NEIGHBORHOOD **MOBILITY** MASTERPLAN

PALM AIRE
VILLAGE
WEST

Palm Aire Village West

Neighborhood Mobility Masterplan

December 2015

Prepared for:

Palm Aire Village West
& The City of Fort Lauderdale
Transportation and Mobility Department

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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.

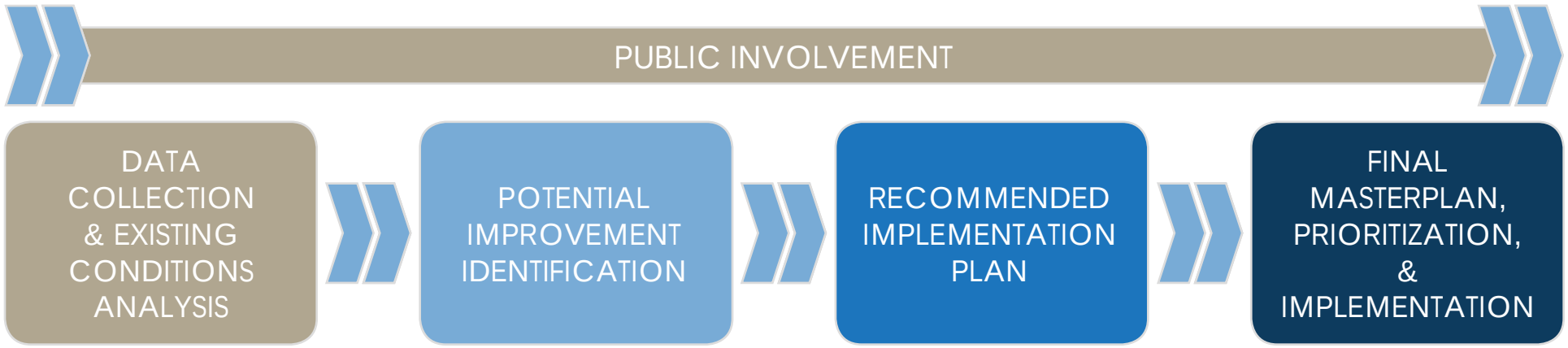
This plan focuses on Palm Aire Village West, a neighborhood in the northwest corner of Fort Lauderdale. It is part of Palm Aire, a collection of single-family homes within the 5,000-acre Palm Aire Country Club community. In 1999, Palm Aire Village West community members voted to be incorporated into the City of Fort Lauderdale. 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 Palm Aire Village West Neighborhood Mobility Masterplan.

STUDY PROCESS

The Palm Aire Village West Neighborhood Mobility Masterplan 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 masterplan. 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. MASTERPLAN

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.

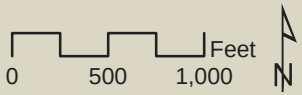
STUDY AREA

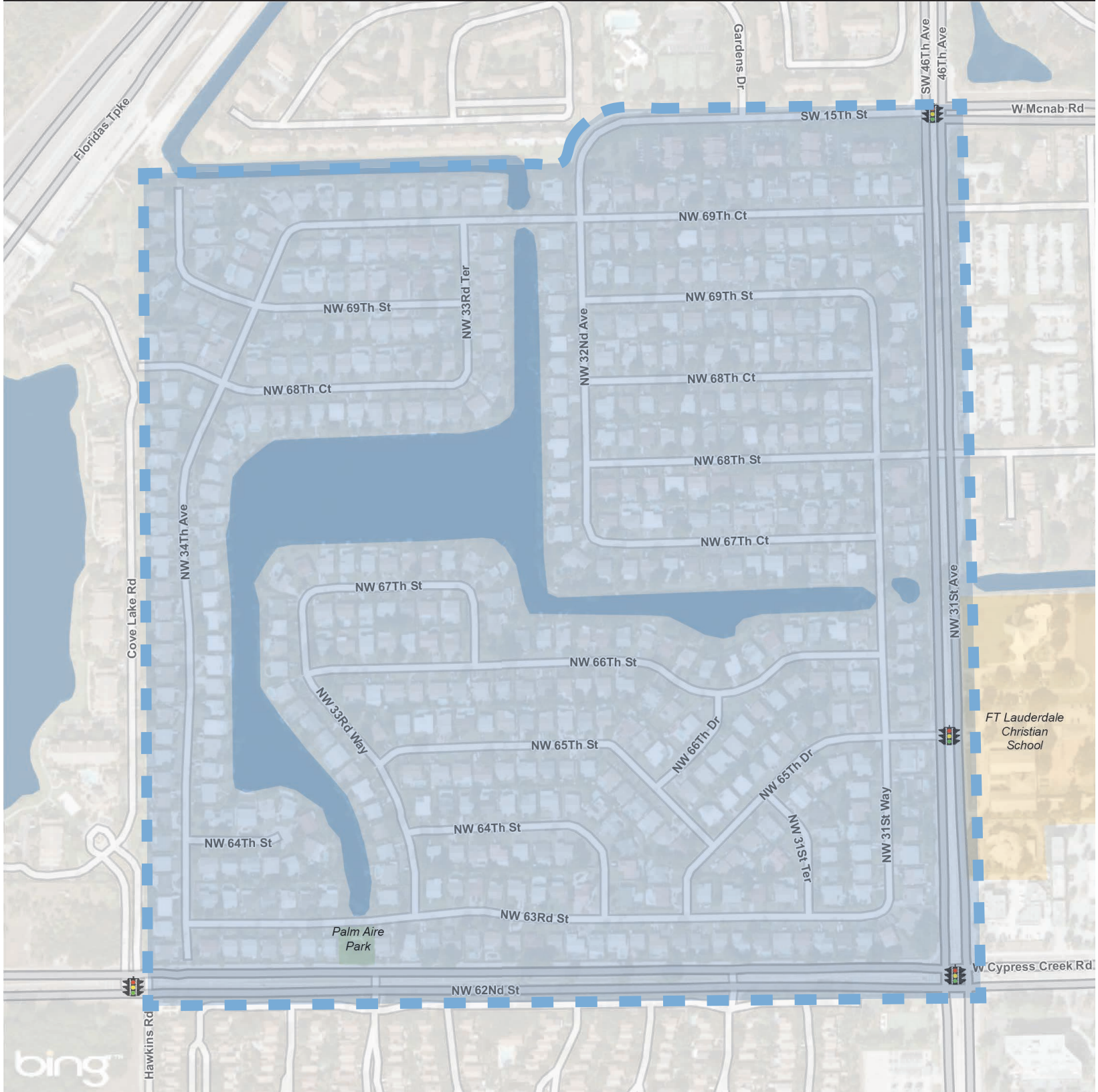
Palm Aire Village West is located in the northwest corner of Fort Lauderdale. Figure 2 displays the project study area. It is bounded by NE 34th Ave to the west, NW 62nd St (Cypress Creek Road) to the south, NW 34th Avenue to the east, and SW 15th St (McNab Road) to the north.

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

Neighborhood Entrance on McNab Road.
Credit: Kittelson & Associates, Inc.

FIGURE 2
STUDY AREA

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FT Lauderdale Christian School
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NW 63Rd St
Palm Aire Park
W Cypress Creek Rd
NW 62Nd St
Hawkins Rd
bing

2 EXISTING & FUTURE CONDITIONS

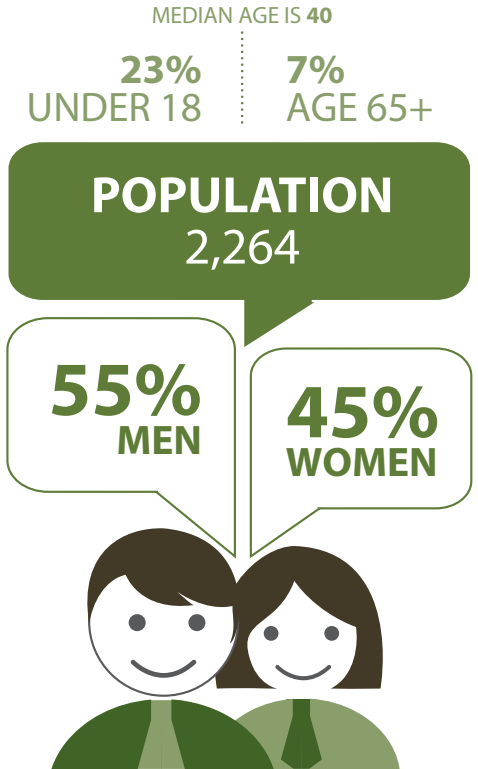
DEMOGRAPHICS

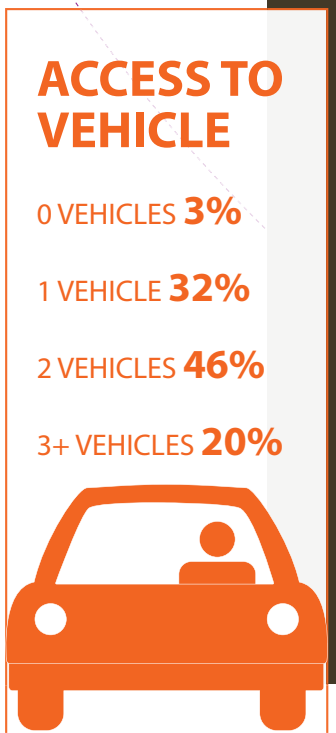
According to 2013 estimates from the U.S. Census Bureau, the Census Block Group containing Palm Aire Village West is home to 2,264 people. Of those, 55 percent are men and 45 percent are women. Almost one-third of the population either are under the age of 18 or over the age of 65. These populations are less likely to drive, and therefore require adequate pedestrian and bicycle facilities to get around. Most people (97 percent) have access to at least one vehicle, and 65 percent have access to two or more vehicles. Even so, over 17 percent carpool, which is almost twice as high as the City's average of 10 percent.

