NEIGHBORHOOD
MOBILITY
MASTER PLAN

TARPON RIVER

Tarpon River

Neighborhood Mobility Master Plan

February 2017

Prepared for:

Tarpon River
& The City of Fort Lauderdale
Transportation and Mobility Department

Prepared By:

Kittelson & Associates, Inc.
110 E. Broward Boulevard, Suite 2410
Fort Lauderdale, FL 33301

&

Cadence
435 N Andrews Avenue No. 2
Fort Lauderdale, FL 33301

CONTENTS

FIGURES

1 INTRODUCTION

PROJECT BACKGROUND

The City of Fort Lauderdale is experiencing a resurgence in development and is working to transform itself into a multimodal, active, vibrant community. In order to support this growth and change, the City is working to complete a series of Neighborhood Mobility Master Plans that address neighborhood transportation issues in collaboration with the community.

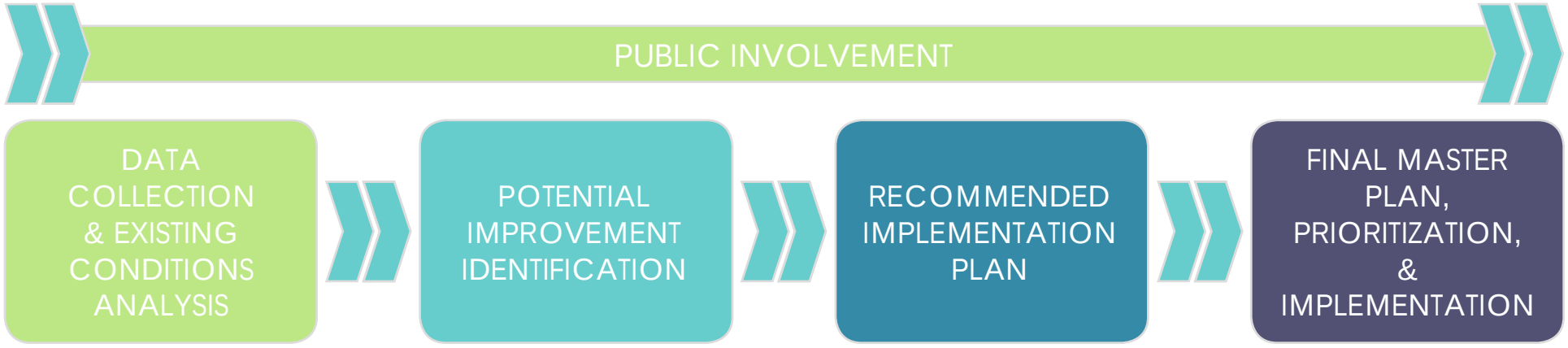
Tarpon River is a neighborhood located in Fort Lauderdale, Florida. It is bordered by Davie Blvd to the south, Tarpon River to the west, New River to the North, and Andrews Ave to the east. The neighborhood is primarily made up of single-family homes, condos, three parks, several churches, and a number of businesses on the western edge that represent a transition between Downtown Fort Lauderdale and the residential portion of the neighborhood. Over time, community members have expressed a desire for a safer and more comfortable multimodal environment. In recognition of these desires, the City of Fort Lauderdale initiated the Tarpon River Neighborhood Mobility Master Plan.

STUDY PROCESS

The Tarpon River Neighborhood Mobility Master Plan was conducted over a period of eleven months, beginning in January of 2015 and ending in November 2015. The project team took a "blank slate" approach, with no predetermined assumptions on the issues or needs. This allowed the neighbors, supported by data and analysis, to identify the issues and importance of those issues.

This process was completed in four phases, as seen in Figure 1. Beginning with data collection and analysis and stakeholder involvement, phase one identified the issues and opportunities in the neighborhood. In phase two, a general menu of potential improvements were identified and presented to the community. The community was then asked to choose the types of strategies they would like to see implemented in the neighborhood. In phase three, the improvement types decided on in phase two were applied to the specific issue and opportunity areas identified in phase one. Additionally, planning level cost estimates and project timing were developed for the improvements. These were presented to the community and the feedback received was used in phase four to create the final master plan. Phase four is ongoing, and includes a final prioritization developed between the community members and the City of Fort Lauderdale as well as the implementation of the projects as funds become available.

FIGURE 1
STUDY PROCESS



REPORT ORGANIZATION

This report is organized into six sections as follows:

1. INTRODUCTION

Describes the study purpose and background, the process, and the study area.

2. EXISTING & FUTURE CONDITIONS

A comprehensive overview of the existing and future conditions in and around the neighborhood, including analysis of the demographics; land use and proposed developments; existing traffic calming devices; multimodal transportation environment; and safety aspects.

3. COMMUNITY ENGAGEMENT

Describes the public involvement activities conducted throughout the study, including a high level overview of the results.

4. SYNTHESIS

Combines the results of the data analysis and the public involvement efforts to create an overall assessment of the needs, desires, and opportunities in the community.

5. MASTER PLAN

Delineates the recommended strategies to address the needs, desires, and opportunities uncovered throughout the project. Also discusses the planning level cost estimates for the recommendations in the study.

6. NEXT STEPS

Presents the next steps for the community, including a discussion of the prioritization of the recommendations based on the prioritization methods approved in the City's Connecting the Blocks plan. This is meant to be a starting point for future prioritization efforts by the City.

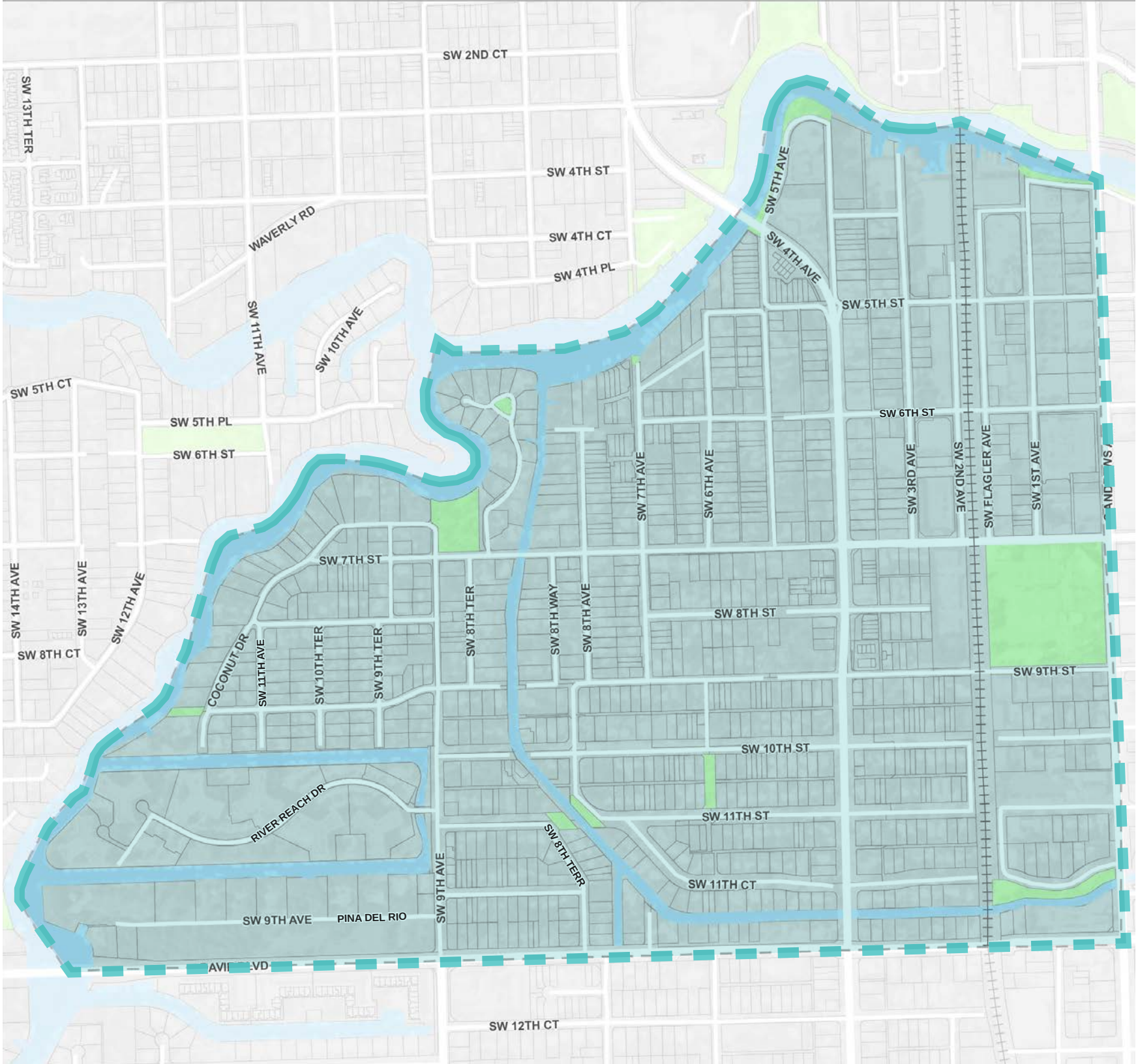
STUDY AREA

The neighborhood is bounded by the New River to the north, the South Fork of the New River to the west, Davie Boulevard to the south, and Andrews Avenue to the east. The western portions of the neighborhood are primarily single family residential, while the northeastern section is a mixture of high rise residential, commercial, and industrial land uses. Figure 2 shows the boundaries of the study area. Like many neighborhoods in the City of Fort Lauderdale, roadway connectivity is challenged by several waterways and inlets, particularly the Tarpon River which flows through the center of the neighborhood and the FEC rail corridor which passes through the neighborhood at grade and is a high volume rail corridor.

Typical Neighborhood Street.
Credit: Kittelson & Associates, Inc.

View of Tarpon River.
Credit: Kittelson & Associates, Inc.

FIGURE 2
STUDY AREA


SW 2ND CT
SW 13TH TER
SW 4TH ST
WAVERLY RD
SW 4TH CT
SW 4TH PL
SW 11TH AVE
SW 10TH AVE
SW 5TH AVE
SW 4TH AVE
SW 5TH ST
SW 5TH CT
SW 5TH PL
SW 6TH ST
SW 7TH AVE
SW 6TH AVE
SW 3RD AVE
SW 2ND AVE
SW FLAGLER AVE
SW 1ST AVE
SW 14TH AVE
SW 13TH AVE
SW 12TH AVE
SW 7TH ST
SW 8TH TER
SW 8TH WAY
SW 8TH AVE
SW 8TH ST
SW 8TH CT
COCONUT DR
SW 11TH AVE
SW 10TH TER
SW 9TH TER
SW 9TH ST
SW 10TH ST
RIVER REACH DR
SW 11TH ST
SW 8TH TERR
SW 11TH CT
SW 9TH AVE
PINA DEL RIO
SW 9TH AVE
SW 12TH CT

2 EXISTING & FUTURE CONDITIONS

DEMOGRAPHICS

According to 2014 estimates from the U.S. Census Bureau, the Tarpon River neighborhood is home to 2,918 people. Of those, 49 percent are men and 51 percent are women. Regarding age, 25 percent of the population are either under the age of 18 (10%) or over the age of 65 (15%). These populations are less likely to drive, and therefore require adequate pedestrian and bicycle facilities to get around. About 92% of households in the neighborhood have access to at least one vehicle, and 50 percent have access to two or more vehicles. The median household income is around $58,000 per year, which is higher than the city as a whole, where the median income is $49,000. Considering education, 42 percent of the population has obtained a bachelor's degree or higher. As income and education levels increase, people become more likely to choose to make trips by walking and biking as opposed to driving, especially for recreational trips.[1] Even though most people have access to a vehicle, adequate pedestrian and bicycle facilities that connect to educational, recreational, and entertainment destinations is important for communities.

1 Kuzmyak, Walters, Bradley, & Kockelman. (2014). *Estimating Bicycling and Walking for Planning and Project Development: A Guidebook*. Washington, DC. Transportation Research Board.

The central location of the neighborhood in the City of Fort Lauderdale allows for short commute times and a more diverse transportation mode split. As such, 52 percent of the population commutes less than 10 miles to work, 9 percent of the population uses alternative modes of transportation (including carpool, transit, walking, and biking) to commute to work, and an additional 7 percent work at home. This is lower than the City's average of 18 percent, which may reflect limited transit circulation in the neighborhood, a lack of bicycle and pedestrian facilities, and limited connectivity between the neighborhood and Downtown Fort Lauderdale.

MEDIAN AGE IS **47**

10% UNDER 18

15% AGE 65+

POPULATION
2,918

49% MEN

51% WOMEN

ACCESS TO VEHICLE

0 VEHICLES **8%**

1 VEHICLE **42%**

2 VEHICLES **37%**

3+ VEHICLES **13%**

MODE SHARE
WORKERS AGE 16+

84.0% DRIVE ALONE

7.0% TELECOMMUTE

4.0% TRANSIT

2.0% CARPOOL

1.0% WALK

1.0% BIKE

1.0% OTHER

COMMUTE DISTANCE

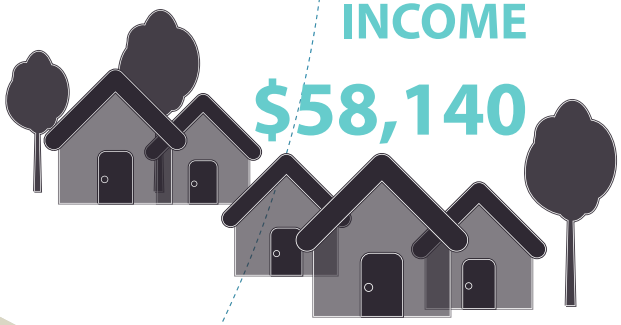
52%
LESS THAN 10 MILES

25%
10 TO 24 MILES

8%
25 TO 50 MILES

15%
GREATER THAN 50 MILES

MEDIAN HOUSEHOLD INCOME



$58,140

EDUCATION
AGE 25+

12% LESS THAN HIGH SCHOOL

28% HIGH SCHOOL

21% SOME COLLEGE/ ASSOCIATES DEGREE

30% BACHELORS DEGREE

12% MASTERS DEGREE OR HIGHER

NEIGHBORHOOD DESTINATIONS

WHERE TARPON RIVER RESIDENTS WORK

Tarpon River residents work all over South Florida. However, as shown in Figure 3, there is a high concentration of jobs in Downtown Fort Lauderdale between Broward Boulevard and SE 17th Street. Because of Tarpon River's proximity to these locations, it is feasible that with the right infrastructure people could walk, bike, or take transit to work. In turn, this could help to reduce vehicular trips, which has been found to provide health benefits, reduce congestion, save money, and increase happiness.

WHERE TARPON RIVER RESIDENTS WANT TO GO

Neighbors have noted that they like living in Tarpon River partially due to its proximity to destinations, but that access to these destinations is not good today. They have indicated a desire to increase pedestrian, bicycle, and transit access to the destinations noted in the graphic to the left so that they can leave their cars behind when accessing shopping, dining, entertainment, and other destinations. Figure 4 shows the nearby destinations that neighbors noted that they would like better access to.

FIGURE 3

WHERE TARPON RIVER RESIDENTS WORK

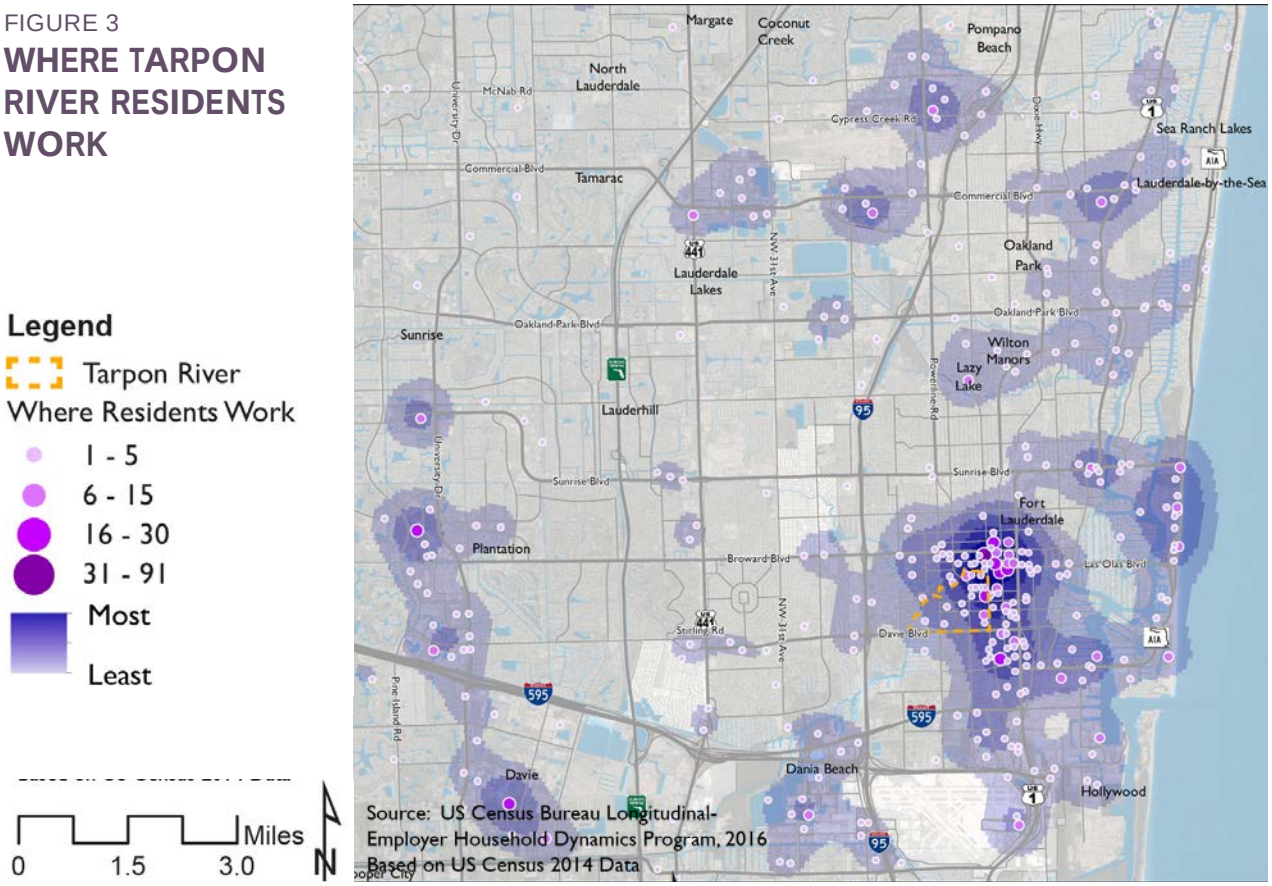
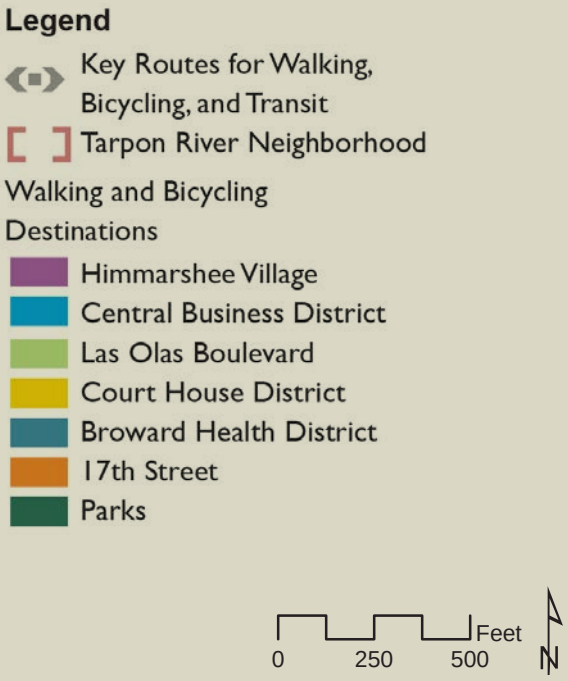
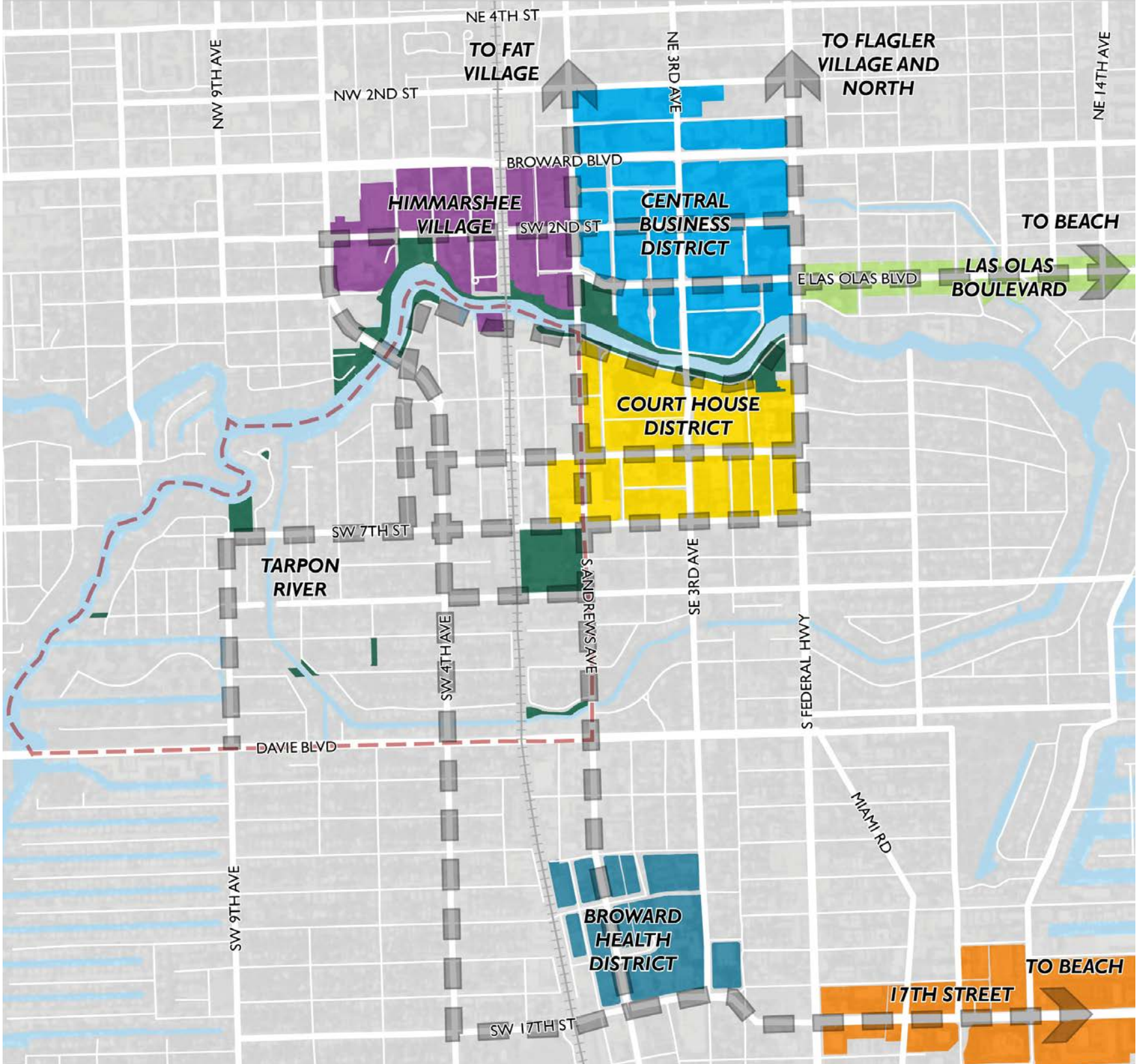


FIGURE 4

WHERE TARPON RIVER RESIDENTS WANT TO GO




NE 4TH ST
TO FAT VILLAGE
NW 9TH AVE
NW 2ND ST
NE 3RD AVE
TO FLAGLER VILLAGE AND NORTH
NE 14TH AVE
BROWARD BLVD
HIMMARSHEE VILLAGE
SW 2ND ST
CENTRAL BUSINESS DISTRICT
TO BEACH
E LAS OLAS BLVD
LAS OLAS BOULEVARD
COURT HOUSE DISTRICT
SW 7TH ST
TARPON RIVER
SANDREWS AVE
SE 3RD AVE
S FEDERAL HWY
SW 4TH AVE
DAVIE BLVD
MIAMI RD
SW 9TH AVE
BROWARD HEALTH DISTRICT
TO BEACH
17TH STREET
SW 17TH ST

LAND USE AND DESTINATIONS

Figure 5 displays the Existing Land Use in the Tarpon River neighborhood. The neighborhood is primarily residential west of the FEC rail line with the exception of some marine related industrial activity immediately adjacent to the line. East of the rail line is a mixture of high density residential and commercial land use, with additional single family residential parcels south of SW 9th Street. The neighborhood is directly connected to the Downtown business district, Riverwalk, and Las Olas Boulevard via the Andrews Avenue Bridge and to the Broward Center for the Performing Arts via the SW 4th Avenue Bridge.

