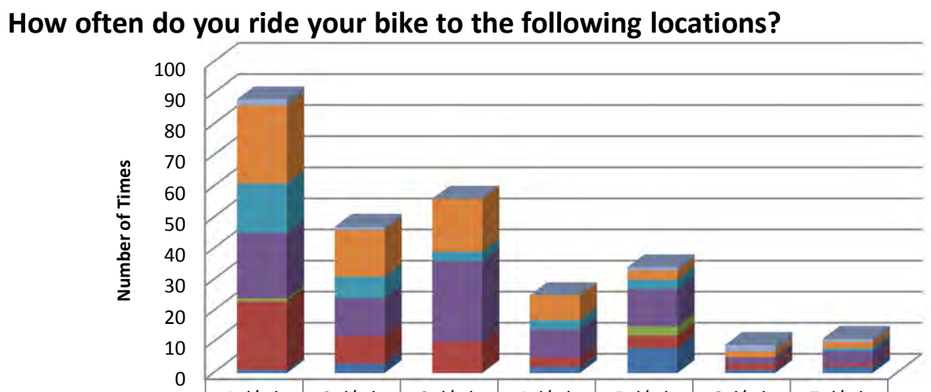
Summary bar graphs are provided in Figure 5, Figure 6, and, Figure 7 illustrating the breakdown of each transportation mode by use per week as well as a breakdown of the average miles traveled (round trip) per mode in Figure 8.

City of Largo Multimodal Transportation Plan Online Survey Results
Zip Codes Represented



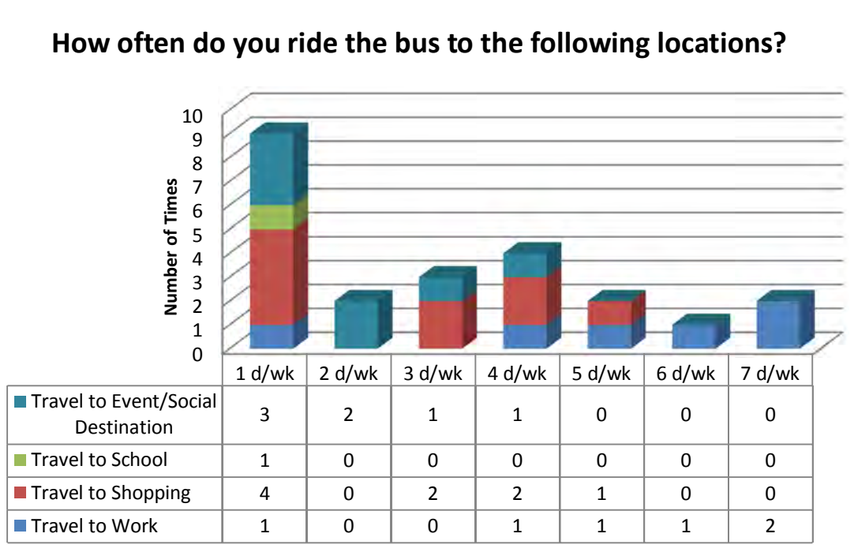


Map 2: Online Survey Results - Zip codes Represented



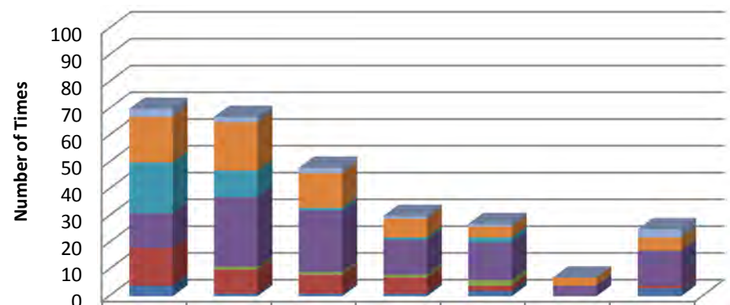
	1 d/wk	2 d/wk	3 d/wk	4 d/wk	5 d/wk	6 d/wk	7 d/wk
To Access Public Transit	2	1	0	0	1	2	1
Leisure (no specific destination)	25	15	17	8	3	2	2
Travel to Event/Social Destination	16	7	3	3	3	0	1
Physical Exercise	21	12	26	9	12	2	4
Travel to School	1	0	0	0	3	0	0
Travel to Shopping	22	9	10	3	4	2	1
Travel to Work	1	3	0	2	8	1	2

Figure 5: How often do you ride your bike



	1 d/wk	2 d/wk	3 d/wk	4 d/wk	5 d/wk	6 d/wk	7 d/wk
Travel to Event/Social Destination	3	2	1	1	0	0	0
Travel to School	1	0	0	0	0	0	0
Travel to Shopping	4	0	2	2	1	0	0
Travel to Work	1	0	0	1	1	1	2

Figure 6: How often do you ride the bus



	1 d/wk	2 d/wk	3 d/wk	4 d/wk	5 d/wk	6 d/wk	7 d/wk
To Access Public Transit	3	2	2	1	1	0	3
Leisure (no specific destination)	17	18	13	7	4	3	5
Travel to Event/Social Destination	19	10	1	1	2	0	0
Physical Exercise	13	26	23	13	14	4	13
Travel to School	0	1	1	1	2	0	0
Travel to Shopping	14	9	7	6	2	0	1
Travel to Work	4	1	1	1	2	0	3

Figure 7: How often do you walk

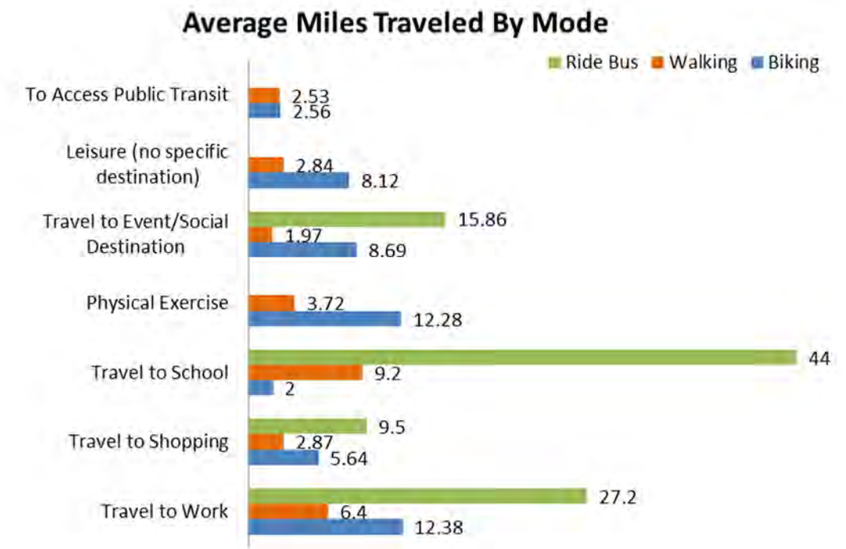


Figure 8: Average Miles Traveled by Mode

In addition to selecting the reasons listed previously some participates provided their own comments describing why they chose to use one particular mode of transportation over another. A summary of those comments is listed below.

Other reasons for biking

- Enjoy the scenery
- Ride for fun/exercise with family
- There is no bus within 2-3 miles of my home
- I don't own a vehicle
- Social activity, way to meet up with other riders
- Handicapped, ride trike PAV3

Other reasons for walking

- Enjoyment of scenery and being outside, its relaxing
- Fun, pleasurable
- No bus stop with 2-3 miles of home
- I don't own a car/car is broken
- To walk animals (dog)
- Social activity/leisure, allows time with friends and family

Other reasons for riding the bus

- I don't own a car/ car is broken
- Trying to save for a replacement vehicle

Transportation Amenities

Following the questions related to transportation mode preferences and frequency of uses, the participants of the survey were asked to comment on specific elements related to each mode previously discussed. Types of elements discussed included existing infrastructure, needed infrastructure, limitations or barriers identified related to the use of a particular mode, as well as ways to improve the efficiency or functionality of each mode. Information obtained within this part of the survey was used to assist the City in identifying and prioritizing the list of projects outlined later in this plan.

Transitioning between modes

Respondents that indicated use of public transportation were asked to select the transition or transfer methods they use to access the bus stop. The options they were provided to select from were: carpool or being dropped off by car, walk, ride a bike, or park at a location near the bus stop. Over eighty-eight percent (88%) selected walking to the bus stop as their primary method for accessing the bus stop with a little over twenty-nine percent (29%) choosing 'riding a bike' as the second most preferred means of accessing the bus stop from the options provided.

A follow up question to those who rode their bike to access the bus stop was a question related to how they store their bike once they reach the stop. Over fifty percent (50%) stated that they use the Bikes on Bus Program provided by Pinellas Suncoast Transit Authority (PSTA), which is a program that allows riders to store their bike on racks mounted to the front of the bus while they ride the bus to their next destination. It was noted by one participant that, in some cases, they have found the mounted bike rack on the bus to be full. In those cases they are left with the options of either waiting for another bus or simply continuing to ride their bike to their final destination. Other methods equally noted as means for storing their bike were securing their bike to the provided bike rack at the bus stop, or if a bike rack was not provided, securing their bike to a sign or post near the stop. Bus stops that do not provide, at minimum, bike racks at their locations, should be assessed further in order to get these types of amenities installed.

Barriers associated with each mode

The results from the previous questions provided a good basis for understanding how people are currently getting around Largo and preferred destinations for non-vehicular forms of travel. This next section focuses on identifying some of the barriers associated with walking, riding a bike, and riding the bus that may discourage additional residents and visitors of Largo from using these modes for travel. Participants were asked to rank the significance from 'Very Significant' to 'Not Significant' of common barriers associated with each mode of transportation to identify elements that have the highest negative or positive influence on a person's decision to choose one mode over another. The following are the results of each assessment.

Walking

It was identified in the previous section and illustrated in Figure 7 that the majority of survey participants that currently walk choose to walk more as a social or leisurely activity, used for physical and health purposes rather than as a means of getting to routine destinations such as work. Shopping was identified as a destination accessed frequently by walking, but only for trips occurring one to two times a week. The assessed significance of the common barriers associated with walking are summarized in Table 2.

Table 2: Barriers Associated with Walking

	Very Significant	Significant	Slightly Significant	Not Significant
Lack of shade along walkways	**34**	26	33	29
Sidewalks not present or fragmented	**73**	31	14	12
Sidewalks too close to the street	**34**	24	28	31
Sidewalks not wide enough	31	23	26	**35**
Travel time/Travel flexibility *(accommodating unexpected personal schedule or destination changes)*	24	31	27	**37**
Availability of end-of-trip amenities *(showers, lockers, etc.)*	14	18	20	**62**

Additional comments provided specific to walking barriers:

- There is a lack of pedestrian crossings near places of business and major intersections (ex. Post Office)
- Need more pedestrian connections to recreation facilities and neighborhoods
- Safety is a concern; high traffic volumes, aggressive/unaware driving behaviors
- Amenities such as water fountains, benches, and restrooms should be placed along popular routes
- Need more crosswalks with flashing lights and police to enforce
- Lighting and additional shade trees are needed
- Sidewalks, such as on Mehlenbacher Road, are fragmented and dangerous
- Facilities are located too close to vehicle traffic; very noisy
- Workplace does not provide end of trip amenities
- All the construction is dangerous
- Too hot, inclement weather

Biking

Similar to the results found with walking, biking was associated with more of a social or leisurely activity, used for physical and health purposes, with only an average of up to 3 days a week being used for shopping trips. The assessed significance of the common barriers associated with biking within the City of Largo are summarized in Table 3.

Table 3: Barriers Associated with Biking

	Very Significant	Significant	Slightly Significant	Not Significant
Lack of shade along bike routes	21	13	**41**	37
Bike lanes not present	**70**	31	6	17
Bike lanes present but I prefer not to bike on the roadways	**41**	21	16	32
Travel time/Travel flexibility *(accommodating unexpected personal schedule or destination changes)*	17	17	32	**41**
Availability of secure, weather-protected bicycle parking	26	26	22	**38**
Availability of end-of-trip amenities *(showers, lockers, etc.)*	16	19	22	**51**

Additional comments provided specific to biking barriers:

- Some streets are not wide enough for bike lanes
- Cyclists do not follow the proper rules of the road
- There is a lack of bicycle parking, especially around business
- Safety is a concern; high traffic volumes, aggressive/unaware driving behaviors
- There is a lack of bike facilities and lanes to nearby shopping centers
- Too hot
- Traffic volume; aggressive/unaware driving behaviors
- Cars don't share the road, additional enforcement and educational campaigns should be implemented
- Lack of public facilities such as restrooms
- Most work places lack end-of-trip amenities

Using Public Transportation

Opposite to the results recorded of the common destinations traveled to by those walking and/or biking those who use public transportation rely on the bus regularly for transportation to work and shopping on an average of five to seven days a week. The types of barriers associated with riding the bus have some overlap to walking and biking but the desired amenities and expectations of a paid service tend to result in a lower tolerance for lack of flexibility and the inability to come and go as one pleases. Table 4 summarizes the significant barriers associated with riding the bus.

Table 4: Barriers Associated with Riding the Bus

	Very Significant	Significant	Slightly Significant	Not Significant
Travel time/Travel flexibility *(accommodating unexpected personal schedule or destination changes)*	**45**	20	14	20
Frequency of service *(does not come often enough)*	**42**	23	13	21
Span of service *(does not come early or late enough)*	**41**	15	20	21
Distance from your residence to bus stops	23	15	21	**37**
Lack of transit access to frequent destinations	**32**	24	16	26
Poor pedestrian access to bus stops	22	15	20	**37**
Bike on bus program is not available	7	15	18	**48**
Lack of amenities at bus stops *(benches, shelters, bike racks, etc.)*	27	18	16	**30**

Additional comments provided specific to riding the bus:

- Connection to Ulmerton from PSTA park and ride is needed
- There are no bus routes that accommodate the 2nd shift work schedule - cost an average of $400/month in taxi charges
- Need Bus Stops on Hamlin Blvd, and 102nd at Imperial Point
- There are a lack of bus stops, required to walk a mile to get to the nearest stop
- Better benches are needed along Willow Avenue
- Prefer not to stand on the side of the road next to loud noisy cars racing by
- Bus safety regarding passengers
- It ends up being easier to ride your bike than take the bus - it just seems to take too much time to wait for the bus.
- There are a lack of transfer points in Largo
- Too many stops, takes too long to get anywhere
- Trash cans are needed at bus stops
- Lack of knowledge of the routes

Priority amenity improvements

The assessment of the common barriers associated with each transportation mode provides a starting point for identifying and prioritizing key areas in which amenity improvements should be focused. In the survey, participants were asked to rank a variety of facility and amenity improvement opportunities and provide feedback as to whether the implementation of that improvement would increase their level of bicycling and/or walking in the City. An additional comment section was provided under both the biking and walking questions allowing participants to provide additional recommendations or comments regarding each section. The summarized feedback received is provided following the tables.

Bicycle facilities and amenities

Table 5: Bicycle Facility and Amenity Priorities

	Strongly Agree	Agree	Disagree	Strongly Disagree
Availability of shaded route	28	**42**	25	17
Designated on-street bike lanes *(signed and marked)*	**50**	36	15	18
Signed bicycle routes *(directional signage only along identified bicycle routes)*	39	**42**	14	18
Shared use paths or bike path *10ft to 12ft paved pathway designated for non-motorized mixed uses*	**56**	36	8	19
Shared Lane Markings ("Sharrows")	27	**32**	24	28
Availability of secure, weather-protected bicycle parking	24	**33**	32	22
Availability of a bike share program	22	22	**36**	32
Availability of end-of-trip amenities (showers, lockers, etc.)	14	32	**37**	28
Bicycle boulevards	**56**	36	8	18

Additional comments provided specific to biking facilities and amenities:

- Bike lanes along vehicle travel lane needs to be 6 ft minimum
- Driver awareness publicity
- Bring back Pinellas Trail monitors: sections of broken glass and people living along the trail
- Enhance safety along Pinellas Trail
- City bike share program is a good idea but have concerns that bikes would get stolen
- Indoor bike tunnel/path with a/c and security and glass windows with optional outside lane with soft pavement
- Fear of cars keeps me from riding as often as I could or should
- Public education/rules and laws regarding bicycle safety is needed
- Public parking with public restrooms in downtown Largo for our bike groups to meet up is needed
- Provide community events to encourage bicycle use

Pedestrian facilities and amenities

Table 6: Pedestrian Facility and Amenity Priorities

	Strongly Agree	Agree	Disagree	Strongly Disagree
Availability of shaded route	42	**43**	18	11
Connectivity of sidewalks	**66**	38	6	10
Improved sidewalk condition/maintenance	**55**	37	13	11
Shared use paths or bike path *10ft to 12ft paved pathway designated for non-motorized mixed uses*	**48**	40	11	16
Pedestrian signals and crosswalks at intersections	**63**	32	11	11
Designated mid-block pedestrian crossings	**52**	36	15	15
Availability of end-of-trip amenities (showers, lockers, etc.)	13	27	32	**38**

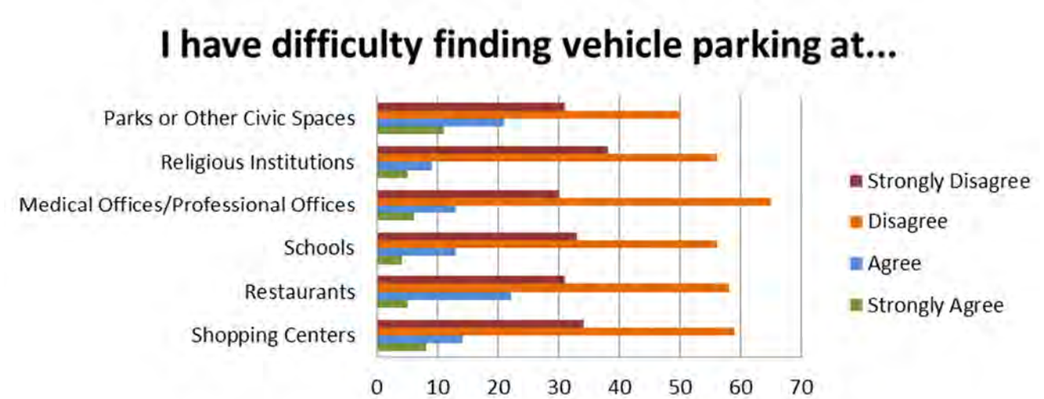
Additional comments provided specific to pedestrian facilities and amenities:

- Add buffer between sidewalk and street
- Get lights for the crosswalks to light crossing area
- Improve drainage along roads to make safer for pedestrians and vehicles
- Build a walking bridge/ramp to cross Ulmerton to the Largo Mall
- More patrol of paths to increase safety
- Additional midblock crossings are needed
- No additional facilities or amenities are needed
- Good street lights are important to feel safe & to be able to see the ground when running
- Need longer walk signs and no right turn signs at major intersections that are on the same signal timing as the pedestrian signals
- Install downtown public restrooms by First Fridays, O Shays, or Barley Mow.

Vehicle accessibility and parking

The use of automobiles is still the primary mode of transportation used within the City. A few questions on the survey were included to assess the current perspectives respondents had towards the existing availability of parking and conditions of parking areas at key destinations around the City. Overall from this survey, it was revealed that the majority of participants either 'disagreed' or 'strongly disagreed' with the statement, "I have difficulty finding a parking space when I go to places in Largo." Figure 9 summarizes the responses regarding each location specified.

Figure 9: Parking Availability

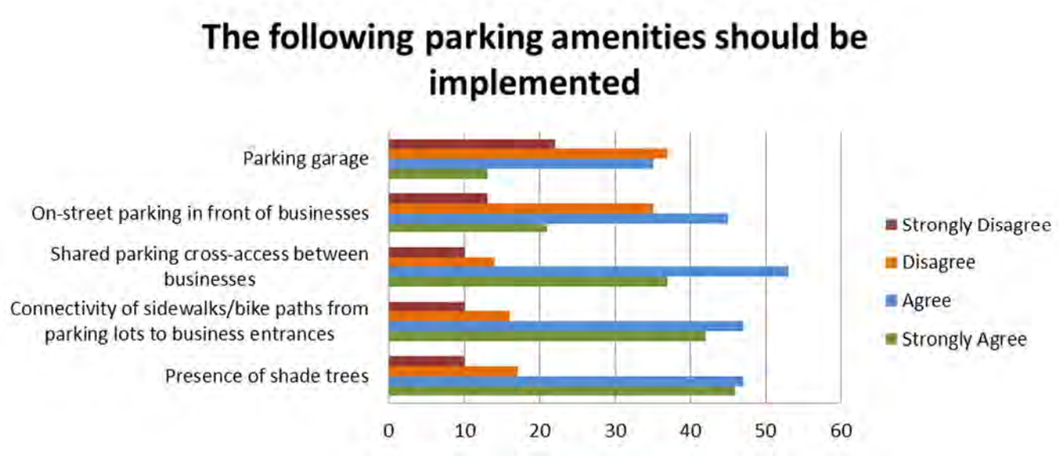


Additional comments provided regarding parking:

- I have difficulty finding bike parking, not vehicle parking
- The Largo library is great!
- There are enough handicapped parking at special city events
- Parallel parking is a nice built-in safety barrier between traffic and sidewalks
- We walk to 4 of July event and all events at Largo Central Park
- Insufficient handicap spaces

When asked to provide feedback on the type of facility and amenity improvements that should be implemented to improve parking areas within the City the following recommendations were preferred.

Figure 10: Additional Vehicle Parking Amenities



Additional comments provided regarding parking:

- Put parking behind businesses
- Make parking free
- Largo central park garage needed
- Keep cars off the sidewalks, cars block walking paths during City events.

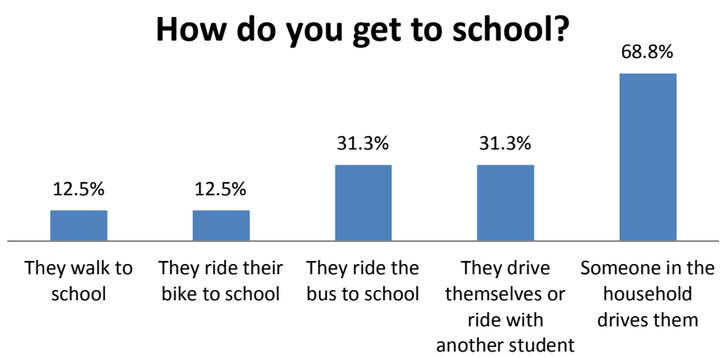
School Accessability

The school section of the survey focused on obtaining information related to how children attending a school within two miles of their residence got to and from school. Respondents were asked to identify which mode of travel they used to get between the two destinations. The following schools were listed and recorded from those who responded to the question asking what specific schools their children attended.

Elementary Schools	**Middle Schools**	**High Schools**
Anona Elementary	Largo Middle	Largo High School
Fuguitt Elementary	Oak Grove Middle	Seminole High School
High Point Elementary	Osceola Middle	
Mildred Helms Elementary School		

Figure 11 illustrates the mode that the children used to get to their designated school. Over sixty-eight percent (68%) of the children living within 2 miles of their house were recorded as being driven by someone in their household, while less than thirteen (13%) percent walk or ride their bike.

Figure 11: Getting to School



When asked why their child did not walk or ride their bike to school the following responses, summarized in Figure 12, were provided for the participant to select from, as well as the option to provide their own comment.

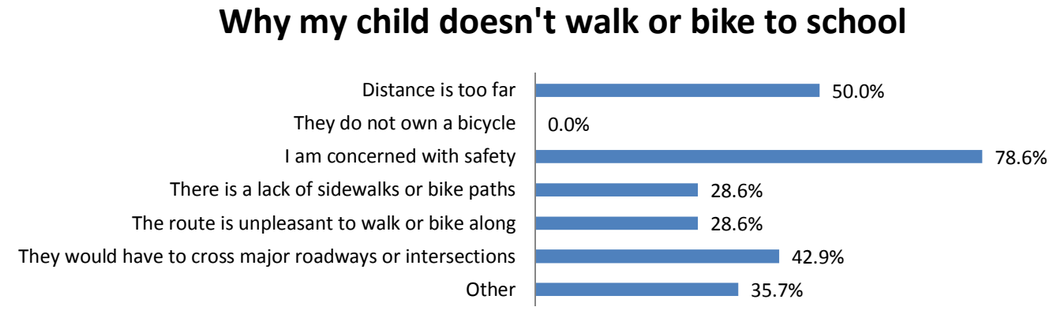


Figure 12: Why my child doesn't walk or ride to school

Other reason they do not walk or bike to school

- Security of bicycle at school
- School is located in Tampa
- My child attends after school activities
- My child is not old enough
- Bike parking at the school isn't optimal. A shaded/covered area would be nice.

SECTION 3 – CRASH DATA ASSESSMENT

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INTRODUCTION

Bicycle and Pedestrian Crashes

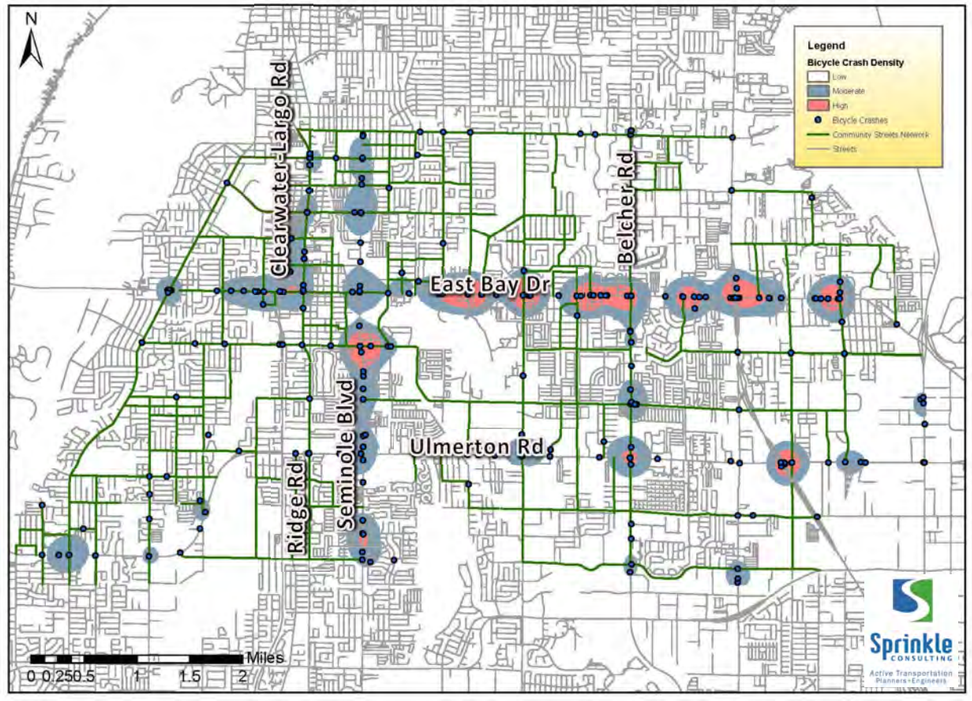
As part of the Multimodal evaluation process, pedestrian and bicycle crashes were reviewed to identify trends and locations with particularly high crash rates. These locations were considered for additional mitigation treatments. The assessment was performed by reviewing the pedestrian and bicycle crash reports (obtained from Pinellas County) from January 2007 – October 2011 for crashes occurring in Largo and nearby unincorporated areas. A computer crash database was used to identify the initial trends while specific crash reports, consisting of the police-completed forms with a summary and drawing representing the crash events were used to obtain more specific information. It is important to note, crash reports were not available for all crashes listed in the computer dataset and not all pedestrian and bicycle crashes are reported to law enforcement.

As part of this review, pedestrian and bicycle crash locations were plotted on a map to identify high hazard locations. These crash density assessments are shown in Map 1 and Map 2. Based upon these crash plots, four roadway corridors - which included several intersections with multiple crashes - and one stand-alone intersection were selected for a more detailed review. These subareas included the following:

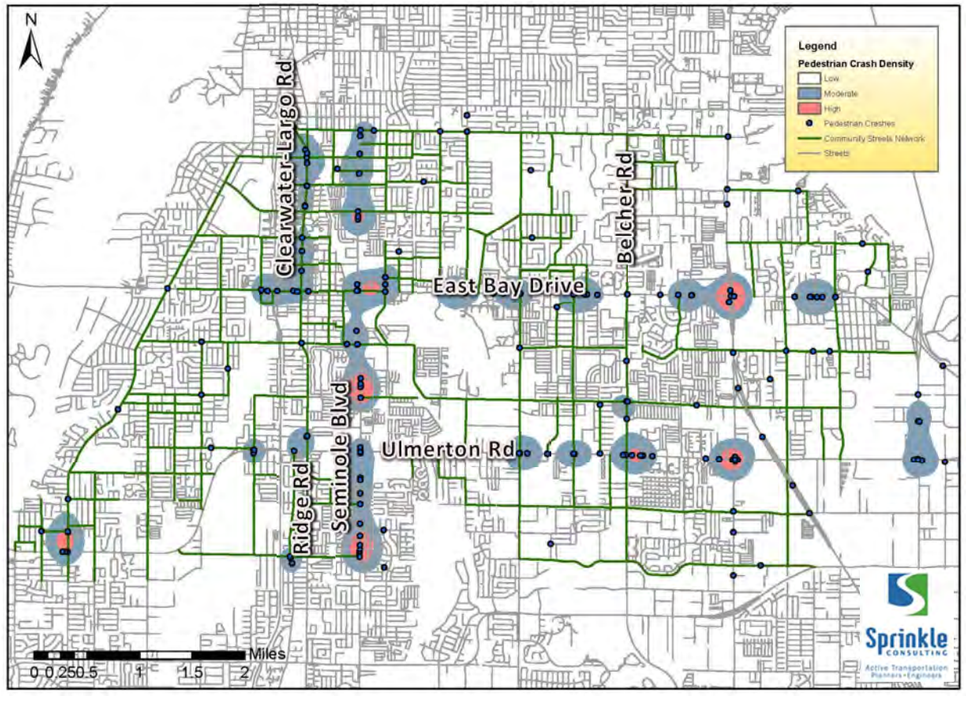
- Clearwater-Largo Road, North of West Bay Drive
- East and West Bay Drive
- Seminole Boulevard/Missouri Avenue
- Ulmerton Road, Belcher Road to US 19
- Walsingham Road at Indian Rocks Road

The review of these corridors follows the general crash trends discussion.

Map 1: Bicycle Crash Density, 2007-2011



Map 2: Pedestrian Crash Density, 2007-2011

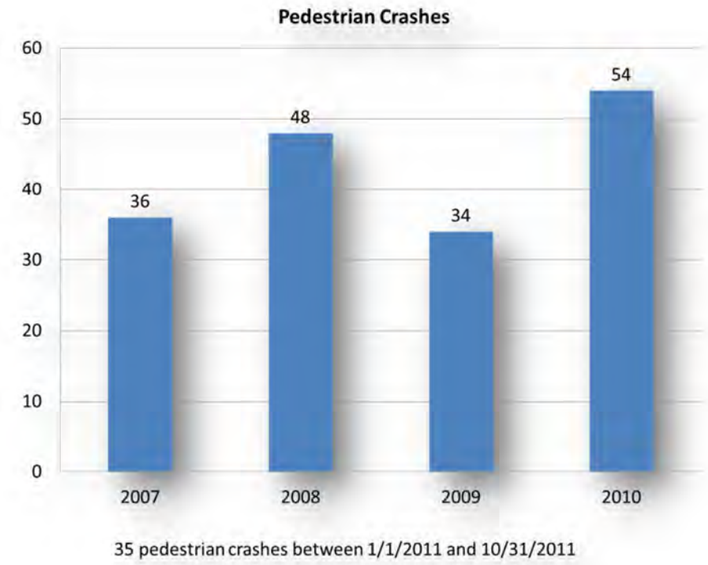


Pedestrian Crash Trends

The crash database contained 230 crash records reported as pedestrian crashes. Forty-four of these crash records did not have corresponding crash reports. Of the remaining 186 crash reports, 25 (13.5%) were bicycle crashes – typically involving bicyclists riding on the sidewalk.

Annual number of pedestrian crashes - The number of pedestrian crashes occurring between 2007 and 2010 are shown in the Figure 1 below:

Figure 1: Pedestrian Crashes

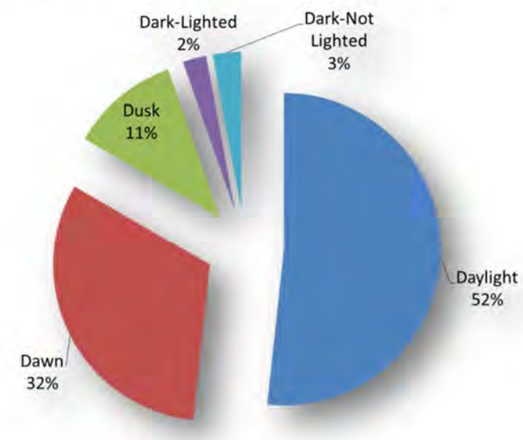


35 pedestrian crashes between 1/1/2011 and 10/31/2011

Nighttime crashes – Over fifty-percent (50%) of the pedestrian crashes occurred under daylight conditions, illustrated in Figure 2. This suggests that pedestrian crashes occurring under sub-optimal lighting conditions are significantly over represented in the crash dataset, assuming daytime walking volumes are much greater than nighttime walking volumes.

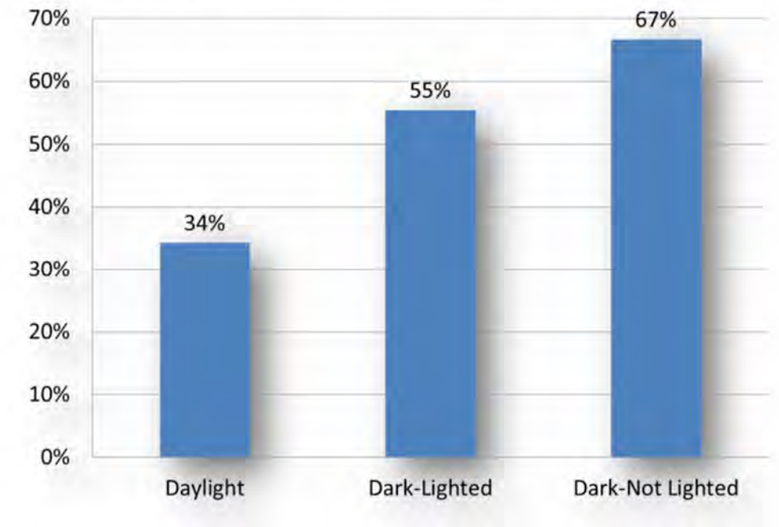
Of particular interest with respect to lighting conditions is the distribution of crash locations that occur under differing lighting conditions. Midblock crashes (non-junction) represent a much greater percentage of nighttime crashes than they do during the daylight hours. Figure 3 provides the breakdown of lighting conditions for non-junction locations.

Figure 2: Pedestrian Crashes by Lighting Condition



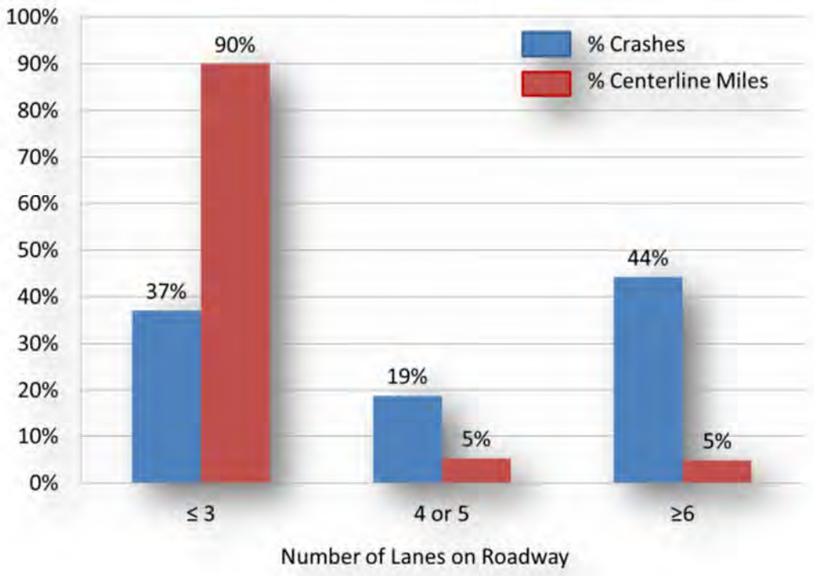
There are several reasons that could explain why midblock crashes are more prevalent at night. One is the fact that visibility is reduced at night and pedestrians tend to overestimate their visibility during that time. Additionally, pedestrians' reduced ability to judge gaps under sub-optimal lighting conditions is greatly reduced when compared to daylight hours. Inadequate lighting can exacerbate both of these problems. Convenience may also be an issue; pedestrians could conceivably be in more of a hurry after dark and thus less likely to walk to a signalized intersection. Alcohol also contributes to nighttime crashes, with 21 of 28 crashes (75%) having intoxication under dark conditions noted on the reports.

Figure 3: Percent of Pedestrian Crashes Coded as Non-Junction



Number of Lanes on the Roadway – Pedestrian crashes are significantly higher on roadways with six or more through lanes of traffic. Figure 4 shows the relative mileage and number of pedestrian crashes occurring on roadways with various numbers of lanes. While this number does not take into account the actual mileage walked, it suggests that countermeasures focused on wide roadways will provide the most potential for crash reductions.

Figure 4: Ped Crashes by Number of Lanes



Contributing Actions - To fully address crash problems, it is important to determine the underlying behavior that lead to the crashes. One hundred fifty-nine crash reports were available to help identify these underlying behaviors. Some of these behaviors are summarized below:

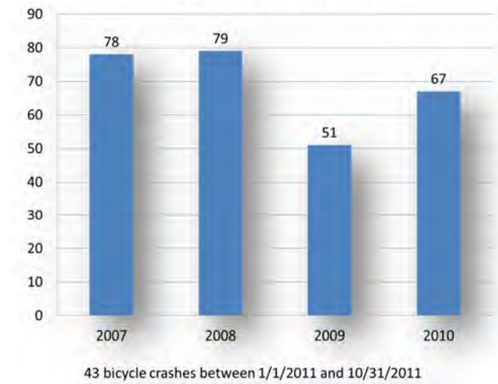
- Seventy-six crashes involved pedestrians crossing the street at unsignalized locations.
- Twenty crashes involved motorists failing to yield to pedestrians prior to making a right on red or a right from a stop condition. Eighteen (80%) of these involved pedestrians walking against traffic on the sidewalk or in the crosswalk.
- Eight crashes involved pedestrians violating traffic signals. An additional five occurred when left turning motorists failed to yield to pedestrians legally in the crosswalk; five involved right turning (on green) motorists failing to yield to pedestrians legally in the crosswalk.
- Seven crashes involved motorists passing pedestrians on the sidewalk and then turning right in front of the pedestrians (a right hook crash).

Bicycle Crash Trends

The crash database contained 294 crash records reported as bicycle crashes. Forty of these crash records did not have corresponding crash reports.

Annual number of bicycle crashes - The number of bicycle crashes occurring between 2007 and 2010 are shown in Figure 5 below:

Figure 5: Bicycle Crashes

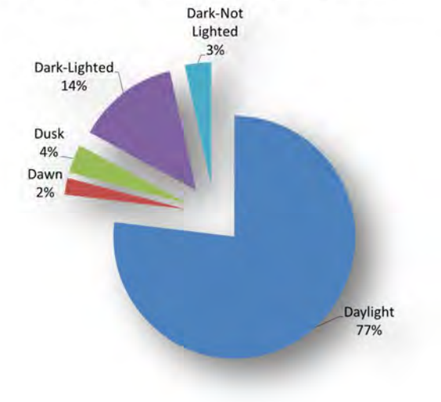


43 bicycle crashes between 1/1/2011 and 10/31/2011

Nighttime crashes - Seventy-seven percent of the bicycle crashes occurred under daylight conditions. While not to the same degree as pedestrian crashes, this suggests that bicycle crashes occurring under sub-optimal lighting conditions are over represented in the crash dataset. Figure 6 provides a breakdown of bicycle crashes by lighting condition.

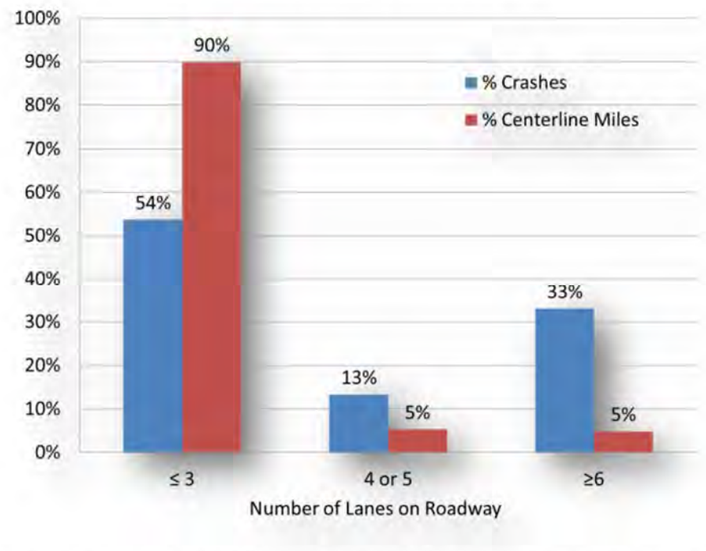
In just one of the crashes that occurred during non-daylight conditions was the bicycle noted as using a headlamp or tail lamp.

Figure 6: Bicycle Crashes by Lighting Condition



Number of Lanes on the Roadway – As is the case for pedestrian crashes, bicycle crashes are significantly higher on roadways with six or more through lanes of traffic. Figure 7 provides a comparison of bike crashes to centerline miles. While this number does not take into account the actual mileage ridden, it suggests that countermeasures focused on wide roadways will provide the most potential for crash reductions.

Figure 7: Bike Crashes by Number of Lanes



Helmet Use – Only five crash records had data entered regarding helmet use. All five of these noted the cyclist was not wearing a helmet.

Contributing Actions – Two hundred seventy-four crash reports were available for review for this part of the bicycle crash analysis effort.

- Thirteen crashes involved bicyclists hit by overtaking motorists. Of these, ten occurred during non-daylight conditions – one bicyclist was using lights. In two cases the bicyclists were observed swerving left into the motorists' path of travel.
- Bicyclists were reported as violating traffic signals in 26 crashes. Twenty-two of these crashes involved bicyclists violating DON'T WALK signals. Three of the reported signal violations my actually have been signal trap crashes, meaning insufficient time for the cyclists to clear the intersection on the yellow plus all red phase of the signal.
- Nine bicycle crashes involved motorists passing bicyclists riding with traffic on the sidewalk and then turning right in front of the bicyclists (a right hook crash).
- An additional 17 crashes occurred when left turning motorists failed to yield to bicyclists legally in the crosswalk.
- Four crashes occurred at intersections with the Pinellas Trail. In three of those crashes the bicyclists failed to stop for a sign and/or flashing beacon. In one case the motorist failed to yield the right of way to the cyclist in the crosswalk.
- 142 crashes (51%) involved motorists failing to yield the right of way to the bicyclists prior to making a right turn on red, or from a stop/yield condition. Of these, 121 (44% of bicycle crashes) involved bicyclists riding against traffic on the sidewalk or in the crosswalk. Eight more involved bicyclists riding against traffic on the shoulder or roadway. This is not legal and could be addressed by law enforcement.

**Section 316.081, F.S – Driving on the right side of the roadway*
A cyclist on a roadway must ride on the side reserved for his direction of travel. Riding in the opposite direction, so as to face oncoming traffic, doubles the risk of collision with a motor vehicle and is a contributing factor in about 15 percent of bicycle-motor vehicle crashes. Motorists entering and leaving roadways at intersections and driveways do not expect traffic to approach from the wrong direction.

GENERAL TRENDS AND CRASH COUNTERMEASURES

Riding against traffic

The most common contributing cause of both pedestrian and bicycle crashes is motorists turning right from a side street or driveway failing to look for traffic coming from their right on the sidewalk. Two potential countermeasures may be appropriate to address this behavior:

- Use horizontal signage, and
- Conduct a public information campaign to heighten awareness.

Horizontal signage (messages painted on the sidewalk) can be used at driveways to remind bicyclists and walkers to look before crossing. Signage like this is being recommended to mitigate similar crashes that have occurred in Hillsborough County. Figure 8 provides an example of horizontal signage used in Redmond, WA.

Figure 8: Example of horizontal signage

Source: Redmond, WA

An education campaign, including flyers or advertising on bus shelters and/or benches, may also be an effective way to educate bicyclists that they are riding in a position that is not safe. This sort of campaign can help remind drivers to be aware of bicyclists riding on the sidewalk. To localize the campaign, a photo of the bicyclist riding against traffic and a motorist failing to look to the right could be taken on a Largo Roadway.

Figure 9: Example of educational campaign poster

Nighttime Crashes

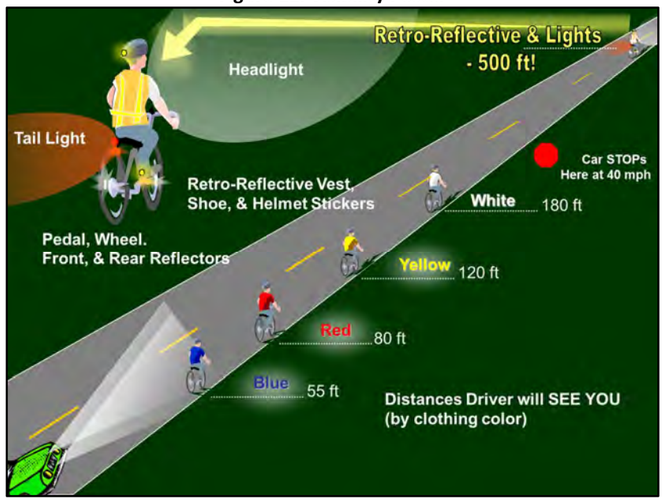
The crash report code "Dark-Lighted" does not necessarily mean a roadway was well lit. Many of the roadways have cobra lamps attached to power poles. Some have poles specifically installed for luminaires. However, the lighting level of the roadways and sidewalks is not uniform. Dark areas intermixed with very bright areas can make pedestrians even harder to see than otherwise uniform lower lighting levels. Compliance with uniformity ratios (Lavg/Lmin, Lmax/Lmin) or veiling luminance ratios as specified in Section 7.3 Lighting, of the FDOT Plans Preparation Manual (PPM) should be followed.

It is also important to note that the PPM comment "(pedestrian or bicycle) Facilities adjacent to a vehicular roadway should use the levels for that roadway" does not mean that lighting the roadway to the appropriate level covers the pedestrian or bicycle facilities. The lighting must be designed to illuminate the entire travel way, including the roadway, bike lanes, paths, and sidewalks. Failure to consider sidewalks and bikeways in the lighting design can result in pedestrians crossing the street suddenly appearing in front of motorists. Providing improved lighting would also make it easier for pedestrians and bicyclists crossing the roadway to judge the speed of and distance to approaching motorists, thus reducing the probability that they will choose and inadequate gap.

Figure 10: Street Light Examples

Another factor that can contribute to the number of nighttime crashes is an overestimation of visibility. Pedestrians assume that because motorists have headlamps they can see pedestrians at great distances. By letting pedestrians know how hard it is for motorists to see pedestrians (possibly through a poster campaign), pedestrians may be more careful crossing the roadway. Figure 11 provides examples of educational posters that could be used to educate bicyclist and pedestrians of additional visibility measures they can take.

Figure 11: Visibility Poster



Bicyclists are legally required to have a headlamp and tail lamp when operating between sunset and sunrise. An enforcement campaign combined with an education campaign/light giveaway program could increase compliance with this law. This would likely reduce nighttime bicycle crashes.

Violation of Don't Walk Signals

Violation of pedestrian "Don't Walk" signals is an activity that could be addressed by a combination of enforcement and engineering treatments. Enforcement should focus on pedestrians and/or bicyclists crossing against the signals when the conflicting vehicular movements (primarily the cross) have a green signal. Engineering treatments, such as, responsive pedestrian buttons (buttons that light up and/or make noise to indicate that they have been pressed) may result in more pedestrians waiting for the signal.

Helmet Use

While bicycle helmets do not prevent crashes, they do reduce the probability that a serious head injury will occurs as a result of a crash. Campaigns that promote helmet use should be considered.

Speed

Speeding is not listed as a contributing cause for any of the pedestrian or bicycle crashes. This does not, however, mean that speed is not a contributing cause of crashes. The probability that a crash will occur increases with the speed of motorists. Efforts to reduce motor vehicle traffic speeds will likely reduce the prevalence of pedestrian and bicycle crashes as well.

RECOMMENDATIONS SUMMARY

The following recommendations are specific to addressing the identified safety issues found in Largo and are consistent with those made in the Pinellas County MPO's Bicycle and Pedestrian Master Plan Crash Data Technical Memorandum, published in November 2012. The recommendations identified through the crash data assessment are:

Lighting Study

It is recommended that a lighting study be conducted along the multimodal street network to identify areas along the roadways that present potentially unsafe conditions due to limited or incorrect lighting. The Study would provide a complete inventory of the existing lighting treatments within the City and provide recommendations on how the identified areas could be improved.

Pedestrian Movement Study

One of the greatest challenges in determining proper placement of multimodal improvements is the lack of documentation on usage and demand. Without accurate and consistent demand and usage figures, it is difficult to measure the positive benefits of investments in these modes, especially when compared to the other transportation modes such as the private automobile. A follow-up to the level of service assessment performed during this study would be to perform a pedestrian movement study which could be expanded to bicyclist as well. The study would evaluate the movement patterns of non-motorized uses within the City to identify the key areas within the city that would benefit the most from immediate improvements.

Public Awareness Program/Campaign

An educational campaign including flyers or advertising on bus shelters and/or benches would be an effective way to educate the public on the laws and opportunities related to walking or biking in the City. Partnering with the local police department and coordinating their community outreach efforts would also be another way to reach out to the community.

Intersection Assessment

Several intersections within the City, beyond those identified in the high hazard areas have safety issues that should be assessed in more detail to identify the correct countermeasures to be applied to correct the deficiencies. An intersection assessment would look at the signal timing, line of sight (sight triangles), lane geometry and potential reconstruction options that could be applied.

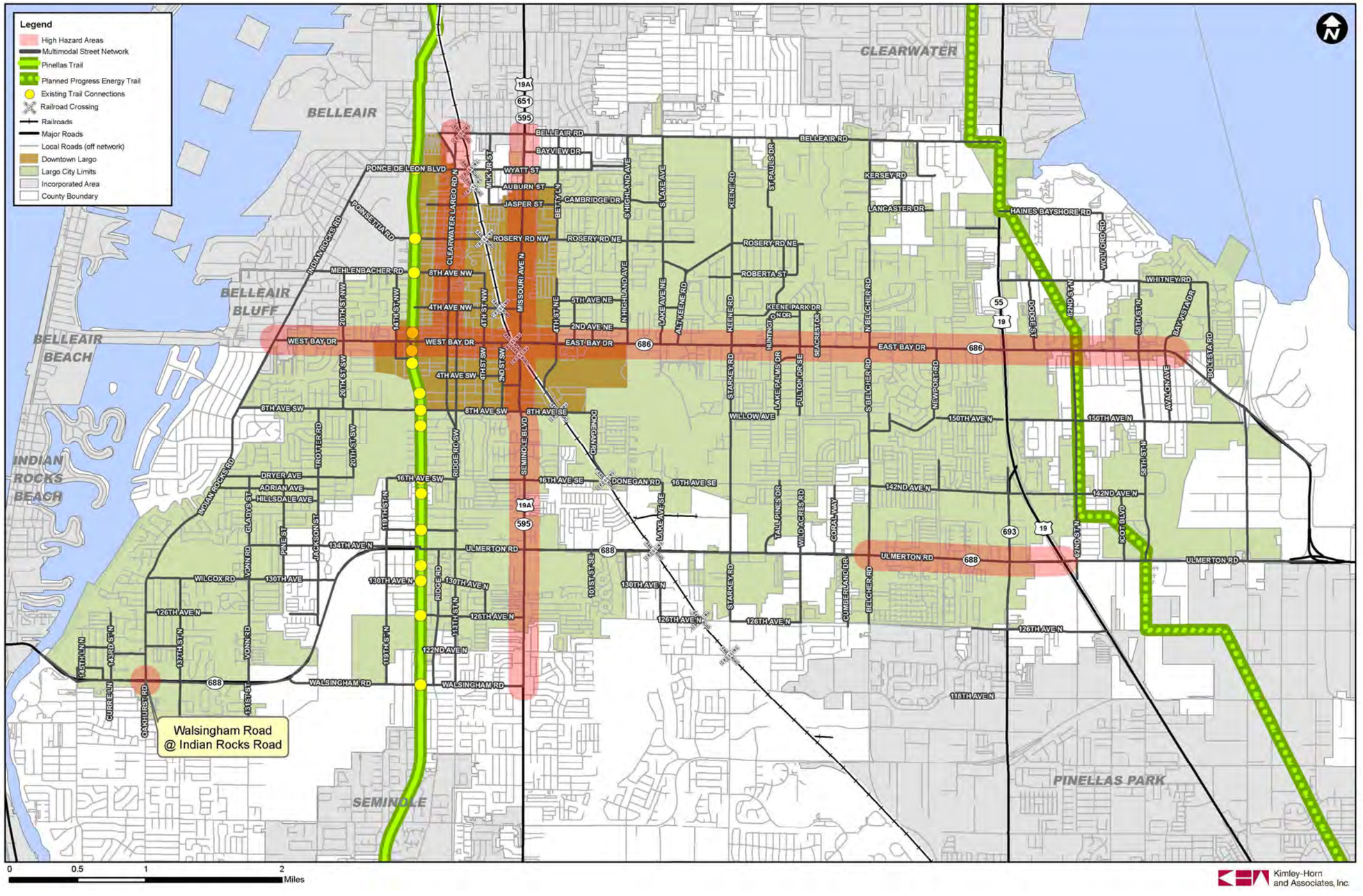
HIGH HAZARD LOCATION OBSERVATIONS AND RECOMMENDATIONS

As noted earlier, five locations with high crash concentrations were selected for more detailed review:

- Clearwater-Largo Road, North of West Bay Drive
- East and West Bay Drive
- Seminole Boulevard/Missouri Avenue
- Ulmerton Road, Belcher Road to US 19
- Walsingham Road at Indian Rocks Road

Map 3 illustrates the identified high hazard locations listed above. Summaries of each area are provided following the map.

Map 3: Identified High Hazard Locations



Clearwater–Largo Road, North of West Bay Drive

Observations

The following is a summary of observations of the crash data. *The parenthetical numbers correspond to the number of data records or reports* used to identify the stated number of crashes. Fourteen pedestrian crash records (database entries) and eleven pedestrian crash reports were reviewed for this corridor. Fifteen bicycle crash records and twelve crash reports were reviewed.

- Four (of 11) bicycle crashes involved motorists proceeding into an intersection after yielding or stopping hitting bicyclists traveling against traffic on the sidewalk. All four of these crashes involved bicyclists traveling against traffic.
- One pedestrian (of 11) and two (of 12) bicyclists violated Don't Walk signals.
- Eight (of 14) pedestrian crashes and four (of 15) bicycle crashes occurred non-daylight conditions.
- Six (of 11) pedestrian crashes occurred with pedestrians crossing at uncontrolled locations. One (of 12) bicyclist crash occurred with a bicyclist crossing at an uncontrolled location.
- Two (of 12) bicycle crashes were the result of motorists who failed to yield to pedestrians in a crosswalk.

Recommendations

Several midblock crossings have been installed north of West Bay Drive on Clearwater Largo Road. These include rectangular rapid flashing beacons and raised medians with diagonal cut-through for pedestrians. Both of the "failure to yield to pedestrian (bicyclists) in crosswalk" crashes occurred at one of these enhanced crossings; one at the crossing between 15th and 16th Avenue NW, the other just north of 5th Avenue NW. In both cases, a motorist in the outside lane passed a motorist(s) who was yielding to the bicyclists, which is illegal. An engineering countermeasure that may help is to place the yield line further in advance of the crosswalk. The existing yield lines at the midblock crossings on Clearwater-Largo Road are approximately 20 feet in advance of the crosswalk; placing them 40 to 50 feet in advance of the crosswalk would give motorists and pedestrians more time to see and react to each other. Additionally, it appears that the palm trees within the median refuge islands could visually screen the pedestrians from approaching motorists. While this crash did not occur at night, a potential improvement to these crossings would be to improve lighting at the crossings – preferably pedestrians would be front lit within the crosswalk.

Bicycling on the sidewalk against traffic and without lights at night were two behaviors that potentially contributed to a significant number of bicycle crashes in this corridor. Educational or enforcement campaigns as described previously in this report could have an influence on the rate of bicycle crashes on Clearwater-Largo Road.

East and West Bay Drive

Observations

There were 44 pedestrian crashes and 103 bicycle crashes recorded along this section of roadway. Of these, seven of the bicycle crashes were coded as pedestrian crashes. Actual crash reports for 36 of the pedestrian crashed and 90 of the bicycle crashes were available. Some of the more significant findings were as follows:

- Sixty-five crashes (of the 126 reports) involved right turn from stop or right turn on red condition, resulting in hitting pedestrians (12) or bicyclists (53) traveling against traffic on the sidewalk. Riding against traffic on the sidewalk was also a significant contributing cause in three additional bike crashes.
- Ten (of the 126 reports) involved pedestrians (2) or bicyclists (8) violating Don't Walk signals or traffic signals. Two of the bike crashes in which the bicyclists were noted as violating the traffic signals may have been signal type crashes (at US 19).
- Sixteen pedestrian crashes (of 44) occurred at night. Twelve (of 103) bicycle crashes occurred at night.
- Crash reports for 14 of the pedestrian crashes and six of the bicycle crashes involved midblock crossings, crossings near but not at intersections, or an uncontrolled intersections; six of these occurred at night.
- Two of the bicycle crashes were overtaking type crashes. In one of the two, the crash occurred after dark and lights were not noted on the bicycle.

Recommendations

The most predominant contributing cause of pedestrian and bicycle crashes along this roadway (more than 50%) is the failure of motorists to scan to their right prior to crossing a sidewalk or crosswalk. The educational measures discussed above for Clearwater-Largo Road should be seriously considered for this corridor as well.

Two bicycle crashes that occurred at the US 19 interchange may have been related to signal timing. In one case, a bicyclist traveling westbound in the travel lanes of Roosevelt Boulevard/Bay Drive was hit by a southbound through motorist. The other crash involved a bicyclist turning left onto eastbound Roosevelt Boulevard being hit by a northbound through motorist. Each cyclist was more than 250 feet beyond the stop bar for his respective movement. Based upon the narrative of the crash report the bicyclists could have entered the intersection on a green light – a bicyclist travelling at 10.5 mph[1] would take sixteen seconds to cover this distance. If the yellow plus all read clearance interval is 5 seconds, then the bicyclists could have been in the intersection for 11 seconds prior to the light turning red and still have been hit. According to the *MUTCD*[2];

- On bikeways, signal timing and actuation shall be reviewed and adjusted to consider the needs of bicyclists.
  - Roosevelt Blvd/East Bay Drive may not qualify as a bikeway, however the frontage road of US 19 may qualify as a bikeway given the *MUTCD's* definition.
- Another option would be to extend of the green time for a movement if a bicycle is detected on the approach to a stop bar.
  - One way this might be accomplished is with a pair of narrow quadripole loops in the travel lane – one of the right side of the lane one on the left. If the right loop detects a vehicle and the right does not, the vehicle would likely be a bicycle.

