

NEIGHBORHOOD
MOBILITY
MASTER PLAN



**SHADY
BANKS**

Shady Banks

Neighborhood Mobility Master Plan

April 2017

Prepared for:

Shady Banks
& The City of Fort Lauderdale
Transportation and Mobility Department

Prepared By:

Kittelson & Associates, Inc.
200 SW 1st Avenue, Suite 1070
Fort Lauderdale, FL 33301

&

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

CONTENTS

Introduction	5
Project Background	6
Study Process	6
Report Organization	7
Study Area	8
Existing & Future Conditions	11
Demographics	12
Land Use and Destinations	14
Street Network	16
Pedestrian, Bicycle, & Transit Facilities	18
Vehicular Access and Intersection Controls	20
Vehicular Traffic Speeds	24
Intersection Operations	26
Pedestrian and Bicycle Experience	28
Community Engagement	33
Community Engagement	34
Synthesis	37
Synthesis	38
Master Plan	41
Master plan	42
Sustainability Best Practices	48
Cost Estimates + Timing	50
Next Steps	53
Next Steps	54
Appendix A	57
Map of Speed and Volume Count Locations	57
Appendix B	61
Planning Level Prioritization Scoring	61

FIGURES

Figure 1 Study Process	6
Figure 2 Study Area	8
Figure 3 Existing Land Use	14
Figure 4 Street Network	16
Figure 5 Bicycle and Pedestrian Facilities	18
Figure 6 Vehicular Access and Intersection Controls	20
Figure 7 Traffic Volumes	22
Figure 8 Traffic Speeds	24
Figure 9 Intersection Operations	26
Figure 10 Pedestrian and Bicycle Environment	28
Figure 11 External Crashes	30
Figure 12 Internal Neighborhood Crashes	30
Figure 13 Crash Map	30
Figure 14 Improvement Needs	38
Figure 15 Neighborhood Mobility Master Plan	42
Figure 16 Cost Estimates and Timing	50



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.

Shady Banks is a residential neighborhood in Fort Lauderdale, Florida. With approximately 500 homes on quiet, tree-lined streets, it is located on the banks of the New River. Hott Park and the Bill Keith Preserve Park are also located within the boundaries of Shady Banks. Over time, community members have expressed concerns over the cut-through vehicular traffic and speeds, as well as a desire to preemptively calm traffic that may be introduced by future developments. In addition, neighbors have expressed the desire for a safer and more walkable environment. In recognition of these desires, the City of Fort Lauderdale initiated the Shady Banks Neighborhood Mobility Master Plan.

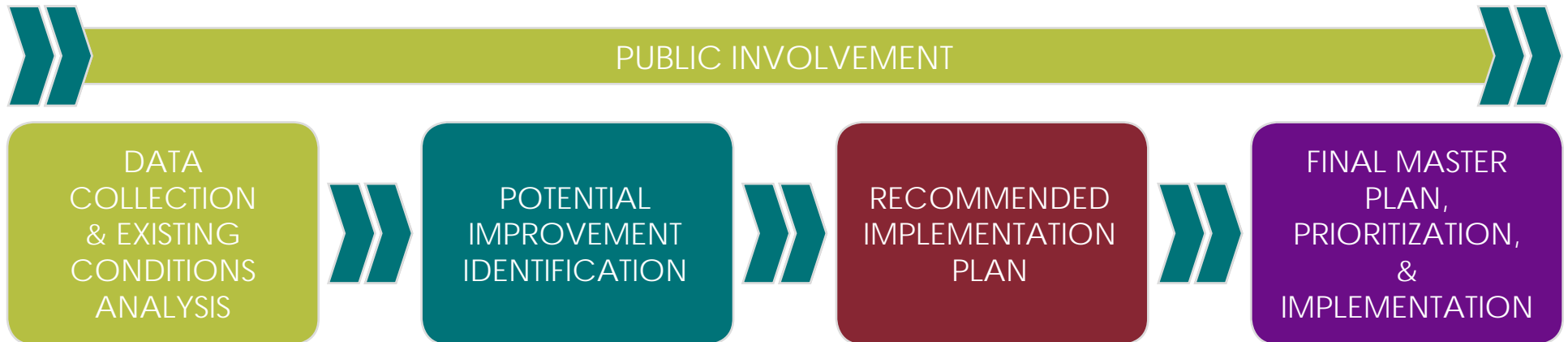
STUDY PROCESS

The Shady Banks Neighborhood Mobility Master Plan was conducted over a period of eleven months, beginning in January of 2016 and ending in November 2016. 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.

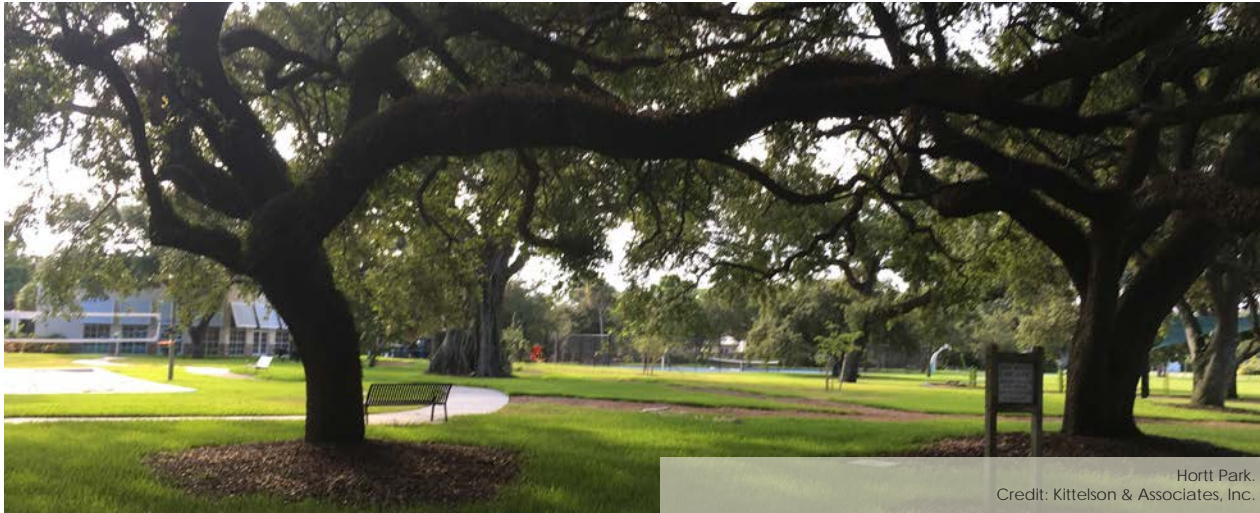
6. NEXT STEPS

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

Shady Banks is bounded by Interstate 95 on the west, Davie Boulevard on the north, and the New River to the east and south. The neighborhood is almost completely made up of single family residential, although it also contains two large parks: Hortt Park and the Bill Keith Preserve Park. Additionally, on the south side of the neighborhood, the land is zoned to

become a marina in the future. **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. However, this provides valuable waterfront boat docking space for residents.

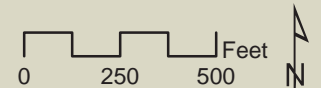


Hortt Park.
Credit: Kittelson & Associates, Inc.



Pavillon in Bill Keith Preserve Park.
Credit: Kittelson & Associates, Inc.

FIGURE 2
STUDY AREA





2

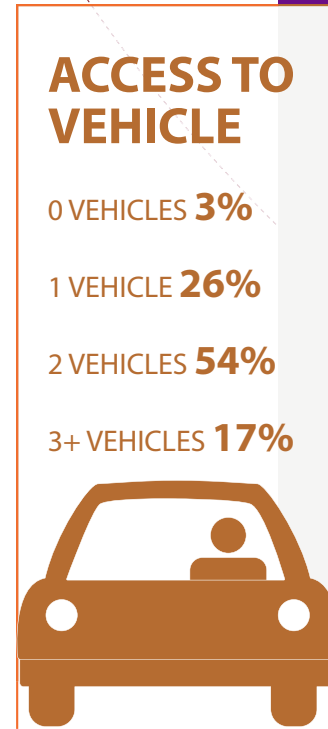
EXISTING & FUTURE
CONDITIONS

DEMOGRAPHICS

According to 2014 estimates from the U.S. Census Bureau, the Census Block Group containing Shady Banks is home to 1,063 people. Of those, 54 percent are men and 46 percent are women. Exactly 40 percent of the population is either under the age of 18 or over the age of 65. These populations are less likely to drive, and therefore require adequate pedestrian and bicycle facilities to get around. Almost everyone (97 percent) has access to at least one vehicle, and 71 percent has access to two or more vehicles. The median household income is around \$68,875, which is more than the city as a whole, where the median income is \$58,000. Approximately 74 percent of the population has at least some college education. 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 are 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 greater transportation mode split. According to the 2014 estimates from the U.S. Census Bureau, 87 percent of the population commutes less than 10 miles to work. According to the 2014 estimates, none of the residents walk or take transit to work, and 5 percent of residents bike to work. This is lower than the City's average of 9 percent of people who use alternative modes of transportation to commute to work. Commuters who get to work by bike rely on adequate pedestrian and bicycle facilities to connect the neighborhood to nearby destinations.