The eastern part of the neighborhood is easily walkable to Downtown, while the western portion is challenged by poor roadway connectivity driven by the rivers and inlets. SW 7th Street is the only east-west crossing of the Tarpon River within the neighborhood.

Because of this, Tarpon River is more auto-dependent than most neighborhoods in Fort Lauderdale, ranking 43 out of 61 neighborhoods in Fort Lauderdale for walkability with a Walk Score of 51[2].

2 Walk Score. (2015). Living in Fort Lauderdale. Retrieved from WalkScore.com: https://www.walkscore.com/FL/Fort_Lauderdale

Multi-Family Housing in Tarpon River.
Credit: Kittelson & Associates, Inc.

Commercial Uses Near Hardy Park.
Credit: Kittelson & Associates, Inc.

FIGURE 5

EXISTING LAND USE

Legend

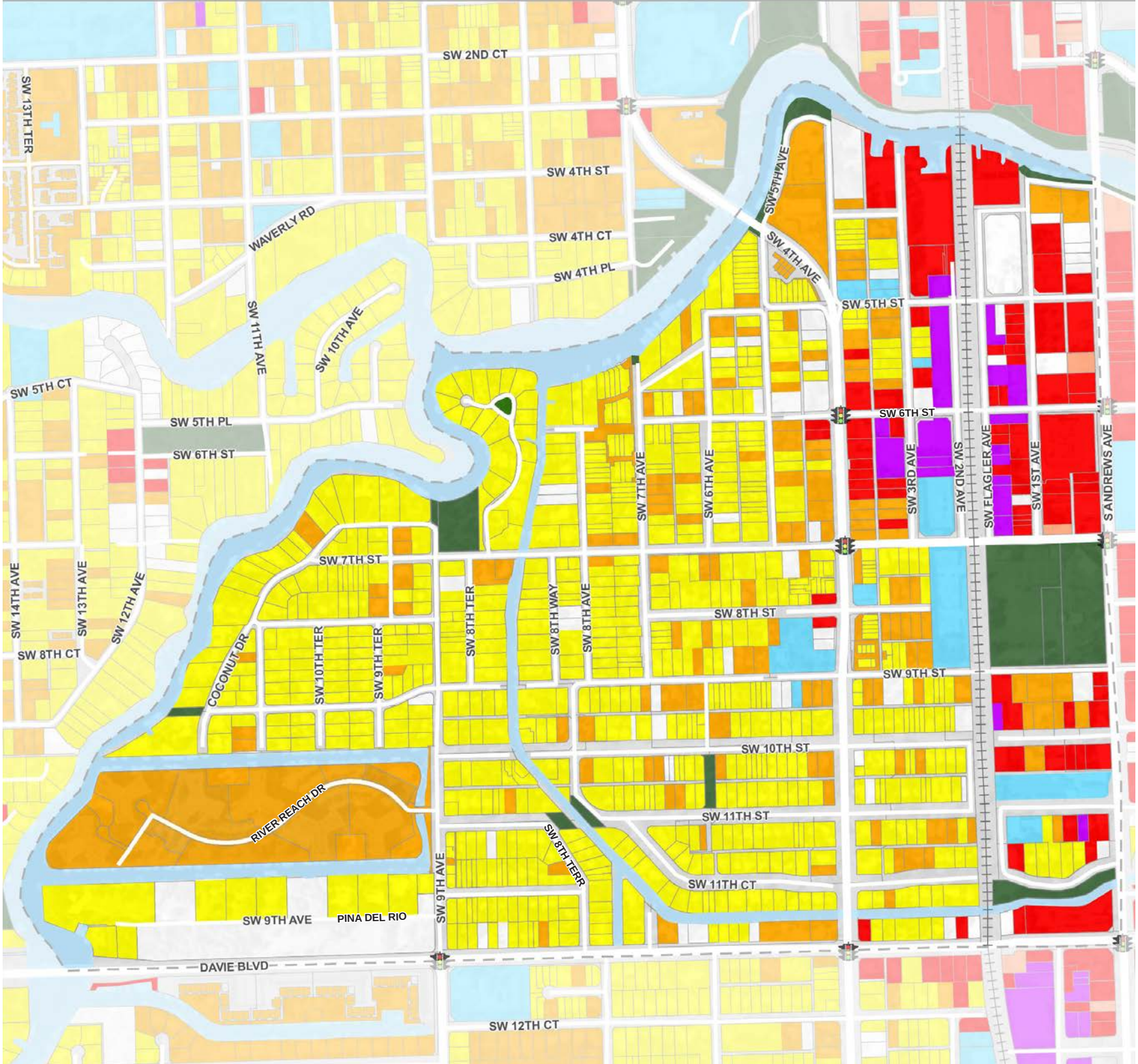
Existing Land Use

- Vacant
- Single Family Residential
- Multi-Family Residential
- Commercial
- Mixed Use
- Recreation
- Industrial
- Institutional

Source: City of Fort Lauderdale GIS, 2016

0 250 500 Feet

N


SW 2ND CT
SW 13TH TER
SW 4TH ST
WAVERLY RD
SW 4TH CT
SW 4TH PL
SW 11TH AVE
SW 10TH AVE
SW 5TH CT
SW 5TH PL
SW 6TH ST
SW 14TH AVE
SW 13TH AVE
SW 12TH AVE
SW 8TH CT
SW 7TH ST
COCONUT DR
SW 10TH TER
SW 9TH TER
SW 8TH TER
SW 8TH WAY
SW 8TH AVE
RIVER REACH DR
SW 9TH AVE
PINA DEL RIO
DAVIE BLVD
SW 12TH CT
SW 5TH AVE
SW 4TH AVE
SW 5TH ST
SW 6TH ST
SW 7TH AVE
SW 6TH AVE
SW 3RD AVE
SW 2ND AVE
SW FLAGLER AVE
SW 1ST AVE
S ANDREWS AVE
SW 8TH ST
SW 9TH ST
SW 10TH ST
SW 11TH ST
SW 8TH TERR
SW 11TH CT

STREET NETWORK

To support multimodal activity and development, the City of Fort Lauderdale has classified its streets according the types of users as well as the surrounding land uses and environmental factors in its Connecting the Blocks plan. As shown in Figure 6, there are seven types of streets found in and around Tarpon River:

Residential Boulevards

Are high-volume thoroughfares that connect activity centers via areas that are primarily residential. They serve primary transit routes but are not desirable as primary routes for goods movement. They should include wide sidewalks and bicycle lanes that are a minimum of 5 feet in width.

Center City Avenues

Traverse higher-density mixed-use and commercial areas. Traffic moves relatively slowly, and walking and biking are not only supported but encouraged. Center City Avenues serve as primary pedestrian and bicycle routes and may also serve as local transit routes; therefore, they should be equipped with wide sidewalks to support pedestrian activity as well as bicycle lanes or multi-use paths.

Commercial Avenues

Connect development nodes, and act as secondary facilities to Commercial Boulevards, serving a more local population. They may have lower density uses with larger setback than would be found in activity centers, but they may also be transitioning to higher densities. They support transit routes and are still have somewhat higher speeds than other avenues. They should have wide sidewalks and bike lanes.

Residential Avenues

Are smaller in scale than Commercial Avenues and serve as lower-speed alternative routes that connect neighborhoods. Surrounding land uses are mainly residential and primarily carry local traffic. They also serve as primary pedestrian and bicycle routes, and may serve as local transit routes; therefore, they should have sidewalks and bicycle lanes.

Residential Streets

Are quiet neighborhood streets with low traffic volumes and speeds. They have the lowest activity level of any type of street but alleys and play an important role in the desirability of a neighborhood. They should feel safe, comfortable, and cared for. They serve as important local bicycle and pedestrian connections; however, all users may share the street space due to low levels of vehicular traffic and low vehicular speeds. Proper signage may be necessary depending on the context.

Commercial Streets

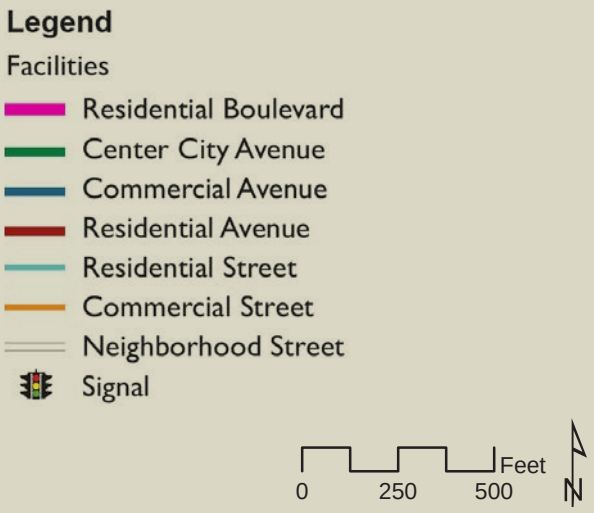
Commercial Streets are streets where land uses transition from downtown environments to neighborhood environments. They connect closely spaced activity nodes, yet speeds should not exceed 25 miles per hour. They are essential for pedestrian and bicycle transportation. The built environment surrounding Commercial Streets includes many types of land uses. Bicycle lanes may be appropriate, although bicycles and vehicular traffic may also share the road depending on the context.

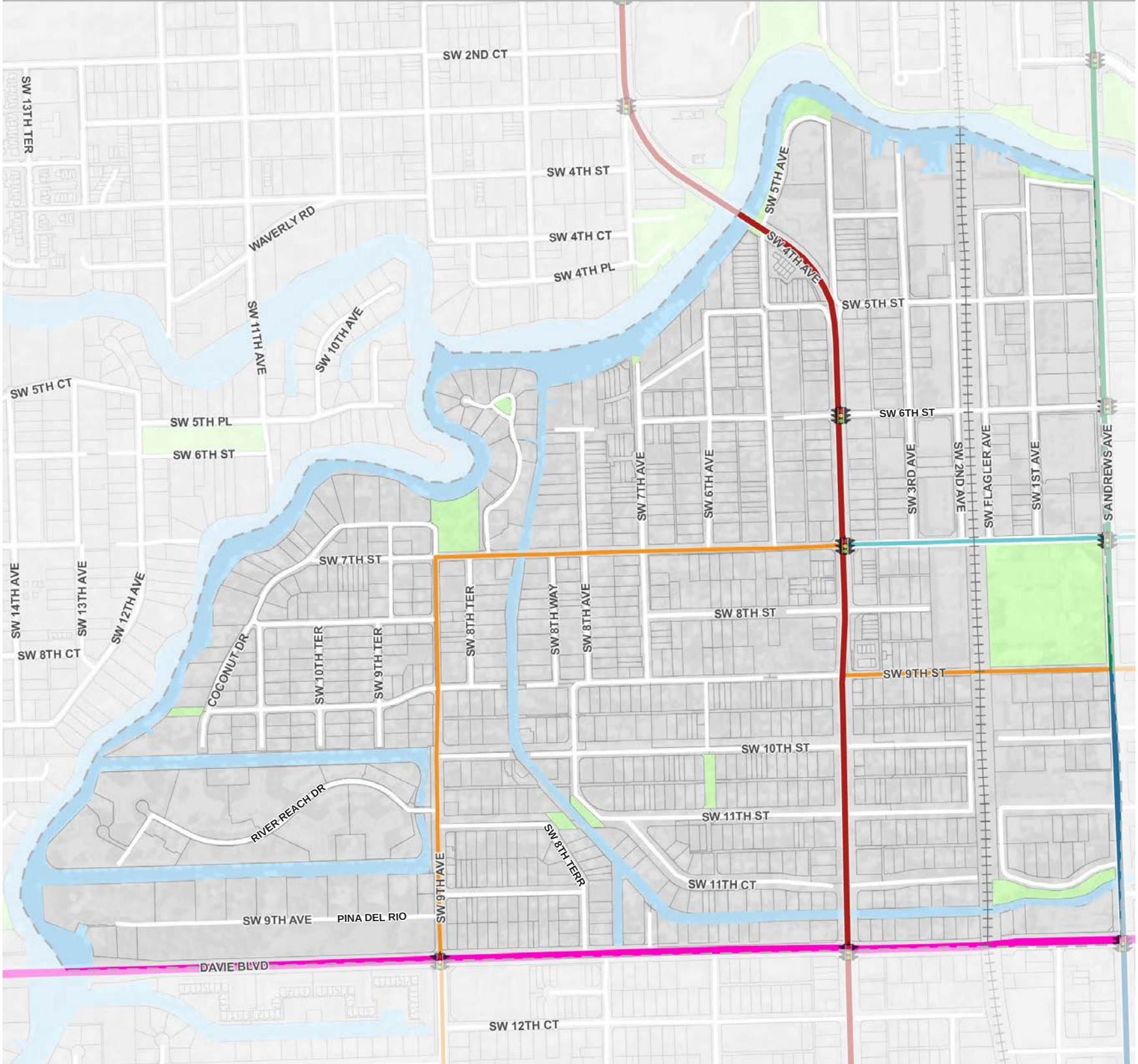
NEIGHBORHOOD STREETS

Can be commercial or residential in nature. They have low speeds and serve low traffic volumes. They are also considered essential for pedestrian and bicycle transportation. Depending on the speeds and volumes, vehicles may share the street with pedestrians and bicyclists or there may be designated pedestrian and bicycle facilities.

FIGURE 6

STREET NETWORK




SW 2ND CT
SW 13TH TER
SW 4TH ST
SW 4TH CT
SW 4TH PL
WAVERLY RD
SW 11TH AVE
SW 10TH AVE
SW 5TH AVE
SW 4TH AVE
SW 5TH ST
SW 5TH CT
SW 5TH PL
SW 6TH ST
SW 7TH AVE
SW 6TH AVE
SW 3RD AVE
SW 2ND AVE
SW FLAGLER AVE
SW 1ST AVE
SANDREWS AVE
SW 14TH AVE
SW 13TH AVE
SW 12TH AVE
SW 7TH ST
SW 8TH TER
SW 8TH WAY
SW 8TH AVE
SW 8TH ST
SW 8TH CT
COCONUT DR
SW 10TH TER
SW 9TH TER
SW 9TH ST
SW 10TH ST
RIVER REACH DR
SW 11TH ST
SW 8TH TERR
SW 9TH AVE
SW 11TH CT
SW 9TH AVE
PINA DEL RIO
DAVIE BLVD
SW 12TH CT

EXISTING PEDESTRIAN & BICYCLE FACILITIES

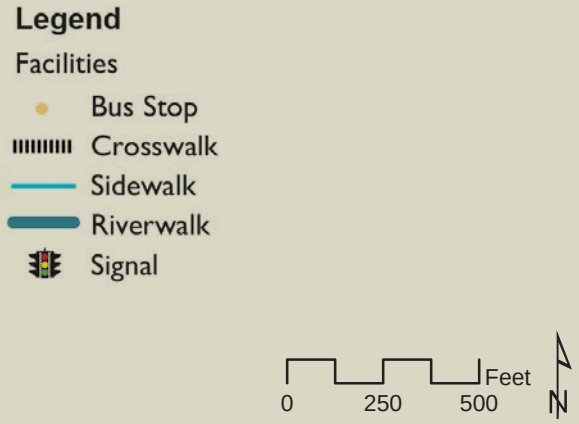
As can be seen in Figure 7, sidewalks are available on the major roadways such as Andrews Avenue, SW 4th Street, and Davie Boulevard, but many parts of the neighborhood have disconnected or no sidewalks available. Travel distances within the neighborhood are also increased significantly for many residents due to the lack of crossing opportunities over the Tarpon River. Residents in the southern portion of the neighborhood have to use Davie Boulevard for east-west passage, while SW 7th Street is the only option for those in the northern portion. A narrow sidewalk is provided along the SW 4th Avenue Bridge, but is not continued on either side. The western end of the bridge is vegetated to the edge of pavement, requiring pedestrians to walk in the street. The FEC rail line has four roadway crossings within the neighborhood, which are being upgraded to include sidewalks or pedestrian gates. There is no physical barrier blocking pedestrian movements across the tracks at other locations through the neighborhood. While there are a number of destinations that people may wish to walk to, the lack of pedestrian facilities may make walking more difficult than driving.

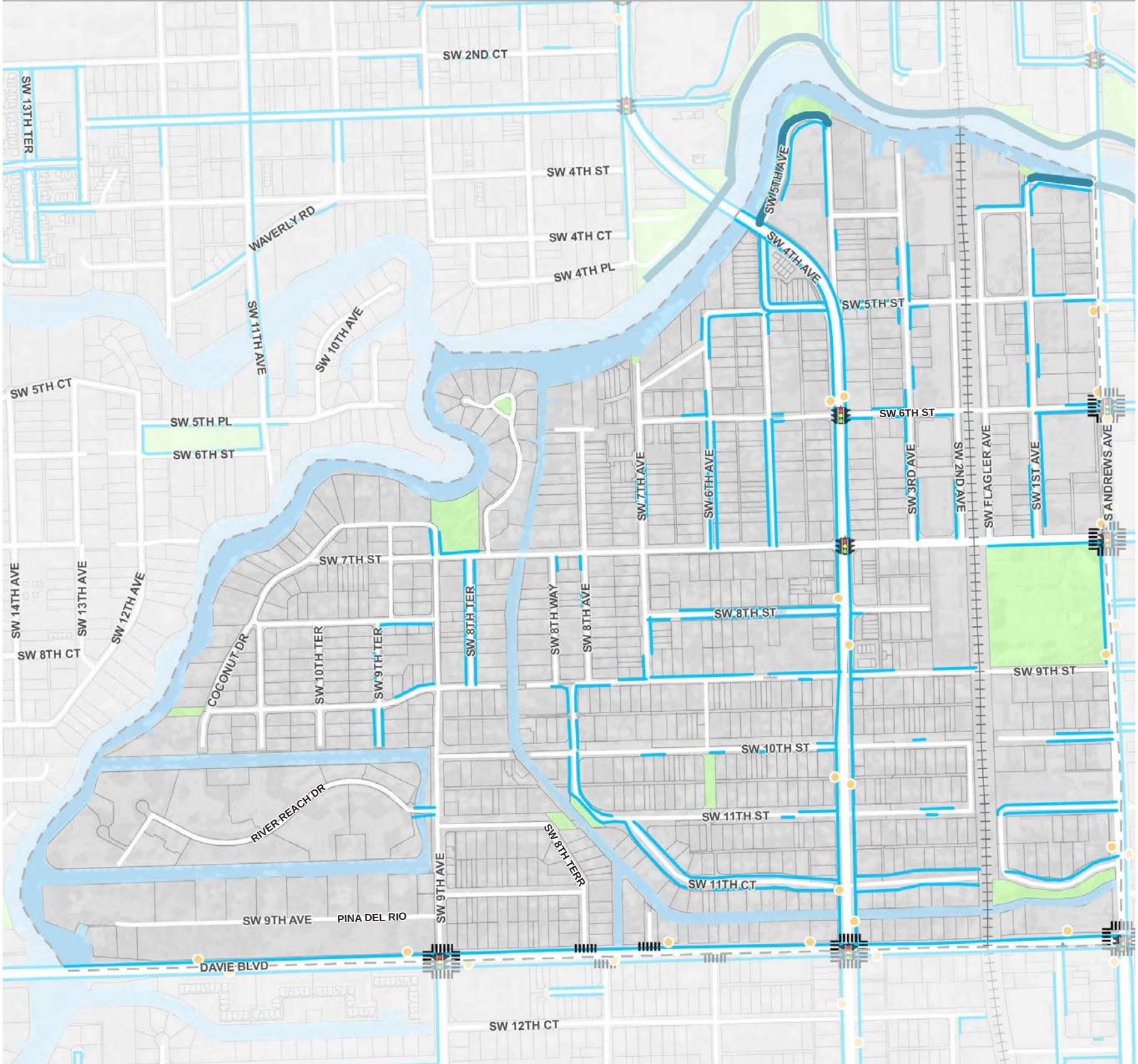
Recreational amenities within the neighborhood include Florence C Hardy Park, Lewis Landing Park, and Raintree Park. There are also a number of small pocket parks and the Sara Horn Greenway that neighbors can access. None of these are connected to a fully complete sidewalk network. The Riverwalk also runs along the northeastern portion of the neighborhood, however it is disjointed. This will likely change as redevelopment occurs along the river. For pedestrians wishing to go downtown, the Andrews Avenue Bridge is equipped with protected sidewalks on the northbound side, accessible only from the Riverwalk South using a switchback ramp. Pedestrian access along Andrews Avenue itself is prohibited. The western part of the Downtown area is accessible using either side of the SW 4th Avenue Bridge which is equipped with sidewalks on both sides.

Sidewalks do exist on Davie Boulevard, SW 4th Avenue, and Andrews Avenue which are the highest speed and highest traffic volume roadways in the neighborhood. There are no marked bicycle facilities within or outside of the neighborhood. Bicyclists were observed riding on the sidewalk and in the street during the field visit.

Lewis Landing Park.
Credit: Kittelson & Associates, Inc.

FIGURE 7
EXISTING BICYCLE AND PEDESTRIAN FACILITIES




SW 2ND CT
SW 13TH TER
SW 4TH ST
WAVERLY RD
SW 4TH CT
SW 4TH PL
SW 11TH AVE
SW 10TH AVE
SW 5TH AVE
SW 4TH AVE
SW 5TH ST
SW 5TH CT
SW 5TH PL
SW 6TH ST
SW 6TH ST
SW 7TH AVE
SW 6TH AVE
SW 3RD AVE
SW 2ND AVE
SW FLAGLER AVE
SW 1ST AVE
S ANDREWS AVE
SW 14TH AVE
SW 13TH AVE
SW 12TH AVE
SW 7TH ST
SW 8TH CT
COCONUT DR
SW 10TH TER
SW 9TH TER
SW 8TH TER
SW 8TH WAY
SW 8TH AVE
SW 8TH ST
SW 9TH ST
SW 10TH ST
RIVER REACH DR
SW 11TH ST
SW 8TH TERR
SW 11TH CT
SW 9TH AVE
PINA DEL RIO
SW 9TH AVE
DAVIE BLVD
SW 12TH CT

TRANSIT ROUTES AND FACILITIES

Tarpon River is served by several forms of transit, including four Broward County Transit (BCT) routes, the SunTrolley, the Water Trolley, and will be served by The Wave (a modern streetcar) in the future. Most of the existing transit runs along Andrews Avenue, although the SunTrolley and one BCT route run along SW 4th Avenue; the Water Trolley picks up along the Riverwalk; and one BCT route runs along Davie Boulevard. The transit routes run as follows:

BCT ROUTE 6

Route 6 runs north/south from the southern County Line in Hallandale Beach to the Broward Central Terminal near downtown Fort Lauderdale. It runs approximately every 30 minutes from around 5:15 AM to around 11:00 PM on Monday through Friday. On Saturday, it runs hourly from 5:20 AM to 10:55 PM. On Sunday, it runs hourly from around 8:20 AM to around 9:00 PM.