[1] Mean bicycle speed according to *Characteristics of Emerging Road and Trail Users and Their Safety,* FHWA Report HRT-04-103, October 2004.
[2] *Manual on Uniform Traffic Control Devices*, FHWA, 2009.

Seminole Boulevard/Missouri Avenue

Observations

There were 36 pedestrian crashes and 51 bicycle crashes along this section of roadway. Five of the bicycle crashes were coded as pedestrian crashes; one pedestrian crash was coded as a bike crash. Crash reports for 29 of the pedestrian crashes and 44 of the bicycle crashes were available.

- Twenty-six crashes (of the 73 reports total) involved right turn from stop or right turn on red condition hitting pedestrians (5) or bicyclists (21) traveling against traffic on the sidewalk. Riding against traffic was also a significant contributing cause in three additional bicycle crashes.
- One pedestrian crash and two bicycle crashes involved the pedestrian or bicyclists violating Don't Walk signals or traffic signals.
- Eighteen (of 36) pedestrian crashes occurred at night. Nine (of 51) bicycle crashes occurred at night. An additional pedestrian crash and four bicycle crashes occurred at dawn or dusk.
- Crash reports for 19 (of 29) of the pedestrian crashes and four (of 44) of the bicycle crashes involved midblock crossings, crossings near but not at intersections, or at uncontrolled intersections; 15 of these occurred under non-daylight conditions. Three of these crashes occurred on the north side of 14th Avenue SW; all three of these occurred at night.

Recommendations

A review of this corridor reveals that lighting is irregular along Seminole Boulevard/Missouri Avenue. Improved lighting that will illuminate the entire cross section of Seminole Boulevard/Missouri Avenue including the sidewalks and median should be considered.

Three crashes suggest some crossing treatment should be provided at 14th Avenue SW. A pedestrian mapping study should be conducted to determine the volumes and paths of pedestrians crossing Seminole Boulevard at this intersection. Several potential modifications could reduce the crash potential at this intersection. All three crashes occurred at night suggest improved lighting on the approaches to the intersection may help. A pedestrian crossing could be considered if volumes suggest it is merited; a pedestrian hybrid signal would be the least restrictive recommended type of crossing treatment. A full signal, potentially at 16th Avenue SW could also help create gaps in traffic, which would allow additional time for pedestrian and bicycle users to cross.

Ulmerton Road, Belcher Road to US 19

Observations

There were 14 pedestrian crashes and 17 bicycle crashes along this section of roadway. Crash reports for ten of the pedestrian crashes and 15 of the bicycle crashes were available. One of the bicycle crashes was coded as pedestrian crash. One pedestrian crash (involving a wheel chair user) was coded as a bike crash.

- Six crashes involved bicyclists traveling against traffic on the sidewalk.
- One (of 14) pedestrian crashes and four (of 17) bicyclist crashes involved the pedestrian or bicyclists violating "Don't Walk" signals or traffic signals.
- Nine (of 14) pedestrian crashes and four (of 17) bicycle crashes occurred at night.
- Crash reports for seven (of ten) of the pedestrian crashes involved midblock crossings, crossings near but not at intersections, or at uncontrolled intersections; four of these occurred at night.
- One bicyclist was noted as crossing through a queue of traffic stopped at a signalized intersection.

Recommendations

A review of this corridor reveals that lighting is irregular along Ulmerton Road. Improved lighting that will illuminate the entire cross section of Ulmerton Road including the sidewalks and median should be considered.

At Ulmerton Road and US 19, consideration should be given to redesigning the northbound right turn lane to a gap acceptance turn lane followed with the creation of a right turn lane on Ulmerton Road rather than adding a lane. As it is currently striped, even though it is a signalized right turn there is no conflict for right turning vehicles; this would encourage violation of the stop before right on red behavior. Additionally, it sets up weave conditions for southbound left turns wishing to continue south on US 19 and for northbound right turns wishing to continue north on US 19. Motor vehicle crash records should be reviewed to determine if this weave is causing motor vehicle safety problems. The gap acceptance slip lane followed with the creation of a right turn lane would address these crashes as well. This is consistent with the AASTHO *Greenbook*[3] which states:

Where the distance to the downstream driveway or intersection is less than the desirable distance for merging or weaving and where pedestrians are present, turning roadways should be controlled with a yield, stop, or signal control and the angle of intersection should be greater than 60 degrees.

Given the high percentage of crashes occurring at uncontrolled locations, and the mile spacing between the Belcher and 66th Street intersections, a pedestrian mapping study should be considered to identify potential location(s) for designated pedestrian crossing(s). Given that this is a six lane road, a pedestrian hybrid signal would be the minimum recommended crossing control.

[3] A Policy on Geometric Design of Highways and Streets, AASHTO, Washington D.C., 2011, pg. 9-93.

Walsingham Road at Indian Rocks Road

Observations

None of the crashes that were identified as occurring around this intersection actually occurred at the intersection. A summary of the crashes follows:

- One pedestrian crash occurrence at the exit of Checkers approximately 100 feet to the west of Indian Rocks Road. The crash was a right turn from stop crash with the bicyclists riding on the sidewalk against traffic.
- One pedestrian crash occurrence involving a pedestrian crossing from Checkers, southbound across Walsingham Road. The pedestrian was hit in the southernmost lane after crossing four other lanes of traffic. This crash occurred at night. The pedestrian was listed as under the influence of alcohol.
- One pedestrian crash occurrence was coded as 250 feet west of Walsingham Road. The pedestrian was crossing northbound and was hit in the first lane after the median. The pedestrian was listed as having hearing and visual defects.
- One pedestrian crash occurrence was coded as 500 feet west of Walsingham Road. Bicyclist was crossing southbound and was hit in the second lane.
- One pedestrian crash occurred 50 feet south of Rosemary Road nearly 900 feet north of Walsingham Road.
- One bicycle crash occurred north of intersection. A bicyclist without lights, cut off by a phantom vehicle, swerved and hit a pole.
- One bicycle crash was coded as occurring 0.25 miles west of Walsingham Road. A motorist exiting a driveway southbound crashed with a bicyclist traveling against traffic on the sidewalk.
- Two of the pedestrian crashes occurred at night.

Several crash reports from the Walsingham Road /Indian Rocks Road area were unavailable. Their locations however can be identified from the crash records:

- Two pedestrian crashes that occurred at Rosemary and Indian Rocks Road.
- A bicycle crash 500 feet west of Indian Rocks Road.
- A bicycle crash 150 feet west of Indian Rocks Road.

Recommendations

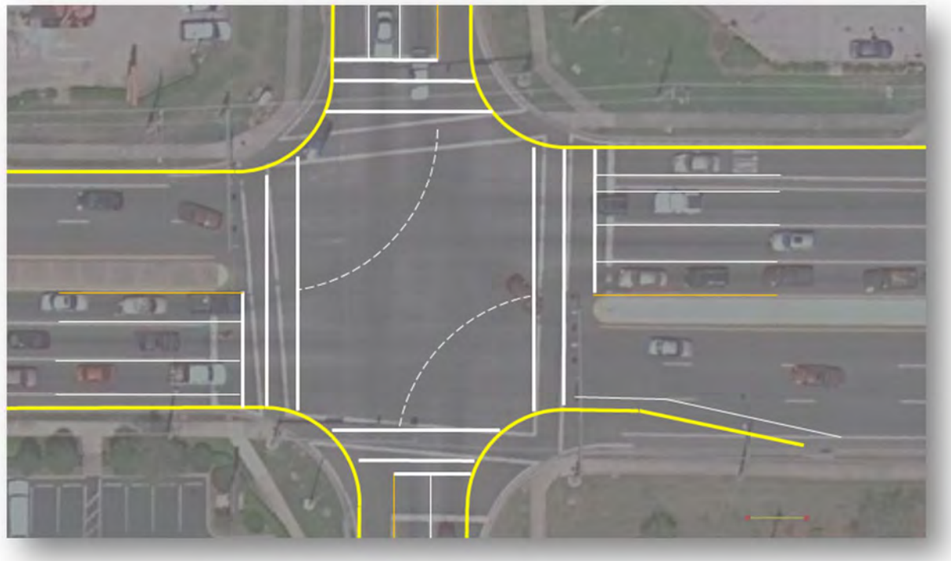
The intersection of Walsingham Road at Indian Rocks Road is a challenge because the crashes were not recorded as happening at the intersection. Enforcement would have limited impact as “crossing not at an intersection” is not illegal.

Making the intersection better for pedestrians could conceivably make more pedestrians inclined to cross in the crosswalks. A schematic drawing of how the intersection geometry could be modified to better serve pedestrians has been provided in Figure 12 and Figure 13. Potential revisions to this intersection could serve as a template for future intersection modifications at any of the major intersections in Largo.

Reduced Radii **-** One potential method of making the intersection more conducive to pedestrian travel is reducing the corner radii:

- The AASHTO *Greenbook*[4] “corner radii should be based upon the minimum turning path of the selected design vehicle.” This will have the effect of reducing the speeds of turning motorists. A bus would likely be the design vehicle for this intersection concept.
- The addition of an eastbound through lane now occurs after the intersection. This will result in more motorists stopping prior to making the right turn onto Walsingham Road.
- Crosswalk distances have been shortened. The centerline crossing distance of the eastern crosswalk has been reduced by more than 25 feet. This reduces the required pedestrian clearance interval by more than seven seconds.
- Right turning movements could be restricted using an electronic No Right Turn blankout sign. This sign could be set to be activated only when pedestrians have pushed the call button.
- Pedestrian hardware that provides feedback to the pedestrian hardware might encourage pedestrian use of the intersection (as opposed to crossing close to but not at the intersection) and compliance with the traffic signals.

Figure 12: Possible Intersection Geometry - Example 1



Channelize the intersection - Another potential method of improving pedestrian conditions at this intersection would be to channelize the intersection. Where there are large volumes of right turning traffic, the provision of right turn channelization islands can have a positive effect on the perceptions of pedestrians. However, with low right turning movement volumes, channelization islands are perceived as an inconvenience by pedestrians.[5]

[4] A Policy on Geometric Design of Highways and Streets, AASHTO, Washington D.C., 2011, pg. 9-55.
[5] *Highway Capacity Manual,* Transportation Research Board, Washington D.C., 2010.

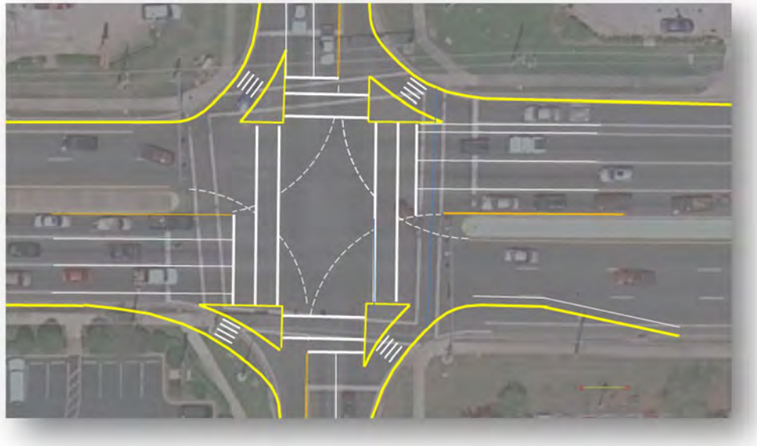
- The AASHTO *Greenbook*[6] discusses the advantages and disadvantages of channelization. It notes that:

Proper channelization increases capacity and provides positive guidance to motorists; improper channelization has the opposite effect and may be worse than none at all. A simple channelization improvement can sometimes result in dramatic operational efficiencies and reduction in crash frequencies.

Channelization islands can be designed to accommodate busses or trucks, as shown in Figure 13.

- As with the previous example, the addition of an eastbound through lane now occurs after the intersection. This will result in more motorists stopping prior to making the right turn onto Walsingham Road.
- Crosswalk distances have been shortened. The centerline crossing distance of the eastern crosswalk has been reduced by more than 28 feet. This reduces the required pedestrian clearance interval by more than seven seconds.
- Depending on the distance to the signal heads, and required left turn space, the stop bars may be able to be brought forward providing additional storage length and reducing motorists' clearance intervals. The dashed left turn guide lines shown represent approximately 60 foot left turn radii. Median islands could be extended to the new stop bars.
- During new construction or reconstruction, the mast arms for this intersection could be placed on the channelization islands, dramatically reducing the required length of the arms.

Figure 13: Possible Intersection Geometry - Example 2



[6] A Policy on Geometric Design of Highways and Streets, AASHTO, Washington D.C., 2011, pg. 9-92.

SECTION 4 – MULTIMODAL LEVEL OF SERVICE ASSESSMENT

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SECTION 4 – MULTIMODAL LEVEL OF SERVICE ASSESSMENT

INTRODUCTION

A primary goal of Largo's Multimodal Network ("network") is to provide a safe and inviting environment along the City's designated community streets to encourage bicycle and pedestrian modes of travel. First, however, the City must identify and address areas of deficiencies related to the overall multimodal mobility along these streets. A key step in reaching these goals is to determine at what level the network is currently meeting the needs of bicyclists and pedestrians, and then establish the appropriate level of accommodation for each use. This section/chapter describes the existing bicycling and walking conditions evaluation performed for the network, establishes accommodation targets, and describes approaches to meeting those targets through improved facilities.

BICYCLE AND PEDESTRIAN LEVEL OF SERVICE

The leading methodology for evaluating bicycling and walking conditions along roadways, both within the State of Florida and throughout the United States, is known as link (or segment) bicycle and pedestrian level of service. Level of service for these non-motorized modes represents a quantification of how safe and comfortable bicyclists and pedestrians feel within the network with respect to motor vehicle traffic. The Bicycle Level of Service (BLOS) Model and Pedestrian Level of Service (PLOS) Model for roadway links were both originally developed in Florida, adopted by the Florida Department of Transportation (FDOT) in its Quality/Level of Service Handbook, and are now the primary evaluation methodologies contained in the national Highway Capacity Manual. They have collectively been applied to tens of thousands of miles of roadways in communities of all types, and are appropriate to use on all classes of roads (arterials, collectors, and local streets). As shown in Table 1 bicycle and pedestrian level of service results are portrayed using a pseudo-academic, A through F grading scale, with "A" representing the best conditions and "F" representing the worst.

Table 1: Level of Service Scores

Level of Service	Score
A	≤ 1.5
B	> 1.5 and ≤ 2.5
C	> 2.5 and ≤ 3.5
D	> 3.5 and ≤ 4.5
E	> 4.5 and ≤ 5.5
F	> 5.5

Source: FDOT Quality/Level of Service Handbook

This type of existing conditions analysis is based on numerous roadway geometry and traffic characteristics, the same characteristics that are important to Largo's existing and future non-motorized transportation users. The procedures were developed based on real-time feedback of a cross section of bicyclists and pedestrians in two metropolitan Florida communities similar to Largo.

For the bicycle mode, important characteristics include the following:

- Traffic volume and speed
- Prevalence of heavy vehicles
- Width of the outside travel lane
- Presence and width of a bike lane or paved shoulder
- Pavement condition

Traffic volume and speed are also central to the pedestrian methodology, which is also heavily influenced by the lateral separation between the walking environment and the adjacent motor vehicle traffic. This separation element includes the following:

- Outside lane width
- Presence/width of a bike lane or paved shoulder
- Buffer zone presence and width
- Sidewalk presence and width
- Presence of physical barriers, such as trees planted in the buffer zone and cars parked along the street

It is important to consider that interaction between these characteristics can lead to very different types of streets producing similar bicycling or walking conditions with regard to safety and comfort, as discussed in the Section 1.

Bicycle and pedestrian level of service provides a convenient way to both set targets for the accommodation that should be provided on Largo's Multimodal Network, and to ultimately identify either standard or roadway-specific facility types that can help achieve those established targets. Largo's Community Street Network consists of approximately 20% of streets classified as arterials, and approximately 40% each of collector streets and local streets (including major local streets), respectively. These classifications suggest that Largo's streets serve inherently different purposes. The arterials are designed to move a high volume of people and goods at relatively high speeds, but they also provide direct access to many commercial establishments. Local streets, at the other end of the spectrum, provide access to the City's neighborhoods and also serve an important recreational function for bicycling and walking activity. It is recommended that the establishment of level of service targets, as discussed later in this section, be tied to this classification system. It is instrumental to first examine the existing bicycling and walking conditions provided by the multimodal network.

Existing Conditions Evaluation

A thorough field inventory of all streets on Largo's multimodal street network was conducted in March 2012. The data collection efforts consisted of inventorying all geometric roadway characteristics listed previously as elements of BLOS and PLOS analysis. Available traffic count data from the Pinellas County Metropolitan Planning Organization (MPO) and FDOT was also included. While traffic volume data is available for all of the network's arterial streets and many collectors, default values were used for other minor collectors and local streets in the absence of available traffic counts. Similar assumed values, based upon volume, speed, and area type, are used for heavy vehicle data, which is largely unavailable.

The multimodal street network was divided into roughly 200 roadway segments, each of which has a reasonably consistent roadway cross section[1]. Given that conditions on one side of the street are not always the same as they are on the other side, particularly when it comes to sidewalks and buffers, each segment was analyzed directionally. For Largo's multimodal street network as a whole, the distance-weighted average bicycle level of service score is 3.17 and the distance-weighted average pedestrian level of service score is 3.13, each of which equates to a "C" on the level of service scale previously identified in Table 1.

The average level of service score by functional roadway classification was also examined. For the bicycle mode, arterial streets in the network have an average score of 4.54 (representing a high "D"), collector streets have an average score of 3.62 (a high "D"), and local streets have an average score of 1.42 (a low "A"). For the pedestrian mode, arterial streets have an average score of 3.96 ("D"), collector streets have an average score of 3.01 ("C"), and

[1] Separate segments along the same roadway were generally created when changes in lane width, number of lanes, or paved shoulder or bike lane presence were noted. In some cases a segment may incorporate average conditions for other elements such as buffer width and pavement condition.

local streets have an average score of 2.43 (“B”). Table 2 summarizes the average LOS assessment for each roadway classification for both bicycle and pedestrian modes. The complete LOS assessment of each roadway segment is provided in Appendix A, detailing the data collected for each segment along with its existing LOS score.

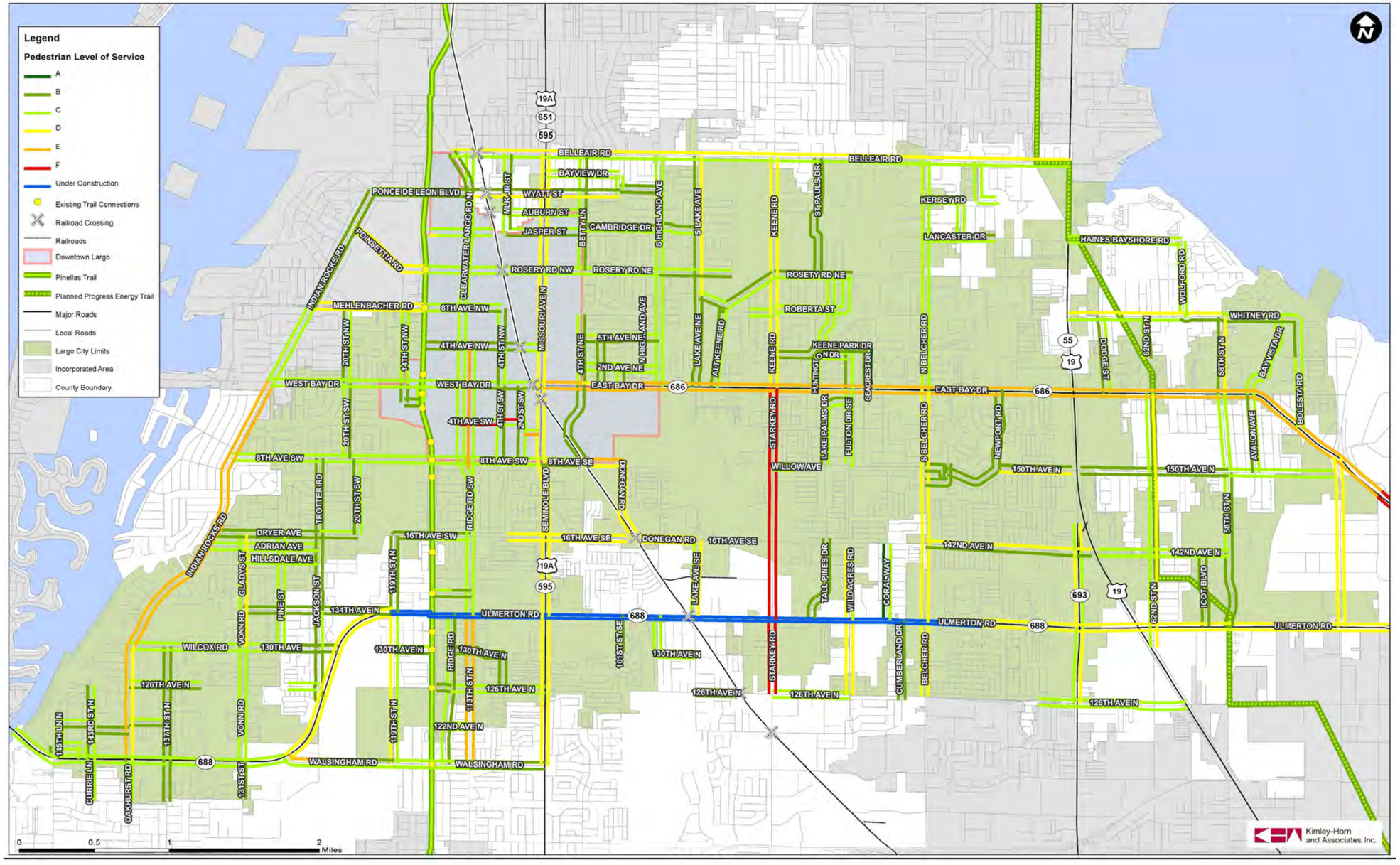
Table 2: Average bicycle and pedestrian LOS score in the network

Mode (Classification)	Average Existing LOS Score	Average Existing LOS Grade
Bicycle (Arterial)	4.54	D
Bicycle (Collector)	3.62	D
Bicycle (Local)	1.42	A
Pedestrian (Arterial)	3.96	D
Pedestrian (Collector)	3.01	C
Pedestrian (Local)	2.43	B

Map 1 and Map 2 on the following pages provide the level of service grades per roadway segment along the multimodal network. These maps illustrate graphically the information summarized in the data collection tables located in the Appendix.

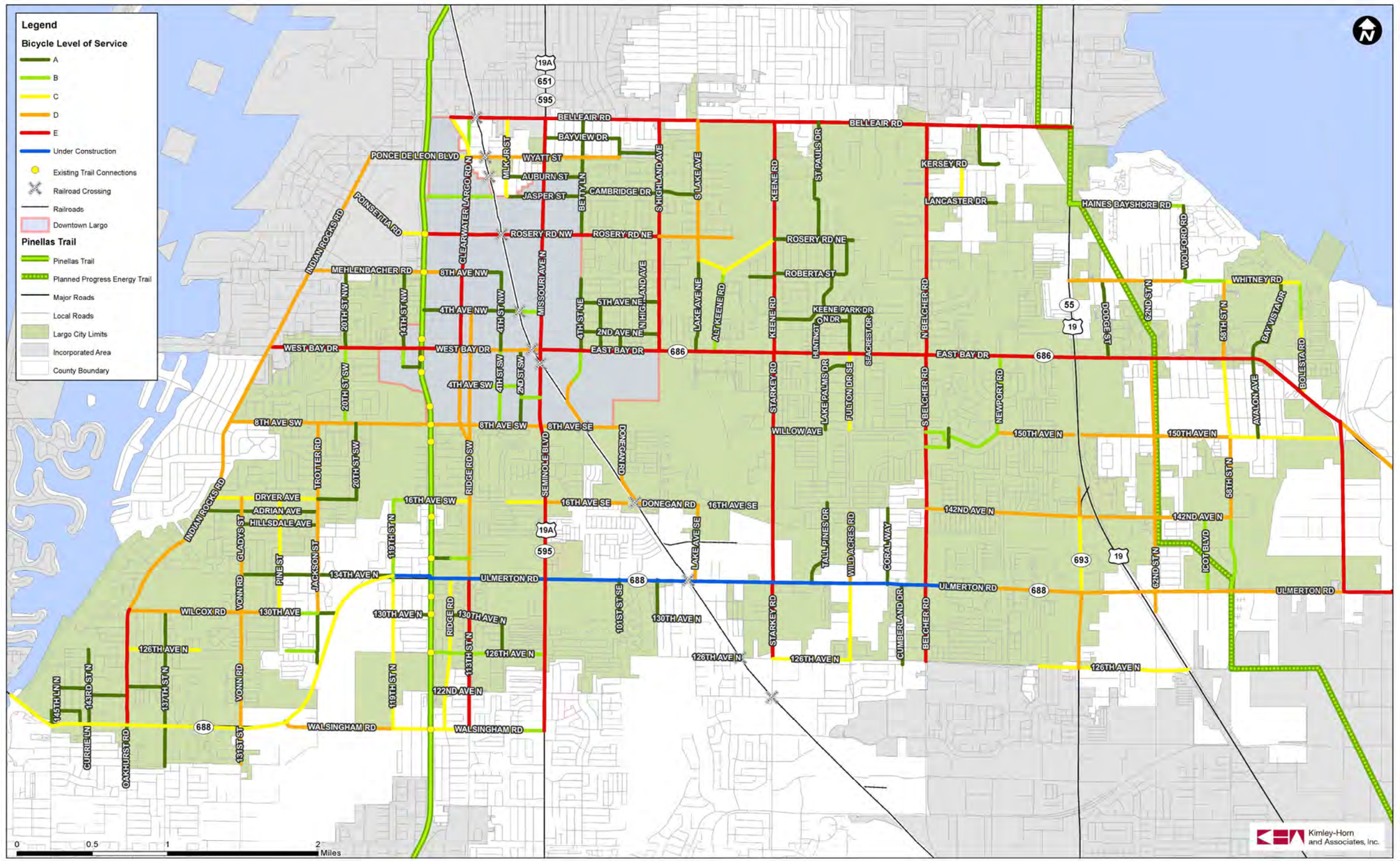
The roadways resulting in high level of service scores particularly for pedestrian LOS can easily be lowered to a more desirable LOS score through the restoration or new construction of actual sidewalks. Over 43% of the existing network has less than 75% sidewalk coverage, with 25% of that total having no existing sidewalks present. For some of the roadways with high bicycle LOS scores, the addition of on-street bike lanes or shared lane markings (sharrows), where applicable, would decrease the LOS scoring. For roadways with high traffic volumes or limited right-of-way additional design considerations would need to be considered.

Map 1: Existing Pedestrian Level of Service



Source: Field work data collection, conducted February 2012

Map 2: Existing Bicycle Level of Service



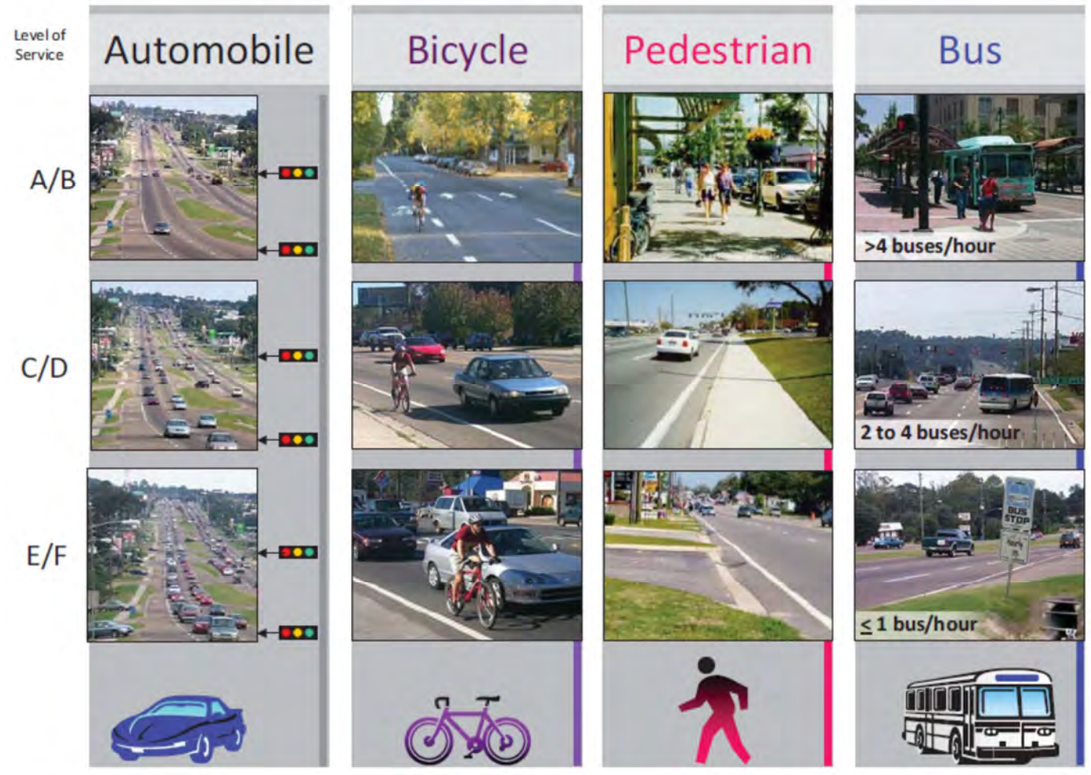
Source: Field work data collection, conducted February 2012

RECOMMENDED LEVEL OF SERVICE TARGETS

Bicycle and Pedestrian Target Level of Service

Figure 1, taken from the FDOT Quality/Level of Service Handbook (2009), provides examples of a typical scenario for each A through F level of service grade of each mode. The examples shown in the matrix are for demonstration purposes only and illustrate only the most common scenarios associated with each LOS.

Figure 1: FDOT Sample LOS Matrix



These results of the level of service assessment and data collection are useful in establishing target levels of service for Largo's Multimodal Network. Based upon the existing average bicycle results for arterials, and the traffic characteristics on those roads, and taking into account project goals, all Multimodal Streets should maintain or achieve a bicycle level of service of at least a "D." This is consistent with the target established in the Downtown Largo Multimodal Plan and can be achieved on all network arterials with the creation of a standard (four- or five-foot) designated (signed and marked) bike lane. Given that the average bicycle level of service result for collectors is nearly a "C" and that many of those collectors already meet that threshold, "C" is the recommended target; as with arterials, this target can be achieved in all cases with a standard designated bike lane. The majority of local streets on the network, nearly all of which currently offer a shared lane environment for bicyclists, already provide a bicycle level of service of "A." As such, "A" should be the target for these streets. The only local streets that would need to provide a dedicated bicycle lane to meet this target are the few roadways that are classified as major local streets. The major local streets have a higher assumed traffic volume than their other local counterparts and provide a more direct connection between major destinations or adjacent roadways. Examples of segments categorized as major local streets are 4th Avenue NW and Tall Pines Drive.

While bike lanes can be considered for all other local streets, particularly when the existing pavement width is sufficient to stripe them, they are not needed to meet the target LOS. Shared Lane Markings should be applied on local streets that are eventually designated by the City as part of a signed bike route. It is recommended that the City complete a Citywide Urban Trails or bike route designation assessment to identify the roadways most appropriate for designation as an urban trails corridor/bike route. The designated routes would be focused on directing users to major destinations along the more desirable/safer routes within the network.

Following a similar approach for the pedestrian mode based upon existing conditions, the recommended pedestrian level of service targets are "C" for arterial streets and "B" for collector and local streets. Consistent with the Downtown Largo Multimodal Plan, 100% sidewalk coverage on both sides of the street should be the goal for the multimodal network. The sidewalks should generally be a minimum of five-feet wide with a minimum six-foot buffer between the sidewalk and the roadway. This recommended standard pedestrian facility will allow all local streets to meet the identified level of service target. Figure 2 is a sample cross section of features required to meet the target LOS for both bicycle and pedestrian modes. Table 3 provides the recommended minimum and preferred design thresholds for each feature.

Figure 2: Sample Cross Section – Local Road

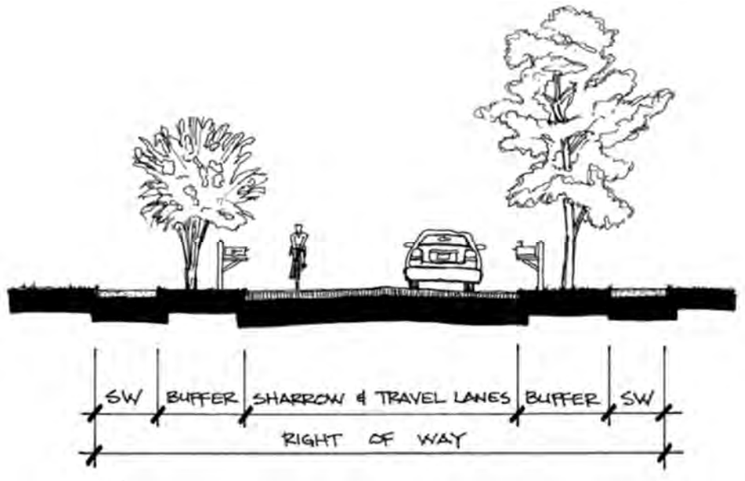


Table 3: Target Local Road Cross Section Thresholds

				SW		Buffer		Bike Lane		Outside Lane		Median	
Local Road	Lanes	Speeds	ROW	Minimum	Preferred	Minimum	Preferred	Minimum	Preferred	Minimum	Preferred	Minimum	Preferred
With Shared Lane	2	20-30	50'	5	5	2	6	0	0	10	12	0	0
With Bike Lane	2	20-30	50'	5	5	2	2	4	4	10	11	0	0

On collector streets, the City should strive to create a buffer of at least seven feet, however, on some of the busy collectors (such as Rosery Road), additional buffering and/or the provision of trees within the buffer will be needed to meet the target of "B." Figure 3 is a sample cross section of features required to meet the target LOS for both bicycle and pedestrian modes. Table 3 provides the recommended minimum and preferred design thresholds for each feature. Please note that the areas in the cross section marked to include bus stops and utilities are considered part of the buffer and should fit within the recommended buffer thresholds provided in the tables.

Figure 3: Sample Cross Section – Collector Road

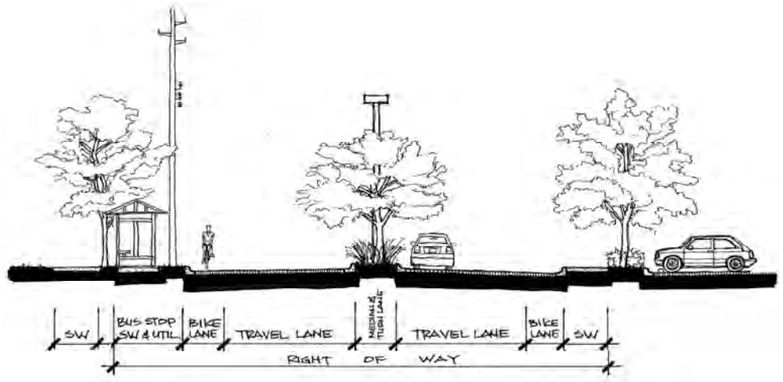


Table 4: Target Collector Road Cross Section Thresholds

				SW		Buffer		Bike Lane		Outside Lane		Median	
Collector Road	Lanes	Speeds	ROW	Minimum	Preferred	Minimum	Preferred	Minimum	Preferred	Minimum	Preferred	Minimum	Preferred
Major - Bike Lane	2	30-35	80'	5	5	6	10	4	6	11	11	10	14
Major - Shared Lane	2	30-35	80'	5	5	6	10	0	0	11	14	10	14
Minor - Bike Lane	2	30-35	60'	5	5	6	4	4	5	11	11	0	8
Minor - Shared Lane	2	30-35	60'	5	5	6	6	0	0	11	14	0	8

The same holds true for arterials; while the standard recommended sidewalk facility may be sufficient for some arterials, the most heavily traveled segment on the network (East Bay Drive, east of Seminole Boulevard) would require a 15-foot buffer with trees spaced at 25 feet to meet the target of "C." Figure 4 is a sample cross section of features required to meet the target LOS for both bicycle and pedestrian modes. Table 5 provides the recommended minimum and preferred design thresholds for each feature. Please note that the areas in the cross section marked to include bus stops and utilities are considered part of the buffer and should fit within the recommended buffer thresholds provided in the tables.

Figure 4: Sample Cross Section - Arterial Road

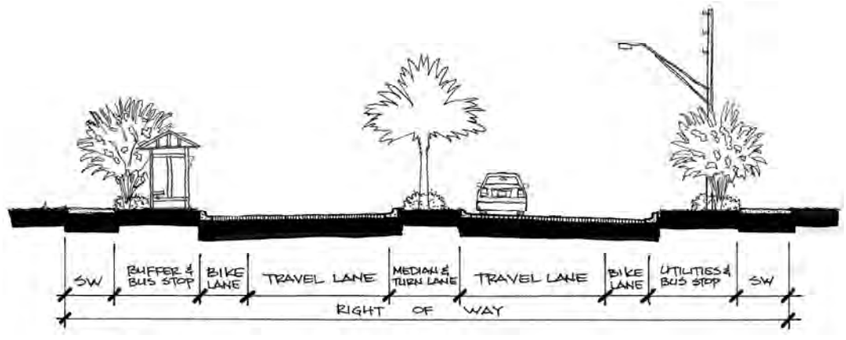


Table 5: Target Arterial Road Cross Section Thresholds

				SW		Buffer		Bike Lane		Outside Lane		Median	
Arterial Road	Lanes	Speeds	ROW	Minimum	Preferred	Minimum	Preferred	Minimum	Preferred	Minimum	Preferred	Minimum	Preferred
Major - Bike Lane	6	40-50	120'-150'	5	8	10	14	5	6	11	12	15.5	19.5
Major - Bike Lane	4	40-50	120'-150'	5	8	10	14	4	6	11	12	15.5	19.5
Major - Shared Lane	4	35-45	120'-150'	5	8	10	14	0	0	11	14	15.5	19.5
Minor - Bike Lane	4	35-45	100'-110'	5	8	10	14	4	6	11	12	14	16
Minor - Shared Lane	4	35-45	100'-110'	5	8	10	14	0	0	11	12	14	16
Minor - Bike Lane	2	35-40	100'	5	6	10	14	4	6	11	12	10	16
Minor - Shared Lane	2	35-40	100'	5	6	10	14	0	0	11	14	10	16

LOS targets for both pedestrian and bicycle modes are shown in Table 6 along with the percentage of network segments that fall below the recommended target. Appendix B provides a breakdown of each roadway classification by mode and lists each segment within the multimodal network that falls below the target LOS.

Table 6: Proposed Target LOS and Percentage of Segments Not Meeting Target

Mode (Classification)	Average Existing LOS	Recommended LOS Target	Percentage of Network (Directional Segments) Not Meeting Target LOS
Bicycle (Arterial)	D	D	62%
Bicycle (Collector)	D	C	65%
Bicycle (Local)	A	A	30%
Pedestrian (Arterial)	D	C	47%
Pedestrian (Collector)	C	B	68%
Pedestrian (Local)	B	B	55%

An additional aspect of non-motorized level of service targets the City may also wish to consider is the setting of more stringent targets (perhaps one letter grade better) for streets that provide direct access to, or are within a specified distance of, certain key trip attractors such as parks and schools. This topic, as well as all of the preliminarily recommended targets, can be further reviewed and discussed with stakeholders and the public as part of the ongoing planning and evaluation process.

Transit Level of Service

Many of Largo's Community Streets are directly served by the Pinellas Suncoast Transit Authority's (PSTA's) fixed route transit, and many more are within a short walking distance of a PSTA route. Currently, the City is served by 10 routes within the City as well as connectors to the adjacent communities. In addition to the bicycle and pedestrian level of service methodologies described in the previous section, FDOT's Quality/Level of Service Handbook includes a transit level of service evaluation procedure. According to that procedure, transit level of service is determined primarily by the transit service frequency (i.e. headway) along the street being evaluated. For example, a street along which a bus travels once every 12 minutes, or five buses per hour, has a base transit level of service of "B", whereas a street which only has service once every 45 minutes has a base transit level of service of "E."

This service frequency is adjusted based upon several other factors to establish the final transit level of service including the following:

- Span of service (hours per day)
- Pedestrian level of service
- Roadway crossing difficulty
- The presence of obstacles to bus stops, such as ditches or fences

The Downtown Largo Multimodal Plan includes a targeted transit level of service standard of "D" for arterial streets, which host the majority of Largo's Community Street transit routes.

The FDOT transit level of service methodology only applies to a particular street, which means that any street not directly served by transit (i.e. all local Community Streets and many of Largo's collector streets) has a bus frequency of less than one per hour, resulting in a LOS "F."

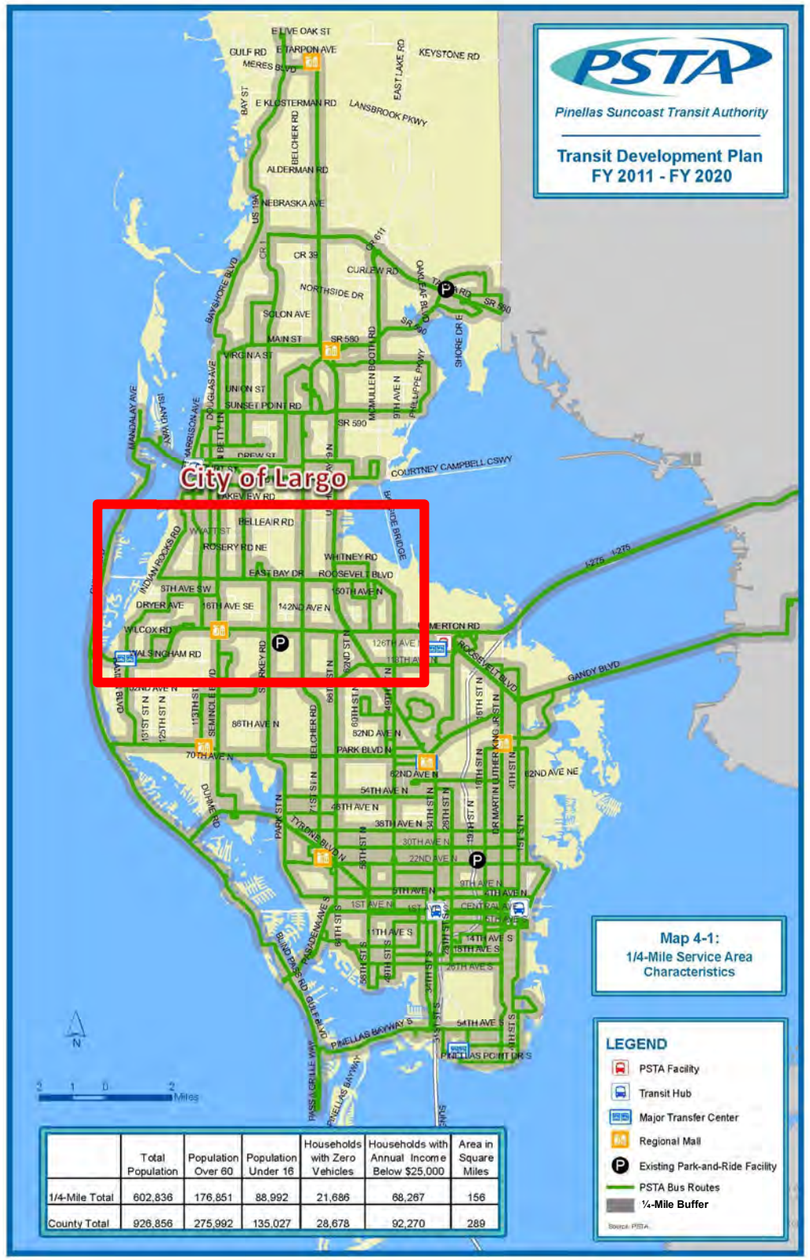
It is recommended that the transit level of service target of "D" be applied to all Multimodal Streets. In addition, it is proposed that any street within one-half mile of a transit route be credited for some level of service provided by that route on a percentage basis. As proposed, this would mean the following:

- any street less than one-quarter mile from a route (or routes) would have the same transit level of service as the street served directly by that route(s); See Figure 5
- streets between one-quarter and three-eighths of a mile away would be one letter grade lower than the street directly served;
- streets between three-eighths and one-half of a mile away would be two letter grades lower than the street directly served, and
- any street not within one-half mile of any route would be assigned a transit level of service of "F."

This approach will indicate not only which streets currently served by transit are in need service improvements to meet the identified target, but also areas not currently served at all that would be ideal locations for new transit service. The following are a few of the recommended new or re-routed alignments identified using the above outlined approach and should be considered.

- Rosery Road (identified in the Downtown Largo Multimodal Plan);
- Belleair Road (one of few arterials not currently served, and would provide a much-needed east-west route for north Largo and south Clearwater); and
- 113th Street N and Keene Road, are the other arterials without current service; these corridors may be accommodated by parallel routes on Seminole Boulevard and Highland Avenue, respectively (new service on both Belleair Road and Keene Road would collectively eliminate most of the ¼-mile service area gap that currently exists within the City).

Figure 5: PSTA 1/4-Mile Service Area



	Total Population	Population Over 60	Population Under 16	Households with Zero Vehicles	Households with Annual Income Below $25,000	Area in Square Miles
1/4-Mile Total	602,836	176,851	88,992	21,686	68,267	156
County Total	926,856	275,992	135,027	28,678	92,270	289

SECTION 5 – DESIGN GUIDELINES OVERVIEW

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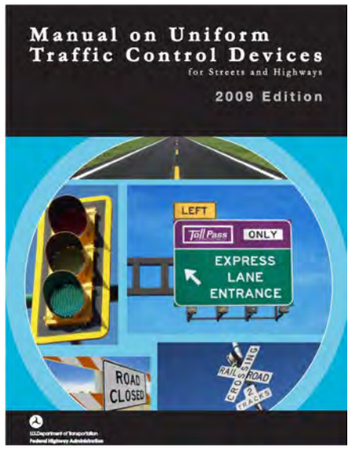
SECTION 5 – DESIGN GUIDELINES OVERVIEW

INTRODUCTION

The Design Guidelines outlined within this section have been prepared for the City of Largo in support of the recommendations presented in this plan for the Multimodal Network, also known as the Community Streets. The recommended improvement examples and features are designed to provide guidance to the city during the design phases and implementation process. Not all recommended improvements outlined in this section will be the best option for every situation and standards may evolve over time. It is encouraged that the City check the referenced state and federal design manuals prior to starting any design phase as design standards may change or additional options may become available.

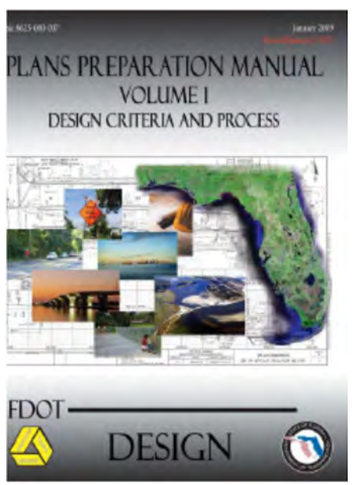
While the design guidelines provide recommended strategies and elements for facilities, i.e. sidewalks and bicycle parking, the LOS analysis provides existing conditions analysis and rating based on certain factors for the multimodal network in the city. Specific design elements can be utilized in parts along a roadway segment in order to improve that segments ranking.

The primary sources used in the development of the design guidelines section were the *Manual on Uniform Traffic Control Devices (MUTCD),* the *Plans Preparations Manual (PPM), and the Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways (Florida Greenbook).*



The ***Manual on Uniform Traffic Control Devices***, or ***MUTCD*** defines the standards used by road managers nationwide to install and maintain traffic control devices on all public streets, highways, bikeways, and private roads open to public traffic. The MUTCD is published by the Federal Highway Administration (FHWA) under 23 Code of Federal Regulations (CFR), Part 655, Subpart F.

The MUTCD, which has been administered by the FHWA since 1971, is a compilation of national standards for all traffic control devices, including road markings, highway signs, and traffic signals. It is updated periodically to accommodate the nation's changing transportation needs and address new safety technologies, traffic control tools and traffic management techniques.



This ***Plans Preparation Manual, Volume 1,*** or ***PPM*** sets forth geometric and other design criteria, as well as procedures, for Florida Department of Transportation (FDOT) projects.

The ***Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways,*** more commonly known as the ***Florida Greenbook*** provides uniform minimum standards and criteria for the design, construction, and maintenance of all public streets, roads, highways, bridges, sidewalks, curbs and curb ramps, crosswalks (where feasible), bicycle facilities, underpasses, and overpasses used by the public for vehicular and pedestrian traffic as directed by Sections 20.23(4)(a), 334.044(10)(a), 334.048(3) and 336.045, F.S.

Other resources used in conjunction during the development of this section include:

- Downtown Largo Multimodal Plan
- City of Largo Strategic Plan
- City of Largo Comprehensive Development Code

All recommended facility improvements along the roads within the multimodal network should be planned in accordance to the guidelines outlined within this section to the fullest capacity, when applicable, to allow a balanced use between modes.

PEDESTRIAN FACILITIES

Introduction

All pedestrian facilities should follow the provisions of the Americans with Disabilities Act (ADA) of 1990. This act ensures that the public facilities shall be designed to accommodate those with physical disabilities. Furthermore, facility design should be consistent with the ADA Public Rights-of-Way Guidelines most recent edition.

The pedestrian facility guidelines provided include information on:

- Signage and pedestrian signals
- Sidewalks
- Crosswalks and crossings
- Landscaping

Each amenity and facility type will be summarized and described using various federal and state guidelines. It is important to note that this guide is intended to be used only as a reference as different sites require different specifications. A thorough review should be completed to determine if all minimum requirements are being met for each respective project.

Signage

Description:

Pedestrian signs, as shown in Figure 1, are used to alert vehicles that pedestrians may be using a facility near the road, and that unexpected entries or other crossing activities may cause conflicts. Likewise, pedestrian signs are predominantly used to limit pedestrian crossings to specific locations along the roadway.

Design Guidelines:

Pedestrian signs, when used at the location of a crossing, can be supplemented with a diagonal downward pointing arrow plaque to make the location of the crossing more visible to motorists.

The minimum height of signs, measured vertically from the bottom of the sign to the sidewalk, shall be seven feet. If there is a directional sign mounted below, it shall not project more than four inches into the sidewalk.

Additional pedestrian signage options and guidelines specific to the use of alternative signage can be found in the MUTCD, Chapter 2B.

Approximate Cost:

Cost is approximately $300 for the sign and sign structure. Additional fees may be required depending on the location of the signs.

Figure 1: Sample Pedestrian Sign in Largo

Signals

Description:

Pedestrian signals are used to alert pedestrians when to cross an intersection by displaying person/hand symbols at traffic signals. These signals usually follow a set traffic signal cycle and alert pedestrians of the designated time that is allowed to cross the road. Additional considerations will need to be taken at intersections that allow vehicles to turn right on red. The *MUTCD, Chapter 4E* should be reviewed prior to planning, and coordination with the local transportation authority should be made prior to the installation of pedestrian signals. Examples of these signals taken from the MUTCD, Figure 4E-1 are shown in Figure 2.

Figure 2: Typical Pedestrian Signal Indications

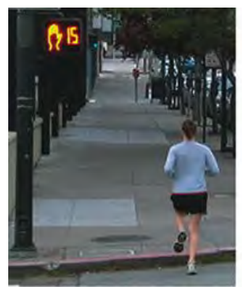
Design Guidelines:

Pedestrian signals should be at a minimum of seven feet above the ground to limit conflicts with pedestrians. Many different factors play into signal design and no two situations are the same. When planning for this type of pedestrian feature all state and federal guidelines should be followed to make the most informed decision possible.

Local Example:

Intersection of Clearwater-Largo Road N and 8th Ave NW: There are several intersections within the City of Largo that have existing pedestrian signals in place. Figure 3 shows how the use of landscaping along the sidewalk provides shade to those waiting to cross the intersection and the street lighting improves visibility to both pedestrians and motorist at night. The pedestrian signals installed at this intersection do not use a countdown display.

Figure 3: Pedestrian Symbol - Intersection of Clearwater-Largo N & 8th Ave NW



Sidewalks

Description:

Sidewalks are critical elements of any pedestrian transportation system within a community. They allow for pedestrian movement from one place to another along direct and convenient routes. Where available, sidewalks should allow for direct access to civic buildings, schools, parks, transit facilities, as well as commercial areas. This can be achieved using:

- Wide sidewalks
- Minimal obstacles
- Moderate grades and cross slopes
- Firm, stable, and slip resistant surfaces
- Adequate lighting
- Clearly defined pedestrian zones

By promoting and increasing accessibility, sidewalks have the potential to stimulate economic development through the encouragement of leisure shopping and providing more activity within an area. Finally, through proper design and implementation, sidewalks can increase public safety by reducing incidents such as pedestrian collisions, injuries, and fatalities in neighborhoods or along major roadways.

Citywide Sidewalk Initiative

The Citywide Sidewalk Initiative facilitates implementation of Strategic Plan goals by connecting schools, neighborhoods, parks, civic attractions and activity areas, such as shopping centers and transit stops, through a network of Community Streets. In 2009, the City of Largo completed an inventory of sidewalk within the City's Community Street Network, which identified over 40 miles of sidewalk gaps. As part of the City's 2011 update to the Largo Strategic Plan, the Citywide Sidewalk Master Plan map was merged with the Citywide Community Street Network map.

Figure 4: Sidewalk gap;
Indian Rocks Rd between Walsingham Rd and Wilcox Rd

A list of recommended sidewalk improvements along the community street network is provided in Section 6 – Proposed Projects, Prioritization, and Phasing.

Design Guidelines:

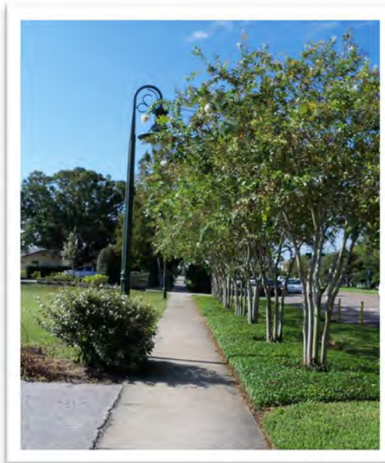
It is essential that basic parameters for sidewalk design account for the needs of all potential users. In certain areas and environments it can be difficult to design a sidewalk that accounts for the wide range of abilities among an entire population. Therefore, the specific end user group that a sidewalk is intended to be used by should be kept in mind when designing sidewalks. In almost all cases, sidewalks should be developed with young children and the elderly in mind minimizing potential conflicts that could be caused by vehicle and pedestrian conflicts.

Sidewalk Width

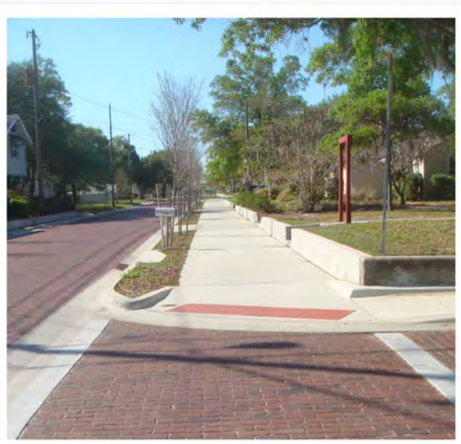
Sidewalk width is one of the main determinants impacting the experience for pedestrians using a sidewalk. Narrow sidewalks can limit the number of users and force them to walk in close proximity to each other. In addition, narrow sidewalks can make pedestrians travel too close to adjacent buildings or fast moving traffic and can limit access for those utilizing wheelchairs.

The minimum width of a sidewalk shall be 5 feet on both curb and gutter and flush shoulder roadways. The minimum separation for a 5-foot sidewalk from the back of curb is 2 feet. If the sidewalk is located adjacent to the curb, the minimum width of the sidewalk is 6 feet.[1]

Sample Recommended Sidewalk Design



Arterial Road – *Large landscaped buffer separating road from 5ft sidewalk*



Local Road – *3ft landscaped buffer, wide sidewalk*

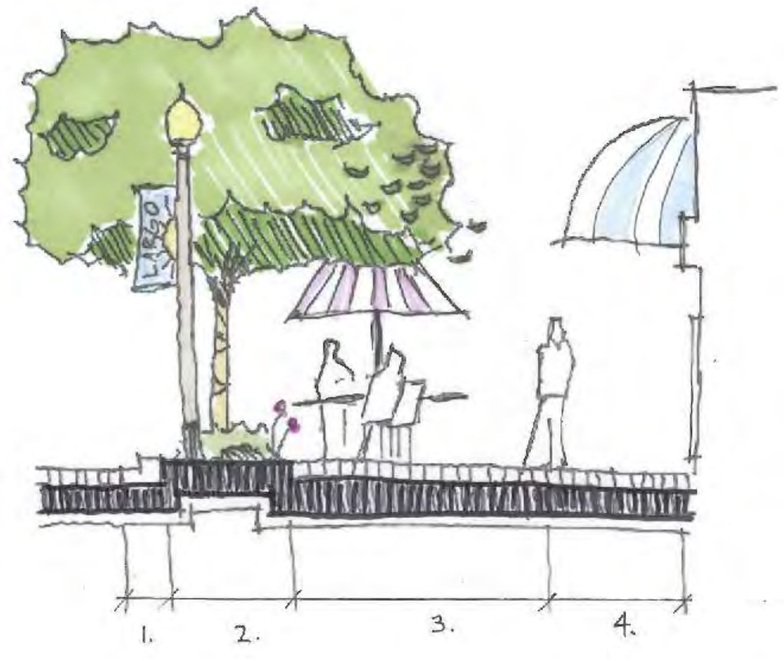
Local Road – *3ft landscaped buffer; wide sidewalk*

Collector Road – *Minimum standard; no buffer 6ft sidewalk*

[1] *Plans Preparation Manual, Jan. 2012; Chapter 8.*

Wider sidewalks are recommended in areas where frequent or heavy pedestrian activity will occur. In these areas it might be more efficient and practical to implement a sidewalk corridor concept. Sidewalk corridors consist of a curb zone, planter/furniture zone, pedestrian zone, and frontage zone. These four areas are briefly described below, and can be spatially seen in Figure 5**.**

Figure 5: Sidewalk Corridors



When designing the sidewalk corridors all zones should be considered.