MODE SHARE WORKERS AGE 16+

73.0%
DRIVE ALONE

13.0%
TELECOMMUTE

9.0%
CARPOOL

5.0%
BIKE

0.0%
TRANSIT

0.0%
WALK

0.0%
OTHER

COMMUTE DISTANCE

87%
LESS THAN 10 MILES

MEDIAN HOUSEHOLD INCOME

\$68,875

33%
10 TO 24 MILES

0%
25 TO 50 MILES

0%
GREATER THAN 50 MILES

EDUCATION

AGE 25+

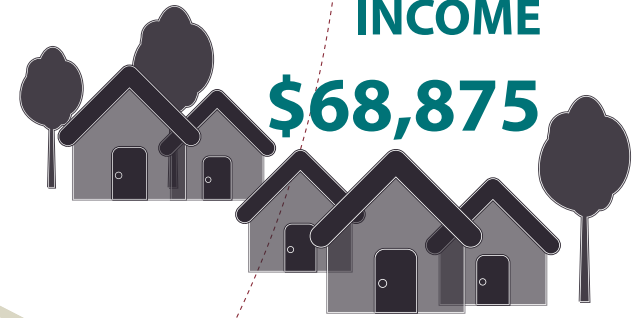
6%
LESS THAN
HIGH SCHOOL

20%
HIGH SCHOOL

30%
SOME COLLEGE/
ASSOCIATES
DEGREE

29%
BACHELORS
DEGREE

15%
MASTERS DEGREE
OR HIGHER



LAND USE AND DESTINATIONS

FIGURE 3 displays the Existing Land Use in the Shady Banks neighborhood. Shady Banks is mostly comprised of single family homes within the neighborhood, with the exception of a commercial area on the water that would likely involve a marina facility, a neighborhood park, and a preserve area. A few multi-family homes are scattered around the neighborhood.

The proximity to nearby transit creates an environment conducive for walking or using alternative modes of transportation; however, good pedestrian and bicycling infrastructure is needed to support this land use. Shady banks is a car-dependent neighborhood, ranking 60 out of 61 neighborhoods in Fort Lauderdale for walkability, with a Walk Score of 17².

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



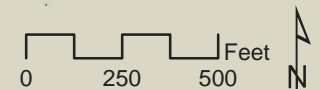
FIGURE 3
EXISTING LAND USE

Legend

Existing Land Use

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

Source: City of Fort Lauderdale GIS, 2016





STREET NETWORK

To support multimodal activity and development, the City of Fort Lauderdale has classified its streets according to the types of users as well as the surrounding land uses and environmental factors in its **Connecting the Blocks** plan. As shown in **FIGURE 4**, there are three types of streets found in and around Shady Banks:

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.

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.





NEIGHBORHOOD STREETS

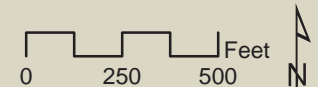
Can be commercial or residential in nature. They have low speeds and serve low traffic volumes. They are also considered essential for pedestrian and bicycle transportation. Depending on the speeds and volumes, vehicles may share the street with pedestrians and bicyclists or there may be designated pedestrian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

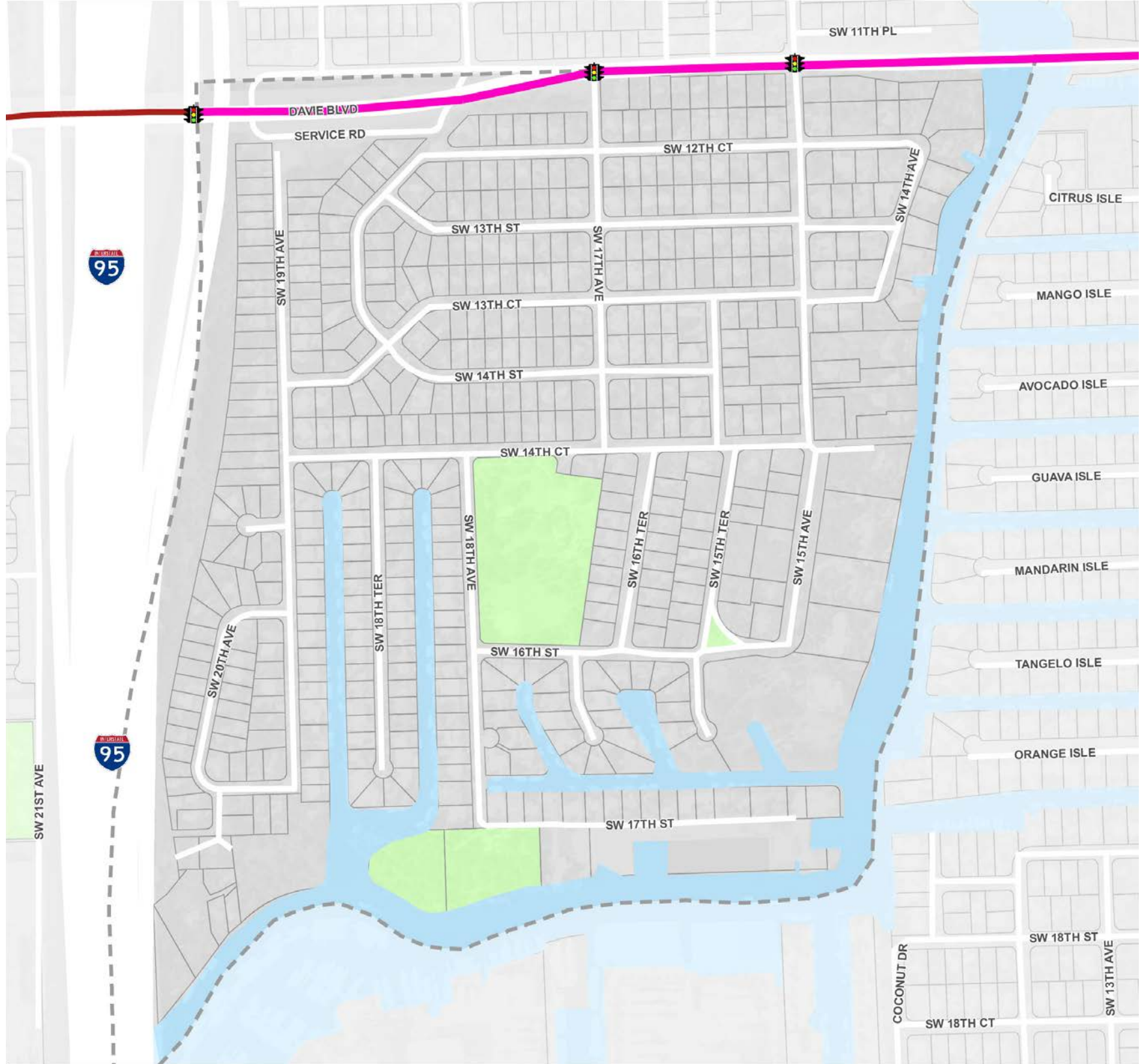
FIGURE 4
STREET NETWORK

Legend

Facilities

-  Residential Boulevard
-  Residential Avenue
-  Neighborhood Street
-  Signal





PEDESTRIAN, BICYCLE, & TRANSIT FACILITIES

As can be seen in **FIGURE 5**, the pedestrian and bicycle network in and around Shady Banks is generally incomplete. Partial sidewalks exist on sections of SW 12th Court, SW 14th Court and several other local streets, and there are very few internal pedestrian and bicycle connections. Although sidewalks are present on Davie Boulevard, bicycle facilities are missing and crosswalks to connect the neighborhood with transit stops are limited.

Both externally and internally, bicyclists are required to share the street with cars and pedestrians. Outside of the neighborhood, the high traffic volumes and speeds on Davie Boulevard create an unfriendly environment for bicyclists and pedestrians. Protected, marked facilities could help create a more inviting environment for all riders. While there are a number of destinations that people may wish to bike to, the lack of bicycle facilities may make biking more difficult than driving.

Throughout the public involvement process, residents noted that they walked mostly for recreational purposes within the neighborhood. Combined with somewhat higher traffic speeds observed via data collection, this suggests the need for sidewalks in some parts of the neighborhood where walking on the street

may not be safe. Also, neighbors advised that the existing sidewalks are not in a satisfactory condition.

Neighbors also expressed the desire to have bicycle facilities in the neighborhood, which would allow them to bike within the neighborhood to popular destinations such as the park or the preserve. There are also opportunities to connect to regional recreational areas with potential new bicycle infrastructure.

One transit route, Route 30, is operated by Broward County Transit and serves the neighborhood. Route 30 runs east/west from the West Regional Terminal in Sunrise to the Broward Central Terminal. It runs approximately every 20 minutes from 5:30 AM to 10:35 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 9:30 AM to 7:05 PM.

There are transit stops on Davie Boulevard at the north side of the neighborhood. However, most of the stops are not accessible via sidewalks from the neighborhood, and there are no crosswalks to the neighborhood directly from the stops. With improved access to transit stops, riding transit may be much more appealing to neighbors.