BCT ROUTE 30

Route 30 runs east/west from the West Regional Terminal in Sunrise to the Broward Central Terminal. It runs approximately every 20 minutes from around 5:30 AM to around 10:30 PM on Monday through Friday. On Saturday, it runs every 30 minutes from 6:00 AM to 10:30 PM. On Sunday, it runs every 45 minutes from around 9:30 AM to around 7:00 PM.

BCT ROUTE 40

Route 40 runs east/west from Lauderhill to the Galleria Mall. It runs approximately every 20 minutes from around 5:30 AM to around 10:30 PM on Monday through Friday. On Saturday, it runs every 30 minutes from 6:00 AM to 10:30 PM. On Sunday, it runs every 40 minutes from around 7:400 AM to around 8:00 PM

BCT ROUTE 101

Route 101 is an express route that runs north/south from Aventura Mall to the Broward Central Terminal. It runs approximately every 20 minutes from around 6:00 AM to around 7:30 PM on Monday through Friday. It does not run on Saturday or Sunday.

SUN TROLLEY

The Sun Trolley is a wave and ride service that is run by the City of Fort Lauderdale. Three routes run through Tarpon River, including the Downtown Link, the Airport Link, and the Neighborhood Link. Fort Lauderdale is currently developing a Transit Master Plan that recommendis the removal of the Neighborhood Link due to low ridership. The Airport and Neighborhood Links are currently free and the Beach Link costs $1.00 per ride or $3.00 for a day pass. The Neighborhood link runs Monday through Friday from 8:15 AM to 2:30 PM. The Airport Link runs on Saturdays and Sundays from 9:00 AM to 5:00 PM and is intended to allow people to explore downtown Fort Lauderdale on layovers. The Beach Link runs seven days a week from 9:30 AM to 6:30 PM.

WATER TROLLEY

The Water Trolley is a free service that is intended to help people cross the New River in 5 minutes or less. It runs every 30 minutes daily from 11:00 AM to 2:00 PM and from 4:00 PM to 11:00 PM.

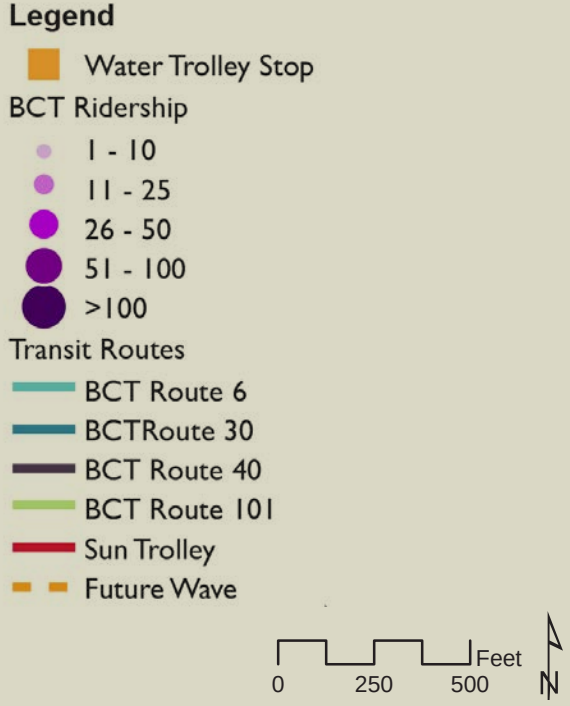
THE WAVE (FUTURE)

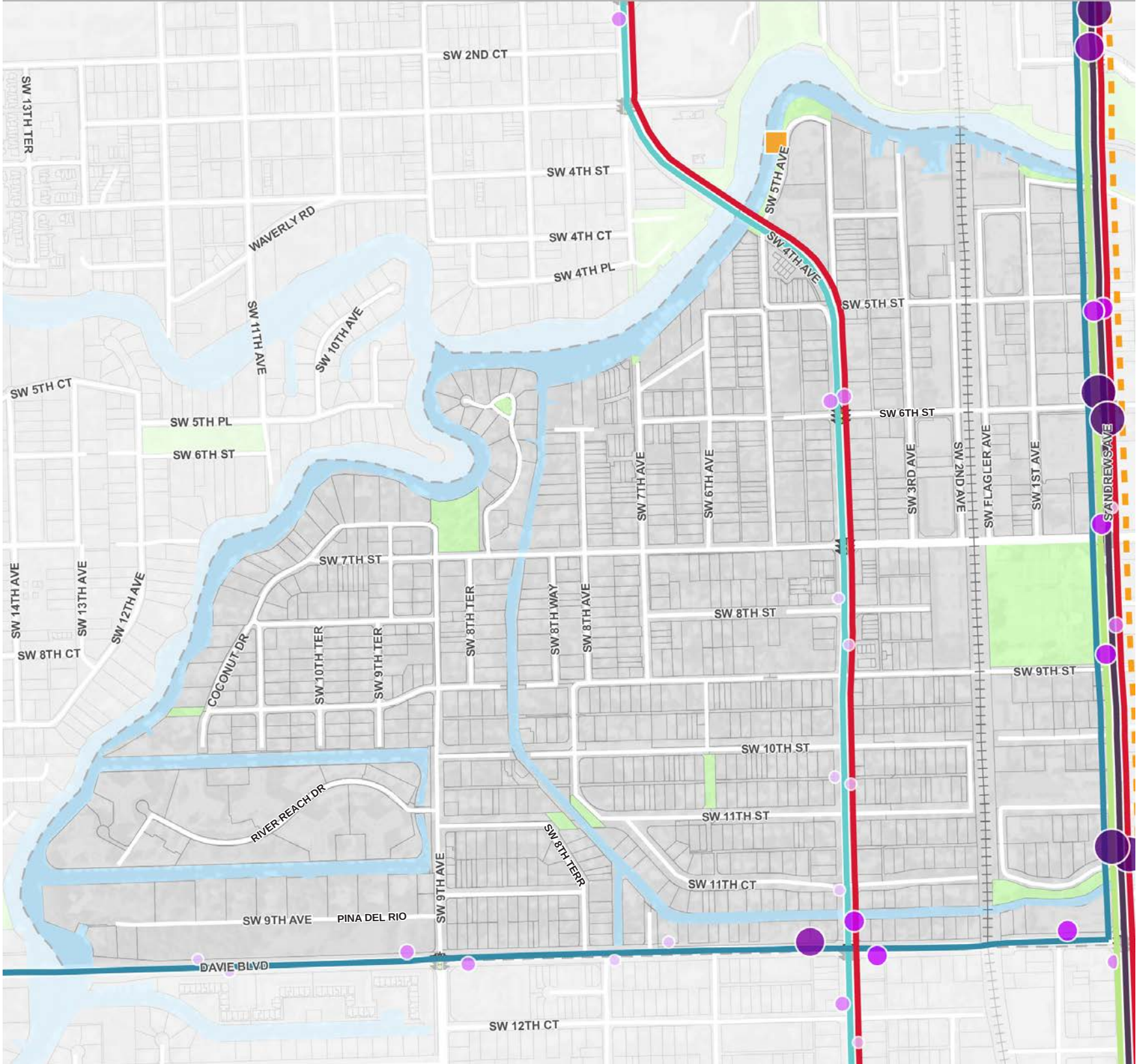
The Wave is a modern street car that is being managed by the Florida Department of Transportation. The first phase is 2.8 miles in and around downtown Fort Lauderdale, and should enter the design build phase in 2017.

Regarding transit stops, there are several stops along Andrews Avenue that have higher ridership. Most of the stops do not have bus shelters or benches, although those with higher ridership along Andrews Avenue and Davie Boulevard do have shelters and seating.

FIGURE 8

TRANSIT ROUTES & FACILITIES




SW 2ND CT
SW 13TH TER
SW 4TH ST
SW 4TH CT
SW 4TH PL
WAVERLY RD
SW 11TH AVE
SW 10TH AVE
SW 5TH AVE
SW 4TH AVE
SW 5TH ST
SW 5TH CT
SW 5TH PL
SW 6TH ST
SW 7TH AVE
SW 6TH AVE
SW 3RD AVE
SW 2ND AVE
SW FLAGLER AVE
SW 1ST AVE
SANDREWS AVE
SW 14TH AVE
SW 13TH AVE
SW 12TH AVE
SW 7TH ST
SW 8TH TER
SW 8TH WAY
SW 8TH AVE
SW 8TH ST
SW 8TH CT
COCONUT DR
SW 10TH TER
SW 9TH TER
SW 9TH ST
SW 10TH ST
RIVER REACH DR
SW 11TH ST
SW 8TH TERR
SW 11TH CT
SW 9TH AVE
PINA DEL RIO
SW 9TH AVE
DAVIE BLVD
SW 12TH CT

VEHICULAR ACCESS AND INTERSECTION CONTROLS

Figure 9 shows vehicular access points for the Tarpon River neighborhood and intersection controls within the neighborhood. There are a number of access points to the neighborhood from Davie Boulevard and Andrews Avenue. There is no access across the south fork of the New River to the west, and two access points from the north via the Andrews Avenue Bridge and the SW 4th Avenue Bridge. Additionally, Tarpon River, which runs through the neighborhood, has only one crossing along SW 7th Street. This creates a situation where SW 7th Street must accommodate most of the vehicular, pedestrian, and bicycle traffic in the neighborhood without adequate sidewalks and bike lanes. Most of the intersections within the neighborhood are controlled by stop signs. The intersection of SW 7th Street and SW 7th Avenue is a roundabout. Two traffic signals exist within the neighborhood along SW 4th Avenue at SW 6th Street and SW 7th Street. Figure 9 displays these controls.

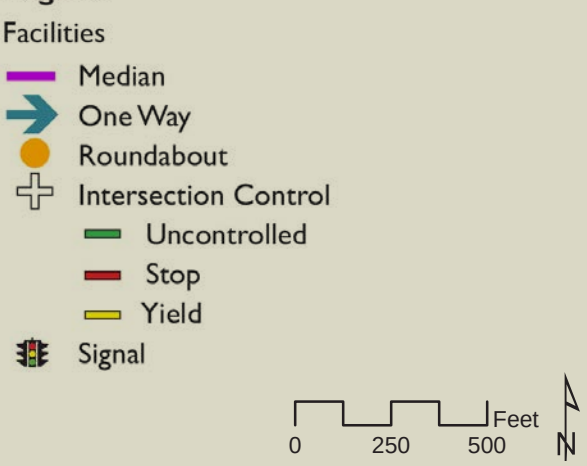
A number of methods have been employed in the neighborhood to assist in traffic calming. To begin, access and egress are restricted in some areas. In most cases, it is permissible to turn left in, however traffic volumes and speeds make these movements less desirable than entering or exiting at signals.

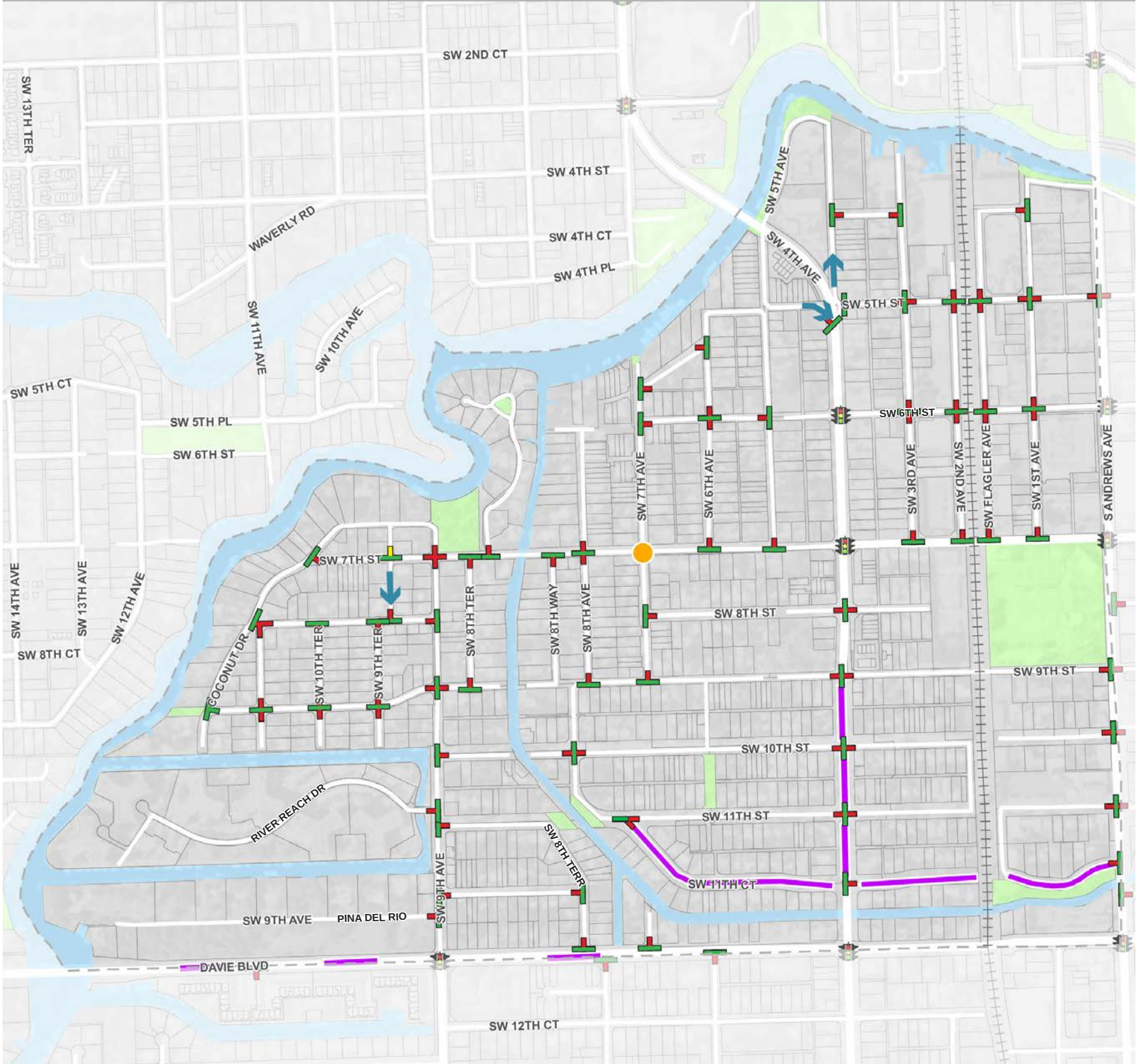
Davie Boulevard, Andrews Avenue, and SW 4th Avenue function as the primary through streets. SW 7th Street and SW 9th Avenue provide an alternative through route. Most other streets within the neighborhood do not provide through connectivity.

Mini Roundabout in Tarpon River.
Credit: Kittelson & Associates, Inc.

FIGURE 9

VEHICULAR ACCESS AND INTERSECTION CONTROLS




SW 2ND CT
SW 13TH TER
SW 4TH ST
SW 4TH CT
SW 4TH PL
WAVERLY RD
SW 11TH AVE
SW 10TH AVE
SW 5TH AVE
SW 4TH AVE
SW 5TH ST
SW 5TH CT
SW 5TH PL
SW 6TH ST
SW 6TH ST
SW 7TH AVE
SW 6TH AVE
SW 3RD AVE
SW 2ND AVE
SW FLAGLER AVE
SW 1ST AVE
S ANDREWS AVE
SW 14TH AVE
SW 13TH AVE
SW 12TH AVE
SW 8TH CT
SW 7TH ST
COCONUT DR
SW 10TH TER
SW 9TH TER
SW 8TH TER
SW 8TH WAY
SW 8TH AVE
SW 8TH ST
SW 9TH ST
SW 10TH ST
RIVER REACH DR
SW 11TH ST
SW 8TH TERR
SW 11TH CT
SW 9TH AVE
PINA DEL RIO
SW 9TH AVE
DAVIE BLVD
SW 12TH CT

VEHICULAR TRAFFIC CALMING MEASURES AND POSTED SPEED LIMITS

Traffic calming measures in the Tarpon River neighborhood generally take the form of speed humps and road closures, as shown in Figure 10. Speed humps are present on SW 7th Street and SW 9th Avenue, calming traffic on what otherwise could facilitate cut-through traffic. They are also present on SW 11th Street, which has a number of church and commercial activities, as well as on street parking.

The posted speed limit along SW 4th Avenue is 40 mph, Andrews Avenue and Davie Boulevard are 35 mph, and the area speed limit is 25 mph and is posted at most entrances to the neighborhood. Generally, 20 MPH is a preferable speed limit for neighborhood streets where pedestrians, bicycles, and cars may share the road.[3]

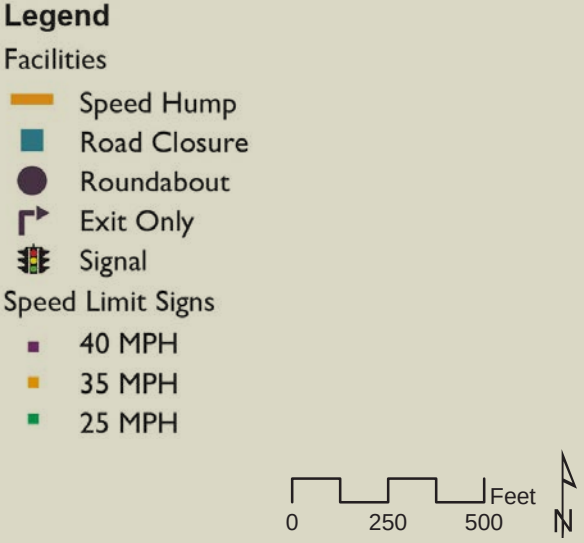
3 Kulash, W. (2001). Residential Streets, Third Edition. Washington, DC: Urban Land Institute.

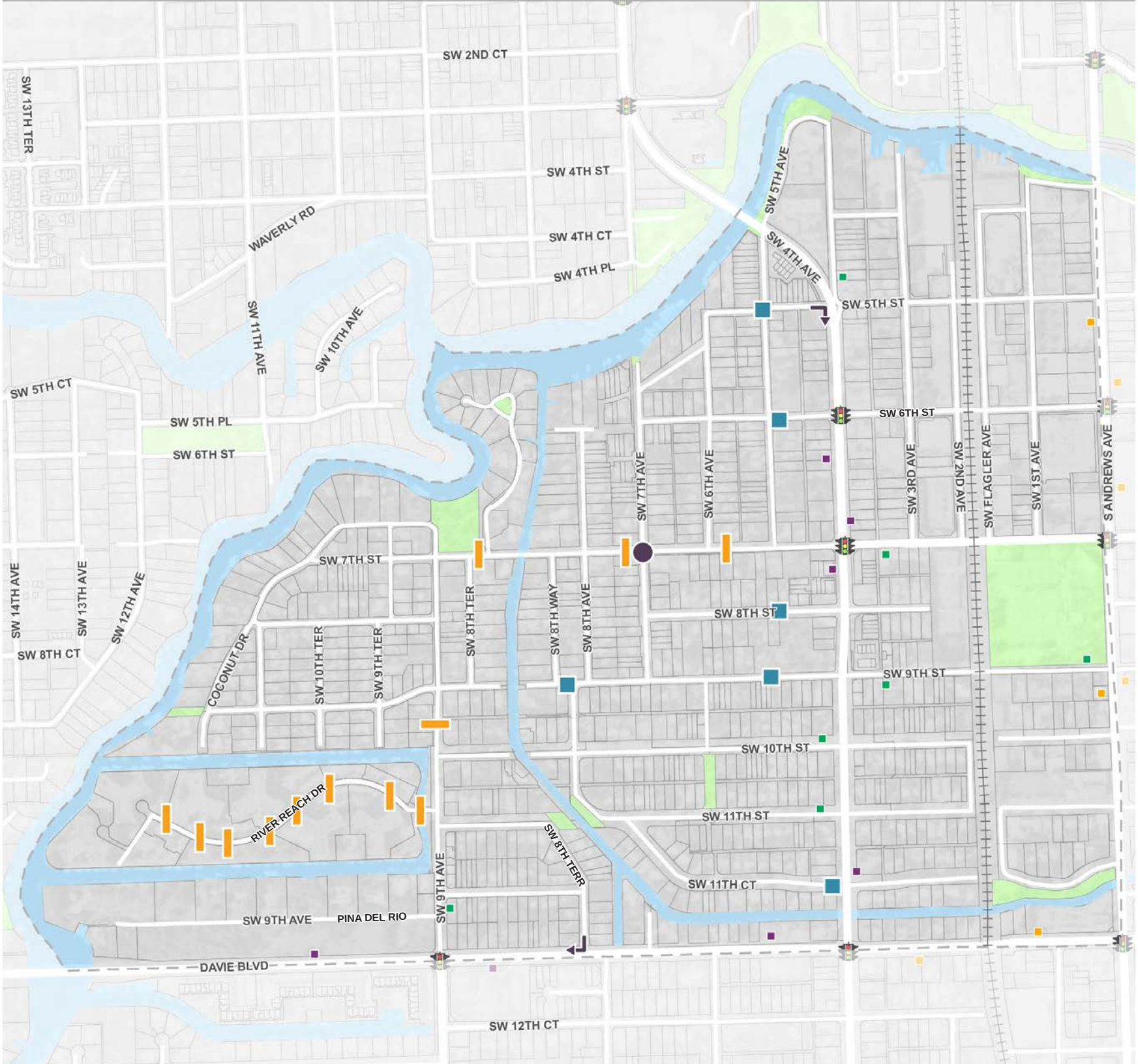
Existing Road Closure.
Credit: Kittelson & Associates, Inc.

Existing Speed Hump.
Credit: Kittelson & Associates, Inc.

FIGURE 10

TRAFFIC CALMING MEASURES




SW 2ND CT
SW 13TH TER
SW 4TH ST
SW 4TH CT
SW 4TH PL
WAVERLY RD
SW 11TH AVE
SW 10TH AVE
SW 5TH AVE
SW 4TH AVE
SW 5TH ST
SW 5TH CT
SW 5TH PL
SW 6TH ST
SW 6TH ST
SW 7TH AVE
SW 6TH AVE
SW 3RD AVE
SW 2ND AVE
SW FLAGLER AVE
SW 1ST AVE
S ANDREWS AVE
SW 14TH AVE
SW 13TH AVE
SW 12TH AVE
SW 7TH ST
SW 8TH CT
COCONUT DR
SW 10TH TER
SW 9TH TER
SW 8TH TER
SW 8TH WAY
SW 8TH AVE
SW 8TH ST
SW 9TH ST
SW 10TH ST
RIVER REACH DR
SW 11TH ST
SW 8TH TERR
SW 9TH AVE
SW 11TH CT
SW 9TH AVE
PINA DEL RIO
DAVIE BLVD
SW 12TH CT

VEHICULAR TRAFFIC VOLUMES

As part of this study, traffic information was collected in April 2016 for the AM peak and PM peak periods. This includes vehicular and pedestrian counts; vehicular speeds; and turning movement counts at select locations. A map of the data collection locations can be found in Appendix B. The speed and volume data is available upon request from the City of Fort Lauderdale.

When considering the average daily traffic shown in Figure 11, it becomes clear that Andrews Avenue and Davie Boulevard carry the most traffic, followed by SW 4th Avenue. SW 6th Street between SW 4th Avenue and Andrews Avenue is the highest volume internal street followed by SW 7th Street and SW 9th Avenue. SW 9th Street between SW 4th Avenue and Andrews Avenue is the only other street in the neighborhood measured to carry more than 1,500 vehicles per day.