1) **Curb Zone** – Consists of the first six inches directly adjacent to the roadway. The curb is an important part of most drainage systems and prevents automobiles from driving onto the sidewalk.
2) **Planter/Furniture Zone** – Located between the curb and actual pedestrian area. This area is typically used to accommodate utilities, pedestrian furniture, transit shelters, and landscaping features. It also serves as a buffer between pedestrians and provides an increased sense of safety. This zone should be at a minimum 5ft wide.
3) **Pedestrian Zone** –The paved portion of the sidewalk corridor that pedestrians travel on and is commonly referred to as the sidewalk. As previously noted, the paved portion should be at a minimum 5ft wide. In an area that expects heavy pedestrian traffic this zone should be increased up to 10ft to accommodate additional users. To allow enough space for wheelchairs to pass each other, the zone should have no protruding objects, obstructions, or obstacles.
4) **Frontage Zone** –The space between the sidewalk and the property line. This area should be 5ft to provide for safe access to store fronts.

For additional guidance on sidewalk and buffer design thresholds please refer to Section 4, pages 4-6 and 4-7.

Grade

Whenever possible, grade should not exceed five percent. In some sections this may not be possible, so alternative designs should be considered. These include, providing rest areas for wheelchair users and wide sidewalk corridors. In order to assure that sidewalks drain properly, a cross slope of 1.5 to 2 percent is recommended. Specific consideration must be given to ensure that grade and cross slope are both constructed to the proper specifications.

Surfaces

The majority of sidewalks constructed consist of a concrete or asphalt surface. Other common materials that are used are tile, pavers, brick, or stone. Concrete and asphalt provide a high degree of firmness and stability. Under dry conditions concrete with a broom finish are sufficiently slip resistant. For areas that experience wet conditions a good drainage system that moves water off of the sidewalk, coupled with a regular maintenance program can help reduce the severity of damages.

Changes in Sidewalk Elevation

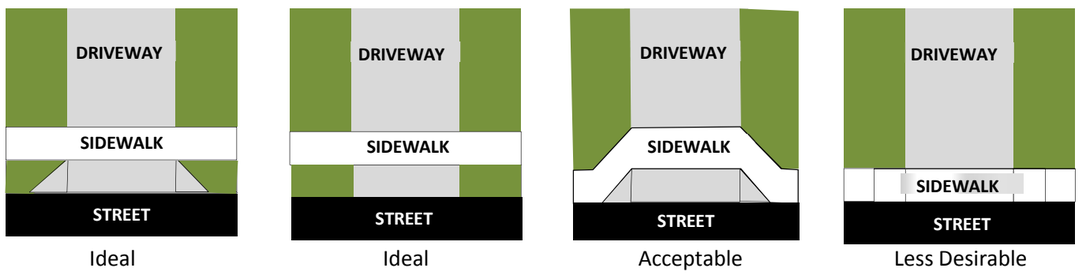
The change in the vertical elevation of sidewalks, separate from the change in grade, can be caused by several factors. These include tree roots pushing up from beneath the sidewalk, heaving and settling from frost, brick surface buckling, and uneven transitions between streets, gutters, and curb ramps. Table 1 lists general requirements for assessments and solutions for these changes in elevation.

Table 1: Changes in sidewalk elevation

Changes in Level	Solution
Up to 0.25 inches	No treatment required
0.25 to 0.5 inches	Bevel surface with maximum grade of 50%
Greater than 0.5 inches	Install ramp with maximum grade of 8.3%

Source: US DOT FHWA – Chapter 4 Sidewalk Design Guidelines and Existing Practices (4.3.6).

There are numerous other factors that apply to site-specific design of sidewalks, that can be found in the American Association of State Highway and Transportation Officials (AASHTO) and the Institute of Transportation Engineers Designing Walkable Urban Thoroughfares: A Context Sensitive Approach. The guidelines include passing space, vertical and horizontal clearance, changes in level, grates as well as other features that may apply in some site specific locations. One very important aspect when planning sidewalks are driveway aprons. When designing sidewalks around driveways, the location of the ramp can greatly affect the slope and grade of sections, therefore, special design considerations should be given to these areas. Driveway aprons should not extend into the clear pedestrian travel zone, where cross slopes are limited to a maximum of two percent.



Source: US DOT FHWA – Accessible Sidewalks and Street Crossings

Approximate Cost:

Cost varies per design and sidewalk type, but FDOT typically uses a cost of $120,400 per mile.

Crosswalks

Description:

Crosswalk markings provide guidance for pedestrians who are crossing roadways by defining and delineating paths on approaches to and within signalized intersections, and on approaches to other intersections where traffic stops. In conjunction with signs and other measures, crosswalk markings help to alert road users of a designated pedestrian crossing point across roadways at locations that are not controlled by traffic control signals or STOP or YIELD signs. Crosswalk design can vary in nature depending on the intensity and usage of a roadway, so special considerations should be made depending on location. An example of a standard crosswalk with signage can be seen in Figure 6.

Figure 6: Typical Crosswalk Examples

Guidelines:

When crosswalk lines are used, they shall consist of solid white lines that mark the crosswalk. They shall not be less than six inches or greater than 24 inches in width (MUTCD); lines must extend the full width of the pavement and the gap between transverse lines shall not be less than six feet.

Marked crosswalks should be provided at all signalized intersections, or when:

- Posted speeds are greater than 40 mph
- A roadway with 4 or more lanes without a raised median that has an ADT of 12,000 or greater
- A roadway with four or more lanes with a raised median that has, or is projected to have within five years an ADT of 15,000 or greater

Midblock Crossings

Description:

Midblock crossings typically occur on roads that have large distances between intersections as well as high traffic volumes, high speeds, and a large amount of pedestrian activity. Midblock crossings must be well signalized to alert motorists of the possibility of having pedestrians in the area. These crossings require the use of multiple high intensity crosswalk features to ensure the safety of pedestrians. Specific design criteria for each midblock crossing will be different, as no two areas are the same. However, at all crossings, there should be ample visibility from both directions so all design features should be considered, including landscaping. At a minimum, midblock crossings should follow general crosswalk design guidelines, but should include higher intensity features, such as raised crosswalks or signal lights, to increase the safety of users.

Possible treatments for consideration include, but are not limited to:

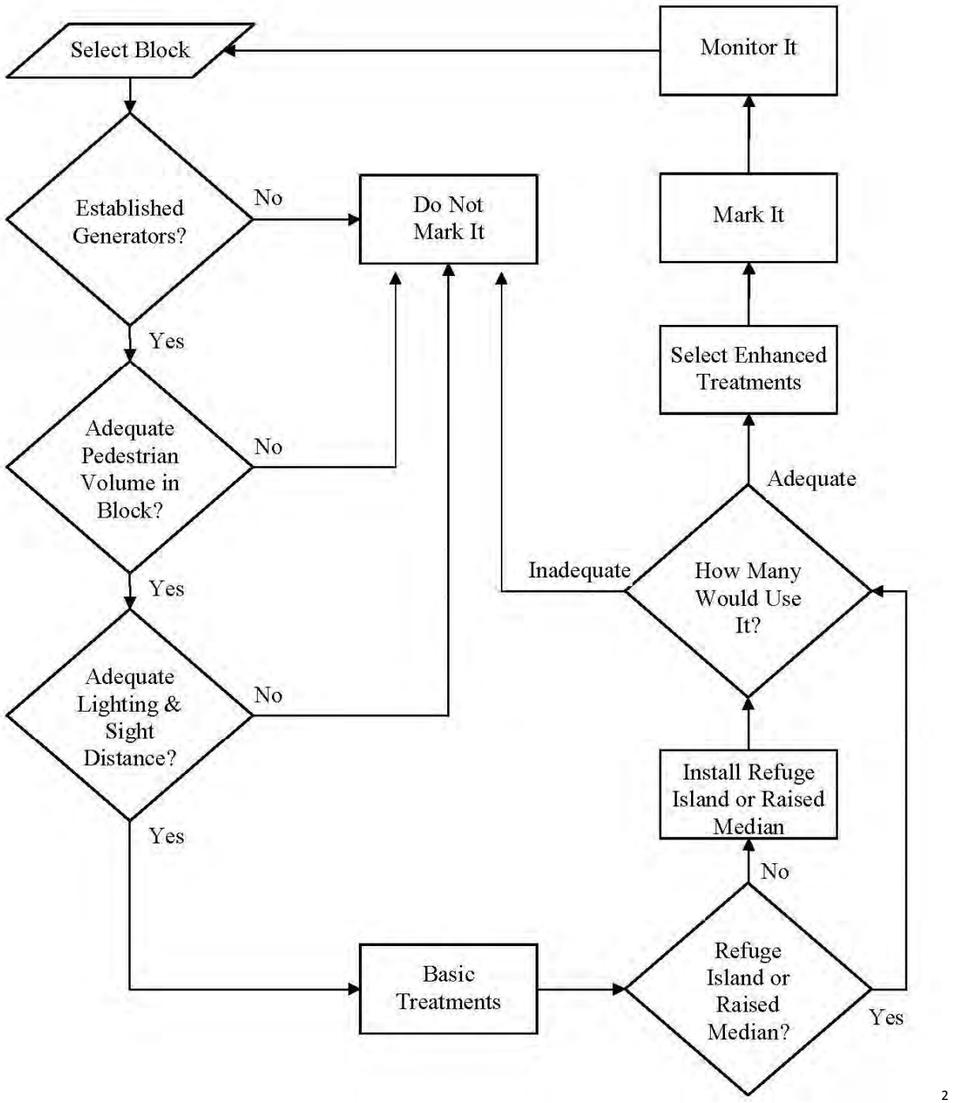
- Increased signage
- Curb extensions
- Preferred crossing signal
- Pedestrian refuge

Figure 8 provides a flow chart showing the different components, their relationships, how they affect whether a midblock crosswalk should be marked, and what treatments should be applied if marked. Figure 9 outlines the FDOT Design Standards for Special Marking Areas which illustrates the marking required to be used when it is determined that the location for a midblock crossing is appropriate.

Local Example: Midblock crossing located on Missouri Avenue, south of Cleveland St and north of Pierce Street. Crosswalk connects the bus stop located on southbound direction of Missouri Avenue to the east side of the road to Cleveland Plaza. Other examples of midblock crossing locations within the City are provided below in Figure 7.

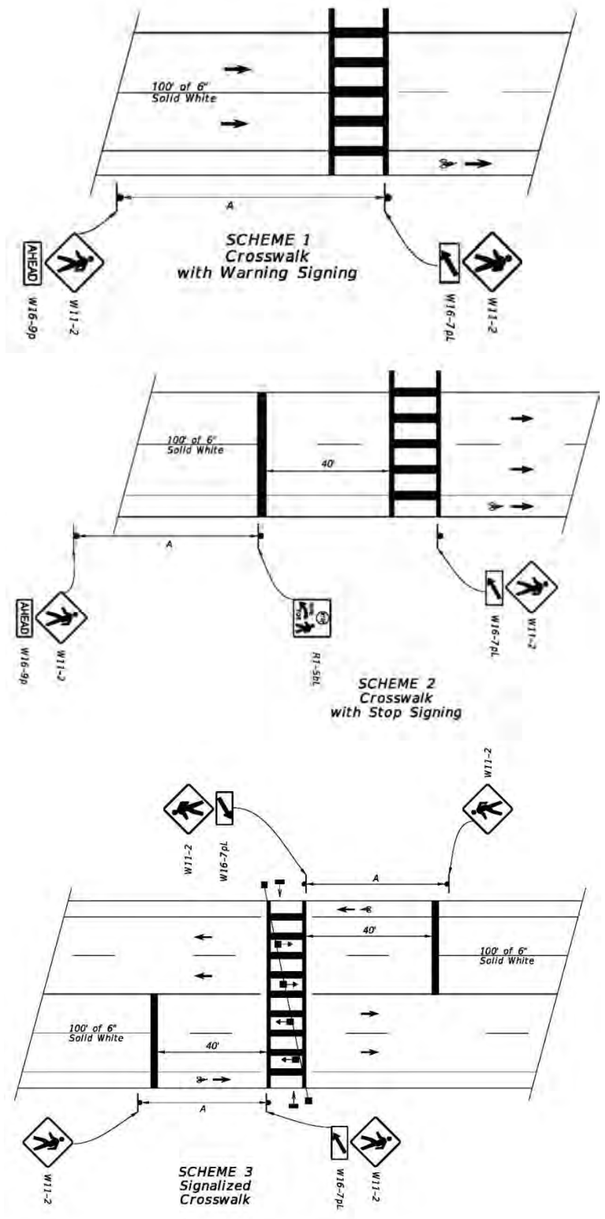
Figure 7: Midblock crossing examples in Largo

Figure 8: Midblock crossing component flowchart



[2]

Figure 9: FDOT Design Standards - Special Marking Areas (Index 17346, Sheet 10)

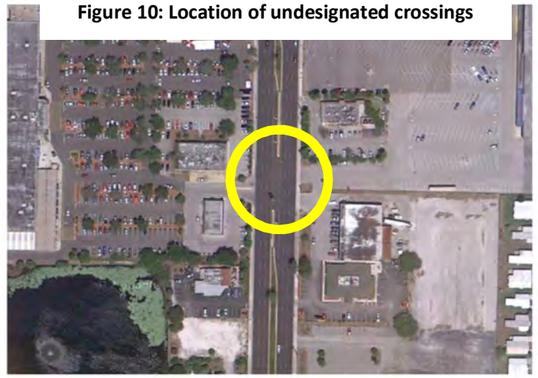


[2] Flow chart obtained from the "Pedestrian Safety at Midblock Locations" report prepared by the Center for Urban Transportation Research, for the Florida Department of Transportation., September 2006. (Page 37, Figure 6)

Identified Problem Area

During one of the field assessments along Missouri Ave N, just south of Rosery Rd, within a five-minute block of time several people, both pedestrians and bike riders were observed crossing the six-lane roadway midblock, rather than at the intersection. The location connected both the Wal-Mart and Kmart shopping centers to the east and west, in front of the Amscot. Figure 10 provides a picture of the location where the crossings were observed.

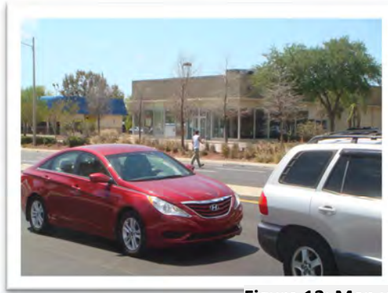
Figure 10: Location of undesignated crossings



The following pictures show three instances where individuals were crossing the street at the same location within a five-minute time frame.

Figure 11: Man walking across Missouri Ave N

Figure 12: Man biking across Missouri Ave N



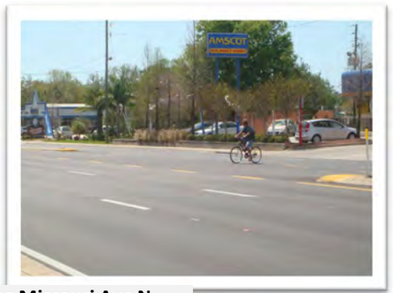


Figure 13: Man with walker crossing Missouri Ave N

Alternative Crosswalks - High Emphasis Crosswalks

Description:

High emphasis crosswalks have the ability to:

- Reduce motor vehicle speeds and create visible, prominent crossing locations for pedestrians and cyclists
- Calm traffic and increases pedestrian safety at mid-block locations and intersections

Textured pavement, such as brick or stone, can also be utilized to enhance the pedestrian environment at crossings by applying the following guidelines:

- Textured pavement must provide a non-vibratory surface for pedestrians
- The use of textures pavement reduces vehicle speeds and improves intersection safety, and clearly delineates a separate space for pedestrians and bicyclists
- Additionally, signage should be added, to indicate to vehicles that pedestrians have the right of way at the intersection

High emphasis crosswalks should be implemented in areas that have high levels of both automobile and pedestrian activity, such as around schools and commercial districts.

Design Guidelines:

Use of stop bars, yield markings, and signs should be used at all crosswalks; other treatments could include flashing beacons, pedestrian signals, curb extensions, and textured pavement crossing.

Approximate Cost:

Costs vary depending on location and features installed, but base FDOT price is $92,000.

Median Refuges

Description:

Median refuges (pedestrian refuges) facilitate pedestrian and/or bicycle crossing of multiple lane or high volume arterials by providing a space in the center of the roadway where bicyclists and pedestrians can wait for gaps in traffic before crossing wide roadways. The use of a refuge allows a bicyclist or pedestrian to safely cross while focusing on one direction of traffic. Left turn movements are restricted and consequently reduces the number of potential conflict points between motor vehicles and bicyclists. Median refuges should be, at a minimum, six feet wide for pedestrian crossings, and ten feet for bicycle crossings.

Design Guidelines:

Ideal places for median refuges include:

- Complex or irregularly shaped intersections
- When a crossing is 60 feet or more
- Wide, four lane streets, with high speeds and traffic volumes
- Where children and elderly cross regularly
- Intersections with significant numbers of pedestrians
- Intersections with insufficient green time to cross

Approximate Cost:

Cost varies depending on design and street type.

Railroad Crossings

Description:

In areas where pedestrians or bicyclists must cross railroad tracks, special considerations must be met in order to ensure their safety. These crossings should include:

- The provision of a crossing arm that would stop vehicles, pedestrians, and bicyclists
- A rubberized material that would allow for an at-grade crossing over the tracks
- Warning signals to indicate when a train is approaching

More specific recommendations can be found in the Guidelines for Accessible Public Rights-of- Way, US Access Board.

Local Example:

In Section 6 of this plan a potential railroad crossing improvement was recommended on Donegan Road at the curve where the road begins to run parallel to the railroad tracks and 16th Ave SE dead ends on the west side of the tracks. At this location a potential connection between 16th Ave SE and Donegan Road is separated by the existing railroad tracks. Though crossing the tracks at this location is discouraged there is existing evidence that this location is frequently used by locals crossing between the two streets by the worn path in the grass leading up to each side of the tracks from both directions.

Figure 14: Potential Railroad Crossing

Figure 15: Worn grass path leading to tracks

Landscaping

Description:

The primary objectives of landscaping standards are to promote the health, safety, and welfare of residents. Landscaping increases the aesthetic appeal of the community. The following minimum standards are intended to enhance and protect natural plant communities within the City.

Design Guidelines:

- A minimum 2ft buffer is recommended along all roads within a multimodal corridor to separate the travel lane from the sidewalk.
- Trees shall not be located where they obstruct lighting. Both the tree size at installation and maturity shall be considered.
- Required landscaping to be located in the sight triangle shall not limit the line of sight between two feet above grade and eight feet above grade.
- For buffers that contain overhead utility lines, the requirement of canopy trees may be altered to low understory trees, or palms in clusters of three, at a ratio of 2.5 understory/palm trees for each required canopy tree
- 100% automatic irrigation systems shall be required for all projects subject to a Development Order Agreement (DO, except for single-family residential lots
- Rain or moisture sensing shut off devices shall be installed with any irrigation system
- Reclaimed water shall be used when service connection to a property can be made without extreme renovations
- The systems should be developed to run on a low volume landscape irrigation design
- Spray heads and nozzles shall be directed away from all travel lanes and sidewalks as to minimize the amount of water applied to or running off into impervious surfaces.

Local Examples:

Figure 16 provides an example of a wide landscaped buffer that separates the travel lanes from the sidewalk.

Figure 16: Clearwater-Largo Road

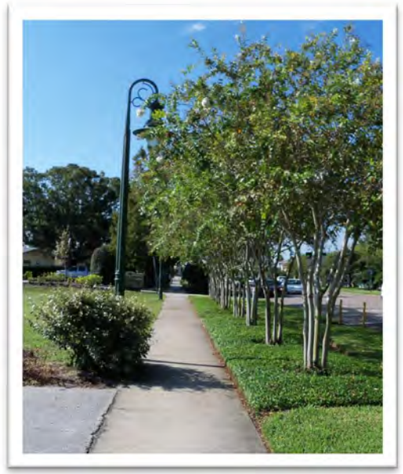


Figure 17: 8th Ave SE, between 1st St SE and Seminole Blvd

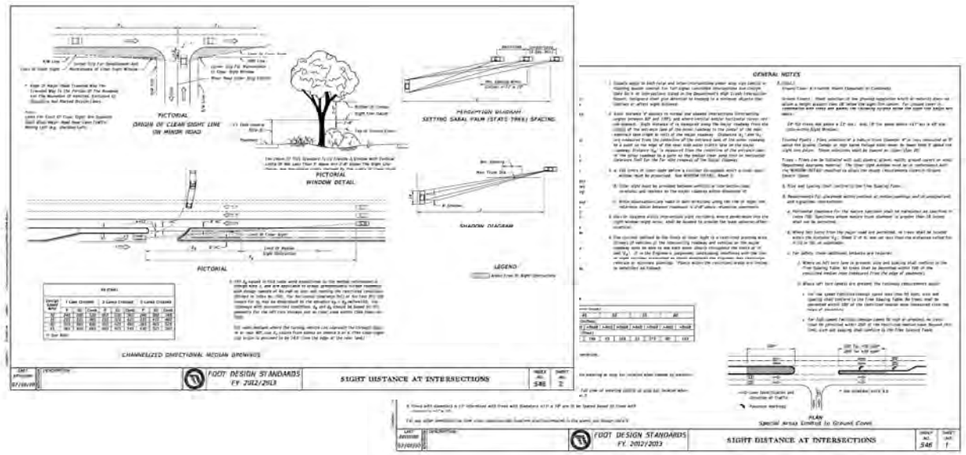
Addressing Sight Triangles

Description:

Sight triangles pertain to the distance necessary for drivers to safely approach, cross, and/or turn right or left at an intersection. Intersection sight distance varies, depending on the design speed of the roadway to be entered, and assumes a passenger car can turn right or left without being overtaken by an approaching vehicle. Sight limitations due to landscaping or poor intersection design can create bicycle and pedestrian conflicts with vehicles. It is important to reference the latest FDOT standards and comprehensive development code requirements pertaining to intersection sight distances to insure that new landscaping and/or the construction of new bicycle and pedestrian facilities meet the specified clear line of sight standards.

Design Guidelines:

FDOT Design Standards Index 546 – Sight Distance at Intersections provides tree spacing and landscaping guidelines associated with creating a clear line of sight at intersections.



BICYCLE FACILITIES

Paved Shoulder

Description:

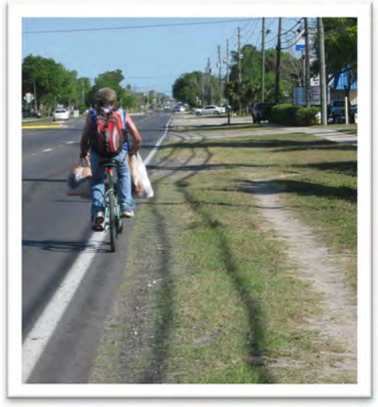
A paved shoulder is a five foot section of the roadway that is outside of the vehicular travel lane but does not have special markings or signing for preferential use by bicyclists. Paved shoulders are typically found on rural roads.

Paved shoulders can reduce conflicts between bicyclists and automobiles by allowing the cyclists to ride outside the vehicle lane. Paved shoulders also preserve the integrity of the pavement by minimizing the number or cars that run off the edge of the road.

According to the *Florida Bicycle Facilities Planning and Design Handbook* and *AASHTO*, obstructions and other impediments on existing highways should be considered for their effect on bicycling and the use of paved shoulders. Impediments not receptive to bicycles include:

- Unsafe grates
- Debris
- Rumble strips
- Narrow lanes
- Driveways
- Rough pavement
- High-speed or high-volume traffic
- High truck volume
- Curbside auto parking
- Lighting
- Railroad crossing flanges
- Bridge expansion joints
- Metal grate bridge decks
- Traffic signals that are not responsive
- Painted hatching

Figure 18: Roadways with and without paved shoulders



Design Guidelines:

The width of paved shoulders vary by location and projected use. The minimum width should be five feet, however existing four foot shoulders may be retained.

Additional standards can be found in the *Plans Preparation Manual (PPM)* Chapter 8, FDOT, and the Florida Bicycle Facilities Planning and Design Handbook, Section 2, FDOT.

Local Example:

The left image of **Error! Reference source not found.** illustrates how the lack of a paved shoulder can present very unsafe and challenging situations for bicyclist. The image to the right provides an example of a roadway with a paved shoulder.

Approximate Cost:

Standard FDOT cost for widening an existing two lane arterial to a four lane arterial with five foot paved shoulders is $2,030,000 per mile.

Designated Bicycle Lanes

Description:

Bicycle lanes are an on-road facility type. They provide delineated road-space specifically allotted for bicycle use adjacent to the existing roadway, between the right most outside road boundary line and the gutter pan seam.

Bike lanes are effective because they establish order, in terms of location, direction, separation, and predictability, for the sharing of highways/roadways between cyclists and motorists. Bike lanes are also an effective means of avoiding sidewalk conflicts between cyclists and pedestrians providing cyclists with a convenient place to ride separated from pedestrian traffic activities. An example of a typical road section with bike lanes is shown in Figure 19.

Figure 19: Walsingham Road

Design Guidelines:

Design Standards from MUTCD:

- Pavement markings designate the portion of the roadway for preferential use by bicyclists. Markings inform all road users of the restricted nature of the bicycle lane.
- **Standard:** Longitudinal pavement markings shall be used to define bicycle lanes.
- **Guidance:** If used, bicycle lane word, symbol, and/or arrow markings should be placed at the beginning of a bicycle lane and at periodic intervals along the bicycle lane based upon engineering judgment.

If there is on-street parking adjacent to the bicycle lane then the lane must be at a minimum five feet wide. If there is no adjacent on-street parking then the lane should have a minimum width of four feet to the curb face. The lane should be designated by a six inch wide, white line to separate it from traffic.

Bicycle slots must be used when there are right hand turn lanes present. Under these conditions the bike lane moves in between the right hand turn lane and the through traffic lane to minimize conflict. Use of signage helps alert motorists that bicyclists may be merging with traffic.

Additional standards can be found in the *MUTCD*, as well as in the *Florida Greenbook* and *PPM*.

Approximate Cost:

Cost varies depending on design and street type, however, standard FDOT cost to add two lanes to an existing two lane arterial is $3,800,000 per mile.

Shared Lane Markings (Sharrow)

Description:

Shared lane markings (SLM), also referred to as sharrows, consist of a bicycle and double chevron pavement marking as seen in Figure 20. They are used to alert bicyclists and drivers that a lane is open to cyclists, even if no bicycle lanes or paved shoulders exist.

Figure 20: Shared Lane Marking (Sharrows)

According to the *Plans Preparation Manual (PPM)*, shared lane markings can only be implemented if the speed limit on a road is less than 35 miles per hour.

Shared lane markings can be used instead of bike lanes on roads with adjacent on-street parking. The sharrow allows the bicyclist to occupy the lane, avoiding placing bicyclists in the "door zone." The door zone is the area where cars that are parallel parking on the streets would open their doors. This area presents a real danger to bicyclists as they often not aware when a door is about to be open. Shared lane markings do not require an increase in lane width, or right-of-way width.

Design Guidelines:

Additional standards can be found in the *Manual on Uniform Traffic Control Devices (MUTCD)* and *PPM.*

Approximate Cost:

Cost varies depending on design and street type.

Wide Curb Lanes

Description:

Similar to a shared lane marking (sharrow), wide curb lanes (WCL) are lanes that can comfortably be shared by bicyclists and cars. When located on roads without curbs they are called wide outside lanes. WCLs do not meet department requirements for bicycle facilities on new construction or reconstruction. WCL's are typically seen on residential roads and are not recommended for roads that carry a large volume of vehicular traffic.

Figure 21: Tall Pines Dr

Design Guidelines:

The preferred minimum width of wide curb lanes, which allows for the safe passing of cyclists by motorists within a single lane, is 14 feet. If space is sufficient for a 14 foot wide curb lane, but traffic volume and speeds are low, the roadway may be split and striped to indicate a three foot shoulder and an 11 foot lane. When 16 or more feet of pavement exists the lane should be striped to delineate a 12 foot lane and a shoulder of four feet or more.

Approximate Cost:

Cost varies depending on design and street type.

Bicycle Boulevards

Description:

On bicycle boulevards, bicycles have priority along the street. The street itself will still provide vehicular access and travel. The use of signs will provide awareness to the fact that the road is a bicycle boulevard, and through other aesthetic choices, the look and feel of the street will be enhanced.

Design Guidelines:

Primary characteristics of a bicycle boulevard are:

- Low vehicle volumes (no more than 4,000/day)
- Low vehicle speeds (Less than 25 mph)
- Logical, direct, and continuous routes that are well marked and signed (usually run parallel to main arterials to make convenient for commuting)
- Provide convenient access to desired destinations (provide bicycle connectivity even if road does continue through)
- Minimal bicyclist delay (provide cyclists with exclusive movement through signalized intersections)
- Comfortable safe crossings for cyclists at intersections (provide facilities for midblock crossings, as well as traffic calming facilities)

Figure 22: Pavement marking on a bicycle boulevard

Approximate Cost:

Cost varies depending on design and street type.

Bicycle Parking

Description:

Adequate, safe, and easy-to-use bicycle parking facilities are essential to the development of a successful bicycle network. Good parking facilities serve as an effective tool to encourage ridership. Sufficient bicycle parking facilities will prevent cyclists from locking their bikes to objects or facilities not intended for that purpose. This practice may cause damage to the object or bicycle, or may disrupt the flow of pedestrian or vehicular traffic.

Bicycle parking should also be planned in conjunction with other user amenities, such as benches, trash receptacles, and recycling containers.

Design Guidelines:

Parking facilities should be located near any resting or recreational areas along bicycle routes and shared use paths. They should be provided at popular trip origination and destination places to deter theft, and minimize damage. Bicycle parking facilities should also be located where bicycles will not be damaged or cause damage to motor vehicles. Bicycle parking facilities should be located where additional racks can be readily added, as needed.

Bicycle parking facilities should be designed according to their use. Long term and short term parking structures should have different attributes depending on the needs of users.

Figure 23: Bike chained to fence

Long Term Structures:

- Are intended for extended storage of bicycles
- Should provide a high degree of security
- Should provide protection from weather
- Should not cause damage to bicycles
- Should be easy to use, with as few moving parts as possible, or with instructions for use, if necessary
- Should accommodate all types of bicycles, including tricycles and those with trailers
- Typical long term bicycle facilities are cages, lockers, or rooms in buildings

Short Term Structures:

- Are intended for short term bicycle parking
- Should not cause damage to bicycles
- Should be located in highly visible places to encourage use, and discourage theft and vandalism
- Should be located proximal to common destination and origination places for cyclists
- Should accommodate high security locks and those that secure the frame and both wheels
- Should accommodate all types of bicycles, including tricycles and those with trailers

Approximate Cost:

Cost varies depending on design and street type.

MULTI-USER FACILITIES

Shared Use Paths/Trails

Description:

Shared use paths provide convenient transportation for multiple users and user groups. They are intended for the preferential treatment of non-motorized travel, including but not limited to, cyclists; joggers; in-line or roller skaters; wheelchair users (motorized and non-motorized); and pedestrians with baby-strollers, small children, or dogs. These facilities are bidirectional pathways separated from road right-of-way which provides a facility for non-automobile commuting as well as recreation opportunities.

Shared use paths connect destinations that may have been inaccessible for bicycle via the road network.

As stated in the *Florida Bicycle Facilities Planning and Design Handbook* (April 2000): "Shared use paths should be thought of as extensions of the highway system that are intended for the exclusive or preferential use of bicycles and pedestrians in much the same way as freeways are intended for the exclusive or preferential use of motor vehicles."

Design Guidelines:

A recommended width of 12 feet allows for movement in two directions as well as the occasional maintenance vehicle. In some cases, where appropriate, shared use paths may be as narrow as eight feet. In order for an eight foot lane to be feasible, the path must have a low number of riders and there must be enough space to allow for passing in some areas. Shared use paths should be constructed out of asphalt in order to provide a smooth, durable riding surface for all users. To allow for proper drainage, the sides of shared use paths should be graded as suggested by the Federal Highway Administration.

According to the *PPMs* shared use paths adjacent to a roadway may be considered if the following conditions are met:

- The path will be separated from the roadway.
- There will be few access points or roadways crossing the path.
- There will be adequate access to local streets and other facilities along the path.
- There is a commitment to provide path continuity with other bikeways throughout the corridor.

Approximate Cost:

Typical costs range from $250,000 to $350,000 per mile.

Shared Use Path – Facility Maintenance

Description:

Shared use paths require maintenance to sustain convenient passage for pedestrians, bicyclists and other non-motorized users. Because these facilities are typically located outside of the road right-of-way, a separate maintenance program is often needed that addresses these facilities.

Design Guidelines:

Sample maintenance procedures and programs to ensure consistently clean trails may include the following:

Trail Inspection: This is integral to all trail maintenance operations. Inspections should occur on a regularly scheduled basis, the frequency of which will depend on the amount of trail use, location, age and type of construction.

Trail Sweeping: This is one of the most important aspects of maintaining trail safety. The type of sweeping depends on the trail design and location. Sweeping should be performed on a regular schedule.

Trash Removal: Trash removal from all corridors is important from both a safety and aesthetic view, and includes removing ground debris and emptying ground containers.

Vegetation Pruning: This should be performed for the safety of trail users. Pruning will be performed to established specifications on a scheduled and as-needed basis, the frequency of which will be very low.

Mowing of Vegetation: Vegetation along trail corridors should be mowed on a regularly-scheduled basis only where mowing is not performed by other agencies or entities. Edging of vegetation should also be done to protect the edge of pavement.

Scheduling of All Maintenance Tasks: Inspections, maintenance and repair of trail-related concerns should be regularly scheduled. Inspection and repair priorities should be dictated by trail use, location and design.

Approximate Cost:

Cost varies depending on length and size of facility

Figure 24: Shared Use Path/Trail Cross Section

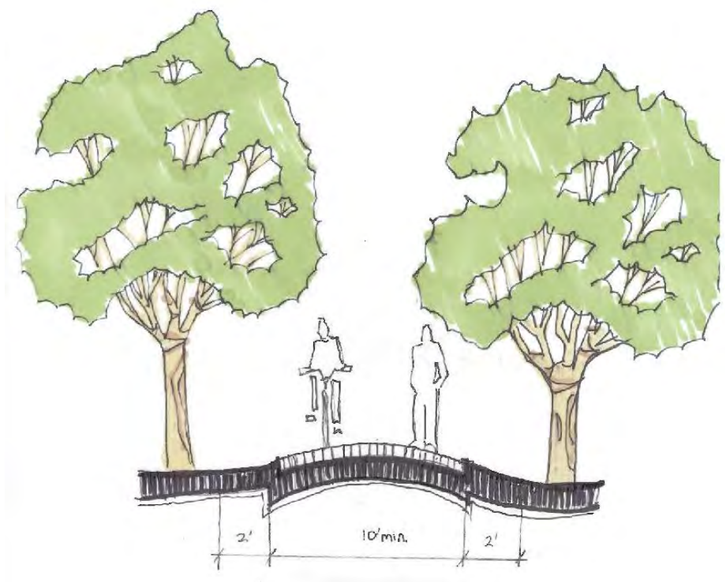


Table 2: Target Urban Trails Cross Section Thresholds

	Path		Buffer	
	Minimum	Preferred	Minimum	Preferred
Urban Trail/High Pedestrian Zone	10	12	6	10

WAYFINDING SIGNS

Description:

Wayfinding is the process of directing pedestrians, bicyclists and vehicles to their final destination; informing them as to their current location; and a means to convey information to the public. This information may also include distance information for vehicles, bicyclists, and pedestrians.

Wayfinding signs should only be used on a localized level in close proximity to the destination when there is no conflict with higher priority signs.

Standardizing wayfinding signs is encouraged as this makes them easier for travelers to see and understand them.

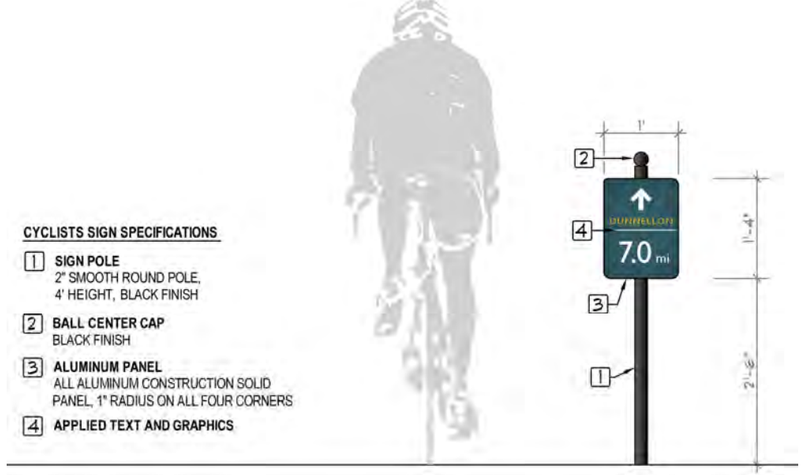
Design Guidelines:

According to the MUTCD wayfinding, signs should:

- Be located away from intersections where high priority traffic control devices are present,
- Be facing away from the street and toward the sidewalk, and
- Be out of the line of sight from vehicular signs, and should not be retroflective

Recommendation:

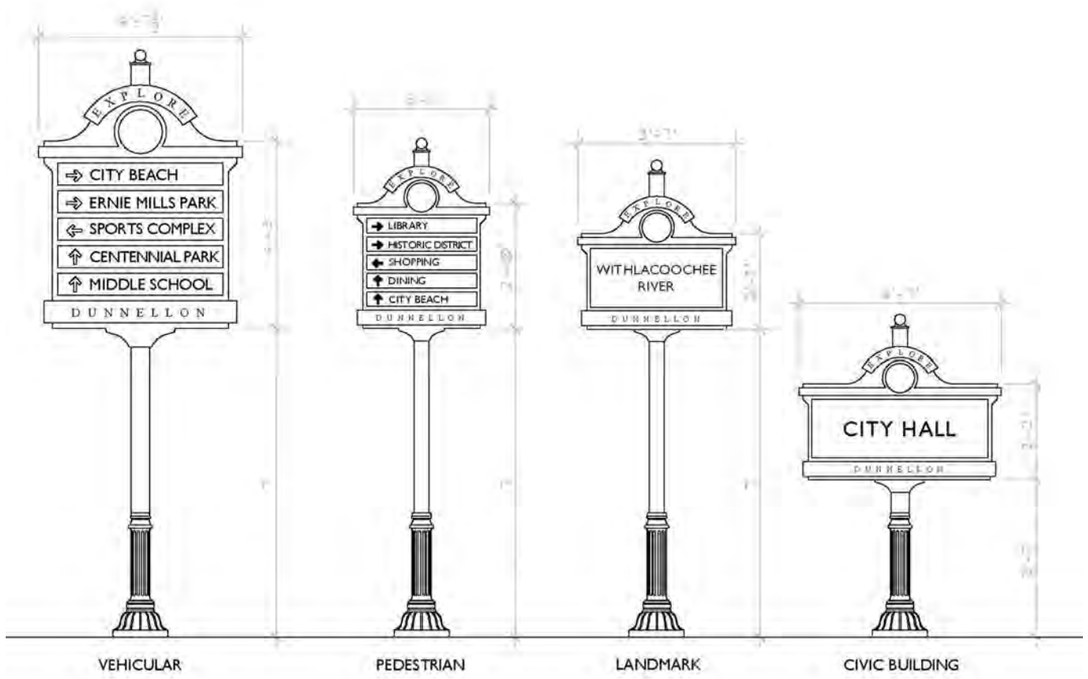
The City of Largo should look into the implementation of Citywide branding that could be applied to wayfinding signs around the city for public facilities, parks, as well as bike routes and designated multimodal streets. Signing could be used to direct residents and visitors along preformed routes and connections around the City. Figure 25 provides an example of wayfinding signage used for the City of Dunnellon, Florida and Wakulla County, Florida.

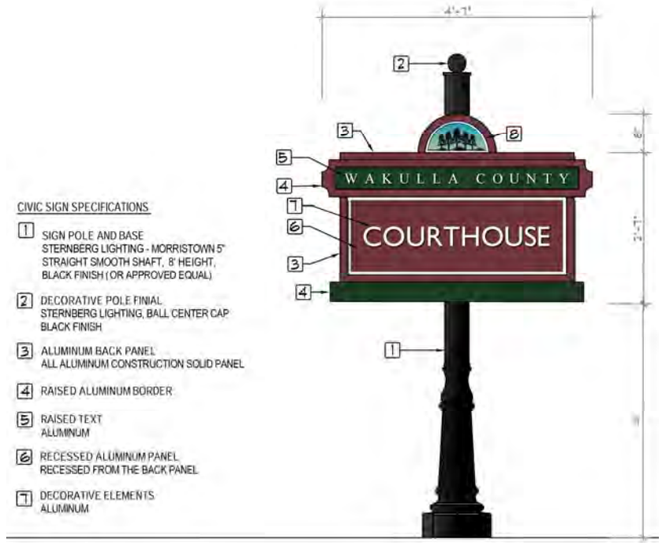


Approximate Cost:

$300 for large sign and structure, smaller mile marker signs vary in price.

Figure 25: Sample Wayfinding Signs (City of Dunnellon and Wakulla County)





TRAFFIC CALMING

Description:

Vehicular traffic, which travels at higher speeds, can be intimidating to pedestrians and cyclists. The quality of a safe and enjoyable multimodal environment is greater if the vehicular traffic is perceived as non-threatening. Measures must be taken to control and calm vehicular traffic in areas with significant pedestrian and bicyclist activity. However, these treatments should not create hazardous conditions for cyclists.

Neckdowns and bulbouts reduce the crossing width of streets for pedestrians, make pedestrians more visible in a crosswalk, and add space to sidewalks that can be used for pedestrian amenities and activities. These treatments are favorable in downtown projects. By forcing drivers to slow down when they turn the corner, makes it safer and more comfortable for those crossing the street. Figure 26 provides an example of this type of treatment.

Figure 26: Sample Neckdown/Bulbout

[3]

Street trees, when implemented on both sides of the street, create a sense of enclosure that discourage speeding. Implementing street trees as a traffic calming mechanism also provide a more aesthetically pleasing place for pedestrians to walk by providing shade as well as a visual buffer from the road. An example of street trees along an existing road in Largo can be seen in Figure 27.

Other traffic calming treatments can consist of a number of horizontal and/or vertical roadway treatments that include, but are not limited to:

- Narrow lanes (road diets)
- Neckdowns/Bulbouts
- Raised intersections
- Raised crosswalks
- Speed tables
- Mini-circles
- Speed cushions
- Roundabouts

The City currently does not allow the use of speed bumps within their jurisdiction but they are considered another roadway treatment used for traffic calming.

Figure 27: 4th St SE-Central Park Dr

Approximate Cost:

Cost varies depending on treatment ($2,000 to $20,000)

[3] *Picture obtained from Projects for Public Spaces Image Collection; Contributed by: Nick Grossman*

TRANSIT FACILITIES

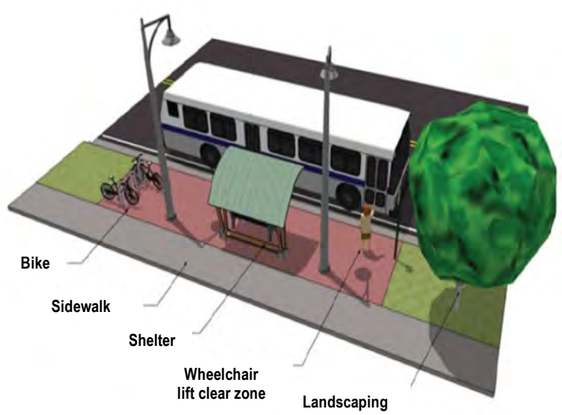
Transit Stop Design

Description:

A transit stop is a designated location at which a rider will wait to board a bus. The bus stop boarding area, also known as a waiting area, is the area at a transit stop provided for riders and may contain a bench and/or a shelter along with other infrastructure and amenities. Infrastructure, such as trash receptacles, informational kiosks, or bicycle parking, can also be located in the waiting area.

The waiting area size is dependent on the following:

- Length and width of shelters and benches
- Clearance requirements for street furniture
- Location of wheelchair lift extension
- Length of the bus
- Setback requirements
- Available right-of-way



Design Guidelines:

Given the varying size and door placement of a transit fleet, a standard ten-foot depth by 30 foot length waiting area is recommended for each transit stop.

The designated waiting area of a transit stop is usually separated from the sidewalk to preserve general pedestrian flow. It is generally recommended that 5-feet of clearance be preserved on sidewalks to reduce potential pedestrian conflicts and limit congestion during boarding. The pad can be located on either side of the sidewalk, depending on available right-of-way space, setback requirements, utility poles, or buildings.

ADA mobility guidelines should be followed when street furniture is included in a waiting area. A waiting pad should accommodate a 5-foot (measured parallel to the street) by 8-foot (measured from the back face of the curb) wheelchair lift clear zone (or landing pad) that is free of all street furniture and overhangs. The paved ADA compliant wheelchair lift clear zone is required in all waiting areas where shelters are installed, and requires that the maximum slope of two percent in any direction.

Waiting areas may be defined with a change in pavement material such as brick pavers, and additional space may be provided at the waiting area to install a bench or shelter depending on need and available space. Landscaping may also be included in the transit stop design to provide shade for waiting riders.

Bicycle storage facilities, such as bike racks, may be provided at transit stops for the convenience of bicyclists using transit. Designated storage facilities discourage bicycle riders from improperly locking bikes onto the transit facilities or on an adjacent property. Proper storage of bicycles can reduce the amount of visual clutter at a transit stop by confining bikes to one area while also increasing safety.

Recommendations regarding bicycle storage include:

- Paved access to the transit stop and constructing the waiting area with non-slip concrete or asphalt.
- Durable, vandal-resistant, low maintenance and remaining structurally sound.
- Design of the storage facility shall minimize protrusions or appendages that may snag, tear, or catch clothing or pose a safety hazard.
- Locate the storage area away from other pedestrian or rider activities to improve safety and reduce congestion.
- Full compliance with the Federal Americans With Disabilities Act.
- Bike storage facility (or bicycle rack) foundation base shall be on a reinforced concrete slab at least four inches thick extending four-inches beyond any vertical rail “foot-print”.
- The height of the bicycle rack shall not exceed 48 inches above the finished surface.
- A trash receptacle, although not required, is suggested.

Additional physical location criteria include:

- Minimal walking distance from the storage facility to the transit stop.
- Located on the periphery of the waiting area.
- Do not locate the storage area where views into the area are restricted by the shelter, landscaping, or existing site elements, such as walls.
- Coordinate the location of the storage area with existing on-site lighting

<u>Local Example:</u>

The bus stop located on Clearwater-Largo Road (Figure 28) provides a good example of a model stop for the multimodal street network.

Figure 28: Bus stop on Clearwater-Largo Rd

Bicycles on Buses

Description:

Bikes-on-Buses is a program that allows bicyclists to bring their bicycles with them while riding mass transit/buses. Each bus in this program is equipped with a front mounted bike rack capable of carrying a minimum of two bicycles. The rack should accommodate all bicycles, from child-sized sixteen-inch wheels to heavily laden commuter bikes (excluding tandems and recumbents). All bikes fit into the rack in exactly the same manner.

Design Guidelines:

A typical bike-rack dimension for two bicycles (length x width) are 66-inches x 27-inches. In the stored position, the rack folds against the front of the bus. In either position visibility and mechanical operations of the bus are not impaired. In the extended position, the turning radius of the vehicle is extended another three feet. Figure 29 provides an example of how the bicycles mount on the front of the buses.

Approximate Cost:

Cost varies depending on features and type.

Figure 29: PSTA Bikes of Buses Program

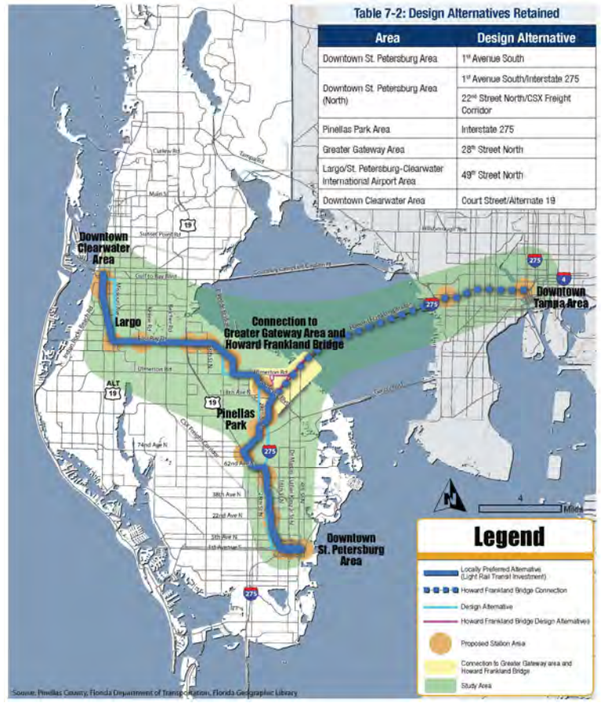
Pinellas County Alternatives Analysis

The Pinellas Alternatives Analysis (AA) is a study created to identify transit options that improve Pinellas County's and West Central Florida's quality of life. The Study looks to implement fixed guideway transit service connecting major residential, employment, and activity centers in Pinellas County to Hillsborough County and the greater Tampa Bay Region. The green buffer illustrated in Figure 30 shows the study area and locally preferred alternatives of the AA which overlaps the City of Largo city limits.

The fixed guideway options identified in the Study were reviewed and taken into consideration during the prioritization process of this plan. The purpose of the Pinellas AA is to:

- Encourage Economic Development and Community Revitalization
- Engage the Public in an Open Dialogue about Transit Needs and Desires
- Promote the Sustainability of Our Community
- Connect to Assets in the Tampa Bay Region
- Provide Mobility Options for Future Riders

Figure 30: Pinellas County Locally Preferred Alternatives



ROADWAY TREATMENTS

Road Diet

Description:

The classic roadway reconfiguration, commonly referred to as a "*road diet*," involves the reduction of travel lanes allowing the roadway to accommodate other uses such as bike lanes, pedestrian crossing islands, and/or parking. Road diets have multiple safety and operational benefits for vehicles as well as pedestrians, such as:

- Decreasing vehicle travel lanes for pedestrians to cross, therefore reducing the multiple-threat crash (when one vehicle stops for a pedestrian in a travel lane on a multi-lane road, but the motorist in the next lane does not, resulting in a crash) for pedestrians,
- Providing room for a pedestrian crossing island,
- Improving safety for bicyclists when bike lanes are added (such lanes also create a buffer space between pedestrians and vehicles),
- Providing the opportunity for on-street parking (also a buffer between pedestrians and vehicles),
- Reducing rear-end and side-swipe crashes, and
- Improving speed limit compliance and decreasing crash severity when crashes do occur.

Design Guidelines:

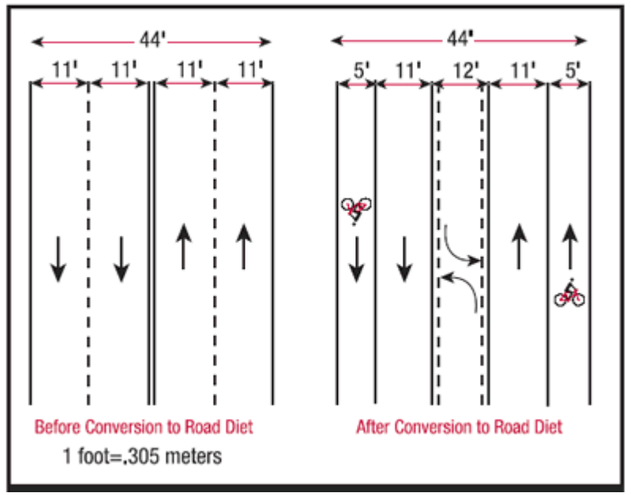
Road diets are frequently considered when a preliminary analysis indicates that sufficient capacity exists to effectively accommodate motor vehicle traffic for the foreseeable future with a reduced number of lanes. Significantly more detailed operational analyses should be carried out for individual segments before moving forward with any identified road diet projects.

Because some road diets involve the removal of a travel lane, which is generally at least ten feet wide, they can be ideal locations for buffered bike lane treatments. Buffered bike lanes, which have been implemented on various types of roads in Tampa Bay and throughout Florida, include a typical four-to-six foot bike lane alongside a space striped with chevrons located between the bike lane and the adjacent travel lane. While the benefits of buffered bike lanes have not been studied in detail, they are widely believed to represent a significant benefit in terms of bicyclists' perceived safety and comfort because of the visual buffer that is given to motorists. Figure 31 provides an example of a four-lane to three-lane roadway diet.

Approximate Cost:

Cost varies depending on features and type.

Figure 31: Sample road diet



Source: FHWA-HRT-04-082, March 2004

Road Name	From	To	Length (mi)	Dir.	# Lanes	mph	Width from Outside Lane to EOP (ft)	Bike Lane (Y/N)	Buffer Width (ft)	Existing Sidewalk Width	% of Sidewalk Coverage	Existing PLOS Score	PLOS Score	Existing BLOS Score	Existing BLOS Grade	Ped Diff	Bike Diff	Bicycle Facility Recommendation	Ped LOS	Bike LOS	Ped Needs	Ped Buffer	Bike Needs	Safety	Community	Transit	Public	Tech	City Staff	Plans	Points Per Segment	Total Points
101st St SE	101st Way	Ulmerton Rd	0 25	NB	2	25	0 0	N	0 0	6 0	60	2 54	C	0 75	A	0 04		Local Road - Shared Lane	1		2	1	1	1							6	8
101st St SE	101st Way	Ulmerton Rd	0 25	SB	2	25	0 0	N	11 0	4 0	100	1 79	B	0 75	A			Local Road - Shared Lane					1	1							2	
109th St N	126th Ave	130th Ave	0 22	NB	2	25	0 0	N	5 0	4 0	100	2 03	B	0 95	A			Local Road - Shared Lane					1								1	2
109th St N	126th Ave	130th Ave	0 22	SB	2	25	0 0	N	8 0	4 0	100	1 92	B	0 95	A			Local Road - Shared Lane					1								1	
113th St N	Walsingham Rd	Ulmerton Rd	1 00	NB	4	40	0 0	N	0 0	0 0	0	5 07	E	4 90	E	1 57	0 40	Add Paved Shoulders Candidate	3	1	3	1	2						3		13	26
113th St N	Walsingham Rd	Ulmerton Rd	1 00	SB	4	40	0 0	N	0 0	0 0	0	5 07	E	4 90	E	1 57	0 40	Add Paved Shoulders Candidate	3	1	3	1	2						3		13	
119th St N	Ulmerton Rd	16th	0 53	SB	2	25	0 0	N	6 0	5 0	100	2 00	B	1 92	B		0 42	Local Road - Shared Lane		1			1	1	2	1					6	12
119th St N	Ulmerton Rd	16th	0 53	NB	2	25	0 0	N	8 0	8 0	100	1 77	B	1 92	B		0 42	Local Road - Shared Lane		1			1	1	2	1					6	
119th St N	Walsingham Rd	Ulmerton Rd	0 98	NB	2	30	0 0	N	12 0	5 0	20	3 52	D	3 09	C	1 02		Add Paved Shoulders Candidate (LOS Met)	3		3		2	1							9	17
119th St N	Walsingham Rd	Ulmerton Rd	0 98	SB	2	30	0 0	N	5 0	5 0	25	3 48	C	3 09	C	0 98		Add Paved Shoulders Candidate (LOS Met)	2		3		2	1							8	
120th Ave N	146th St	144th St	0 19	EB	2	25	0 0	N	0 0	0 0	0	2 76	C	0 85	A	0 26		Local Road - Shared Lane	1		3	1	1								6	12
120th Ave N	146th St	144th St	0 19	WB	2	25	0 0	N	0 0	0 0	0	2 76	C	0 85	A	0 26		Local Road - Shared Lane	1		3	1	1								6	
122nd Ave N	145th Ln	143rd St	0 21	EB	2	25	0 0	N	0 0	0 0	0	2 76	C	0 85	A	0 26		Local Road - Shared Lane	1		3	1	1								6	8
122nd Ave N	145th Ln	143rd St	0 21	WB	2	25	0 0	N	3 0	4 0	100	2 10	B	0 85	A			Local Road - Shared Lane				1	1								2	
122nd Ave N	Ridge Rd	113th St	0 16	EB	2	25	0 0	N	0 0	0 0	0	2 76	C	1 11	A	0 26		Local Road - Shared Lane	1		3	1	1								6	12
122nd Ave N	Ridge Rd	113th St	0 16	WB	2	25	0 0	N	0 0	0 0	0	2 76	C	1 11	A	0 26		Local Road - Shared Lane	1		3	1	1								6	
126th Ave N	116th St	Ridge Rd	0 25	EB	2	25	0 0	N	5 0	4 0	100	1 95	B	2 15	B		0 65	Local Road - Shared Lane		2			1								3	6
126th Ave N	116th St	Ridge Rd	0 25	WB	2	25	0 0	N	5 0	4 0	100	1 95	B	2 15	B		0 65	Local Road - Shared Lane		2			1								3	
126th Ave N	66th St	US 19	0 73	WB	2	35	0 0	N	0 0	0 0	0	3 45	C	2 72	C	0 95		Add Paved Shoulders Candidate (LOS Met)	2		3	1	2	2							10	19
126th Ave N	66th St	US 19	0 73	EB	2	35	0 0	N	30 0	5 0	20	3 42	C	2 72	C	0 92		Add Paved Shoulders Candidate (LOS Met)	2		3		2	2							9	
126th Ave N	68th St	66th St	0 26	EB	2	30	0 0	N	0 0	0 0	0	3 49	C	3 45	C	0 99		Add Paved Shoulders Candidate (LOS Met)	2		3	1	2								8	15
126th Ave N	68th St	66th St	0 26	WB	2	30	0 0	N	6 0	4 0	50	3 11	C	3 45	C	0 61		Add Paved Shoulders Candidate (LOS Met)	2		3		2								7	
126th Ave N	95th St	RR	0 28	EB	2	25	0 0	N	12 0	4 0	100	1 91	B	2 12	B		0 62	Local Road - Shared Lane		2			1								3	6
126th Ave N	95th St	RR	0 28	WB	2	25	0 0	N	12 0	4 0	100	1 91	B	2 12	B		0 62	Local Road - Shared Lane		2			1								3	
126th Ave N	end	Jackson	0 20	EB	2	25	0 0	N	0 0	0 0	0	3 21	C	2 44	B	0 71	0 94	Local Road - Shared Lane	2	2	3	1	1								9	18
126th Ave N	end	Jackson	0 20	WB	2	25	0 0	N	0 0	0 0	0	3 21	C	2 44	B	0 71	0 94	Local Road - Shared Lane	2	2	3	1	1								9	
126th Ave N	Indian Rocks Rd	134th St	0 48	EB	2	25	0 0	N	10 0	4 0	70	2 60	C	2 83	C	0 10	1 33	Local Road - Shared Lane	1	3	2		1	2							9	15
126th Ave N	Indian Rocks Rd	134th St	0 48	WB																												
126th Ave N	Ridge Rd	Seminole Blvd	0 63	WB																												
126th Ave N	Ridge Rd	Seminole Blvd	0 63	EB																												
126th Ave N	Starkey Rd	Wild Acres Rd	0 52	EB																												
126th Ave N	Starkey Rd	Wild Acres Rd	0 52	WB																												
12th St SW	2nd Ave SW	West Bay Dr	0 13	SB	2	25	0 0	N	0 0	0 0	0	2 89	C	1 68	B	0 39	0 18	Local Road - Shared Lane	1	1	3	1	1								7	13
12th St SW	2nd Ave SW	West Bay Dr	0 13	NB	2	25	0 0	N	0 0	0 0	0	2 89	C	1 29	A	0 39		Local Road - Shared Lane	1		3	1	1								6	
130th Ave N	119th St	Pinellas Trail	0 23	EB	2	25	0 0	N	15 0	5 0	30	2 96	C	0 95	A	0 46		Local Road - Shared Lane	1		3		1								5	6
130th Ave N	119th St	Pinellas Trail	0 23	WB	2	25	0 0	N	10 0	5 0	100	1 76	B	0 95	A			Local Road - Shared Lane					1								1	
130th Ave N	Jackson St	Ulmerton Rd	0 13	EB	2	25	4 0	N	5 0	5 0	100	1 73	B	0 72	A			Local Road - Shared Lane					1			1					2	4
130th Ave N	Jackson St	Ulmerton Rd	0 13	WB	2	25	4 0	N	7 0	5 0	100	1 67	B	0 72	A			Local Road - Shared Lane					1			1					2	
130th Ave N	Ridge Rd	109th St	0 35	EB	2	25	0 0	N	10 0	4 0	100	1 73	B	0 00	A			Restripe Candidate (Local)					1								1	2
130th Ave N	Ridge Rd	109th St	0 35	WB	2	25	0 0	N	10 0	4 0	100	1 73	B	0 00	A			Restripe Candidate (Local)					1								1	
130th Ave N	Washington Ave	95th St	0 25	WB	2	25	0 0	N	0 0	0 0	0	3 21	C	2 24	B	0 71	0 74	Local Road - Shared Lane	2	2	3	1	1								9	13
130th Ave N	Washington Ave	95th St	0 25	EB	2	25	0 0	N	8 0	4 0	90	2 25	B	2 24	B		0 74	Local Road - Shared Lane		2	1		1								4	
131st St N	114th Ave	Walsingham Rd	0 25	NB	2	35	0 0	N	15 0	4 0	75	2 97	C	4 14	D	0 47	0 64	Add Paved Shoulders Candidate	1	2	2		2	2							9	15
131st St N	114th Ave	Walsingham Rd	0 25	SB	2	35	0 0	N	20 0	4 0	100	2 36	B	4 14	D		0 64	Add Paved Shoulders Candidate		2			2	2							6	
134th Ave N	Vonn Rd/Gladys St	end	0 98	EB	2	25	0 0	N	12 0	4 0	60	2 49	B	1 28	A			Local Road - Shared Lane			2		1	1	1	1					6	10
134th Ave N	Vonn Rd/Gladys St	end	0 98	WB	2	25	0 0	N	12 0	4 0	100	1 79	B	1 28	A			Local Road - Shared Lane					1	1	1	1					4	
137th St N	unknown	Wilcox Rd	1 03	SB	2	25	0 0	N	10 0	5 0	100	1 76	B	1 11	A			Local Road - Shared Lane					1	1	1						3	6
137th St N	unknown	Wilcox Rd	1 03	NB	2	25	0 0	N	15 0	4 0	100	1 71	B	1 11	A			Local Road - Shared Lane					1	1	1						3	
142nd Ave N	Belcher Rd	66th St	1 11	EB	2	35	0 0	N	3 0	5 0	25	4 16	D	4 10	D	1 66	0 60	Add Paved Shoulders Candidate	3	2	3	1	2	2	2		3	3	3		24	41
142nd Ave N	Belcher Rd	66th St	1 11	WB	2	35	0 0	N	30 0	5 0	100	2 34	B	4 10	D		0 60	Add Paved Shoulders Candidate		2			2	2	2		3	3	3		17	
142nd Ave N	US 19	58th St	0 87	WB	2	30	0 0	N	25 0	5 0	70	2 58	C	3 56	D	0 08	0 06	Shared Lane Markings Candidate	1	1	2		1	1	2		3	3	3		17	33
142nd Ave N	US 19	58th St	0 87	EB	2	30	0 0	N	8 0	5 0	90	2 56	C	3 56	D	0 06	0 06	Shared Lane Markings Candidate	1	1	1		1	1	2		3	3	3		16	
143rd St N	Walsingham Rd	Channel Dr	0 50	SB	2	30	0 0	N	0 0	0 0	0	3 00	C	1 29	A	0 50		Local Road - Shared Lane	1		3	1	1	2							8	11
143rd St N	Walsingham Rd	Channel Dr	0 50	NB	2	30	0 0	N	20 0	4 0	100	1 71	B	1 29	A			Local Road - Shared Lane					1	2							3	
144th St N	Walsingham Rd	120th Ave	0 09	NB	2	25	0 0	N	0 0	0 0	0	2 83	C	1 04	A	0 33		Local Road - Shared Lane	1		3	1	1								6	12
144th St N	Walsingham Rd	120th Ave	0 09	SB	2	25	0 0	N	0 0	0 0	0	2 83	C	1 04	A	0 33		Local Road - Shared Lane	1		3	1	1								6	
145th Ln N	120th	122nd	0 15	NB	2	25	0 0	N	0 0	0 0	0	2 70	C	0 68	A	0 20		Local Road - Shared Lane	1		3	1	1								6	12
145th Ln N	120th	122nd	0 15	SB	2	25	0 0	N	0 0	0 0	0	2 70	C	0 68	A	0 20		Local Road - Shared Lane	1		3	1	1								6	
146th St N	Walsingham Rd	120th Ave	0 08	NB	2	25	0 0	N	0 0	5 0	75	2 48	B	1 14	A			Local Road - Shared Lane			2	1	1								4	6

SECTION 6 – PROPOSED PROJECTS, PRIORITIZATION, AND PHASING

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SECTION 6 – PROPOSED PROJECTS, PRIORITIZATION, AND PHASING

INTRODUCTION

This section provides a summary of the proposed citywide multimodal projects, the prioritization methodology, and possible phasing of the identified projects for the next 25-years. This section is intended to be used by the City as a guide for implementation of the identified high priority multimodal projects. Project phasing is anticipated to change as existing funding sources are increased, decreased, or new funding sources are identified. It is recommended that the project phasing within this section be reevaluated and updated on an annual bases in conjunction with the City budget update done each year.