FIGURE 5
BICYCLE AND PEDESTRIAN FACILITIES

Legend

BCT Ridership

● 51 - 100

● 101 - 200

Transit Routes

— Route 30

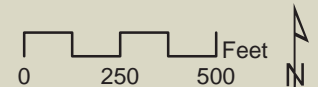
Walking & Bicycling Facilities

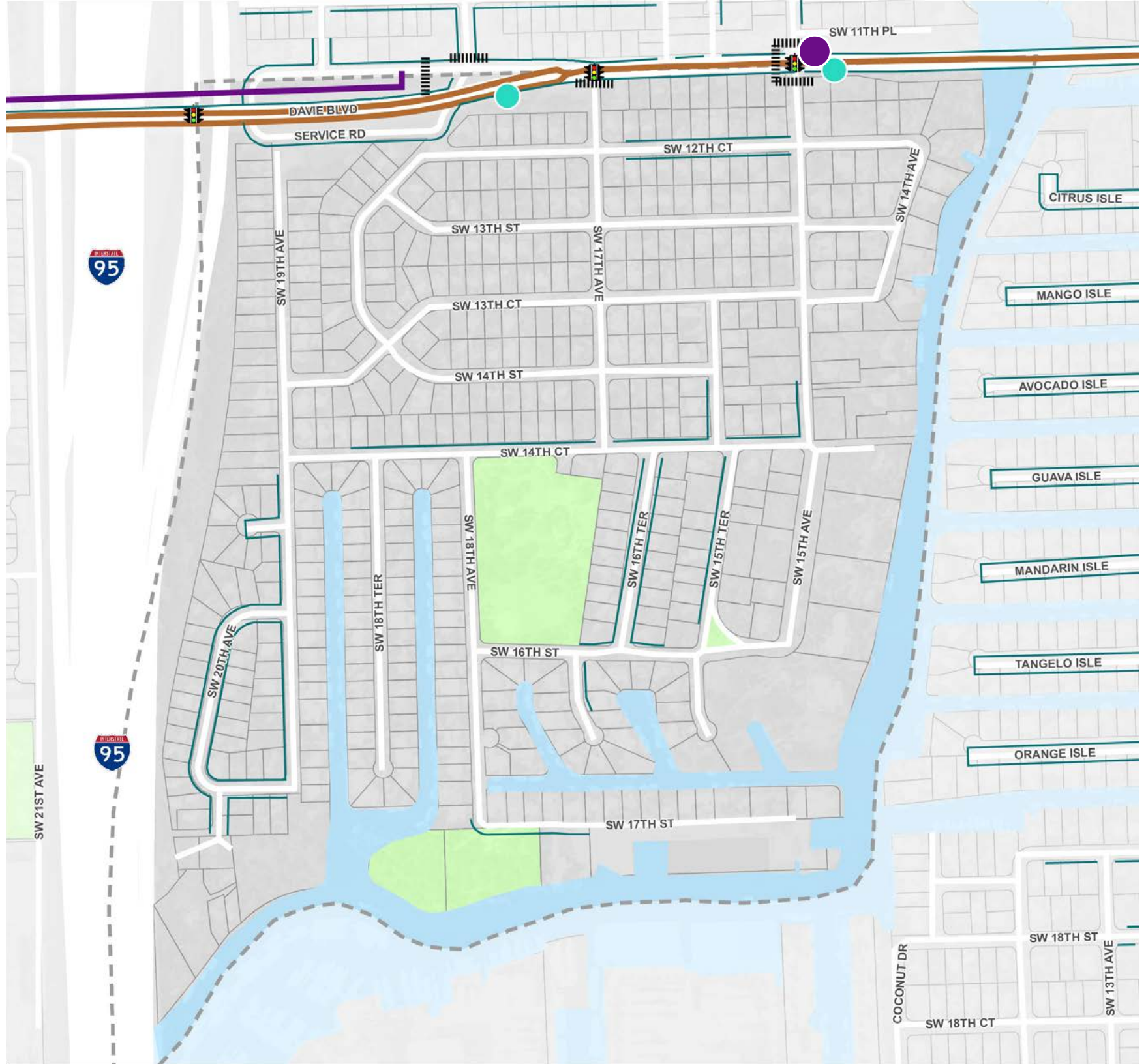
Crosswalk

Sidewalk

Bike Path

Signal





VEHICULAR ACCESS AND INTERSECTION CONTROLS

FIGURE 6 shows vehicular access points to Shady Banks and intersection controls within the neighborhood. Regarding entrances and exits to the neighborhood, there is only one entrance and one exit along Davie Boulevard. From all other sides, the neighborhood is bordered by South Fork New River or I-95. Both the entrance and the exit points are one-way signalized roadways.

Almost every intersection in the neighborhood has a form of traffic control such as a stop sign on one or more legs. **FIGURE 6** displays the location of stop-controlled intersections within the neighborhood. SW 17th Avenue, SW 15th Avenue and SW 14th Court generally function as through streets, with side streets generally yielding to traffic on those streets. Neighbors noted concerns of speeding and vehicles failing to stop at stop signs on these streets.

Neighbors expressed concern over cut-through traffic on SW 12th Court, which is generated by the heavy traffic and congestion on Davie Boulevard. Some neighbors expressed their desire to change the flow of traffic on SW 15th

Avenue and SW 17th Avenue to discourage cut through. This change would create a new issue with the left turn movement at SW 17th Avenue.

The area speed limit in Shady Banks is currently 25 mph and is posted at the entrance to the neighborhood. Generally, 20 MPH is a preferable speed limit for neighborhood streets where pedestrians, bicycles, and cars may share the road.³ The Broward County Traffic Engineering Division is in charge of the speed limits in the city and generally sets the speed limits on neighborhood streets at 25 MPH. Further discussion regarding speed limits will need to take place with the Division if changes to the speed limit are desired.

There are no speed humps or any other traffic calming measures installed within the neighborhood. However, there is one road closure at the north end of SW 19th Avenue which neighbors noted that they appreciate. Some neighbors expressed the need for traffic calming in order to prevent speeding.

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



One-way entrance into Shady Banks. Credit: Kittelson & Associates, Inc.



One-way entrance into Shady Banks. Credit: Kittelson & Associates, Inc.

FIGURE 6
VEHICULAR ACCESS AND INTERSECTION CONTROLS

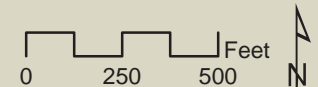
Legend

Speed Limit Signs

- 40 MPH
- 25 MPH

Facilities

- Road Closure
- ➔ One Way
- Median
- ⊕ Intersection Control
- Uncontrolled
- Stop
- 🚦 Signal





SW 21ST AVE



SW 11TH PL

DAVIE BLVD

SERVICE RD

SW 12TH CT

SW 13TH ST

SW 13TH CT

SW 14TH ST

SW 14TH CT

SW 18TH AVE

SW 16TH ST

SW 17TH ST

SW 16TH TER

SW 15TH TER

COCONUT DR

SW 18TH ST

SW 18TH CT

SW 13TH AVE

CITRUS ISLE

MANGO ISLE

AVOCADO ISLE

GUAVA ISLE

MANDARIN ISLE

TANGELO ISLE

ORANGE ISLE

VEHICULAR TRAFFIC VOLUMES

As part of this study, traffic information was collected in July 2016 for the AM and PM peak periods. This includes vehicular and pedestrian counts; vehicular speeds; and turning movement counts at select locations. A map of the locations as well as the count data can be found in **APPENDIX A**.

FIGURE 7 shows the traffic volumes at the locations where data was collected. When considering the average daily traffic, the data shows that the north end of SW 15th Avenue experiences the highest traffic volume within the neighborhood, followed by the rest of SW 15th Avenue, SW 17th Avenue and SW 14th Court. This data reflects that SW 17th Avenue and SW 15th Avenue are the only two neighborhood roads that provide a connection to Davie Boulevard. Neighbors complained about cut-through traffic on SW 12th Court, however, the traffic data does not show significantly higher

volumes on that street than on any other neighborhood streets.

In general, local streets (Neighborhood Streets) should serve 1,500 vehicles per day or less.⁴ The north end of NW 15th Avenue currently carries more than this threshold, but as long as there is one exit to the whole neighborhood, this is unlikely to change. This suggests a need for high quality pedestrian and bicycle treatments on that segment to facilitate comfortable and safe multimodal mobility.

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



FIGURE 7
TRAFFIC VOLUMES

Legend

Average Daily Traffic

- No Data Collected
- 172 - 500
- 501 - 1,000
- 1,001 - 1,500
- 1,831

Signal

Source: Traffic Counts collected July 20-21, 2016





VEHICULAR TRAFFIC SPEEDS

Speed data was collected at several locations throughout the community, and is presented in **FIGURE 8**. In general, minor speeding occurred along certain locations. The highest speeds were measured at the north end of SW 15th Avenue where the only entrance to the neighborhood is located. SW 15th Avenue, SW 17th Avenue, and SW 14th Court are the streets with higher speeds. These are also the streets where the traffic volumes are the highest. Apart from these locations, minor speeding was recorded on SW 12th Court and SW 13th Street,

which can indicate cut-through traffic on these two roads. Additionally, people exceeded the speed limit on SW 16th Terrace and SW 18th Avenue. These latter locations are adjacent to the neighborhood park where people like to walk and bike, making it a potential location for vehicular and pedestrian conflicts. Traffic calming measures should help lower speeds in these locations in order to create a safe and comfortable environment for people walking and biking to the park.



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



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

FIGURE 8
TRAFFIC SPEEDS*

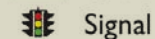
Legend

Prevailing Speeds

- No Data Collected
- 20 MPH or Less
- 21 - 25 MPH
- 25 - 30 MPH
- 35 MPH

Posted Speed

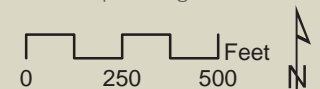
- 25 MPH
- 40 MPH



Signal

Source: Traffic Counts collected
July 20-21, 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.





SW 21ST AVE

SW 20TH AVE

SW 19TH AVE

DAVIE BLVD
SERVICE RD

SW 13TH ST

SW 13TH CT

SW 14TH ST

SW 14TH CT

SW 16TH ST

SW 17TH ST

SW 17TH AVE

SW 18TH AVE

SW 18TH TER

SW 16TH TER

SW 15TH TER

SW 15TH AVE

SW 12TH CT

COCONUT DR

SW 18TH CT

SW 18TH ST

SW 13TH AVE

SW 11TH PL

CITRUS ISLE

MANGO ISLE

AVOCADO ISLE

GUAVA ISLE

MANDARIN ISLE

TANGELO ISLE

ORANGE ISLE

INTERSECTION OPERATIONS

Existing vehicular traffic operations were analyzed for eleven intersections within Shady Banks using the traffic counts that were collected. The analysis was undertaken to help identify where vehicular congestion occurs and whether additional improvements are needed to mitigate any congestion or concerns. The majority of the intersections analyzed were internal intersections of local streets within the neighborhood. Two intersections along Davie Boulevard were also included as part of the analysis.

The intersections were analyzed using Highway Capacity Software (HCS). **FIGURE 9** summarizes the results of the intersection operations assessment. The analysis is based on the volume

to capacity (v/c) ratio, which represents vehicular demand on the intersection in relation to its physical capacity and average delay.

The analysis of internal intersections of local streets showed that all of the intersections operate at an acceptable level with low volume-to-capacity ratios and low delay.

The two intersections on Davie Boulevard experience higher levels of delay than the internal intersections. The highest level of delay occurs at the intersection of Davie Boulevard and SW 15th Avenue. The average delay is especially high for the traffic in northbound and southbound directions. However, the values are still within the acceptable range.



Typical Stop Controlled Intersection in Shady Banks.
Credit: Kittelson & Associates, Inc.