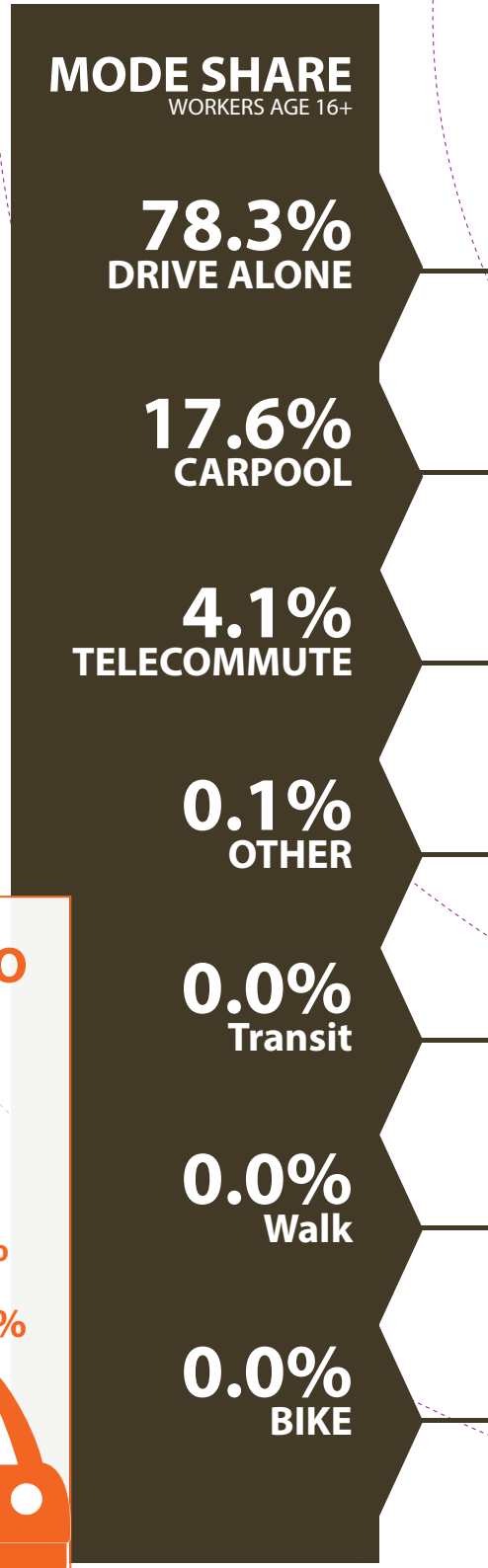
The median household income is around $62,000 per year, which is higher than the city as a whole, where the median income is $58,000. The population is also generally educated, with 70 percent having at least some college education. As income and education levels increase, people become more likely to 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, this information further enforces the need for adequate pedestrian and bicycle facilities that connect to educational, recreational, and entertainment destinations.

According to the 2013 estimates from the U.S. Census Bureau, nearly 54 percent of the population commutes less than 10 miles to work, however the 2013 Census did not report any residents who walk, bike, or take transit to work. This is lower than the City's average of 9 percent, which may be due to the location of the neighborhood in a mostly residential area not in close proximity to commercial services.

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







COMMUTE DISTANCE

53.8%
LESS THAN 10 MILES

25.6%
10 TO 24 MILES

12.8%
25 TO 50 MILES

7.7%
GREATER THAN 50 MILES

MEDIAN HOUSEHOLD INCOME

$61,842

EDUCATION
AGE 25+

3%
LESS THAN HIGH SCHOOL

24%
HIGH SCHOOL

46%
SOME COLLEGE/ ASSOCIATES DEGREE

21%
BACHELORS DEGREE

6%
MASTERS DEGREE OR HIGHER

LAND USE AND DESTINATIONS

As shown in Figure 3, Palm Aire Village West is almost completely comprised of single family homes, with the exception of the Palm Aire Village West Park in the southern portion of the neighborhood. It is surrounded by several single- and multi-family home neighborhoods and is in close proximity to religious institutions, schools, and some commercial uses. However, due to the segregation of land uses and distance between destinations, the current land use pattern does not lend itself to walking or other alternative modes of transportation. Because of this, Palm Aire Village West is more auto-dependent than most neighborhoods in Fort Lauderdale, ranking 57 out of 61 neighborhoods in Fort Lauderdale for walkability with a Walk Score of 25[2].

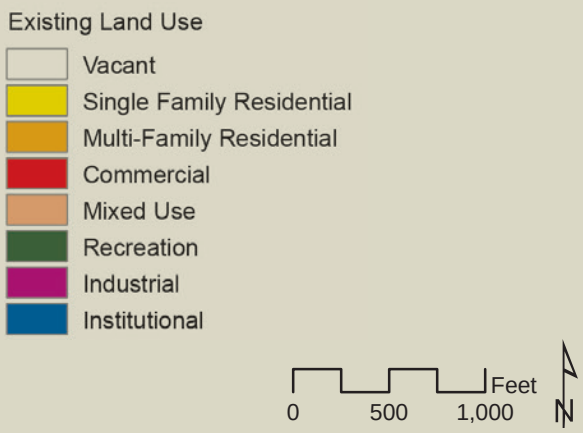
2 Walk Score. (2015). Living in Fort Lauderdale. Retrieved from WalkScore.com: https://www.walkscore.com/FL/Fort_Lauderdale

Typical Homes in Palm Aire Village West.
Credit: Google.

Palm Aire Village West Park.
Credit: Google.

FIGURE 3

EXISTING LAND USE

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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 4, there are three types of streets found in and around Palm Aire Village West:

Commercial Boulevards

Serve primarily commercial or mixed uses and act as main thoroughfares that connect activity centers and support constant medium- to high-volumes of traffic at moderate speeds. They also serve as primary transit routes and routes for goods movement. In general, they should include dedicated bicycle facilities, pedestrian enhancements, and transit accommodations.

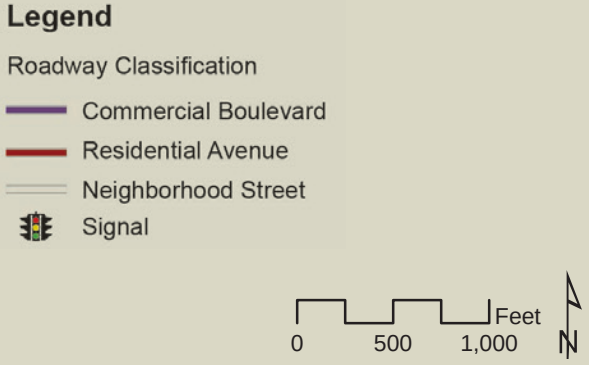
Residential Avenues

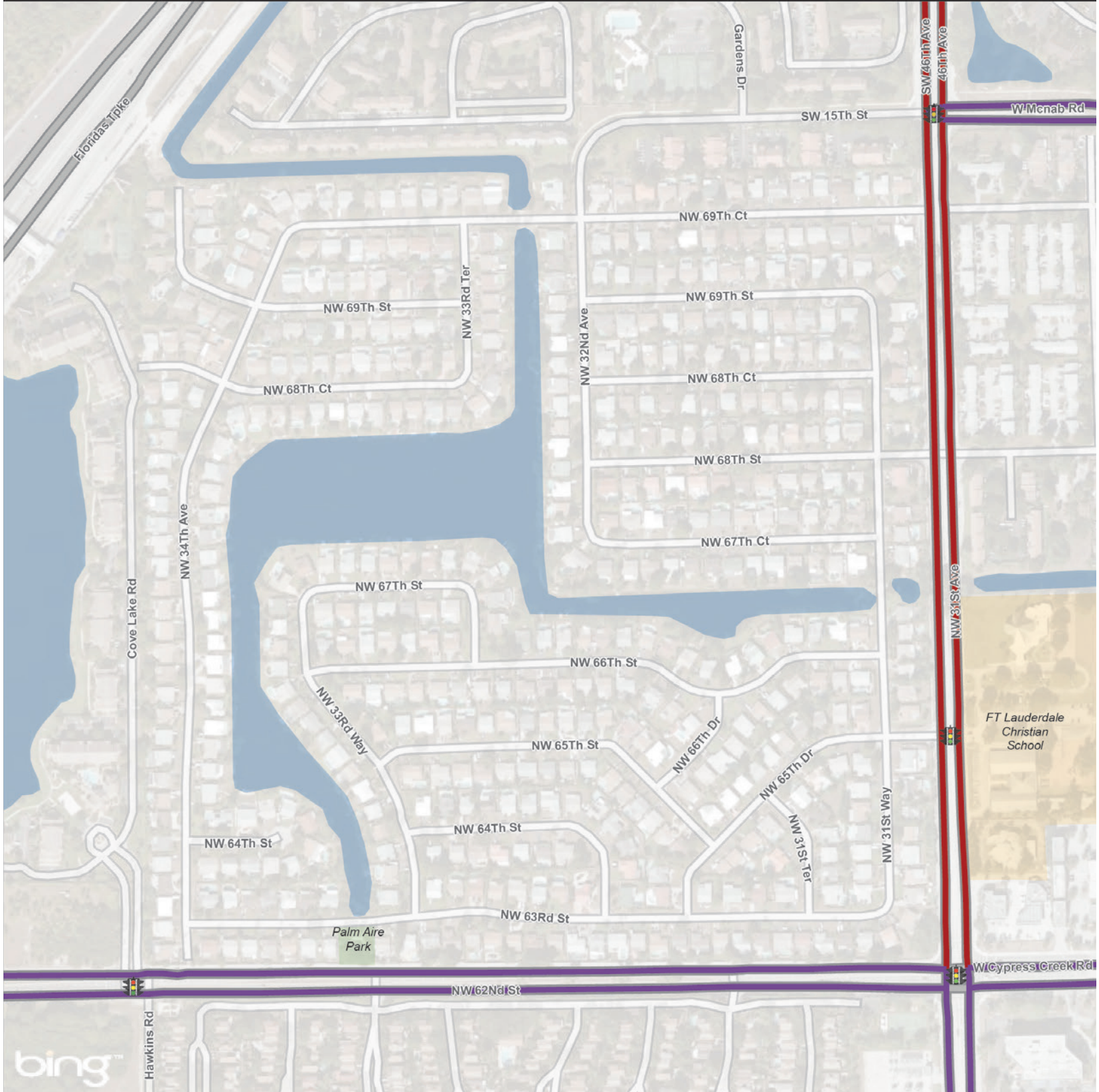
Can be smaller in scale than Commercial Avenues and serve as lower-speed alternative routes that connect neighborhoods. Surrounding land uses are mainly residential and primarily carry local traffic. They also serve as primary pedestrian and bicycle routes, and may serve as local transit routes; therefore,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

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EXISTING PEDESTRIAN, BICYCLE, & TRANSIT FACILITIES

As can be seen in Figure 5, the pedestrian and bicycle network within and surrounding Palm Aire Village West is generally incomplete. While there are sidewalks on NW 31st Avenue and the north side of Cypress Creek Road directly adjacent to the neighborhood, pedestrian crossing opportunities and even sidewalk connectivity to bus stops and other destinations is lacking outside of the neighborhood. Internally, there are no sidewalks.