BICYCLE FACILITY RECOMMENDATIONS

While some segments of Largo's Multimodal Network currently provide adequate conditions for bicycling, there is significant potential to improve the network's accommodation of bicycle travel through the provision of new facilities. Based on existing conditions and roadway geometries, recommended bicycle facility improvements have been identified. The recommendations, which focus on the network's arterial and collector roads, are the result of a multi-step analysis used to identify cost-effective solutions, where available. One of five potential solutions has been identified for each of the analyzed roadway segments. These outcomes include the following:

- No Recommended Improvement - existing on-road bicycle facility
- Roadway Restripe Candidate - reduction of existing lane widths to create space for bike lanes
- Road Diet Candidate - reduction of the number of lanes to create space for bike lanes
- Add Paved Shoulders Candidate
- Shared Lane Markings Candidate/Detailed Corridor Study Needed.

It should be noted that implementation of most roadway restripe, road diet, and paved shoulders projects would improve bicycling conditions sufficiently to meet the level of service targets identified in Section 4 of this Plan. Detailed corridor studies for the other segments may ultimately identify longer-term solutions to help meet the identified level of service targets. Each recommendation type is discussed in more detail in the sections below. Recommendations for the network's local streets, as well as for identifying the potential for shared use path/trail facilities, are also included. Map 1 provides a map of all of the proposed bicycle recommendations outlined below along the multimodal street network.

Existing On-Road Bicycle Facilities

One of the primary purposes of this Multimodal Network Plan is to identify locations for new on-road bicycle facilities. Accordingly, the first step in the facility recommendation process is to identify and filter out those study network segments where an on-road bicycle facility already exists. For the purposes of this plan, an existing bicycle facility is constituted by designated bike lanes or paved shoulders at least four feet wide (with a striped edge line). Twenty-three Multimodal Network segments, totaling approximately 11.2 centerline miles of roadway, currently have existing on-road bicycle facilities.

Roadway Restripe Candidates

Among strategies commonly used to improve bicycling conditions, roadway restriping is frequently considered the most desirable solution due to the very low associated cost and the existence of excess lane width on many streets. Roadway restriping was one of the first improvement recommendations analyzed after network segments with existing on-road bicycle facilities were filtered out.

For the purposes of this plan, the City has identified a minimum lane width of 11 feet to be considered a roadway restripe candidate, consistent with FDOT District 7 recommendation. The Multimodal Network analysis identifies five arterial and collector roadway segments on which the total pavement width (TPW) is sufficient to create space for four feet of bicycle facility in each direction of travel while preserving the minimum lane width for all other travel lanes and turn lanes. These segments are listed below:

- Walsingham Road (Reservoir Drive/125th Street to 119th Street): 2-lane undivided with 30' TPW;
- Indian Rocks Road (West Bay Drive to Mehlenbacher Road): 2-lane divided (two-way left turn lane) with 40' TPW;
- 49th St N (Ulmerton Rd to Roosevelt Blvd): 6-lane divided (raised median) with 37' TPW in each direction;
- East Bay Dr (8th St to U.S. 19): 6-lane divided (raised median) with 37' TPW in each direction;
- Roosevelt Blvd (U.S. 19 to 49th St): 6-lane divided (raised median) with 37' TPW in each direction; and

If the City were to allow a minimum lane width of 10 feet to be used the following segments would also be considered possible restripe candidates.

- West Bay Drive (Indian Rocks Road to Clearwater-Largo Road: 4-lane divided (two-way left turn lane) with 59' TPW;
- Belcher Road (Roosevelt Boulevard to Belleair Road): 4-lane divided (two-way left turn lane) with 58' TPW[1]; and;
- Keene Road (East Bay Drive to Belleair Road): 4-lane divided (two-way left turn lane) with 58' TPW.
- East Bay Dr (4th St/Central Park to 8th St): 5-lane (2 lanes EB and 3 lanes WB) divided (raised median) with 25' TPW EB and 37' TPW WB;
- Seminole Blvd (Walsingham Rd to East/West Bay Dr): 6-lane divided (raised median) with 34' TPW in each direction.

Road Diet Candidates

While the removal of travel lanes to create bicycle facilities (i.e., a road diet) is also relatively inexpensive to implement, restriping is typically a less noticeable change to a roadway and should generally be considered first. Road diets are more typically considered when a preliminary analysis indicates that sufficient capacity exists to effectively accommodate motor vehicle traffic for the foreseeable future with a reduced number of lanes. Significantly more detailed operational analyses should be carried out for individual segments before moving forward with any identified road diet projects.

Planning-level estimates of future year motor vehicle capacity are feasible through the use of generalized level of service tables, which are based upon default values using the *Highway Capacity Manual*. The Florida Department of Transportation has developed a set of generalized motor vehicle level of service tables that are widely utilized throughout Florida and the United States. The tables use default values for different area types for many traffic variables such as K-factor, D-factor, peak hour factor, and g/C ratio. The lookup tables produce a level of service result based on roadway class (determined through average signal spacing, which was field-collected), traffic volume, and number of lanes.

[1] Clearwater-Largo Road north of West Bay Drive provides an example of an existing 4-lane road with a two-way left turn lane and 50 feet of pavement that this recommendation would create (minus the resulting four-foot bike lanes)

To identify road diet candidates, the roadway segments were assessed using a reduced number of lanes (*e.g.*, 6-lane to 4-lane) to determine the resulting motor vehicle level of service. The results were compared against the identified motor vehicle level of service standard of "D" to see where excess capacity exists. Three resulting road diet candidate segments were identified:

- Ridge Road from Ulmerton Road to 8th Avenue SW,
- Clearwater-Largo Road from 8th Avenue SW to West Bay Drive (a continuation of the first segment),and
- Belcher Road from 118th Avenue N to Roosevelt Boulevard.

All three of these segments are currently 6-lane roads. The Pinellas County Metropolitan Planning Organization's 2011 Level of Service Report identifies each as currently providing LOS "B." Furthermore, FDOT's Generalized Tables indicate that LOS "B" would be maintained with a conversion to a 4-lane configuration. While the road diet candidates along Ridge Road and Clearwater-Largo Road both appear to have abundant capacity available for a lane reduction, it should be noted that plausible additional signalization[2] or traffic volume along Belcher Road could lead to an unacceptable motor vehicle level of service.

Because road diets involve the removal of a travel lane, which is generally at least ten feet wide, they are ideal locations for buffered bike lane treatments. Buffered bike lanes, which have been implemented on various types of roads in Tampa Bay and throughout Florida, include a typical four-to-six foot bike lane alongside a space striped with chevrons located between the bike lane and the adjacent travel lane. While the benefits of buffered bike lanes have not been studied in detail, they are widely believed to represent a significant benefit in terms of bicyclists' perceived safety and comfort because of the visual buffer that is given to motorists.

The identified roadway restripe and road diet candidates, if implemented, represent a significant enhancement to the Largo Multimodal Network's accommodation of bicycle travel without significant roadway reconstruction expenditures.

Add Paved Shoulders Candidates

At this point in the bicycle facility recommendation process, remaining roadway segments were examined to determine the feasibility of adding paved shoulders, which could be designated as bike lanes. While more expensive than roadway restriping and road diet projects, constructing paved shoulders on the outside of the existing edge of pavement is still much less expensive than projects that involve reconstruction of the roadway. Segments were required to have an open shoulder (i.e., not curb-and-gutter) cross-section to be considered a candidate for adding paved shoulders. Within this category, some segments will ultimately be better candidates for adding paved shoulders than others. Some of these segments have swales or ditches relatively close to the pavement that would require more costly drainage improvements and re-grading. Others are minor collectors on residential streets where bicycling conditions are already relatively good and/or paved shoulders may not be viewed as compatible with the adjacent land use. At this planning level, however, all should be considered initial candidates for this bicycle facility improvement type. More than 30% of the Multimodal Network mileage has been identified as potential paved shoulder candidate segments.

[2] Additional signals could change the FDOT roadway classification to a higher class, which would lead to different volume-based LOS thresholds.

Shared Lane Markings Candidates/Detailed Corridor Study Needed

Many arterial and collector Multimodal Network segments present minimal opportunity for improving bicycling conditions through the identified roadway retrofit strategies discussed above. Specific bicycling-related improvements to these segments will require extensive and detailed operational-level investigations of the constraints and opportunities along the corridors. The identification and development of parallel routes that are well-suited for bicycle travel may also be appropriate in some cases.

An inexpensive short-term improvement for roads that fall into this category is the installation of Shared Lane Markings, sometimes referred to as "sharrows." According to the 2012 American Association of State Highway Transportation Officials (AASHTO) *Guide for the Development of Bicycle Facilities*, Shared Lane Markings are appropriate in situations where increased guidance to bicyclists and motorists is desired, particularly when there is insufficient width to provide bike lanes. Shared Lane Markings alert motorists to the position bicyclists are likely to occupy within the lane, encourage safe passing of cyclists by motorists, and reduce the incidence of wrong-way bicycling. Research also suggests they reduce the incidence of sidewalk riding when sidewalks are present. The AASHTO *Guide* cites their best use as being on "Space-constrained roads with narrow travel lanes, or road segments upon which bike lanes are not selected due to space constraints or other limitations," which accurately describes this portion of the Multimodal Network.

There is no research at this time indicating that Shared Lane Markings significantly positively influence bicyclists' sense of safety and comfort (i.e., level of service). However, given the other benefits and the relatively low cost and time associated with implementation, as well as the presumed increased awareness they provide, Shared Lane Markings should be considered as an interim solution for the approximately 12 miles of the network in this category. Shared Lane Markings should also be considered for roadway restripe, road diet, and add paved shoulders candidate segments that are ultimately determined to be infeasible based on more detailed study.

While Shared Lane Markings do represent a significant aspect to making the Multimodal Network more accommodating of bicycling, the City should be judicious in their application with regard to both scope and connectivity. Shared Lane Markings should be considered most important along sections of road that have the potential to provide an extension of an existing bicycle facility or a connection between two facilities. The recommended Shared Lane Markings for 58th Street N between 142nd Avenue N and Roosevelt Boulevard provide a good example of this consideration. While Shared Lane Markings may be somewhat desirable for this segment in isolation, their importance and effectiveness become much more significant if the recommended roadway restripe south of 142nd Avenue and the addition of paved shoulders north of Roosevelt Boulevard are both implemented.

Local Streets

Approximately 40% of the Multimodal Network is comprised of streets functionally classified as "local." These streets are almost entirely surrounded by residential use. Local streets have low-to-very low traffic volumes and low speeds (all posted at 35 mph or less). These low volumes and speeds enable local streets to provide relatively good bicycling conditions (mostly bicycle LOS "A" and "B"), even in the absence of dedicated bicycle facilities. As such, construction projects to create new bike lanes are generally not recommended. Bike lanes are specifically recommended on only three network segments, specifically those that have sufficient space in their current configurations to allow for roadway restriping. While Shared Lane Markings could be considered for all other local streets, the AASHTO *Guide* states that their intended use is on collectors and minor arterials, which is particularly relevant given the concern of overuse of the device. The City should only consider Shared Lane Markings for local streets which have a demonstrated high level of bicycle travel or which are identified as part of a designated bike route at some point in the future.

Shared Use Path

Shared use paths adjacent to the roadway, also known as trails, provide a bicycle facility that some segments of the Largo population, including families with young children and senior citizens, prefer over on-road facilities. However, shared-use paths are associated with several serious operational concerns. The AASHTO *Guide* identifies 14 such concerns, many of which are related to contra-flow riding and conflicts at driveways and other unsignalized intersections. Accordingly, shared-use paths should generally only be considered on arterial and major collector roadways where very high motor vehicle speeds and volumes may discourage bicyclists from riding in the roadway even when bike lanes are provided. Shared-use paths are not a primary bicycle facility recommendation for any portions of the Multimodal Network, and should only be considered as supplemental facilities for high-speed, high-volume roadways, which include portions of,

- East Bay Drive,
- West Bay Drive,
- 113th Street N,
- Ridge Road,
- Clearwater-Largo Road,
- Starkey Road,
- Keene Road, and
- Belcher Road.

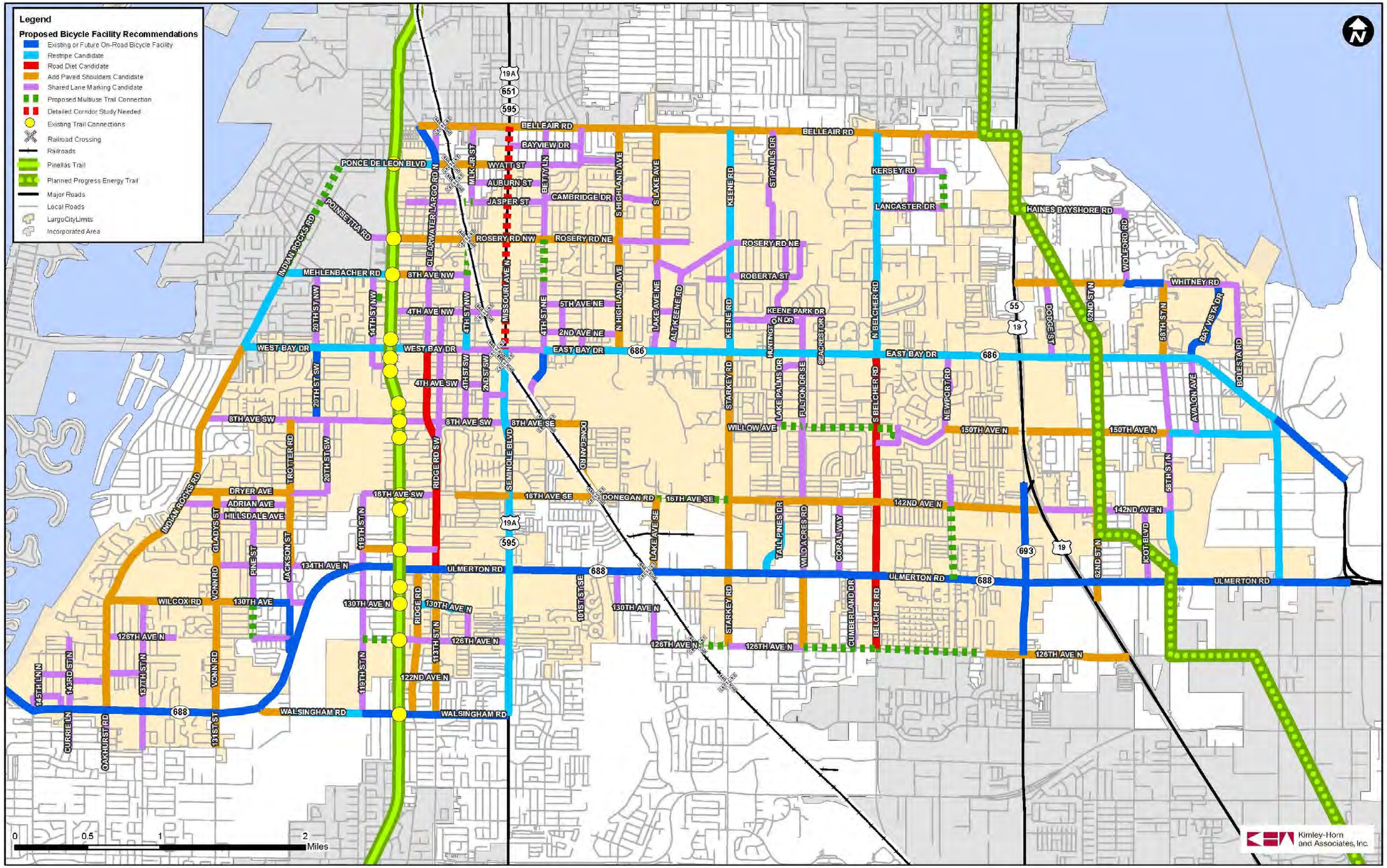
Right-of-way availability, prevalence of driveways and unsignalized intersections, land use compatibility, and utility and drainage impacts collectively keep any of these locations from being ideal shared-use path candidates. If the City does identify any shared-use path needs in the future, careful facility design will be needed to minimize the associated operational concerns.

Wide sidewalks that function as shared-use paths currently exist on several streets in Largo, including portions of Central Park Drive, 8th Avenue SE, and Walsingham Road on the Multimodal Network. On-road Shared Lane Markings are recommended in these locations.

PEDESTRIAN FACILITY RECOMMENDATIONS

As stated in the Phase I report, 100% sidewalk coverage on both sides of the street (where constructible) is the goal for the City's Multimodal Network. Currently, of the approximately 200 directional miles of roads on the network, more than 70 miles of sidewalk gaps exist and only 54 of the 179 (30%) analyzed segments have full sidewalk coverage. The resulting pedestrian facility recommendation for the remaining 70% network is to construct sidewalks, ideally five feet wide, with a buffer width of at least six-feet, to fill the gaps.

Map 1: Proposed Bicycle Facility Recommendations



PRELIMINARY TRANSIT RECOMMENDATION CONCEPTS

The transit assessment preformed during this phase found that the existing transit network works relatively well. Further coordination with the PSTA will be needed before the following suggested recommendations are considered for implementation. The recommendations were developed based on FDOT recommendations and through the review of other planning documents.

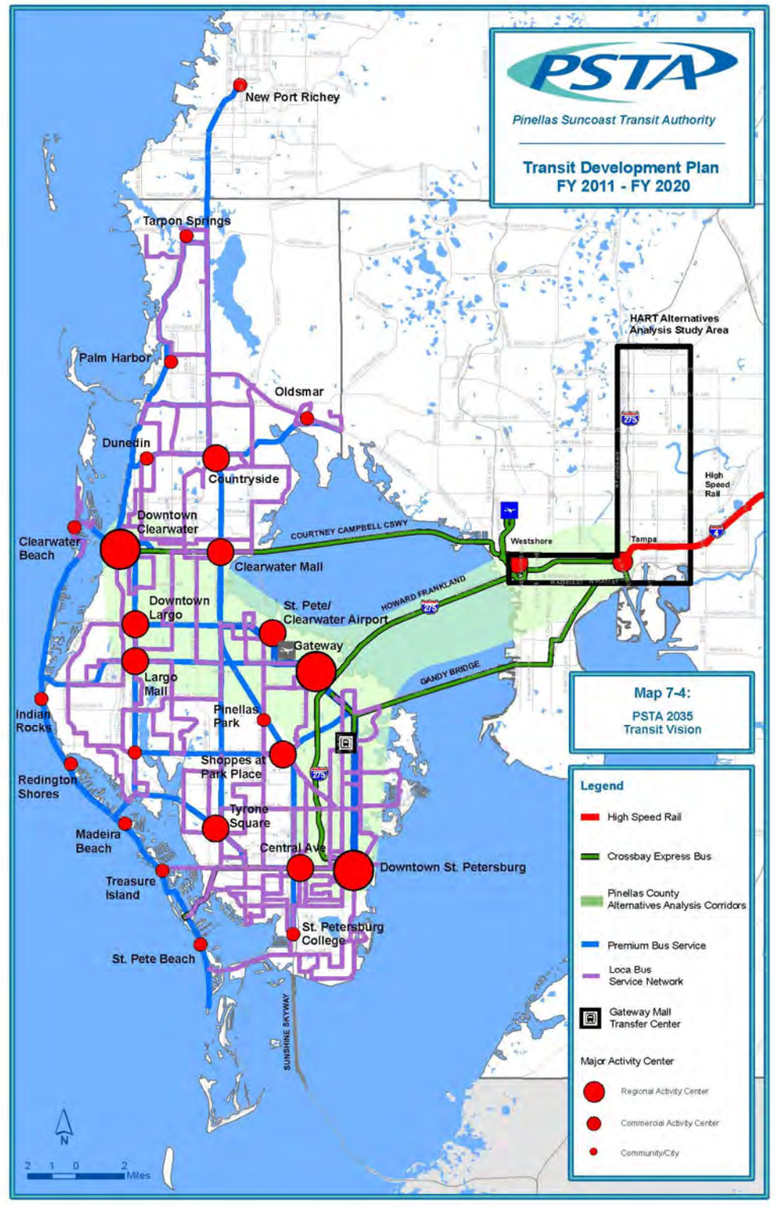
The following are a summary of the major transit recommendations identified during the preliminary assessment.

- Establish a recommended maximum headway on all PSTA routes within Largo of 20 minutes – This equates to the low end of level of service (LOS) "C" (without any adjustment factors). FDOT describes 20 minutes as representing the "Maximum desirable time to wait if transit vehicle is missed".
- Establish a recommended span of service of 14 hours for all routes (the minimum needed to avoid a downward LOS adjustment according to FDOT); some routes are currently at 12-13 hours of daily service.
- Support approved agreement from Oct. 2, 2012 for the construction of a PSTA station at the Largo/Crossroads Mall development. The project, located at the southeast corner of U.S. 19 and Roosevelt Boulevard, will include a 120,851-square-foot Walmart Store, a 342-unit apartment complex and the PSTA transfer station.
- A few new or re-routed alignments were identified and should be considered:
    - Rosery Road (identified in the Downtown Largo Multimodal Plan);
    - Belleair Road (one of few arterials not currently served, and would provide a much-needed east-west route for north Largo and south Clearwater); and
    - 113th Street N and Keene Road, are the other arterials without current service; these corridors may be accommodated by parallel routes on Seminole Boulevard and Highland Avenue, respectively (new service on both Belleair Road and Keene Road would collectively eliminate most of the ¼-mile service area gap that currently exists within the City).
- Support the recommendation identified in the PSTA's Transit Development Plan Major Update (FY 2011-2020) and the Downtown Largo Multimodal Plan for the construction of an intermodal center in Downtown Largo.

    "Largo Towne Center – PSTA has been working with the City of Largo, property owners, and developers of the Largo Towne Center on an appropriate transit center at the new commercial center. Conceptual design is complete and is proposed to include: sheltered waiting area, ticket booth, bathroom facilities, lighting, security cameras, and enough space for five buses at any one time."
- Recommend premium bus service (likely some form of BRT) along routes currently identified by PSTA.

Figure 1, to the right provides the PSTA's 2035 Transit Vision. The vision includes the proposed location of the Commercial Activity Center which is the planned location for the Largo Towne Center intermodal center as well as the identified corridors for the premium bus service.

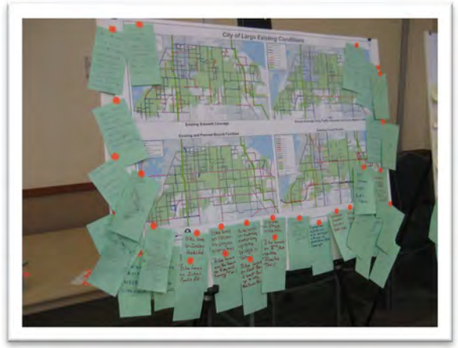
Figure 1: PSTA 2035 Transit Vision



PRIORITIZATION METHODOLOGY

To identify the initial list of citywide project corridors and focus areas along the Multimodal Network a prioritization methodology framework similar to the one used in the Downtown Largo Multimodal Plan was applied. The weighting of each category used to prioritize the potential projects was determined through public and stakeholder input as well as through direction provided by City staff. The following is a list of the categories used to prioritize the segments followed by descriptions of the specific elements evaluated under each category shown in Table 1.

- Level of Service
- Pedestrian needs
- Bicycle needs
- Safety
- Community resource connectivity
- Transit connectivity
- Public support
- Supports local plans



Applying the Prioritization Point System

Each roadway corridor, in each direction was assessed using the eight specific categories listed above and shown in Table 1. Corridors were assigned points from each category that fit closest to the descriptions listed under each grouping. Once all categories had been assessed for the corridor, in each direction the points accumulated from all categories were added together to give the total points per corridor. Projects with the highest point totals were considered higher priority corridors and candidates for near-term improvements.

Consolidating Projects

Once the prioritization methodology was applied to all segments within the multimodal street network, the segments were then separated by jurisdiction. Segments not managed by the City will require additional coordination with either the County of State to be included in their long range planning programs. The high priority projects from each jurisdictional group (City, County, and State) were then evaluated more closely to identify segments that could be combined with dependent adjacent corridors as well as identify those segments that could be completed independently, such as to complete smaller gaps in the network. A summary of the top ranked prioritized projects along the multimodal network are provided in Table 2. A copy of the complete list of corridor segments along with their individual scoring in provided in the Appendix.

Table 1: Prioritization Methodology Point System

LEVEL OF SERVICE (LOS)	
Pedestrian LOS	
Below Recommended Target (Ped) >1	**3**
Below Recommended Target (Ped) 1 < 0.5	**2**
Below Recommended Target (Ped) < 0.5	**1**
Bicycle LOS	
Below Recommended Target (Bike) >1	**3**
Below Recommended Target (Bike) 1 < 0.5	**2**
Below Recommended Target (Bike) < 0.5	**1**
PEDESTRIAN NEEDS*	
Substandard sidewalks - sidewalk coverage along at least one side of the road 50% or less	**3**
Sidewalk improvements needed - only 50% - 85% sidewalk coverage on at least 1 side	**2**
Minor sidewalk improvements needed/between 85%-90% sidewalk coverage	**1**
Crosswalk enhancements needed	**1**
Mid-block crossings recommended	**1**
Enhanced buffering between vehicle travel lane from sidewalk recommended (existing buffer 3 feet or less)	**1**
Landscape enhancements recommended	**1**
BICYCLE NEEDS	
Detailed corridor study needed	**3**
Recommended Road Diet for bike lanes	**3**
The construction of paved shoulders, restriping, or shared lane markings (sharrows)	**3**
Corridor has recommended improvement but is currently meeting target LOS	**2**
SAFETY	
Located within identified high hazard area	**3**
Corridor has an average of 4 or more crashes within last 5-years	**2**
Corridor has some areas of concern due to bike/ped related crashes within last 5-years	**1**
COMMUNITY RESOURCE CONNECTIVITY*	
Recommended Multi-use Trail - provides parallel facility to major corridor or fills network gap	**3**
Within Urban Trails Corridor	**2**
Connection to School(s)	**2**
Connection to recreational centers or parks	**2**
Connection to community or governmental facilities	**2**
Connection to activity center	**2**
TRANSIT CONNECTIVITY	
Corridors served by more than 2 transit routes	**3**
Corridors served by 1-2 transit route	**2**
Corridors served by at least 1 transit route	**1**
Corridor is within 1/4 mile buffer of a transit route	**1**
PUBLIC SUPPORT*	
Corridor and/or improvements were identified as high priority from public input	**3**
Corridor and/or improvements were identified as high priority by Technical Committee	**3**
SUPPORTS LOCAL PLANS	
Identified for funded improvements in another plan	**3**
Identified for unfunded improvements in another plan	**2**

**Point options separated by thick black lines can be combined with other options within the same category; Pedestrian Needs, Community Resource Connectivity, Transit Connectivity, and Public Support*

Table 2: Top Ranked City Maintained Proposed Projects

	Corridor	From	To	Distance	Description of Recommendation	Improvement Summary	Estimated Construction Cost
1	**16th Avenue SE**	**Seminole Blvd**	**End (Railroad Crossing)**	**0.6**	**There is incomplete sidewalk coverage along the entire segment. It is recommended that sidewalks be added to both sides of the street and paved shoulders be added to accommodate bicyclists. Currently the segment dead ends at the railroad tracks. A worn unplanned pedestrian/bike path was observed cutting across the property between where 16th Ave dead ends and Donegan Rd curves north on the east side of the tracks. It is recommended that coordination with CSX be made to discuss the construction of a proper bicycle and pedestrian crossing between the two roadways.**	**sidewalks, paved shoulder, railroad crossing***	**$308,000**
2	**8th Ave SE**	**Missouri Avenue**	**Donegan Road**	**0.52**	**The corridor was ranked as a high priority in both the technical stakeholder meeting and at the public workshop. The corridor would provide an alternative east-west connection to Ulmerton Road across the City. The recommendation is in support of the 142nd Avenue Urban Trail Corridor adopted by the City and has been broken into optional phases.**		**$210,000**
2a	*8th Avenue SE*	*Missouri Avenue*	*2nd Street*	*0.23*	There are no sidewalk recommendations required for this portion of the corridor; it is recommended that the shared lane markings be continued from previous segment.	shared lane markings	$2,400
2b	*8th Avenue SE*	*2nd Street*	*Donegan Road*	*0.29*	Segment has been identified as a "Top 100 Ranked" segment on the Sidewalk Program map. There is less than 50% sidewalk coverage on only one side of the street. It is recommended that sidewalks be constructed along both sides of the road and that proper railroad crossing treatments be applied. Paved shoulders should be added to accommodate bicyclists.	sidewalks, paved shoulders, railroad crossing*	$200,000
3	**McMullen Road**	**Lake Avenue**	**Keene Road**	**0.59**	**This segment was identified as a "Top 100 Ranked" segment and core sidewalk gap corridor on the Sidewalk Program map. There is only sidewalk coverage on one side of the road. It is recommended that the addition of a sidewalk be considered for the opposite side of the road and that proper crossings be installed at the intersection of Alt Keene Rd and McMullen Road. There are potential viewshed issues at that intersection. The addition of shared lane markings to make motorist aware that bicyclist are sharing the road is recommended.**	**sidewalk, shared lane markings**	**$106,000**
4	**Alt Keene Road**	**East Bay Dr**	**McMullen Road**	**0.53**	**This segment was identified as a "Top 100 Ranked" segment and core sidewalk gap corridor on the Sidewalk Program map. There is only sidewalk coverage on one side of the road. It is recommended that the addition of a sidewalk be considered for the opposite side of the road and that proper crossings be installed at the intersection of Alt Keene Rd and McMullen Road. There are potential viewshed issues at that intersection. The addition of shared lane markings to make motorist aware that bicyclist are sharing the road is recommended.**	**sidewalk, shared lane markings**	**$36,000**

*Projects identified will require a detailed corridor study including survey.

	Corridor	From	To	Distance	Description of Recommendation	Improvement Summary	Estimated Construction Cost
5	**West Bay Drive**	**Indian Rocks Road**	**Missouri Avenue**	**1.79**	**This segment has been identified as part of the Belleair Causeway urban trails corridor. West Bay has also been identified as a high hazard location due to the number of bicycle and pedestrian crashes. There is 100% sidewalk coverage along this corridor. The recommendation for this corridor includes the addition of shared lane markings on the portion within the downtown district and a potential restripe project to include bike lanes for the west portion of the segment outside the downtown district.**	**potential restripe, shared lane markings**	**$35,000**
5a	*West Bay Drive*	*Indian Rocks Road*	*Pinellas Trail*	*1*	This portion of the segment is located outside the downtown district. It is recommended that the road be restriped to add bike lanes. Both sides of the road have existing sidewalks.	potential restripe	$25,000
5b	*West Bay Drive*	*Pinellas Trail*	*Missouri Avenue*	*0.79*	This portion of the segment is located within the downtown district; funding from the downtown district could be applied to this portion of the segment. It is recommended that shared lane markings be added. Both sides of the road have existing sidewalks.	shared lane markings	$10,000
6	**Rosery Road**	**Pinellas Trail**	**S Lake Avenue**	**1.8**	**There are existing sidewalks located along both sides of this corridor. The LOS for bicycling is E, it is recommended that paved shoulders be added along the full length of this corridor to bring the LOS closer to the recommended LOS standard. Segment is located within the Downtown Corridor Urban Trails Corridor.**	**paved shoulder**	**$420,000**
6a	*Rosery Road*	*Pinellas Trail*	*Betty Lane*	*1.04*	It is recommended that paved shoulders be added to this segment. The segment is located within the downtown district, funds from the downtown district could be applied to this portion of the corridor.	paved shoulder	$240,000
6b	*Rosery Road*	*Betty Lane*	*S Lake Avenue*	*0.76*	It is recommended that paved shoulders be added to this segment.	paved shoulder	$180,000
7	**16th Avenue NW**	**Pinellas Trail**	**Jasper Street**	**0.56**	**This segment has less than 30 percent sidewalk coverage and provides no connection across the railroad. It is recommended that sidewalks be added on both sides of the street and a shared use path/trail be added to connect 16th Avenue NW to Jasper Street. Shared lane markings are recommended to alert motorists that bicyclists are sharing the road.**		**$146,000**
7a	*16th Avenue NW*	*Pinellas Trail*	*Railroad Crossing*	*0.47*	Sidewalks should be constructed on both sides of the street and shared lane markings should be installed.	sidewalk, shared lane markings	$116,000
7b	*16th Avenue NW*	*Railroad Crossing*	*Jasper Street*	*0.09*	This portion of the segment is intended to be a shared use path/trail connection between 16th Avenue NW and Jasper Street. It would be for non-motorized uses. Proper railroad crossing treatments would be required for crossing the tracks as well as coordination with CSX.	shared use path/trail	$30,000
8	**4th Ave NW**	**Pinellas Trail**	**Missouri Avenue**	**0.78**	**This corridor was assessed during the feasibility study. There are sidewalk gaps and access management issues along the corridor as well as a potential to create a non-motorized railroad crossing on the east end of the corridor. Price is undetermined at this time due to the multiple factors that influence the design and construction of the improvements.**	**sidewalks, paved shoulder, railroad crossing***	**NA***

	Corridor	From	To	Distance	Description of Recommendation	Improvement Summary	Estimated Construction Cost
9	58th Street N	142nd Ave N	Whitney Road	0.51	There are some gaps in the sidewalk network along this segment and there are no designated bike facilities. It is recommended that paved shoulders be added between Roosevelt Blvd and Whitney Road and shared lane markings be added to the remaining portion of the segment.	sidewalks, shared lane markings	$250,000
10	Bolesta Road	Whitney Road	Roosevelt Blvd	0.73	There are incomplete segments of sidewalk coverage along this corridor. It is recommended that sidewalk gaps be filled and shared lane markings be added.	sidewalk, shared lane markings	$158,000
11	Whitney Road	58th St N	Bolesta Road	0.51	This corridor was assessed during the feasibility study. There are sidewalk gaps and recommended intersection improvements identified. Cost is subject to change due to possible right-of-way/environmental constraints. It is recommended that shared lane markings be added.	sidewalk, shared lane markings	$10,000
12	4th St NE	East Bay Dr	8th Ave NW	0.5	There is only sidewalk coverage along one side of the corridor. It is recommended that sidewalks be added to both sides of the corridor. The addition of paved shoulders along the segment is recommended to aid in raising the existing bicycle LOS.	sidewalks, paved shoulder	$96,000
13	Clearwater-Largo Road	8th Avenue	Ponce de Leon Blvd	1.76	There are existing sidewalks along both sides of this corridor. It is recommended that a road diet (reduction from six lanes to four lanes) be studied for application on the segment between 8th Ave NW and West Bay and shared lane markings be added to the remainder of the segment from West Bay Drive to Ponce de Leon Blvd.	road diet, shared lane markings	$47,000
14	Lake Avenue NE	McMullen Road	Belleair Road	1.53	There is only sidewalk coverage along one side of the corridor. It is recommended that sidewalks be added to both sides of the corridor. The addition of paved shoulders along the segment is recommended to aid in raising the existing bicycle LOS high than an 'E.'	paved shoulder	$500,000
15	14th St NW	West Bay Dr	Mehlenbacher Road	0.51	There are no existing sidewalks on either side of the corridor. It is recommended that sidewalks be added to both sides of the street as well as shared lane markings.	sidewalk, shared lane markings	$110,000
16	Gladys St	134th Avenue	Dryer Avenue	0.51	There is only about 60 percent sidewalk coverage on one side of the street. It is recommended that paved shoulders be added to the entire length of the corridor in addition to completing the sidewalk gaps.	sidewalks, paved shoulder	$350,000
17	5th Ave NE	4th St NE	N Highlands Ave	0.53	The corridor has existing sidewalk coverage on one side of the street. It is recommended that sidewalks be added to the other side of the street as well as shared lane markings.	sidewalk, shared lane markings	$96,000
18	2nd Ave NE	4th St NE	N Highlands Ave	0.53	The corridor has existing sidewalk coverage on one side of the street. It is recommended that sidewalks be added to the other side of the street as well as shared lane markings. The existing sidewalk is also below the minimum 5' foot wide standard set within this plan.	sidewalk, shared lane markings	$96,000

*Projects identified will require a detailed corridor study including survey.

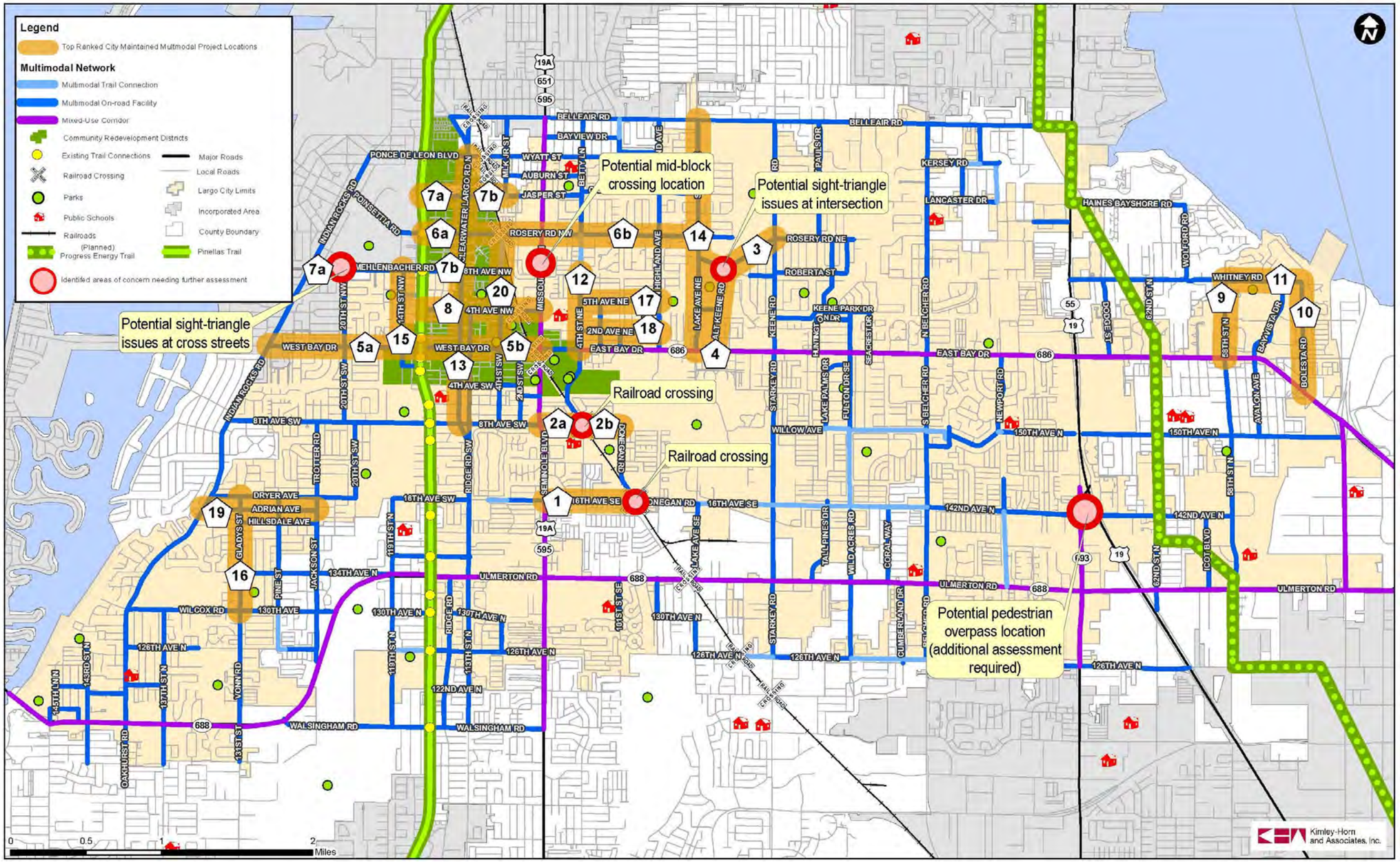
	Corridor	From	To	Distance	Description of Recommendation	Improvement Summary	Estimated Construction Cost
19	Adrian Ave	Indian Rocks Road	Trotter Road	0.76	There is inconsistent sidewalk coverage along the corridor. Proper crosswalks and ramping should be constructed at the intersections along with the addition of shared lane markings.	sidewalk, shared lane markings	$110,000
20	4th St NW	4th Ave	8th Ave	0.52	The corridor has existing sidewalk coverage on one side of the street. It is recommended that sidewalks be added to the other side of the street as well as shared lane markings. Proper crosswalks and ramping should be constructed at the intersections.	sidewalk, shared lane markings	$125,000

Table 3 provides a summary of the top five (5) identified proposed corridor projects along the future-city, County, and State, maintained roadways. Maps are provided for each jurisdiction's prioritized projects on the following pages.

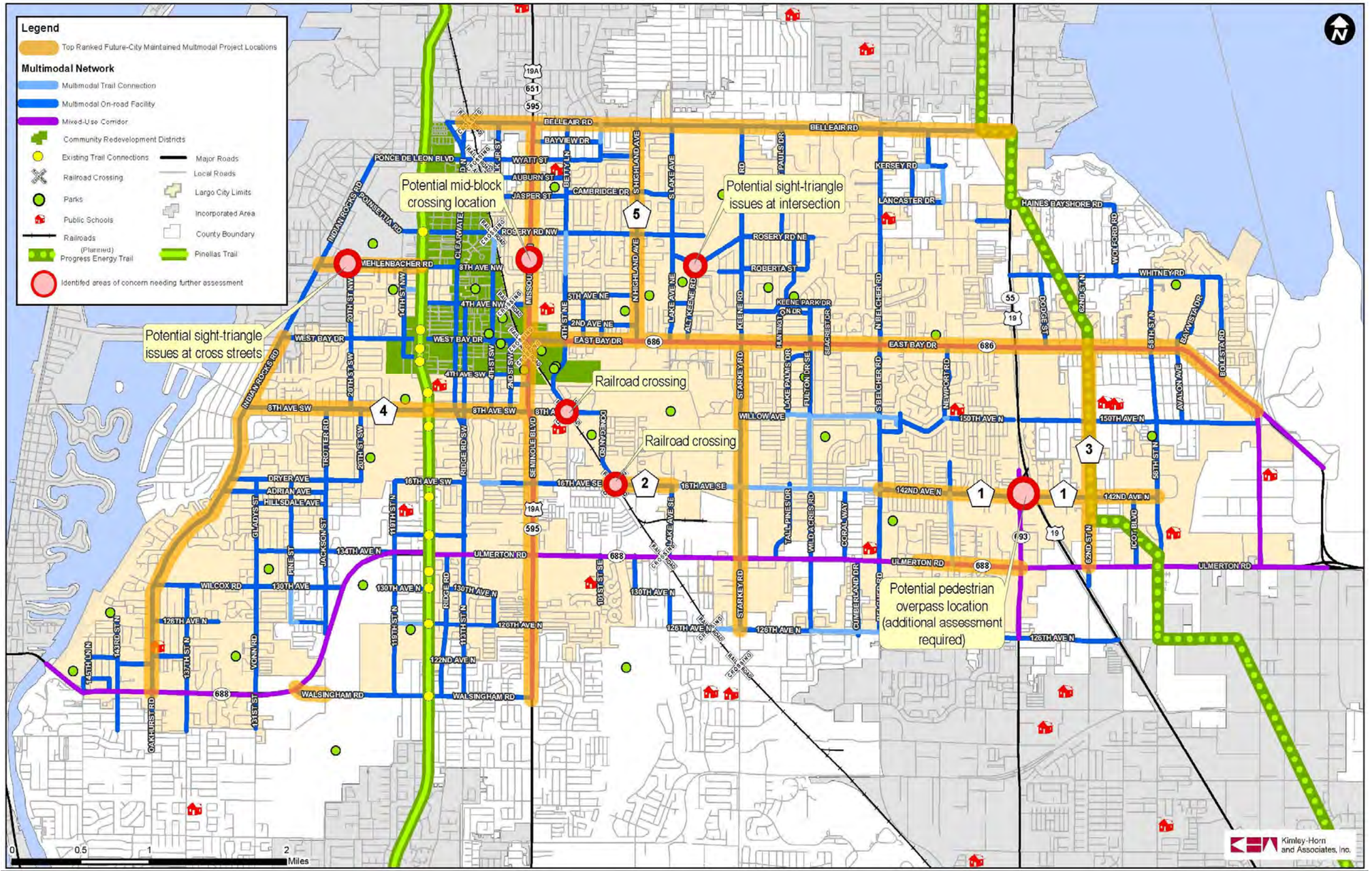
Table 3: Top 5 Prioritized Non-City Owned Projects

Summary of Top 5 Prioritized Future-City Maintained Projects			
Priority	**Road Name**	**From**	**To**
1	142nd Ave N	Belcher Rd	58th St
2	Donegan Rd	Lake Ave	8th Ave SE
3	62nd St N	Ulmerton Rd	Roosevelt Rd
4	8th Ave SW	Indian Rocks Rd	Missouri Ave
5	Highlands Ave	East Bay Dr	Belleair Rd
Summary of Top 5 Prioritized County Maintained Projects			
Priority	**Road Name**	**From**	**To**
1	Starkey Rd	126th Ave	East Bay Dr
2	Indian Rocks Rd	Walsingham Rd	West Bay Dr
3	Mehlenbacher Rd	Indian Rocks Rd	Pinellas Trail
4	Belleair Rd	Clearwater-Largo Rd	US 19
5	Walsingham Rd	Ulmerton Rd	125th St
Summary of Top 5 Prioritized State Maintained Projects			
Priority	**Road Name**	**From**	**To**
1	East Bay Dr	Seminole Blvd	US 19
2	Roosevelt Blvd	US 19	49th St
3	Missouri Ave	East/West Bay Dr	Belleair Rd
4	Seminole Blvd	Walsingham Rd	East/West Bay Dr
5	Ulmerton Rd	El Centro Blvd	66th St

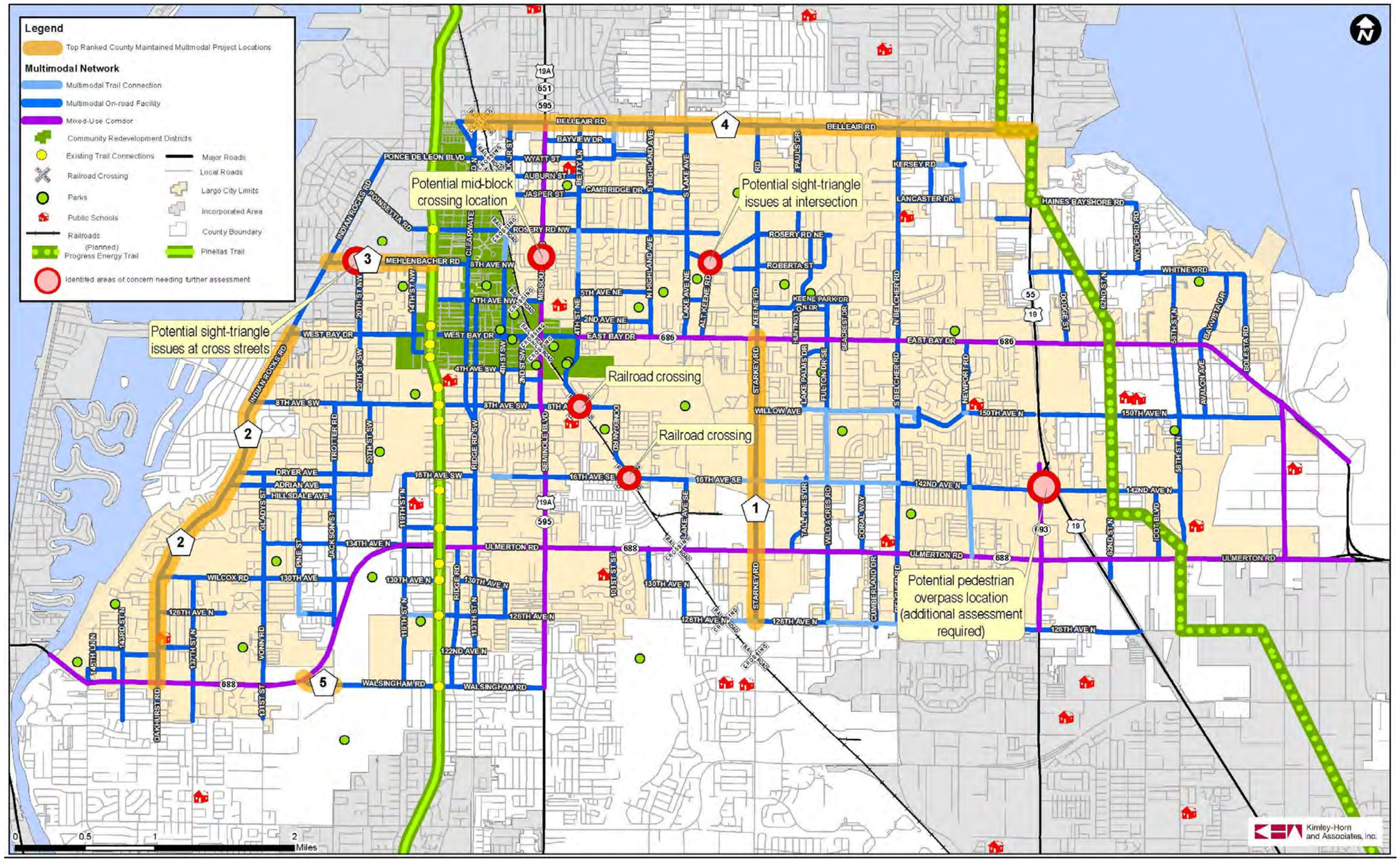
Map 2: Identified Top Ranked Prioritized City Projects



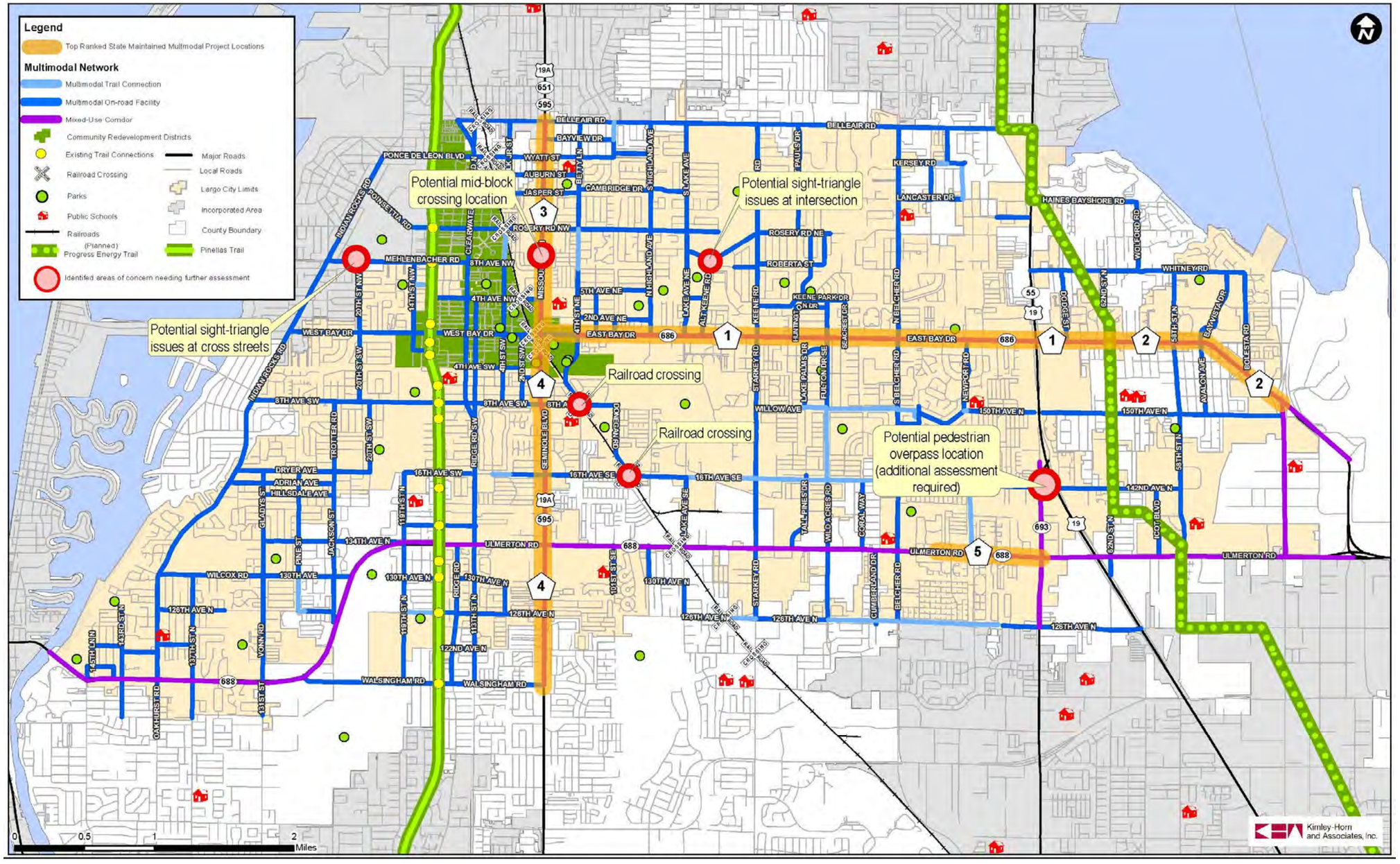
Map 3: Identified Top Ranked Prioritized Future-City Projects



Map 4: Identified Top Ranked Prioritized County Projects



Map 5: Identified Top Ranked Prioritized State Projects



FUNDING OVERVIEW

Phasing Process

The phasing plan for the implementation of projects over the next 25-years was determined by first identifying the high priority projects, using the prioritization methodology described in the previous sections and then assessing the cost of each project to match with anticipated available funding within each planning phase. The next 25-years were broken into five, five-year planning horizons, starting with FY 2014. The planning horizons were grouped into the following five phases.