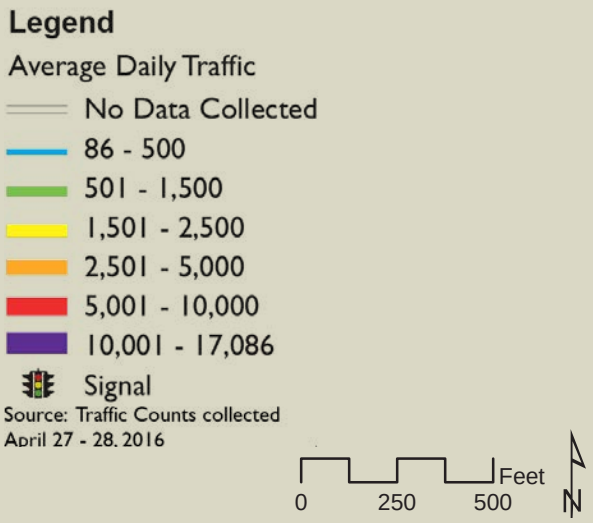
In general, local streets (Neighborhood Streets) should serve 1,500 vehicles per day or less.[4] Residential Avenues, such as SW 7th Street, serve more than 1,500 vehicles per day. SW 9th Street is classified as a neighborhood street, however, it serves over 1,500 vehicles per day. These volumes suggest that may be misclassified and might actually be functioning as an Avenue. This may be caused by the fact that it is the southernmost crossing of the FEC rail line in the neighborhood.

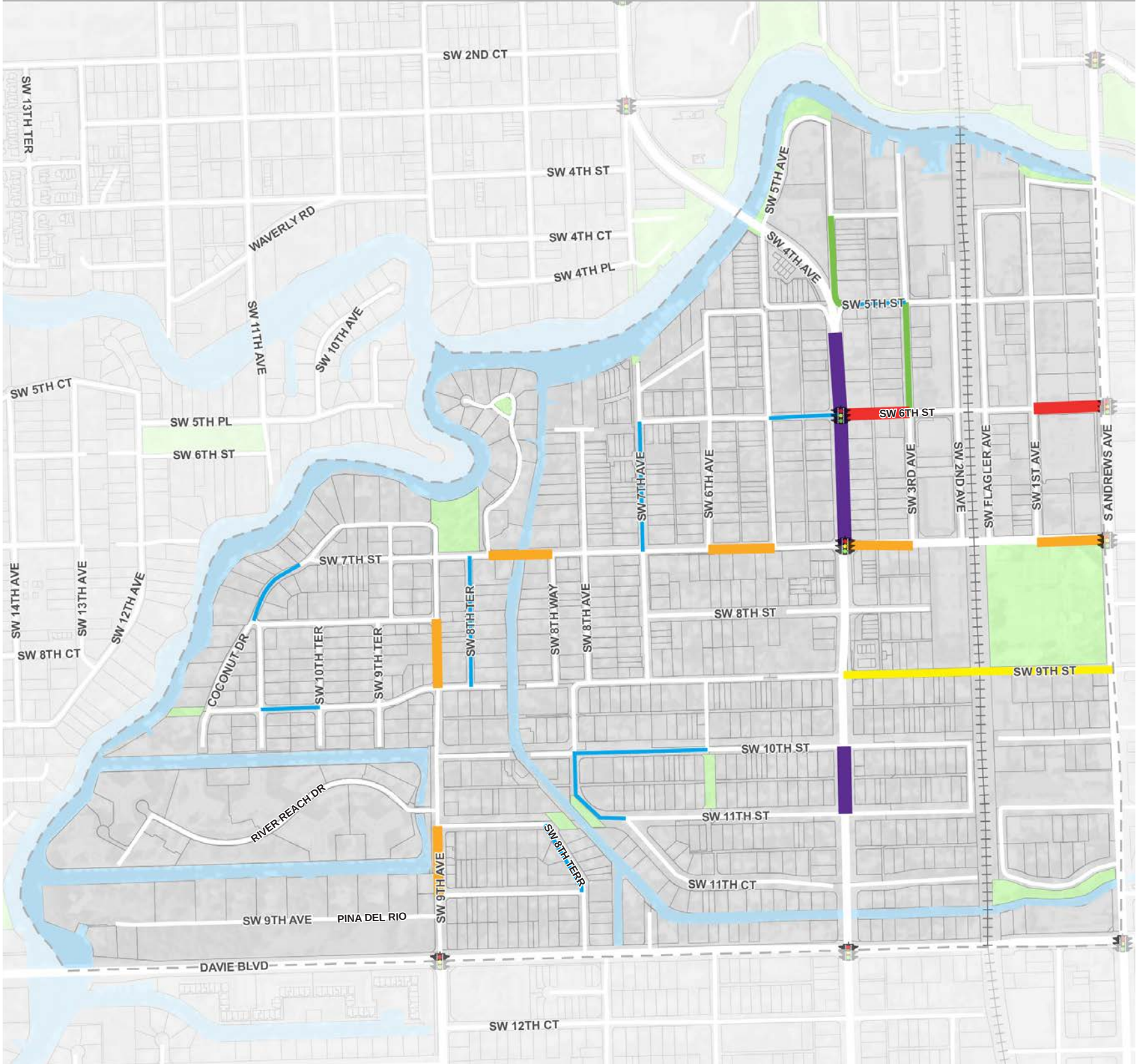
In general, the traffic volumes are highest east of SW 4th Avenue where there is more commercial activity.

4 Kulash, W. (2001). Residential Streets, Third Edition. Washington, DC: Urban Land Institute.

SW 7th Street Bridge.
Credit: Kittelson & Associates, Inc.

FIGURE 11
TRAFFIC VOLUMES




SW 2ND CT
SW 13TH TER
SW 4TH ST
SW 4TH CT
SW 4TH PL
WAVERLY RD
SW 11TH AVE
SW 10TH AVE
SW 5TH AVE
SW 4TH AVE
SW 5TH ST
SW 5TH CT
SW 5TH PL
SW 6TH ST
SW 7TH AVE
SW 6TH AVE
SW 3RD AVE
SW 2ND AVE
SW FLAGLER AVE
SW 1ST AVE
S ANDREWS AVE
SW 14TH AVE
SW 13TH AVE
SW 12TH AVE
SW 7TH ST
SW 8TH TER
SW 8TH WAY
SW 8TH AVE
SW 8TH ST
SW 8TH CT
COCONUT DR
SW 10TH TER
SW 9TH TER
SW 9TH ST
SW 10TH ST
RIVER REACH DR
SW 11TH ST
SW 8TH TERR
SW 11TH CT
SW 9TH AVE
PINA DEL RIO
SW 9TH AVE
DAVIE BLVD
SW 12TH CT

VEHICULAR TRAFFIC SPEEDS

Speed data was collected at several locations throughout the community as well. A map of the data collection locations can be found in Appendix B. The speed and volume data is available upon request from the City of Fort Lauderdale. Based on this data, Figure 12 shows that drivers generally exceed the posted speed limit of 25 miles per hour on, SW 9th Street, SW 8th Terrace, SW 10th Street, SW 4th Avenue (north of SW 5th Street), SW 3rd Avenue, SW 7th Street (east of SW 4th Avenue), SW 6th Street, and particularly, SW 9th Street. Prevailing speeds along SW 4th Avenue are also higher than the posted speed limit of 40 miles per hour, south of SW 7th Street.

Data indicates that speeds are lower on SW 7th Street, where a roundabout and the narrow bridge calm traffic, than on SW 9th Avenue, where speed humps and stop signs are intended to calm traffic. Commonly, drivers speed up between speed bumps and stop signs. This suggests that a combination of measures may be needed to slow drivers down.

Typical Neighborhood Street.
Credit: Kittelson & Associates, Inc.

Typical Neighborhood Street.
Credit: Kittelson & Associates, Inc.

FIGURE 12

TRAFFIC SPEEDS*

Legend

Prevailing Speeds
- No Data Collected
- 20 MPH or Less
- 21 - 25 MPH
- 25 - 30 MPH
- 30 - 35 MPH
- 35 - 40 MPH
- 41 - 44 MPH

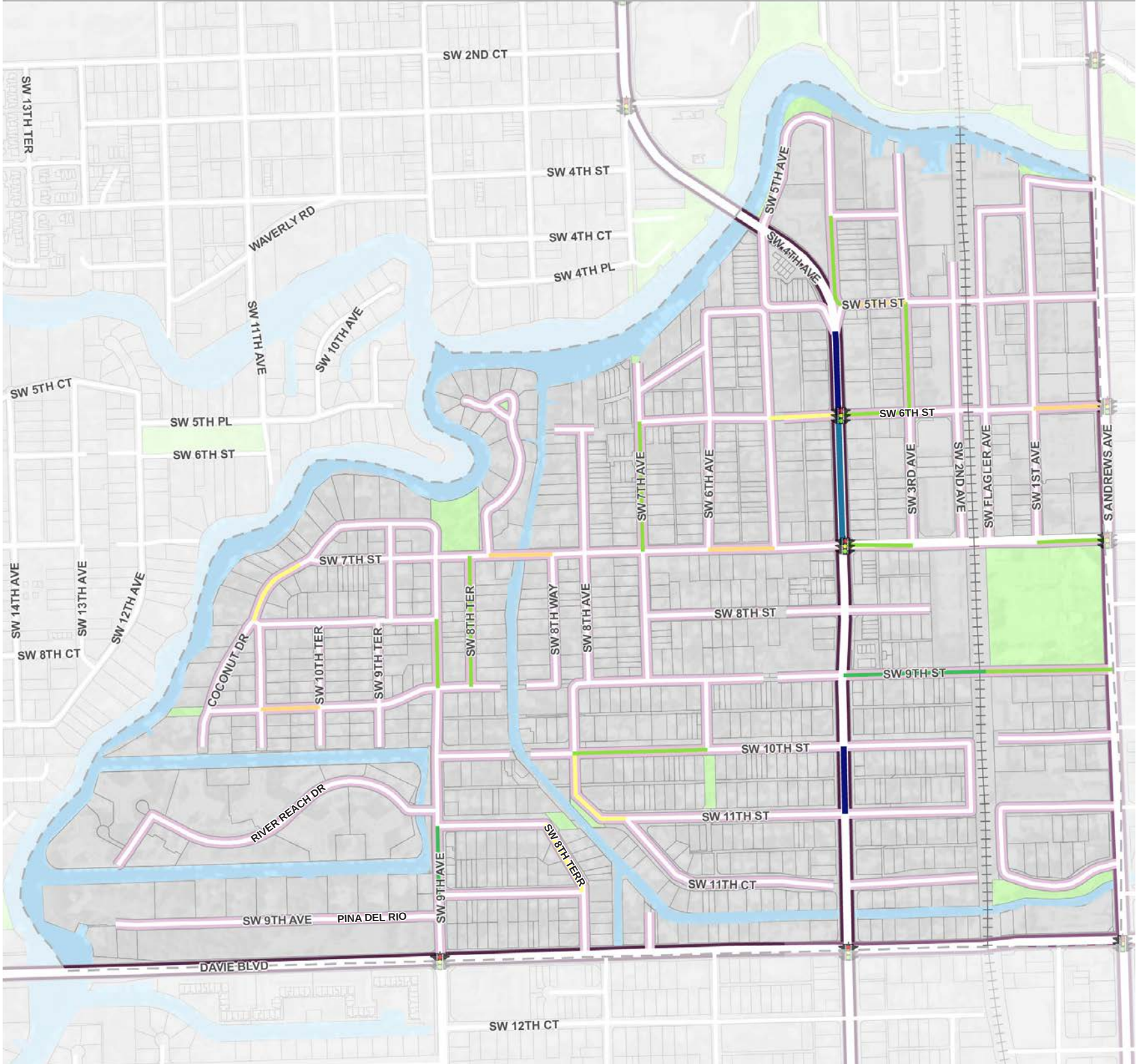
Posted Speed
- 25 MPH
- 35 MPH
- 40 MPH
- Signal

Source: Traffic Counts collected April 27 - 28, 2016

*Speeds are shown in the proximity to the collection locations only. The map does not represent neighborhood-wide speeds. It does not preclude the other areas of the neighborhood not studied from having speeding issues.

0 250 500 Feet

N

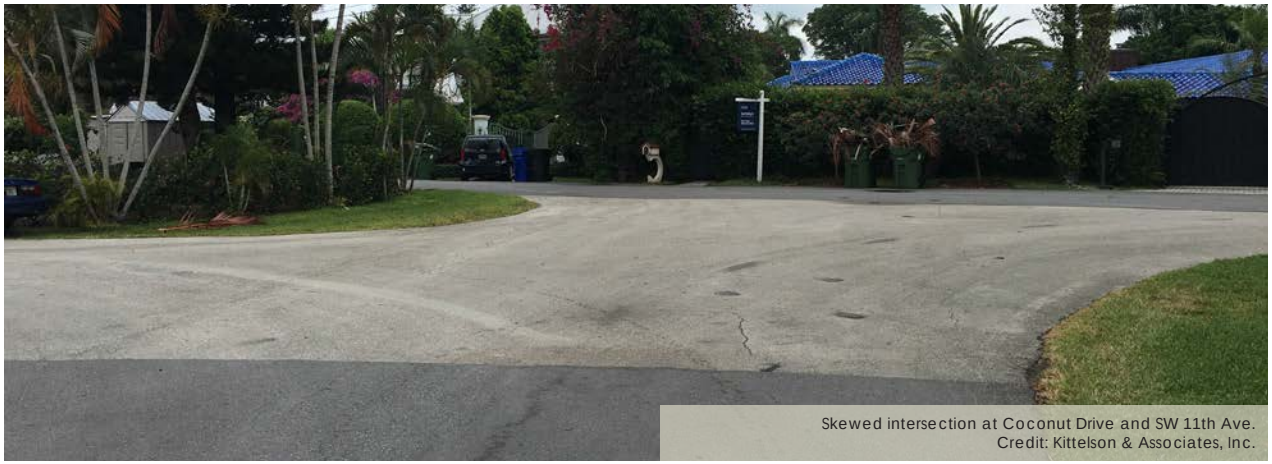

SW 2ND CT
SW 13TH TER
SW 4TH ST
SW 4TH CT
SW 4TH PL
WAVERLY RD
SW 11TH AVE
SW 10TH AVE
SW 5TH AVE
SW 4TH AVE
SW 5TH ST
SW 5TH CT
SW 5TH PL
SW 6TH ST
SW 7TH AVE
SW 6TH AVE
SW 3RD AVE
SW 2ND AVE
SW FLAGLER AVE
SW 1ST AVE
S ANDREWS AVE
SW 14TH AVE
SW 13TH AVE
SW 12TH AVE
SW 7TH ST
SW 8TH CT
COCONUT DR
SW 10TH TER
SW 9TH TER
SW 8TH TER
SW 8TH WAY
SW 8TH AVE
SW 8TH ST
SW 9TH ST
SW 10TH ST
RIVER REACH DR
SW 11TH ST
SW 8TH TERR
SW 11TH CT
SW 9TH AVE
PINA DEL RIO
SW 9TH AVE
DAVIE BLVD
SW 12TH CT

INTERSECTION OPERATIONS

Existing vehicular traffic operations were analyzed for several intersections within Tarpon River using the traffic counts that were collected. The turning movement count data is available upon request from the City of Fort Lauderdale. The intersection analysis was performed for the PM peak hour using the current Highway Capacity Manual analysis standards.

Figure 13 summarizes the results of the intersection operations assessment. All of the intersections analyzed within the neighborhood operate below capacity, with less than 85 percent of the traffic capacity used during the peak periods. Based on these results, the lower volume intersections are also estimated to operate below capacity. It should be noted that this analysis does not take into account the effects of the bridge opening or railroad crossing due to the limitations of the software. These incidents have the potential to cause traffic to queue while they occur, which can take time to clear up after each occurrence.

Typical Neighborhood Street.
Credit: Kittelson & Associates, Inc.



Skewed intersection at Coconut Drive and SW 11th Ave.
Credit: Kittelson & Associates, Inc.

FIGURE 13

INTERSECTION OPERATIONS

Intersection Operations

- Poor (Over 100% Capacity)
- Fair (85% - 100% Capacity)
- Good (Below 85% Capacity)
- Signal

0 250 500 Feet

N


SW 2ND CT
SW 13TH TER
SW 4TH ST
WAVERLY RD
SW 4TH CT
SW 4TH PL
SW 5TH AVE
SW 4TH AVE
SW 5TH ST
SW 11TH AVE
SW 10TH AVE
SW 5TH CT
SW 5TH PL
SW 6TH ST
SW 6TH ST
SW 7TH AVE
SW 6TH AVE
SW 3RD AVE
SW 2ND AVE
SW FLAGLER AVE
SW 1ST AVE
S ANDREWS AVE
SW 14TH AVE
SW 13TH AVE
SW 12TH AVE
SW 7TH ST
SW 8TH TER
SW 8TH WAY
SW 8TH AVE
SW 8TH ST
SW 8TH CT
COCONUT DR
SW 10TH TER
SW 9TH TER
SW 9TH ST
SW 10TH ST
RIVER REACH DR
SW 11TH ST
SW 8TH TERR
SW 11TH CT
SW 9TH AVE
PINA DEL RIO
SW 9TH AVE
DAVIE BLVD
SW 12TH CT

PEDESTRIAN AND BICYCLE EXPERIENCE

The sidewalk network with the Tarpon River neighborhood is incomplete and disjointed. Sidewalk often exist on one side of the street, then on the other side on the next block, and there are many blocks with no sidewalks at all. There are no signed bicycle facilities within the neighborhood. As such, pedestrians and bicyclists currently share the travel way with automobiles. While this situation may not pose concerns for certain streets, it creates safety conflicts, particularly on narrower roadway sections or those with higher speeds.

To assess the quality of the existing pedestrian and bicycle environment, traffic volumes and speeds were analyzed within the neighborhood. The analysis was also intended to assist in prioritizing needed improvements within the neighborhood. Figure 14 and Figure 15 show the results of this evaluation. SW 4th Avenue was analyzed separately, as discussed later in this section. Neighborhood streets with low volumes (fewer than 500 vehicles per day) and low speeds (less than 20 miles per hour) were considered to have a more favorable environment for pedestrians and bicyclists sharing the travel way with automobiles. Streets with higher traffic volumes and faster vehicle speeds were considered to have a less favorable environment.

Separate pedestrian and bicycle facilities were also considered. The presence of sidewalks is sufficient to elevate the pedestrian environment to "Good" on local streets. Regarding bicycle facilities, national and international guidance suggests that bicyclists can reasonably share the street with vehicles on two lane streets with speed limits under 20 MPH and volumes under 5,000 vehicles per day.[5] After that, separate, marked facilities should be incorporated.

Neighborhood streets with the poorest environment for pedestrians and bicyclists using the street include SW 7th Street, SW 9th Avenue, SW 6th Street, SW 9th Street, SW 3rd Avenue and SW 4th Avenue (north of SW 5th Street).

SW 4TH AVENUE MULTIMODAL LEVEL OF SERVICE

Pedestrian and bicycle level of service conditions were analyzed along SW 4th Avenue using Multimodal Level of Service (MMLOS) analysis standards. The pedestrian LOS addresses the safety and comfort for those walking along the street and for those crossing the street. The bicycle LOS addresses the safety and comfort of those bicycling along the street.

As can be seen in Figure 14, The pedestrian LOS analysis showed LOS C, which is largely due to the sidewalks and buffers between vehicles and pedestrians. The bicycle LOS analysis showed poor conditions along the corridor, as there are no bicycle facilities. The safety and comfort for bicyclists can be improved through bike lanes or other accommodations.

5 National Association of City Transportation Officials (NACTO). Urban Bikeway Design Guide. Washington, DC. 2011.

CROW. CROW Design Manual for Bicycle Traffic. The Netherlands. 2007.

National Transport Authority. National Cycle Manual. Ireland. 2011.

Land Transport Safety Authority, New Zealand. Cycle Network and Route Planning Guide. Wellington, New Zealand. 2004.

Danish Road Directorate. Collection of Cycle Concepts. Copenhagen, Denmark. 2000.

Sustrans. The National Cycle Network – Guidelines and Practical Details: Issue 2. Bristol, United Kingdom, 2006.

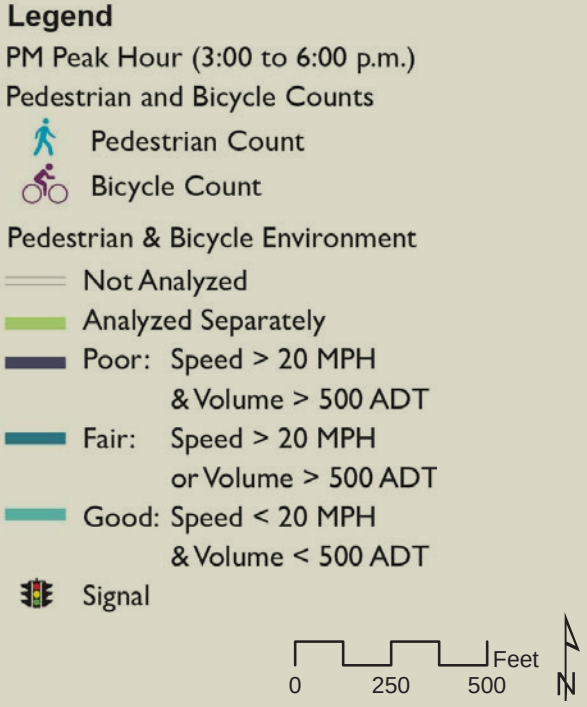
FIGURE 14

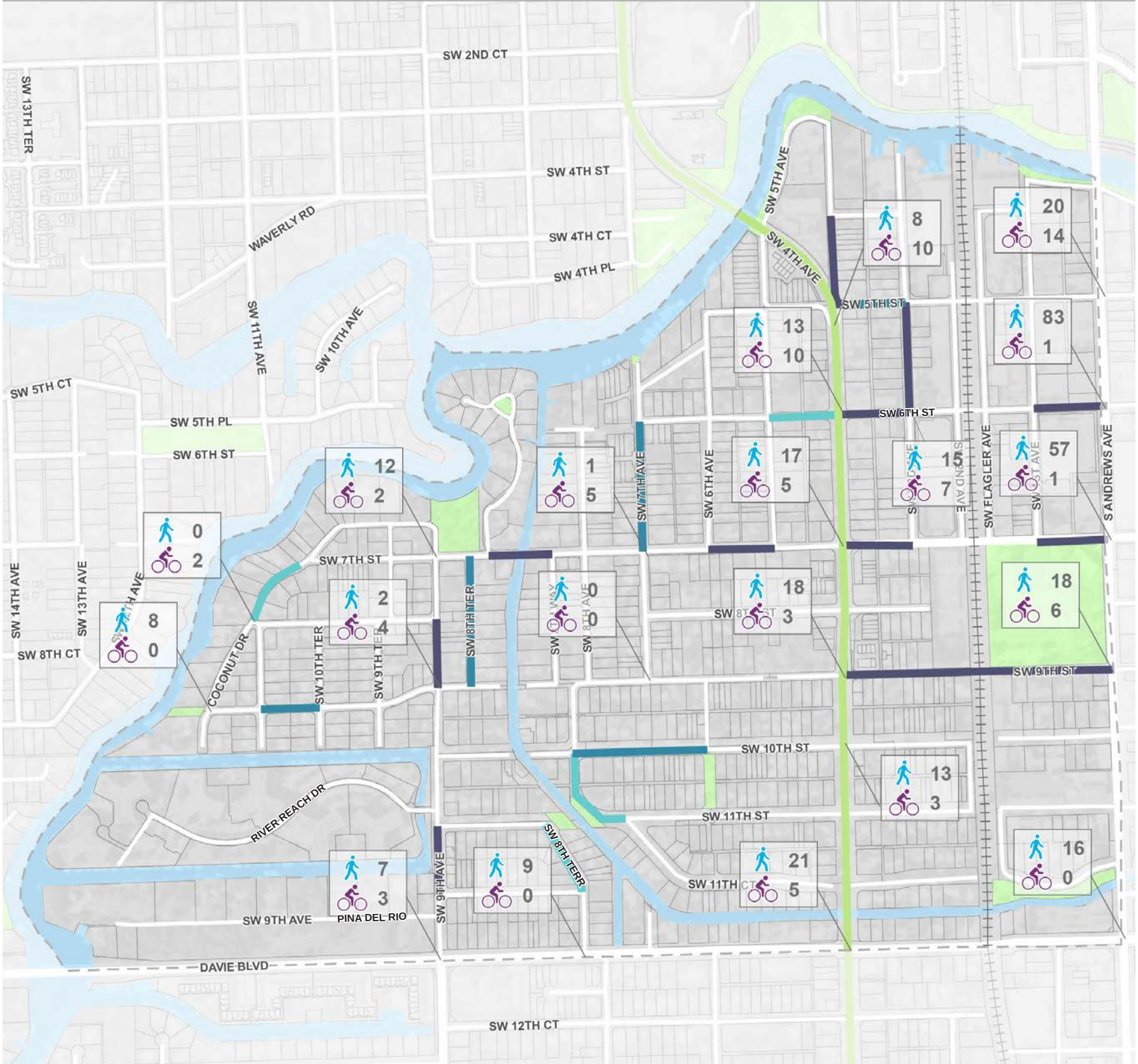
PEDESTRIAN AND BICYCLE LEVEL OF SERVICE

Mode	Movement	LOS
Walking	Walking northbound	C
	Walking southbound	C
Bicycling	Bicycling northbound	E
	Bicycling southbound	E

FIGURE 15

PEDESTRIAN AND BICYCLE ENVIRONMENT




SW 2ND CT
SW 13TH TER
SW 4TH ST
SW 4TH CT
SW 4TH PL
WAVERLY RD
SW 11TH AVE
SW 10TH AVE
SW 5TH AVE
SW 4TH AVE
SW 5TH ST
SW 5TH CT
SW 5TH PL
SW 6TH ST
SW 6TH ST
SW 7TH AVE
SW 6TH AVE
SW FLAGLER AVE
SW 2ND AVE
SW 1ST AVE
S ANDREWS AVE
SW 14TH AVE
SW 13TH AVE
SW 8TH CT
SW 7TH ST
SW 8TH TER
SW 8TH AVE
SW 8TH WAY
SW 8TH ST
SW 9TH ST
COCONUT DR
SW 10TH TER
SW 9TH TER
SW 10TH ST
RIVER REACH DR
SW 11TH ST
SW 8TH TERR
SW 9TH AVE
SW 11TH CT
PINA DEL RIO
SW 9TH AVE
DAVIE BLVD
SW 12TH CT
8 10
20 14
13 10
83 1
12 2
1 5
17 5
15 7
57 1
0 2
2 4
0 0
18 3
18 6
8 0
13 3
7 3
9 0
21 5
16 0

CRASHES

Crash data was collected for the five year period between 2011 and 2016 using data collected from Signal Four Analytics. Figure 16, Figure 17, and Figure 18 display the crash data. There were a total of 786 crashes in the study area, with 646 (82%) occurring within 100' of an intersection and 140 (18%) occurring along segments outside of the intersection influence areas. This data shows that the majority of the crashes in the area happened along the major roads surrounding the community. Therefore, the crashes within and surrounding Tarpon River were considered separately.