There are no marked bicycle facilities in or around the community. Internally, bicyclists are currently required to share the street with cars and pedestrians. Outside of the neighborhood, the high traffic volumes and speeds on the major roads create an unfriendly environment for bicyclists, and protected, marked facilities would be needed to create a more inviting environment for all riders.

Throughout the public involvement process, residents noted that they walked, biked, and rollerbladed mostly for recreational purposes within the neighborhood. Combined with comments about traffic speeds, this suggests the need for at least sidewalks in some parts of the neighborhood. There are also opportunities to connect to regional recreational opportunities with potential new bicycle infrastructure.

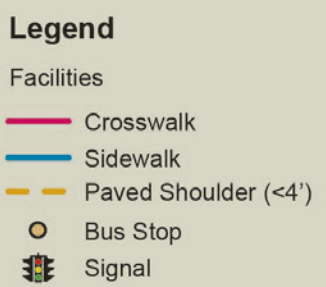
There are transit stops surrounding the Village. Most of these are just posts, however there are also shelters at some stops. While most of the stops are accessible via sidewalks and have close access to crosswalks, some stops on the south side of NW 62nd Street do not have sidewalks, and therefore are not accessible.

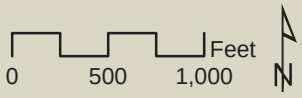
Bus Stop with Shelter and No Bike Lanes on NW 31st Avenue.
Credit: Kittelson & Associates, Inc.

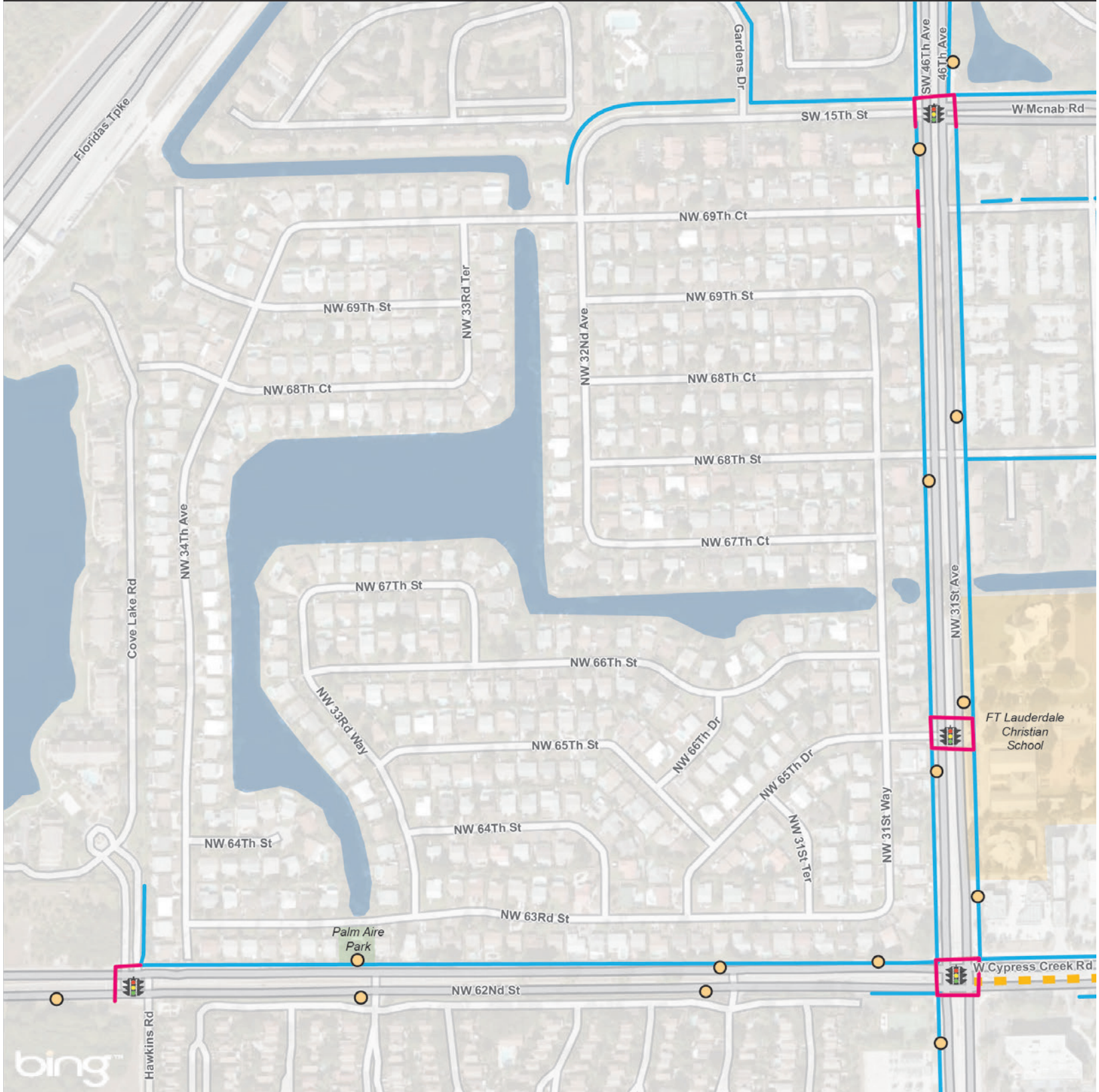
Bus Stop with no Sidewalk Access and No Bike Lanes on NW 62nd Avenue.
Credit: Kittelson & Associates, Inc.

FIGURE 5

EXISTING BICYCLE AND PEDESTRIAN FACILITIES



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VEHICULAR ACCESS AND INTERSECTION CONTROLS

Figure 6 shows vehicular access points in Palm Aire Village West and intersection controls within the neighborhood. Regarding entrances and exits to the neighborhood, there are four access points along NW 31st Avenue. There was also, at one point, one more on Cypress Creek Road that has since been closed to vehicular traffic. Of the four access points on 31st Avenue, two are signalized and two are not. It was noted in the public involvement that traffic backs up through the intersections in the peak hour, and that vehicles turning left at the unsignalized intersection at NW 68th Street cause back-ups into the neighborhood at peak hours as well.

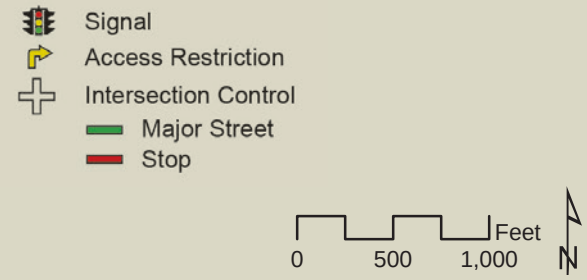
Every intersection in Palm Aire Village West is stop controlled on one or more legs. Figure 6 displays these controls. NW 34th Ave, NW 33rd Way, NW 32nd Ave, NW 31st Way, NW 63rd Street, NW 65th Drive, and NW 69th Court generally function as through streets, with side streets generally yielding to traffic on those streets. Concerns of speeding on many of these streets were noted in the public involvement activities.

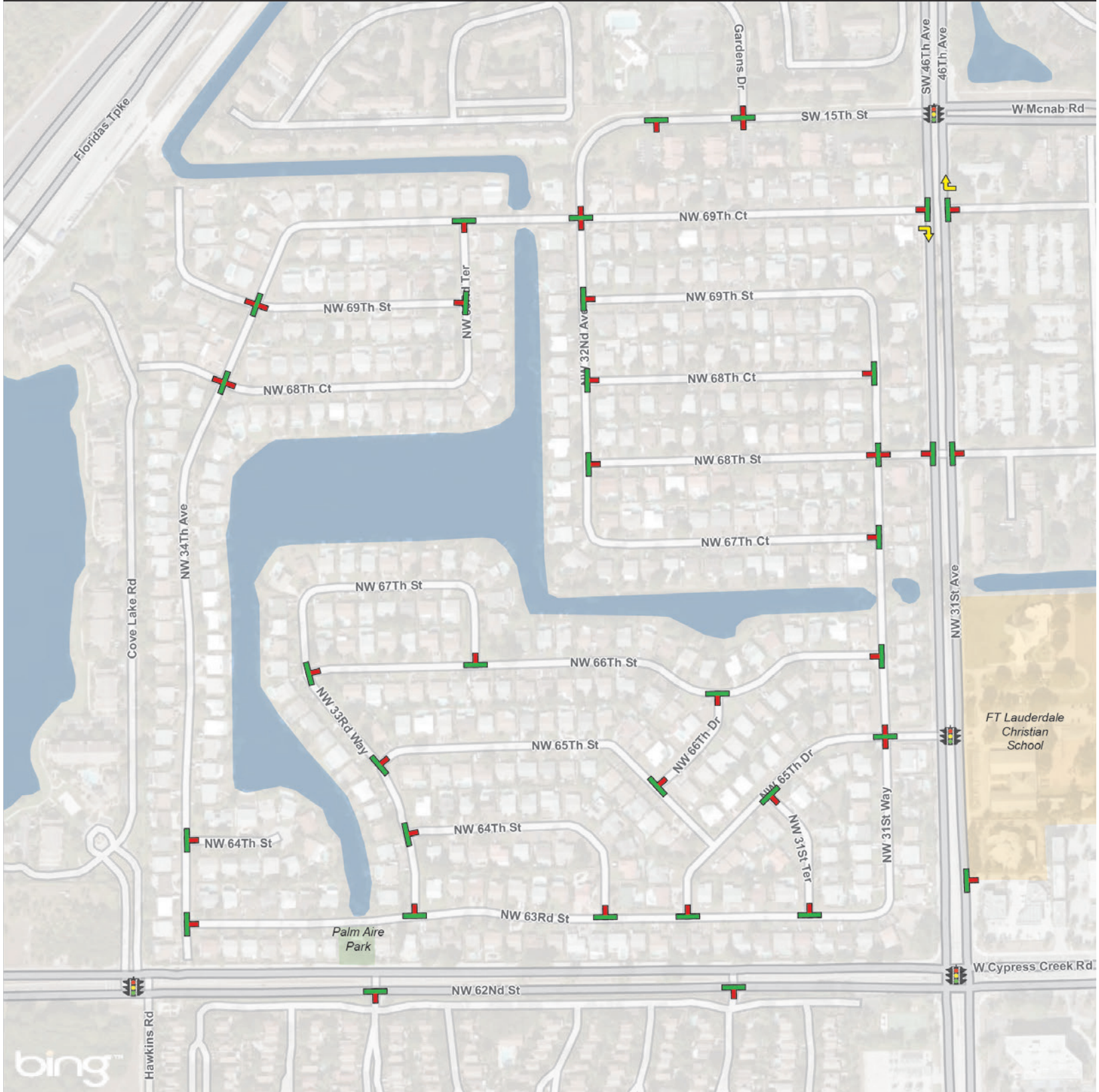
Signalized Neighborhood Access at McNab Road and NW 31st Ave.
Credit: Kittelson & Associates, Inc.