- **Phase I** : FY 2014-2018
- **Phase II** : FY 2019-2023
- **Phase III** : FY 2024-2028
- **Phase IV** : FY 2029-2033
- **Phase V** : FY 2034-2038

The highest priority projects, agreed upon by the City, were recommended for implementation in the earlier phases until the anticipated balance of funds become available. The project phasing does not take into consideration other construction projects planned for the roadways, such as resurfacing and utility improvements. It should be noted that multimodal project phasing should be adjusted to be constructed concurrent with other planned improvements to reduce overall costs and impacts to the community during construction.

Transit Service Consideration

As outlined in the Downtown Largo Multimodal Plan, transit recommendations were not included in the implementation phases as it is assumed that the cost associated with improving these types of projects would be administered on a regional bases by PSTA, Pinellas MPO, Pinellas County, or other state or private agency.

Bus Stops and Shelter Amenities

The estimated cost associated with bringing a bus stop up to the recommended standard outlined in the Design Standards section of this plan has been provided. It is assumed that bus stop locations will be moved within 100 feet of an intersection, (unless a mid-block crossing is present) providing greater pedestrian connectivity. It is recommended that bus stops and shelter amenities be re-configured or constructed to correlate to the corridor along which it is located during its corresponding implementation phase.

If a corridor is recommend for improvement before a transit service operates along it, it is recommended that bus stop and shelter amenities be located within 100 feet of an intersection when service is initiated. During all phases of implementation, the location of bus stops, shelter amenities, and other transit facilities will require close coordination with PSTA or the implementing agency.[3]

State and County Roadways

This plan makes recommendations for multimodal improvements along state and county roadways which are under the jurisdiction of Pinellas County and/or FDOT. As shown in the prioritization results, roadways not under the jurisdiction of the City of Largo were ranked separately. It is recommended that coordination with the jurisdictional agency be made in the early stages of project planning and design for maintaining or improving the facility. Constructing recommended multimodal improvements concurrently with roadway construction projects reduces overall project cost and limits the impact and inconvenience of construction on the surrounding community.

Funding Sources

The funding sources outlined in this section were obtained from the *Proposed City of Largo Capital Improvement Program and Long Range Financial Plan, FY 2013-2017* and calculations outlined in the *Downtown Largo Multimodal Plan, 2011*. Final numbers used were finalized by City staff using all resources available. Funding amounts and totals presented for years outside FY 2013-2017 are planning level estimates created for this plan.

All financial projections are based on the best information available and are subject to change. All financial projections are updated twice annually; first while developing the CIP and Long Range Financial Plan, and secondly during the annual budget process. Projects identified to be funded in a specific year will not be funded until officially adopted into the City's CIP. [4] It is recommended that when new updates or changes to the CIP or other funding sources are made that the projects listed within the effected years be reevaluated. The implementation of projects outlined within each planning phase are anticipated to follow the estimated annual available funds summarized in Table 4.

Table 4: Estimated Annual Total Funds Available for Transportation Projects

Funding Sources	Estimated Annual Allocation
Local Option Sales Tax (LOST)	$563,000
Downtown Tax Increment Financing District (DTIF)	$456,285
Transportation Impact Fund (TIF)	$196,420
Estimated Total CIP Available Funds	**$1,215,705**

Local Option Sales Tax (LOST)

The LOST Fund accounts for proceeds from the local option sales tax, which is also called the Penny for Pinellas. An extension of the tax was approved by referendum through December 31, 2019. For planning purposes it was assumed that the Penny for Pinellas tax would be extended again upon its renewal date in year 2019. If this tax does not get renewed the funding phasing schedule will need to be revised. LOST funds can be used for new infrastructure or significant repairs to infrastructure. A modest estimated annual revenue source of $563,000 was used for the project phasing schedule.

Downtown Tax Increment Financing District (DTIF)

Downtown Tax Increment Financing District (DTIF) Fund projects are based on redevelopment activities in the downtown area. Projects located within the Downtown area eligible to use this funding source are identified in each planning phase.

The City projects that the Largo Downtown Tax Increment Finance District (DTIF) is projected to accrue approximately $456,285 per year in revenue. These funds can only be spent on projects within the West Bay Drive CRD.

Transportation Impact Fee

Transportation Impact Fee Fund projects are based on impact fees paid by new development, which can vary widely from year to year, and have also been affected by the recession. Transportation impact fees are established by Pinellas County and are shared with the municipality that collected the fee. An estimated $196,100 would be available for use by 2017, resulting in an average of $196,420 through 2017. A modest annual projected total of $150,000 was used for years beyond 2017.

[3] *Recommendation and language from Downtown Largo Multimodal Plan, 2011.*

[4] *Information obtained from the City of Largo Proposed Capital Improvement Program and Long Range Financial Plan, FY 2013-2017.*

PROPOSED PHASING

Introduction

The projects selected for each five year planning horizon were selected from the top 20 project recommendation list. Projects were not always phased in order that they may have appeared in the table due to funding limitations. The goal of each planning horizon was to identify complete corridors or segments what would support a previous year's project implementation or provide an existing connection for the projects proposed for the upcoming planning horizons. With the understanding that project goals and priorities can change and funding opportunities can fluctuate a table of short term projects is also provided and can be found in the Appendix. The table of short term projects can be used by the City when a larger proposed corridor project is unable to be funded in its designated planning horizon, allowing the City the option to select from a list of lower cost, high priority projects.

Cost Estimates

The projected project cost shown for each proposed project are planning level estimates. Cost estimates were created using FDOT Long Range Estimate (LRE) system and average project costs gathered from past projects. Total cost shown is derived from a standard typical section. Costs will need to be adjusted to account for any additional items not deemed typical, such as intersections/interchanges, improvements to cross streets, bridges over 20', right-of-way, landscaping, ITS, and traffic signals. A 15% preliminary engineering (PE) design cost and 15% construction, engineering, and inspection (CEI) cost was also applied. A copy of the FDOT Roadway Cost Per Centerline Mile estimate sheet is provided in the Appendix.

Roadway Cost Per Centerline Mile
Revised June 2012

	Construction Cost From LRE	MOT *	Mobilization *	Subtotal	Scope Contingency (25%)	Total Construction Cost	PE Design (15%)	CEI (15%)	Total Project Cost **
Rural Arterial									
New Construction (2-Lane Roadway) with 5' Paved Shoulders	$2,597,141	$259,714	$329,668	$3,826,541	$956,635	**$4,533,176**	$679,976	$679,976	$5,893,128
New Construction (4-Lane Roadway) with 5' Paved Shoulders	$4,783,393	$478,339	$526,173	$5,787,905	$1,446,976	**$7,234,881**	$1,085,232	$1,085,232	$9,405,345
New Construction (6-Lane Roadway) with 5' Paved Shoulders	$6,097,845	$609,785	$670,763	$7,378,393	$1,844,598	**$9,222,991**	$1,383,449	$1,383,449	$11,989,889
Milling and Resurfacing (4-Lane Roadway) with 5' Paved Shoulders	$1,031,387	$103,139	$113,452	$1,247,979	$311,995	**$1,559,973**	$233,996	$233,996	$2,027,965
Milling and Resurfacing (6-Lane Roadway) with 5' Paved Shoulders	$1,509,273	$150,927	$166,020	$1,826,220	$456,555	**$2,282,775**	$342,416	$342,416	$2,967,607
Add Lanes (2 to 4 Lanes) with 5' Paved Shoulders (Includes milling and resurfacing of existing pavement)	$3,764,991	$376,499	$414,149	$4,555,640	$1,138,910	**$5,694,550**	$854,182	$854,182	$7,402,914
Add Lanes (4 to 6 Lanes) with 5' Paved Shoulders (Includes milling and resurfacing of existing pavement)	$4,147,292	$414,729	$456,202	$5,018,223	$1,254,556	**$6,272,779**	$940,917	$940,917	$8,154,613
Add Lanes (4 to 8 Lanes) with 5' Paved Shoulders (Includes milling and resurfacing of existing pavement)	$5,567,988	$556,799	$612,479	$6,737,266	$1,684,317	**$8,421,583**	$1,263,237	$1,263,237	$10,948,057
Add Lanes (6 to 8 Lanes) with 5' Paved Shoulders (Includes milling and resurfacing of existing pavement)	$5,274,825	$522,483	$574,731	$6,322,039	$1,580,510	**$7,902,548**	$1,185,382	$1,185,382	$10,273,312
Add 1 Through Lane on Inside (To Existing) with 5' Paved Shoulders	$871,292	$87,129	$95,842	$1,054,263	$263,566	**$1,317,829**	$197,674	$197,674	$1,713,177
Add 1 Through Lane on Outside (To Existing) with 5' Paved Shoulders	$1,423,981	$142,398	$156,638	$1,723,017	$430,754	**$2,153,771**	$323,066	$323,066	$2,799,903
Add 200' Exclusive Left Turn Lane	$44,214	$8,632	$7,827	$58,473	$14,618	**$73,091**	$10,964	$10,964	$95,019
Add 200' Exclusive Right Turn Lane	$107,770	$16,165	$18,596	$142,526	$35,631	**$178,157**	$26,724	$26,724	$231,604
Urban Arterial									
New Construction (2-Lane Roadway) with 5' Sidewalk, and Curb & Gutter	$4,279,236	$427,924	$479,716	$5,177,876	$1,294,469	**$6,472,344**	$970,852	$970,852	$8,414,048
New Construction (4-Lane Roadway) with 5' Sidewalk, and Curb & Gutter	$6,040,559	$604,056	$664,462	$7,309,077	$1,827,269	**$9,136,346**	$1,370,452	$1,370,452	$11,877,250
New Construction (6-Lane Roadway) with 5' Sidewalk, and Curb & Gutter	$7,395,280	$739,528	$813,580	$8,949,474	$2,237,369	**$11,186,843**	$1,678,026	$1,678,026	$14,542,895
Milling and Resurfacing (4-Lane Roadway) with 5' Sidewalk, and Curb & Gutter	$1,118,757	$110,876	$121,962	$1,341,595	$335,399	**$1,676,994**	$251,549	$251,549	$2,180,093
Milling and Resurfacing (4-Lane Roadway) with 5' Sidewalk, and Curb & Gutter	$1,573,097	$157,310	$173,041	$1,903,447	$475,862	**$2,379,309**	$356,896	$356,896	$3,093,100
Add Lanes (2 to 4 Lanes) with 5' Sidewalk, and Curb & Gutter (Includes milling and resurfacing existing pavement)	$4,686,892	$468,689	$515,558	$5,671,140	$1,417,785	**$7,088,925**	$1,063,339	$1,063,339	$9,215,603
Add Lanes (4 to 6 Lanes) with 5' Sidewalk, and Curb & Gutter (Includes milling and resurfacing existing pavement)	$5,179,398	$517,940	$569,734	$6,267,070	$1,566,767	**$7,833,837**	$1,175,076	$1,175,076	$10,183,989
Add Lanes (4 to 8 Lanes) with 5' Sidewalk, and Curb & Gutter (Includes milling and resurfacing existing pavement)	$6,977,100	$697,710	$767,481	$8,442,291	$2,110,573	**$10,552,863**	$1,582,930	$1,582,930	$13,718,723
Add Lanes (6 to 8 Lanes) with 5' Sidewalk, and Curb & Gutter (Includes milling and									

Other Roadway Related Costs
Revised June 2012

	Construction Cost From LRE	MOT *	Mobilization (15%)	Subtotal	Scope Contingency (25%)	Total Construction Cost	PE Design (15%)	CEI (15%)	Total Project Cost
Intersection Traffic Signalization (Mast Arm Assembly)**									
2-Lane Roadway Intersecting 2-Lane Roadway	$117,519	$17,628	$20,272	$155,419	$38,855	**$194,274**	$29,141	$29,141	$252,556
4-Lane Roadway Intersecting 4-Lane Roadway	$147,128	$22,069	$25,380	$194,576	$48,644	**$243,220**	$36,483	$36,483	$316,186
6-Lane Roadway Intersecting 6-Lane Roadway	$187,577	$28,136	$32,357	$248,070	$62,018	**$310,088**	$46,513	$46,513	$403,114
Bicycle and Pedestrian Facilities									
Sidewalks Per Mile (6' Width - 1 Side)	$74,389	$3,719	$11,716	$89,825	$22,456	**$112,281**	$16,842	$16,842	$145,965
Sidewalks Per Mile (8' Width - 1 Side)	$99,267	$4,463	$14,060	$107,790	$26,948	**$134,738**	$20,211	$20,211	$175,158
Multi-Use Trail Per Mile (12' Width - 1 Side)	$161,864	$8,093	$25,494	$195,450	$48,863	**$244,313**	$36,647	$36,647	$317,607
Stormwater Retention Facilities									
1 Acre Pond Site (6' Depth)	$217,451	$10,873	$34,250	$262,584	$65,646	**$328,231**	$49,235	$49,235	$426,700
Median Retrofit									
Convert 14' Center Turn Lane to 14' Raised Median (Per Mile)	$183,563	$27,534	$31,665	$242,762	$60,690	**$303,452**	$45,518	$45,518	$394,488
Cross Street Improvements									
Widen 1-Leg of Existing Rural 2-Lane Cross Street to Accommodate 2 Receiving Lanes, Dual Left Turn lanes, and Exclusive Right Turn Lane (Approximate Length of 0.25 Miles)	$1,181,526	$177,229	$209,813	$1,562,569	$390,642	**$1,953,211**	$292,982	$292,982	$2,539,174

* A 15% MOT factor was used for Traffic Signals, Median Retrofit, and Cross Street Improvements. A 5% factor was used for all other figures.
**The cost of traffic signalization assumes the installation of mast arms on all four legs of an intersection. To obtain the cost of signalizing a four-lane roadway intersecting a two-lane roadway, divide the signal cost of a four-lane roadway by two and add this figure to the signal cost of the two-lane roadway divided by two.

Notes:
1. Estimates were derived from FDOT LRE system
2. The figures are based on market costs for Hillsborough County.
3. Costs shown are present day costs.
4. The costs developed for this report are not site-specific and should be used for preliminary estimating purposes only.

Table 5: Phase I Planning Horizon

	Phase I					
	FY 2014	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018***	**Totals**
Local Option Sales Tax (LOST)	$0	$25,000	$50,000	$590,000	$25,000	$690,000
Transportation Impact Fund (TIF)	565,000	595,000	100,000	675,000	400,000	$2,335,000
16th Ave SE: Seminole Blvd to End	*$77,000*	*$77,000*	*$77,000*	*$77,000*		$308,000
8th Ave SE: Missouri Ave to Donegan Rd	*$105,000*	*$105,000*				$210,000
West Bay Drive: Indian Rocks Rd to Missouri Rd					*$25,000*	$25,000
McMullen Rd: Lake Ave to Keene Rd	*$53,000*	*$53,000*				$106,000
Clearwater-Largo Rd: West Bay Dr to Ponce de Leon Blvd	*$27,000*					$27,000
Roosevelt Blvd: US 19 to 49th St		*$25,000*	*$25,000*			$50,000
Missouri Ave: East/West Bay Dr to Belleair Rd		*NA**				$0
Ulmerton Rd: 66th St to US 19			*NA**			$0
Walsingham Rd: Indian Rocks Rd at Ulmerton Rd				*NA**		$0
Downtown Tax Increment Financing District (DTIF) - Projects within District	$50,000	$370,000	$0	$982,100	$150,000	$1,552,100
West Bay Drive: Indian Rocks Rd to Missouri Rd					*$10,000*	$10,000
Clearwater-Largo Rd: West Bay Dr to Ponce de Leon Blvd	*$20,000*					$20,000
Estimated Available Revenue	**$615,000**	**$990,000**	**$150,000**	**$2,247,100**	**$575,000**	**$4,577,100**
Projected Cost	*$282,000*	*$260,000*	*$102,000*	*$77,000*	*$35,000*	*$756,000*
Estimated Available Funds Left	*$333,000*	*$730,000*	*$48,000*	*$2,170,100*	*$540,000*	***$3,821,100***

NA- Detailed corridor assessment needed; High Hazard corridor*

Table 6: Phase II Planning Horizon

	Phase II					
	FY 2019*	**FY 2020***	**FY 2021***	**FY 2022***	**FY 2023***	**Totals**
Local Option Sales Tax (LOST)	$50,000	$590,000	$579,900	$597,300	$615,200	$2,432,400
Transportation Impact Fund (TIF)	150,000	150,000	150,000	150,000	150,000	$750,000
Alt Keene Rd: East Bay Dr to McMullen Rd	*$36,000*					$36,000
Rosery Rd: Pinellas Trailt S Lake Avenue	*$50,000*	*$75,000*	*$75,000*	*$75,000*	*$20,000*	$295,000
16th Ave NW: Pinellas Trail to Jasper St	*$50,000*	*$50,000*	*$50,000*			$150,000
58th St N: Roosevelt Blvd to Whitney Rd	*NA**					NA
Bolesta Rd: Whitney Rd to Roosevelt Rd	*$80,000*	*$80,000*				$160,000
4th St NE: East Bay Dr to 8th Ave NE		*$10,000*	*$10,000*	*$10,000*		$30,000
Pine St: Wilcox Rd to Dryer Ave		*$105,000*	*$100,000*			$205,000
Whitney Rd: 58th St to Bolesta Rd	*$15,000*					$15,000
Adrian Ave: Indian Rocks Rd to Trotter Rd				*$50,000*	*$50,000*	$100,000
Downtown Tax Increment Financing District (DTIF) - Projects within District	$411,000	$422,300	$434,000	$445,800	$458,100	$2,171,200
Rosery Rd: Pinellas Trailt S Lake Avenue	*$50,000*	*$25,000*	*$25,000*	*$25,000*		$125,000
4th St NE: East Bay Dr to 8th Ave NE		*$22,000*	*$22,000*	*$22,000*		$66,000
4th Ave NW: Pinellas Trail to Missouri Ave	*NA**					NA
Estimated Available Revenue	**$611,000**	**$1,162,300**	**$1,163,900**	**$1,193,100**	**$1,223,300**	**$5,353,600**
Projected Cost	*$281,000*	*$367,000*	*$282,000*	*$182,000*	*$70,000*	*$1,182,000*
Estimated Available Funds Left	*$330,000*	*$795,300*	*$881,900*	*$1,011,100*	*$1,153,300*	*$4,171,600*

NA- Detailed corridor assessment needed; Refer to feasibility study for detailed project needs*

Table 7: Phase III Planning Horizon

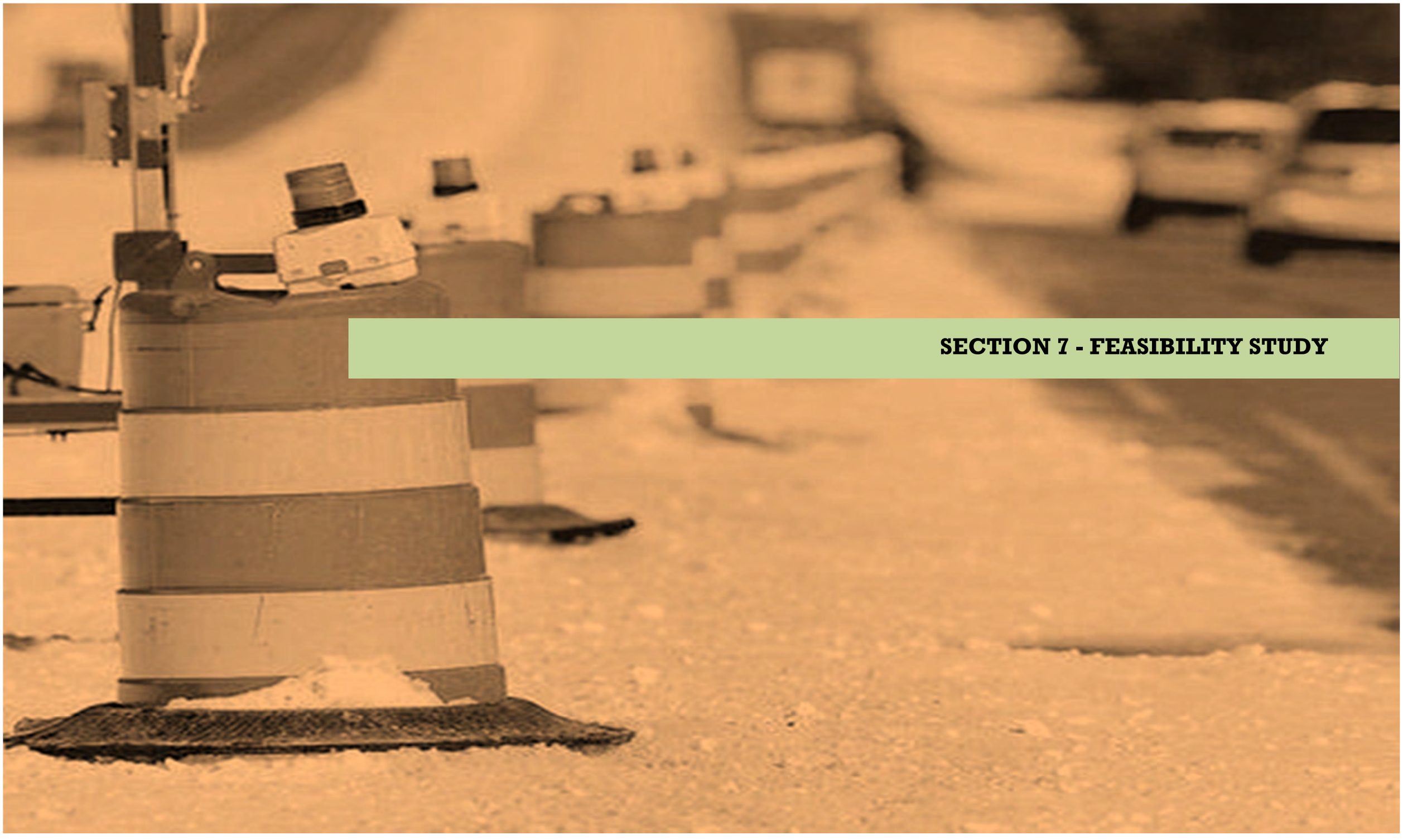
	Phase III					
	FY 2024*	**FY 2025***	**FY 2026***	**FY 2027***	**FY 2028***	**Totals**
Local Option Sales Tax (LOST)	$633,700	$652,700	$672,300	$692,400	$713,200	$3,364,300
Transportation Impact Fund (TIF)	$150,000	$150,000	$150,000	$150,000	$150,000	$750,000
City East-West Connector (8th Ave SW: Indian Rocks Rd to Missouri Ave)	*$100,600*	*$20,120*	*$20,120*	*$20,120*	*$20,120*	$181,080
City East-West Connector (16th Ave SE: Lake Ave SE to Belcher Rd)	*$150,000*	*$150,000*	*$150,000*	*$50,000*	*$41,000*	$541,000
City East-West Connector (142nd Ave N: Belcher Rd to 66th St)	*$130,000*	*$130,000*	*$130,000*	*$130,000*	*$126,000*	$646,000
City East-West Connector (142nd Ave N: US 19 to 58th St N)	*$65,500*					$65,500
Downtown Tax Increment Financing District (DTIF)	$470,700	$483,700	$497,000	$510,600	$524,700	$2,486,700
Estimated Available Revenue	**$1,254,400**	**$1,286,400**	**$1,319,300**	**$1,353,000**	**$1,387,900**	**$6,601,000**
Projected Cost	*$446,100*	*$300,120*	*$300,120*	*$200,120*	*$187,120*	*$1,433,580*
Estimated Available Funds Left	*$808,300*	*$986,280*	*$1,019,180*	*$1,152,880*	*$1,200,780*	***$5,167,420***

Table 8: Phase IV Planning Horizon

	Phase IV					
	FY 2029*	**FY 2030***	**FY 2031***	**FY 2032***	**FY 2033***	**Totals**
Local Option Sales Tax (LOST)	$734,600	$756,000	$778,000	$800,600	$823,900	$3,893,100
Transportation Impact Fund (TIF)	$150,000	$150,000	$150,000	$150,000	$150,000	$750,000
Vonn Rd: Walsingham Rd to Wilcox Rd		*$215,000*				$215,000
City East-West Connector (Donegan Rd: Lake Ave SE to 8th Ave SE)	*$93,560*	*$93,560*	*$93,560*	*$93,560*	*$93,560*	$467,800
58th St N: Ulmerton Rd to Roosevelt Blvd	*$20,000*					$20,000
Ponce de Leon Blvd: Missouri Ave to Hillcrest Ave		*$50,000*	*$50,000*			$100,000
Downtown Tax Increment Financing District (DTIF)	$539,100	$554,000	$569,200	$584,800	$600,900	$2,848,000
Estimated Available Revenue	**$1,423,700**	**$1,460,000**	**$1,497,200**	**$1,535,400**	**$1,574,800**	**$7,491,100**
Projected Cost	*$113,560*	*$358,560*	*$143,560*	*$93,560*	*$93,560*	*$802,800*
Estimated Available Funds Left	*$1,310,140*	*$1,101,440*	*$1,353,640*	*$1,441,840*	*$1,481,240*	***$6,688,300***

Table 9: Phase V Planning Horizon

	Phase V					
	FY 2034*	**FY 2035***	**FY 2036***	**FY 2037***	**FY 2038***	**Totals**
Local Option Sales Tax (LOST)	$848,000	$872,500	$898,000	$924,000	$951,000	$4,493,500
Transportation Impact Fund (TIF)	$150,000	$150,000	$150,000	$150,000	$150,000	$750,000
Wild Acres: Ulmerton Rd to End	*$60,000*	*$60,000*	*$60,000*			$180,000
Lake Ave: McMullen Rd to Belleair Rd		*$200,000*	*$200,000*	*$200,000*		$600,000
Downtown Tax Increment Financing District (DTIF)	$617,400	$634,300	$652,000	$670,000	$688,200	$3,261,900
Estimated Available Revenue	**$1,615,400**	**$1,656,800**	**$1,700,000**	**$1,744,000**	**$1,789,200**	**$8,505,400**
Projected Cost	*$60,000*	*$260,000*	*$260,000*	*$200,000*	*$0*	*$780,000*
Estimated Available Funds Left	*$1,555,400*	*$1,396,800*	*$1,440,000*	*$1,544,000*	*$1,789,200*	***$7,725,400***



SECTION 7 - FEASIBILITY STUDY

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SECTION 7 – FEASIBILITY STUDY

INTRODUCTION

This section of the document is intended to identify and document the anticipated alignment, features, typical sections, and other components associated with the design and construction of the recommended improvements along five of the top ranked projects identified in Section 6. The study includes an evaluation of the corridors, an assessment of available right-of-way, identified constraints, and preliminary cost estimates. The five prioritized project corridors are as follows:

- Rosery Road – From Pinellas Trail to Highland Ave
- 4th Ave NW – From Pinellas Trail to Missouri Ave
- Indian Rocks Road – From Walsingham Rd to Wilcox Rd
- East Bay Drive – From Seminole Blvd to Keene Rd
- 58th Street N – From Roosevelt Blvd to Whitney Rd & Whitney Rd/58th St N to Bolesta Rd

IMPROVEMENT OBJECTIVE

The objective for the recommended improvements is to provide multimodal facilities along each corridor that supports at minimum walking, the use of bicycles, public transportation, and automobiles. The five project corridors are all designated as part of the multimodal network and are within the designated Urban Trail Corridors. The recommended improvement concepts and designs were developed through the following efforts:

- Field review of existing conditions
- Stakeholder Interviews
- Coordination with City staff
- Input received during the Public Workshop

The enhancements will improve mobility for multiple modes by providing connections between residential areas, schools, hospitals, major shopping and employment centers, and recreational amenities.

AGENCY COORDINATION

All project corridors are located within the Largo City limits, although two of the corridors are not currently under city jurisdiction. Indian Rocks Road is currently maintained by Pinellas County while East Bay Drive is maintained by the Florida Department of Transportation (FDOT). A recommended pedestrian crossing is proposed along 4th Avenue NW which would require further coordination with CSX before further assessments or design can take place. Coordination will need to be made with each agency prior to starting the design phases along these corridors.

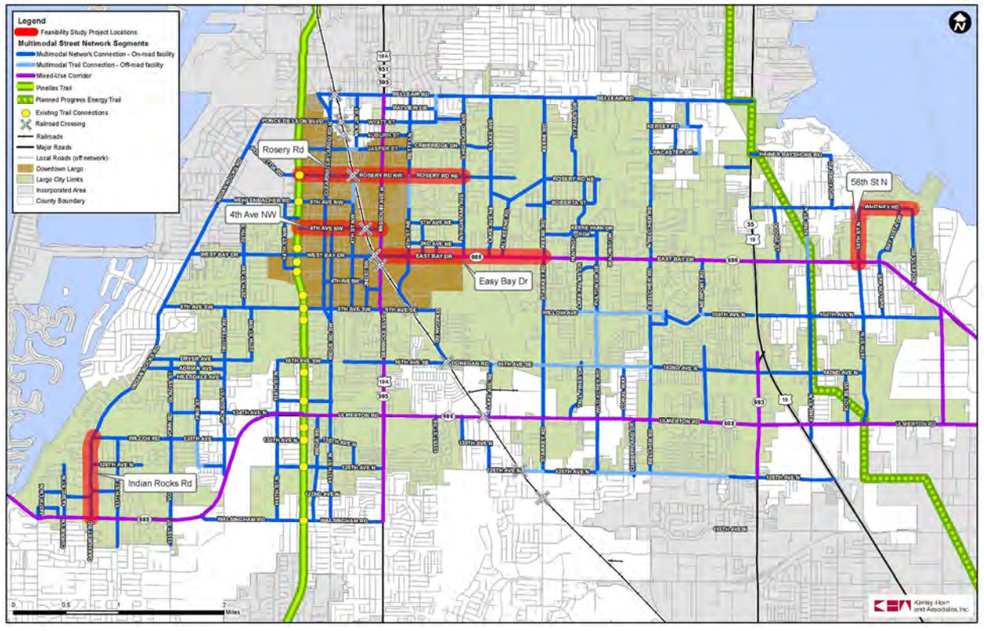
COST ESTIMATES

Planning-level cost estimates were developed based on Florida Department of Transportation (FDOT) cost-per-mile models for District 7. If estimates were not available similar completed projects were used to develop a base cost estimate. The cost estimates are intended to provide a general estimate based on limited information. Cost estimates will be refined in subsequent design phases when more information is available.

ASSESSMENT OVERVIEW

Each of the five project corridors were assessed using information gathered in the field, through public involvement and in-person interviews, as well as information provided by City staff. Maps with picture references and/or call-outs are provided for each project corridor identifying specific points along the corridor that were identified as potential constraints or obstacles that may influence the cost of implementing the project. The recommended design guidelines and criteria outlined in the Design Guidelines section of this plan were applied to each project corridor to identify the recommended needed improvements. An existing conditions snapshot of each project corridor is provided followed by the recommended needed improvements. Map 1 illustrates where the five project corridors are located.

Map 1: Feasibility Study Project Areas



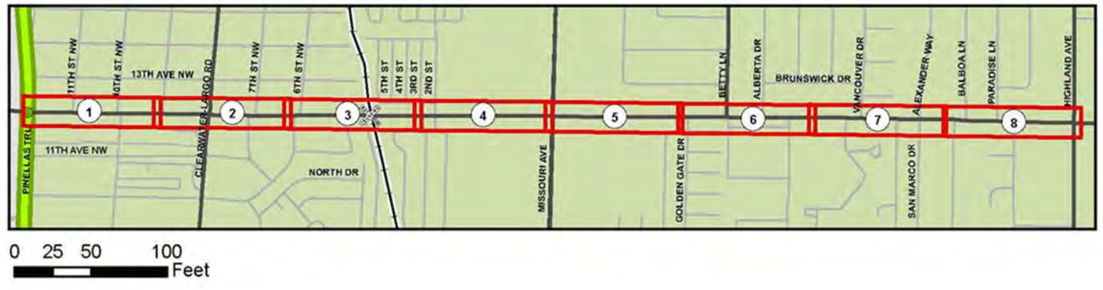
ROSERY ROAD – PINELLAS TRAIL TO HIGHLAND AVENUE

Corridor Overview

Rosery Road is located in the northwest quadrant of the City and is one of the main collector roads connecting Indian Rocks Road, Pinellas Trail, Downtown Largo, and Highland Avenue. There are existing sidewalks and landscaping along a majority of the corridor but there are no existing bike facilities. Improvement needs were identified at the existing trail connection where Pinellas Trail crosses Rosery Road on the north side of the street. Additionally, it was noted that the existing railroad crossing needs to be reconstructed to include at grade pedestrian crossings with adequate separation for vehicle travel lanes.

For the feasibility assessment summary the corridor was broken into eight segments, as shown below in Figure 1. A summary of the findings is provided following the estimated project cost page.

Figure 1: Rosery Road Corridor Overview



Existing Conditions Snapshot

Corridor Limits

The western end of the corridor begins where Pinellas Trail intersects Rosery Rd and continues east to Highlands Avenue.

Length

1.5 miles

Roadway Type

Major Collector - Serves traffic movement within subareas of a city, and are designed to funnel traffic into the arterial system. (Largo CDC, 02/12)

Right-of-Way

Existing - 60 Feet Future - 80 Feet

Speed Limit

30 MPH

Traffic Volumes

An Average Daily Traffic (ADT) volume of 10,280 was calculated for this corridor using the average traffic volumes collected along similar corridors in the City. The ADT totals collected were obtained from FDOT. Because Rosery Road is not along a state maintained roadway traffic volumes were not available from FDOT for this corridor.

Major Destinations/Adjacent Land Uses

The majority of the corridor is surrounded by residential land uses, including single and multi-family residents, a mobile home park, and a 55+ retirement living community (Teakwood Village). Commercial uses are found at the intersection of Clearwater-Largo Road and at the intersection of Missouri Ave N.

Multimodal Assessment

Pedestrian

There is existing sidewalk coverage on both sides of the road along the entire corridor except for on the north side of Rosery Road between 9th St NW and Pinellas Trail.

Bicycle

There are no existing designated bicycle lanes or facilities along the corridor.

Transit

There are no existing bus routes that run along Rosery Road. Existing routes do run along Clearwater-Largo Road, Missouri Road, and Highland Avenue. Bus stops for those existing routes are located within 400 feet of the Rosery Road intersections. Route connections include Routes 18, 52, 61, 73, and 98.

Recommended Improvements

Pinellas Trail to Clearwater Largo Road (Segments 1-2)

This segment of Rosery Road has existing sidewalk coverage and a connection to Pinellas Trail on the south side of the street. Due to existing drainage issues the road segment would need to be reconstructed to include curb and gutter before a sidewalk could be added to the north side of the street. It is recommended that 4'-5' paved shoulders be added to the existing road if not feasible to do full reconstruction. An alternative to adding a paved shoulder along the corridor would be to mark the corridor with Shared Lane Markings (Sharrows).

Clearwater-Largo Road to Highlands Avenue (Segments 2-8)

There are existing sidewalks on both sides of the street between Clearwater-Largo Road and Highland Avenue. It is recommended that 4'-5' paved shoulders be added to both sides of the road. It should be noted that some segments of the road may need to be restriped to allow room to add paved shoulders, mostly due to existing landscaping and infrastructure. Sidewalks along this corridor are below recommended minimum standard set and should be replaced when feasible.

Railroad Crossing (Segment 3)

The existing railroad crossing does not provide proper ADA components nor does it provide adequate separation for pedestrians from the travel lanes. (Please refer to photos). It is recommended that coordination be made with CSX before starting the design phases of reconstructing an improved pedestrian crossing.

Estimated Project Cost

Table 1: Rosery Road Estimated Project Cost

Rosery Road							
Primary Recommendation	**Description**	**From**	**To**	**Estimated Base Construction Cost**	**Distance (mi)**	**Estimated Project Cost**	**Notes**
Add Sidewalk	*A minimum 5' sidewalk should be added to the north side of Rosery Road between Pinellas Trail and Clearwater-Largo Road.*	Pinellas Trail	Clearwater-Largo Road	$ 122,500	0.27	$ 33,075	*There were potential drainage issues identified along the east side of the corridor that may increase the cost of filling in the sidewalk gaps in some areas.*
Add Paved Shoulder	*A 4'-5' paved shoulder will be constructed on both sides of the street.*	Clearwater-Largo Road	Highland Avenue	$ 158,500	1.5	$202,900 - $238,000	*Cost dependent upon whether segment west of Clearwater-Largo is included (if reconstruction is not chosen)*
(Alternative to Paved Shoulder) Add Shared Lane Marking and Signage	*Add shared lane markings (Sharrows) along with proper signage along entire corridor.*	Pinellas Trail	Highland Avenue	See Note	1.5	$20,800	*Pavement markings required every 250' (64) at $200 each, signs required at transitions (8) at $1,000 each.*
Intersection striping	*Restripe crosswalks with 12" white stripe 5-12' lanes on all quadrants.*	Intersections of Clearwater-Largo Rd; Missouri Ave; and Highland Ave.		$ 1,700	3	$ 5,100	*Highlands Ave is under construction. Cost/improvements associated with Highland Ave may be able to be consolidated.*
Railroad crossing	*Improvements to the existing railroad crossing should be made to incorporate appropriate bike/ped and ADA standards. Coordination with CSX is required before starting the design phases.*	Railroad crossing across Rosery Road		NA	Intersection	NA	*Cost is dependent upon final design.*
ADA ramps/sidewalk transitions	*All driveways that are not at grade level with the intersecting sidewalk will require a curb ramp or some type of textured surface to alert pedestrians there is a change in grade and/or they are crossing a road.*	Areas should be noted during design phase		$800-$1,500	Multiple	NA	Improvements should be implement in conjunction with other roadway projects along the corridor.
Alternative Recommendation	**Description**	**From**	**To**	**Estimated Base Construction Cost**	**Distance (mi)**	**Estimated Project Cost**	**Notes**
Roadway Reconstruction	*Reconstruct the roadway to include minimum 5' sidewalk on both sides of road, 4'-5' designated bike lanes, and 8'-10' landscaped buffer separating sidewalk from travel lane. Road will remain 1-lane in each direction.*	Pinellas Trail	Clearwater-Largo Road	$ 6,488,000	0.27	$ 1,751,760	*Alternative would be to just add paved shoulders and not add a sidewalk on the north side of the street.*
Possible required additional cost and/or coordination							
Trail crossing/access improvements	*Additional coordination should be made with Pinellas County Parks & Conservation Resources Department before starting the design phase around the trail access point on Rosery Road.*	Intersection of Pinellas Trail and Rosery Road		NA	Intersection	NA	*Cost depends on final design.*

Source: Cost estimates were obtained from FDOT using the LRE for District 7 and 3. Cost does not include 15% CEI cost. A 10% MOT and Mobilization factor was included.

Summary of Findings

Map 2: Rosery Road Segment 1 - Pinellas Trail to 9th St NW

Map 3: Rosery Road Segment 2 - 9th St NW to 6th St NW

Recommendations/Notes:

The existing drainage along Rosery Road between Pinellas Trail and 9th Street NW will need to be converted to a curb and gutter to increase available right-of-way for the construction of sidewalks on both sides of the street. It is recommended that paved shoulders be added along the length of the corridor. The addition of shared lane markings could be used as an alternative to adding paved shoulders. All cross streets and major driveways that intersect the sidewalk must include proper textured ramps or stamped concrete. Coordination should be made with the Pinellas County Parks & Conservation Resources Department to discuss access/connection improvements to the Pinellas Trail. Sidewalk connection improvements are needed at the intersection of Clearwater-Largo Rd. Enhanced landscaping around the intersection is also encouraged.

Map 4: Rosery Road Segment 3 - 6th St NW to 2nd St

Map 5: Rosery Road Segment 4 - 2nd St to Missouri Ave

Recommendations/Notes:

There are existing sidewalks on both sides of the street between Clearwater-Largo Road and Highland Avenue. Currently bicyclists use the sidewalk rather than the road due to the lack of bicycle facilities. The existing sidewalk is not wide enough to accommodate pedestrians and bicyclists. It is recommended that a minimum 5’ sidewalk be constructed on both sides of the street along with designated bike lanes. There is currently a grassed buffer separating the sidewalks from the vehicle travel lanes. It is ideal that this buffer width is maintained during reconstruction or the addition of paved shoulders along with the existing tree spacing within the buffer. Coordination should be made during the commercial redevelopment planned to west of Missouri Ave to address access management issues along Rosery Rd. The existing railroad crossing does not provide a safe separation from the vehicle travel lanes for pedestrians. It is strongly recommended that improvements be made during construction to provide a proper crossing facility that would allow for both pedestrians and bicyclist to cross the tracks safely. Coordination with FDOT and CSX is required before starting the design phase.

Map 6: Rosery Road Segment 5 - Missouri Ave to Golden Gate Dr

Map 7: Rosery Road Segment 6 - Golden Gate Dr to Chaparral Apartment

Recommendations/Notes:

There are existing sidewalks on both sides of the street between Clearwater-Largo Road and Highland Avenue. Currently bicyclists use the sidewalk rather than the road due to the lack of bicycle facilities. The existing sidewalk is not wide enough to accommodate pedestrians and bicyclists. It is recommended that a minimum 5' sidewalk be constructed on both sides of the street along with designated bike lanes. There is currently a grassed buffer separating the sidewalks from the vehicle travel lanes. It is ideal that this buffer width is maintained during reconstruction or the addition of paved shoulders along with the existing tree spacing within the buffer. Coordination should be made during the commercial redevelopment planned to east of Missouri Ave to address access management issues along Rosery Rd.

Map 8: Rosery Road Segment 7 - Chaparral Apartment to San Remo Dr

Map 9: Rosery Road Segment 8 - San Remo Dr to Highland Ave

Recommendations/Notes:

There are existing sidewalks on both sides of the street between Clearwater-Largo Road and Highland Avenue. Currently bicyclists use the sidewalk rather than the road due to the lack of bicycle facilities. The existing sidewalk is not wide enough to accommodate both modes and should not be used for biking. It is recommended that a minimum 5’ sidewalk be constructed on both sides of the street along with designated bike lanes. There is currently a grassed buffer separating the sidewalks from the vehicle travel lanes. It is ideal that this buffer width is maintained during reconstruction or the addition of paved shoulders along with the existing tree spacing within the buffer. Coordination should be made with construction efforts being done on Highland Avenue so intersection improvements and paved shoulders are incorporated.

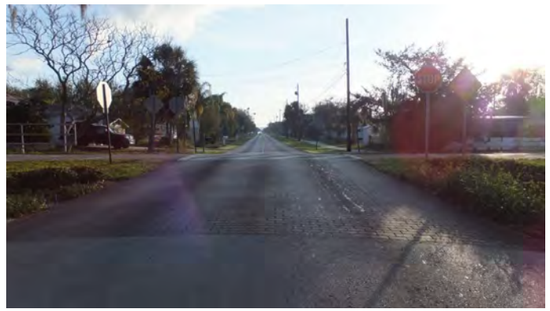


Photo 1:
Looking east, approaching Pinellas Trail on Rosery Rd. The textured pavement alerts drivers they are approaching the trail crossing.

Photo 2:
On Pinellas Trail looking north, where Rosery Rd intersects the trail.

Photo 3a:
Sidewalk connection to Pinellas Trail on south side of Rosery Rd. Recommended that same connection be constructed on north side of street.

Photo 3b:
Existing drainage along south side of Rosery Rd. The recommended road reconstruction would convert the existing drainage to curb & gutter.

Photo 4a:
At the intersection of Pinellas Trail and Rosery Rd, looking north. There is no existing sidewalk coverage on the north side of Rosery Rd resulting in no existing connection to the trail on the north side of the street.

Photo 4b:
At the intersection of Pinellas Trail and Rosery Rd, looking north. The existing drainage along the north side of the street will need to be addressed during road reconstruction to allow for proper bicycle and pedestrian access to the trail.

Photo 5:
North side of Rosery Rd, looking east. There are no existing sidewalks on the north side of the road. Existing drainage would need to be converted to curb and gutter and mailboxes would need to be relocated along ROW.

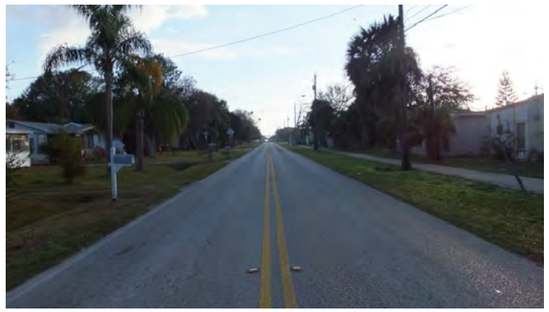


Photo 6:
Existing cross section of Rosery Road, east of Pinellas Trail looking east.

Photo 7:
Corner of 11th St & Rosery Rd, looking west.

Photo 8a:
Existing drainage on south side of Rosery Rd with sidewalk.

Photo 8b:
Existing sidewalk, south side Rosery Rd, looking east.

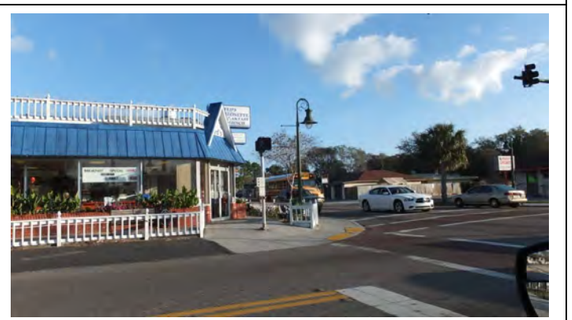


Photo 9:
Intersection of Clearwater-Largo. Incomplete connection.

Photo 10:
Intersection of Clearwater-Largo Rd. Crosswalks need to be restamped/painted.

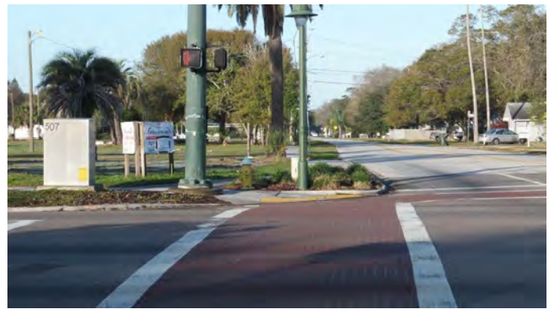


Photo 11:
Intersection of Clearwater-Largo Rd, looking east down Rosery Rd. Good example of landscaping at intersection.

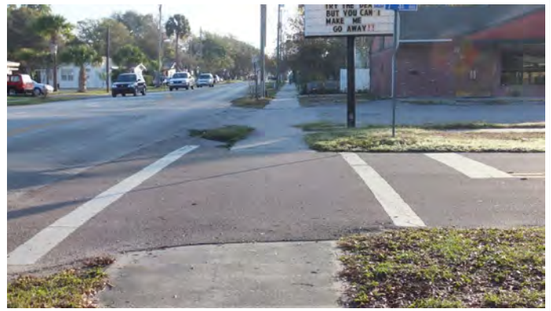


Photo 12a:
Cross streets along Rosery Rd lack proper crosswalk detection features, such as textured crosswalk pad.

Photo 12b:
Southside of Rosery Road, looking east. Because there are no bike lanes bicyclist use the sidewalks to ride.

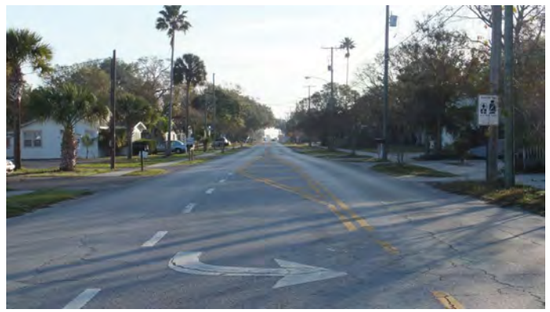


Photo 13a:
Rosery Rd, east of Clearwater-Largo Rd, looking east.

Photo 13b:
Rosery Rd, east of Clearwater-Largo Rd, looking west.

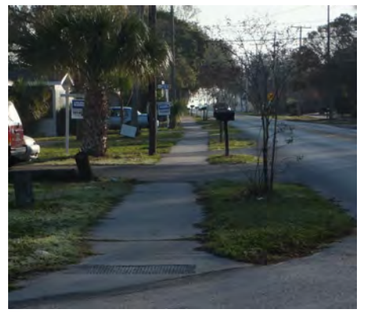


Photo 14:
Existing sidewalks on both sides of Rosery, east of Clearwater-Largo Rd with minimum 5’ grassed buffer with trees.

Photo 15a:
Rosery Rd approaching railroad crossing (looking east).

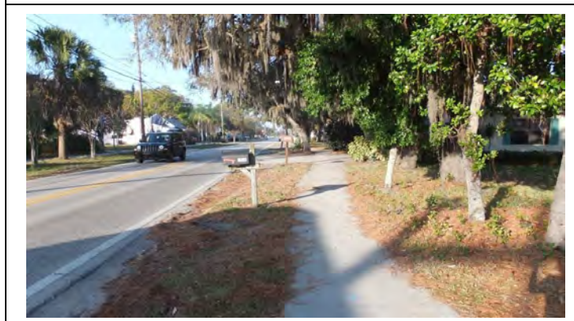


Photo 15b:
Rosery Rd approaching railroad crossing (looking west).

Photo 16:
Existing railroad crossing is unsafe for pedestrians to use as there is not a safe distance or buffer between the edge of pavement and the travel lanes. (North side of tracts)

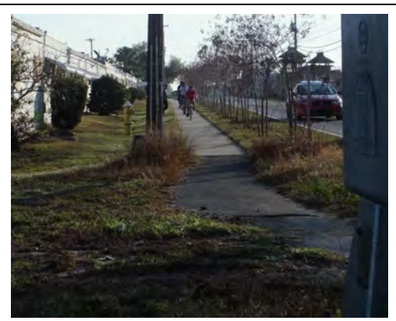


Photo 17a:
Pedestrians are forced off of the sidewalk due to bicyclist using the sidewalk to ride due to lack of designated bike lanes. (North side of tracts)

Photo 17b:
Bicyclist and pedestrians have to share the same narrow path to cross over the tracks. Improvements to this railroad crossing is necessary. (North side of tracts)

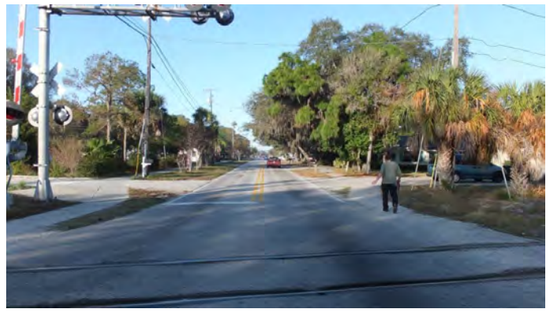
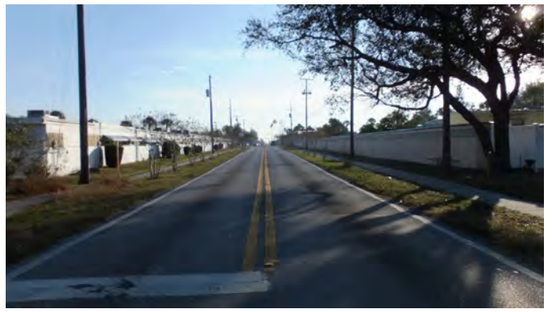
			

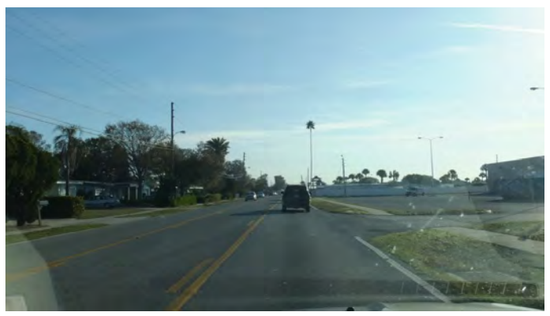
Photo 17c: There is no existing buffer or separation between pedestrians and the travel lanes when crossing the train tracks. (looking west, east of tracks)	**Photo 18a:** South side of railroad crossing has unmaintained crossing area with insufficient buffering between the travel lanes and the path to walk/ride on.	**Photo 18b:** Tracks on south side of Rosery Rd have unfilled holes in the crossing that create a safety hazard for pedestrians and bicyclist crossing the tracks.	**Photo 19:** Roser Road east of the railroad crossing, looking east. Sidewalks on both sides of the street with adequate buffering.
			
Photo 20: Rosery Rd, looking east. Approaching mid-block crossing.	**Photo 21:** Rosery Road, looking east. The construction of a raised landscaped median is recommended.	**Photo 22:** Intersection of Rosary Rd and Highland Ave, looking north up Highland Ave. This corner is used by students as a bus stop. Parents were seen waiting with their children for the bus while other students stood in the parking lot. A bike rack is located in the parking lot adjacent to Highlands Ave.	**Photo 23:** There is a lack of sidewalk connection at this intersection. Highlands Ave is under design and it is anticipated that sidewalks and intersection improvements will be addressed along the corridor.

	
Photo 24: Looking north along Highlands Ave. No sidewalk connection to the east across Highlands Ave.	**Photo 25:** Heading south on Highlands Ave, approaching Rosery Rd. Area were students wait for the bus is on the left.

4TH AVENUE NW – PINELLAS TRAIL TO MISSOURI AVENUE

Corridor Overview

4th Avenue NW is located in the northwest quadrant of the City. This corridor is categorized as a local road but has a designated future right-of-way consistent with that of a minor collector. The corridor is intersected by the CSX rail line which currently restricts pedestrians from crossing over the tracts, though it is regularly used by locals as a cut through. The 4th Avenue NW corridor also abuts Pinellas Trail on the west. Currently there is not an existing connection to Pinellas Trail from 4th Avenue NW.

Existing Conditions Snapshot

Corridor Limits

The western end of the corridor begins where Pinellas Trail intersects 4th Avenue NW and continues east to the CSX railroad tracts. The corridor continues on the east side of the tracts to Missouri Avenue.

Length

0.77 miles

Roadway Type

(Existing) Local road - Local roads provide basic access between residential and commercial properties, connecting with higher order highways.

(Future) Minor Collector - Serves traffic movement within subareas of a city, and are designed to funnel traffic into the arterial system. (Largo CDC, 02/12)

Right-of-Way

Existing – 60 Feet Future - 60 Feet

Speed Limit

30 MPH

Traffic Volumes

An Average Daily Traffic (ADT) volume of 500 was calculated for this corridor using the average traffic volumes collected along similar corridors in the City. The ADT totals collected were obtained from FDOT. Because 4th Avenue NW is not along a state maintained roadway traffic volumes were not available from FDOT for this corridor.

Major Destinations/Adjacent Land Uses

The majority of the corridor is surrounded by residential land uses, including single and multi-family residents, as well as a mobile home park. Commercial uses are found at the intersection of Clearwater-Largo Road and at the intersection of Missouri Ave N.

Multimodal Assessment

Pedestrian

There is existing sidewalk coverage on both sides of the road along the entire corridor, west of the CSX tracts except for on the south side of 4th Ave NW between Howard Drive NW and the Pinellas Trail. There is partial sidewalk coverage on 4th Ave NW east of the CSX tracts.

Bicycle

There are no existing designated bicycle lanes or facilities along the corridor.

Transit

There are no existing bus routes that run along 4th Avenue NW. Existing routes do run along Clearwater-Largo Road and Missouri Road. Bus stops for those existing routes are located within 400 feet of the 4th Avenue NW intersections. Route connections include Routes 18, 52, 61, and 98.

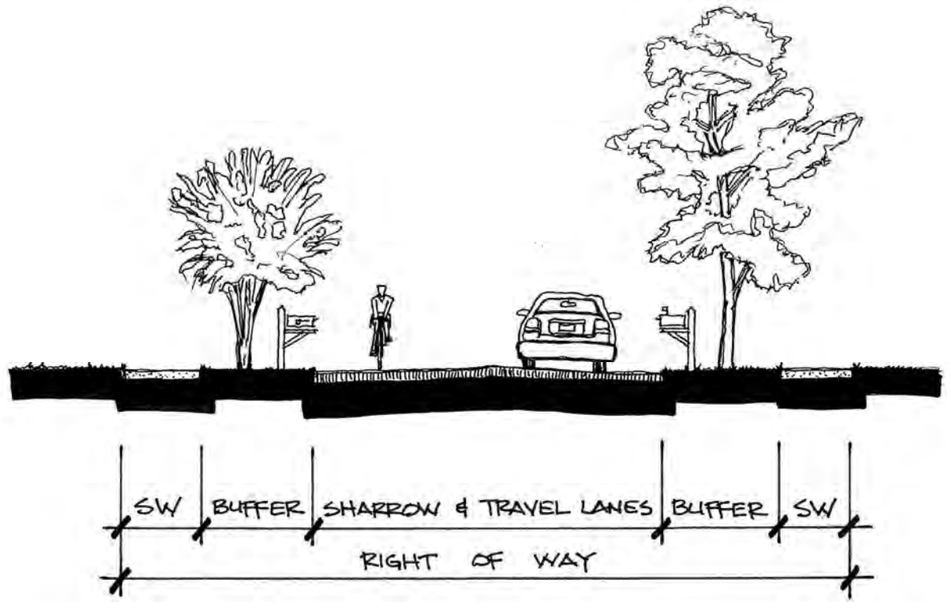
Recommended Improvements

It is recommended that the City look into coordinating with CSX and opening access across the tracts with proper rail crossing treatments at minimum for non-motorized modes (such as bikes and pedestrians). Allowing access across the tracks would provide an uninterrupted connection between the Pinellas Trail and Missouri Avenue. The option to allow full access to all modes (i.e. vehicles) was considered but not recommended at this time. A traffic analysis study would be required prior to starting any design for a full access roadway connection as the traffic distribution would be expected to have a large shift.

Coordination should also be made with the Pinellas County Parks and Conservation Resources department in regards to making improvements to the trail access point located on the west end of the corridor where 4th Avenue NW dead ends into Pinellas Trail. This location is not an official access point to the trail though it is currently used as one by locals.