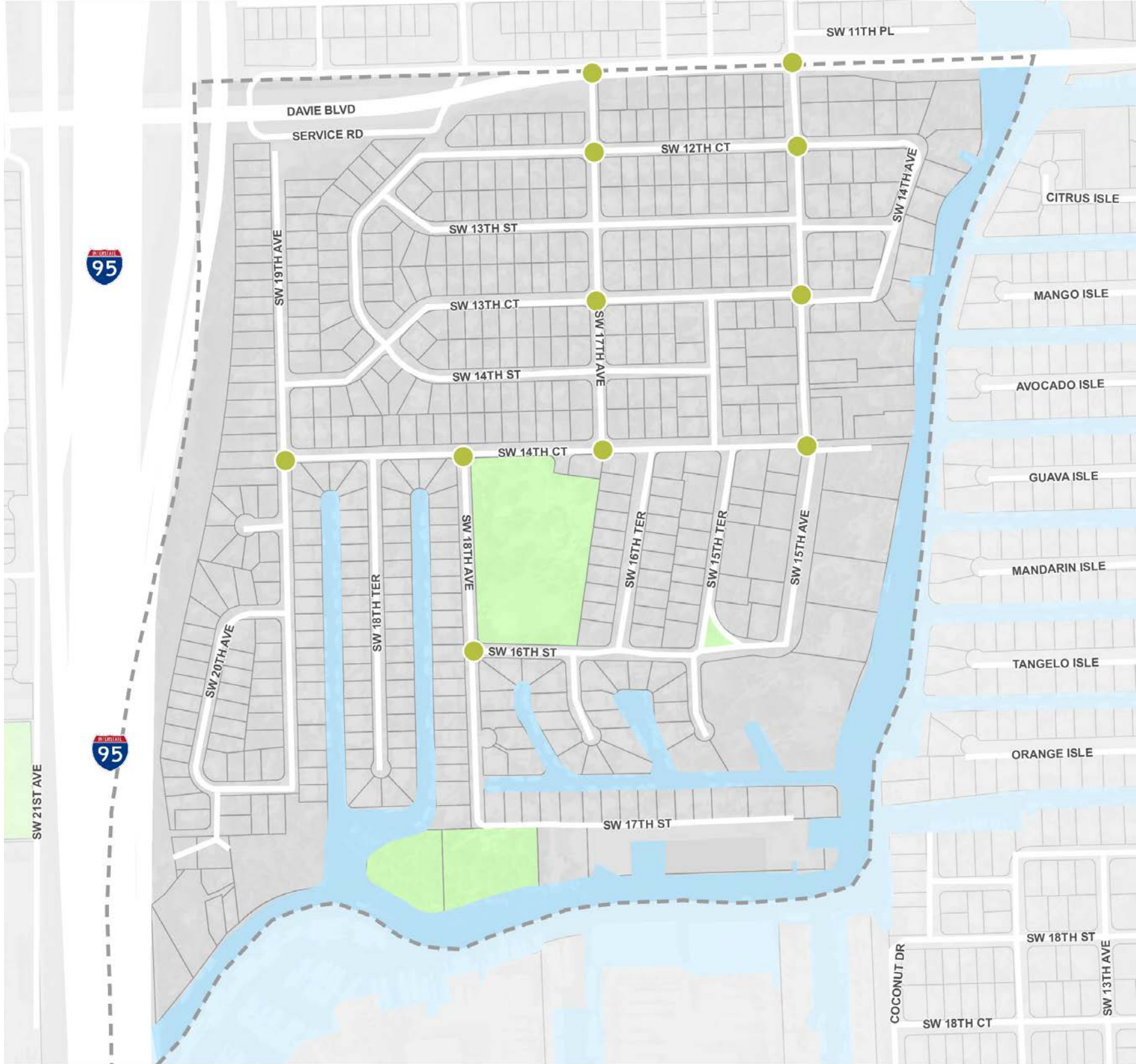
Typical Stop Controlled Intersection in Shady Banks.
Credit: Kittelson & Associates, Inc.

FIGURE 9
INTERSECTION OPERATIONS

Intersection Operations

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





PEDESTRIAN AND BICYCLE EXPERIENCE

As discussed earlier, the majority of streets within Shady Banks lack sidewalks and bicycle infrastructure. As such, pedestrians and bicyclists currently share the travel way with automobiles. This situation may not pose concerns for certain streets, but it creates safety conflicts when there is fast-moving traffic or high traffic volumes.

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 10** shows the results of this evaluation. 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 suggest that bicyclists can reasonably share the street with vehicles on two lane streets with speed limits less than 25 MPH and volumes under 5,000 vehicles per day.⁵ After that, separate,

marked facilities should be incorporated.

Only the north half of SW 19th Avenue was considered to have a “good” pedestrian and bicycle environment in terms of speed; all the other neighborhood streets had higher speeds than 20 MPH. However, many of the streets within Shady Banks were considered “fair.” The “fair” streets can continue to support neighbors that wish to walk on the street, although sidewalks will help create an even more comfortable walking environment.

Neighborhood streets with the poorest environment for pedestrians and bicyclists using the street include SW 17th Avenue, SW 15th Avenue, SW 18th Avenue and SW 14th Court. While some of these streets have sidewalks, it was noted that they are disjointed or broken. Continuous sidewalks in good condition and/or bicycle lanes may help to improve the walking and bicycling environment by providing physical separation between vehicles, pedestrians, and bicyclists on streets with higher speeds and volumes.

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.

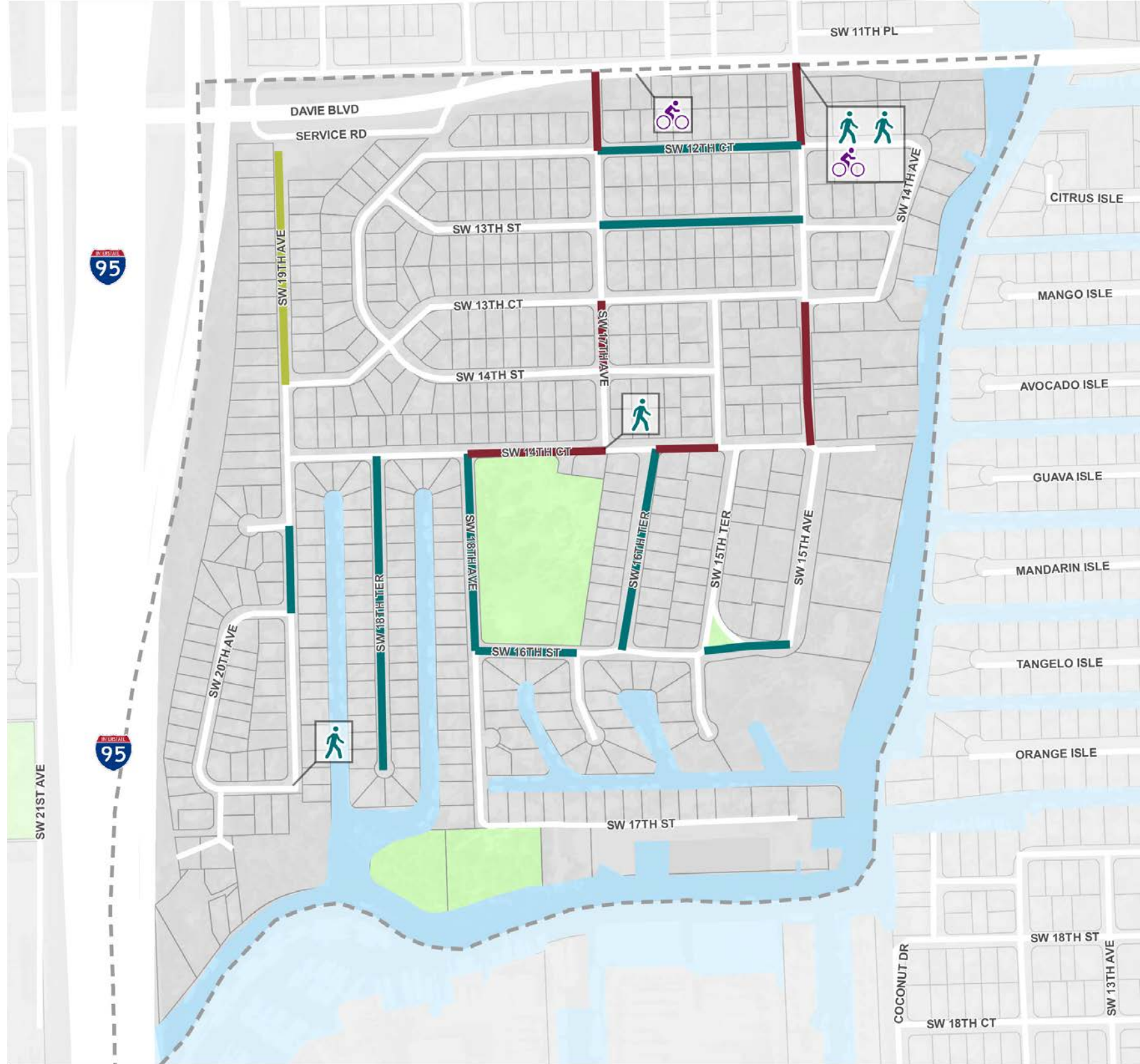
Sustrans. The National Cycle Network – Guidelines and Practical Details: Issue 2. Bristol, United Kingdom, 2006.