Unsignalized Neighborhood Access at NE 68th Street and NW 31st Avenue.
Credit: Kittelson & Associates, Inc.

FIGURE 6

VEHICULAR ACCESS AND INTERSECTION CONTROLS

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VEHICULAR TRAFFIC CALMING MEASURES AND POSTED SPEED LIMITS

There have not been many traffic calming measures implemented in the village, as shown in Figure 7. The only measure that has been implemented was a road closure at NW 34th Avenue and NW 62nd Street. This road closure effectively removes the potential for cut-through traffic, as all of the remaining entrances are on NW 31st Avenue. The exception to this is traffic that may use the at NW 68th Street as a way to avoid the signal at McNab Road when heading towards the condominiums to the north, as noted by neighbors in the public meetings.

The area speed limit in Palm Aire Village West is currently 25 mph and is posted at most entrances to the neighborhood and near the park. 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.

Road Closure at NW 34th Avenue and NW 62nd Street.
Credit: Kittelson & Associates, Inc.

FIGURE 7

TRAFFIC CALMING MEASURES

Legend

Facilities

- Road Closure
- Signal

Speed Limit Signs

- 25 MPH Area Speed Limit
- 15 MPH School Zone

0 500 1,000 Feet

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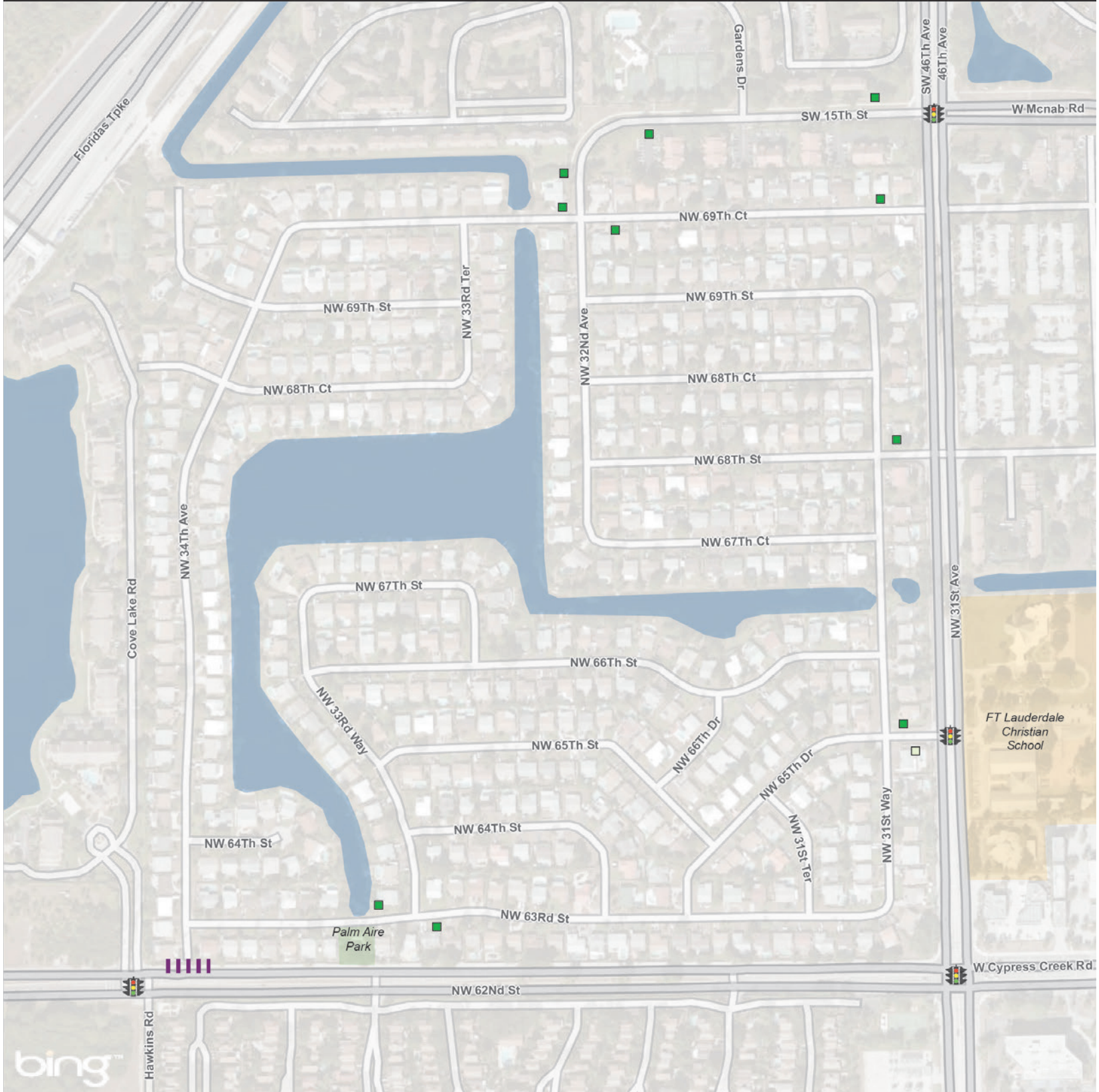
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VEHICULAR TRAFFIC VOLUMES

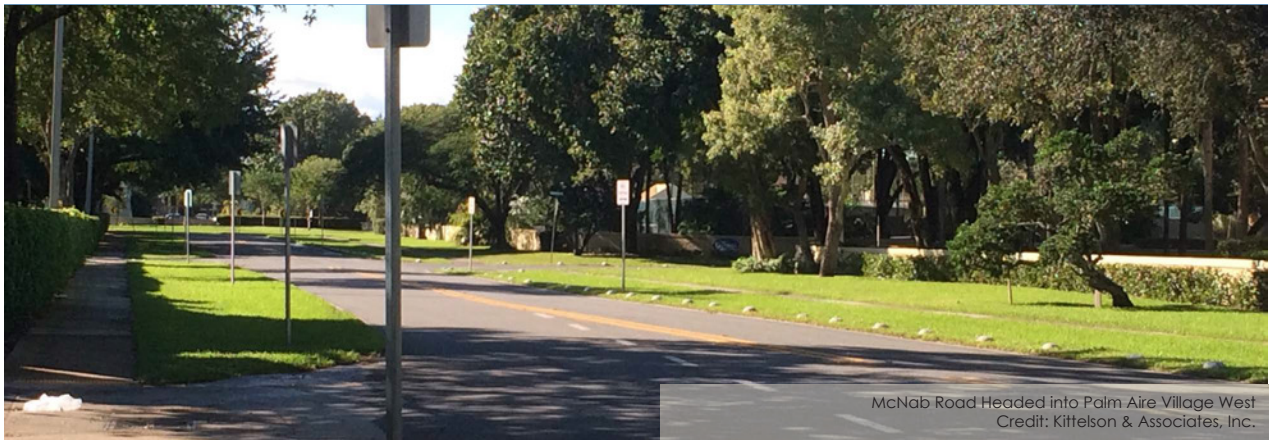
As part of this study, traffic information was collected. This includes vehicular, bicycle, and pedestrian counts; vehicular speeds; and turning movement counts at select locations. A map of the locations as well as the count data can be found in Appendix A.

Figure 8 shows the traffic volumes at the locations where data was collected. When considering the average daily traffic, the data shows that most of the traffic is concentrated along SW 15th Street and on the other perimeter streets in the neighborhood.

This holds true throughout Palm Aire Village West, with all internal streets carrying 1,000 vehicles or less. The exception to this statement is SW 15th Street/McNab Road, which carries just over 1,000 vehicles per day. In general, local streets (Neighborhood Streets) should serve 1,500 vehicles per day or less, which holds true throughout the Village.[4]

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

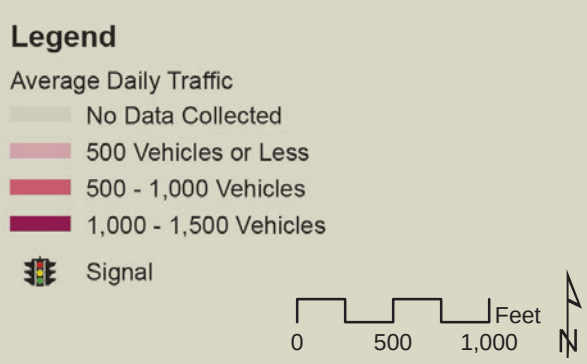
Typical Neighborhood Street.
Credit: Kittelson & Associates, Inc.