The recommended cross section for this roadway is for it to remain a 2-lane, undivided road. Sidewalks are already present along the full length of the corridor, west of 1st St NW but no bike facilities are available. It is recommended that shared lane markings (Sharrows) along with proper signage be installed along the full length of the corridor. Additional landscaping that should include the planting of trees should be added within the buffered right-of-way, between the sidewalk and travel lanes. The proposed cross section for this corridor is provided in Figure 2.

Figure 2: Proposed Cross Section



Estimated Project Cost

Table 2: 4th Avenue NW Estimated Project Cost

4th Avenue NW - Pinellas Trail to Missouri Avenue							
Primary Recommendation	**Description**	**From**	**To**	**Estimated Base Construction Cost**	**Distance (mi)**	**Estimated Project Cost**	**Notes**
Trail Connection	*Access to Pinellas Trail from 4th Ave NW should be constructed. Coordination should be made with Pinellas County Parks & Conservation Resources Department before starting the design phase.*	4th Ave NW	Pinellas Trail	NA	Connection	NA	*Cost is dependent upon the work required to address the existing drainage issues adjacent to the trail.*
Railroad Crossing	*Improvements to the existing railroad crossing should be made to incorporate appropriate bike/ped and ADA standards. Coordination with CSX is required before starting the design phases.*	West segment of 4th Ave NW	East segment of 4th Ave NW	NA	Connection	NA	*Cost is dependent upon the design of the crossing, either partial access for non-motorized uses or full access which would include vehicles.*
Add Shared Lane Marking and Signage	*Add shared lane markings (Sharrows) along with proper signage along entire corridor.*	Pinellas Trail	Missouri Ave	See Note	0.78	$10,400	*Pavement markings required every 250' (32) at $200 each, signs required at transitions (4) at $1,000 each.*

Source: Cost estimates were obtained from FDOT using the LRE.

Summary of Findings

Numbers on map corresponds with the numbered photos. Locations with more than one picture associated with it will have a letter next to the numbered title (i.e. 1a, 1b…).

Map 10: 4th Ave NW Corridor

Photo Key

			
Photo 1a: Western end of the study corridor, where Pinellas Trail intersects 4th Ave NW. It is recommended that improvements be made to improve the access for non-motorized modes from 4th Ave to Pinellas Trail.	**Photo 1b:** It is evident that residents are using this area to access the trail. Improvements should be made to complete the connection to the trail.	**Photo 1c:** Picture was taken looking north in between the Pinellas Trail edge of pavement and the end of 4th Ave NW. This area floods following heavy rain storms. This should be taken into consideration when designing a connection.	**Photo 2:** 4th Ave NW, looking east, Pinellas Trail directly behind. Sidewalks are present along both sides of the street. It is recommended that shared lane markings (sharrow) be used along the length of the corridor to account for bicyclist.

			
Photo 3: East of 4th St NW on 4th Ave NW, looking west.	**Photo 4:** 1st St NW, looking north towards where 4th Ave terminates at the tracks.	**Photo 5a:** Within a 10 minute span of time 5 different local residents used this area as a cut through. (A biker, a skateboarder, and three pedestrians)	**Photo 5b:** Picture taken at base of tracks on the west side, looking west towards 4th Ave NW.
			
Photo 5c: Picture taken at edge of pavement of 4th Ave NW looking south down 1st St NW.	**Photo 5d:** Picture taken at edge of tree line on east side of tracks, looking north.	**Photo 5e:** Picture taken at edge of tree line on east side of tracks, looking south.	**Photo 5f:** Picture taken at edge of tree line on east side of tracks, looking west towards 4th Ave NW.
			
Photo 6a: Dead end on 4th Ave NW, east of railroad tracks. There is a clear cut through between the trees going across the tracks, connecting to 4th Ave NW on the west of the CSX tracks.	**Photo 6b:** Within the tree line, adjacent to the tracks evidence of squatting is visible. Creating a complete connection for non-motorized uses will discourage the use of this area for squatting or loitering.(looking north)	**Photo 6c:** Additional evidence of squatting is visible looking south. Creating a complete connection for non-motorized uses will discourage the use of this area for squatting or loitering.	**Photo 7a:** 4th Ave NW, west of Missouri Ave intersection, looking west.

	
Photo 7b: 4th Ave NW, east of tracks, looking east. Sidewalks are present on both sides of the street from the Lutheran Church parking lot east.	**Photo 7c:** Sidewalk on north side of the street, looking west stops abruptly at the end of the Lutheran Church parking lot.

INDIAN ROCKS ROAD – WALSINGHAM ROAD TO WILCOX ROAD

Corridor Overview

The Indian Rocks Road corridor is located in the southwest quadrant of the City. This corridor is one of the main North-South corridors that connects into Largo. The intersection of Indian Rocks Road and Walsingham Road was identified as one of the high hazard areas during the crash data assessment. This corridor has high volumes of traffic and lacks sufficient multimodal facilities including transit shelters, designated bike lanes, and uninterrupted sidewalk coverage.

Existing Conditions Snapshot

Corridor Limits

The southern end of the corridor begins at the intersection of Walsingham Road and continues north to Wilcox Road.

Length

0.76 miles

Roadway Type

Minor Arterial - An arterial road provides the highest level of mobility for long, uninterrupted travel. This class of street brings vehicular traffic to and from highways and serves major movements of vehicular traffic within or through the urban areas that are not served by highways. Arterials interconnect and provide direct access to the principal traffic generators within a city, such as business offices and retail centers. (Largo CDC, 02/12)

Right-of-Way

Existing – 60-80 Feet Future - 100 Feet

Speed Limit

35 MPH

Traffic Volumes

An Average Daily Traffic (ADT) volume of 15,777 was calculated for this corridor using the average traffic volumes collected along similar corridors in the City. The ADT totals collected were obtained from FDOT. Because Indian Rocks Road is not along a state maintained roadway traffic volumes were not available from FDOT for this corridor.

Major Destinations/Adjacent Land Uses

The majority of the corridor is adjacent to commercial land uses with a mix of single and multi-family residential. Anona Elementary School is also located within the study area with two major shopping locations at the intersection of Walsingham Road and Indian Rocks Road.

Multimodal Assessment

Pedestrian

There is existing sidewalk coverage on the west side of Indian Rocks Road along the entire corridor. There is also sidewalk coverage on the east side of the road between Walsingham Road and the north corner of the Anona Elementary property. Only fragmented sidewalk coverage is available on the east side between Anona Elementary and Wilcox Road.

Bicycle

There are no existing designated bicycle lanes or facilities along the corridor.

Transit

There is one bus route that runs along Indian Rocks Road, Route 66. Additional routes are accessible at the Indian Rocks Shopping Center at the corner of Walsingham Road and Indian Rocks Road, Routes 59, 61, 66, and 74.

Recommended Improvements

The proposed cross section for an arterial road with a right-of-way of 60’ft is suggested to follow the design guidelines shown in Table 3.

Table 3: Sample Arterial Cross Section

Lane	Speeds	Sidewalks	Buffer	Bike Lane	Outside Lane
2 Lane/ U	35-40	5'-6'	10'-14'	4'-5'	11’

There is existing fragmented sidewalk coverage on the east side of Indian Rocks Road between Anona Elementary and Wilcox Road. There were potential drainage issues identified along the east side of the corridor that may increase the cost of filling in the sidewalk gaps in some areas. Due to the use of the Wilcox Nursery property within this corridor the construction of a sidewalk may be infeasible as the front portion of the property is used for parking, loading and unloading products. Coordination with the nursery will need to be done to understand the full use of the area to reduce the potential maintenance that would be required to repair the sidewalk that may become damaged because of parked vehicles and/or traffic if installed adjacent to the property.

There are no existing bike lanes or adequate paved shoulders along any part of the corridor. It is recommended that a 4’-5’ foot paved shoulder be constructed on both sides of the road for use as a bike lane. Due to right-of-way constraints starting at the north portion of the Indian Rocks Shopping Center, heading south towards the Walsingham Road intersection, the recommended paved shoulder may need to be terminated. Proper signage should be installed to notify the bicyclist and driver that bikes are to share the road in that segment of the corridor.

It was recommended in, Section 3 - Crash Data Assessment that intersection improvements be made to the intersection of Indian Rocks Road and Walsingham Road to improve the crosswalks. This intersection was identified as a high hazard area and two intersection modifications were suggested; reduced radii or implement a channelized intersection. The addition of crosswalks at the intersection of Wilcox Road and Indian Rocks Road is also suggested.

It is recommended that bus shelters should be provided at each bus stop, with at minimum the inclusion of a concrete platform area with a bench connected to the adjacent sidewalk.

Estimated Project Cost

Table 4: Indian Rocks Road Estimated Project Cost

Indian Rocks Road - Walsingham Road to Wilcox Road							
Primary Recommendation	**Description**	**From**	**To**	**Estimated Base Construction Cost**	**Distance (mi)**	**Estimated Project Cost**	**Notes**
Sidewalk Gaps	*Fill sidewalk gaps on east side of road.*	Indian Rocks Road	Wilcox Road	$ 122,500	0.45	$ 55,125	*There were potential drainage issues identified along the east side of the corridor that may increase the cost of filling in the sidewalk gaps in some areas.*
Paved Shoulders	*Add 4'-5' paved shoulder to both sides of the street.*	Rosemary Lane	Wilcox Road	$ 158,500	0.57	$ 90,345	*Cost varies depending on necessary grading.*
Intersection Reconstruction	*It was suggested that the intersection radii be reduced or the intersection be modified to be channelized to allow for improved pedestrian connectivity across the intersection.*	Walsingham Road & Indian Rocks Road		See Note	Intersection	NA	*A detailed survey would need to be conducted to determine feasibility of each suggested recommendation.*
Bus Stop Improvements	*Bus shelters should be provided at each bus stop, with at minimum the inclusion of a concrete platform area with a bench connected to the adjacent sidewalk.*	Walsingham Road	Wilcox Road	See Note	Individual	NA	*Price varies depending on the features and type of improvement.*
Add Crosswalks	*Add crosswalks to the intersection of Wilcox Road and Indian Rocks Road.*	Wilcox Road & Indian Rocks Road		$ 1,700	Intersection	$1,700	

Source: Cost estimates were obtained from FDOT using the LRE.

Summary of Findings

Numbers on map corresponds with the numbered photos. Locations with more than one picture associated with it will have a letter next to the numbered title (i.e. 1a, 1b…).

Map 11: Indian Rocks Road Corridor

Photo Key

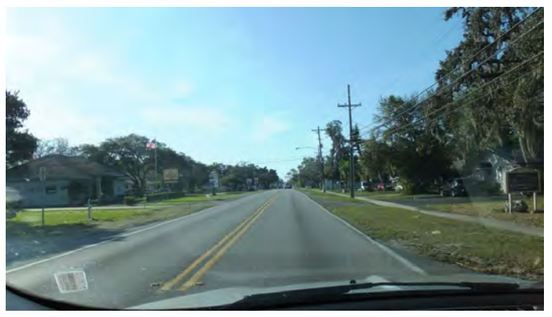
			
Photo 1: Indian Rocks Rd, looking north, just south of the Wilcox Rd intersection. Fragmented sidewalk connections are located along the entire east side of the road.	**Photo 2a:** The edge of pavement along the corridor is unmaintained and uneven. Biking or walking along the east side of the road is undesirable and unsafe.	**Photo 2b:** The absence of a curb results in vehicles pulling off the side of the road freely. This can result in pedestrian and bicycle conflicts with vehicles.	**Photo 3a:** Indian Rocks Rd, looking south. Bus stops along the corridor lack seating and shelters. All bus stops should be connected by a sidewalk.

			
Photo 3b: Indian Rocks Rd, looking north.	**Photo 4:** Indian Rocks Rd, looking north. The area adjacent to the nursery is used for parking and loading. This should be kept in consideration when reconstructing the road so that it does not negatively impact the business.	**Photo 5a:** Indian Rocks Road, looking north. Edge of pavement is unmaintained and uneven. There are no existing sidewalk connections on the east side of the road.	**Photo 5b:** Indian Rocks Road, looking north. Edge of pavement is unmaintained and uneven. There are no existing sidewalk connections on the east side of the road.

Photo 6:
Bus stop adjacent to Anona Elementary has no sidewalk connection or protection from sun or rain.

EAST BAY DRIVE – MISSOURI ROAD TO KEENE ROAD

Corridor Overview

The East Bay Drive corridor is centrally located in the City and is a state maintained roadway. This corridor is one of the main East-West corridors that runs through the heart of the City but was also identified as one of the high hazard areas in Section 3 – Crash Data Assessment. East Bay Drive is currently scheduled to be resurfaced soon. It was noted that there was limited available right-of way along the corridor that may limit the feasibility of restriping to add on-road bike facilities.

Existing Conditions Snapshot

Corridor Limits

The west end of the corridor begins at the intersection of Missouri Avenue/Seminole Blvd and continues east to Keene Road/Starkey Road.

Length

1.56 miles

Roadway Type

Mixed-Use - The mixed-use corridors include the highest density (residential) and intensity (commercial) development where the potential for increased transit orientation may exist in the future.

Right-of-Way

Existing - ~100 Feet Future - 150 Feet

Speed Limit

40 MPH/Missouri Avenue – Lake Ave NE & 45 MPH/Lake Ave NE – Keene Road

Traffic Volumes

An Average Daily Traffic (ADT) volume of 45,000 was recorded and obtained from FDOT.

Major Destinations/Adjacent Land Uses

The majority of the corridor is adjacent to commercial land uses with a mix of multi-family residential along the roadway and access roads connecting to single family and mobile home developments. The City of Largo's Central Park is located on the western portion of the corridor, Everest University in the Center, and Keene Plaza shopping center on the east.

Multimodal Assessment

Pedestrian

There is existing sidewalk coverage on both sides of East Bay along the entire corridor. Due to the higher densities of commercial development there are multiple access roads and driveways that intersect the sidewalks. There are also locations along the corridor that lack sufficient crossing points for pedestrians.

Bicycle

There are no existing designated bicycle lanes or facilities along the corridor.

Transit

There are three bus routes that run along East Bay Drive, Route 52, 73, 98. Additional routes are accessible at Missouri Avenue, Route 18 and 61.

Recommended Improvements

Due to the existing curb and gutter and limited available right-of-way between Missouri Avenue and 6th Street NE it is recommended that the road be reconstructed to include on-street bike facilities. It is recommended that a survey be completed to confirm actual existing right-of-way feasibility of adding an on-road bike facility using the current roadway alignment. It may be possible east of 6th Street NE to reconstruct the existing utility easement/buffer between the edge of pavement and the existing sidewalks on either side of the road to make room for a paved shoulder. If the existing buffer is removed then the sidewalks would also need to be widened to a minimum width of 6' where they abut directly against the edge of pavement of the road.

It is also recommended that the bus stops along East Bay Drive be upgraded to include at minimum a concrete platform under the bench, connecting to an existing sidewalk or constructing an actual shelter at the stop.

Estimated Project Cost

Table 5: East Bay Drive Estimated Project Cost

East Bay Drive - Missouri Avenue to Keene Road							
Primary Recommendation	**Description**	**From**	**To**	**Estimated Base Construction Cost**	**Distance (mi)**	**Estimated Project Cost**	**Notes**
Road Restriping	*Restripe the existing lanes to add a bike lane.*	Missouri Avenue	Keene Road	$ 1,677,000	1.55	$ 2,599,350	*East Bay is scheduled to be resurfaced. Coordination should be made to identify potential restriping options during planned resurfacing.*
Bus Stop Improvements	*Bus shelters should be provided at each bus stop, with at minimum the inclusion of a concrete platform area with a bench connected to the adjacent sidewalk.*	Missouri Avenue	Keene Road	See Note	Individual	NA	*Price varies depending on the features and type of improvement.*
Alternative Recommendation	**Description**	**From**	**To**	**Estimated Base Construction Cost**	**Distance (mi)**	**Estimated Project Cost**	**Notes**
Road Reconstruction	*Reconstruct the existing roadway alignment to include on-road bike facilities.*	Missouri Avenue	Keene Road	$ 11,112,300	1.55	$ 17,224,065	*There were potential drainage issues identified along the east side of the corridor that may increase the cost of filling in the sidewalk gaps in some areas.*

Source: Cost estimates were obtained from FDOT using the LRE.

58TH STREET N – ROOSEVELT BLVD TO WHITNEY ROAD/58TH STREET N TO BOLESTA ROAD

Corridor Overview

58th Street N and Whiney Road are located in the northeast quadrant of the City. These corridors are categorized as collector roads and both are within the designated employment center. There were several areas along the two corridors where sidewalks were not available and within some of those areas it was noted that the construction of a sidewalk may not be feasible due to environmental constraints. An environmental assessment would need to be conducted to confirm these preliminary observations.

Existing Conditions Snapshot

Corridor Limits

The southwest end of the corridor begins at the intersection of 58th Street N and Roosevelt Boulevard and heads north to Whitney Road. The corridor continues along Whitney Road west tending at Bolesta Road.

Length

1.0 miles

Roadway Type

Major/Minor Collector - Serves traffic movement within subareas of a city, and are designed to funnel traffic into the arterial system. (Largo CDC, 02/12)

Existing Right-of-Way

58th Street NW - 80 Feet

Whitney Road - 60 Feet

Speed Limit

30 MPH

Traffic Volumes

An Average Daily Traffic (ADT) volume of 5,000 was calculated for the segment along 58th Street between Roosevelt Boulevard and Whitney Road and an ADT of 2,000 for the segment along Whitney Road between 58th Street and Bolestra Road. The ADT was calculated using the average traffic volumes collected along similar corridors in the City. The ADT totals collected were obtained from FDOT. Because these segments are not along a state maintained roadway traffic volumes were not available from FDOT for this corridor.

Major Destinations/Adjacent Land Uses

The corridor circles around Bay Care Heath System (Hospital) and Tech Data Corporation. There is also single family and multi-family residential located along the corridor as well. This area of the City contains high density employment centers.

Multimodal Assessment

Pedestrian

There is existing sidewalk coverage on the east side of 58th Street between Roosevelt Boulevard and Whitney Road but no sidewalk coverage on the west side. There is only sidewalk coverage on the north side of Whitney Road east of 58th Street until Plantation Boulevard where a sidewalk is provided on the southside adjacent to the Largo Datsko Park only.

Bicycle

There are no existing designated bicycle lanes or facilities along the corridor.

Transit

There is one bus route that runs along 58th Street, Route 79. Additional routes are accessible at the intersection of Roosevelt Road and 58th Street, Route 98.

Recommended Improvements

The recommended cross section for both 58th Street and Whitney Road is for them to remain a 2-lane, undivided road. Sidewalks are already present along the east side of 58th Street N as well as the north and most of the south side of Whitney Road. The construction of a sidewalk on the west side of 58th Street may be constrained due to a possible existing wetland and/or costly drainage reconstruction. An alternative to constructing a sidewalk along the west side of 58th Avenue would be to construct one midblock crossing connecting the east side of 58th Street to the bus stop north of Tech Data Drive on the west side of the street. In addition, creating designated crosswalks at the intersection of 164th Avenue N and 58th Street. It is recommended that the existing sidewalks along 164th Avenue N be extended to the edge of pavement along 58th Street N and crosswalks be added crossing 164th Avenue as well as crossing 58th Street N from the south side of 164th Avenue N. The construction of a boardwalk along the west side of 58th Street would also provide an alternative walking option that would avoid the need to address drainage along the west side of 58th Street.

There is currently a gap in sidewalk coverage on the south side of Whitney Road west of Plantation Boulevard. It looks as if there may be constraints to available right-of-way due to the private residencies along the segment. A suggested alternative to possibly needing to acquire additional right-of-way from the home owners would be to construct a crosswalk connecting the south and north segments of sidewalks either at or just north of Planation Boulevard.

To accommodate bicycles, it is recommended that shared lane markings (Sharrows) along with the required signage be implemented along the Whitney Road segment, the restripe and/or addition of paved shoulders may be restricted due to the existing curb. The same is suggested along 58th Street N. Due to the same limitations identified with adding a sidewalk, implementing shared lane markings would meet the facility needs identified.

In regards to transit, the bus stops currently available along 58th Street consist of only a bench and bus stop sign. Because this area is designated as a major employment center it is recommended that the bus stops be upgraded to include at minimum paved concrete platforms under the benches, connecting to an adjacent sidewalk or if feasible install full shelters to provide protection from outside conditions.

Estimated Project Cost

Table 6: 58th Street/Whitney Road Estimated Project Cost

58th Street - Roosevelt Blvd to Whitney Road							
Primary Recommendation	**Description**	**From**	**To**	**Estimated Base Construction Cost**	**Distance (mi)**	**Estimated Project Cost**	**Notes**
Add Shared Lane Marking and Signage	*Add shared lane markings (Sharrows) along with proper signage along entire corridor.*	Roosevelt Blvd	Whitney Road	See Note	0.5	$2,200	*Pavement markings required every 250' (10) at $200 each, signs required at transitions (2) at $1,000 each.*
Bus Stop Improvements	*Bus shelters should be provided at each bus stop, with at minimum the inclusion of a concrete platform area with a bench connected to the adjacent sidewalk.*	Roosevelt Blvd	Whitney Road	See Note	Individual (5)	NA	*Price varies depending on the features and type of improvement.*
Add Midblock Crossing	*Provide a midblock crossing to connect existing sidewalk on east side of street to the existing bus stop on the west side of the street.*	Bus stop north of Tech Data Drive on west side		See Note	Individual (1)	$2,000-$5,000	*It is recommended that flashing beacons be installed as part of the midblock crossing. Price may vary.*
Add Crosswalks	*Add crosswalks to the intersection of 164th Avenue N and 58th Street N.*	164th Avenue N & 58th Street N		See Note	Intersection	$2,000-$5,000	*Cost may vary depending on cost of additional sidewalk extensions along 164th Avenue.*
Alternative Recommendation	**Description**	**From**	**To**	**Estimated Base Construction Cost**	**Distance (mi)**	**Estimated Project Cost**	**Notes**
Construct Boardwalk	*Construct a boardwalk along west side of 58th Street as an alternative to constructing a sidewalk.*	Roosevelt Blvd	Whitney Road	See Note	0.5	NA	*It is not recommended that a boardwalk be constructed the entire length of the segment but should be constructed where appropriate to avoid costly drainage issues or potential wetland issues.*
Whitney Road - 58th Street N to Bolesta Road							
Add Shared Lane Marking and Signage	*Add shared lane markings (Sharrows) along with proper signage along entire corridor.*	58th Street N	Bolesta Road	See Note	0.5	$2,200	*Pavement markings required every 250' (10) at $200 each, signs required at transitions (2) at $1,000 each.*
Add Crosswalk	*Add crosswalk to the intersection of Plantation Boulevard.*	Plantation Blvd & Whitney Road		See Note	Intersection	$2,000-$5,000	*Price may vary depending on whether a sidewalk extension is needed or not.*

Summary of Findings

Numbers on map corresponds with the numbered photos. Locations with more than one picture associated with it will have a letter next to the numbered title (i.e. 1a, 1b…).

Map 12: 58th St/Whitney Road Corridors

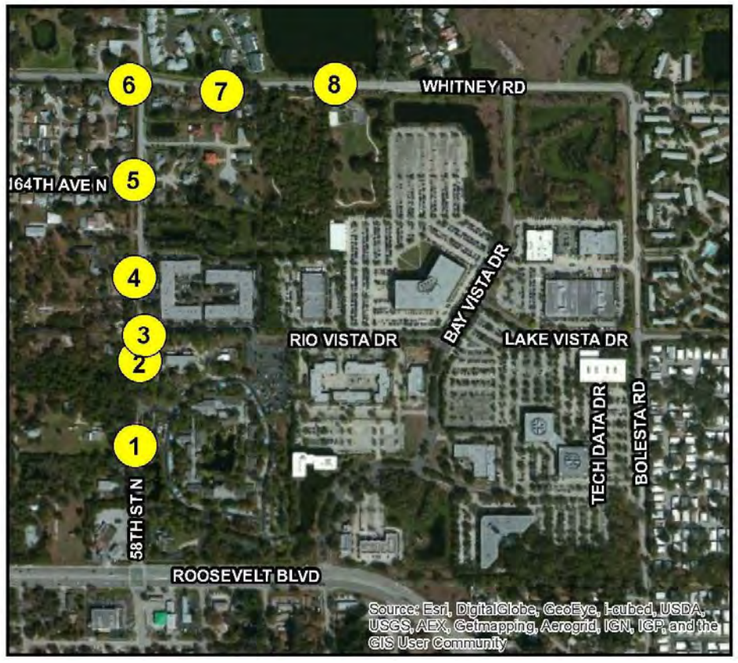
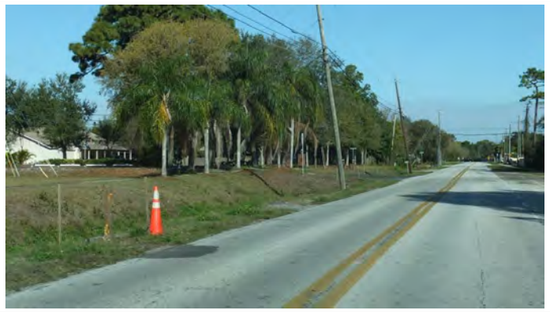


Photo Key

			
Photo 1a: At bus stop on west side of 58th Street, north of Tech Data Drive, looking north.	**Photo 1b:** Bus stop on west side of street north of Tech Data Drive. Location of recommended midblock crossing and bus stop upgrade.	**Photo 1c:** Identified drainage constraints south of existing bus stop.	**Photo 2:** Existing cross section. 58th Street, looking north.

			
Photo 3: Existing bus stop just north of 164th Place N.	**Photo 4:** Noted drainage and existing utility constraints that may impact the construction of a sidewalk along the west side of 58th Street.	**Photo 5:** Possible constraint with extending sidewalk on north side of 164th Avenue N to 58th St.	**Photo 6:** Existing bus stop west of Whitney Road and 58th Street intersection.
			
Photo 7: Whitney Road looking east, start of sidewalk on south side of road just east of Plantation Boulevard.	**Photo 8:** Existing cross section along Whitney Road, looking east.		

APPENDICES

GLOSSARY OF TERMS

This glossary defines terms used in this plan referring to multimodal facility planning and is intended to establish the appropriate and consistent terminology for everyone involved in the planning and implementation process. The following terms are listed as defined by the Federal Highway Administration.

Bicycle (Bike)—A device propelled solely by human power having two or more wheels in tandem, including children's bicycles.

Bicycle Boulevard—A street segment (or series of contiguous street segments) that has been modified to accommodate through bicycle traffic but discourage through motor traffic.

Bicycle Facility—A general term denoting infrastructure and provisions to accommodate or encourage bicycling, including parking and storage facilities and shared roadways specifically designated for bicycle use.

Bicycle (Bike) Lane—A portion of a roadway that has been designated by striping, pavement markings, and signs for the preferential or exclusive use of bicyclists (see Figure 1).

Complete Streets—Roadways that are designed with the safety of all users in mind, including but not limited to motorists, pedestrians, bicyclists, and transit users.

Multi Use Path—See Shared Use Path.

On-road Facility—A facility that is part of the roadway or traveled way that is typically used by bicyclists and/or motor vehicles such as a shared lane, wide curb lane, bicycle lane, or bikeable shoulder.

Off-road Facility—A path used by bicyclist and pedestrians that is separate from the roadway used by motor vehicles. This may parallel a roadway or may be separate from a road, as it may pass through parks within the public right-of-way or on private right-of-way. This can be separated from pedestrian traffic (bicycle path) or shared with pedestrian traffic (shared use path).

Paved Shoulder—The portion of the roadway contiguous with the traveled way for accommodation of stopped vehicles, for emergency use, and for lateral support of sub-base, base, and surface courses (see Figure 1). Use by cyclists is dependent upon State laws and the condition of the roadway.

Pedestrian Crossing Conflicts and Pedestrian Exposure - Conflict points are locations where vehicles and pedestrians both interact. Most commonly, these include intersections and driveways. (FDOT District 7, August 2009)

Roadway—The portion of a highway, including the shoulder, that is improved, designed, or ordinarily used for vehicular travel (see Figure 1).

Road (Lane) Diet - This technique in transportation planning reduces the number of travel lanes on a roadway and/or the effective width of the roadway in order to achieve systemic improvements like inclusion of a bicycle lane, two way left turn lane, and increased corner radii.(FDOT District 7, August 2009)

Shared Lane Marking (SLM or "Sharrow")—A pavement marking symbol that assists bicyclists with lateral positioning in lanes that are too narrow for a motor vehicle and a bicycle to travel side-by-side within the same traffic lane.

Shared Use Path—A pathway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way (see Figure 1). Shared use paths may also be used by pedestrians, skaters, wheelchair users, joggers, and other non-motorized users. Such facilities are often referred to as "trails."

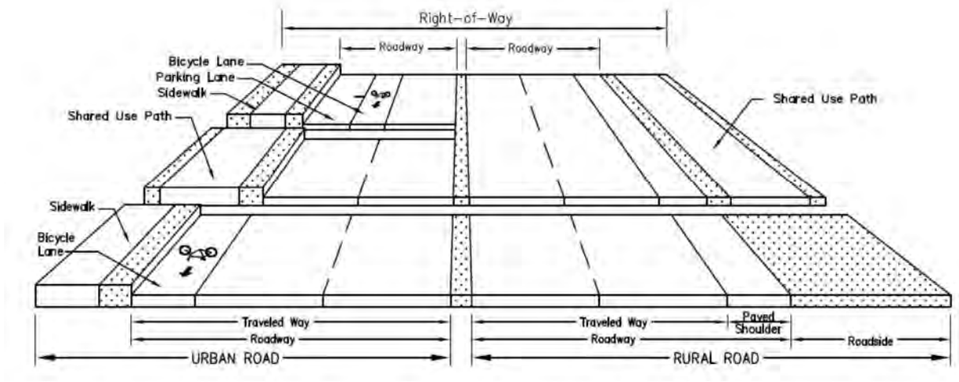
Sidewalk—The portion of a street or highway right-of-way designed for preferential or exclusive use by pedestrians (see Figure 1).

Signed Bike Route—A shared roadway that has been designated by signing as a preferred route for bicycle use.

Traffic Calming—A way to design or retrofit streets to encourage slower and more uniform vehicle speeds.

Wide Curb Lane—A travel lane at least 14 feet wide, adjacent to a curb, which allows bicyclists and motorists to travel side-by-side within the same traffic lane.

Figure 1: Roadway Right-of-Way



[1] Definitions and Figure obtained from the "Bicycle Road Safety Audit Guidelines and Prompt Lists", May 2012.

Roadway Cost Per Centerline Mile

Revised June 2012

	Construction Cost From LRE	MOT *	Mobilization *	Subtotal	Scope Contingency (25%)	Total Construction Cost	PE Design (15%)	CEI (15%)	Total Project Cost **
Rural Arterial									
New Construction (2-Lane Roadway) with 5' Paved Shoulders	$2,997,141	$299,714	$329,686	$3,626,541	$906,635	**$4,533,176**	$679,976	$679,976	**$5,893,129**
New Construction (4-Lane Roadway) with 5' Paved Shoulders	$4,783,393	$478,339	$526,173	$5,787,905	$1,446,976	**$7,234,881**	$1,085,232	$1,085,232	**$9,405,346**
New Construction (6-Lane Roadway) with 5' Paved Shoulders	$6,097,845	$609,785	$670,763	$7,378,393	$1,844,598	**$9,222,991**	$1,383,449	$1,383,449	**$11,989,888**
Milling and Resurfacing (4-Lane Roadway) with 5' Paved Shoulders	$1,031,387	$103,139	$113,453	$1,247,979	$311,995	**$1,559,973**	$233,996	$233,996	**$2,027,965**
Milling and Resurfacing (6-Lane Roadway) with 5' Paved Shoulders	$1,509,273	$150,927	$166,020	$1,826,220	$456,555	**$2,282,775**	$342,416	$342,416	**$2,967,607**
Add Lanes (2 to 4 Lanes) with 5' Paved Shoulders (Includes milling and resurfacing of existing pavement)	$3,764,991	$376,499	$414,149	$4,555,640	$1,138,910	**$5,694,550**	$854,182	$854,182	**$7,402,914**
Add Lanes (4 to 6 Lanes) with 5' Paved Shoulders (Includes milling and resurfacing of existing pavement)	$4,147,292	$414,729	$456,202	$5,018,223	$1,254,556	**$6,272,779**	$940,917	$940,917	**$8,154,613**
Add Lanes (4 to 8 Lanes) with 5' Paved Shoulders (Includes milling and resurfacing of existing pavement)	$5,567,988	$556,799	$612,479	$6,737,266	$1,684,317	**$8,421,583**	$1,263,237	$1,263,237	**$10,948,057**
Add Lanes (6 to 8 Lanes) with 5' Paved Shoulders (Includes milling and resurfacing of existing pavement)	$5,224,825	$522,483	$574,731	$6,322,039	$1,580,510	**$7,902,548**	$1,185,382	$1,185,382	**$10,273,313**
Add 1 Through Lane on Inside (To Existing) with 5' Paved Shoulders	$871,292	$87,129	$95,842	$1,054,263	$263,566	**$1,317,829**	$197,674	$197,674	**$1,713,177**
Add 1 Through Lane on Outside (To Existing) with 5' Paved Shoulders	$1,423,981	$142,398	$156,638	$1,723,017	$430,754	**$2,153,771**	$323,066	$323,066	**$2,799,903**
Add 300' Exclusive Left Turn Lane	$44,214	$6,632	$7,627	$58,473	$14,618	**$73,091**	$10,964	$10,964	**$95,018**
Add 300' Exclusive Right Turn Lane	$107,770	$16,165	$18,590	$142,526	$35,631	**$178,157**	$26,724	$26,724	**$231,604**
Urban Arterial									
New Construction (2-Lane Roadway) with 5' Sidewalk, and Curb & Gutter	$4,279,236	$427,924	$470,716	$5,177,876	$1,294,469	**$6,472,344**	$970,852	$970,852	**$8,414,048**
New Construction (4-Lane Roadway) with 5' Sidewalk, and Curb & Gutter	$6,040,559	$604,056	$664,462	$7,309,077	$1,827,269	**$9,136,346**	$1,370,452	$1,370,452	**$11,877,250**
New Construction (6-Lane Roadway) with 5' Sidewalk, and Curb & Gutter	$7,396,260	$739,626	$813,589	$8,949,474	$2,237,369	**$11,186,843**	$1,678,026	$1,678,026	**$14,542,896**
Milling and Resurfacing (4-Lane Roadway) with 5' Sidewalk, and Curb & Gutter	$1,108,757	$110,876	$121,963	$1,341,595	$335,399	**$1,676,994**	$251,549	$251,549	**$2,180,093**
Milling and Resurfacing (6-Lane Roadway) with 5' Sidewalk, and Curb & Gutter	$1,573,097	$157,310	$173,041	$1,903,447	$475,862	**$2,379,309**	$356,896	$356,896	**$3,093,102**
Add Lanes (2 to 4 Lanes) with 5' Sidewalk, and Curb & Gutter (Includes milling and resurfacing existing pavement)	$4,686,892	$468,689	$515,558	$5,671,140	$1,417,785	**$7,088,925**	$1,063,339	$1,063,339	**$9,215,602**
Add Lanes (4 to 6 Lanes) with 5' Sidewalk, and Curb & Gutter (Includes milling and resurfacing existing pavement)	$5,179,396	$517,940	$569,734	$6,267,070	$1,566,767	**$7,833,837**	$1,175,076	$1,175,076	**$10,183,988**
Add Lanes (4 to 8 Lanes) with 5' Sidewalk, and Curb & Gutter (Includes milling and resurfacing existing pavement)	$6,977,100	$697,710	$767,481	$8,442,291	$2,110,573	**$10,552,863**	$1,582,930	$1,582,930	**$13,718,722**
Add Lanes (6 to 8 Lanes) with 5' Sidewalk, and Curb & Gutter (Includes milling and resurfacing existing pavement)	$6,115,218	$611,522	$672,674	$7,399,413	$1,849,853	**$9,249,267**	$1,387,390	$1,387,390	**$12,024,047**
Add 1 Through Lane on Inside (To Existing) with 5' Sidewalk, and Curb & Gutter	$840,549	$84,055	$92,460	$1,017,064	$254,266	**$1,271,330**	$190,699	$190,699	**$1,652,729**
Add 1 Through Lane on Outside (To Existing) with 5' Sidewalk, and Curb & Gutter	$2,331,279	$233,128	$256,441	$2,820,847	$705,212	**$3,526,059**	$528,909	$528,909	**$4,583,877**
Add 300' Exclusive Left Turn Lane	$57,270	$8,591	$9,879	$75,740	$18,935	**$94,675**	$14,201	$14,201	**$123,077**
Add 300' Exclusive Right Turn Lane	$126,412	$18,962	$21,806	$167,179	$41,795	**$208,974**	$31,346	$31,346	**$271,666**

*** A 15% MOT and Mobilization factor was used for exclusive left and right turn lanes. A 10% factor was used for all other figures.**

**** Total cost shown is derived from a standard typical section. Costs will need to be adjusted to account for signals, bridges, or any additional item not deemed typical.**

Note:

1. **Estimates were derived from FDOT LRE system**
2. **These figures exclude costs for intersections/interchanges, improvements to cross streets, bridges over 20', right-of-way, landscaping, ITS, and traffic signals.**
3. **The figures are based on market costs for Hillsborough County.**
4. **Costs shown are present day costs.**
5. **The costs developed for this report are not project-specific and should be used for preliminary estimating purposes only.**

Roadway Cost Per Centerline Mile

Revised June 2012

	Construction Cost From LRE	MOT (10%)	Mobilization (10%)	Subtotal	Scope Contingency (25%)	Total Construction Cost	PE Design (15%)	CEI (15%)	Total Project Cost
Rural Arterial									
Add Lanes (4 to 6 Lanes) with 5' Paved Shoulders, 2 Traffic Signals, Highway Lighting, Fiber Based Communication Backbone, Widening 150' Low Level Bridge, and Milling & Resurfacing Existing 4 Lanes	$5,835,025	$583,503	$641,853	$7,060,381	$1,765,095	**$8,825,476**	$1,323,821	$1,323,821	**$11,473,119**
Urban Arterial									
Add Lanes (4 to 6 Lanes) with 5' Sidewalk, Bike Lanes, 2 Traffic Signals, Highway Lighting, Fiber Based Communication Backbone, Widening 150' Low Level Bridge, and Milling & Resurfacing Existing 4 Lanes	$6,392,794	$639,279	$703,207	$7,735,281	$1,933,820	**$9,669,101**	$1,450,365	$1,450,365	**$12,569,831**

Note:

1. **Estimates were derived from FDOT LRE system**
2. **These figures exclude costs for intersections/interchanges, cross street improvements, right-of-way, ITS, and landscaping.**
3. **The figures are based on market costs for Hillsborough County.**
4. **Costs shown are present day costs.**
5. **The costs developed for this report are not site-specific and should be used for preliminary estimating purposes only.**

Other Roadway Related Costs
Revised June 2012

	Construction Cost From LRE	MOT *	Mobilization (15%)	Subtotal	Scope Contingency (25%)	Total Construction Cost	PE Design (15%)	CEI (15%)	Total Project Cost
Intersection Traffic Signalization (Mast Arm Assembly)**									
2-Lane Roadway Intersecting 2-Lane Roadway	$117,519	$17,628	$20,272	$155,419	$38,855	**$194,274**	$29,141	$29,141	**$252,556**
4-Lane Roadway Intersecting 4-Lane Roadway	$147,128	$22,069	$25,380	$194,576	$48,644	**$243,220**	$36,483	$36,483	**$316,186**
6-Lane Roadway Intersecting 6-Lane Roadway	$187,577	$28,136	$32,357	$248,070	$62,018	**$310,088**	$46,513	$46,513	**$403,114**
Bicycle and Pedestrian Facilities									
Sidewalks Per Mile (5' Width - 1 Side)	$74,389	$3,719	$11,716	$89,825	$22,456	**$112,281**	$16,842	$16,842	**$145,966**
Sidewalks Per Mile (6' Width - 1 Side)	$89,267	$4,463	$14,060	$107,790	$26,948	**$134,738**	$20,211	$20,211	**$175,159**
Multi-Use Trail Per Mile (12' Width - 1 Side)	$161,864	$8,093	$25,494	$195,450	$48,863	**$244,313**	$36,647	$36,647	**$317,607**
Stormwater Retention Facilities									
1 Acre Pond Site (6' Depth)	$217,461	$10,873	$34,250	$262,584	$65,646	**$328,231**	$49,235	$49,235	**$426,700**
Median Retrofit									
Convert 14' Center Turn Lane to 14' Raised Median (Per Mile)	$183,563	$27,534	$31,665	$242,762	$60,690	**$303,452**	$45,518	$45,518	**$394,488**
Cross Street Improvements									
Widen 1-Leg of Existing Rural 2-Lane Cross Street to Accommodate 2 Receiving Lanes, Dual Left Turn lanes, and Exclusive Right Turn Lane (Approximate Length of 0.25 Miles)	$1,181,526	$177,229	$203,813	$1,562,569	$390,642	**$1,953,211**	$292,982	$292,982	**$2,539,174**

* A 15% MOT factor was used for Traffic Signals, Median Retrofit, and Cross Street Improvements. A 5% factor was used for all other figures.

**The cost of traffic signalization assumes the installation of mast arms on all four legs of an intersection. To obtain the cost of signalizing a four-lane roadway intersecting a two-lane roadway, divide the signal cost of a four-lane roadway by two and add this figure to the signal cost of the two-lane roadway divided by two.

Notes:

1. Estimates were derived from FDOT LRE system
2. The figures are based on market costs for Hillsborough County.
3. Costs shown are present day costs.
4. The costs developed for this report are not site-specific and should be used for preliminary estimating purposes only.

Interchange Cost
Revised June 2012

	Construction Cost From LRE	MOT (10%)	Mobilization (10%)	Subtotal	Scope Contingency (25%)	Total Construction Cost	PE Design (15%)	CEI (15%)	Subtotal Project Cost
Single Point Urban Interchange (SPUI)	$ 17,742,132.39	$1,774,213	$1,951,635	$21,467,980	$5,366,995	**$26,834,975**	$4,025,246	$4,025,246	**$34,885,468**

Note:

1. Cost was derived from an LRE estimate to modify the existing diamond interchange at I-75/SR 54 to a single point urban interchange.
2. Cost shown is for construction only. Does not include Design, CEI, and right-of-way.

Bridge Cost Per Square Foot

Revised June 2012

	Cost Per Square Foot
New Construction	**2012**
Low Level	**$125**
Mid Level	**$140**
High Level	**$170**
Overpass (Over Roadway)	**$155**
Bascule	**$1,800**
Pedestrian Overpass	**$335**
Widening	
Low Level	**$150**
Mid Level	**$170**
High Level	**$205**
Overpass (Over Roadway)	**$185**
Bridge Removal	
Concrete Bridge	**$50**

Note:

1. Figures are for construction costs per square foot of deck area.
2. All figures exclude costs for right-of-way, bridge approaches, and approach slabs.
3. Figures account for recent increases in concrete and steel, and the effects of labor and material shortages in the construction industry.
4. The costs developed for this report are not site-specific and should be used for preliminary estimating purposes only.

City of Largo
Multimodal List of Short Term Projects

Road Name	From	To	Owner	Length (mi)	Dir.	# Lanes	mph	Width of Outside Lane (ft)	Pavement Width (ft)	Buffer Width (ft)	Tree Spacing in Buffer	Existing Sidewalk Width	% of Sidewalk Coverage	Existing Sidewalk Length (ft)	Existing PLOS Score	PLOS Grade	Needed Sidewalk (ft)	Ped LOS Difference	Sidewalk Cost	Contingecy (25%)	Total Const Cost	PE Design (15%)	CEI Cost (15%)	S/W Total Project Cost
City Managed Roadway Segments																								
101st St SE	101st Way	Ulmerton Rd	City	0.25	NB	2	25	11.0	22.0	0.0	0	6.0	60	784	2.54	C	523	0.04	$11,919	$2,980	**$14,899**	$2,235	$2,235	**$19,369**
119th St N	Walsingham Rd	Ulmerton Rd	City	0.98	NB	2	30	10.0	20.0	12.0	0	5.0	20	1,034	3.52	D	4,137	1.02	$94,301	$23,575	**$117,876**	$17,681	$17,681	**$153,239**
119th St N	Walsingham Rd	Ulmerton Rd	City	0.98	SB	2	30	10.0	20.0	5.0	0	5.0	25	1,293	3.48	C	3,878	0.98	$88,407	$22,102	**$110,509**	$16,576	$16,576	**$143,662**
120th Ave N	146th St	144th St	City	0.19	EB	2	25	10.0	20.0	0.0	0	0.0	0	-	2.76	C	1,001	0.26	$22,829	$5,707	**$28,536**	$4,280	$4,280	**$37,096**
120th Ave N	146th St	144th St	City	0.19	WB	2	25	10.0	20.0	0.0	0	0.0	0	-	2.76	C	1,001	0.26	$22,829	$5,707	**$28,536**	$4,280	$4,280	**$37,096**
122nd Ave N	Ridge Rd	113th St	City	0.16	EB	2	25	10.0	20.0	0.0	0	0.0	0	-	2.76	C	824	0.26	$18,782	$4,696	**$23,478**	$3,522	$3,522	**$30,521**
122nd Ave N	145th Ln	143rd St	City	0.21	EB	2	25	10.0	20.0	0.0	0	0.0	0	-	2.76	C	1,125	0.26	$25,642	$6,410	**$32,052**	$4,808	$4,808	**$41,668**
122nd Ave N	Ridge Rd	113th St	City	0.16	WB	2	25	10.0	20.0	0.0	0	0.0	0	-	2.76	C	824	0.26	$18,782	$4,696	**$23,478**	$3,522	$3,522	**$30,521**
126th Ave N	66th St	US 19	City	0.73	WB	2	35	11.5	23.0	0.0	0	0.0	0	-	3.45	C	3,850	0.95	$87,761	$21,940	**$109,701**	$16,455	$16,455	**$142,612**
126th Ave N	end	Jackson	City	0.20	EB	2	25	10.0	20.0	0.0	0	0.0	0	-	3.21	C	1,069	0.71	$24,364	$6,091	**$30,455**	$4,568	$4,568	**$39,592**
126th Ave N	Indian Rocks Rd	134th St	City	0.48	EB	2	25	9.0	18.0	10.0	0	4.0	70	1,779	2.60	C	762	0.10	$17,376	$4,344	**$21,720**	$3,258	$3,258	**$28,237**
126th Ave N	68th St	66th St	City	0.26	EB	2	30	10.0	20.0	0.0	0	0.0	0	-	3.49	C	1,372	0.99	$31,268	$7,817	**$39,085**	$5,863	$5,863	**$50,810**
126th Ave N	Ridge Rd	Seminole Blvd	City	0.63	WB	2	25	10.0	20.0	10.0	0	4.0	60	1,995	2.70	C	1,330	0.20	$30,314	$7,579	**$37,893**	$5,684	$5,684	**$49,260**
126th Ave N	Starkey Rd	Wild Acres Rd	City	0.52	EB	2	30	12.0	24.0	0.0	0	0.0	0	-	3.27	C	2,741	0.77	$62,481	$15,620	**$78,101**	$11,715	$11,715	**$101,531**
126th Ave N	end	Jackson	City	0.20	WB	2	25	10.0	20.0	0.0	0	0.0	0	-	3.21	C	1,069	0.71	$24,364	$6,091	**$30,455**	$4,568	$4,568	**$39,592**
126th Ave N	Ridge Rd	Seminole Blvd	City	0.63	EB	2	25	10.0	20.0	15.0	0	4.0	60	1,995	2.61	C	1,330	0.11	$30,314	$7,579	**$37,893**	$5,684	$5,684	**$49,260**
126th Ave N	Starkey Rd	Wild Acres Rd	City	0.52	WB	2	30	12.0	24.0	7.0	0	5.0	75	2,056	2.51	C	685	0.01	$15,620	$3,905	**$19,525**	$2,929	$2,929	**$25,383**
126th Ave N	68th St	66th St	City	0.26	WB	2	30	10.0	20.0	6.0	0	4.0	50	686	3.11	C	686	0.61	$15,634	$3,908	**$19,542**	$2,931	$2,931	**$25,405**
126th Ave N	66th St	US 19	City	0.73	EB	2	35	11.5	23.0	30.0	0	5.0	20	770	3.42	C	3,080	0.92	$70,209	$17,552	**$87,761**	$13,164	$13,164	**$114,090**
12th St SW	2nd Ave SW	West Bay Dr	City	0.13	SB	2	25	9.0	18.0	0.0	0	0.0	0	-	2.89	C	663	0.39	$15,101	$3,775	**$18,877**	$2,832	$2,832	**$24,540**
12th St SW	2nd Ave SW	West Bay Dr	City	0.13	NB	2	25	9.0	18.0	0.0	0	0.0	0	-	2.89	C	663	0.39	$15,101	$3,775	**$18,877**	$2,832	$2,832	**$24,540**
130th Ave N	Washington Ave	95th St	City	0.25	WB	2	25	10.0	20.0	0.0	0	0.0	0	-	3.21	C	1,317	0.71	$30,010	$7,502	**$37,512**	$5,627	$5,627	**$48,766**
130th Ave N	Washington Ave	95th St	City	0.25	EB	2	25	10.0	20.0	8.0	0	4.0	90	1,185	2.25	B	132		$3,001	$750	**$3,751**	$563	$563	**$4,877**
131st St N	114th Ave	Walsingham Rd	City	0.25	NB	2	35	9.5	19.0	15.0	0	4.0	75	991	2.97	C	330	0.47	$7,529	$1,882	**$9,412**	$1,412	$1,412	**$12,235**
134th Ave N	Vonn Rd/Gladys St	end	City	0.98	EB	2	25	10.0	20.0	12.0	0	4.0	60	3,118	2.49	B	2,078		$47,377	$11,844	**$59,222**	$8,883	$8,883	**$76,988**
142nd Ave N	Belcher Rd	US 19	City	1.11	EB	2	35	10.5	21.0	3.0	0	5.0	25	1,466	4.16	D	4,397	1.66	$100,219	$25,055	**$125,274**	$18,791	$18,791	**$162,857**
142nd Ave N	US 19	58th St	City	0.87	WB	2	30	12.0	24.0	25.0	0	5.0	70	3,230	2.58	C	1,384	0.08	$31,553	$7,888	**$39,441**	$5,916	$5,916	**$51,273**
142nd Ave N	US 19	58th St	City	0.87	EB	2	30	12.0	24.0	8.0	0	5.0	90	4,153	2.56	C	461	0.06	$10,518	$2,629	**$13,147**	$1,972	$1,972	**$17,091**
143rd St N	Walsingham Rd	Channel Dr	City	0.50	SB	2	30	9.0	18.0	0.0	0	0.0	0	-	3.00	C	2,618	0.50	$59,682	$14,921	**$74,603**	$11,190	$11,190	**$96,984**
144th St N	Walsingham Rd	120th Ave	City	0.09	NB	2	25	9.5	19.0	0.0	0	0.0	0	-	2.83	C	466	0.33	$10,633	$2,658	**$13,292**	$1,994	$1,994	**$17,279**
144th St N	Walsingham Rd	120th Ave	City	0.09	SB	2	25	9.5	19.0	0.0	0	0.0	0	-	2.83	C	466	0.33	$10,633	$2,658	**$13,292**	$1,994	$1,994	**$17,279**
145th Ln N	120th	122nd	City	0.15	NB	2	25	10.5	21.0	0.0	0	0.0	0	-	2.70	C	787	0.20	$17,941	$4,485	**$22,426**	$3,364	$3,364	**$29,154**
145th Ln N	120th	122nd	City	0.15	SB	2	25	10.5	21.0	0.0	0	0.0	0	-	2.70	C	787	0.20	$17,941	$4,485	**$22,426**	$3,364	$3,364	**$29,154**
146th St N	Walsingham Rd	120th Ave	City	0.08	NB	2	25	9.5	19.0	0.0	0	5.0	75	331	2.48	B	110		$2,511	$628	**$3,139**	$471	$471	**$4,081**
14th St NW	West Bay Dr	Mehlenbacher Rd	City	0.51	NB	2	30	9.5	19.0	0.0	0	0.0	0	-	2.94	C	2,678	0.44	$61,037	$15,259	**$76,296**	$11,444	$11,444	**$99,185**
14th St NW	West Bay Dr	Mehlenbacher Rd	City	0.51	SB	2	30	9.5	19.0	0.0	0	0.0	0	-	2.94	C	2,678	0.44	$61,037	$15,259	**$76,296**	$11,444	$11,444	**$99,185**
16th Ave NW	Pinellas Trail	RR	City	0.43	EB	2	30	9.0	18.0	0.0	0	0.0	0	-	3.00	C	2,255	0.50	$51,405	$12,851	**$64,256**	$9,638	$9,638	**$83,533**
16th Ave NW	Pinellas Trail	RR	City	0.43	WB	2	30	9.0	18.0	6.0	0	5.0	30	677	3.25	C	1,579	0.75	$35,983	$8,996	**$44,979**	$6,747	$6,747	**$58,473**
16th Ave SE	Seminole Blvd	end	City	0.54	EB	2	25	9.5	19.0	0.0	0	0.0	0	-	4.14	D	2,845	1.64	$64,849	$16,212	**$81,061**	$12,159	$12,159	**$105,379**
16th Ave SE	Seminole Blvd	end	City	0.54	WB	2	25	9.5	19.0	0.0	0	0.0	0	-	4.14	D	2,845	1.64	$64,849	$16,212	**$81,061**	$12,159	$12,159	**$105,379**
16th Ave SW	4th St	Seminole Blvd	City	1.00	EB	2	25	8.5	17.0	0.0	0	0.0	0	-	3.58	D	5,288	1.08	$120,544	$30,136	**$150,680**	$22,602	$22,602	**$195,884**
16th Ave SW	Pinellas Trail	Ridge Rd	City	0.26	WB	2	30	10.0	20.0	0.0	0	0.0	0	-	3.32	C	1,347	0.82	$30,705	$7,676	**$38,381**	$5,757	$5,757	**$49,895**
16th Ave SW	Trotter Rd	20th St	City	0.26	WB	2	25	10.0	20.0	12.0	0	4.0	50	677	2.67	C	677	0.17	$15,437	$3,859	**$19,297**	$2,895	$2,895	**$25,086**
16th Ave SW	4th St	Seminole Blvd	City	1.00	WB	2	25	8.5	17.0	0.0	0	0.0	0	-	3.58	D	5,288	1.08	$120,544	$30,136	**$150,680**	$22,602	$22,602	**$195,884**