**FIGURE 10
PEDESTRIAN AND BICYCLE
ENVIRONMENT**



Source: Signal 4 Analytics, 2011 - 2016





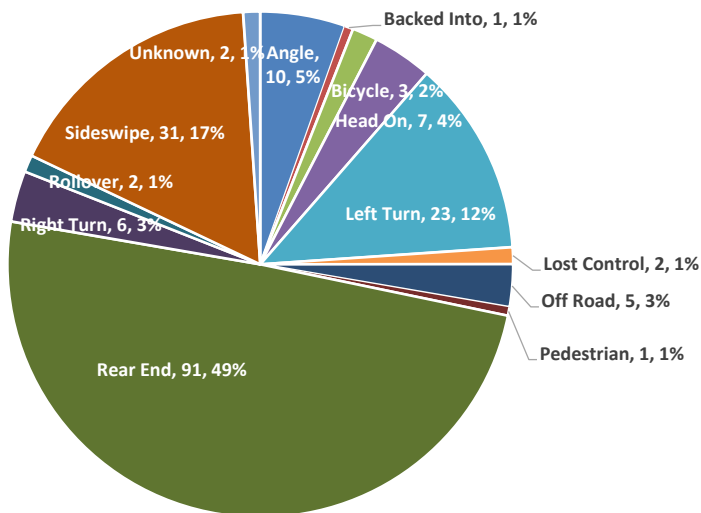
CRASHES

Crash data was collected for the five year period between 2011 and 2016 using data collected from Signal Four Analytics. **FIGURE 11, FIGURE 12,** and **FIGURE 13** display the crash data. The crash data showed 200 crashes in the area, but after further examination, we were able to determine that seven of them were miscoded at the wrong location. After filtering the miscoded crashes out, a total of 193 crashes were found within the study area, with 139 occurring at intersections and 54 occurring along segments outside of the intersection influence areas. The data shows that the majority of the crashes in the area happened along Davie Boulevard, the major roadway outside of the community. Therefore, the crashes within and outside of the neighborhood were considered separately

EXTERNAL ROADWAYS

There were a total of 184 crashes on Davie Boulevard. The majority of these occurred at the intersections of SW 17th Avenue and SW 15th Avenue. The intersection with the highest numbers of crashes was located at Davie Boulevard and SW 15th Avenue. The most common crash type was rear end crashes, making up 91 of the 184 crashes. There were also three bicycle crashes and one pedestrian crash at SW 15th Avenue. Pedestrian and bicycle crashes on high speed facilities are a point of concern because they often result in serious injuries. There was one fatal left-turn crash, happening in dusk conditions and involving a motorcycle. There were 62 crashes that resulted in an injury.

FIGURE 11
EXTERNAL CRASHES



NEIGHBORHOOD STREETS

There were a total of 9 crashes on streets inside Shady Banks. Five occurred at intersections and four occurred on segments. Five crashes were reported on SW 14th Court, and the intersection of SW 14th Court and SW 15th Avenue is the only location within the neighborhood where two crashes were reported. The most common crash type was sideswipe, making up 3 of the 9 internal crashes. These crashes generally involved vehicles hitting parked cars, which suggest that some streets might be too narrow within the neighborhood for safe parking. Intoxication was suspected in some of the crashes. Two injuries were reported and there were no fatalities. There were two pedestrian crashes and no bicycle crashes.

FIGURE 12
INTERNAL NEIGHBORHOOD CRASHES

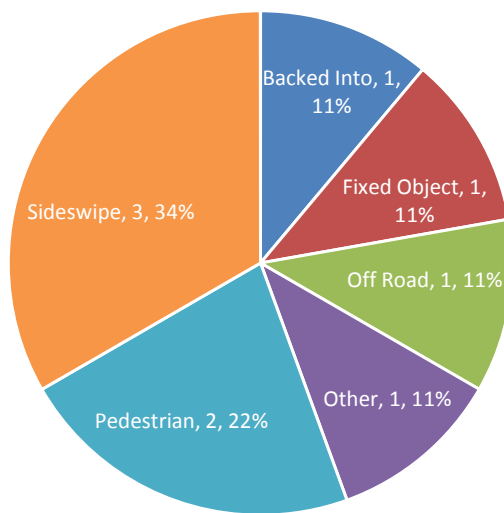


FIGURE 13
CRASH MAP

Legend

Intersection Crashes

- 1 - 2
- 3 - 9
- 10 - 15
- 96

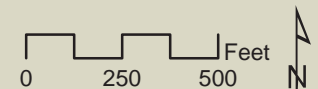
Segment Crashes

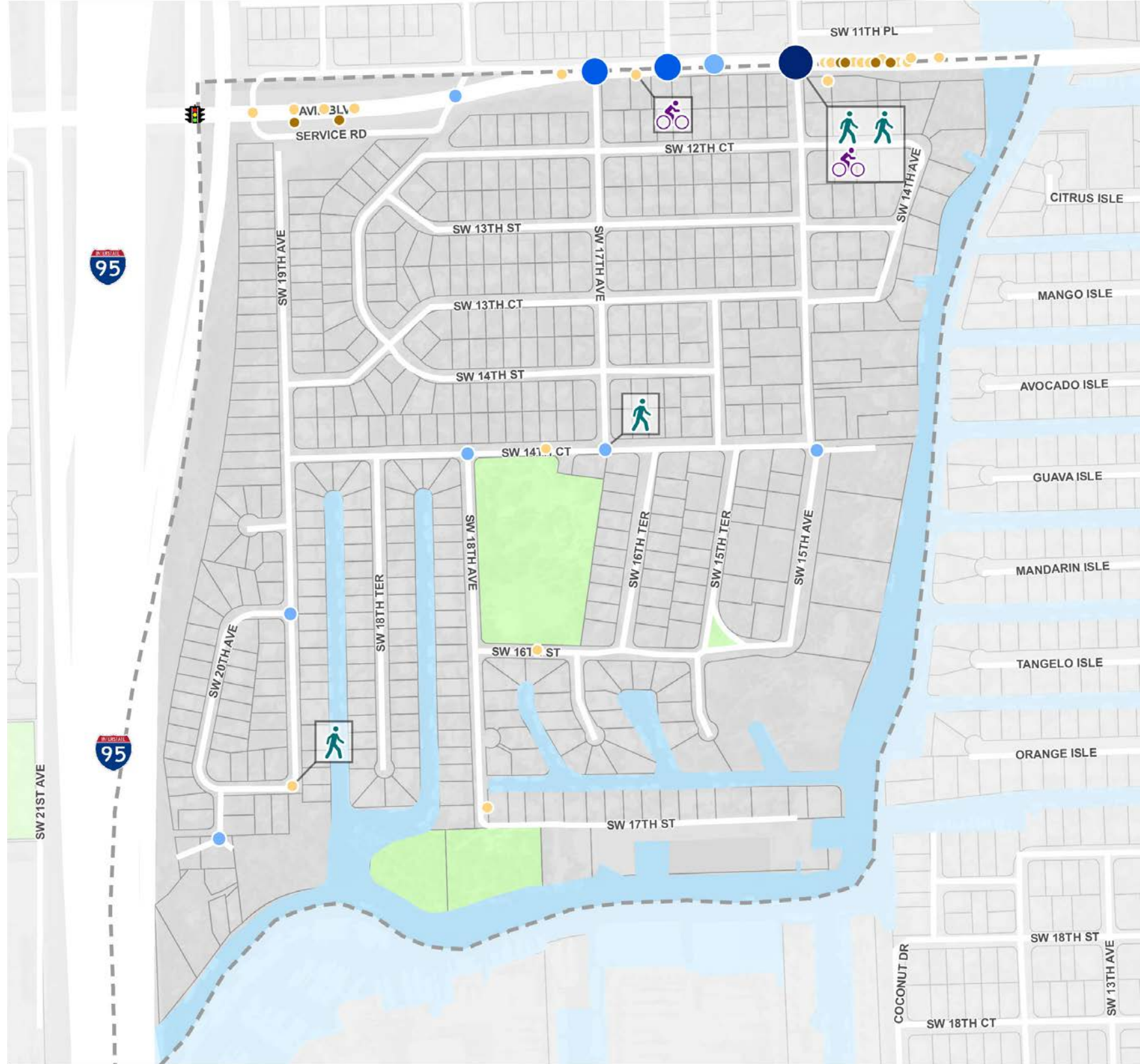
- 1
- 2 - 6

Pedestrian + Bicycle Crashes

- 🚶 Pedestrian Crash
- 🚲 Bicycle Crash

Source: Signal 4 Analytics, 2011 - 2016





3

COMMUNITY
ENGAGEMENT

COMMUNITY ENGAGEMENT

While created and supported by strong technical analysis, this plan is intended to represent the needs and desires of the community. In order to do this, a series of public workshops were held at four Shady Banks Home Owner's Association meetings at Hortt Park Community Center. The first was held on June 15, 2016 at 7:00 PM, the second was held on September 26, 2016 at 7:00 PM, the third meeting was held on November 16, 2016 at 7:00 PM, and the fourth was held on January 15, 2017 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 26 community members 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 the framework of the plan. A total of 104 comments were received. The main issues identified were the need for traffic calming; reduce traffic cutting through the neighborhood; better pedestrian and bicycle connectivity; access and connectivity; wayfinding; neighborhood beautification; stormwater management.

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 30 residents 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 42 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 raised intersections, beautification, sidewalks, bicycle lanes, pedestrian scale lighting, 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 26 residents attended the third meeting. In general, most residents were happy with the recommendations. There were a total of 76 comments received, and most were focused on the strategies. This resulted in several strategies being added for traffic calming. Additionally, there was some debate about raised intersections. While they are clearly supported, the priority for their installation was discussed. It was determined that raised intersections will remain in the master plan, however the neighbors would prioritize them as they desire. As this plan is a living document, the raised intersections can be built if, when and where the neighbors ultimately decide. Additionally, the neighbors asked the team to consider mini roundabouts at SW 17th Avenue and SW 12th Court, SW 15th Avenue and SW 12th Court, SW 17th Avenue and SW 14th Court, SW

15th Avenue and SW 14th Court.

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 22 people attended and there were 53 individual pieces of input received. The top strategies for prioritization were as follows:

1. Installing a gateway treatment at SW 17th Ave and Davie Blvd and changing the geometry to slow down traffic
2. Constructing new sidewalks and filling sidewalk gaps on SW 14th Ct
3. Modifying the intersection of Davie Blvd at SW 15th Ave to better control traffic and add bike lanes
4. Conducting a safety study on Davie Blvd from SW 17th Ave to the bridge
5. Modifying the signal timing at SW 15th Ave and Davie Blvd to better move traffic north and south

In addition to this meeting, the City will also continue to work with Shady Banks 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.