EXTERNAL ROADWAYS

There were a total of 644 crashes on the roads surrounding the neighborhood. The majority of these occurred within 100' of an intersection. The intersections with the highest numbers of crashes include SW 4th Avenue at Davie Boulevard, Andrews Avenue at Davie Boulevard, Andrews Avenue at SW 6th Street, and SW 9th Avenue at Davie Boulevard. Rear end crashes were the most common crash type, with 181 occurrences at intersections and 68 along segments. 77 intersection crashes related to left turns. There were also 16 pedestrian crashes and 7 bicycle crashes. Two left turn crashes along Davie Boulevard (one at SW 4th Avenue and one just west of Andrews Avenue)resulted in a fatality and 194 of the crashes resulted in injuries. This means that approximately 30% of crashes on the roads surrounding the Tarpon River neighborhood resulted in an injury.

NEIGHBORHOOD STREETS

There were a total of 142 crashes on the streets within the neighborhood. 120 of these were also within 100' of an intersection, and the intersections with the highest numbers of crashes were generally along SW 4th Avenue. There were also 14 crashes at the intersection of SW 1st Avenue and SW 6th Street which was the third largest number at an internal intersection. The most common type of crash was angle followed by left turn. There was one bicycle fatality, and 38 injury crashes, meaning that just over 25% of internal neighborhood crashes resulted in an injury. The lower average severity is likely due to the lower speeds cars use on the neighborhood streets.

FIGURE 16

EXTERNAL CRASHES

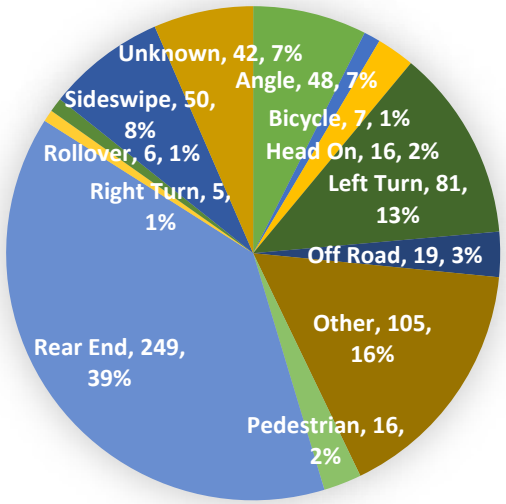


FIGURE 17

INTERNAL NEIGHBORHOOD CRASHES

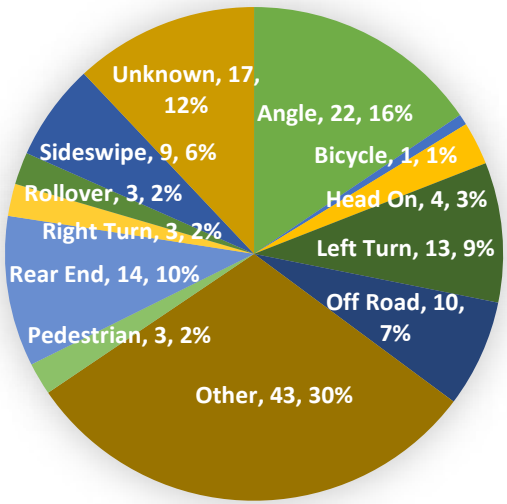
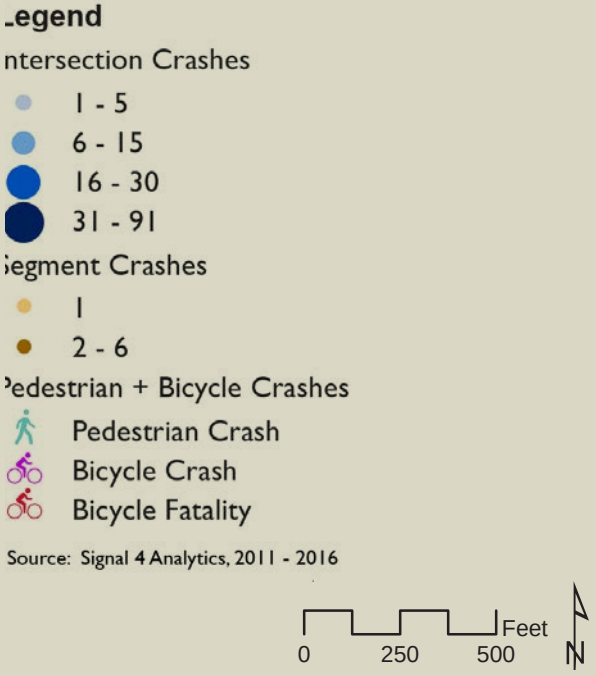
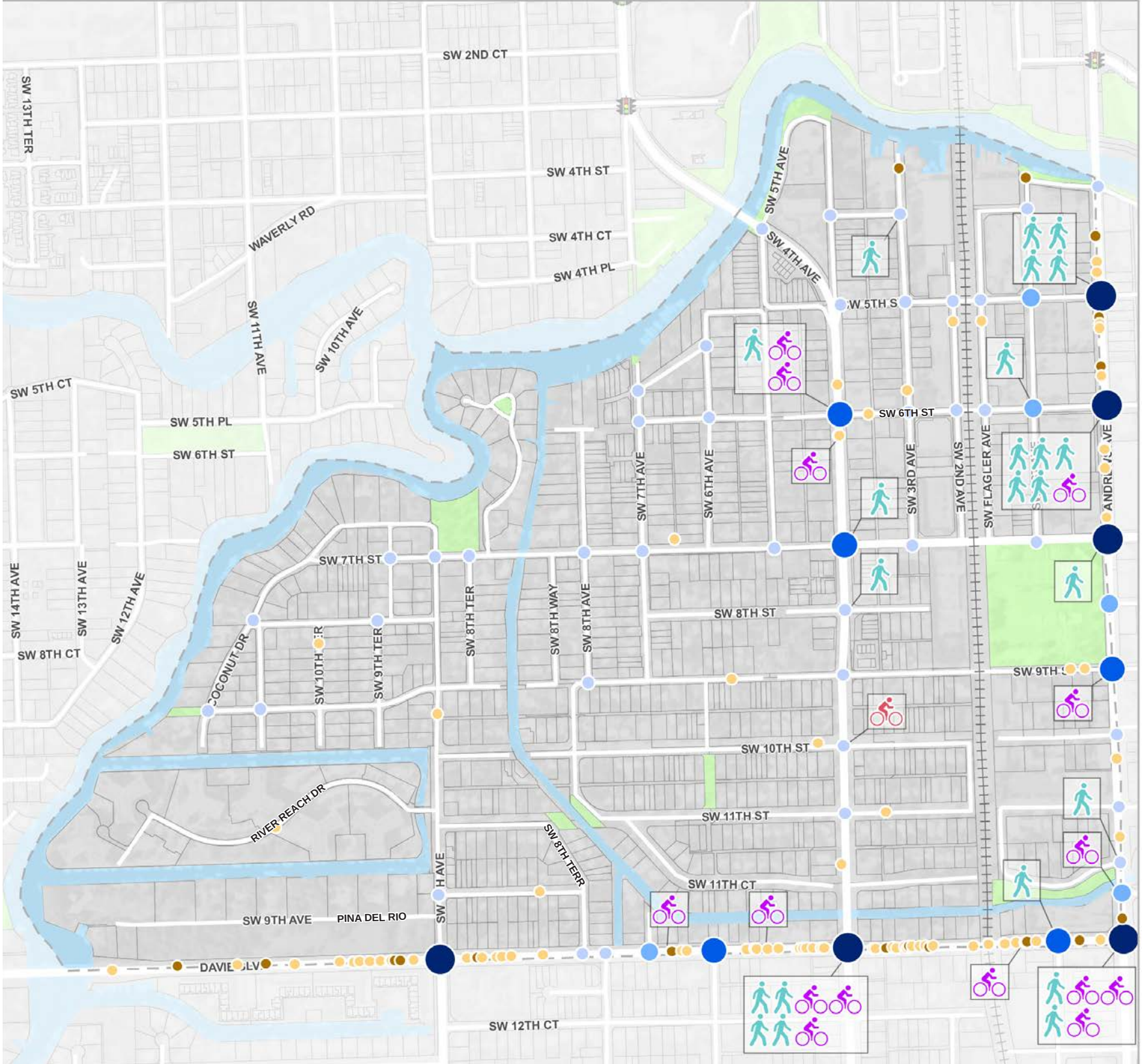


FIGURE 18

CRASH MAP




SW 2ND CT
SW 13TH TER
SW 4TH ST
SW 4TH CT
SW 4TH PL
WAVERLY RD
SW 11TH AVE
SW 10TH AVE
SW 5TH AVE
SW 4TH AVE
SW 5TH S
SW 5TH CT
SW 5TH PL
SW 6TH ST
SW 7TH AVE
SW 6TH AVE
SW 3RD AVE
SW 2ND AVE
SW FLAGLER AVE
SW 14TH AVE
SW 13TH AVE
SW 12TH AVE
SW 8TH CT
SW 7TH ST
SW 8TH TER
SW 8TH WAY
SW 8TH AVE
SW 8TH ST
SW 9TH TER
SW 10TH ST
RIVER REACH DR
SW 8TH TERR
SW 11TH ST
SW 11TH CT
SW 9TH AVE
PINA DEL RIO
SW 12TH CT

3 COMMUNITY ENGAGEMENT

COMMUNITY ENGAGEMENT

While supported by strong technical analysis, this plan is intended primarily to represent the needs and desires of the community. In order to do this, a series of four public workshops were held in conjunction with Tarpon River Home Owner's Association meetings at Trinity Lutheran Church. The first was held on March 24, 2016 at 7:00 PM; the second was held on May 26, 2016 at 7:00 PM; the third was held on August 24, 2016 at 7:00 PM; and the fourth was held on October 26, 2016 at 7:00 PM. More information, including a list of attendees from each meeting and a full summary of the issues, comments, and responses is available from the City of Fort Lauderdale.

WORKSHOP I

The first workshop provided community members with an introduction to the project and allowed for initial comment on the issues and opportunities in the neighborhood. A total of 48 people attended the first workshop. At this workshop, community members were asked to post their issues and concerns on a series of maps. Feedback was also solicited through comment forms and via phone and email. This feedback was used as the basis for the recommendations and framework of the plan. Eighty three comments were received, and the main issues identified were the need for sidewalks; a desire for traffic calming; traffic operations improvements; better pedestrian and bicycle connectivity; and neighborhood beautification.

WORKSHOP II

At the second workshop, the results of the existing conditions analysis were presented along with a synthesis map of the issues and opportunities and a menu of potential solutions. A total of 24 people attended the second workshop. To help the community members evaluate the potential solutions, high level measures of effectiveness for traffic calming and the pedestrian and bicycle environment were presented. Residents were able to comment on the issues and opportunities identified, as well as point out where issues were missed. They also selected their favorite strategies and discussed the ones they did not want to see in their neighborhood. A total of 296 comments were received when considering the strategies and improvement locations combined, which were used to help select the draft recommendations for the master plan. The most liked strategies included a new Water Trolley stop, new sidewalks, pedestrian and bicycle improvements, raised intersections, mini median islands, and high visibility crosswalks.

WORKSHOP III

The third meeting tied the project together for the community. The draft Master plan, which was created utilizing a combination of the information, values, and opinions gathered from the previous meetings and the other data and analysis, was presented for comment. Additionally, high level cost estimates were provided for the strategies and the plan as a whole. A total of 45 people attended the third meeting. In general, most residents were happy with the recommendations. There were a total of 334 comments received, inclusive of the voting on strategies, and most were focused on the strategies. This resulted in several strategies being added for connectivity and traffic calming.

WORKSHOP IV

This plan is intended to be the Community's plan, as they have the largest stake in it. At the fourth meeting, the final master plan was presented to the community. Neighbors were asked to vote for their top priorities for implementation. A total of 24 people attended and there were 94 individual pieces of input received. The top strategies for prioritization were as follows:

1. Construct sidewalks on south side of SW 7th Street
2. Construct sidewalks on west side of SW 9th Avenue
3. Construct pedestrian bridge across Tarpon River (at SW 11th Street)
4. Install pedestrian lighting on the south side of SW 7th Street
5. Modify signal timing at Davie Boulevard and SW 9th Avenue

In addition to this meeting, the City will also continue to work with Tarpon River to implement the strategies once they are prioritized and as funding becomes available.

SURVEY

A survey about travel modes was also undertaken. The results can be found on the following page. The survey revealed that the key community desires included better walking and bicycling conditions and a desire to improve non-motorized access to destinations.

TARPON RIVER

WALK

56% Walk everyday for pleasure or exercise

4% Walk everyday from home to places of business (restaurants, grocery, doctor, bank)

BIKE

4% Bike everyday for pleasure or exercise

4% Bike everyday from home to places of business (restaurants, grocery, doctor, bank)

Sidewalks & streets are comfortable when walking

16% During the day

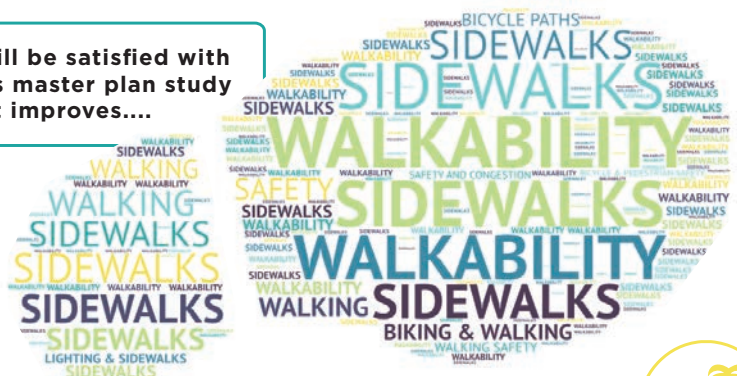
At night 13%

Street conditions are comfortable when driving an automobile

92% During the day

At night 80%

I will be satisfied with this master plan study if it improves....



60% Use alternative transportation once a month

- Water Taxi
- Riverwalk Water Trolley
- Sun Trolley
- Uber/Lyft
- Tri Rail
- Broward County Transit

I ENJOY THIS NEIGHBORHOOD BECAUSE...

- close proximity to water 80%
- close proximity to entertainment & cultural amenities 80%
- close proximity to interstate 68%
- close proximity to parks 60%
- sense of community 52%

DEFINED transportation & mobility problems as...

- No access to alternate forms of travel
- Inadequate parking

DETERED FROM WALKING

- 71% Unsafe sidewalk conditions
- Lack of connections 63%
- 54% Poor lighting

DETERED FROM BIKING

- 88% Unsafe bicycling conditions
- 71% Lack of bike lanes

Online Survey Findings
25 Surveys Completed

cadence LANDSCAPE ARCHITECTURE | URBAN DESIGN | SITE PLANNING

KITTELSON & ASSOCIATES, INC. TRANSPORTATION ENGINEERING/PLANNING

4 SYNTHESIS

SYNTHESIS

A transportation and land use synthesis was developed that considers the existing conditions holistically. This synthesis points to several conclusions regarding the study area:

There is a need for additional traffic calming along major and neighborhood roads, as they currently exhibit speeds that exceed the desired maximum for the area. This is especially true when considering the potential for pedestrian and bicycle trips along those roads.

The street network within the neighborhood must meet the needs of drivers but also prioritize pedestrian and bicycle trips. These trips regularly occur along the same roads on which drivers are speeding, which suggests increased need for pedestrian and bicycle facilities.

There is a desire and a need for better multimodal connectivity to downtown Fort Lauderdale. Neighbors noted that they want to be able to bike, walk, and take the water trolley to get to downtown and other nearby destinations, but the existing facilities do not support trips other than those taken by car.

STUDY GOALS

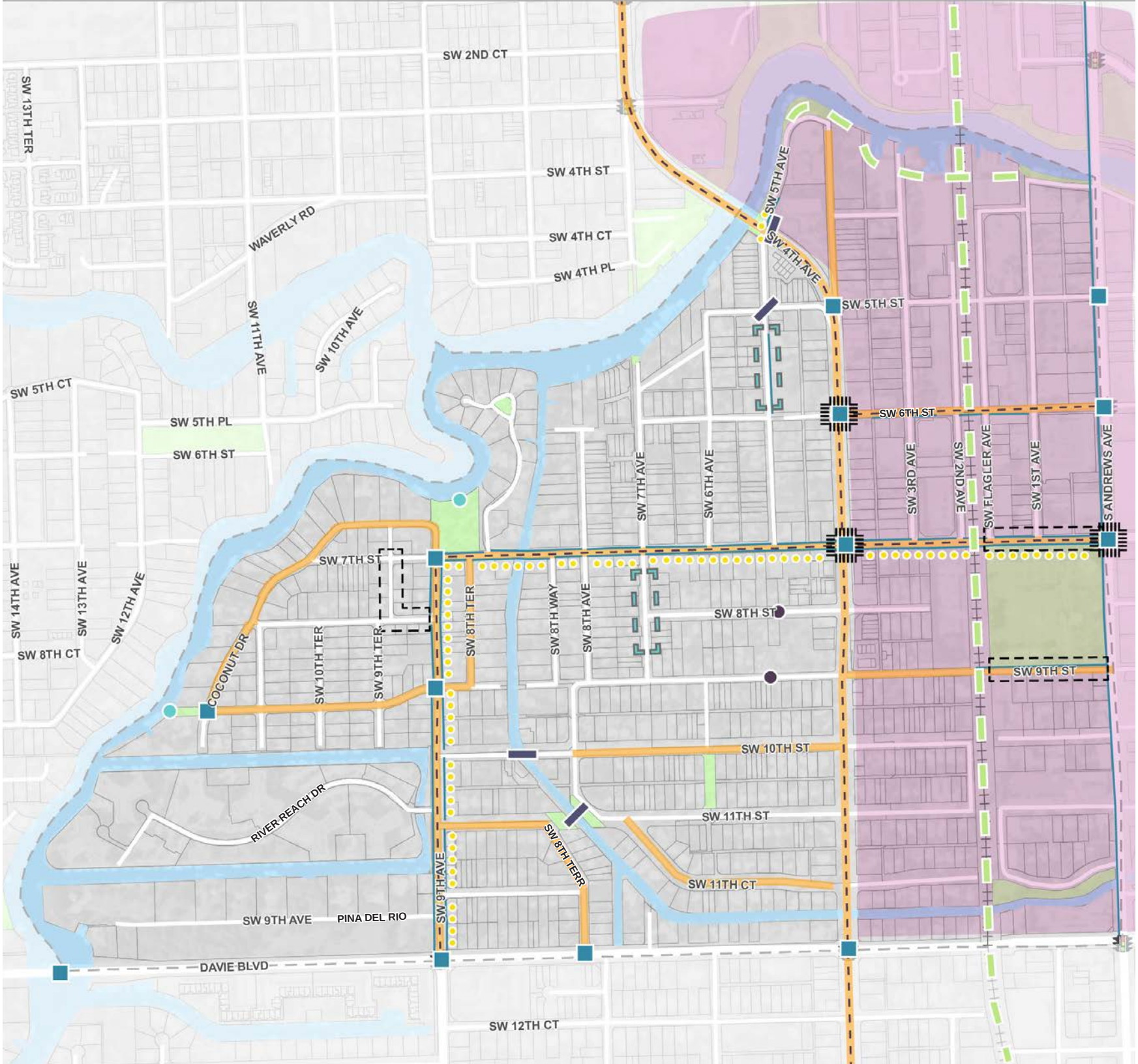
In general, the synthesis points to the following goals:

1. Calm Traffic
2. Enhance the Pedestrian and Bicycle Environment
3. Improve Multimodal Access to Downtown Fort Lauderdale and the Surrounding Destinations

Figure 19 presents the issues and opportunities uncovered from the synthesis. The issues identified generally focus on areas where multimodal connectivity, access, comfort, and safety improvements can be made to achieve the three aforementioned goals. This map does not represent solutions; rather, it was a starting point for discussion with community members about the issues and opportunities in Tarpon River. Therefore, the master plan (i.e. solutions) map reflects different information.