City of Largo
Multimodal List of Short Term Projects

Road Name	From	To	Owner	Length (mi)	Dir.	# Lanes	mph	Width of Outside Lane (ft)	Pavement Width (ft)	Buffer Width (ft)	Tree Spacing in Buffer	Existing Sidewalk Width	% of Sidewalk Coverage	Existing Sidewalk Length (ft)	Existing PLOS Score	PLOS Grade	Needed Sidewalk (ft)	Ped LOS Difference	Sidewalk Cost	Contingecy (25%)	Total Const Cost	PE Design (15%)	CEI Cost (15%)	S/W Total Project Cost
20th St SW	West Bay Dr	Mehlenbacher Rd	City	0.51	SB	2	30	10.0	20.0	3.0	0	5.0	50	1,345	2.87	C	1,345	0.37	$30,657	$7,664	**$38,321**	$5,748	$5,748	**$49,818**
20th St SW	16th Ave	8th Ave	City	0.50	NB	2	30	10.0	20.0	0.0	0	0.0	0	-	2.87	C	2,659	0.37	$60,612	$15,153	**$75,765**	$11,365	$11,365	**$98,495**
20th St SW	West Bay Dr	Mehlenbacher Rd	City	0.51	NB	2	30	10.0	20.0	12.0	0	5.0	90	2,421	1.99	B	269		$6,131	$1,533	**$7,664**	$1,150	$1,150	**$9,964**
2nd Ave NE	4th St	Highland Ave	City	0.52	EB	2	25	10.0	20.0	6.0	0	4.0	50	1,382	2.76	C	1,382	0.26	$31,500	$7,875	**$39,376**	$5,906	$5,906	**$51,188**
2nd Ave NE	4th St	Highland Ave	City	0.52	WB	2	25	10.0	20.0	6.0	0	4.0	50	1,382	2.76	C	1,382	0.26	$31,500	$7,875	**$39,376**	$5,906	$5,906	**$51,188**
2nd St SW	8th Ave SW	West Bay Dr	City	0.50	SB	2	30	10.0	20.0	0.0	0	5.0	25	664	3.28	C	1,991		$45,379	$11,345	**$56,723**	$8,509	$8,509	**$73,740**
4th Ave NW	RR	Missouri Ave	City	0.76	EB	2	25	8.0	16.0	0.0	0	0.0	0	-	3.03	C	4,034	0.53	$91,947	$22,987	**$114,934**	$17,240	$17,240	**$149,414**
4th Ave NW	RR	Missouri Ave	City	0.76	WB	2	25	8.0	16.0	11.0	0	4.0	50	2,017	2.85	C	2,017	0.35	$45,973	$11,493	**$57,467**	$8,620	$8,620	**$74,707**
4th St NE	East Bay Dr	8th Ave NE	City	0.47	NB	2	25	10.0	20.0	0.0	0	0.0	0	-	2.76	C	2,503	0.26	$57,044	$14,261	**$71,304**	$10,696	$10,696	**$92,696**
4th St NW	4th Ave	8th Ave	City	0.50	EB	2	30	10.0	20.0	0.0	0	0.0	0	-	2.87	C	2,650	0.37	$60,404	$15,101	**$75,505**	$11,326	$11,326	**$98,156**
4th St NW	West Bay Dr	4th Ave	City	0.27	WB	2	30	15.0	30.0	5.0	0	4.0	25	357	2.81	C	1,071	0.31	$24,412	$6,103	**$30,515**	$4,577	$4,577	**$39,669**
4th St NW	4th Ave	8th Ave	City	0.50	WB	2	30	10.0	20.0	11.0	0	4.0	75	1,987	2.37	B	662		$15,101	$3,775	**$18,876**	$2,831	$2,831	**$24,539**
4th St SW	8th Ave SW	West Bay Dr	City	1.01	NB	2	30	10.0	20.0	0.0	0	0.0	0	-	2.87	C	5,350	0.37	$121,940	$30,485	**$152,425**	$22,864	$22,864	**$198,152**
58th St N	Roosevelt Blvd	Whitney Rd	City	0.52	SB	2	25	9.5	19.0	0.0	0	0.0	0	-	4.14	D	2,720	1.64	$62,009	$15,502	**$77,512**	$11,627	$11,627	**$100,765**
58th St N	142nd Ave	150th Ave	City	0.53	NB	2	30	12.5	25.0	20.0	0	5.0	75	2,115	2.54	C	705	0.04	$16,072	$4,018	**$20,091**	$3,014	$3,014	**$26,118**
5th Ave NE	4th St	Highland Ave	City	0.52	EB	2	25	10.0	20.0	6.0	25	4.0	10	277	3.32	C	2,489		$56,746	$14,187	**$70,933**	$10,640	$10,640	**$92,213**
5th Ave SW	Clearwater Largo Rd	4th St	City	0.27	WB	2	25	10.0	20.0	5.0	0	5.0	25	351	3.13	C	1,053	0.63	$24,008	$6,002	**$30,010**	$4,501	$4,501	**$39,013**
5th Ave SW	4th St	2nd St	City	0.17	EB	2	25	10.0	20.0	0.0	0	0.0	0	-	2.76	C	877	0.26	$20,002	$5,000	**$25,002**	$3,750	$3,750	**$32,503**
5th Ave SW	4th St	2nd St	City	0.17	WB	2	25	10.0	20.0	0.0	0	0.0	0	-	2.76	C	877	0.26	$20,002	$5,000	**$25,002**	$3,750	$3,750	**$32,503**
62nd St N	Ulmerton Rd	Roosevelt Blvd	City	1.68	SB	2	40	9.5	19.0	20.0	0	5.0	35	3,099	3.79	D	5,756	0.53	$131,211	$32,803	**$164,013**	$24,602	$24,602	**$213,217**
62nd St N	end	Whitney Rd	City	0.28	NB	2	25	12.0	24.0	9.0	0	5.0	60	892	2.54	C	595	0.04	$13,554	$3,389	**$16,943**	$2,541	$2,541	**$22,025**
62nd St N	Ulmerton Rd	Roosevelt Blvd	City	1.68	NB	2	40	9.5	19.0	30.0	0	5.0	65	5,756	3.03	C	3,099	1.29	$70,652	$17,663	**$88,315**	$13,247	$13,247	**$114,809**
6th St NE	East Bay Dr	5th Ave NE	City	0.32	SB	2	25	10.0	20.0	6.0	0	5.0	80	1,345	2.21	B	336	0.82	$7,662	$1,916	**$9,578**	$1,437	$1,437	**$12,452**
8th Ave NW	Clearwater-Largo Rd	end	City	0.26	EB	2	25	10.5	21.0	0.0	0	0.0	0	-	2.70	C	1,385	0.20	$31,580	$7,895	**$39,474**	$5,921	$5,921	**$51,317**
8th Ave NW/Mehlenbacher Rd	Pinellas Trail	Clearwater-Largo Rd	City	0.26	EB	2	30	9.5	19.0	8.0	0	4.0	50	674	3.35	C	674		$15,369	$3,842	**$19,211**	$2,882	$2,882	**$24,975**
8th Ave SE	2nd St	Donegan	City	0.28	EB	2	30	10.5	21.0	0.0	0	0.0	0	-	4.63	E	1,456	2.13	$33,186	$8,297	**$41,483**	$6,222	$6,222	**$53,927**
8th Ave SE	2nd St	Donegan	City	0.28	WB	2	30	10.5	21.0	25.0	0	4.0	50	728	3.62	D	728	1.12	$16,593	$4,148	**$20,741**	$3,111	$3,111	**$26,964**
8th Ave SW	Indian Rocks Rd	Missouri Ave	City	2.06	EB	2	30	11.0	22.0	5.0	0	4.0	80	8,716	3.43	C	2,179	0.93	$49,670	$12,418	**$62,088**	$9,313	$9,313	**$80,714**
8th St NE	East Bay Dr	2nd Ave NE	City	0.13	NB	2	25	10.0	20.0	0.0	0	0.0	0	-	2.76	C	685	0.26	$15,616	$3,904	**$19,520**	$2,928	$2,928	**$25,376**
95th St N	126th Ave	130th Ave	City	0.25	SB	2	25	8.5	17.0	8.0	0	4.0	25	331	3.46	C	993		$22,627	$5,657	**$28,284**	$4,243	$4,243	**$36,769**
Adrian Ave	Indian Rocks Rd	Trotter Rd	City	0.75	WB	2	30	10.0	20.0	7.0	0	4.0	30	1,190	3.17	C	2,777	0.67	$63,300	$15,825	**$79,125**	$11,869	$11,869	**$102,863**
Adrian Ave	Indian Rocks Rd	Trotter Rd	City	0.75	EB	2	30	10.0	20.0	15.0	0	4.0	30	1,190	3.10	C	2,777	0.60	$63,300	$15,825	**$79,125**	$11,869	$11,869	**$102,863**
Alt Kenne Rd	East Bay Dr	McMullen Rd	City	0.52	SB	2	30	9.5	19.0	15.0	0	5.0	60	1,662	2.70	C	1,108	0.20	$25,250	$6,313	**$31,563**	$4,734	$4,734	**$41,032**
Anona Heights Dr	Indian Rocks Rd	137th St	City	0.25	EB	2	25	10.0	20.0	15.0	0	4.0	50	669	2.62	C	669		$15,239	$3,810	**$19,049**	$2,857	$2,857	**$24,764**
Auburn St	MLK Ave	Betty Ln	City	0.50	EB	2	25	10.0	20.0	8.0	0	5.0	50	1,332	2.68	C	1,332	0.12	$30,373	$7,593	**$37,966**	$5,695	$5,695	**$49,356**
Auburn St	MLK Ave	Betty Ln	City	0.50	WB	2	25	10.0	20.0	8.0	0	5.0	50	1,332	2.68	C	1,332	0.18	$30,373	$7,593	**$37,966**	$5,695	$5,695	**$49,356**
Avalon Ave	150th Ave	Roosevelt Blvd	City	0.38	NB	2	25	9.5	19.0	0.0	0	0.0	0	-	2.83	C	1,994	0.33	$45,463	$11,366	**$56,829**	$8,524	$8,524	**$73,877**
Bay Vista Dr	Roosevelt Blvd	Whitney Rd	City	0.41	NB	2	30	21.5	21.5	0.0	0	0.0	0	-	2.70	C	2,184	0.20	$49,790	$12,447	**$62,237**	$9,336	$9,336	**$80,909**
Bay Vista Dr	Roosevelt Blvd	Whitney Rd	City	0.41	SB	2	30	21.5	21.5	0.0	0	0.0	0	-	2.70	C	2,184	0.20	$49,790	$12,447	**$62,237**	$9,336	$9,336	**$80,909**
Bayview Dr	Missouri Ave	Hillcrest Ave	City	0.49	EB	2	25	10.0	20.0	0.0	0	0.0	0	-	2.76	C	2,613	0.26	$59,560	$14,890	**$74,450**	$11,167	$11,167	**$96,784**
Bayview Dr	Missouri Ave	Hillcrest Ave	City	0.49	WB	2	25	10.0	20.0	0.0	0	0.0	0	-	2.76	C	2,613	0.26	$59,560	$14,890	**$74,450**	$11,167	$11,167	**$96,784**
Betty Ln	Rosery Rd	Belleair Rd	City	0.77	NB	2	30	9.5	19.0	6.0	0	4.0	65	2,637	2.67	C	1,420	0.17	$32,367	$8,092	**$40,459**	$6,069	$6,069	**$52,597**
Bolesta Rd	Northern Ave	Whitney Rd	City	0.25	NB	2	25	9.0	18.0	0.0	0	0.0	0	-	3.34	C	1,345	0.84	$30,658	$7,665	**$38,323**	$5,748	$5,748	**$49,820**
Bolesta Rd	Roosevelt Blvd	Cypress Ln	City	0.48	SB	2	30	11.5	23.0	0.0	0	0.0	0	-	3.14	C	2,534	0.64	$57,771	$14,443	**$72,213**	$10,832	$10,832	**$93,877**

City of Largo
Multimodal List of Short Term Projects

Road Name	From	To	Owner	Length (mi)	Dir.	# Lanes	mph	Width of Outside Lane (ft)	Pavement Width (ft)	Buffer Width (ft)	Tree Spacing in Buffer	Existing Sidewalk Width	% of Sidewalk Coverage	Existing Sidewalk Length (ft)	Existing PLOS Score	PLOS Grade	Needed Sidewalk (ft)	Ped LOS Difference	Sidewalk Cost	Contingecy (25%)	Total Const Cost	PE Design (15%)	CEI Cost (15%)	S/W Total Project Cost
Bolesta Rd	Northern Ave	Whitney Rd	City	0.25	SB	2	25	9.0	18.0	11.0	0	5.0	30	403	3.26	C	941	0.76	$21,461	$5,365	**$26,826**	$4,024	$4,024	**$34,874**
Cambridge Dr	Chesterfield Dr	S Lake Ave	City	0.61	WB	2	30	10.0	20.0	12.0	0	4.0	40	1,290	2.95	C	1,935		$44,105	$11,026	**$55,131**	$8,270	$8,270	**$71,670**
Chesterfield Dr	Betty Ln	Cambridge Dr	City	0.17	WB	2	25	10.0	20.0	0.0	0	0.0	0	-	2.76	C	896	0.26	$20,427	$5,107	**$25,534**	$3,830	$3,830	**$33,195**
Coral Way	Ulmerton Rd	end	City	0.50	SB	2	25	10.0	20.0	0.0	0	0.0	0	-	2.76	C	2,653	0.26	$60,464	$15,116	**$75,580**	$11,337	$11,337	**$98,254**
Currie Ln	113th Ave	Walsingham Rd	City	0.27	NB	2	25	10.0	20.0	0.0	0	0.0	0	-	2.76	C	1,440	0.26	$32,818	$8,204	**$41,022**	$6,153	$6,153	**$53,329**
Currie Ln	113th Ave	Walsingham Rd	City	0.27	SB	2	25	10.0	20.0	0.0	0	0.0	0	-	2.76	C	1,440	0.26	$32,818	$8,204	**$41,022**	$6,153	$6,153	**$53,329**
Dodge St	Roosevelt Blvd	Whitney St	City	0.51	SB	2	25	10.0	20.0	11.0	0	4.0	50	1,359	2.68	C	1,359	0.18	$30,983	$7,746	**$38,729**	$5,809	$5,809	**$50,347**
Donegan Rd	Lake Ave	8th Ave SE	City	0.92	SB	2	30	11.0	22.0	0.0	0	0.0	0	-	4.06	D	4,861	1.56	$110,812	$27,703	**$138,515**	$20,777	$20,777	**$180,069**
Donegan Rd	Lake Ave	8th Ave SE	City	0.92	NB	2	30	11.0	22.0	25.0	0	5.0	25	1,215	3.55	D	3,646	1.05	$83,109	$20,777	**$103,886**	$15,583	$15,583	**$135,052**
Fairlane Dr	Imperial Dr	Keene Rd	City	0.16	EB	2	25	10.0	20.0	0.0	0	0.0	0	-	2.76	C	860	0.26	$19,606	$4,901	**$24,507**	$3,676	$3,676	**$31,859**
Fairlane Dr	Imperial Dr	Keene Rd	City	0.16	WB	2	25	10.0	20.0	0.0	0	0.0	0	-	2.76	C	860	0.26	$19,606	$4,901	**$24,507**	$3,676	$3,676	**$31,859**
Fulton Dr SE	16th Ave SE	East Bay Rd	City	0.50	NB	2	30	10.0	20.0	0.0	0	0.0	0	-	3.32	C	2,663		$60,704	$15,176	**$75,880**	$11,382	$11,382	**$98,645**
Fulton St NE	East Bay Dr	Keene Park Dr	City	0.27	SB	2	30	10.0	20.0	0.0	0	0.0	0	-	2.87	C	1,438	0.82	$32,784	$8,196	**$40,980**	$6,147	$6,147	**$53,274**
Gershwin Dr	Keene Park Dr	Rosery Rd	City	0.50	NB	2	25	10.0	20.0	13.0	0	4.0	40	1,054	2.83	C	1,582	0.33	$36,051	$9,013	**$45,064**	$6,760	$6,760	**$58,584**
Gershwin Dr	Keene Park Dr	Rosery Rd	City	0.50	SB	2	25	10.0	20.0	13.0	0	4.0	40	1,054	2.83	C	1,582	0.33	$36,051	$9,013	**$45,064**	$6,760	$6,760	**$58,584**
Gladys St	134th Ave	Dryer Ave	City	0.51	SB	2	30	10.0	20.0	0.0	0	0.0	0	-	4.18	D	2,677	1.68	$61,030	$15,257	**$76,287**	$11,443	$11,443	**$99,174**
Gladys St	134th Ave	Dryer Ave	City	0.51	NB	2	30	10.0	20.0	12.0	0	4.0	65	1,740	3.05	C	937	0.55	$21,360	$5,340	**$26,701**	$4,005	$4,005	**$34,711**
Gooden Crossing	Pinellas Trail	driveway	City	0.15	EB	2	25	9.0	18.0	0.0	0	0.0	0	-	2.89	C	782	0.39	$17,823	$4,456	**$22,279**	$3,342	$3,342	**$28,962**
Haines Bayshore Rd	US 19	Wolford Rd	City	0.76	WB	2	35	10.0	20.0	0.0	0	0.0	0	-	3.00	C	3,996	0.50	$91,082	$22,770	**$113,852**	$17,078	$17,078	**$148,008**
Haines Bayshore Rd	US 19	Wolford Rd	City	0.76	EB	2	35	10.0	20.0	30.0	0	5.0	25	999	3.21	C	2,997	0.71	$68,311	$17,078	**$85,389**	$12,808	$12,808	**$111,006**
Highland Ave	East Bay Dr	Belleair Rd	City	1.53	NB	2	35	11.5	23.0	25.0	0	4.0	70	5,649	3.47	C	2,421	0.97	$55,182	$13,796	**$68,978**	$10,347	$10,347	**$89,671**
Highland Ave	East Bay Dr	Belleair Rd	City	1.53	SB	2	35	11.5	23.0	25.0	0	4.0	70	5,649	3.47	C	2,421	0.97	$55,182	$13,796	**$68,978**	$10,347	$10,347	**$89,671**
Hillcrest Ave	Ponce de Leon Blvd	Belleair Rd	City	0.13	NB	2	25	10.0	20.0	0.0	0	0.0	0	-	2.76	C	669	0.26	$15,260	$3,815	**$19,075**	$2,861	$2,861	**$24,797**
Hillcrest Ave	Ponce de Leon Blvd	Belleair Rd	City	0.13	SB	2	25	10.0	20.0	0.0	0	0.0	0	-	2.76	C	669	0.26	$15,260	$3,815	**$19,075**	$2,861	$2,861	**$24,797**
Hillsdale Ave	Gladys St	Trotter Rd	City	0.51	WB	2	25	10.0	20.0	8.0	0	4.0	25	667	3.13	C	2,002	0.63	$45,633	$11,408	**$57,042**	$8,556	$8,556	**$74,154**
Hillsdale Ave	Gladys St	Trotter Rd	City	0.51	EB	2	25	10.0	20.0	12.0	0	4.0	50	1,335	2.67	C	1,335	0.17	$30,422	$7,606	**$38,028**	$5,704	$5,704	**$49,436**
Huntington Dr N	Huntington Dr W	Fulton St	City	0.22	EB	2	25	10.5	21.0	0.0	0	0.0	0	-	2.70	C	1,172	0.20	$26,721	$6,680	**$33,402**	$5,010	$5,010	**$43,422**
Huntington Dr N	Huntington Dr W	Fulton St	City	0.22	WB	2	25	10.5	21.0	0.0	0	0.0	0	-	2.70	C	1,172	0.20	$26,721	$6,680	**$33,402**	$5,010	$5,010	**$43,422**
Huntington Dr W	East Bay Dr	Huntington Dr N	City	0.22	NB	2	25	10.5	21.0	0.0	0	0.0	0	-	2.70	C	1,162	0.20	$26,497	$6,624	**$33,121**	$4,968	$4,968	**$43,057**
Huntington Dr W	East Bay Dr	Huntington Dr N	City	0.22	SB	2	25	10.5	21.0	0.0	0	0.0	0	-	2.70	C	1,162	0.20	$26,497	$6,624	**$33,121**	$4,968	$4,968	**$43,057**
Jasper St	Martin Luther King	Betty Ln	City	0.50	EB	2	25	10.0	20.0	5.0	0	5.0	50	1,317	2.73	C	1,317	0.23	$30,025	$7,506	**$37,532**	$5,630	$5,630	**$48,791**
Jasper St	Martin Luther King	Betty Ln	City	0.50	WB	2	25	10.0	20.0	5.0	0	5.0	75	1,976	2.32	B	659		$15,013	$3,753	**$18,766**	$2,815	$2,815	**$24,396**
Kersey Rd	Belcher Rd	Albemarle Rd	City	0.23	EB	2	25	10.0	20.0	0.0	0	0.0	0	-	2.76	C	1,229	0.26	$28,008	$7,002	**$35,010**	$5,252	$5,252	**$45,513**
Kersey Rd	Belcher Rd	Winchester Rd	City	0.23	WB	2	25	10.0	20.0	0.0	0	0.0	0	-	2.76	C	1,229	0.26	$28,008	$7,002	**$35,010**	$5,252	$5,252	**$45,513**
Lake Ave NE	McMullen Rd	Belleair Rd	City	0.92	SB	2	30	10.0	20.0	0.0	0	0.0	0	-	4.18	D	4,878	1.68	$111,186	$27,797	**$138,983**	$20,847	$20,847	**$180,678**
Lake Ave SE	Ulmerton Rd	Donegan Rd	City	0.50	SB	2	35	13.0	26.0	25.0	0	5.0	25	658	3.52	D	1,973	1.02	$44,977	$11,244	**$56,221**	$8,433	$8,433	**$73,088**
Lake Ave SE	Lake Palms Dr	Fulton Dr	City	0.18	WB	2	25	10.0	20.0	0.0	0	0.0	0	-	2.76	C	937	0.26	$21,365	$5,341	**$26,707**	$4,006	$4,006	**$34,719**
Lake Ave SE	Ulmerton Rd	Donegan Rd	City	0.50	NB	2	35	13.0	26.0	25.0	0	5.0	50	1,315	3.05	C	1,315	0.55	$29,985	$7,496	**$37,481**	$5,622	$5,622	**$48,725**
Lake Palms Dr	Willow Ave	Meadow Lake Ave	City	0.37	SB	2	30	10.0	20.0	0.0	0	0.0	0	-	2.87	C	1,972	0.37	$44,946	$11,237	**$56,183**	$8,427	$8,427	**$73,037**
Lancaster Dr	Belcher Rd	Portsmouth Rd	City	0.46	WB	2	25	9.0	18.0	0.0	0	0.0	0	-	2.89	C	2,446	0.39	$55,754	$13,939	**$69,693**	$10,454	$10,454	**$90,601**
Lancaster Dr	Belcher Rd	Portsmouth Rd	City	0.46	EB	2	25	9.0	18.0	10.0	0	4.0	70	1,712	2.42	B	734		$16,726	$4,182	**$20,908**	$3,136	$3,136	**$27,180**
Martin Luther King Ave	Jasper St	Belleair Rd	City	0.52	NB	2	25	9.5	19.0	2.0	0	5.0	25	685	3.38	C	2,056	0.88	$46,868	$11,717	**$58,584**	$8,788	$8,788	**$76,160**
McMullen Rd	Lake Ave	Keene Rd	City	0.64	WB	2	30	9.0	18.0	0.0	0	0.0	0	-	3.45	C	3,396	0.95	$77,410	$19,352	**$96,762**	$14,514	$14,514	**$125,790**
Mehlenbacher Rd	Indian Rocks Rd	Pinellas Trail	City	0.75	EB	2	30	9.0	18.0	0.0	0	0.0	0	-	4.24	D	3,968	1.74	$90,441	$22,610	**$113,052**	$16,958	$16,958	**$146,967**

City of Largo
Multimodal List of Short Term Projects

Road Name	From	To	Owner	Length (mi)	Dir.	# Lanes	mph	Width of Outside Lane (ft)	Pavement Width (ft)	Buffer Width (ft)	Tree Spacing in Buffer	Existing Sidewalk Width	% of Sidewalk Coverage	Existing Sidewalk Length (ft)	Existing PLOS Score	PLOS Grade	Needed Sidewalk (ft)	Ped LOS Difference	Sidewalk Cost	Contingecy (25%)	Total Const Cost	PE Design (15%)	CEI Cost (15%)	S/W Total Project Cost
Mehlenbacher Rd	Indian Rocks Rd	Pinellas Trail	City	0.75	WB	2	30	9.0	18.0	0.0	0	0.0	0	-	4.24	D	3,968	1.74	$90,441	$22,610	**$113,052**	$16,958	$16,958	**$146,967**
Myrtle Ave	Clearwater Largo Rd	Belleair Rd	City	0.20	SB	2	30	8.5	17.0	0.0	0	0.0	0	-	3.07	C	1,042	0.57	$23,761	$5,940	**$29,702**	$4,455	$4,455	**$38,612**
Myrtle Ave	Clearwater Largo Rd	Belleair Rd	City	0.20	NB	2	30	8.5	17.0	15.0	0	5.0	30	313	3.22	C	730	0.72	$16,633	$4,158	**$20,791**	$3,119	$3,119	**$27,029**
Pine St	Wilcox Rd	Dryer Ave	City	0.76	NB	2	30	10.0	20.0	0.0	0	0.0	0	-	3.32	C	3,991	0.82	$90,984	$22,746	**$113,730**	$17,060	$17,060	**$147,849**
Pine St	Wilcox Rd	Dryer Ave	City	0.76	SB	2	30	10.0	20.0	17.0	0	5.0	65	2,594	2.54	C	1,397	0.04	$31,845	$7,961	**$39,806**	$5,971	$5,971	**$51,747**
Ponce de Leon Blvd	Missouri Ave	Hillcrest Ave	City	0.50	WB	2	25	10.0	20.0	0.0	0	0.0	0	-	4.07	D	2,632	1.57	$59,990	$14,998	**$74,988**	$11,248	$11,248	**$97,484**
Ridge Rd	Walsingham Rd	134th Ave	City	1.00	NB	2	30	9.5	19.0	17.0	0	4.0	50	2,643	2.98	C	2,643	0.48	$60,235	$15,059	**$75,294**	$11,294	$11,294	**$97,882**
Ridge Rd	Walsingham Rd	134th Ave	City	1.00	SB	2	30	9.5	19.0	20.0	0	4.0	85	4,492	2.23	B	793		$18,070	$4,518	**$22,588**	$3,388	$3,388	**$29,365**
Roberta St	Keene Rd	Rosery Rd	City	0.70	EB	2	25	10.0	20.0	0.0	0	0.0	0	-	2.76	C	3,705	0.26	$84,449	$21,112	**$105,561**	$15,834	$15,834	**$137,229**
Roberta St	Keene Rd	Rosery Rd	City	0.70	WB	2	25	10.0	20.0	0.0	0	0.0	0	-	2.76	C	3,705	0.26	$84,449	$21,112	**$105,561**	$15,834	$15,834	**$137,229**
Rosery Rd	Keene Rd	Roberta St	City	0.52	WB	2	25	10.0	20.0	10.0	0	4.0	40	1,104	2.86	C	1,655	0.36	$37,732	$9,433	**$47,165**	$7,075	$7,075	**$61,315**
Rosery Rd	Highland Ave	end	City	0.48	EB	2	30	9.0	18.0	15.0	0	4.0	80	2,047	2.76	C	512	0.26	$11,667	$2,917	**$14,584**	$2,188	$2,188	**$18,959**
Rosery Rd	Keene Rd	Roberta St	City	0.52	EB	2	25	10.0	20.0	10.0	0	4.0	80	2,207	2.19	B	552		$12,577	$3,144	**$15,722**	$2,358	$2,358	**$20,438**
Seacrest Dr	East Bay Dr	Kenne Park Dr	City	0.27	NB	2	25	9.0	18.0	12.0	0	4.0	90	1,293	2.01	B	144		$3,274	$818	**$4,092**	$614	$614	**$5,320**
Sherbrook Rd	Weymouth Dr	Belleair Rd	City	0.25	NB	2	25	11.0	22.0	0.0	0	0.0	0	-	2.64	C	1,316	0.14	$29,993	$7,498	**$37,491**	$5,624	$5,624	**$48,739**
Sherbrook Rd	Weymouth Dr	Belleair Rd	City	0.25	SB	2	25	11.0	22.0	0.0	0	0.0	0	-	2.64	C	1,316	0.14	$29,993	$7,498	**$37,491**	$5,624	$5,624	**$48,739**
Vonn Rd	Walsingham Rd	Wilcox Rd	City	0.75	NB	2	30	11.0	22.0	17.0	0	4.0	80	3,182	2.86	C	795	0.36	$18,131	$4,533	**$22,663**	$3,400	$3,400	**$29,462**
Vonn Rd	Wilcox	134th	City	0.25	SB	2	30	10.0	20.0	5.0	0	4.0	25	328	4.02	D	985	1.52	$22,452	$5,613	**$28,065**	$4,210	$4,210	**$36,485**
Vonn Rd	Walsingham Rd	Wilcox Rd	City	0.75	SB	2	30	11.0	22.0	11.0	0	5.0	90	3,579	2.73	C	398	0.23	$9,065	$2,266	**$11,332**	$1,700	$1,700	**$14,731**
Walsingham Rd	Ulmerton Rd	Reservoir Dr/125th St	City	0.23	WB	2	30	10.0	20.0	0.0	0	0.0	0	-	4.63	E	1,223	2.13	$27,884	$6,971	**$34,855**	$5,228	$5,228	**$45,312**
Walsingham Rd	Ulmerton Rd	Reservoir Dr/125th St	City	0.23	EB	2	30	10.0	20.0	30.0	0	5.0	50	612	3.50	C	612	1.00	$13,942	$3,486	**$17,428**	$2,614	$2,614	**$22,656**
Washington Ave	130th Ave	Ulmerton Rd	City	0.26	NB	2	25	9.5	19.0	0.0	0	0.0	0	-	2.83	C	1,347	0.33	$30,702	$7,676	**$38,378**	$5,757	$5,757	**$49,891**
Washington Ave	130th Ave	Ulmerton Rd	City	0.26	SB	2	25	9.5	19.0	0.0	0	0.0	0	-	2.83	C	1,347	0.33	$30,702	$7,676	**$38,378**	$5,757	$5,757	**$49,891**
Weymouth Dr	Sherbrook Rd	end	City	0.12	EB	2	25	10.0	20.0	0.0	0	0.0	0	-	2.76	C	648	0.26	$14,776	$3,694	**$18,470**	$2,771	$2,771	**$24,011**
Weymouth Dr	Sherbrook Rd	end	City	0.12	WB	2	25	10.0	20.0	0.0	0	0.0	0	-	2.76	C	648	0.26	$14,776	$3,694	**$18,470**	$2,771	$2,771	**$24,011**
Whitney Rd	US 19	Wolford	City	0.76	EB	2	30	9.5	19.0	0.0	0	0.0	0	-	4.25	D	4,034	1.75	$91,947	$22,987	**$114,934**	$17,240	$17,240	**$149,414**
Whitney Rd	58th St	Bolesta Rd	City	0.50	EB	2	30	10.0	24.0	12.0	0	8.0	30	795	3.22	C	1,855	0.72	$42,283	$10,571	**$52,853**	$7,928	$7,928	**$68,709**
Whitney Rd	Wolford	58th	City	0.27	EB	2	30	15.5	31.0	0.0	0	0.0	0	-	3.64	D	1,428	1.14	$32,549	$8,137	**$40,686**	$6,103	$6,103	**$52,892**
Whitney Rd	US 19	Wolford	City	0.76	WB	2	30	9.5	19.0	11.0	0	5.0	60	2,420	3.13	C	1,613	0.63	$36,779	$9,195	**$45,973**	$6,896	$6,896	**$59,766**
Wilcox Rd	Indian Rocks Rd	Pine	City	1.00	EB	2	35	10.5	21.0	20.0	0	5.0	50	2,644	3.26	C	2,644	0.76	$60,272	$15,068	**$75,340**	$11,301	$11,301	**$97,942**
Wild Acres Rd	end	Ulmerton Rd	City	0.38	NB	2	30	8.0	16.0	0.0	0	0.0	0	-	3.76	D	1,994	1.26	$45,463	$11,366	**$56,829**	$8,524	$8,524	**$73,877**
Wild Acres Rd	Ulmerton Rd	Whispering Dr	City	0.47	NB	2	30	12.0	24.0	0.0	0	0.0	0	-	3.96	D	2,472	1.46	$56,355	$14,089	**$70,443**	$10,566	$10,566	**$91,576**
Wild Acres Rd	Ulmerton Rd	Whispering Dr	City	0.47	SB	2	30	12.0	24.0	0.0	5	0.0	60	1,483	3.22	C	989	0.72	$22,542	$5,635	**$28,177**	$4,227	$4,227	**$36,630**
Wild Acres Rd	end	Ulmerton Rd	City	0.38	SB	2	30	8.0	16.0	0.0	0	0.0	0	-	3.76	D	1,994	1.26	$45,463	$11,366	**$56,829**	$8,524	$8,524	**$73,877**
Willow Ave	Starkey Rd	Caribbean Way	City	0.15	WB	2	25	10.0	20.0	0.0	0	0.0	0	-	3.21	C	782	0.71	$17,823	$4,456	**$22,279**	$3,342	$3,342	**$28,962**
Winchester Rd	Lancaster Dr	Kersey Rd	City	0.25	NB	2	15	6.0	12.0	0.0	0	0.0	0	-	3.23	C	1,329	0.73	$30,299	$7,575	**$37,873**	$5,681	$5,681	**$49,235**
Winchester Rd	Lancaster Dr	Kersey Rd	City	0.25	SB	2	15	6.0	12.0	0.0	0	0.0	0	-	3.23	C	1,329	0.73	$30,299	$7,575	**$37,873**	$5,681	$5,681	**$49,235**
Wolford Rd	Whitney Rd	Haines Bayshore Rd	City	0.49	NB	2	30	10.0	20.0	0.0	0	0.0	0	-	2.87	C	2,613	0.37	$59,569	$14,892	**$74,461**	$11,169	$11,169	**$96,799**
Wolford Rd	Whitney Rd	Haines Bayshore Rd	City	0.49	SB	2	30	10.0	20.0	0.0	0	0.0	0	-	2.87	C	2,613	0.37	$59,569	$14,892	**$74,461**	$11,169	$11,169	**$96,799**
Wyatt St	Clearwater Largo Rd	Missouri Ave	City	0.50	WB	2	30	10.0	20.0	0.0	0	0.0	0	-	4.18	D	2,656	1.68	$60,532	$15,133	**$75,665**	$11,350	$11,350	**$98,365**

City of Largo
Multimodal List of Short Term Projects

Road Name	From	To	Owner	Length (mi)	Dir.	# Lanes	mph	Width of Outside Lane (ft)	Pavement Width (ft)	Buffer Width (ft)	Tree Spacing in Buffer	Existing Sidewalk Width	% of Sidewalk Coverage	Existing Sidewalk Length (ft)	Existing PLOS Score	PLOS Grade	Needed Sidewalk (ft)	Ped LOS Difference	Sidewalk Cost	Contingecy (25%)	Total Const Cost	PE Design (15%)	CEI Cost (15%)	S/W Total Project Cost
City and County Managed Roadway Segments																								
113th St N	Walsingham Rd	Ulmerton Rd	City/County	1.00	NB	4	40	11.5	23.0	0.0	0	0.0	0	-	5.07	E	5,282	1.57	$120,393	$30,098	**$150,492**	$22,574	$22,574	**$195,639**
113th St N	Walsingham Rd	Ulmerton Rd	City/County	1.00	SB	4	40	11.5	23.0	0.0	0	0.0	0	-	5.07	E	5,282	1.57	$120,393	$30,098	**$150,492**	$22,574	$22,574	**$195,639**
County Managed Roadway Segments																								
150th Ave N	end	US 19	County	0.52	WB	2	25	9.0	18.0	0.0	0	0.0	0	-	4.20	D	2,725	1.70	$62,104	$15,526	**$77,630**	$11,645	$11,645	**$100,919**
Belleair Rd	Clearwater Largo Rd	US 19	County	4.12	EB	2	35	10.0	20.0	30.0	0	5.0	60	13,050	3.67	D	8,700	0.17	$198,311	$49,578	**$247,889**	$37,183	$37,183	**$322,256**
Indian Rocks Rd	Walsingham Rd	Wilcox Rd	County	0.76	NB	2	35	11.0	22.0	15.0	0	5.0	20	805	5.11	E	3,220	1.61	$73,397	$18,349	**$91,746**	$13,762	$13,762	**$119,270**
Indian Rocks Rd	Wilcox Rd	West Bay Dr	County	2.03	SB	2	35	11.0	22.0	0.0	0	0.0	0	-	5.47	E	10,715	1.97	$244,254	$61,063	**$305,317**	$45,798	$45,798	**$396,913**
Indian Rocks Rd	Wilcox Rd	West Bay Dr	County	2.03	NB	2	35	11.0	22.0	20.0	0	4.0	40	4,286	4.73	E	6,429	1.23	$146,552	$36,638	**$183,190**	$27,479	$27,479	**$238,148**
Oakhurst Rd	113th Ave	Walsingham Rd	County	0.28	SB	2	35	11.0	22.0	15.0	0	5.0	50	730	2.75	C	730	0.25	$16,631	$4,158	**$20,788**	$3,118	$3,118	**$27,025**
Poinsettia Rd	Indian Rocks Rd	Pinellas Trail	County	0.58	EB	2	25	11.5	23.0	0.0	0	0.0	0	-	3.90	D	3,081	1.40	$70,225	$17,556	**$87,781**	$13,167	$13,167	**$114,115**
Poinsettia Rd	Indian Rocks Rd	Pinellas Trail	County	0.58	WB	2	25	11.5	23.0	0.0	0	0.0	0	-	3.90	D	3,081	1.40	$70,225	$17,556	**$87,781**	$13,167	$13,167	**$114,115**
Ponce de Leon Blvd	Indian Rocks	Pinellas Trail	County	0.36	EB	2	25	15.0	15.0	7.0	25	5.0	50	946	2.63	C	946	0.13	$21,569	$5,392	**$26,961**	$4,044	$4,044	**$35,049**
Starkey Rd	126th Ave	East Bay Dr	County	2.53	NB	4	45	11.0	22.0	5.0	0	5.0	20	2,670	5.53	F	10,678	2.03	$243,411	$60,853	**$304,264**	$45,640	$45,640	**$395,543**
Starkey Rd	126th Ave	East Bay Dr	County	2.53	SB	4	45	11.0	22.0	5.0	0	5.0	20	2,670	5.53	F	10,678	2.03	$243,411	$60,853	**$304,264**	$45,640	$45,640	**$395,543**
Private and State Managed Roadway Segments																								
130th Ave N	119th St	Pinellas Trail	Private	0.23	EB	2	25	10.0	20.0	15.0	0	5.0	30	361	2.96	C	843	0.46	$19,210	$4,803	**$24,013**	$3,602	$3,602	**$31,217**
66th St N	142nd Ave	US 19	State	0.18	NB	4	45	15.5	27.0	0.0	0	0.0	0	-	5.14	E	950	1.64	$21,664	$5,416	**$27,080**	$4,062	$4,062	**$35,204**
Roosevelt Blvd	Airport Parkway Dr	Terminal Blvd	State	0.27	WB	4	50	16.5	28.0	0.0	0	0.0	0	-	6.39	F	1,426	2.89	$32,496	$8,124	**$40,620**	$6,093	$6,093	**$52,806**
Roosevelt Blvd	Airport Parkway Dr	Terminal Blvd	State	0.27	EB	4	50	16.0	28.0	0.0	0	0.0	0	-	6.43	F	1,426	2.93	$32,496	$8,124	**$40,620**	$6,093	$6,093	**$52,806**
Ulmerton Rd	49th St	Roosevelt Blvd	State	0.49	WB	4	45	17.0	29.0	25.0	0	5.0	50	1,294	5.25	E	1,294	1.75	$29,487	$7,372	**$36,859**	$5,529	$5,529	**$47,917**
Ulmerton Rd	119th St	El Centro Blvd	State	3.96										-	UC	UC	20,909		$476,608	$119,152	**$595,760**	$89,364	$89,364	**$774,488**
Ulmerton Rd	119th St	El Centro Blvd	State	3.96										15,682	UC	UC	5,227		$119,152	$29,788	**$148,940**	$22,341	$22,341	**$193,622**
Ulmerton Rd	49th St	Roosevelt Blvd	State	0.49	EB	4	45	17.0	29.0	25.0	0	5.0	75	1,940	4.84	E	647	1.34	$14,744	$3,686	**$18,429**	$2,764	$2,764	**$23,958**

City of Largo
Multimodal Prioritization Scoring

Road Name	From	To	Owner	Length (mi)	Dir.	# Lanes	Con	ADT	mph	Width of Outside Lane (ft)	Width from Outside Lane to EOP (ft)	Width of Pavement Striped for OSP (ft)	Pavement Width (ft)	Bike Lane (Y/N)	Cross Section (C/S)	Buffer Width (ft)	Tree Spacing in Buffer	Existing Sidewalk Width	% of Sidewalk Coverage	Existing Sidewalk Length (ft)	Existing PLOS Score	PLOS Score	Needed Sidewalk (ft)	Existing BLOS Score	Existing BLOS Grade	Ped Diff	Bike Diff	Bicycle Facility Recommendation	Ped LOS	Bike LOS	Ped Needs	Ped Buffer	Bike Needs	Safety	Community	Transit	Public	Tech	Plans	Points Per Segment	Total Points
101st St SE	101st Way	Ulmerton Rd	City	0.25	NB	2	U	500	25	11.0	0.0	0.0	22.0	N	S	0.0	0	6.0	60	784	2.54	C	523	0.75	A	0.04		Local Road - Shared Lane	1		3	1	3	1	2					11	18
109th St N	126th Ave	130th Ave	City	0.22	NB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	5.0	0	4.0	100	1,182	2.03	B	-	0.95	A			Local Road - Shared Lane					3							3	7
113th St N	Walsingham Rd	Ulmerton Rd	Shared	1.00	NB	4	D	23,163	40	11.5	0.0	0.0	23.0	N	S	0.0	0	0.0	0	-	5.07	E	5,282	4.90	E	1.57	0.40	Add Paved Shoulders Candidate	3	1	3	1	3							11	22
119th St N	Ulmerton Rd	16th	City	0.53	SB	2	U	2,000	25	11.5	0.0	0.0	23.0	N	C	6.0	0	5.0	100	2,804	2.00	B	-	1.92	B		0.42	Local Road - Shared Lane		1		1	3	1	4	1				11	22
119th St N	Walsingham Rd	Ulmerton Rd	City	0.98	SB	2	U	2,500	30	10.0	0.0	0.0	20.0	N	S	5.0	0	5.0	25	1,293	3.48	C	3,878	3.09	C	0.98		Add Paved Shoulders Candidate (LOS Met)	2		3		2	1	2					10	22
120th Ave N	146th St	144th St	City	0.19	EB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	0.0	0	0.0	0	-	2.76	C	1,001	0.85	A	0.26		Local Road - Shared Lane	1		3	1	3							8	16
122nd Ave N	Ridge Rd	113th St	City	0.16	EB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	0.0	0	0.0	0	-	2.76	C	824	1.11	A	0.26		Local Road - Shared Lane	1		3	1	3							8	16
122nd Ave N	145th Ln	143rd St	City	0.21	EB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	0.0	0	0.0	0	-	2.76	C	1,125	0.85	A	0.26		Local Road - Shared Lane	1		3	1	3							8	12
126th Ave N	end	Jackson	City	0.20	EB	2	U	2,000	25	10.0	0.0	0.0	20.0	N	S	0.0	0	0.0	0	-	3.21	C	1,069	2.44	B	0.71	0.94	Local Road - Shared Lane	2	2	3	1	3							11	22
126th Ave N	Ridge Rd	Seminole Blvd	City	0.63	WB	2	U	2,000	25	10.0	0.0	0.0	20.0	N	C	10.0	0	4.0	60	1,995	2.70	C	1,330	2.29	B	0.20	0.79	Local Road - Shared Lane	1	2	2	1	3		2					11	22
126th Ave N	Indian Rocks Rd	134th St	City	0.48	EB	2	U	2,000	25	9.0	0.0	0.0	18.0	N	S	10.0	0	4.0	70	1,779	2.60	C	762	2.83	C	0.10	1.33	Local Road - Shared Lane	1	3	2	1	3	2						12	21
126th Ave N	66th St	US 19	City	0.73	WB	2	U	2,500	35	11.5	0.0	0.0	23.0	N	S	0.0	0	0.0	0	-	3.45	C	3,850	2.72	C	0.95		Add Paved Shoulders Candidate (LOS Met)	2		3	1	2	2						10	20
126th Ave N	68th St	66th St	City	0.26	EB	2	U	2,500	30	10.0	0.0	0.0	20.0	N	S	0.0	0	0.0	0	-	3.49	C	1,372	3.45	C	0.99		Add Paved Shoulders Candidate (LOS Met)	2		3	1	2							8	16
126th Ave N	Starkey Rd	Wild Acres Rd	City	0.52	EB	2	U	2,500	30	12.0	0.0	0.0	24.0	N	C	0.0	0	0.0	0	-	3.27	C	2,741	2.68	C	0.77		Shared Lane Markings Candidate (LOS Met)	2		3	1	2							8	14
126th Ave N	95th St	RR	City	0.28	EB	2	U	2,000	25	12.0	0.0	0.0	24.0	N	C	12.0	0	4.0	100	1,464	1.91	B	-	2.12	B		0.62	Local Road - Shared Lane		2		1	3							6	12
126th Ave N	116th St	Ridge Rd	City	0.25	EB	2	D	500	25	12.0	0.0	0.0	12.0	N	C	5.0	0	4.0	100	1,340	1.95	B	-	2.15	B		0.65	Local Road - Shared Lane		2			3							5	10
12th St SW	2nd Ave SW	West Bay Dr	City	0.13	SB	2	U	500	25	9.0	0.0	0.0	18.0	N	S	0.0	0	0.0	0	-	2.89	C	663	1.68	B	0.39	0.18	Local Road - Shared Lane	1	1	3	1	3		2					11	21
130th Ave N	Washington Ave	95th St	City	0.25	WB	2	U	2,000	25	10.0	0.0	0.0	20.0	N	C	0.0	0	0.0	0	-	3.21	C	1,317	2.24	B	0.71	0.74	Local Road - Shared Lane	2	2	3	1	3							11	18
130th Ave N	Jackson St	Ulmerton Rd	City	0.13	EB	2	S	500	25	16.0	4.0	0.0	44.0	N	C	5.0	0	5.0	100	670	1.73	B	-	0.72	A			Local Road - Shared Lane					3		2	1				6	13
130th Ave N	Ridge Rd	109th St	City	0.35	EB	2	U	500	25	14.0	0.0	0.0	28.0	N	C	10.0	0	4.0	100	1,854	1.73	B	-	0.00	A			Restripe Candidate (Local)				1	3							4	8
130th Ave N	119th St	Pinellas Trail	Private	0.23	WB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	10.0	0	5.0	100	1,204	1.76	B	-	0.95	A			Local Road - Shared Lane				1	3		2					6	16
131st St N	114th Ave	Walsingham Rd	City	0.25	NB	2	U	5,000	35	9.5	0.0	0.0	19.0	N	S	15.0	0	4.0	75	991	2.97	C	330	4.14	D	0.47	0.64	Add Paved Shoulders Candidate	1	2	2	1	3	2						11	19
134th Ave N	Vonn Rd/Gladys St	end	City	0.98	EB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	12.0	0	4.0	60	3,118	2.49	B	2,078	1.28	A			Local Road - Shared Lane			2	1	3	1	2	1				10	18
137th St N	unknown	Wilcox Rd	City	1.03	SB	2	U	500	25	10.0	0.0	0.0	20.0	N	S	10.0	0	5.0	100	5,421	1.76	B	-	1.11	A			Local Road - Shared Lane				1	3	1	2					7	14
142nd Ave N	Belcher Rd	66th St	City	1.11	EB	2	U	7,365	35	10.5	0.0	0.0	21.0	N	S	3.0	0	5.0	25	1,466	4.16	D	4,397	4.10	D	1.66	0.60	Add Paved Shoulders Candidate	3	2	3	1	3	2	2		3	3		22	38
142nd Ave N	US 19	58th St	City	0.87	EB	2	U	5,000	30	12.0	0.0	0.0	24.0	N	C	8.0	0	5.0	90	4,153	2.56	C	461	3.56	D	0.06	0.06	Shared Lane Markings Candidate	1	1	1	1	3	1	2		3	3		16	33
143rd St N	Walsingham Rd	Channel Dr	City	0.50	SB	2	U	500	30	9.0	0.0	0.0	18.0	N	S	0.0	0	0.0	0	-	3.00	C	2,618	1.29	A	0.50		Local Road - Shared Lane	1		3	1	3	2						10	16
144th St N	Walsingham Rd	120th Ave	City	0.09	NB	2	U	500	25	9.5	0.0	0.0	19.0	N	S	0.0	0	0.0	0	-	2.83	C	466	1.04	A	0.33		Local Road - Shared Lane	1		3	1	3							8	16
145th Ln N	120th	122nd	City	0.15	NB	2	U	500	25	10.5	0.0	0.0	21.0	N	C	0.0	0	0.0	0	-	2.70	C	787	0.68	A	0.20		Local Road - Shared Lane	1		3	1	3							8	16
146th St N	Walsingham Rd	120th Ave	City	0.08	NB	2	U	500	25	9.5	0.0	0.0	19.0	N	C	0.0	0	5.0	75	331	2.48	B	110	1.14	A			Local Road - Shared Lane			3	1	3							7	12
14th St NW	West Bay Dr	Mehlenbacher Rd	City	0.51	NB	2	U	500	30	9.5	0.0	0.0	19.0	N	S	0.0	0	0.0	0	-	2.94	C	2,678	1.29	A	0.44		Local Road - Shared Lane	1		3	1	3	2						10	20
14th St SW	2nd Ave SW	West Bay Dr	City	0.12	NB	2	S	500	25	10.0	0.0	0.0	30.0	N	C	0.0	0	5.0	100	660	2.09	B	-	2.37	B		0.87	Local Road - Shared Lane		2	1	1	3	2						9	16
150th Ave N	end	US 19	County	0.52	WB	2	U	5,000	25	9.0	0.0	0.0	18.0	N	S	0.0	0	0.0	0	-	4.20	D	2,725	3.69	D	1.70	0.19	Add Paved Shoulders Candidate	3	1	3	1	3	1						12	18
150th Ave N	US 19	58th St	County	1.01	EB	2	U	5,000	30	9.5	0.0	0.0	19.0	N	C	10.0	0	5.0	100	5,329	2.42	B	-	4.01	D		0.51	Add Paved Shoulders Candidate		2		1	3	2						8	16
150th Ave N	58th St	49th St	County	0.72	EB	2	S	5,000	30	13.0	0.0	0.0	39.0	N	C	2.5	0	5.0	100	3,801	2.54	C	-	3.44	C	0.04		Restripe Candidate (LOS Met)	1		1	1	2	1		1				7	14
16th Ave NW	Pinellas Trail	RR	City	0.43	EB	2	U	500	30	9.0	0.0	0.0	18.0	N	S	0.0	0	0.0	0	-	3.00	C	2,255	1.60	B	0.50	0.10	Local Road - Shared Lane	1	1	3	1	3	1	2					12	25
16th Ave SE	Seminole Blvd	end	City	0.54	EB	2	U	5,000	25	9.5	0.0	0.0	19.0	N	S	0.0	0	0.0	0	-	4.14	D	2,845	3.65	D	1.64	0.15	Add Paved Shoulders Candidate	3	1	3	1	3	2	2		3	3		21	42
16th Ave SW	4th St	Seminole Blvd	City	1.00	EB	2	U	2,500	25	8.5	0.0	0.0	17.0	N	S	0.0	0	0.0	0	-	3.58	D	5,288	2.86	C	1.08		Add Paved Shoulders Candidate (LOS Met)	3		3	1	2	2	2					13	26
16th Ave SW	Pinellas Trail	Ridge Rd	City	0.26	WB	2	U	2,000	30	10.0	0.0	0.0	20.0	N	C	0.0	0	0.0	0	-	3.32	C	1,347	2.61	C	0.82	1.11	Local Road - Shared Lane	2	3	3	1	3	1						13	21
16th Ave SW	Trotter Rd	20th St	City	0.26	WB	2	U	500	25	10.0	0.0	0.0	20.0	N	S	12.0	0	4.0	50	677	2.67	C	677	1.11	A	0.17		Local Road - Shared Lane	1		3	1	3	1						9	14
16th Ave SW	119th St	Pinellas Trail	City	0.25	WB	2	U	2,000	30	11.5	0.0	0.0	23.0	N	C	7.0	0	5.0	100	1,337	2.09	B	-	2.08	B		0.58	Local Road - Shared Lane		2		1	3							6	12
20th St SW	West Bay Dr	Mehlenbacher Rd	City	0.51	SB	2	U	500	30	10.0	0.0	0.0	20.0	N	S	3.0	0	5.0	50	1,345	2.87	C	1,345	1.26	A	0.37		Local Road - Shared Lane	1		3	1	3							8	13
20th St SW	16th Ave	8th Ave	City	0.50	NB	2	U	500	30	10.0	0.0	0.0	20.0	N	C	0.0	0	0.0	0	-	2.87	C	2,659	1.01	A	0.37		Local Road - Shared Lane	1		3	1	3							8	12
20th St SW	8th Ave	West Bay Dr	City	0.50	NB	2	U	5,000	35	16.0	4.0	0.0	32.0	Y	C	2.0	0	5.0	100	2,642	2.60	C	-	2.24	B	0.10		Existing On-Road Bicycle Facility	1		1	1		1						4	6
2nd Ave NE	4th St	Highland Ave	City	0.52	EB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	6.0	0	4.0	50	1,382	2.76	C	1,382	1.11	A	0.26		Local Road - Shared Lane	1		3	1	3	1						9	18
2nd Ave SW	14th St	12th St	City	0.11	EB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	10.0	0	5.0	100	590	1.76	B	-	0.95	A			Local Road - Shared Lane				1	3	1						5	10
2nd St SW	8th Ave SW	West Bay Dr	City	0.50	SB	2	U	500	30	10.0	0.0	0.0	20.0	N	C	0.0	0	5.0	25	664	3.28	C	1,991	1.44	A			Local Road - Shared Lane			4	1	3	1						9	16
49th St N	Ulmerton Rd	Roosevelt Blvd	State	1.13	SB	6	D	39,285	45	13.5	0.0	0.0	37.0	N	C	3.0	0	5.0	100	5,966	3.93	D	-	4.66	E	0.43	0.16	Restripe Candidate	1	1		1	3			2				8	16
4th Ave NW	RR	Missouri Ave	City	0.76	EB	2	U	500	25	8.0	0.0	0.0	16.0	N	S	0.0	0	0.0	0	-	3.03	C	4,034	1.92	B	0.53	0.42	Local Road - Shared Lane	2	1	3	1	3						3	13	25
4th Ave NW	Pinellas Trail	1st St	City	0.62	EB	2	U	500	25	9.5	0.0	0.0	19.0	N	S	8.0	0	5.0	100	3,251	1.83	B	-	1.14	A			Local Road - Shared Lane				1	3						3	7	14
4th St NE	East Bay Dr	8th Ave NE	City	0.47	NB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	0.0	0	0.0	0	-	2.76	C	2,503	1.11	A	0.26		Local Road - Shared Lane	1		3	1	3	2					3	13	22
4th St NW	4th Ave	8th Ave	City	0.50	EB	2	U	500	30	10.0	0.0	0.0	20.0	N	S	0.0	0	0.0	0	-	2.87	C	2,650	1.11	A	0.37		Local Road - Shared Lane	1		3	1	3		2					10	18
4th St NW	West Bay Dr	4th Ave	City	0.27	WB	2	U	500	30	15.0	0.0	0.0	30.0	N	C	5.0	0	4.0	25	357	2.81	C	1,071	0.53	A	0.31		Restripe Candidate (Local)	1		3		3		2					9	15
4th St SW	8th Ave SW	West Bay Dr	City	1.01	NB	2	U	500	30	10.0	0.0	0.0	20.0	N	C	0.0	0	0.0	0	-	2.87	C	5,350	2.44	B	0.37	0.94	Local Road - Shared Lane	1	2	3	1	3	1	2					13	21
58th St N	Roosevelt Blvd	Whitney Rd	City	0.52	SB	2	U	5,000	25	9.5	0.0	0.0	19.0	N	S	0.0	0	0.0	0	-	4.14	D	2,720	3.82	D	1.64	0.32	Add Paved Shoulders Candidate	3	1	3	1	3	2		1			2	16	25
58th St N	142nd Ave	150th Ave	City	0.53	NB	2	U	5,000	30	12.5	0.0	0.0	25.0	N	C	20.0	0	5.0	75	2,115	2.54	C	705	4.04	D	0.04	0.54	Shared Lane Markings Candidate	1	2	2	1	3			1			2	12	21
58th St N	150th Ave	Roosevelt Blvd	City	0.49	NB	2	U	5,000	30	13.5	0.0	0.0	27.0	N	C	2.5	0	5.0	100	2,587	2.53	C	-	3.37	C	0.03		Shared Lane Markings Candidate (LOS Met)	1		1	1	2	1		1			2	9	18
58th St N	Ulmerton Rd	142nd Ave	City	0.49	NB	4	U	5,000	30	11.5	0.0	0.0	48.5	N	C	6.0	0	5.0	100	2,609	2.18	B	-	2.47	B			Restripe Candidate (LOS Met)				1	2			1			2	6	12
5th Ave NE	4th St	Highland Ave	City	0.52	EB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	6.0	25	4.0	10	277	3.32	C	2,489	1.11	A			Local Road - Shared Lane			3	1	3		4					11	19
5th Ave SW	Clearwater Largo Rd	4th St	City	0.27	EB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	0.0	0	4.0	100	1,404	2.22	B	-	2.28	B		0.78	Local Road - Shared Lane		2	2	1	3							8	18
5th Ave SW	4th St	2nd St	City	0.17	EB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	0.0	0	0.0	0	-	2.76	C	877	0.95	A	0.26		Local Road - Shared Lane	1		3	1	3							8	16
62nd St N	Ulmerton Rd	Roosevelt Blvd	City	1.68	SB	2	U	5,000	40	9.5	0.0	0.0	19.0	N	S	20.0	0	5.0	35	3,099	3.79	D	5,756	4.23	D	0.53	0.73	Add Paved Shoulders Candidate	2	2	3	1	3	2	4	1				18	36
62nd St N	end	Whitney Rd	City	0.28	NB	2	U	2,000	25	12.0	0.0	0.0	24.0	N	C	9.0	0	5.0	60	892	2.54	C	595	1.94	B	0.04	0.44	Local Road - Shared Lane	1	1	2	1	3		4					12	21
66th St N	142nd Ave	US 19	State	0.18	NB	4	D	27,500	45	15.5	4.0	0.0	27.0	N	S	0.0	0	0.0	0	-	5.14	E	950	3.70	D	1.64		Existing On-Road Bicycle Facility	3		3	1		2						9	12
66th St N	126th Ave	Ulmerton Rd	State	0.50	NB	6	D	38,000	45	16.0	4.0	0.0	38.0	N	S	4.0	0	5.0	100	2,640	3.76	D	-	3.55	D	0.26		Existing On-Road Bicycle Facility	1					2		1				4	8
66th St N	Ulmerton Rd	142nd Ave	State	0.51	SB	4	D	27,500	45	15.5	4.0	0.0	27.0	N	S	15.0	0	5.0	100	2,693	3.63	D	-	3.70	D	0.13		Existing On-Road Bicycle Facility	1			1		2						4	7
6th St NE	East Bay Dr	5th Ave NE	City	0.32	NB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	6.0	0	4.0	100	1,681	1.99	B	-	1.11	A			Local Road - Shared Lane				1	3	1						5	14
8th Ave NW	Clearwater-Largo Rd	end	City	0.26	EB	2	U	500	25	10.5	0.0	0.0	21.0	N	S	0.0	0	0.0	0	-	2.70	C	1,385	0.78	A	0.20		Local Road - Shared Lane	1		3	1	3	1						9	13
8th Ave NW/Mehlenbacher Rd	Pinellas Trail	Clearwater-Largo Rd	City	0.26	EB	2	U	4,469	30	9.5	0.0	0.0	19.0	N	S	8.0	0	4.0	50	674	3.35	C	674	3.94	D			Add Paved Shoulders Candidate			3	1	3						3	10	17
8th Ave SE	2nd St	Donegan	City	0.28	EB	2	U	9,322	30	10.5	0.0	0.0	21.0	N	S	0.0	0	0.0	0	-	4.63	E	1,456	4.01	D	2.13	0.51	Add Paved Shoulders Candidate	3	2	3	1	3	2		3				17	34
8th Ave SE	Missouri Ave (Seminole Blvd)	2nd St	City	0.27	EB	2	U	9,322	30	12.0	0.0	0.0	24.0	N	C	3.0	0	10.0	100	1,409	2.84	C	-	3.74	D	0.34	0.24	Shared Lane Markings Candidate (existing wide SW)	1	1		1	3	2		3				11	21
8th Ave SW	Indian Rocks Rd	Missouri Ave	City	2.06	EB	2	U	9,322	30	11.0	0.0	0.0	22.0	N	C	5.0	0	4.0	80	8,716	3.43	C	2,179	4.10	D	0.93	0.60	Shared Lane Markings Candidate	2	2	2		3	2	2	2	3			18	34
8th St NE	East Bay Dr	2nd Ave NE	City	0.13	NB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	0.0	0	0.0	0	-	2.76	C	685	1.11	A	0.26		Local Road - Shared Lane	1		3	1	3							8	12
95th St N	126th Ave	130th Ave	City	0.25	SB	2	U	2,000	25	8.5	0.0	0.0	17.0	N	C	8.0	0	4.0	25	331	3.46	C	993	2.75	C		1.25	Local Road - Shared Lane		3	3	1	3	1						11	21
Adrian Ave	Indian Rocks Rd	Trotter Rd	City	0.75	WB	2	U	500	30	10.0	0.0	0.0	20.0	N	S	7.0	0	4.0	30	1,190	3.17	C	2,777	1.26	A	0.67		Local Road - Shared Lane	2		3	1	3							9	18
Alt Kenne Rd	East Bay Dr	McMullen Rd	City	0.52	SB	2	U	2,000	30	9.5	0.0	0.0	19.0	N	S	15.0	0	5.0	60	1,662	2.70	C	1,108	2.40	B	0.20	0.90	Local Road - Shared Lane	1	2	2	1	3	1	4		3			17	31
Anona Heights Dr	Indian Rocks Rd	137th St	City	0.25	EB	2	U	500	25	10.0	0.0	0.0	20.0	N	S	15.0	0	4.0	50	669	2.62	C	669	0.95	A			Local Road - Shared Lane			3	1	3	1						8	14
Auburn St	MLK Ave	Betty Ln	City	0.50	EB	2	U	500	25	10.0	0.0	0.0	20.0	N	S	8.0	0	5.0	50	1,332	2.68	C	1,332	1.28	A	0.12		Local Road - Shared Lane	1		3	1	3	1						9	18
Avalon Ave	150th Ave	Roosevelt Blvd	City	0.38	NB	2	U	500	25	9.5	0.0	0.0	19.0	N	S	0.0	0	0.0	0	-	2.83	C	1,994	1.29	A	0.33		Local Road - Shared Lane	1		3	1	3			1				9	14
Bay Vista Dr	Tech Data Dr	Whitney Rd	City	0.41	NB	2	D	500	30	21.5	5.0	0.0	21.5	Y	C	0.0	0	0.0	0	-	2.70	C	2,184	0.00	A	0.20		Existing On-Road Bicycle Facility (Local)	1		3	1		1						6	12
Bayview Dr	Missouri Ave	Hillcrest Ave	City	0.49	EB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	0.0	0	0.0	0	-	2.76	C	2,613	1.11	A	0.26		Local Road - Shared Lane	1		3	1	3							8	16
Belcher Rd	Roosevelt Blvd	Belleair Rd	County	1.52	NB	4	S	22,624	40	11.0	0.0	0.0	58.0	N	C	13.0	0	5.0	100	8,042	3.33	C	-	4.63	E		0.13	Restripe Candidate		1		1	3	2	2	1				10	20
Belcher Rd	126th Ave N	Roosevelt Blvd	County	2.54	NB	6	D	26,845	45	11.0	0.0	0.0	32.0	N	C	3.0	0	5.0	100	13,391	3.51	D	-	4.62	E	0.01	0.12	Road Diet Candidate	1	1		1	3	2		1				9	18
Belleair Rd	Clearwater Largo Rd	US 19	County	4.12	EB	2	U	10,936	35	10.0	0.0	0.0	20.0	N	S	30.0	0	5.0	60	13,050	3.67	D	8,700	4.69	E	0.17	0.19	Add Paved Shoulders Candidate	1	1	2	1	3	2	2				3	15	27
Betty Ln	Rosery Rd	Belleair Rd	City	0.77	NB	2	U	500	30	9.5	0.0	0.0	19.0	N	S	6.0	0	4.0	65	2,637	2.67	C	1,420	1.45	A	0.17		Local Road - Shared Lane	1		2	1	3	1						8	13
Bolesta Rd	Northern Ave	Whitney Rd	City	0.25	NB	2	U	2,000	25	9.0	0.0	0.0	18.0	N	S	0.0	0	0.0	0	-	3.34	C	1,345	2.88	C	0.84	1.38	Local Road - Shared Lane	2	3	3	1	3							12	24