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 **traffic calming** along major roads within the neighborhood, as they currently exhibit speed that exceed the desired maximum for the area. This is especially true when considering the potential for pedestrian and bicycle trips along those roads.

Traffic calming measures are also needed to help **discourage cut-through traffic**. Drivers utilize SW 17th Ave, SW 12th Ct, and SW 15th Ave to bypass the signals on Davie Boulevard and to access Downtown through neighborhood streets to the north of Shady Banks.

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 are **a number of destinations** within and near the study area. Because of their proximity to the residential uses, **good overall connectivity** in the study area is desired to facilitate travel along key pedestrian and bicycle desire lines.

Crashes are concentrated along Davie Boulevard, the northern limit of the study area. Along Davie Boulevard, there are bus stops on the south side of the road near SW 17th Avenue and SW 15th Avenue. A crosswalk is missing on the east leg at the intersection of SW 15th Avenue. Additionally, long signal cycle lengths require long waits for pedestrians at marked crossings. These factors may encourage people to cross at undesigned locations.

STUDY GOALS

In general, the synthesis points to the following goals:

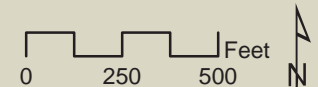
1. Reduce Cut Through Traffic
2. Calm Traffic
3. Enhance the Pedestrian and Bicycle Environment

FIGURE 14 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 Shady Banks. The final master plan represents the final progression to solutions from this initial illustration of improvements needed.

FIGURE 14
IMPROVEMENT NEEDS

Issues + Opportunities

- Lack of Water Trolley Stop
- Lack of Lighting
- Lack of Street Trees/Shade
- Intersection Issue
- Need Crosswalk
- Need Bicycle Connection
- Poor/No Sidewalk
- Traffic Backs up
- Flooding
- Speeding/Cut Through
- Poor Bidge Operations
- High Crash Volume





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 Shady Banks.

The plan presented in this report focuses on strategies to calm traffic and improve mobility within and around Shady Banks. It also considers strategies to connect Shady Banks to the rest of the City. These include strategies on Davie Boulevard; strategies concerning B-Cycle and the Water Trolley; and the proposed Bicycle Boulevard. Although these strategies are 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.

In order to achieve the neighborhood's goals, the Neighborhood Mobility Master Plan recommends intersection, mid-block, and street focused traffic calming strategies as well as enhancements to the pedestrian and bicycling network. **FIGURE 15** 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

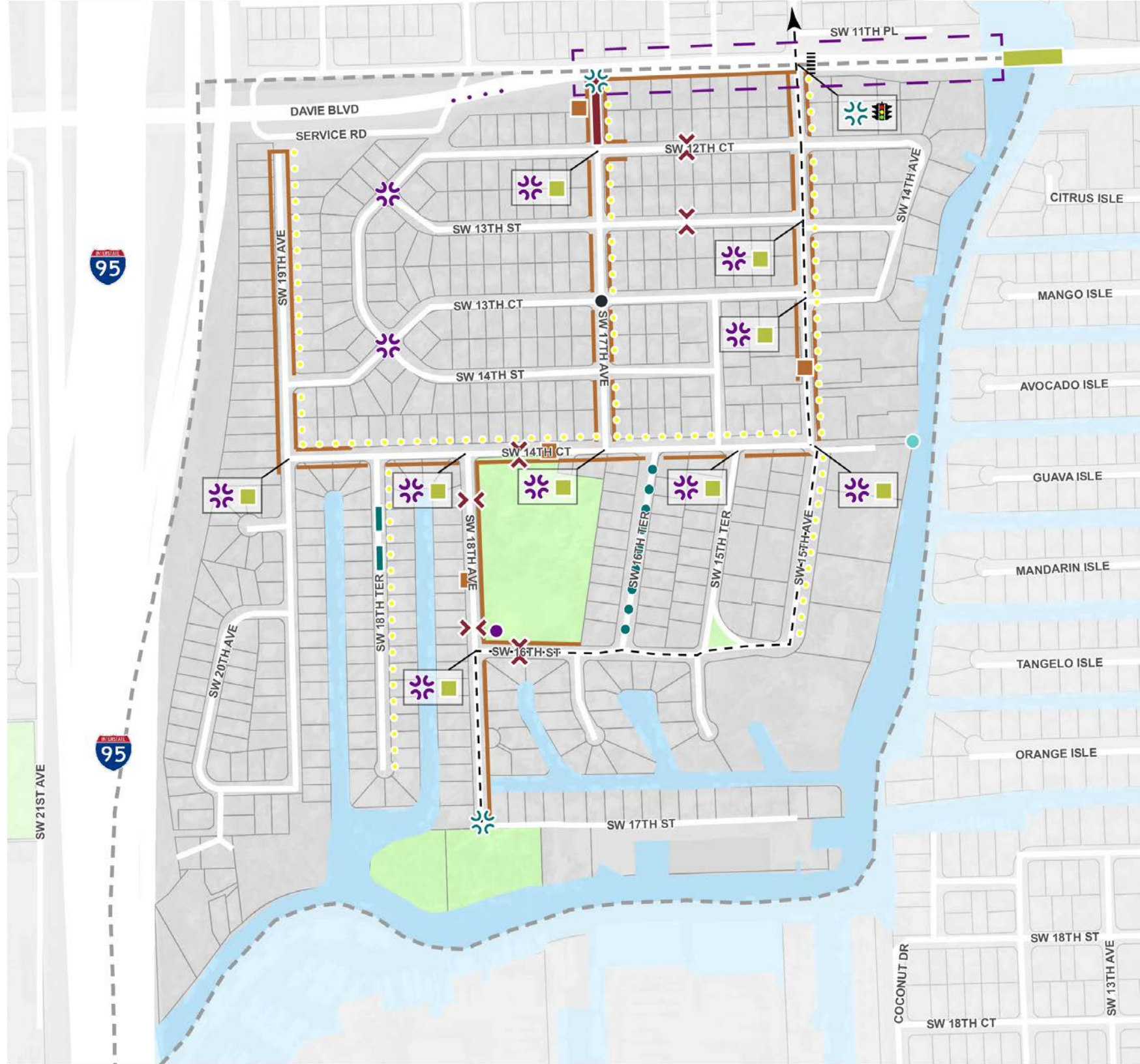
Many of the strategies in this plan will require further study prior to implementation. This will include coordination with the neighbors who live in close proximity to the improvement location and technical analysis to determine the most appropriate design, location, and signage for the strategy.

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 15
NEIGHBORHOOD MOBILITY
MASTER PLAN

- New Water Trolley Stop
- New B-Cycle Station
- Add Pedestrian Lighting
- Add Street Trees
- Add Plastic Bollards
- Adjust Signal Timing
- Adjust Bridge Timing
- Tighten Turning Radii
- Speed Signage Program
- Construct Raised Intersect
- >< Construct Pinch Point
- - Construct Mini Median Isla
- - - Create Bicycle Boulevard
- Construct Sidewalk
- Construct Mini Roundabout
- Change Geometry
- Install Gateway Treatment
- ||||| Paint Crosswalk
- [-] Conduct Safety Study





● NEW WATER TROLLEY STOP



The Water Trolley connects to Downtown and Las Olas free of charge. A new stop at on SW 14th Court could provide better access for Shady Banks neighbors by allowing them to leave their cars behind when headed to many of the desired destinations.

● NEW B-CYCLE STATION



A new B-Cycle station in Hортt Park could provide access to bicycles for Shady Banks residents. This could help to provide better bicycle access to surrounding destinations. It could also encourage visitors to Hортt Park and Bill Keith Preserve to bike instead of driving, reducing neighborhood traffic.

● ● ● PEDESTRIAN LIGHTING



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 and/or LED to save energy and promote sustainability.

● ● ● ADD STREET TREES



Street trees help create a sense of enclosure along the road, narrowing a driver's field of vision and thus encouraging lower vehicle speeds. They can also help provide a buffer between pedestrians and vehicles. They also help to lower temperatures, provide shade for pedestrians, and absorb stormwater and airborne pollutants.

● ● ● ADD PLASTIC BOLLARDS



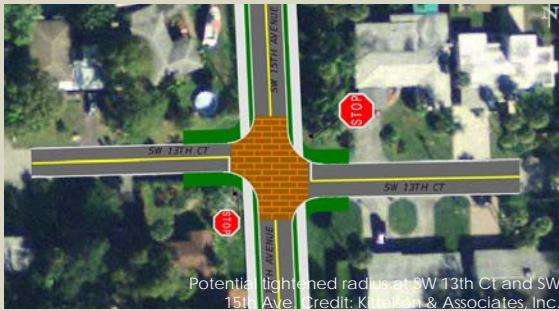
Neighbors noted that people drive through the striped portion of Davie Blvd west of SW 17th Avenue, which leads directly into the turn lane into Shady Banks. Adding plastic bollards to the striped safety zone could help to deter people from using it to speed through and could deter cut through traffic within the neighborhood.

■ ADJUST BRIDGE & SIGNAL TIMING



Traffic backs up on Davie Blvd. when the bridge opens. Adjusting the schedule could help ease traffic. Also, the signal at SW 15th Ave does not allow westbound traffic through when the bridge is up. Adjusting the signal timing to better work with the bridge timing could help ease traffic.

TIGHTEN TURNING RADII



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.

SPEED SIGNAGE PROGRAM



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. "No Outlet" signs on SW 18th Avenue could also help limit cut through.



RAISED INTERSECTION



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.

PINCH POINT



Pinch points narrow the travel way, requiring drivers to slow down or yield to each other to maneuver through the area. Pinch points can be created using curb extensions, landscaping, or edge islands in the street. If desired, pinch points can be designed to accommodate bicycles, as shown above.