FIGURE 19

IMPROVEMENT NEEDS


SW 2ND CT
SW 13TH TER
SW 4TH ST
SW 4TH CT
SW 4TH PL
WAVERLY RD
SW 11TH AVE
SW 10TH AVE
SW 5TH AVE
SW 4TH AVE
SW 5TH ST
SW 5TH CT
SW 5TH PL
SW 6TH ST
SW 7TH AVE
SW 6TH AVE
SW 3RD AVE
SW 2ND AVE
SW FLAGLER AVE
SW 1ST AVE
S ANDREWS AVE
SW 14TH AVE
SW 13TH AVE
SW 12TH AVE
SW 7TH ST
SW 8TH TER
SW 8TH WAY
SW 8TH AVE
SW 8TH ST
SW 8TH CT
COCONUT DR
SW 10TH TER
SW 9TH TER
SW 9TH ST
SW 10TH ST
RIVER REACH DR
SW 11TH ST
SW 8TH TERR
SW 9TH AVE
SW 11TH CT
SW 9TH AVE
PINA DEL RIO
DAVIE BLVD
SW 12TH CT

5 MASTER PLAN

MASTER PLAN

Based on the analysis and community input conducted throughout the project, a number of context sensitive strategies were developed to calm traffic and enhance the pedestrian and bicycling environment in the neighborhood. Together, these strategies will enhance the accessibility, comfort, and overall livability within and around Tarpon River.

The overall master plan is split into two parts: the Neighborhood Streets Master Plan and the External Streets Master Plan. The Neighborhood Streets Master Plan generally focuses on internal streets located within Tarpon River. The External Streets Master Plan considers the two roadways that bound Tarpon River: Davie Boulevard and Andrews Avenue.

NEIGHBORHOOD MOBILITY MASTER PLAN

The Neighborhood Mobility Master Plan considers strategies to calm traffic and improve mobility within and around Tarpon River.

In order to achieve the neighborhood's goals, the Neighborhood Streets Master Plan recommends intersection, mid-block, and street focused traffic calming strategies as well as enhancements to the pedestrian and bicycling network. Figure 20 presents a comprehensive summary of the recommendations. The images and descriptions on the following pages provide various details and examples for each strategy.

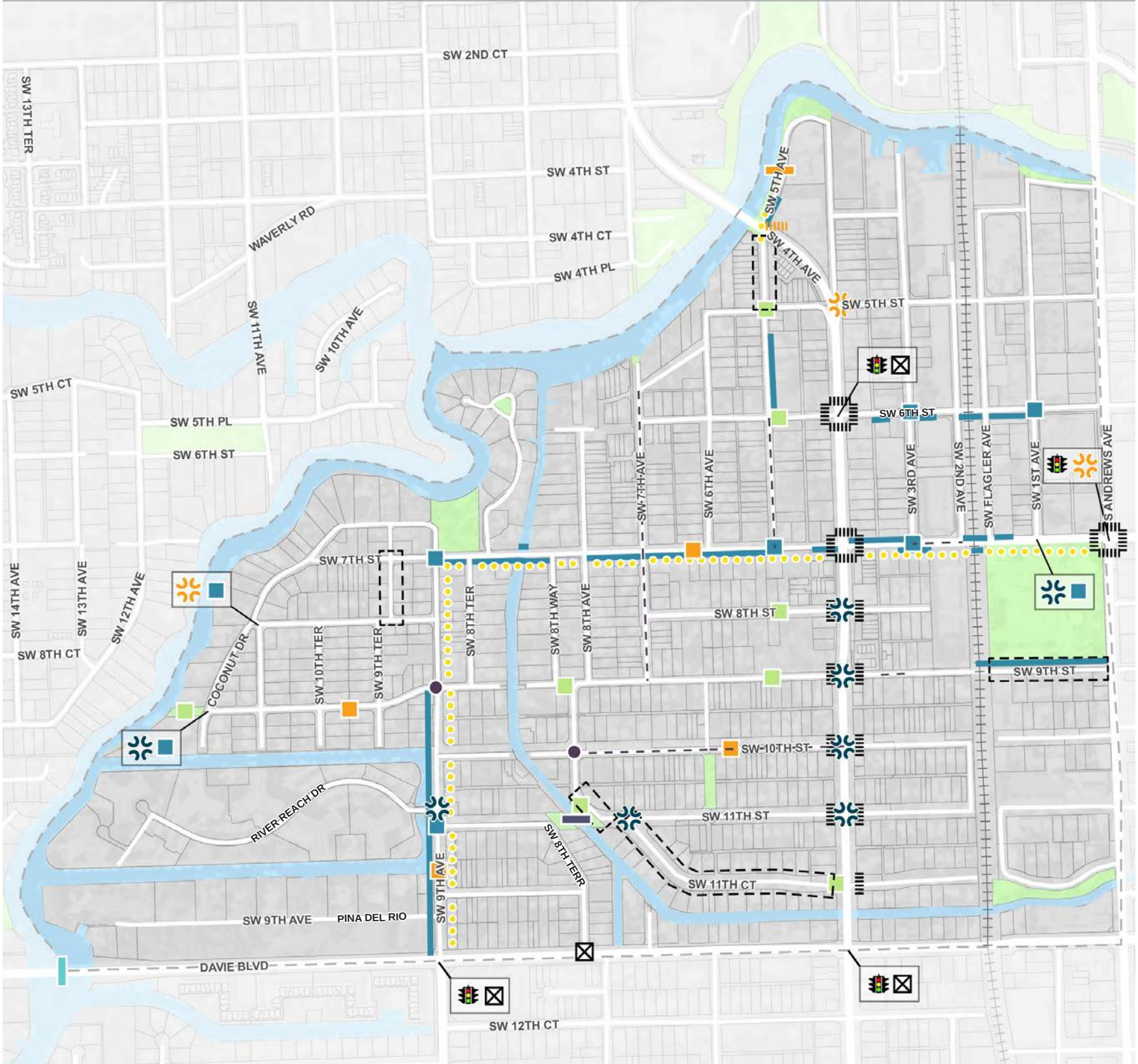
A NOTE ON IMPLEMENTATION

Many of the strategies in this plan will require further study prior to implementation. This will include coordination with the neighbors who live in close proximity to the improvement location and technical analysis to determine the most appropriate design, location, and signage for the strategy.

For example, it may be determined that a pinch point with two edge islands or a chicane with three alternating edge islands is preferable to a mini median islands to narrow the road based on the surrounding neighbor's desires. Another example would be the creation of a raised intersection in place of a mini roundabout based on available space and other considerations.

FIGURE 20

NEIGHBORHOOD MOBILITY MASTER PLAN


SW 2ND CT
SW 13TH TER
SW 4TH ST
SW 4TH CT
SW 4TH PL
WAVERLY RD
SW 11TH AVE
SW 10TH AVE
SW 5TH AVE
SW 4TH AVE
SW 5TH ST
SW 5TH CT
SW 5TH PL
SW 6TH ST
SW 7TH AVE
SW 6TH AVE
SW 3RD AVE
SW 2ND AVE
SW FLAGLER AVE
SW 1ST AVE
SANDREWS AVE
SW 14TH AVE
SW 13TH AVE
SW 12TH AVE
SW 7TH ST
SW 8TH TER
SW 8TH WAY
SW 8TH AVE
SW 8TH ST
SW 8TH CT
COCONUT DR
SW 10TH TER
SW 9TH TER
SW 9TH ST
SW 10TH ST
RIVER REACH DR
SW 11TH ST
SW 8TH TERR
SW 11TH CT
SW 9TH AVE
PINA DEL RIO
DAVIE BLVD
SW 12TH CT

• • • PEDESTRIAN LIGHTING


Pedestrian Lighting in Flagler Village. Credit: Google

Installing pedestrian-scale lighting, especially at locations that are not fronted by homes, will create a safer and more comfortable environment for walking. These lights can be solar powered or LED to save energy and promote sustainability

■ SPEED SIGNAGE PROGRAM

Riverside Park Chicane. Credit: Elvert Barnes

Child at Play Sign. Credit: yajagoff.com

Electronic speed signs use radar detection to alert drivers of their speeds as they pass by. They are generally installed as a temporary measure, although they may be permanent. They can be placed in the marked locations for one month at a time to help alert drivers to slow down. Other neighborhoods around the country have found success with neighborhood led signage programs, such as “Isabella” cut outs and “Children at Play” signs that neighbors can put up on their own.

☒ DON’T BLOCK THE BOX


Don’t Block the Box Treatment. Credit: Google

Residents have identified locations where traffic backs up through intersections. “Don’t Block the Box” signs coupled with painted intersections (like the one in the image above) can alert drivers not to block the intersection.

■ RAISED INTERSECTION

Miami Road Raised Intersection. Credit: Kittelson & Associates, Inc.

The entire area of an intersection is raised above normal pavement surface level to reduce vehicle speed through the intersection and provide a better view of pedestrians and motorists in the intersection. These are recommended in areas where driveway or roadway width prevented the use of mini roundabouts.

● MINI ROUNDABOUT


Tarpon River Mini Roundabout. Credit: Kittelson & Associates, Inc.

A small circular island used in the middle of intersections to force vehicular traffic to slow and negotiate around it. They also increase vehicular safety. It may be landscaped and may have mountable curbs. Raised intersections may be used in place of mini roundabouts, if desired, but may not be as effective at traffic calming.

POCKET PARK WITH IMPROVED PED/BIKE CONNECTIVITY

Rendering of Improved Park at Sara Horn Greenway. Credit: Cadence

Rendering of Improved Park on SW 6th Street. Credit:

There are a number of closed streets and small parks throughout Tarpon River that are underutilized. For example, many of the closed streets have been blocked off by narrow planters. With some small changes, they could be turned in to enhanced pedestrian and bicycle connections that also serve to improve drainage through landscape design. The Sara Horn Greenway is a narrow park adjacent to a wide street. By narrowing the street, it can be expanded to become a greater asset to the community. These changes will provide valuable aesthetic, environmental, recreational, and traffic calming improvements for Tarpon River.

TIGHTEN TURNING RADII

Potential tightened radius at River Reach. Credit: Kittelson & Associates, Inc.

Large turning radii facilitate faster vehicle turning movements and increase crossing distance for pedestrians. Reducing the curb radii will aid in slowing vehicles and improve pedestrian safety. It may also discourage truck cut-through traffic.

CHANGE GEOMETRY

Intersection geometry lends itself to higher vehicular speeds in some locations. This can cause issues for pedestrians crossing the street and can encourage people to run stop signs. Therefore, changes in intersection geometry are recommended at three locations. At SW 4th Avenue and SW 5th Street, the street can be skewed so that vehicles can no longer exit SW 4th Avenue at high speeds. The addition of a stop sign and a left turn will further calm traffic. At SW 8th Street and Coconut Drive, the intersection will also be brought to a 4 way stop, reducing the pavement that needs to be crossed and allowing drivers to better see each other. At SW 7th Street and Andrews Avenue, widening the westbound lane and narrowing the eastbound left turn lane could help to better facilitate turning movements.

MODIFY BRIDGE TIMING

Davie Blvd Bridge. Credit: Bing

Traffic backs up on Davie Blvd when the bridge opens. On weekdays, it only opens for emergencies and towing companies from 7:30-9 AM and 4:30-6 PM. However, it opens irregularly throughout the day, including from 9-10 AM when there is usually heavy traffic on Davie Blvd. Adjusting the schedule to better accommodate peak vehicle travel times could help ease traffic.

MODIFY SIGNAL TIMING


Davie Blvd at SW 9th Ave. Credit: Google


SW 6th Street at SW 4th Street. Credit: Google

Signal timing was raised as an issue at a number of locations. A signal timing analysis revealed that an update to the signal timing could be beneficial on Davie Blvd at SW 9th Ave and at SW 4th Ave and on SW 7th Street at Andrews Ave. The issue on SW 9th Ave could also be related to the bridge openings, which should be further studied. The signal on SW 6th Street at SW 4th Ave flashes on the weekends, which causes delays for east-west traffic and difficulty crossing the street. It is recommended that the signal timing be updated to a full signal at all times. A full signal study should be completed to determine impacts to the system from any changes.

PEDESTRIAN BRIDGE


Pedestrian Entry on NW 62nd Street. Credit: Kittelson & Associates, Inc.

Neighbors noted a lack of opportunities for crossing Tarpon River. A new pedestrian/ bicycle bridge on SW 11th Street will provide connectivity on a low speed and volume street that provides good connectivity to parks in and around the neighborhood.

IMPROVE PEDESTRIAN ACCESS

SW 4th Ave Bridge. Credit: Google

The bridge on SW 4th Avenue is a primary river crossing point for Tarpon River residents. However, the current access requires residents to walk up the ramp beginning at SW 7th Street. This is not convenient for those accessing the bridge from the Riverwalk. New stairs connecting the Riverwalk to the bridge could help improve access.

RAISED PED CROSSING


Raised Pedestrian Crossing at Intersection. Credit: Wikimedia Commons

The pedestrian crossing is raised to give motorists and pedestrians a better view of the crossing area. Because of the elevation change, traffic is slowed. The raised crossing may also be accompanied by a pinch point to reduce the crossing distance for pedestrians and further calm traffic.

PAINT CROSSWALK


High Visibility Crosswalk on Federal Highway. Credit: Kittelson & Associates, Inc.

There are three locations where crosswalks are missing a signalized intersections. It is recommended that crosswalks are painted to allow for better pedestrian accessibility. Crosswalks should also be painted along driveways on SW 4th Ave to alert drivers of pedestrians.

– – MINI MEDIANS

Mini Median Island. Credit: Google

Islands constructed between travel lanes can help narrow the lanes and slow down traffic. They may be landscaped, helping to beautify the neighborhood. Adding a raised crossing or speed table to the median island can further help to slow traffic and should be considered in the design phase.

CONSTRUCT SIDEWALK

5' Sidewalk with Buffer. Credit: Google

Sidewalks provide a minimum level of comfort for pedestrians, absent of any other features. Sidewalks are desired on SW 9th Ave and SW 7th Street. A network of sidewalks will improve pedestrian comfort and accessibility. A 3' grass buffer will separate the sidewalk from the street.

FORMALIZE/STUDY PARKING

People park on the street on SW 11th Court. Credit: Kittelson & Associates, Inc.

Throughout Tarpon River, people park on the side of the street. In some locations, where the street is wide, on street parking can be formalized. This can have a secondary benefit of calming traffic. A parking study should be completed for the entire neighborhood to address the needs and opportunities.

EXTERNAL CONNECTIVITY PLAN

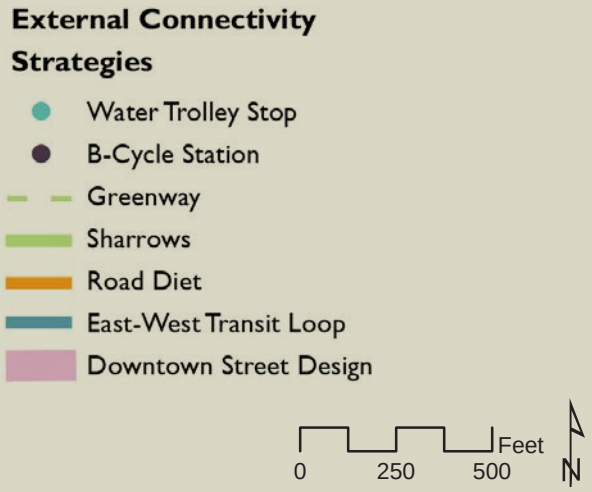
The External Connectivity Plan considers strategies to connect Tarpon River to the rest of the City. Although this plan is part of the overall Master Plan, the improvements will likely be funded by different sources and in a different manner than the neighborhood streets. Additionally, due to the complex nature of these streets, these improvements are intended to be high level suggestions that may change based on further analysis.

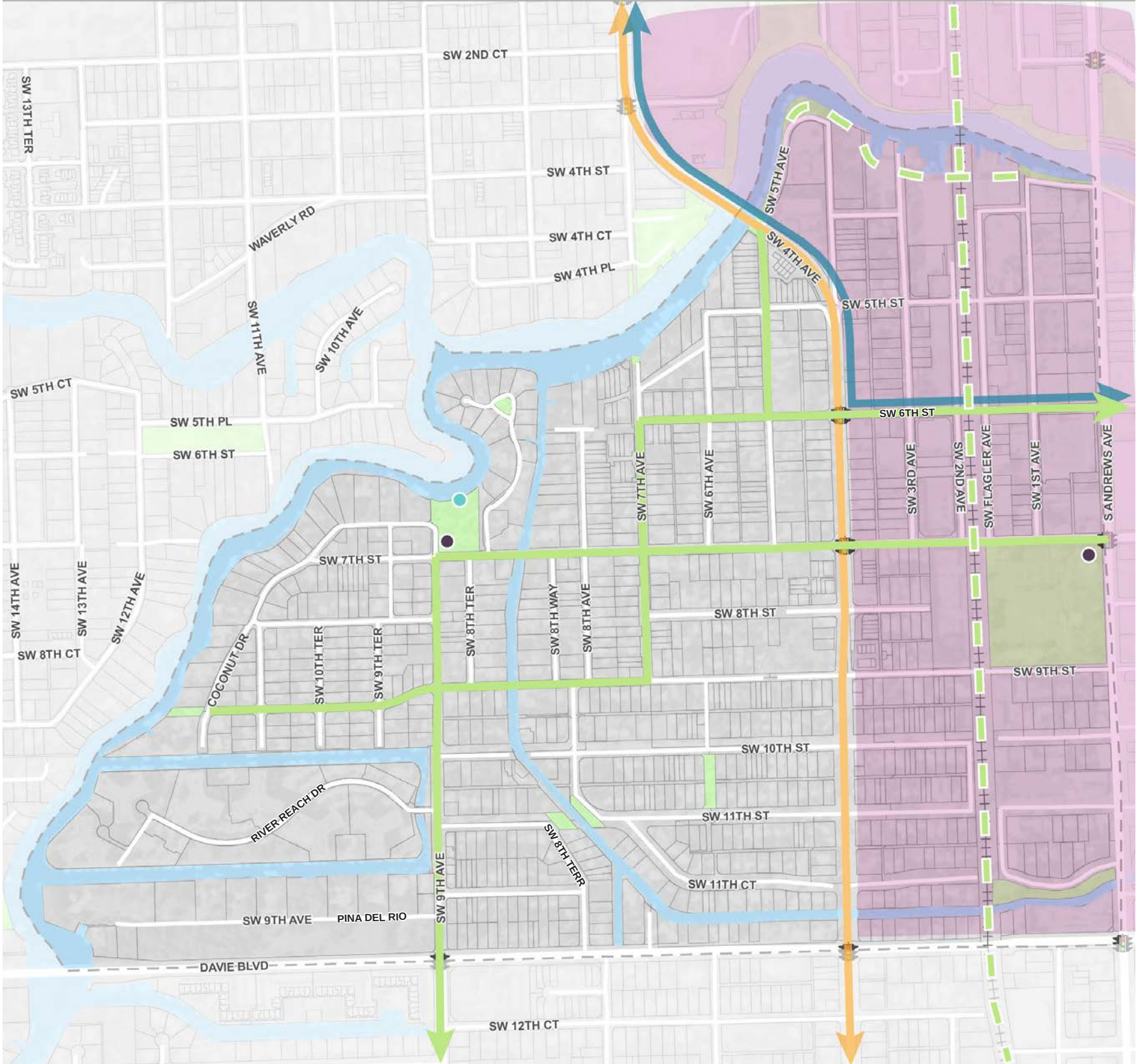
The main goal of the External Streets Master Plan is to improve multimodal connectivity between Tarpon River and the surrounding destinations. The external streets fall under multiple jurisdictions, including the City of Fort Lauderdale, Broward County, and the Florida Department of Transportation, and therefore the final definition and implementation of improvements will require close coordination between those entities. Although this plan is part of the overall Tarpon River Neighborhood Master Plan, many of the affected roads serve to provide regional and local connectivity. This suggests that the improvements will likely be funded by different sources and in a different manner than the neighborhood streets. Additionally, due to the complex nature of these streets, these improvements are intended to be high level suggestions that may change based on further analysis. There are still opportunities to influence improvements, especially during resurfacing projects and for safety improvements.

Many of these improvements are based on recommendations delineated in Connecting the Blocks, Fort Lauderdale's multimodal connectivity Master Plan and therefore more detailed analysis was not performed as part of this plan. The images and descriptions on the following pages provide various details and examples for each strategy. Figure 21 displays the External Connectivity Plan.

FIGURE 21

EXTERNAL CONNECTIVITY PLAN




SW 2ND CT
SW 13TH TER
SW 4TH ST
WAVERLY RD
SW 4TH CT
SW 4TH PL
SW 11TH AVE
SW 10TH AVE
SW 5TH AVE
SW 4TH AVE
SW 5TH ST
SW 5TH CT
SW 5TH PL
SW 6TH ST
SW 7TH AVE
SW 6TH AVE
SW 3RD AVE
SW 2ND AVE
SW FLAGLER AVE
SW 1ST AVE
S ANDREWS AVE
SW 14TH AVE
SW 13TH AVE
SW 12TH AVE
SW 7TH ST
SW 8TH TER
SW 8TH WAY
SW 8TH AVE
SW 8TH ST
SW 8TH CT
COCONUT DR
SW 10TH TER
SW 9TH TER
SW 9TH ST
SW 10TH ST
RIVER REACH DR
SW 11TH ST
SW 8TH TERR
SW 11TH CT
SW 9TH AVE
PINA DEL RIO
SW 9TH AVE
DAVIE BLVD
SW 12TH CT

WATER TROLLEY STOP

Water Trolley. Credit: SunTrolley

The Water Trolley provides a great transportation option for those traveling to waterfront destinations. It connects to Downtown and Las Olas free of charge. It also provides a simple connection for people to cross the river. However, the closest stop is located near the Esplanade on the east side of SW 4th Ave, which is difficult to cross on foot. Additionally, this location is far for most Tarpon River neighbors. Even so, neighbors noted they enjoy taking the Water Trolley or that they would if it were more accessible. A new stop at Lewis Landing Park could provide better access for Tarpon River neighbors by allowing them to leave their cars behind when headed to many of the desired destinations. Other stops were also requested, particularly at River Reach and at the park at Coconut Drive and SW 9th Street, however if only one location is feasible, Lewis Landing Park is the most practical.

EAST WEST TRANSIT LOOP

Downtown Master Plan Transit Goal. Credit: Fort Lauderdale Downtown Master Plan.

Transit is a very important strategy when considering how to better connect people to destinations. It is especially important when considering connections to destinations that are somewhat further away or when there is inclement weather. Currently, there is good connectivity to the airport and potentially to the beach via Sun Trolley. The Wave Streetcar will connect Tarpon River to FAT village and eventually 17th Street. However, the transit routes currently lack simple, direct east/west connections to areas like Las Olas Boulevard. The Downtown Master Plan recommends an east/west loop that could tie the area together. The Tarpon River Neighborhood Mobility Master Plan supports the recommendation for an east/west loop to help improve connectivity to Downtown. It should be noted that the City is currently developing a Transit Master Plan that does not include this route. Therefore, any exploration of this route will need to come in the future, after higher demand routes and transit needs are satisfied.

DOWNTOWN STREET DESIGN

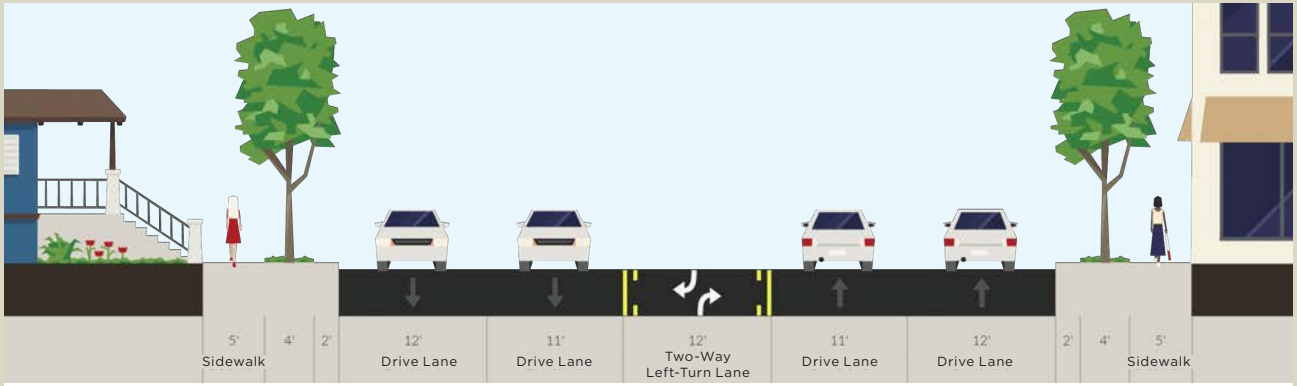

Streetscaping is done piecemeal and is not consistent. Credit: Kittelson & Associates, Inc.