City of Largo
Multimodal Prioritization Scoring

Road Name	From	To	Owner	Length (mi)	Dir.	# Lanes	Con	ADT	mph	Width of Outside Lane (ft)	Width from Outside Lane to EOP (ft)	Width of Pavement Striped for OSP (ft)	Pavement Width (ft)	Bike Lane (Y/N)	Cross Section (C/S)	Buffer Width (ft)	Tree Spacing in Buffer	Existing Sidewalk Width	% of Sidewalk Coverage	Existing Sidewalk Length (ft)	Existing PLOS Score	PLOS Score	Needed Sidewalk (ft)	Existing BLOS Score	Existing BLOS Grade	Ped Diff	Bike Diff	Bicycle Facility Recommendation	Ped LOS	Bike LOS	Ped Needs	Ped Buffer	Bike Needs	Safety	Community	Transit	Public	Tech	Plans	Points Per Segment	Total Points
Bolesta Rd	Roosevelt Blvd	Cypress Ln	City	0.48	SB	2	U	2,000	30	11.5	0.0	0.0	23.0	N	S	0.0	0	0.0	0	-	3.14	C	2,534	2.47	B	0.64	0.97	Local Road - Shared Lane	2	2	3	1	3	1						12	19
Cambridge Dr	Chesterfield Dr	S Lake Ave	City	0.61	EB	2	U	500	30	10.0	0.0	0.0	20.0	N	C	9.0	0	4.0	100	3,225	2.00	B	-	1.26	A	0.45		Local Road - Shared Lane	1			1	3	1						6	14
Central Park Dr	Largo Parks Dept.	East Bay Dr	City	0.23	NB	2	D	5,000	30	17.5	3.5	0.0	17.5	Y	C	5.0	0	5.0	100	1,217	2.33	B	-	2.00	B			Existing On-Road Bicycle Facility						2	4					6	12
Central Park Dr/3rd St SE	8th Ave SE	Largo Parks Dept.	City	0.34	NB	2	U	5,000	30	10.5	0.0	0.0	21.0	N	S	8.0	0	10.0	100	1,782	2.24	B	-	3.66	D		0.16	Shared Lane Markings Candidate (existing wide SW)		1		1	3		4					9	18
Chesterfield Dr	Betty Ln	Cambridge Dr	City	0.17	WB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	0.0	0	0.0	0	-	2.76	C	896	1.11	A	0.26		Local Road - Shared Lane	1		3	1	3							8	12
Clearwater-Largo Rd	8th Ave	West Bay Dr	City	0.50	NB	6	S	23,163	35	11.0	0.0	0.0	80.0	N	C	2.0	0	5.0	100	2,666	3.07	C	-	4.47	D			Road Diet Candidate			1	1	3	3	2	1				11	22
Clearwater-Largo Rd	West Bay Dr	Ponce de Leon Blvd	City	1.27	NB	4	S	23,163	30	10.0	0.0	0.0	50.0	N	C	5.0	0	5.5	100	6,703	3.30	C	-	4.60	E		0.10	Shared Lane Markings Candidate		1			3	3	2	2				11	22
Coral Way	Ulmerton Rd	end	City	0.50	SB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	0.0	0	0.0	0	-	2.76	C	2,653	0.95	A	0.26		Local Road - Shared Lane	1		3	1	3	2						10	16
Cromwell Dr	Newport Rd	Amhurst Way	City	0.05	SB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	7.0	0	4.0	100	283	1.95	B	-	1.11	A			Local Road - Shared Lane				1	3							4	8
Cromwell Dr	Portsmouth Rd	Newport Rd	City	0.47	NB	2	U	2,500	25	10.0	0.0	0.0	20.0	N	C	10.0	0	4.0	100	2,472	2.09	B	-	2.49	B			Shared Lane Markings Candidate (LOS Met)				1	2							3	6
Cumberland Dr	Cottonwood Dr	Ulmerton Rd	City	0.53	NB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	8.0	0	4.0	100	2,791	1.92	B	-	0.95	A			Local Road - Shared Lane				1	3							4	8
Currie Ln	113th Ave	Walsingham Rd	City	0.27	NB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	0.0	0	0.0	0	-	2.76	C	1,440	0.95	A	0.26		Local Road - Shared Lane	1		3	1	3	1						9	18
Del Robles Dr	Rosery Rd	St. Pauls Dr	City	0.26	NB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	8.0	0	4.0	100	1,348	1.92	B	-	0.95	A			Local Road - Shared Lane				1	3							4	8
Dodge St	Roosevelt Blvd	Whitney St	City	0.51	SB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	11.0	0	4.0	50	1,359	2.68	C	1,359	0.95	A	0.18		Local Road - Shared Lane	1		3	1	3	1						9	14
Donegan Rd	Lake Ave	8th Ave SE	City	0.92	SB	2	U	5,000	30	11.0	0.0	0.0	22.0	N	S	0.0	0	0.0	0	-	4.06	D	4,861	3.85	D	1.56	0.35	Add Paved Shoulders Candidate	3	1	3	1	3		2		3	3		19	38
Dryer Ave	Indian Rocks Rd	Trotter Rd	City	0.70	EB	2	U	5,000	25	11.0	0.0	0.0	22.0	N	S	15.0	0	5.0	100	3,704	2.13	B	-	3.49	C			Add Paved Shoulders Candidate (LOS Met)				1	2	1	2	1				7	14
East Bay Dr	Seminole Blvd	Central Park	State	0.27	EB	4	D	45,000	30	10.5	0.0	0.0	21.0	N	C	0.0	0	6.0	100	1,426	4.71	E	-	5.09	E	1.21	0.59	Shared Lane Markings Candidate	3	2	1	1	3	3	2	3	3			21	42
East Bay Dr	4th St/Central Park	8th St	State	0.26	EB	4	D	45,000	40	13.5	0.0	0.0	25.0	N	C	3.0	0	5.0	100	1,373	4.89	E	-	5.24	E	1.39	0.74	Restripe Candidate	3	2		1	3	3	2	2	3			19	36
East Bay Dr	8th St	US 19	State	3.02	EB	6	D	60,500	45	13.5	0.0	0.0	37.0	N	C	3.0	0	5.0	100	15,946	4.78	E	-	5.34	E	1.28	0.84	Restripe Candidate	3	2		1	3	3		3	3			18	36
Fairlane Dr	Imperial Dr	Keene Rd	City	0.16	EB	2	U	500	25	10.0	0.0		20.0	N	C	0.0	0	0.0	0	-	2.76	C	860	1.28	A	0.26		Local Road - Shared Lane	1		3	1	3							8	16
Ft. Harrison Ave	Ponce de Leon Blvd	Belleair Rd	City	0.30	NB	4	U	15,765	30	15.0	5.0		50.0	N	C	20.0	0	5.0	100	1,561	2.38	B	-	2.61	C			Existing On-Road Bicycle Facility				1								1	2
Fulton Dr SE	Willow Ave	East Bay Rd	City	0.50	NB	2	U	2,000	30	10.0	0.0	0.0	20.0	N	C	0.0	0	0.0	0	-	3.32	C	2,663	2.61	C		1.11	Local Road - Shared Lane		3	3	1	3							10	16
Fulton St NE	East Bay Dr	Keene Park Dr	City	0.27	SB	2	U	500	30	10.0	0.0	0.0	20.0	N	C	0.0	0	0.0	0	-	2.87	C	1,438	1.11	A	0.82		Local Road - Shared Lane	2		3	1	3							9	13
Gershwin Dr	Keene Park Dr	Rosery Rd	City	0.50	NB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	13.0	0	4.0	40	1,054	2.83	C	1,582	1.28	A	0.33		Local Road - Shared Lane	1		3	1	3							8	16
Gladys St	134th Ave	Dryer Ave	City	0.51	SB	2	U	5,000	30	10.0	0.0	0.0	20.0	N	S	0.0	0	0.0	0	-	4.18	D	2,677	3.96	D	1.68	0.46	Add Paved Shoulders Candidate	3	1	3	1	3							11	20
Gooden Crossing	driveway	Ridge Rd	City	0.25	NB	2	S	500	25	12.0	0.0	0.0	36.0	N	C	3.0	0	4.0	100	1,329	2.03	B	-	2.33	B		0.83	Local Road - Shared Lane		2		1	3	1						7	13
Gooden Crossing	Pinellas Trail	driveway	City	0.15	EB	2	U	500	25	9.0	0.0	0.0	18.0	N	S	0.0	0	0.0	0	-	2.89	C	782	1.44	A	0.39		Local Road - Shared Lane	1		3	1	3							8	12
Haines Bayshore Rd	US 19	Wolford Rd	City	0.76	WB	2	U	500	35	10.0	0.0	0.0	20.0	N	S	0.0	0	0.0	0	-	3.00	C	3,996	1.89	B	0.50	0.39	Local Road - Shared Lane	1	1	3	1	3	2						11	23
Highland Ave	East Bay Dr	Belleair Rd	City	1.53	NB	2	U	10,696	35	11.5	0.0	0.0	23.0	N	S	25.0	0	4.0	70	5,649	3.47	C	2,421	4.52	E	0.97	1.02	Add Paved Shoulders Candidate	2	3	2	1	3	2		1			3	17	34
Hillcrest Ave	Ponce de Leon Blvd	Bayview	City	0.13	NB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	0.0	0	0.0	0	-	2.76	C	669	1.11	A	0.26		Local Road - Shared Lane	1		3	1	3							8	16
Hillsdale Ave	Gladys St	Trotter Rd	City	0.51	WB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	8.0	0	4.0	25	667	3.13	C	2,002	1.11	A	0.63		Local Road - Shared Lane	2		3	1	3							9	17
Huntington Dr N	Huntington Dr W	Fulton St	City	0.22	EB	2	U	500	25	10.5	0.0	0.0	21.0	N	C	0.0	0	0.0	0	-	2.70	C	1,172	0.78	A	0.20		Local Road - Shared Lane	1		3	1	3							8	16
Huntington Dr W	East Bay Dr	Huntington Dr N	City	0.22	NB	2	U	500	25	10.5	0.0	0.0	21.0	N	C	0.0	0	0.0	0	-	2.70	C	1,162	0.78	A	0.20		Local Road - Shared Lane	1		3	1	3							8	16
Icot Blvd	Ulmerton Rd	142nd Ave	City	0.49	NB	2	S	500	30	15.0	0.0	0.0	47.5	N	C	6.0	0	5.0	100	2,588	1.84	B	-	1.91	B		0.41	Local Road - Shared Lane		1		1	3	1						6	12
Indian Rocks Rd	Walsingham Rd	Wilcox Rd	County	0.76	NB	2	U	15,777	35	11.0	0.0	0.0	22.0	N	S	15.0	0	5.0	20	805	5.11	E	3,220	4.76	E	1.61	0.26	Add Paved Shoulders Candidate	3	1	3	1	3	2	2	1	3			19	33
Indian Rocks Rd	Wilcox Rd	West Bay Dr	County	2.03	SB	2	U	15,777	35	11.0	0.0	0.0	22.0	N	S	0.0	0	0.0	0	-	5.47	E	10,715	4.45	D	1.97		Add Paved Shoulders Candidate	3		3	1	3	2		1	3			16	32
Indian Rocks Rd	West Bay Dr	Mehlenbacher Rd	County	0.57	NB	2	S	9,359	30	13.5	0.0	0.0	40.0	N	C	20.0	0	5.0	100	3,024	2.58	C	-	3.81	D	0.08	0.31	Restripe Candidate	1	1		1	3			1	3			10	20
Indian Rocks Rd	Mehlenbacher Rd	Ponce de Leon Blvd	County	0.86	NB	2	U	9,359	30	12.0	0.0	0.0	24.0	N	C	20.0	25	5.0	100	4,528	1.83	B	-	4.00	D		0.50	Shared Lane Markings Candidate		1		1	3			1	3			9	18
Jackson St	Wilcox Rd	134th	City	0.25	SB	2	U	5,000	30	10.0	0.0	0.0	20.0	N	C	6.0	0	5.0	100	1,346	2.53	C	-	3.78	D	0.03	0.28	Shared Lane Markings Candidate	1	1		1	3							6	11
Jackson St	Ulmerton Rd	Wilcox Rd	City	0.35	NB	2	U	2,000	25	16.0	4.0	0.0	32.0	N	C	5.0	0	5.0	100	1,864	1.91	B	-	0.03	A			Existing On-Road Bicycle Facility (Local)						1						1	2
Jasper St	Martin Luther King	Betty Ln	City	0.50	EB	2	U	500	25	10.0	0.0	0.0	20.0	N	S	5.0	0	5.0	50	1,317	2.73	C	1,317	1.28	A	0.23		Local Road - Shared Lane	1		3		3	1		1				9	16
Keene Park Dr	Keene Rd	Seacrest Dr	City	0.65	EB	2	U	500	25	9.5	0.0	0.0	19.0	N	C	13.0	0	4.0	100	3,443	1.78	B	-	1.29	A			Local Road - Shared Lane				1	3							4	8
Keene Rd	East Bay Dr	Belleair Rd	County	1.53	SB	4	S	24,003	45	10.5	0.0	0.0	58.0	N	C	1.0	0	5.0	100	8,056	3.96	D	-	5.13	E	0.46	0.63	Restripe Candidate	1	2	1	1	3	2	2					12	23
Kersey Rd	Belcher Rd	Winchester Rd	City	0.23	EB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	0.0	0	0.0	0	-	2.76	C	1,229	1.11	A	0.26		Local Road - Shared Lane	1		3	1	3							8	16
Lake Ave NE	McMullen Rd	Belleair Rd	City	0.92	SB	2	U	5,000	30	10.0	0.0	0.0	20.0	N	S	0.0	0	0.0	0	-	4.18	D	4,878	3.78	D	1.68	0.28	Add Paved Shoulders Candidate	3	1	3	1	3	1	4					16	26
Lake Ave NE	East Bay Dr	McMullen Rd	City	0.61	NB	2	U	500	30	10.0	0.0	0.0	20.0	N	C	0.0	0	6.0	100	3,202	2.10	B	-	1.11	A			Local Road - Shared Lane			1	1	3	2	4					11	22
Lake Ave SE	Ulmerton Rd	Donegan Rd	City	0.50	SB	2	U	5,000	35	13.0	0.0	0.0	26.0	N	S	25.0	0	5.0	25	658	3.52	D	1,973	3.54	D	1.02	0.04	Add Paved Shoulders Candidate	3	1	3	1	3	1						12	23
Lake Ave SE	Lake Palms Dr	Fulton Dr	City	0.18	WB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	0.0	0	0.0	0	-	2.76	C	937	0.95	A	0.26		Local Road - Shared Lane	1		3	1	3							8	11
Lake Palms Dr	Willow Ave	Whispering	City	0.37	SB	2	U	500	30	10.0	0.0	0.0	20.0	N	C	0.0	0	0.0	0	-	2.87	C	1,972	1.11	A	0.37		Local Road - Shared Lane	1		3	1	3	1						9	14
Lancaster Dr	Belcher Rd	Portsmouth Rd	City	0.46	WB	2	U	500	25	9.0	0.0	0.0	18.0	N	S	0.0	0	0.0	0	-	2.89	C	2,446	1.44	A	0.39		Local Road - Shared Lane	1		3	1	3	1						9	16
Martin Luther King Ave	Jasper St	Belleair Rd	City	0.52	NB	2	U	2,000	25	9.5	0.0	0.0	19.0	N	C	2.0	0	5.0	25	685	3.38	C	2,056	2.54	C	0.88	1.04	Local Road - Shared Lane	2	3	3	1	3	1		1				14	23
McMullen Rd	Lake Ave	Keene Rd	City	0.64	WB	2	U	2,000	30	9.0	0.0	0.0	18.0	N	C	0.0	0	0.0	0	-	3.45	C	3,396	2.82	C	0.95	1.32	Local Road - Shared Lane	2	3	3	1	3		4		3			19	33
Mehlenbacher Rd	Indian Rocks Rd	Pinellas Trail	City	0.75	EB	2	U	4,469	30	9.0	0.0	0.0	18.0	N	S	0.0	0	0.0	0	-	4.24	D	3,968	3.98	D	1.74	0.48	Add Paved Shoulders Candidate	3	1	3	1	3	1					3	15	30
Missouri Ave	East/West Bay Dr	Belleair Rd	State	1.53	NB	6	D	36,000	40	12.0	0.0	0.0	32.5	N	C	0.0	0	6.0	100	8,078	3.68	D	-	4.55	E	0.18	0.05	Detailed Corridor Study Needed	1	1	1	1	3	3	2	3				15	30
Myrtle Ave	Clearwater Largo Rd	Belleair Rd	City	0.20	SB	2	U	500	30	8.5	0.0	0.0	17.0	N	S	0.0	0	0.0	0	-	3.07	C	1,042	1.94	B	0.57	0.44	Local Road - Shared Lane	2	1	3	1	3							10	20
Newport Rd	Cromwell Dr	East Bay Dr	City	0.89	NB	2	U	2,000	25	10.0	0.0	0.0	20.0	N	C	10.0	0	4.0	100	4,692	2.03	B	-	2.44	B		0.94	Local Road - Shared Lane		2		1	3							6	12
Oakhurst Rd	113th Ave	Walsingham Rd	County	0.28	SB	2	U	500	35	11.0	0.0	0.0	22.0	N	S	15.0	0	5.0	50	730	2.75	C	730	0.85	A	0.25		Local Road - Shared Lane	1		3	1	3	3						11	18
Pine St	Wilcox Rd	Dryer Ave	City	0.76	NB	2	U	2,000	30	10.0	0.0	0.0	20.0	N	S	0.0	0	0.0	0	-	3.32	C	3,991	3.14	C	0.82	1.64	Local Road - Shared Lane	2	3	3	1	3	1						13	24
Poinsettia Rd	Indian Rocks Rd	Pinellas Trail	County	0.58	EB	2	U	5,000	25	11.5	0.0	0.0	23.0	N	C	0.0	0	0.0	0	-	3.90	D	3,081	3.18	C	1.40		Shared Lane Markings Candidate (LOS Met)	3		3	1	2	1						10	20
Ponce de Leon Blvd	Missouri Ave	Hillcrest Ave	City	0.50	WB	2	U	5,000	25	10.0	0.0	0.0	20.0	N	C	0.0	0	0.0	0	-	4.07	D	2,632	3.60	D	1.57	0.10	Shared Lane Markings Candidate	3	1	3	1	3							11	16
Ponce de Leon Blvd	Pinellas Trail	Clearwater-Largo Rd	City	0.29	EB	2	U	5,000	30	15.0	0.0	0.0	30.0	N	C	7.0	0	5.0	100	1,540	2.34	B	-	3.16	C			Restripe Candidate (LOS Met)				1	2	2						5	10
Ponce de Leon Blvd	Indian Rocks	Pinellas Trail	County	0.36	EB	2	D	5,000	25	15.0	0.0	0.0	15.0	N	C	7.0	25	5.0	50	946	2.63	C	946	2.97	C	0.13		Restripe Candidate (LOS Met)	1		3	1	2							7	10
Portsmouth Rd	Belcher Rd	Cromwell Dr	City	0.50	EB	2	U	2,500	25	10.0	0.0	0.0	20.0	N	C	12.0	0	4.0	100	2,656	2.03	B	-	2.49	B			Shared Lane Markings Candidate (LOS Met)				1	2							3	6
Ridge Rd	Walsingham Rd	134th Ave	City	1.00	NB	2	U	2,500	30	9.5	0.0	0.0	19.0	N	S	17.0	0	4.0	50	2,643	2.98	C	2,643	3.18	C	0.48		Add Paved Shoulders Candidate (LOS Met)	1		3	1	2							7	12
Ridge Rd	Ulmerton Rd	8th Ave SW	County	1.03	NB	6	D	23,163	40	14.0	3.0	0.0	35.5	N	C	0.0	0	6.0	100	5,452	3.10	C	-	3.76	D			Road Diet Candidate			1	1	3	2		1				8	16
Roberta St	Keene Rd	Rosery Rd	City	0.70	EB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	0.0	0	0.0	0	-	2.76	C	3,705	0.95	A	0.26		Local Road - Shared Lane	1		3	1	3	1						9	18
Roosevelt Blvd	US 19	49th St	State	1.90	EB	6	D	49,000	50	13.0	0.0	0.0	37.0	N	C	3.0	0	5.0	100	10,032	4.52	E	-	5.50	E	1.02	1.00	Restripe Candidate	3	2		1	3	3		2	3			17	34
Roosevelt Blvd	Airport Parkway Dr	Terminal Blvd	State	0.27	WB	4	D	46,500	50	16.5	5.5	0.0	28.0	N	S	0.0	0	0.0	0	-	6.39	F	1,426	3.94	D	2.89		Existing On-Road Bicycle Facility	3		3	1								7	14
Roosevelt Blvd	49th St	Airport Parkway Dr	State	0.37	EB	4	D	46,500	50	16.0	5.0	0.0	27.0	N	S	0.0	0	6.0	100	1,954	5.26	E	-	4.16	D	1.76		Existing On-Road Bicycle Facility	3		1	1			2					7	12
Rosemary Ln	143rd St	Indian Rocks Rd	City	0.25	WB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	3.0	0	4.0	100	1,341	2.10	B	-	0.95	A			Local Road - Shared Lane				1	3	2						6	12
Rosery Rd	RR	Highland Ave	City	1.05	EB	2	S	10,280	30	11.5	0.0	0.0	35.0	N	S	10.0	0	4.0	100	5,520	3.08	C	-	4.52	E	0.58	1.02	Add Paved Shoulders Candidate	2	3		1	3	2					3	14	27
Rosery Rd	Pinellas Trail	RR	City	0.51	EB	2	U	10,280	30	9.5	0.0	0.0	19.0	N	S	15.0	0	5.0	100	2,704	2.91	C	-	4.55	E	0.41	1.05	Add Paved Shoulders Candidate	1	3		1	3	2					3	13	26
Rosery Rd	Keene Rd	Roberta St	City	0.52	WB	2	U	500	25	10.0	0.0	0.0	20.0	N	C	10.0	0	4.0	40	1,104	2.86	C	1,655	1.28	A	0.36		Local Road - Shared Lane	1		3	1	3						3	11	20
Rosery Rd	Highland Ave	end	City	0.48	EB	2	U	5,000	30	9.0	0.0	0.0	18.0	N	C	15.0	0	4.0	80	2,047	2.76	C	512	3.88	D	0.26	0.38	Shared Lane Markings Candidate	1	1	2	1	3							8	13
Seacrest Dr	East Bay Dr	Kenne Park Dr	City	0.27	NB	2	U	500	25	9.0	0.0	0.0	18.0	N	C	12.0	0	4.0	90	1,293	2.01	B	144	1.44	A			Local Road - Shared Lane				1	3	2						7	13
Seminole Blvd	Walsingham Rd	East/West Bay Dr	State	2.53	NB	6	D	32,000	45	11.5	0.0	0.0	34.0	N	C	0.0	0	5.0	100	13,358	3.80	D	-	4.96	E	0.30	0.46	Restripe Candidate	1	1	1	1	3	3		2				12	24
Sherbrook Rd	Weymouth Dr	Belleair Rd	City	0.25	NB	2	U	500	25	11.0	0.0	0.0	22.0	N	C	0.0	0	0.0	0	-	2.64	C	1,316	0.60	A	0.14		Local Road - Shared Lane	1		3	1	3							8	16
Southridge Dr	Hillcrest Ave	Highland Ave	City	0.27	EB	2	U	500	25	13.0	0.0	0.0	26.0	N	C	10.0	0	4.0	100	1,402	1.77	B	-	0.00	A			Local Road - Shared Lane				1	3	1						5	10
St. Pauls Dr	Del Robles Dr	Belleair Rd	City	0.56	NB	2	U	500	30	13.0	0.0	0.0	26.0	N	C	6.0	75	4.0	100	2,956	1.78	B	-	0.00	A			Local Road - Shared Lane				1	3							4	8
Starkey Rd	126th Ave	East Bay Dr	County	2.53	NB	4	D	32,195	45	11.0	0.0	0.0	22.0	N	S	5.0	0	5.0	20	2,670	5.53	F	10,678	5.08	E	2.03	0.58	Add Paved Shoulders Candidate	3	2	3		3	2		1		3		17	34
Tall Pines Dr	Ulmerton Rd	Whispering Dr	City	0.40	NB	2	U	500	30	20.0	0.0	0.0	20.0	N	C	5.0	0	4.0	100	2,092	1.82	B	-	0.00	A			Restripe Candidate (Local)					3	1						4	8
Tall Pines Dr	Whispering Dr	South Pines	City	0.17	NB	2	U	500	30	10.0	0.0	0.0	20.0	N	C	7.0	0	4.0	100	922	2.06	B	-	1.26	A			Local Road - Shared Lane				1	3							4	8
Trotter Rd	134th Ave	8th Ave SW	City	1.01	SB	2	U	5,000	30	9.5	0.0	0.0	19.0	N	S	15.0	0	4.0	100	5,315	2.37	B	-	4.37	D		0.87	Add Paved Shoulders Candidate		2		1	3	1	2	1			3	13	26
Ulmerton Rd	El Centro Blvd	66th St	State	0.65	EB	6	D	52,000	45	15.5	4.0	0.0	38.0	Y	C	0.0	0	6.0	100	3,432	4.38	D	-	3.92	D	0.88		Existing On-Road Bicycle Facility	2		1	1		3		2		3		12	24
Ulmerton Rd	49th St	Roosevelt Blvd	State	0.49	WB	4	D	45,000	45	17.0	5.0	0.0	29.0	N	S	25.0	0	5.0	50	1,294	5.25	E	1,294	3.54	D	1.75		Existing On-Road Bicycle Facility	3		3	1		2		3				12	23
Ulmerton Rd	66th St	US 19	State	0.39	EB	8	D	45,500	45	15.0	4.0	0.0	48.0	Y	C	0.0	0	6.0	100	2,059	3.69	D	-	3.81	D	0.19		Existing On-Road Bicycle Facility	1		1	1		3		3				9	18

City of Largo
Multimodal Prioritization Scoring

Road Name	From	To	Owner	Length (mi)	Dir.	# Lanes	Con	ADT	mph	Width of Outside Lane (ft)	Width from Outside Lane to EOP (ft)	Width of Pavement Striped for OSP (ft)	Pavement Width (ft)	Bike Lane (Y/N)	Cross Section (C/S)	Buffer Width (ft)	Tree Spacing in Buffer	Existing Sidewalk Width	% of Sidewalk Coverage	Existing Sidewalk Length (ft)	Existing PLOS Score	PLOS Score	Needed Sidewalk (ft)	Existing BLOS Score	Existing BLOS Grade	Ped Diff	Bike Diff	Bicycle Facility Recommendation	Ped LOS	Bike LOS	Ped Needs	Ped Buffer	Bike Needs	Safety	Community	Transit	Public	Tech	Plans	Points Per Segment	Total Points
Ulmerton Rd	US 19	58th St	State	0.61	WB	6	D	45,000	45	15.5	4.0	0.0	35.5	Y	C	3.0	0	5.0	100	3,221	4.10	D	-	3.85	D	0.60		Existing On-Road Bicycle Facility	2			1		2		3				**8**	**15**
Ulmerton Rd	58th St	49th St	State	0.75	EB	8	D	45,000	45	15.5	4.0	0.0	47.5	Y	C	3.0	0	5.0	100	3,960	3.65	D	-	3.71	D	0.15		Existing On-Road Bicycle Facility	1			1		2		3				**7**	**14**
Ulmerton Rd	119th St	El Centro Blvd	State	3.96																-	UC	UC	20,909	UC	UC			Future On-Road Bicycle Facility			3	1		2		1				**7**	**13**
Ulmerton Rd	Walsingham Rd	119th St	State	1.29	EB	6	D	35,000	45	16.0	4.0	0.0	40.0	Y	C	3.0	0	5.0	100	6,811	3.67	D	-	3.41	C	0.17		Existing On-Road Bicycle Facility	1			1		2		1				**5**	**10**
Vonn Rd	Walsingham Rd	Wilcox Rd	City	0.75	SB	2	U	6,853	30	11.0	0.0	0.0	22.0	N	S	11.0	0	5.0	90	3,579	2.73	C	398	3.57	D	0.23	0.07	Add Paved Shoulders Candidate	1	1	1	1	3	2	2	1				**12**	**25**
Vonn Rd	Wilcox	134th	City	0.25	SB	2	U	6,853	30	10.0	0.0	0.0	20.0	N	S	5.0	0	4.0	25	328	4.02	D	985	3.99	D	1.52	0.49	Add Paved Shoulders Candidate	3	1	3		3							**10**	**15**
Walsingham Rd	Ulmerton Rd	Reservoir Dr/125th St	City	0.23	WB	2	U	8,750	30	10.0	0.0	0.0	20.0	N	S	0.0	0	0.0	0	-	4.63	E	1,223	4.16	D	2.13	0.66	Add Paved Shoulders Candidate	3	2	3	1	3			2				**14**	**27**
Walsingham Rd	Reservoir Dr/125th St	119th St	City	0.50	EB	2	U	8,750	30	15.0	0.0	0.0	30.0	N	C	0.0	0	8.0	100	2,657	2.81	C	-	3.54	D	0.31	0.04	Restripe Candidate	1	1	1	1	3			1				**8**	**14**
Walsingham Rd	119th St	Pinellas Trail	City	0.25	EB	2	U	8,750	30	15.0	4.0	0.0	30.0	Y	C	0.0	0	10.0	100	1,315	2.78	C	-	2.55	C	0.28		Existing On-Road Bicycle Facility	1		1	1				2				**5**	**10**
Walsingham Rd	Indian Rocks Rd	Ulmerton Rd	City	1.06	EB	6	D	26,500	45	16.0	4.0	0.0	40.0	Y	C	3.0	0	5.0	100	5,597	3.33	C	-	3.27	C			Existing On-Road Bicycle Facility				1				3				**4**	**8**
Walsingham Rd	Indian Rocks bridge	Indian Rocks Rd	City	0.84	EB	4	D	16,700	45	16.0	4.0	0.0	28.0	Y	C	3.0	0	5.0	100	4,435	3.28	C	-	3.25	C			Existing On-Road Bicycle Facility				1				1				**2**	**4**
Walsingham Rd	113th Sr	Seminole Blvd	City	0.50	WB	2	U	8,750	30	16.0	4.5	0.0	32.0	N	S	25.0	0	5.0	100	2,645	2.36	B	-	2.25	B			Existing On-Road Bicycle Facility				1								**1**	**2**
Walsingham Rd	Pinellas Trail	113th St	City	0.25	EB	2	S	8,750	30	14.5	4.0	0.0	41.0	Y	C	5.0	0	5.0	100	1,344	2.86	C	-	2.64	C	0.36		Existing On-Road Bicycle Facility	1											**1**	**2**
Washington Ave	130th Ave	Ulmerton Rd	City	0.26	NB	2	U	*500*	25	9.5	0.0	0.0	19.0	N	C	0.0	0	0.0	0	-	2.83	C	1,347	1.14	A	0.33		Local Road - Shared Lane	1		3	1	3							**8**	**16**
West Bay Dr	Clearwater-Largo Rd	Missouri Ave	City	0.53	EB	4	D	22,131	30	11.5	0.0	0.0	23.0	N	C	7.0	50	8.0	100	2,816	2.70	C	-	4.42	D			Shared Lane Markings Candidate				1	3	3	2	3	3			**15**	**30**
West Bay Dr	Indian Rocks Rd	Clearwater-Largo Rd	City	1.27	EB	4	S	22,131	35	13.0	0.0	0.0	59.0	N	C	4.0	0	6.0	100	6,687	3.27	C	-	4.56	E		0.06	Restripe Candidate		1			3	3	2	1	3			**13**	**26**
Weymouth Dr	Sherbrook Rd	end	City	0.12	EB	2	U	*500*	25	10.0	0.0	0.0	20.0	N	C	0.0	0	0.0	0	-	2.76	C	648	1.11	A	0.26		Local Road - Shared Lane	1		3	1	3							**8**	**16**
Whitney Rd	US 19	Wolford	City	0.76	EB	2	U	*5,000*	30	9.5	0.0	0.0	19.0	N	S	0.0	0	0.0	0	-	4.25	D	4,034	3.83	D	1.75	0.33	Add Paved Shoulders Candidate	3	1	3	1	3		2	1				**14**	**26**
Whitney Rd	58th St	Bolesta Rd	City	0.50	WB	2	U	*2,000*	30	12.0	0.0	0.0	24.0	N	C	11.0	0	5.0	100	2,650	1.95	B	-	2.11	B		0.61	Local Road - Shared Lane		2		1	3	1	2					**9**	**24**
Whitney Rd	Wolford	58th	City	0.27	EB	2	U	*5,000*	30	15.5	3.5	0.0	31.0	N	S	0.0	0	0.0	0	-	3.64	D	1,428	2.48	B	1.14		Existing On-Road Bicycle Facility	3		3	1			2	1				**10**	**14**
Wilcox Rd	Indian Rocks Rd	Pine	City	1.00	WB	2	U	*5,000*	35	10.5	0.0	0.0	21.0	N	S	8.0	0	5.0	100	5,288	2.58	C	-	3.53	D	0.08	0.03	Add Paved Shoulders Candidate	1	1		1	3							**6**	**16**
Wilcox Rd	Pine	Jackson	City	0.25	EB	2	U	*5,000*	30	16.0	4.0	0.0	32.0	N	C	5.0	0	5.0	100	1,340	2.38	B	-	1.97	B			Existing On-Road Bicycle Facility							2					**2**	**4**
Wild Acres Rd	Ulmerton Rd	Whispering Dr	City	0.47	NB	2	U	*5,000*	30	12.0	0.0	0.0	24.0	N	C	0.0	0	0.0	0	-	3.96	D	2,472	3.56	D	1.46	0.06	Shared Lane Markings Candidate	3	1	3	1	3	1						**12**	**22**
Wild Acres Rd	end	Ulmerton Rd	City	0.38	NB	2	U	*2,500*	30	8.0	0.0	0.0	16.0	N	S	0.0	0	0.0	0	-	3.76	D	1,994	3.44	C	1.26		Add Paved Shoulders Candidate (LOS Met)	3		3	1	2	1						**10**	**20**
Willow Ave	Starkey Rd	Caribbean Way	City	0.15	WB	2	U	*2,000*	25	10.0	0.0	0.0	20.0	N	C	0.0	0	0.0	0	-	3.21	C	782	2.29	B	0.71	0.79	Local Road - Shared Lane	2	2	3	1	3	1						**12**	**19**
Winchester Rd	Lancaster Dr	Kersey Rd	City	0.25	NB	2	U	*500*	15	6.0	0.0	0.0	12.0	N	S	0.0	0	0.0	0	-	3.23	C	1,329	2.88	C	0.73	1.38	Local Road - Shared Lane	2	3	3	1	3							**12**	**24**
Wolford Rd	Whitney Rd	Haines Bayshore Rd	City	0.49	NB	2	U	*500*	30	10.0	0.0	0.0	20.0	N	S	0.0	0	0.0	0	-	2.87	C	2,613	1.44	A	0.37		Local Road - Shared Lane	1		3	1	3	1						**9**	**18**
Wyatt St	Clearwater Largo Rd	Missouri Ave	City	0.50	WB	2	U	*5,000*	30	10.0	0.0	0.0	20.0	N	S	0.0	0	0.0	0	-	4.18	D	2,656	3.78	D	1.68	0.28	Add Paved Shoulders Candidate	3	1	3	1	3							**11**	**16**

(UNEDITED) ADDITIONAL COMMENTS SUBMITTED BY THE PUBLIC

Additional comments provided at the end of the survey

- The county density and traffic has been steadily increasing. It is important to offer and encourage other modes of transportation for work and leisure. Additionally, it would make Largo a more appealing community to live in.
- I have been in contact with several people at the City of Largo asking for a sidewalk from 20th Ave to the Pinellas Trail along Mehlenbacher Road since my first grandchild was born in 2000 as I like to walk with them in strollers and for my own exercise. My grandson is now 12 and still no sidewalk. This is very dangerous I have seen children to the very old walk on the side of the road to get to and from the trail which as I said is dangerous as the cars fly up and down the road. I talked to Curtis Holmes most recently and again was promised the sidewalk would be in soon Please make this a priority. I have been a Largo resident for 30 years. Thank you, Wendy Edwards
- I am pleased that there is an attempt to make Largo a safer community and a place where health and quality of life are respected.
- Mehlanbacher Road needs a continuous sidewalk. This is dangerous for pedestrians, bicyclists and drivers. It is already a narrow, multijurisdictional mess but it is unsafe for Largo residents who walk or bike this roadway and for the drivers. Someone is going to get hurt. Lean on the county to do their part for safety.
- The route 52 bus that passes through Largo is overcrowded - standing room only, and seems only to cater to the nonworking errand runners. What are the workers of all the 2nd shift jobs of which there are plenty -- supposed to do. The system is not sophisticated enough nor trendy enough to provide workers an option. Indeed most of the passengers are poorer bus pass folks. This is NOT the city to live in unless you have a vehicle or have plenty of money for cabs.
- Length of time from one destination to another. No consistant placement of bus stops Limited visibilkity of bus stops limited cross walks other than intersections
- You need to add accessibility for wheelchairs and child strollers for public consideration when considering suitability of walking, biking, public transport routes. While I could walk many places in my neighborhood, it was exceedingly difficult to take my mother-in-law out for rolls because of the condition of walkways, curbs and paths. Thank you.
- Thank you for inviting us to participate in this discussion. Second to more safe and available routes, drivers need to make room for movement by pedestrians and bikes. Often they appear to think cars should have priority and bully pedestrians and bicyclists. Widening streets only encourages that attitude.
- Please provide bus stops on 102nd Ave AND at Hamlin Blvd. It couse use several stops anywhere on Hamlin Rd.
- In my opinion, buses and bikes are a real menace for traffic in certain places. Bike riders are constantly getting hit by cars that are exiting or entering businesses because they just assume the drivers are watching for them. Most drivers I believe are trying to watch for other cars, not bikes. It is soooooo dangerous. Can anything be done to save more lives of bike riders and pedestrians? Buses have entirely too many bus stops. It is so annoying to get behind a bus.
- I love the current roads and transportation.
- I live off 8th Ave NW (Mehlenbacher) and 16th st, there are not any sidewalks for me to walk or bike on. I see kids walking to school in the morning, and they have to walk on the road. That part of the street is named Mehlenbacher. It is a shame because the Pinellas County Trail is a few blocks to the East of where I live,and I am afraid to bike there because of the lack of a sidewalk, Mehlenbacher is a very busy road there needs to be some kind of system put into place.Thanks
- More bike paths going east to west would be great. Linking all the parks would also be good.
- Why no questions re auto traffic???? West Bay Drive from Missouri to Clearwater/Largo Road is a mess.
- Locations of bus stops. Getting off at a bus stop and directly the street or blvd be a bus stop for the return trip. In many cases, I have to ask a bus driver where is the bus stop hi
- I would like to see designated bus lanes along the streets of Largo, because when people see that bus in front of them they immediatly begin looking for any space in traffic to jump in so they dont get stuck behind it in the case that it should stop for picking up/dropping off riders, and it causes a huge problem because they dont pay any attention and ive seen numerous people get hit or come close to being hit by that person that doesnt want to wait for the bus to move again.
- The bikes need to be removed from our roads! They are a constant danger as they only abide by the rules when it suits them. They need to be relegated to the sidewalks with all the others who don't drive.
- I drive to work M-F from dunedin to largo via keene rd. I wouldn't bike cause it is simply not safe. I would prefer public transportation, like light rail, but would consider a bus if did not have sooo many stops, and traffic is still tough! It would be confortable and I can do work on laptop and text to my heart's delight!
- Please put a bus stop near to my home. It is terrible to be a homeowner and not even have access to public transportation within 2-3 miles of my home. 10215 Regal Drive, Largo, fl, 33774
- More sidewalks and better sidewalks as Pinellas Trail and Parks are closed at night. Bike paths on roadways such as Indian Rocks Rd as there are no sidewalks.
- My biggest gripe/complaint is that I live on Starkey and would walk or bike to the store..1/2 mile if there was a sidewalk or bike route..save gas and get exercise all at once and feel safe enough to do so...right now..NO sidewalks.bummer
- I live in Gulfport and often ride to Largo a few times a week for exercise. I always appreciate it when a town has bike lanes to help keep me safe when riding on the road. When I come to Largo, I often stop to eat - so I patronize local establishments. Please support rec bike riders too -we come to your community to spend money - if you are supportive.
- My 82 year old mother has lived in Largo since 1965. She has paid taxes all that time. She does not drive. I would love to see more door to door transportation for her to community center, shopping and dr. Appointments (if in Largo). Due to my work schedule, she stays home a lot because she does not to pay so much for cab. It does not have to be free, but make it reasable due to her limited funds. We do not do enough for seniors who live in Largo. The new community center is nice but it is in an isolated area from downtown, even if she takes a bus, she would have to walk in from east bay, and take several buses to get there.
- Please raise taxes and spend more money on projects.
- The crosswalk at 8th Ave SW and Seminole Blvd is dangerous. That intersection and the intersection of Seminole and Ulmerton needs a pedestrian bridge. Also, I would love to ride the bus to work. However, it appears it would take me over an hour, two buses, and a mile walk to go from the corner of 8th Ave SW and Seminole Blvd. to the Seminole Post Office. I think the bus system needs more options added to be used by mainstream citizens in lieu of driving.
- With so much vehicle traffic it is a huge challenge to switch us over to alternative modes of transportation. I admire and appreciate your efforts here. Not only would improvements here improve our air quality and reduce stress on our roadways saving the City money, but it would improve the health of our citizens by encouraging them to get out and enjoy the beautiful city we live in. Good maps would help, as would GIS interaction allowing individuals to layer info they can apply to their lives to increase their efficiency. Good luck with this project!
- There are several shopping centers specifically on Missouri Avenue that if one needs to get to a bus stop across the street, one either has to brave a jaywalking fine or the traffic, or go several hundred feet to the next cross walk. As a pedestrian, a bike rider, AND a frequent bus rider, I would beg you to consider some mid-intersection crossings at those strip malls. Currently, downtown Largo is set up solely for the convenience of the driving traffic, and it is quite off-putting to shop there. Also, as to the buses, there are

several, particularly the 78, that REALLY need to expand their evening and weekend hours . . . if not all week, then maybe just a couple days a week. Several times I have had to cut my shopping time short and have been unable to even see a movie with my children because of the ridiculously early hours of 78 . . . and I know several more people who have been late for the bus because of their work or missed the last bus because one of them is late. Which brings me to my next point. Can someone PLEASE make an attempt to keep these buses on schedule! The aforementioned bus is almost NEVER on time, and when it is, the other bus I'm on isn't and I miss the last bus home! Sometimes I've had to wait as much as 45! minutes for a bus that never shows! And one last thing. The bus schedules themselves need to have more cross sections and stops listed. Thank you for reading this list of my concerns. I realize that some of them may not be able to be addressed, but at least someone now knows what they are. Thanks, Sharon E. Caruana

- DO NOT USE TAXPAYER MONEY TO PROVIDE ANY OF THESE SERVICES!!! LARGO ALREADY WASTES ENOUGH TAXPAYER DOLLARS. NONE OF THIS IS NEEDED, LOWER OUR TAXES INSTEAD AND LET US KEEP OUR HARD EARNED MONEY. QUIT WASTING OUR TAX DOLLARS ON UNNEEDED SERVICES.
- Ulmerton road as busy as it is for vehicles needs to have additional bike lanes added, from 66th st to Ridge Rd.
- Shared pedestrian and cycling pathways would be great and safer. More shade everywhere possible, would also help the environment. better shelter for people at bus stops and better maintenance on what is available so it is usable.
- Look to Europe for answers...
- i believe the buses should not have days it dont work and stop i think there busses need to sart at 4am and end at2:30am or run all night. i dont think it right that where my job is the 73 nor the 58 run on sunday to were i cant get to work we work till 4:30 at night have to wait for the first bu to get there at 6 or later and that not fair these bus need to run longer and be more sufficiant i mean the bus system is crazy oh this day it run but this day it dont it stops at 6 pm and u have no way home its crazyi belive it should un all night long not eerybody has a nine to five job
- This is an exercise in money-wasting. I am hopeful someday the Largo "leaders" and staff will acknowledge that Largo is just that, Largo. A town most have to drive thru to get somewhere else. Unless we come up with significant changes and development to 'downtown', Largo as a destination is a fantasy. The 80 year olds going to the Cultural Center are not pedestrians. Am I going to do my weekly shopping at Publix and bike home with 10 bags of groceries? No. Just stop it.
- Ahhhhh, what I was looking for. I have a HUGE issue with the Pinellas Public transportation!!! If you want to make the streets safer, then tell your bus drivers to QUIT PULLING OUT IN FRONT OF TRAFFIC!!! I use to see them do this on a daily basis on Ulmerton Rd in the middle of rush hour traffic with cars backed up at a stop!! They just pull out like no one else is there or matters. I now take a different route to insure I don't get into an accident due to their inconsiderate behavior. I wouldn't think the law that you must "yield right of way to the bus" would include discourteous behavior & driving! Educate your drivers to be SAFE, not STUPID!!!
- bustravel#73isnotfreguant,enough-anddoesnotrunlateenough
- I would love to ride my bike to work but feel like I would be putting my life at risk going up and down East Bay Dr.. I tried walking abut it takes to long (5.3 miles each way)... I will try riding my bike this week but will be forced to use the sidewalk. I know it's dangerous but not as dangerous as using the street.
- Thank you for opening this survey up for us!
- Bike lanes in my opinion should be on as many roads as possible. I ride 4-5K miles a year and run approx. 1K. As gas continues to go up a little every year and the economy being years from healthy, more people are going to rely on bikes for travel. Drivers are not going to be happy with us on the roads and cyclists are always in fear of being run over. What people need to understand is bikes were here first. Long before cars were around. Most people choose to drive and thats cool. But I should not be punished for choosing to ride my bike for fitness or to get my haircut. Everyone has to give some and the more and sooner we do this in all of Pinellas County, the safer and more productive this place will be. My two cents worth.
- I would like a public outdoor running walking track. ie a high school track.
- I have been struck by a vehicle while riding my bicycle in the city of Largo. More enforcement of Stop Sign violations is needed. If vehicles(especially the one that struck me) would have stopped at the white line first, instead of driving past the stop sign, I would not have been injured and thrown off of my bicycle. Even though the person that struck me was sited, I am now having to go through months of dealing with insurance companies and medical bills. I will never ride my bicycle on the sidewalk along West Bay Drive again.
- Sidewalks are need on Vonn Road from the Largo Golf Course to Wilcox Road. Sidewalks are needed on Indian Rocks Road from Wilcox Road to West Bay. A traffic signal is needed at Indian Rocks Road and Wilcox Road and the intersection there needs to be reconfigured. Very Dangerous.
- I have lived in Pinellas County for 30 plus years. Florida is not condusive for walkers or those who ride bikes. Steam Boat Springs Colorado has a great town system. There are smaller buses that pick residents up to take them to the main run down town. The larger bus runs down town. The bus system should also improve as it is terrible. One of the worst I've ever seen. I have traveled the world. I think bus stops should also have shelter as we have thunderstroms and lightening in Florida. Shelter at the bus stops would be great for thoses who ride. Also with Florida crazy drivers who do not follow speed zones and are on cell phones, overpasses should be used to cross the street. Florida is one of the highest for vehicle versus perdestrians accidents. I work at a hosptial and see this often. Over passes may eliminate this and off trails with security options to make residents feel safe. Inner city transit should be embraced in Florida as the roads can not handle the traffic. If Largo does improve side walks and bike ways, I may consider returning. The whole of Pinellas county needs to improve on this area. There are nearly 975,000 residents and the roads which can not handle the congestion of cars. Local leaders should think outside of the box. If I needed transit, I could not get around. I would love to see Pinellas as a whole become more user friendly to perdestrians and bikers. At least someone came up with this bright idea thanks goodness.
- When my family and I lived in Salzburg, Austria (Europe) for five years, we had no car. EVERYTHING we did was by bus or bicycle. We were happier and healthier. The public busses were used as school bussed for the children. The busses came EVERY 10 MINUTES. There was ALWAYS a bus shelter. It was affordable and convenient. I did all my shopping by bicycle and never had problems with cars because there was plenty of space for the bicycles plus the cars were respectful of bikers in the bike lanes. We saved money, and, as I mentioned before, we were much healthier. I wish we could do this in Florida. I especially miss riding my bike to work. I wish the Pinellas Traiil would complete their plans for an east/west route so that I can travel safely from West Bay in Largo to Old Coachman/Drew Street in Clearwater. Thanks!
- I do ride the bike travel and it would be nice to have more shade as well as areas to have drinking fountains available. I do not ride my bike on streets as I am afraid that I be hit by another vehicle. I would love to ride my bike or walk to & from work, but there is not enough sidewalks or marked biking areas on the ride - biking lanes. Also, I would like to see more pedestrian crossings with the flashing lights that cars have to stop for - like they have on Clearwater/Largo Road. Also, off Keene Road where Pedestrians cross over to Sweetbay - there needs to be a cross walk/flash as it is too far for them to walk to the light. I would also like a law made that cars must stop for pedestrians in cross walk. So many cars disregard the Ped and just cut them off. You know too how many get hit by cars or cannot get across street in time. I think the count down of numbers to cross the street for ped. and cars is great. I do love living in Largo and find it very convenient to stores/restaurants/beach/trail but sidewalks would definitely help those walking on 14th N.W. as there has been many close calls. Also, so many cars speed on this street where I live and I wish we could have speed humps put in to slow them up. It's a raceway for motorcycles too and cars going home from work. I

hope that this has helped you survey and we will continue to see improvements in sidewalks, bike paths off the trail, and areas for bikers on the road.

- Creating safe alternatives is most important. Cycling in traffic is frightening. My biggest concern is the lack of sidewalks along Whitney Road and the off shoot roads. We have many children waiting at school bus stops physically in the dirt or on the edge of a retention pond. Also we would have more walkers if we had sidewalks.
- easy tranportation to the beaches, maybe using hotels as parking spots to catch the buses, so no need to drive. Should look fun! Maybe more of the trolly type buese to/from.
- I travel Missouri / Seminole Blvd the most. I appreciate the improvements being made. Please finish soon so we can enjoy it. :) I also appreciate the changes to Highland Rec Center, please keep a path open from Wertz Drive so we can still get through to Tennis Courts, Pool and Walking paths. Thanks you
- I think better sidewalks on the minor roads and lighting. keene for example is an awful road to cycle on and I would use it more if it had sidewalks to both shop and to go to the gym.
- We really think the made up 'construction' projects at a time when people are struggling to even find jobs, or pay bills is way out of control. To take so many old shade trees down is insanity when the City and County is always spouting about GREEN programs when there is nothing farther from that, the city has been doing. Shade trees not only cool but guess what we BREATHE the oxygen they made and they WERE sound barriers. The truth is I believe the City of Largo is wasting so much money on destruction projects that my family and others are considering moving from this area period. The lack of conscience thought is really disgusting here now, to replace old large trees with tiny stick trees all while using poisonous Monsanto chemicals to help 'grow' things is all the State of Florida does now. None of it's creative and it's like living in a "Stepford Wives" movie. Too much HOT PAVEMENT, too many SIGNS everywhere, and too much MAN-MADE involvement in nature that was doing just fine until these "invented projects" came about for a waste of MILLIONS of $$$. Who needs 4 to 5 parks / recreation centers in a square mile radius (always around City Hall too) because they're TOO HOT and MAN MADE! You've helped destroy animal populations as well but I'm sure the wasted $$ over-rides life of any kind once again. Good Riddance
- The biggest problem with public transportation (buses) is the time it takes to get from point "A" to point "B". For me to take a bus from my house on US 19 and curlew Rd to Largo city hall would take almost three hrs each way and that's if I could catch all the buses just right. That is way too much time.
- It would be wonderful to be able to educate the population more about bicycle safety and that a bicycle has the same rules that apply to a motor vehicle. More bike lanes and better signage would be a great help.
- Speed up the snail pace as to road renovations. Really 5 workers stand around and one does the actual construction work.Yopur local tax dollars at work, I guess. Need much better oversight, Is the Belcher, Starkey Keene, Ulmerton, Barmoore areas the only area in all of Pinellas County that needs road construction & renovations. Nothing like jamming those areas with so many , seemingly uncoordinated road repair delays. Who is driving the ship on this.....
- Unpleasant to walk on trail when people do not pick up waste after their HUGE dogs.
- I attend a lot of programs at the cultural center, and get very upset when the reclaimed water is on, I get wet and so does my car. Please change timer to a later time. Thank You
- Great Survey
- There really are not many destinations worth going to in Largo..... Usually ride to grocery store, library and parks.
- If one is retired, then some of the responses to the questions in this survey don't show the true experience of the individual responding to the questions.
- Bus stops should be shaded and have a bench
- Sidewalks and bike lanes are the way to go.
- Hopefully it will be located far off-street. The current practice of putting pedestrian and bike trails alongside city streets increases the number of pedestrian and bicycle injuries/fatalities when an auto accident occurs.
- Largo is located ideally with access to many parks,services,the trail and beaches. It would be wonderful to create a walkable, bikable city. C
- You have no questions for those of us who use motorized wheelchairs and scooters to get around Largo so many of the questions were not applicable. There is no transfer point in Largo to get us to the beaches on the bus as there once was. Consideration should be paid to getting smaller buses or vans like many countries have to increase the number of routes and the availability of public transportation
- i would like to see mass transportation links to hillsborough county across the various causways we have and make the links accessable to the many residence of pinellas county.
- more sidewalks in general would be great. too many people are forced to walk in the street.
- 58th street between 147th and 150th has no side walks even though there is a school at 58th and 150th, the street is narrow, in this section, and no drainage for storm water. also bus route 52 is at 58th and 150th. where 79 has stops every few feet?
- I have been pulled over twice by Largo Police for riding my bike on the sidewalk. I know it is for walkers and I get off when there is a walker. They gave me a warning both times. The streets are to dangerous in Largo to bike on.
- Provide temporary box trash bins along 4th street N.E. and other streets with large City events. Ray and I walk 4th street N.E. next day after each event to pick up bags and bags of garbage. If the City would keep the boxes there for a full 24 hours after each event it wil make clean up easier. The High School cannot always be asked to clean up after us. Halloween and the Holiday stoll could truly use box bins by car parking lots. Ray and I along with another couple keep 4th street clean after events so maybe just ask the public to help clean trash the next day after each big event. Thanks for asking for ideas, Carol
- No way for handicap to use public transportation on many routes for lack of sidewalks and transit interfaces and stops too far away.
- We have the Pinellas Trail in Largo for those of us who wish to bicycle for exercise. If sidewalks are continuous and well-maintained, there is NOTHING stopping bicyclists from getting on their bikes. We don't need bike lanes, showers and other expenses. Sidewalks are enough. Thank you.
- Largo has many places to walk, with side walks parks,etc. We also have the trail which was a large expense. WE DO NOT NEED TO SPEND MONEY ON THIS NOW!!!!!!!!!!!!!!!!!
- Please continue to support the infrastructure we have but do not add any new ones. Everyone likes free stuff, but none of the stuff you are suggesting is free, yet no where in the survey is cost of future plans considered. Furthermore, to plan out more than 10 years in this econonmy is a wasted effort...check your last 10 year and 20 year plans & see how close they were to actuality.
- If you have the money to do these things via grants, etc., fine. But if you need to go into the budget, now is not the time. You are raising storm water fees and squeezing nickels out of your departments because you are in a financial bind, therefore, don't take on any major projects until you are fully funded. Oh, and Ms. Buck is not the only one on 1st Ave SW asking for street lights. Please get us some lights down here for our businesses.
- Glad to see the proactive approach to thinking and planning here in Largo
- Safety is primary to useing bysicles.
- There is a lack of respect and "watching out" by drivers towards people on both bicycles and motorcycles! Some people think that bicycles do not belong any where! In addition, so many drivers are distracted by: 1. Talking on their cell phones. 2. Text messaging on their cell phones. 3. Eating while driving. 4. Putting on make up. Any combination of 1-4 together while driving! In addition, many drivers do not look for pedestrians walking! They even lack respect for other drivers! Smaller busses should be purchased for routes that lack a lot of bus riders.

- My wife and I walk each weekend in one of the following places:St. Pete, Dunedin or Safety Harbor. The lack of a down town with some kind of a social scene. Cafe, shops and theaters.keeps us away from down town largo. We love the parks and spend time there often. But, the lack of more public social areas is a draw back.
- I do not believe light rail would be cost effective given our geography and population density. We are not NYC.
- We need sidewalks or bike lanes South of 8th Ave SW on Indian Rocks Rd
- Traffic is too heavy for safe bike use on most roads.
- Anything that can be done to generate less automobile usage is a huge plus. The biking/pedestrian accident statistics for the entire state of Florida are disgraceful. Public transporation should be a top priority for the region.
- My family and I would LOVE to be able to ride bikes and walk more. Businesses (especially shopping centers) with special bike parking and accommodations would make us MUCH more likely to bike there. A community bike share program would be amazing! We want to walk and use bikes more, but the sidewalk conditions/availability are a MAJOR deterant.