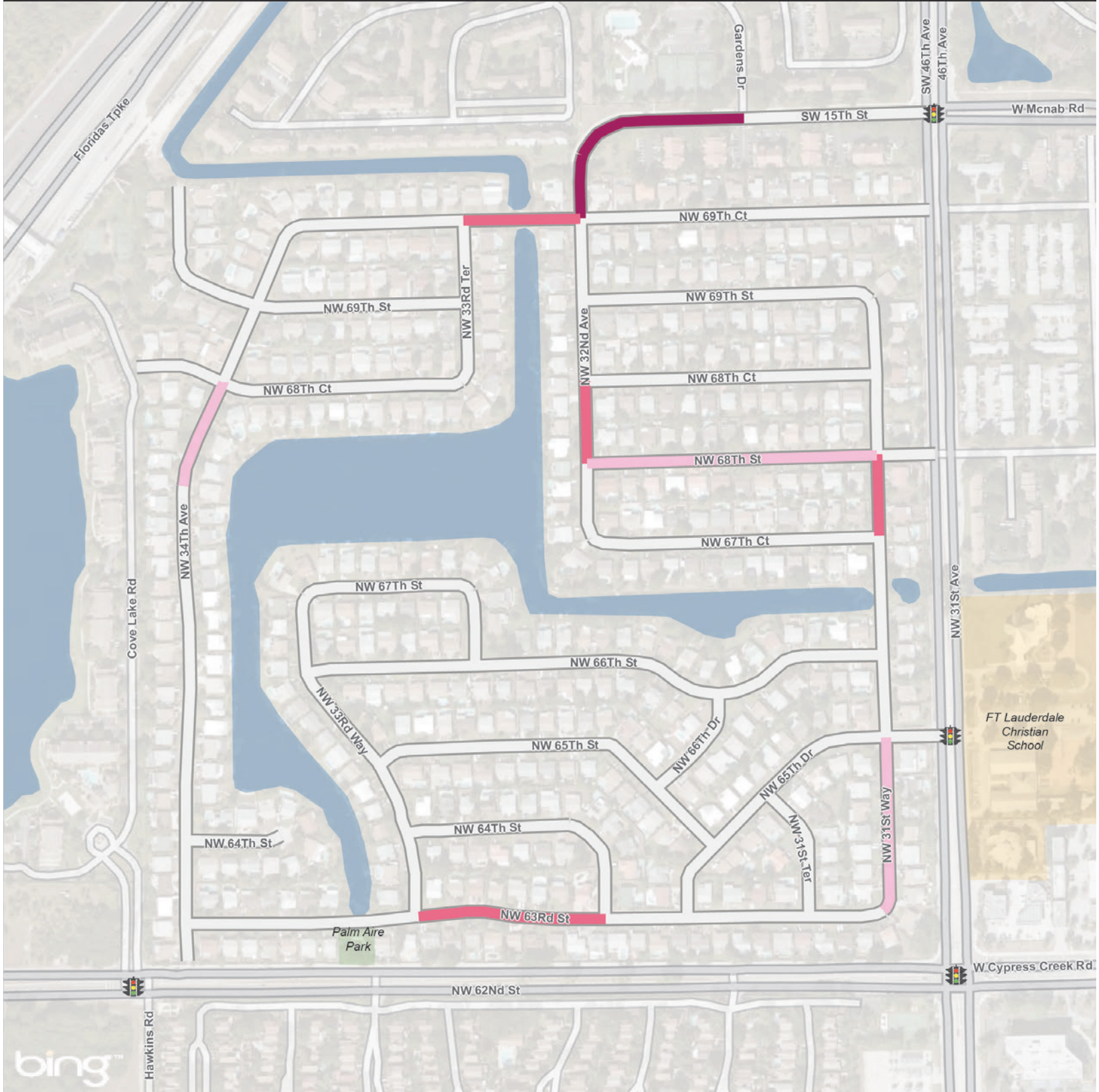


McNab Road Headed into Palm Aire Village West
Credit: Kittelson & Associates, Inc.

FIGURE 8

TRAFFIC VOLUMES

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VEHICULAR TRAFFIC SPEEDS

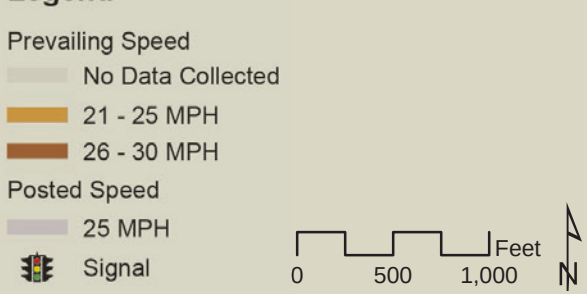
Speed data was collected at several locations throughout the community, and is presented in Figure 9. In general, people exceeded the speed limit on the perimeter streets of NW 34th Avenue, NW 31st Way, NW 63rd Street, NW 68th Street, and NW 69th Court. Because these are the streets that people are also the most likely to walk and bike on, there is the potential for vehicular and pedestrian conflict. Additionally, it was noted that drivers are exceeding the speed very close to the park, which can pose a problem for people accessing the park on foot or by bicycle.

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

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

FIGURE 9

TRAFFIC SPEEDS*



*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.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INTERSECTION OPERATIONS

Throughout the study, it was reported that NW 31st Avenue was congested during the AM and PM peak hours, causing traffic to back up through the intersections and block people from exiting the Village. To address this, existing vehicular traffic operations were analyzed for all intersections along NW 31st Avenue between Cypress Creek Road and McNab Road using the traffic counts that were collected.

It was found that although counts were not collected at the intersection of Cypress Creek Road and NW 31st Avenue, that intersection had an impact on the queues along NW 31st Avenue and therefore affected the intersection operations along NW 31st Avenue. To account for this, supplemental traffic counts were used to perform analysis for that intersection. The turning movement count data is available upon request from the City of Fort Lauderdale.

The intersection analysis was performed using Synchro. Figure 10 summarizes the results of the intersection operations assessment. The analysis is based on the volume to capacity (v/c) ratio, which represents the vehicular demand on the intersection in relation to its physical capacity. It is a measure to determine whether an intersection is over capacity. When an intersection is over capacity, traffic can back up and create congestion. The analysis shows that some of the intersections are not over capacity on their own. However, the intersection of Cypress Creek Road and NW 31st Ave is over capacity, which can create queues that may affect the remaining intersections.

Because the Synchro analysis does not take into account the effects of queuing, SimTraffic was utilized to better understand the impacts of the queues from the Cypress Creek Road intersection on the remaining intersections.

One of the main intersections identified as problematic by the Villagers was NW 65th Drive at NW 31st Avenue, which is directly north of Cypress Creek Road. It was found that absent the queues from Cypress Creek Road, the intersection would likely be operating well. Therefore, the crux of the issue is the queuing.

Long wait times and congestion were also noted by neighbors at the intersection of McNab Road and NW 31st Avenue. The intersection analysis confirmed that this intersection is over capacity as well.

Finally, many residents noted that traffic backs up into the Village at NW 68th Street during peak hours from drivers attempting to turn left out of the Village. The intersection analysis found that those movements were problematic, and that the current configuration does not support those movements during the peak hour.

FIGURE 10

INTERSECTION OPERATIONS

Intersection	Control Type	Approach	AM Peak Hour			PM Peak Hour		
			LOS*	v/c ratio	Queue (ft)**	LOS*	v/c ratio	Queue (ft)**
McNab Rd. & NW 31st Ave.	Signalized	NB	*	0.64	284	N/A	1.04	242
		SB	*	2.22	663	N/A	0.96	517
		EB	N/A	0.83	376	N/A	0.56	61
		WB	N/A	0.63	336	N/A	1.58	293
		Overall	N/A	1.02	-	N/A	1.17	-
NW 69th Ct. & NW 31st Ave.	Two-Way Stop Controlled (Unsignalized)	EB	N/A	0.14	50	N/A	0.13	109
		WB	N/A	0.03	38	N/A	0.16	418
NW 68th St. & NW 31st Ave.	Two-Way Stop Controlled (Unsignalized)	EB	N/A	1.62	91	N/A	N/A†	310
		WB	N/A	1.75	80	N/A	N/A†	674
NW 65th Dr. & NW 31st Ave.	Signalized	NB	N/A	0.3	159	N/A	0.46	421
		SB	N/A	0.43	94	N/A	0.38	1064
		EB	N/A	0.25	75	N/A	0.39	109
		WB	N/A	0.19	0	N/A	0.46	31
		Overall	N/A	0.42	-	N/A	0.46	-
Cypress Creek Rd. & NW 31st Ave.	Signalized	NB	F	1.1	751	E	0.92	884
		SB	F	1.2	349	F	1.08	766
		EB	F	1.17	1107	F	1.55	1343
		WB	E	1.04	634	E	1.02	1281
		Overall	F	1.18	-	F	1.15	-

*LOS is only shown for the intersection of Cypress Creek Road and NW 31st Avenue because the Synchro analysis does not accurately represent the impacts to the remaining intersections.

**Queue results were obtained from 10 simulation runs with random seeds from SimTraffic. All queue results are reported for the movements that impact neighborhood ingress and egress. For the signalized intersections, this is the north/south through movements. For the unsignalized intersections, this is the east/west movements.

† No values were provided by Synchro due to excessive delay and high v/c ratio.

PEDESTRIAN AND BICYCLE EXPERIENCE

As discussed earlier, the majority of streets within Palm Aire Village West lack sidewalks and bicycle lanes. 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 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 and compared to pedestrian and bicycle counts. The analysis was also intended to assist in prioritizing needed improvements within the neighborhood. Figure 11 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 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.

None of the neighborhood streets analyzed were considered to have a "good" pedestrian and bicycle environment due to speeds over 20 MPH and higher volumes. Neighborhood streets with the poorest environment for pedestrians and bicyclists using the street include NW 63rd Street, NW 32nd Avenue, NW 31st Way, and NW 69th Court. Even so, people were seen biking and walking on all streets, suggesting the need for a comfortable pedestrian and bicycling environment.

Because McNab Road has sidewalks, volumes under 5,000 vehicles per day, and speeds under 20 MPH north of the entrance to Palm Aire Village West, its status elevated from "Poor" to "Good." Pedestrians have a designated space, and although bicycles are required to share the street with vehicles, the volumes and speeds are low enough that the environment should still be comfortable. The highest numbers of pedestrians were seen along NW 31st Ave at the signalized intersections. The number of cyclists is relatively consistent through the Village.

Sidewalks on McNab Road. Credit: Google.