Fort Lauderdale's Downtown Master Plan lists a number of strategies and design criteria for streets and development. However, there has not been a comprehensive assessment of the streets in downtown. Because of this, redevelopment of streets happens in a piecemeal manner as new development occurs, and there is little connectivity or consistency. Additionally, the design standards do not include accommodations for bicycle facilities. An evaluation and design for each street in downtown could be undertaken to develop a comprehensive vision for downtown streets. Especially in the northeastern portion of Tarpon River, this could help to address some of the multimodal transportation concerns brought about by new development. Street designs could include formalized on-street parking, bulb outs, raised intersections, lighting, landscaping, and other amenities. These changes can have economic, social, environmental, traffic calming, and other benefits.

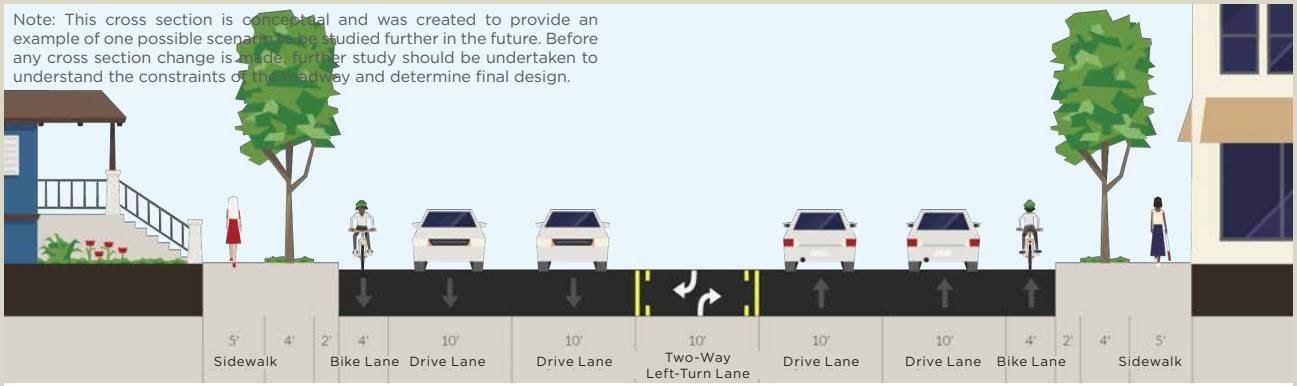
PEDESTRIAN AND BICYCLE ENHANCEMENTS

Outside of Tarpon River, there is little pedestrian and bicycle connectivity to and destinations. Sidewalks are supported by the neighbors, and they should be extended to connect to nearby destinations as discussed in the Traffic Calming and Internal Connectivity Master Plan. However, there is almost no bicycle connectivity to destinations. The following bicycle connectivity strategies are recommended:

- Reconfigure SW 4th Avenue to include bicycling facilities. This could be done through narrowing lanes within the existing cross section. The bike lanes should connect through Fort Lauderdale, providing bicycle access to the surrounding destinations to the north and south. It can also help to improve safety and comfort for all modes.
- A new B-Cycle station in Lewis Landing Park and another in Hardy Park to provide access to bicycles. Many residents work in downtown and the addition of bike share will add mobility options.
- Paint sharrows on streets with lower speeds and volumes that are also identified as preferred bike routes. Sharrows remind motorists of the presence of bicycles and indicate to cyclists where to safely ride within the street. Cities like Portland and Seattle have found success in creating networks of sharrows on traffic calmed streets.
- Connect the Riverwalk and the Flagler Greenway as redevelopment occurs. These long term connections will help complete the pedestrian and bicycle network.



EXISTING SECTION ON SW 4TH AVENUE (LOOKING NORTH)



PROPOSED SECTION ON SW 4TH AVENUE (LOOKING NORTH)

SUSTAINABILITY BEST PRACTICES

SUGGESTIONS FOR IMPROVING SUSTAINABILITY THROUGH DESIGN

As a coastal city, Fort Lauderdale depends on and is sustained by water. This has been one of the City's greatest assets since its inception, however it has also posed some unique challenges. The City is frequently the target of hurricanes during hurricane season and continuously faces the impacts of climate change, such as sea level rise, flooding, salt water intrusion into the water supply, and other related issues. To prepare for and address these issues, Fort Lauderdale has implemented adaptive measures to ensure the sustainability of the City's infrastructure and strives to incorporate sustainable practices into daily living. These efforts are supported by policy in the City's 2035 Vision, Fast Forward Fort Lauderdale, and in the 2018 Strategic Plan, Press Play Fort Lauderdale.

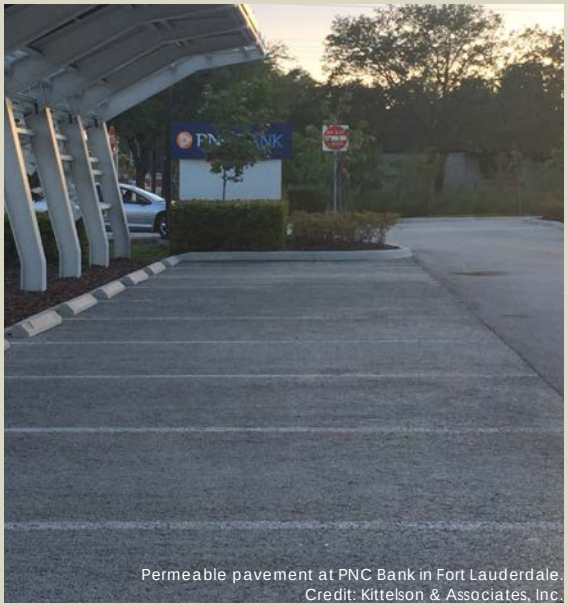
In recognition and support of the City's goals and vision, it is recommended that strategies to support sustainability be woven throughout the improvements recommended in the Tarpon River Neighborhood Mobility Master Plan. The strategies discussed can be incorporated into the design of some of the improvements that is implemented as a result of this plan. Not only do they provide resiliency, but they improve the environment and beautify the surroundings. These treatment details were not presented to the community, but they are generally accepted practices for sustainability should the community wish to include them.

MANAGE STORMWATER RUNOFF

Rain Garden in Swale. Credit: Edward Belden, Los Angeles and San Gabriel Rivers Watershed Council

Drainage and flooding are increasingly becoming important considerations throughout Fort Lauderdale due to sea level rise and climate change. In addition to the use of pervious surfaces, tree-lined streets, and native landscaping, there are other methods of managing stormwater (and associated drainage issues). For example, rain gardens can be planted in small parks that collect, store, and filter rainwater. They, and other retention and filtration techniques, can also be incorporated into curb extensions, chicanes, and street planters.

PERMEABLE SURFACES



Permeable pavement at PNC Bank in Fort Lauderdale.
Credit: Kittelson & Associates, Inc.

Impermeable surfaces, such as traditional roads, driveways, sidewalks, and any other surface that prevents water penetration into the soil disrupt the flow of water into natural drainage cycles. Therefore, the use of impervious surfaces can exacerbate stormwater runoff and associated flooding and pollution issues. Permeable surfaces are porous and allow for water penetration. Permeable pavements should be considered for all new sidewalk, street, and driveway projects to help alleviate these issues. The aesthetics of permeable paving can also give the illusion of a narrower street and help to calm traffic.

TREE-LINED AND SHADED STREETS

Tree Lined Street in Victoria Park.
Credit: Kittelson & Associates, Inc.

Street trees help create a sense of enclosure along the road (sometimes referred to as a "street wall"), narrowing a driver's field of vision and thus encouraging lower vehicle speeds. If placed between the road and the sidewalk, they can help provide a physical and visual buffer between pedestrians and vehicles. They also help to lower temperatures, provide shade for pedestrians, and absorb stormwater and airborne pollutants.

NATIVE LANDSCAPING

Native landscaping at PNC Bank in Fort Lauderdale.
Credit: Kittelson & Associates, Inc.

Native landscaping involves using plants and other vegetation that is indigenous to the Fort Lauderdale area. Plants native to a specific region have adapted to the local soil, conditions, and weather patterns. Therefore, native plants are low maintenance and do not require much (or any) pesticides, fertilizers, watering, or mowing. As a whole, this improves the quality of the air, water, and environment while conserving water, energy, and money.

COST ESTIMATES + TIMING

Planning-level cost estimates and typical construction timelines were developed for the improvements identified in this plan. The cost estimates and project timelines in Figure 22 are intended to assist the community in prioritizing improvement solutions. The timelines include the length of time for design and construction of each improvement. The Master Plan map has been included for reference on the opposite page.

Due to multiple agencies being responsible for the maintenance and operations for the roadways in the External Connectivity Plan, available funding and costs are not reflected herein. Those costs and funding will need to be determined outside of this plan among the various responsible agencies.

The following pages discuss the planning level costs and the next steps. In the next steps section, a range of possible funding sources are discussed that can be used to pay for the improvements listed in this plan over time as funding becomes available.

IMPROVEMENT TIMING/PHASING KEY

- Less than 1 Year
- 1 to 2 Years
- 2 to 5 Years

Note: *Cost estimates include construction costs but do not include design and construction engineering inspection costs.

Low end estimate is based on a 20 percent contingency and high end estimates are based on a 30 percent contingency.

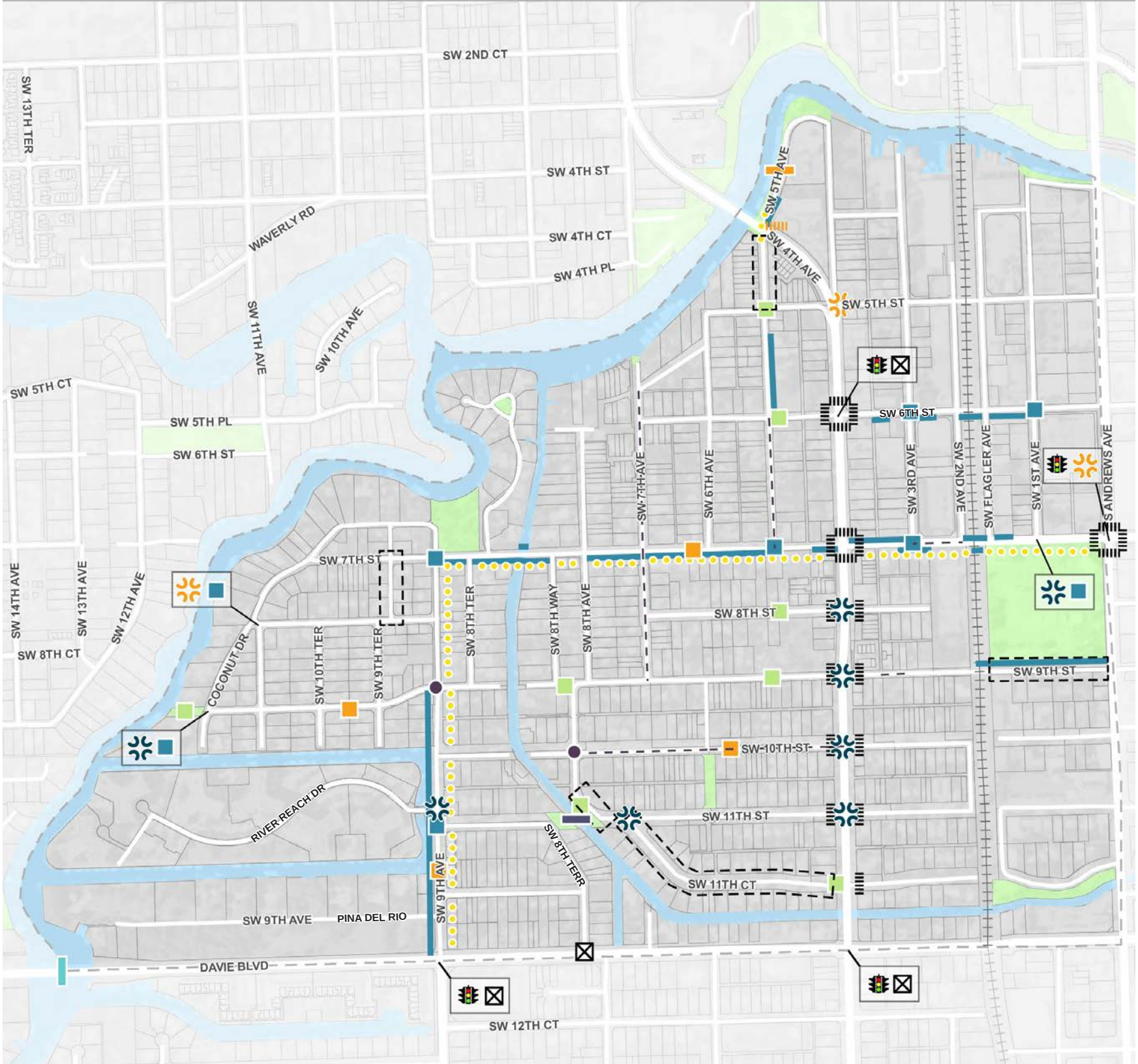
FIGURE 22

COST ESTIMATES AND TIMING

The cost estimates present a high level picture of the costs for the improvements for planning purposes only. They include construction costs but do not take into account the costs of design, construction engineering inspection, the movement of utilities, or impacts or changes to existing drainage structures. Additionally, appropriate resources should be used to create a context-sensitive concept in the design of each improvement from which to base a more detailed cost estimate.

The timing estimates associated with each improvement represent the general length of time from design through construction. They do not represent prioritization or actual project timelines, and are intended to provide a general picture of the length of time that it may take to complete a project once it has begun.

Improvement*		Quantity (Number or total feet)	Per Location Cost** (in 2015 Dollars)		Total Cost** (for all locations in 2015 Dollars)		Timing
			Low End	High End	Low End	High End	
Pedestrian Lighting		97 Lights	$4,500 (Average cost per solar powered pedestrian light in City of Fort Lauderdale)		$435,960	$435,960	●
Speed Signage Program		1 Movable Sign	$2,800	$7,500	$2,800	$7,500	●
Raised Intersection	3 Legs	5 Locations	$23,600	$26,500	$118,000	$132,500	●
	4 Legs	4 Locations	$24,700	$27,800	$98,800	$111,200	●
Pocket Park with Improved Ped/Bike Connectivity		8 Locations	Based on Agreed Upon Design				●
Mini Roundabout		2 Locations	$40,600	$45,600	$81,200	$91,200	●
Change Intersection Geometry		3 Locations	Values Determined Based on Actual Locations		$4,700	$5,200	●
Tighten Curb Radii		2 Locations	Values Determined Based on Actual Locations		$100	$100	●
Pedestrian Bridge		1 Location	Values Determined Based on FDOT Preliminary Planning Guidance		$525,300	$525,300	●
Raised Crossing		1 Location	$7,900	$8,900	$7,900	$8,900	●
5' Sidewalk		4,510 Feet	$39	$44	$175,900	$198,400	●
Mini Median Island		6 Locations	$13,300	$14,900	$79,800	$89,400	●
Formalize/Study Parking		Based on Parking Study					●
Total Cost					$1,530,460	$1,605,660	


SW 2ND CT
SW 13TH TER
SW 4TH ST
WAVERLY RD
SW 4TH CT
SW 4TH PL
SW 11TH AVE
SW 10TH AVE
SW 5TH AVE
SW 4TH AVE
SW 5TH ST
SW 5TH CT
SW 5TH PL
SW 6TH ST
SW 7TH AVE
SW 6TH AVE
SW 3RD AVE
SW 2ND AVE
SW FLAGLER AVE
SW 1ST AVE
SANDREWS AVE
SW 14TH AVE
SW 13TH AVE
SW 12TH AVE
SW 7TH ST
SW 8TH TER
SW 8TH WAY
SW 8TH AVE
SW 8TH ST
SW 8TH CT
COCONUT DR
SW 10TH TER
SW 9TH TER
SW 9TH ST
SW 10TH ST
RIVER REACH DR
SW 11TH ST
SW 8TH TERR
SW 11TH CT
SW 9TH AVE
PINA DEL RIO
DAVIE BLVD
SW 12TH CT

6 NEXT STEPS

NEXT STEPS

The Tarpon River Neighborhood Mobility Master Plan is a community driven plan based on input from neighbors and supported by data and analysis. It is intended to provide a road map to a safe, connected, comfortable, and multimodal transportation network within and around Tarpon River. It is also one piece of the greater puzzle that, when complete, will help to achieve the City of Fort Lauderdale's vision for strong and connected neighborhoods.

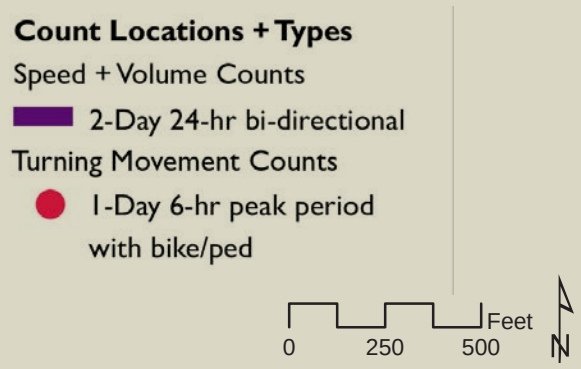
This plan is comprehensive and is intended to be implemented over time as funds become available and the neighbors see fit. Therefore, further prioritization is needed to ensure that the implementation schedule accurately represents the needs and desires of the community members. This prioritization is left to the discretion of Tarpon River residents, however the City of Fort Lauderdale and the consultant team intends to help guide Tarpon River in developing this prioritization in a forthcoming prioritization meeting. To assist in the prioritization process, each internal street improvement has been assigned a number of points based on the prioritization methodology developed in the City's Connecting the Blocks plan. External streets were also considered as part of this to help quantify the benefits of the improvements even though they will likely be made as FDOT, developers, the County, or the City implement other projects. The methodology takes into account the prioritization needs developed by the City and the Broward Metropolitan Planning Organization. However, because the improvements were ranked on a project basis as opposed to as a whole, the scoring should not be considered comprehensive and instead should be taken as one data point in the overall prioritization process. The scoring and scoring criteria can be found in Appendix B.

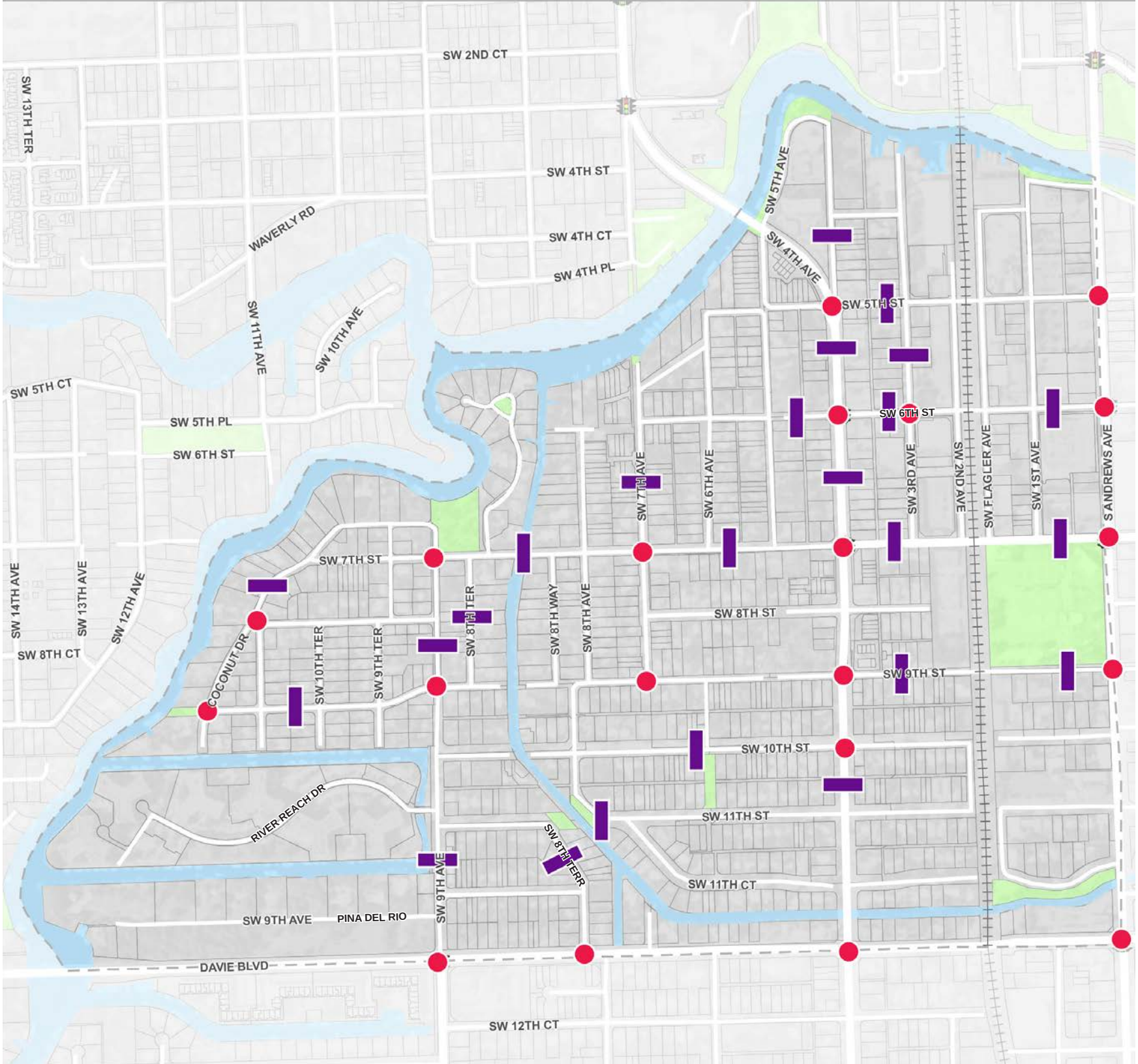
Regarding the funding of the plan, a variety of sources are available now and more will likely become available in the future. The creation and adoption of this plan enables Tarpon River to be eligible for those funds, and neighborhood support increases the likelihood that improvements will be built. Possible funding sources include private developers as new construction occurs around Tarpon River; grants applied for by Tarpon River, the City, Broward County, the Broward Metropolitan Planning Organization, and the Florida Department of Transportation; and a variety of other innovative sources as they are developed.