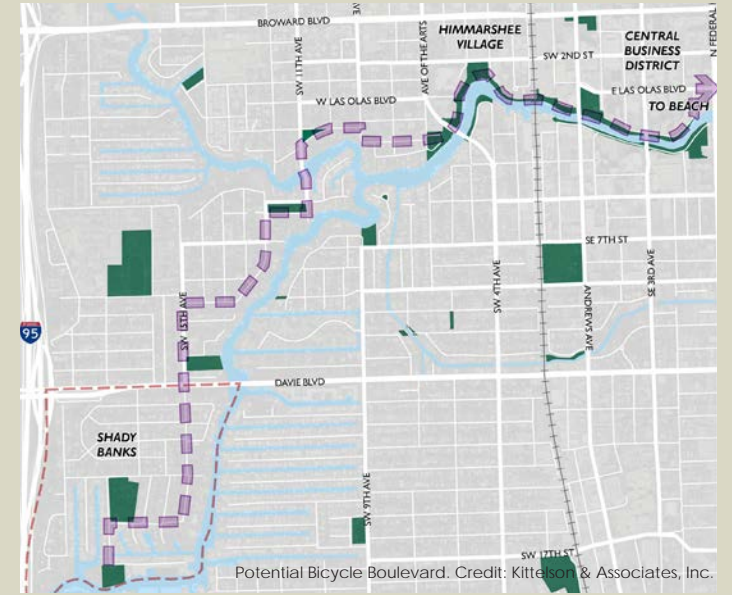
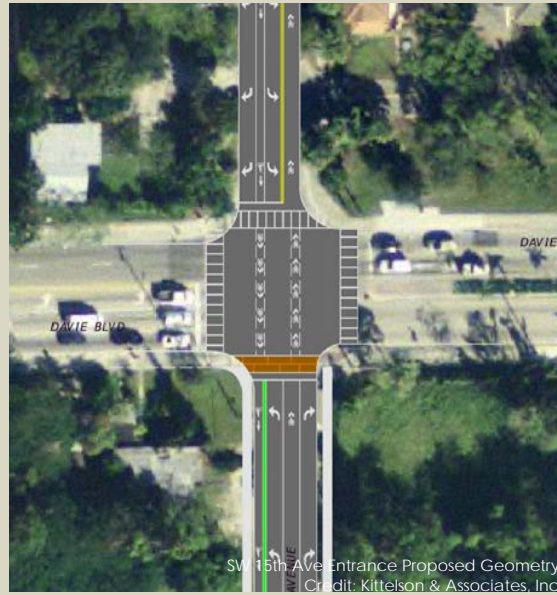
MINI MEDIAN ISLANDS



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.

CREATE BICYCLE BOULEVARD

There are a number of parks in Shady Banks and destinations near Shady Banks north of Davie Boulevard that are difficult to access via biking or walking due to a lack of dedicated space. A bicycle boulevard could help to address this. Bicycle Boulevards are low volume and low speed streets that have been optimized for bicycle travel through treatments such as traffic calming and traffic reduction, signage and pavement markings, and intersection crossing treatments. Shady Banks could easily be connected to the destinations to the north and east via streets that have already been or could easily be traffic calmed with small improvements, eventually connecting into the Riverwalk.



CHANGE GEOMETRY



At SW 17th Avenue, removing the high speed right turn lane and installing a brick street, a neckdown, and a raised intersection at SW 12th Court can discourage cut through, slow traffic, and better direct traffic movement.



At SW 15th Avenue, narrowing the exit lanes creates space for sidewalks and bicycle facilities and can help to reduce the number of people turning the wrong way into Shady Banks, which neighbors noted as a concern.



At the intersection of SW 18th Avenue and SW 17th Street, restriping and adding stop signs could help to address the sight distance issue caused by a wall and a sharp turn. Painting the intersection could further help to calm traffic.

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 throughout the neighborhood but were especially supported on SW 17th Ave, SW 15th Ave, SW 14th Ct, and SW 18th Ave. A network of sidewalks will improve pedestrian comfort and accessibility. A 3' grass buffer may separate the sidewalk from the street.

MINI ROUNDABOUT



Shady Banks 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.

GATEWAY TREATMENT



Potential Gateway Treatment. Credit: Cadence.

Neighbors noted that drivers speed into the entrance on SW 17th Avenue. Paving the streets with brick can help to slow vehicles. Combined with a new physical gateway feature to the neighborhood, they can help to alert drivers to be watchful for pedestrians or bicyclists. Stamped concrete could provide a cheaper alternative.

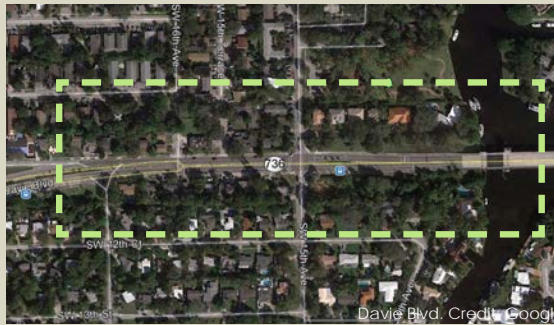
PAINT CROSSWALK



SW 15th Ave Missing Crosswalk. Credit: Kittelson & Associates, Inc.

There is no crosswalk on the east leg of the intersection of Davie Boulevard and SW 15th Avenue. However, there is a bus stop on the northeast corner of the intersection. Neighbors noted that transit riders cross on the east leg even though there is no crosswalk. Painting a crosswalk can help address this issue.

CONDUCT SAFETY STUDY



There were 193 crashes in the Shady Banks study area between June 2011 and June 2015, and 91 (47%) of them occurred on Davie Boulevard between SW 17th Ave and the Bridge. A safety study should be completed in this area to help determine solutions to reduce the number of crashes.

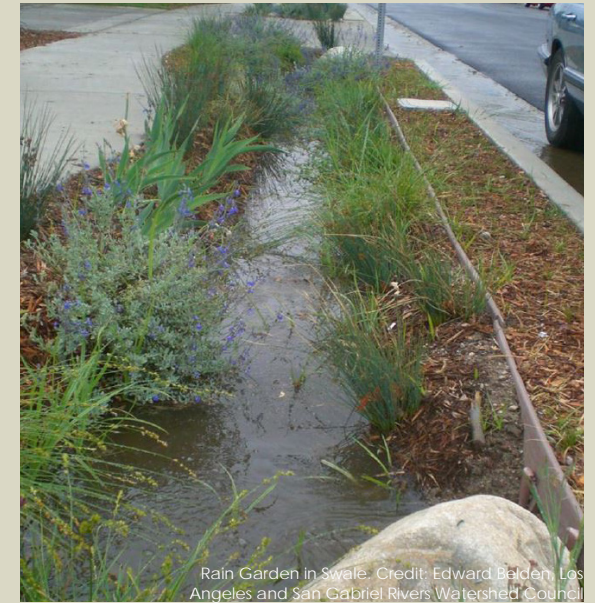
SUSTAINABILITY BEST PRACTICES

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 Shady Banks 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.

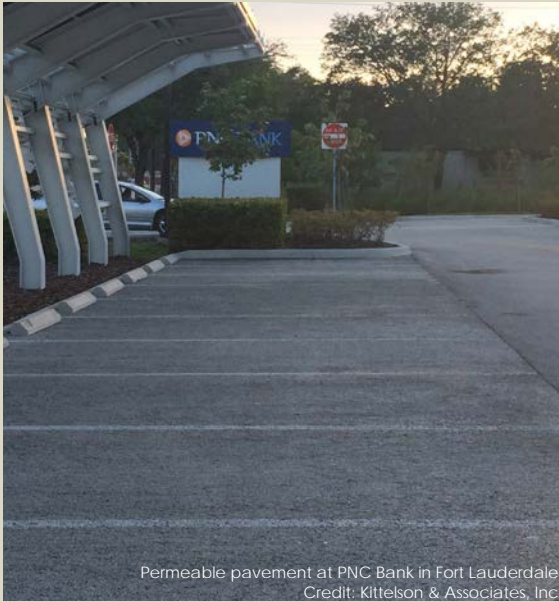
MANAGE STORMWATER RUNOFF



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.

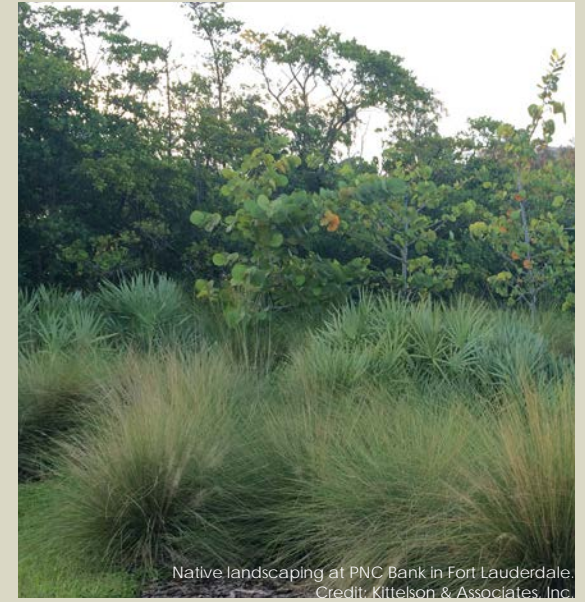
TREE-LINED AND SHADED STREETS



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 16** 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.