FIGURE 11

PEDESTRIAN AND BICYCLE ENVIRONMENT

PM Peak Hour (3:00 to 6:00 p.m.)
Pedestrian and Bicycle Counts

Pedestrian Count

Bicycle Count

Pedestrian and Bicycle Environment

Not Analyzed

Poor: Speeds > 20 MPH and Volume > 500 ADT

Fair: Speeds > 20 MPH or Volume > 500 ADT

Good: Speeds ≤ 20 MPH and Volume ≤ 500 ADT

0 500 1,000 Feet

N

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.

Roads and Traffic Authority New South Wales. New South Wales Bicycle Guidelines (Version 1.2). North Sydney, Australia. 2005.

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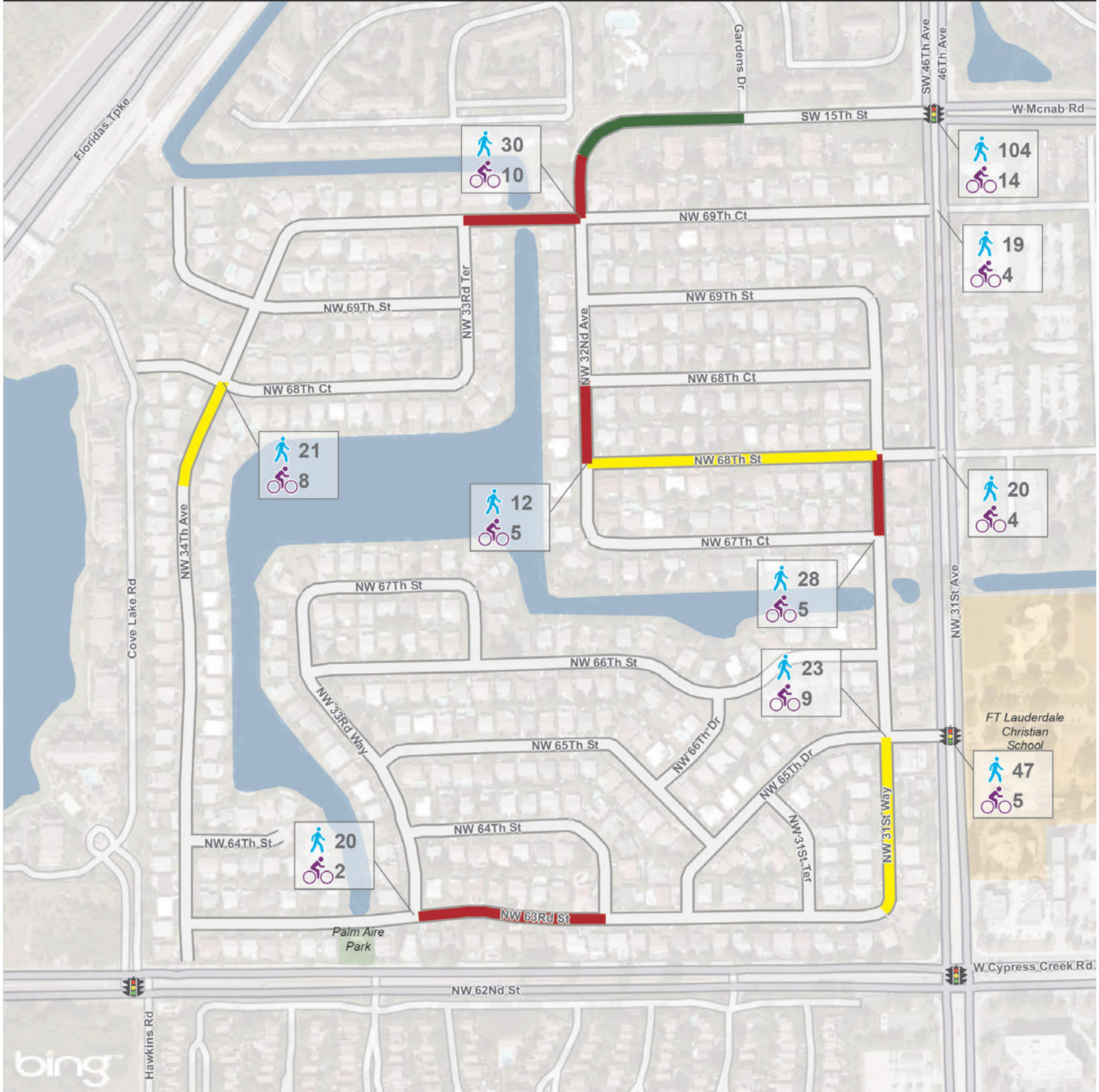
Danish Road Directorate. Collection of Cycle Concepts. Copenhagen, Denmark. 2000.

Sustrans. The National Cycle Network – Guidelines and Practical Details: Issue 2. Bristol, United Kingdom, 2006.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NW 67Th St
NW 34Th Ave
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W Cypress Creek Rd
NW 62Nd St
Hawkins Rd
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CRASHES

Crash data was collected for the five year period between January 2010 and December 2015 using data collected from Signal Four Analytics. Figures 12 - 14 display the crash data. There were a total of 256 crashes in the study area, with 216 occurring within 100' of an intersection and 40 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 the Village were considered separately.

EXTERNAL ROADWAYS

There were a total of 239 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 Cypress Creek Road at 31st Street and McNab Road at NW 31st Avenue. The most common crash type was rear end crashes, making up 127 of the 239 crashes. There were also three pedestrian crashes and one bicycle crash. Pedestrian and bicycle crashes on high speed facilities are a point of concern because they often result in serious injuries. There was 1 fatality, which was a pedestrian fatality at McNab Road and NW 31st Avenue, and there were 88 injuries. This means that one in three crashes on the roads surrounding the neighborhood resulted in an injury.

INTERNAL NEIGHBORHOOD ROADWAYS

There were a total of 17 crashes on the roads within the neighborhood. The crashes were relatively evenly divided between intersections and segments. They are located at NE 32nd Street, NE 46th Street, NE 47th Court, and NE 49th Street. The most common crash type was other, making up 9 of the 17 crashes. These crashes generally involved vehicles backing out of driveways, attempting three-point turns, and vehicles parked in swales on the side of the road being hit. There were no fatalities, and 3 injuries. There was one pedestrian crash, which was not serious, and no bicycle crashes. While this is not represented in the statistics, neighbors noted that parents park along NW 49th Ct to wait for the school bus, blocking the street and creating a potentially unsafe condition.

FIGURE 12

EXTERNAL CRASHES

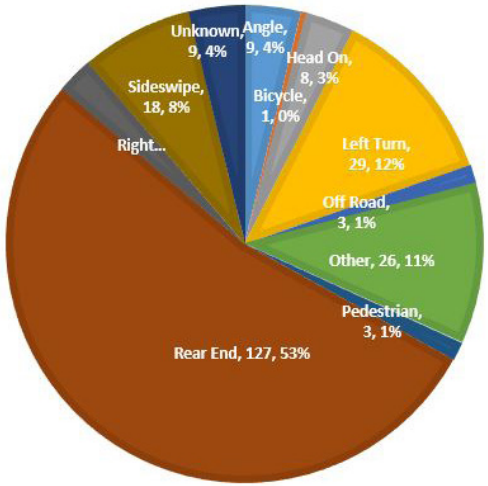


FIGURE 13

INTERNAL NEIGHBORHOOD CRASHES

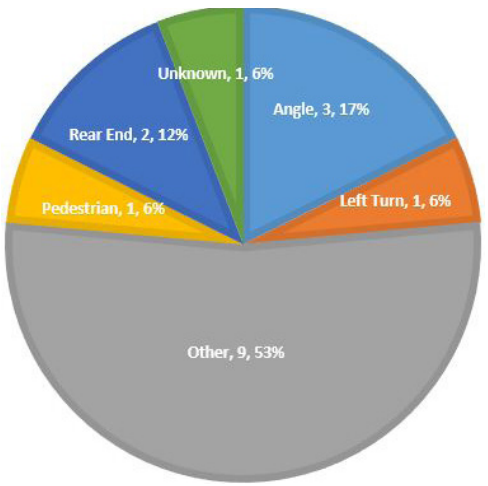
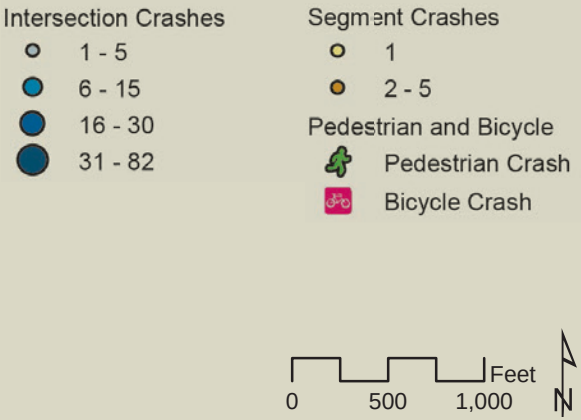
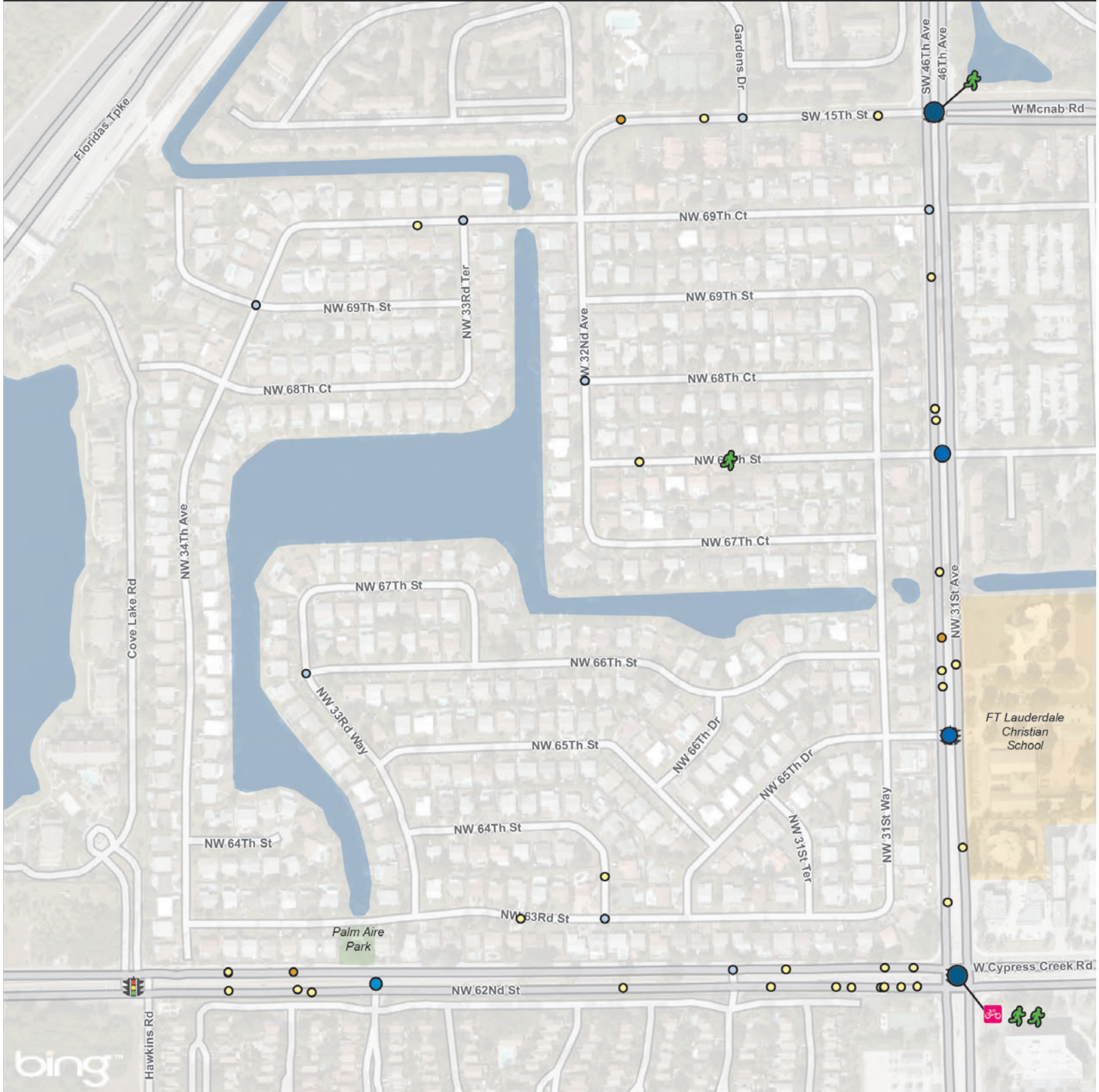