APPENDIX A

MAP OF SPEED AND VOLUME COUNT LOCATIONS

MAP OF SPEED AND
VOLUME COUNT LOCATIONS




SW 2ND CT
SW 13TH TER
SW 4TH ST
SW 4TH CT
SW 4TH PL
WAVERLY RD
SW 11TH AVE
SW 10TH AVE
SW 5TH AVE
SW 4TH AVE
SW 5TH ST
SW 5TH CT
SW 5TH PL
SW 6TH ST
SW 6TH ST
SW 7TH AVE
SW 6TH AVE
SW 3RD AVE
SW 2ND AVE
SW FLAGLER AVE
SW 1ST AVE
S ANDREWS AVE
SW 14TH AVE
SW 13TH AVE
SW 12TH AVE
SW 7TH ST
SW 8TH CT
COCONUT DR
SW 10TH TER
SW 9TH TER
SW 8TH TER
SW 8TH WAY
SW 8TH AVE
SW 8TH ST
SW 9TH ST
SW 10TH ST
SW 11TH ST
RIVER REACH DR
SW 8TH TERR
SW 9TH AVE
SW 11TH CT
SW 9TH AVE
PINA DEL RIO
DAVIE BLVD
SW 12TH CT

APPENDIX B

PLANNING LEVEL PRIORITIZATION SCORING

PRIORITIZATION CRITERIA, WEIGHT, AND THRESHOLDS

TABLE 21. PRIORITIZATION CRITERIA, WEIGHTS, AND THRESHOLDS

MEASURE		WEIGHT	BENEFIT CATEGORIES	DESCRIPTION	THRESHOLDS	POINTS
	PROJECT BENEFITS					
1	Anticipated improvement in pedestrian/bicyclist safety	2	Safety	Project type typically improves pedestrian and bicyclist safety.	Minimal Moderate Substantial	0 1 2
2	Anticipated safety benefit to segment with history of fatal or severe injury pedestrian and bicycle crashes	2	Safety	Based on most recent crash maps for City of Fort Lauderdale.	Minimal Moderate Substantial	0 1 2
3	Support of regional transit services and/or premium transit services	3	Travel Choices, Sustainability	Planned premium transit services shown in the LRTP are in the corridor.	Minimal Moderate Substantial	0 1 2
4	Enhancement of transit stops	1	Travel Choices, Sustainability	Project creates space for enhanced transit stops (e.g., sidewalk buffer)	Minimal Moderate Substantial	0 1 2
5	Closure of sidewalk network gaps	5	Connectivity, Safety, Travel Choices, Health Benefits	New sidewalks constructed to close gaps and make new connections.	Minimal Moderate Substantial	0 1 2
6	Closure of bicycle network gaps	5	Connectivity, Safety, Travel Choices, Health Benefits	New bicycle facilities constructed to close gaps and make new connections.	Minimal Moderate Substantial	0 1 2
7	Improvement of street crossings for non-automobile modes	3	Connectivity, Safety, Travel Choices, Health Benefits	Project enhances street crossings.	Minimal Moderate Substantial	0 1 2
8	Support of active transportation	5	Quality of Life, Sustainability, Economic Benefit	Project improves areas with high Active Transportation Demand Scores	Minimal Moderate Substantial	0 1 2
9	Improvement of multimodal system quality	4	Quality of Life, Travel Choices, Economic Benefit	Project adds pedestrian-scale lighting, shade, buffers, and other quality elements	Minimal Moderate Substantial	0 1 2
10	Incorporation of sustainability elements to adapt to climate change	4	Sustainability, Safety, Connectivity	Project adds stormwater management, shade, LED lighting, and drought resistant features.	Minimal Moderate Substantial	0 1 2
	PROJECT FEASIBILITY					
11	Opportunity to qualify for federal or other funding	1	N/A	Corridor study and/or livability study involving multiple jurisdictions and/or agencies	Minimal Moderate Substantial	0 1 2
12	Freedom from obstacles to implementation	5	N/A	Timeline, agency approvals, need for land acquisition, contract capacity, etc.	Minimal Moderate Substantial	0 1 2
13	Community support	5	N/A	Consistency with the Multimodal Connectivity Map	Minimal Moderate Substantial	0 1 2

Details of the Project Benefits criteria in Table 21 and the proposed scoring procedure are as follows:

- Anticipated improvement in pedestrian/bicyclist safety. Crossing enhancements score a 1. Projects that reduce crossing distance score a 2. Projects that separate bicyclists from automobiles score a 2. (The Highway Safety Manual (HSM) indicates that these project types tend to improve pedestrian/bicyclist safety.)

- Anticipated improvement to segment with history of fatal or severe injury pedestrian/bicycle crashes. This applies only to segments with a history of fatal or severe injury pedestrian/bicycle crashes. Projects that create separation between pedestrians and automobiles or between bicyclists and automobiles score a 2. Other project types that the HSM indicates tend to improve pedestrian/bicyclist safety score a 1.

- Support of regional and premium transit services. Projects that create new regional and premium transit services score a 2. Projects that enhance existing regional and premium transit services score a 1. This also applies to pedestrian/bicycle projects that are within 1/4 mile of The Wave and Tri-Rail. Projects that create pedestrian/bicycle connections to The Wave and Tri-Rail score a 2. Projects that enhance existing pedestrian/bicycle connections to The Wave and Tri-Rail score a 1.

- Enhances transit stops. Projects that add a sidewalk buffer score a 1. Projects that add bus stop amenities score a 2.

- Closure of sidewalk network gaps. Projects that complete existing sidewalks score a 1. Projects that construct more extensive, new sidewalks score a 2.

- Closure of bicycle network gaps. Projects that complete existing bicycle facilities score a 1. Projects that construct more extensive, new bicycle lanes score a 2. Projects that add sharrows score a 1.

- Improves street crossings for non-automobile modes. Projects that include 1-2 crossing enhancements score a 1. Projects that include 3 or more crossing enhancements score a 2.

- Supports active transportation. Projects that serve Census tracts ranked in the top 1-10 for Active Transportation Demand score a 2. Projects in the top 10-20 score a 1.2. Active Transportation Demand Score is an index developed by the City of Portland, Oregon, for use in prioritizing multimodal projects. It accounts for population density, business density, percent of population less than 17 years old, percent of population greater than or equal to 65 years old, percent of population that is non-white, percent of households below the poverty line, and percent of households with no access to an automobile. These demographic characteristics are traditionally tied to propensity to travel by non-automobile modes.

- Improves multimodal system quality. Projects that add 3-4 of sidewalk buffers, bicycle lane buffers, pedestrian-scale lighting, and shade score a 2. Projects that add 1-2 of those elements score a 1.

- Incorporation of sustainability elements to adapt to climate change. Projects that add 3-4 of stormwater management, shade, LED lighting, and drought resistant features score a 2. Projects that add 1-2 of those elements score a 1.

Details of the Project Feasibility criteria in Table 21 and the proposed scoring procedure are as follows:

- Opportunity to qualify for federal or other funding. Projects score a 1 if they are located in a major corridor, are located in corridors that affect multiple jurisdictions, or are livability projects. Projects score a 2 if they are consistent with projects identified in the CIP, Transportation Improvement Program (TIP), or LRTP.

- Freedom from implementation obstacles. Projects on State and County roads score a 1. Projects on City roads score a 2.

- Community support. Projects consistent with the previously supported neighborhood plans (which were created with public input) score a 1. Projects consistent with the City Commission approved Neighborhood or Master Plans score a 2.

CONNECTING THE BLOCKS PRIORITIZATION - INTERNAL MOBILITY MASTER PLAN

Location	Treatment	Reason	Comments	Prioritization Score	Measure												
					1	2	3	4	5	6	7	8	9	10*	11	12	13
Davie Blvd at the New River Bridge	Modify Bridge Timing	Congestion Relief	Coordinate with County	25	0	0	0	0	0	0	0	1	0		1	1	2
Davie Blvd at SW 9th Ave	Modify Signal Timing	Congestion Relief	Send to BCTED	25	0	0	0	0	0	0	0	1	0		1	1	2
Davie Blvd at SW 9th Ave	Paint/Sign Don't Block the Box	Congestion Relief		28	0	0	0	0	0	0	1	1	0		1	1	2
Davie Blvd at SW 8th Terr	Paint/Sign Don't Block the Box	Congestion Relief		28	0	0	0	0	0	0	1	1	0		1	1	2
Davie Blvd at SW 4th Ave	Modify Signal Timing	Congestion Relief	Send to BCTED	25	0	0	0	0	0	0	0	1	0		1	1	2
Davie Blvd at SW 4th Ave	Paint/Sign Don't Block the Box	Congestion Relief		28	0	0	0	0	0	0	1	1	0		1	1	2
SW 11th Ct from SW 11th St to SW 4th Ave	Formalize On Street Parking	Parking		25	0	0	0	0	0	0	0	1	0		0	2	2
SW 11th Ct at SW 4th Ave	Create/Improve Pocket Park with Improved Ped/Bike Connectivity	Ped/Bike + Green Space		53	2	0	0	0	1	1	2	1	2		0	2	2
SW 11th Ct at SW 4th Ave	Paint Crosswalk on East Leg	Ped/Bike	Coordinate with SW 4th Ave RRR	43	1	0	1	0	1	0	1	1	0		1	2	2
SW 11th St at SW 9th Ave	Construct Raised Intersection	Traffic Calming		32	2	0	0	0	0	0	1	1	0		0	2	2
SW 11th St at Tarpon River	Construct Pedestrian Bridge	Ped/Bike		53	2	0	0	0	2	2	0	1	1		0	2	2
SW 11th St at Sara Horn Greenway	Create/Improve Pocket Park with Improved Ped/Bike Connectivity	Ped/Bike + Green Space		53	2	0	0	0	1	1	2	1	2		0	2	2
SW 11th St at Sara Horn Greenway	Formalize On Street Parking	Parking		27	1	0	0	0	0	0	0	1	0		0	2	2
SW 11th St at SW 11th Ct	Tighten Turning Radii	Traffic Calming		32	2	0	0	0	0	0	1	1	0		0	2	2
SW 11th St at SW 4th Ave	Tighten Turning Radii	Traffic Calming	Coordinate with SW 4th Ave RRR	35	2	0	1	0	0	0	1	1	0		1	1	2
SW 11th St at SW 4th Ave	Paint Crosswalk on West and East Legs	Ped/Bike	Coordinate with SW 4th Ave RRR	38	1	0	1	0	1	0	1	1	0		1	1	2
River Reach Dr at SW 9th Ave	Tighten Turning Radii	Traffic Calming		32	2	0	0	0	0	0	1	1	0		0	2	2
SW 10th St at SW 8th Ave	Construct Mini Roundabout	Traffic Calming		30	1	0	0	0	0	0	1	1	0		0	2	2
SW 10th St from SW 8th Ave to SW 4th Ave	Construct Mini Median Islands	Traffic Calming		25	0	0	0	0	0	0	0	1	0		0	2	2
SW 10th St from SW 8th Ave to SW 4th Ave	Install Electronic Speed Sign	Traffic Calming		25	0	0	0	0	0	0	0	1	0		0	2	2
SW 10th St at SW 4th Ave	Tighten Turning Radii	Traffic Calming	Coordinate with SW 4th Ave RRR	42	2	1	1	0	0	0	1	1	0		1	2	2
SW 10th St at SW 4th Ave	Paint Crosswalk on West and East Legs	Ped/Bike	Coordinate with SW 4th Ave RRR	45	1	1	1	0	1	0	1	1	0		1	2	2

Location	Treatment	Reason	Comments	Prioritization Score	Measure												
					1	2	3	4	5	6	7	8	9	10*	11	12	13
SW 9th St at Coconut Dr	Create/Improve Pocket Park with Improved Ped/Bike Connectivity	Ped/Bike + Green Space		53	2	0	0	0	1	1	2	1	2		0	2	2
SW 9th St at Coconut Dr	Tighten Turning Radii	Traffic Calming		32	2	0	0	0	0	0	1	1	0		0	2	2
SW 9th St at Coconut Dr	Construct Raised Intersection	Traffic Calming / Ped/ Bike		32	2	0	0	0	0	0	1	1	0		0	2	2
SW 9th St from Coconut Dr to SW 9th Ave	Install Electronic Speed Sign	Traffic Calming		25	0	0	0	0	0	0	0	1	0		0	2	2
SW 9th St at SW 9th Ave	Construct Mini Roundabout	Traffic Calming		30	1	0	0	0	0	0	1	1	0		0	2	2
SW 9th St at SW 8th Ave	Create/Improve Pocket Park with Improved Ped/Bike Connectivity	Ped/Bike + Green Space		53	2	0	0	0	1	1	2	1	2		0	2	2
SW 9th St at Road Closure	Create/Improve Pocket Park with Improved Ped/Bike Connectivity	Ped/Bike + Green Space		53	2	0	0	0	1	1	2	1	2		0	2	2
SW 9th St at SW 4th Ave	Tighten Turning Radii	Traffic Calming	Coordinate with SW 4th Ave RRR	35	2	0	1	0	0	0	1	1	0		1	1	2
SW 9th St at SW 4th Ave	Paint Crosswalk on West and East Legs	Ped/Bike	Coordinate with SW 4th Ave RRR	38	1	0	1	0	1	0	1	1	0		1	1	2
SW 9th St from SW 4th Ave to Railroad	Construct Mini Median Islands	Traffic Calming		32	2	0	1	0	0	0	0	1	0		0	2	2
SW 9th St from Railroad to S Andrews Ave	Construct Sidewalk on North Side	Ped/Bike		45	2	0	2	0	2	0	0	1	0		0	2	2
SW 9th St from Railroad to S Andrews Ave	Formalize On Street Parking	Parking		27	1	0	0	0	0	0	0	1	0		0	2	2
SW 8th St at Coconut Dr	Change Intersection Geometry	Traffic Calming		28	0	0	0	0	0	0	1	1	0		0	2	2
SW 8th St at Coconut Dr	Construct Raised Intersection	Traffic Calming		32	2	0	0	0	0	0	1	1	0		0	2	2
SW 8th St at Road Closure	Create/Improve Pocket Park with Improved Ped/Bike Connectivity	Ped/Bike + Green Space		53	2	0	0	0	1	1	2	1	2		0	2	2
SW 8th St at SW 4th Ave	Tighten Turning Radii	Traffic Calming	Coordinate with SW 4th Ave RRR	35	2	0	1	0	0	0	1	1	0		1	1	2
SW 8th St at SW 4th Ave	Paint Crosswalk on West and East Legs	Ped/Bike	Coordinate with SW 4th Ave RRR	38	1	0	1	0	1	0	1	1	0		1	1	2
SW 7th St at SW 9th Ave	Construct Raised Intersection	Traffic Calming / Ped/ Bike		32	2	0	0	0	0	0	1	1	0		0	2	2
SW 7th St from SW 9th Ave to SW 4th Ave	Construct Sidewalk on South Side	Ped/Bike		39	2	0	0	0	2	0	0	1	0		0	2	2
SW 7th St from SW 9th Ave to SW 4th Ave	Install Pedestrian Lighting on South Side	Ped/Bike		33	2	0	0	0	0	0	0	1	1		0	2	2

CONNECTING THE BLOCKS PRIORITIZATION - INTERNAL MOBILITY MASTER PLAN

Location	Treatment	Reason	Comments	Prioritization Score	Measure												
					1	2	3	4	5	6	7	8	9	10*	11	12	13
SW 7th St from SW 7th Ave to SW 5th Ave	Install Electronic Speed Sign	Traffic Calming		25	0	0	0	0	0	0	0	1	0		0	2	2
SW 7th St at SW 5th Ave	Construct Raised Intersection	Traffic Calming		32	2	0	0	0	0	0	1	1	0		0	2	2
SW 7th St at SW 4th Ave	Paint Crosswalk on West and East Legs	Ped/Bike	Coordinate with SW 4th Ave RRR	38	1	0	1	0	1	0	1	1	0		1	1	2
SW 7th St from SW 4th Ave to S Andrews Ave	Fill Sidewalk Gaps	Ped/Bike		40	2	0	2	0	1	0	0	1			0	2	2
SW 7th St from SW 4th Ave to S Andrews Ave	Install Pedestrian Lighting on South Side	Ped/Bike		36	2	0	1	0	0	0	0	1	1		0	2	2
SW 7th St at SW 3rd Ave	Construct Raised Intersection	Traffic Calming		35	2	0	1	0	0	0	1	1	0		0	2	2
SW 7th St from SW 3rd Ave to SW 2nd Ave	Construct Mini Median Islands	Traffic Calming		28	0	0	1	0	0	0	0	1	0		0	2	2
SW 7th St at SW 1st Ave	Tighten Turning Radii	Traffic Calming		35	2	0	1	0	0	0	1	1	0		0	2	2
SW 7th St at SW 1st Ave	Construct Raised Intersection	Traffic Calming		35	2	0	1	0	0	0	1	1	0		0	2	2
SW 7th St at S Andrews Ave	Modify Signal Timing	Congestion Relief	Send to BCTED	25	0	0	0	0	0	0	0	1	0		1	1	2
SW 7th St at S Andrews Ave	Paint Crosswalk on All Legs	Ped/Bike		38	1	0	1	0	1	0	1	1	0		1	1	2
SW 7th St at S Andrews Ave	Change Intersection Geometry	Traffic Calming		28	0	0	0	0	0	0	1	1	0		1	1	2
SW 6th St at Road Closure	Create/Improve Pocket Park with Improved Ped/Bike Connectivity	Ped/Bike + Green Space		53	2	0	0	0	1	1	2	1	2		0	2	2
SW 6th St at SW 4th Ave	Modify Signal Timing	Congestion Relief	Send to BCTED	25	0	0	0	0	0	0	0	1	0		1	1	2
SW 6th St at SW 4th Ave	Paint Crosswalks on All Legs	Ped/Bike	Coordinate with SW 4th Ave RRR	38	1	0	1	0	1	0	1	1	0		1	1	2
SW 6th St at SW 4th Ave	Paint/Sign Don't Block the Box	Congestion Relief	Coordinate with SW 4th Ave RRR	28	0	0	0	0	0	0	1	1	0		1	1	2
SW 6th St from SW 4th Ave to S Andrews Ave	Fill Sidewalk Gaps	Ped/Bike		40	2	0	2	0	1	0	0	1	0		0	2	2
SW 6th St at SW 3rd Ave	Construct Raised Intersection	Traffic Calming		35	2	0	1	0	0	0	1	1	0		0	2	2
SW 6th St at SW 1st Ave	Construct Raised Intersection	Traffic Calming		35	2	0	1	0	0	0	1	1	0		0	2	2
SW 5th St at SW 5th Ave	Create/Improve Pocket Park with Improved Ped/Bike Connectivity	Ped/Bike + Green Space		53	2	0	0	0	1	1	2	1	2		0	2	2

Location	Treatment	Reason	Comments	Prioritization Score	Measure												
					1	2	3	4	5	6	7	8	9	10*	11	12	13
SW 5th St at SW 4th Ave (East)	Change Intersection Geometry	Traffic Calming		28	0	0	0	0	0	0	1	1	0		0	2	2
SW 9th Terr from SW 8th St to SW 7th St	Formalize On Street Parking	Parking		25	0	0	0	0	0	0	0	1	0		0	2	2
SW 9th Ave from Davie Blvd to River Reach Dr	Install Electronic Speed Sign	Traffic Calming		25	0	0	0	0	0	0	0	1	0		0	2	2
SW 9th Ave from Davie Blvd to SW 9th St	Construct Sidewalk on West Side	Ped/Bike	Sidewalk already exists from SW 9th St to SW 7th ST	39	2	0	0	0	2	0	0	1	0		0	2	2
SW 9th Ave from Davie Blvd to SW 7th St	Install Pedestrian Lighting	Ped/Bike		33	2	0	0	0	0	0	0	1	1		0	2	2
SW 7th Ave from SW 9th St to SW 7th St	Construct Mini Median Islands	Traffic Calming		25	0	0	0	0	0	0	0	1	0		0	2	2
SW 7th Ave from SW 7th St to SW 6th St	Construct Mini Median Islands	Traffic Calming		25	0	0	0	0	0	0	0	1	0		0	2	2
SW 5th Ave from SW 7th St to SW 6th St	Construct Mini Median Islands	Traffic Calming		25	0	0	0	0	0	0	0	1	0		0	2	2
SW 5th Ave from SW 6th St to SW 5th St	Construct Sidewalk	Ped/Bike		39	2	0	0	0	2	0	0	1	0		0	2	2
SW 5th Ave from SW 5th St to SW 4th Ave	Formalize On Street Parking	Parking		25	0	0	0	0	0	0	0	1	0		0	2	2
SW 5th Ave at SW 4th Ave	Install Pedestrian Lighting	Ped/Bike		33	2	0	0	0	0	0	0	1	1		0	2	2
SW 5th Ave at SW 4th Ave	Install Pedestrian Access to SW 4th Ave Bridge from Riverwalk	Ped/Bike		34	2	0	0	0	1	0	0	1	0		1	1	2
SW 5th Ave from SW 4th Ave to Sidewalk	Construct Sidewalk on East Side	Ped/Bike		34	2	0	0	0	1	0	0	1	0		0	2	2
SW 5th Ave at Sidewalk Connection	Install Raised Pedestrian Crossing to Riverwalk	Ped/Bike		34	2	0	0	0	1	0	0	1	0		0	2	2

CONNECTING THE BLOCKS PRIORITIZATION - EXTERNAL CONNECTIVITY PLAN

Location	Treatment	Reason	Comments	Prioritization Score	Measure												
					1	2	3	4	5	6	7	8	9	10*	11	12	13
SW 9th St from Coconut Dr to SW 7th Ave	Create Sharrows/Bicycle Blvd	Bicycle Connectivity		32	1	0	0	0	0	1	0	1	0		0	2	2
SW 7th St from SW 9th Ave to S Andrews Ave	Create Sharrows/Bicycle Blvd	Bicycle Connectivity		38	1	0	2	0	0	1	0	1	0		0	2	2
Florence C. Hardy Park	Install B-Cycle Station	Bicycle Connectivity	Coordinate with B-Cycle	36	0	0	2	0	0	1	0	1	0		0	2	2
Lewis Landing Park	Install B-Cycle Station	Bicycle Connectivity	Coordinate with B-Cycle	30	0	0	0	0	0	1	0	1	0		0	2	2
Lewis Landing Park	Create Water Trolley Stop	Multimodal Connectivity	Coordinate with Water Trolley	25	0	0	0	0	0	0	0	1	0		0	2	2
SW 6th St from SW 4th Ave to Federal Hwy	Create E/W Transit Loop	Multimodal Connectivity	Coordinate with TMA	31	0	0	2	0	0	0	0	1	0		1	1	2
SW 6th St from SW 7th Ave to Federal Hwy	Create Sharrows/Bicycle Blvd	Bicycle Connectivity		38	1	0	2	0	0	1	0	1	0		0	2	2
Riverwalk from SW 4th Ave to SW 1st Ave	Complete Missing Link	Multimodal Connectivity	Coordinate with new development	60	2	0	2	0	2	2	0	1	0		1	2	2
SW 9th Ave from Snyder Park to SW 7th St	Create Sharrows/Bicycle Blvd	Bicycle Connectivity		32	1	0	0	0	0	1	0	1	0		0	2	2
SW 7th Ave from SW 9th St to SW 6th St	Create Sharrows/Bicycle Blvd	Bicycle Connectivity		32	1	0	0	0	0	1	0	1	0		0	2	2
SW 5th Ave from SW 7th St to Riverwalk	Create Sharrows/Bicycle Blvd	Bicycle Connectivity		32	1	0	0	0	0	1	0	1	0		0	2	2
SW 4th Ave from Snyder Park to Himmarshee ST	Paint Bike Lanes	Bicycle Connectivity	Coordinate with SW 4th Ave RRR	54	2	2	2	0	0	2	0	1	0		2	1	2
SW 4th Ave from SW 6th St to Himmarshee St	Create E/W Transit Loop	Multimodal Connectivity	Coordinate with TMA	31	0	0	2	0	0	0	0	1	0		1	1	2
FEC Railroad Tracks	Construct Flagler Greenway	Multimodal Connectivity	Coordinate with FECI	55	2	0	2	0	2	2	0	1	0		1	1	2
Downtown RAC	Develop Downtown Street Design Guidelines	Multimodal Connectivity	Coordinate with DSD	55	1	0	2	0	1	1	1	1	1		1	2	2

TARPON RIVER

TARPONRIVER.ORG

KITTELSON & ASSOCIATES

cadence

TARPON RIVER

TARPONRIVER.ORG

KITTELSON & ASSOCIATES

cadence