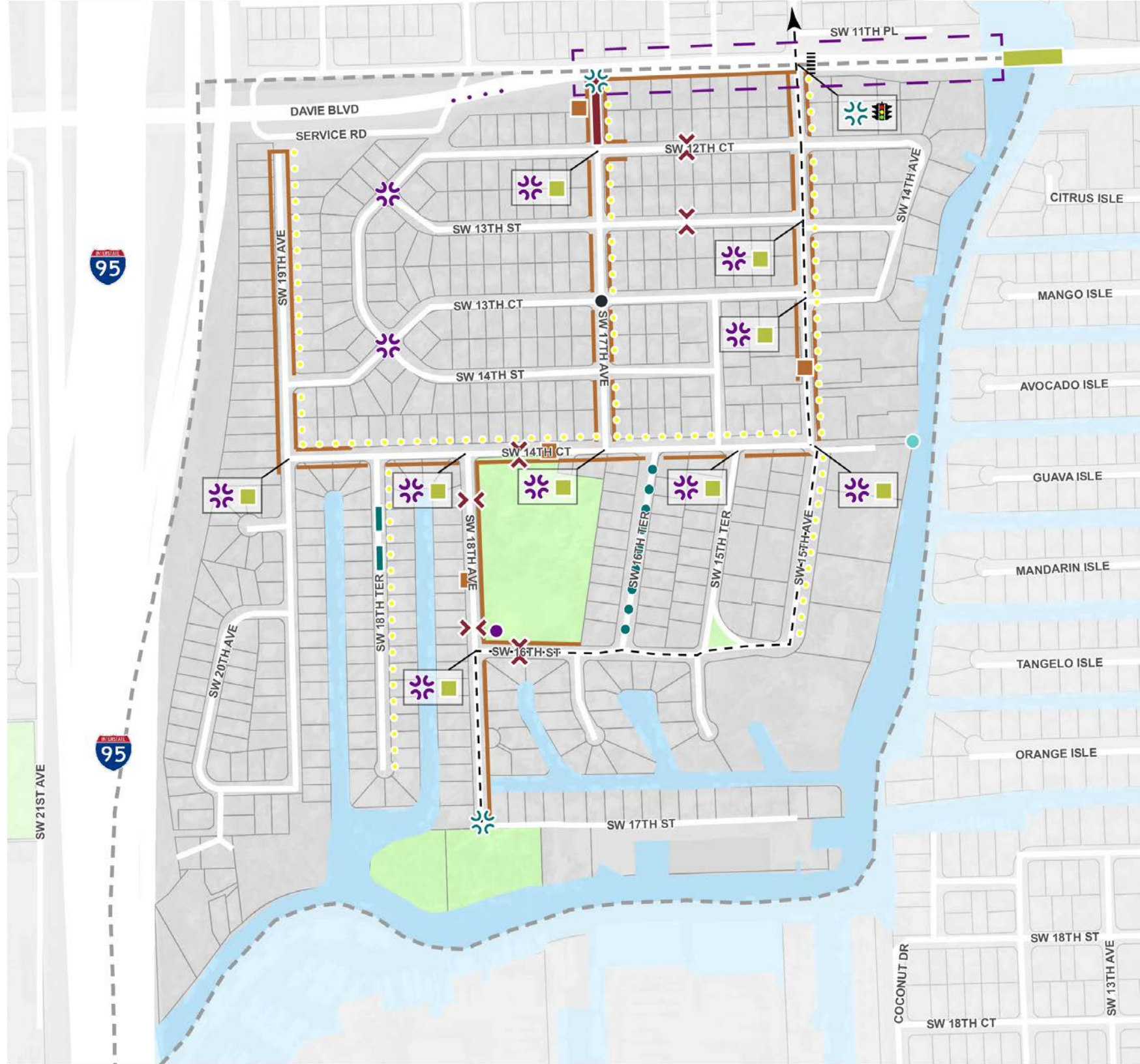
Low end estimate is based on a 20 percent contingency and high end estimates are based on a 30 percent contingency.

FIGURE 16
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 2016 Dollars)		Total Cost* (for all locations in 2016 Dollars)		Timing	
		Low End	High End	Low End	High End		
Internal Streets							
●● Pedestrian Lighting	139 Lights	\$4,500	(Average cost per solar powered pedestrian light in City of Fort Lauderdale)	\$626,850	\$626,850	●	
○○ Add Street Trees	45 Trees	\$700	\$800	\$31,733	\$36,267	●	
✿ Tighten Curb Radii	11 Locations	Values Determined Based on Actual Locations		\$3,500	\$3,900	●	
▣ Speed Signage Program	1 Movable Sign	\$2,800	\$7,500	\$2,800	\$7,500	●	
■ Raised Intersection	3 Legs	6 Locations	\$23,600	\$26,500	\$141,600	\$159,000	●
	4 Legs	3 Locations	\$24,700	\$27,800	\$74,100	\$83,400	●
✕ Construct Pinch Point	6 Locations	\$2,100	\$2,400	\$12,600	\$14,400	●	
▭ Construct Mini Median Island	1 Location	\$13,300	\$14,900	\$13,300	\$14,900	●	
— Construct Sidewalk	9,620 Feet	\$39	\$44	\$375,200	\$423,300	●	
○ Construct Mini Roundabout	1 Location	\$40,600	\$45,600	\$40,600	\$45,600	●	
✿ Change Geometry**	1 Location	\$260	\$1,324	\$260	\$1,324	●	
— Install Gateway Treatment	Varies Based on Agreed Upon Design					●	
Total Cost				\$1,183,343	\$1,414,641		



6

NEXT STEPS

NEXT STEPS

The Shady Banks 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 Shady Banks. 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 Shady Banks residents, however the City of Fort Lauderdale and the consultant team have created a guide to help guide Shady Banks in developing this prioritization. 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 to align with potential funding sources. 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. Additionally, a guiding [Prioritization Memorandum](#) has been created based on input from neighbors and other factors, such as cost information, feasibility, and others to help guide Shady Banks in the implementation of this plan.

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 Shady Banks 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 Shady Banks; grants applied for by Shady Banks, 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

Count Locations + Types

Speed + Volume Counts

 2-Day 24-hr bi-directional

Turning Movement Counts

 1-Day 6-hr peak period with bike/ped



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.

Location	Treatment	Reason	Comments	Prioritization Score	Measure												
					1	2	3	4	5	6	7	8	9	10*	11	12	13
SW 17 Ave between Davie Blvd and SW 14 Ct	Construct Sidewalk	Ped/Bike		47	2	0	0	2	2	0	1	0	2		0	2	2
SW 17 Ave between Davie Blvd and SW 14 Ct	Add Pedestrian Lighting	Ped Lighting		38	2	0	0	0	0	0	2	0	2		0	2	2
SW 17 Ave between Davie Blvd and SW 12 Ct	Install Gateway Treatment	Entryway, Congestion Relief, Traffic Calming		35	1	1	0	0	0	0	1	0	2		0	2	2
SW 18 Ave at SW 13 St	Tighten Turning Radii	Traffic Calming		27	2	0	0	0	0	0	1	0	0		0	2	2
SW 18 Ave at SW 13 Ct	Tighten Turning Radii	Traffic Calming		27	2	0	0	0	0	0	1	0	0		0	2	2
SW 18 Ave at SW 14 Ct	Tighten Turning Radii	Traffic Calming		27	2	0	0	0	0	0	1	0	0		0	2	2
SW 18 Ave at SW 14 Ct	Construct Raised Intersection	Traffic Calming		27	2	0	0	0	0	0	1	0	0		0	2	2
SW 18 Ave at SW 16 St	Tighten Turning Radii	Traffic Calming		27	2	0	0	0	0	0	1	0	0		0	2	2
SW 18 Ave at SW 16 St	Construct Raised Intersection	Traffic Calming		27	2	0	0	0	0	0	1	0	0		0	2	2
Hortt Park	New B-Cycle Station	Ped/Bike		41	2	0	1	0	0	2	0	0	1		0	2	2
SW 18 Ave at SW 17 St	Change Geometry	Sight Distance		34	2	2	0	0	0	0	2	0	0		0	2	2
SW 18 Ave between SW 14 Ct and SW 16 St	Construct Pinch Points	Traffic Calming		25	1	0	0	0	0	0	1	0	0		0	2	2
SW 18 Ave between SW 14 Ct and SW 16 St	Speed Signage Program	Traffic Calming		23	0	0	0	0	0	0	1	0	0		0	2	2
SW 18 Ave between SW 14 Ct and SW 17 St	Construct Sidewalk	Ped/Bike		43	2	0	0	2	2	0	1	0	1		0	2	2
SW 19 Ave at SW 14 Ct	Tighten Turning Radii	Traffic Calming		27	2	0	0	0	0	0	1	0	0		0	2	2
SW 19 Ave at SW 14 Ct	Construct Raised Intersection	Traffic Calming		27	2	0	0	0	0	0	1	0	0		0	2	2
SW 19 Ave between SW 14 Ct and End	Construct Sidewalk	Ped/Bike		43	2	0	0	2	2	0	1	0	1		0	2	2
SW 19 Ave between SW 14 Ct and End	Add Pedestrian Lighting	Ped Lighting		34	2	0	0	0	0	0	2	0	1		0	2	2
SW 16 Ter from SW 16 St to SW 14 Ct	Add Street Trees	Landscaping		26	1	0	0	0	0	0	0	0	1		0	2	2
SW 18 Ter from SW 14 Ct to End	Construct Mini Median Island	Traffic Calming		23	0	0	0	0	0	0	1	0	0		0	2	2
SW 18 Ter from SW 14 Ct to End	Add Pedestrian Lighting	Ped Lighting		34	2	0	0	0	0	0	2	0	1		0	2	2
SW 14 Ct at SW 15 Ter	Tighten Turning Radii	Traffic Calming		27	2	0	0	0	0	0	1	0	0		0	2	2
SW 14 Ct at SW 15 Ter	Construct Raised Intersection	Traffic Calming		27	2	0	0	0	0	0	1	0	0		0	2	2
SW 14 Ct between SW 18 Ave and SW 17 Ave	Construct Pinch Points	Traffic Calming		25	1	0	0	0	0	0	1	0	0		0	2	2
SW 14 Ct between SW 18 Ave and SW 17 Ave	Speed Signage Program	Traffic Calming		23	0	0	0	0	0	0	1	0	0		0	2	2
SW 14 Ct from SW 19 Ave to SW 15 Ave	Add Pedestrian Lighting	Ped Lighting		34	2	0	0	0	0	0	2	0	1		0	2	2
SW 14 Ct (private property)	New Water Trolley Stop	Multimodal Connectivity	Coordinate with Water Trolley	20	0	0	0	0	0	0	0	0	0		0	2	2
SW 14 Ct from SW 19 Ave to SW 15 Ave	Construct Sidewalk	Ped/Bike		38	2	0	0	0	2	0	0	0	1		0	2	2



K KITTELSON
& ASSOCIATES

cādence