FIGURE 14

CRASH MAP

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3 COMMUNITY ENGAGEMENT

COMMUNITY ENGAGEMENT

While created and 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 three public workshops were held in conjunction with Palm Aire Village West Home Owner's Association meetings at the Fire Station at the Fort Lauderdale Executive Airport. The first was held on March 26, 2015 at 7:00 PM; the second was held on June 27, 2015 at 10:00 AM; and the third was held on September 24, 2015 at 7:00 PM. For more information, including a list of attendees from each meeting and a full summary of the issues, comments, and responses, please see the Public Involvement Summary Technical Memorandum, 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 81 community members and 6 project team 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 framework of the plan. Seventy two comments were received, and the main issues identified were the need 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 11 residents and 5 project team members 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 54 comments were received when considering the strategies and improvement locations combined, which were used to help select the draft recommendations for the masterplan. The most liked strategies included raised crosswalks, mini median islands, signage, and pedestrian scale lighting.

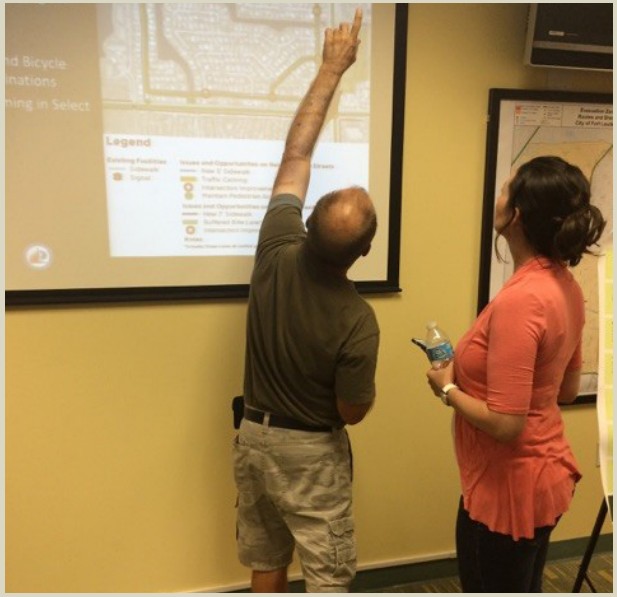
WORKSHOP III

The third meeting tied the project together for the community. The draft Masterplan, 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 55 residents and 5 project team members attended the third meeting. In general, most residents were happy with the recommendations. There were a total of 29 comments received, and most were focused on the strategies. This resulted in several strategies being added for traffic calming.

After the meeting, there were some additional questions about the cost and effectiveness of the strategies. The project team worked with the Home Owner's Association to ensure that all of the locations with traffic calming needs were adequately covered. Regarding strategy effectiveness and cost, there was clarification that the strategies are intended to be implemented over time as money becomes available. Additionally, it was clarified that intersection strategies such as roundabouts and raised intersections have similar costs and are both intended to slow down traffic with proper design. Regarding pinch points and chicanes, it was also noted that the effectiveness will depend somewhat on the final design of the strategies. The City will work with the neighbors to ensure the proper design is instituted as the improvements are implemented.

FUTURE MEETINGS

This plan is intended to be the Community's plan, as they have the largest stake in it. The City and other agencies will, in the future, be able to continue to work with Palm Aire Village West to implement the strategies once they are prioritized and as funding becomes available. The next step for the Village is for the Association to prioritize the implementation strategies in order to utilize existing allocated funding as well as identify priorities for future funding.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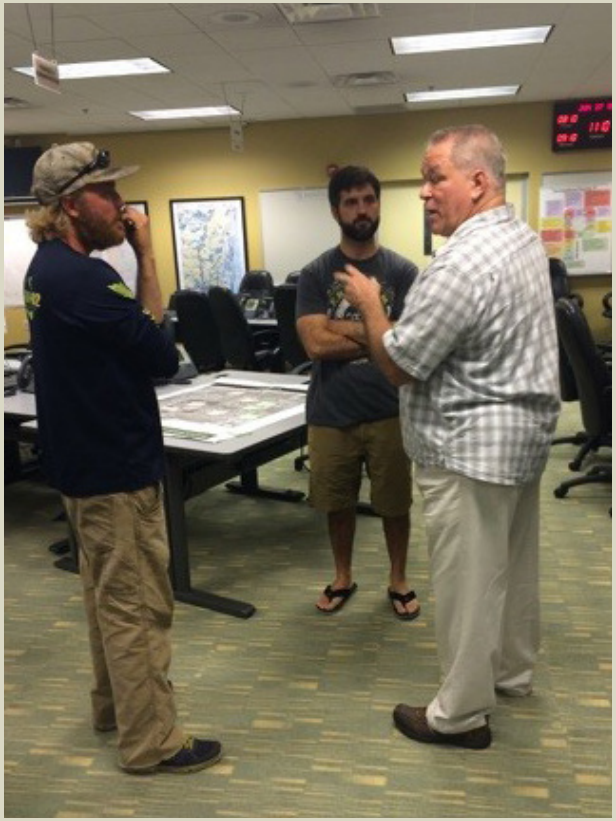


4 SYNTHESIS

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.

Key intersections and streets for pedestrian, bicycle, and vehicular connectivity are apparent in several locations where major roads meet. These intersections and streets should support all modes, including providing safe crossings for bicyclists and pedestrians.

Traffic on NW 31st Avenue is causing delays for drivers attempting to exit the neighborhood during peak periods. It will be necessary to consider strategies to improve access to and from the Village, such as signage, signalization, and access restrictions.

STUDY GOALS

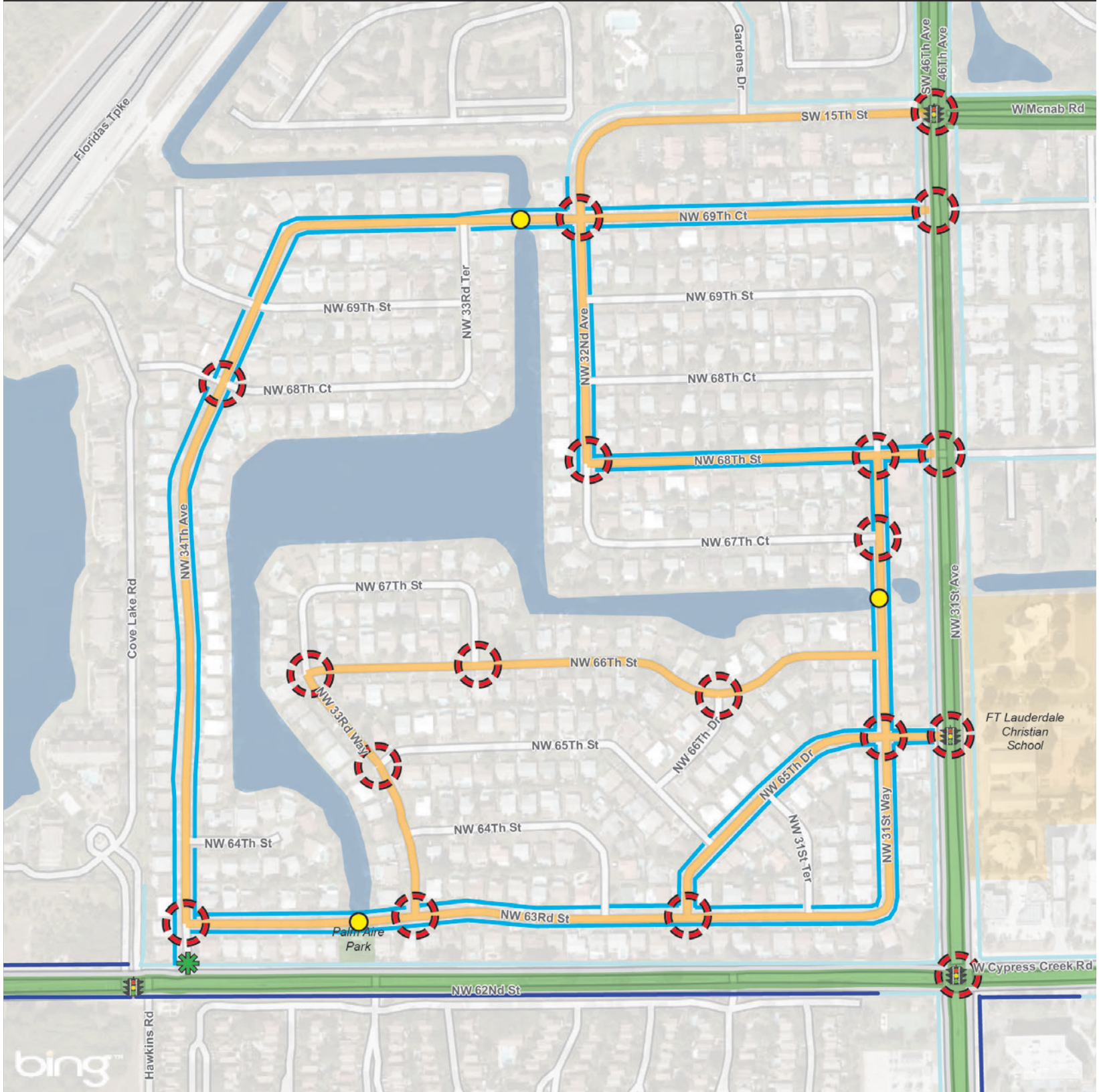
In general, the synthesis points to the following goals:

1. Calm Traffic
2. Enhance the Pedestrian and Bicycle Environment
3. Improve Access into and out of the Village

Figure 15 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 Palm Aire Village West. Therefore, the masterplan (i.e. solutions) map reflects different information.

FIGURE 15

IMPROVEMENT NEEDS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5 MASTERPLAN

MASTERPLAN

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 Palm Aire Village West.

The overall masterplan is split into two parts: the Neighborhood Streets Masterplan and the External Streets Masterplan. The Neighborhood Streets Masterplan generally focuses on internal streets located within Palm Aire Village West. The External Streets Masterplan considers the two roadways that bound the Village: Cypress Creek Road and NW 31st Avenue.

NEIGHBORHOOD STREETS MASTERPLAN

The Neighborhood Streets Masterplan focuses on streets internal to Palm Aire Village West. These streets generally function as internal connections for residents.

In order to achieve the neighborhood's goals, the Neighborhood Streets Masterplan recommends intersection, mid-block, and street focused traffic calming strategies as well as enhancements to the pedestrian and bicycling network. Figure 16 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

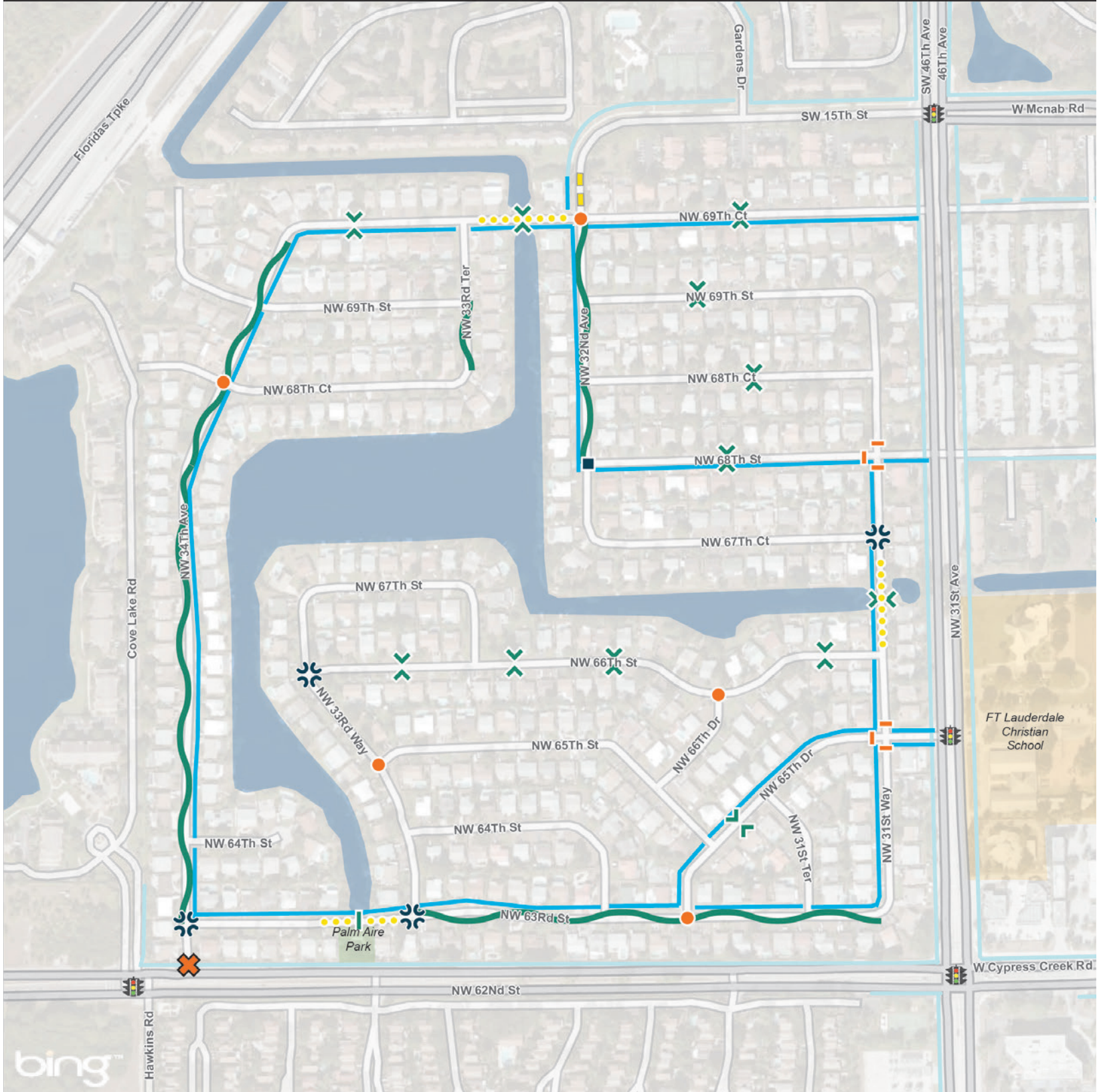
Many of the strategies in this plan will require further study prior to implementation. This will include coordination with the neighbors who live in close proximity to the improvement location and technical analysis to determine the most appropriate design, location, and signage for the strategy.

For example, it may be determined that a chicane with three alternating edge islands is preferable to pinch point with two edge 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 16

NEIGHBORHOOD STREETS MASTERPLAN

Note: At the intersection of NW 32nd Ave and NW 69th Ct, neighbors requested a four-way stop as an interim intersection control measure. In order to do this, a warrant study will need to be completed to determine whether it is a viable option.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NW 63Rd St
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NW 62Nd St
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MINI ROUNDABOUT


Flagler Village 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.

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.

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. Additionally, they can help to prevent drivers from spilling into the intersection in periods of congestion by providing a physical cue to stop.

TIGHTEN TURNING RADII

Large turning radii facilitate faster vehicle turning movements and increase crossing distance for pedestrians. Reducing the curb radii will aid in reducing vehicular speeds as well as the potential for pedestrian-vehicular conflicts. The extra space can be used for landscaping, shade trees, or to implement sustainable features. These features, such as rain gardens that collect, store, and filter rainwater can also help to address the drainage issues noted throughout the project.

PINCH POINT

Floranada Road Pinch Point. Credit: Kittelson & Associates, Inc.

Pinch points narrow the travel way, requiring drivers to slow down or yield to each other to maneuver through the area. They can be created using curb extensions, landscaping, or edge islands and may have a speed table in the middle if appropriate. A chicane with three alternating edge islands may be used instead, if desired.

RAISED PED CROSSING + PINCH POINT

Raised Pedestrian Crossing at Pinch Point. Source: FHWA

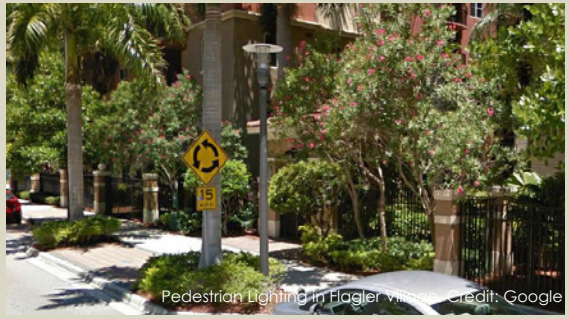
The pedestrian crossing is raised to give motorists and pedestrians a better view of the crossing area. Because of the elevation change, traffic is slowed. The raised crossing will be accompanied by a pinch point to reduce the crossing distance for pedestrians and further calm traffic.

5' SIDEWALK

5' Sidewalk with Buffer. Credit: Google

Sidewalks provide a minimum level of comfort for pedestrians. There are no sidewalks in the Village and pedestrians must walk in the street. A sidewalk network will improve pedestrian comfort and accessibility. A 3' grass buffer will separate the sidewalk from the street where possible.

PED 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 to save energy and promote sustainability

CHICANE

Riverside Park Chicane. Credit: Kittelson & Associates, Inc.

A series of fixed objects, usually extensions of the curb, which alter a straight roadway into a zigzag path to slow vehicles. Chicanes reduce the speed of motorists but are still easy to navigate. They facilitate one- or two-way traffic. The exact design will be determined in the design phase based on further input.

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. Additionally, by locating at the northern entrance to the Village, a gateway feature will be created.

CLOSE PED ENTRY

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

Many neighbors requested that the pedestrian entrance on NW 62nd Street be closed for safety reasons. This entrance will be closed when the new fence surrounding the neighborhood is installed.

EXTERNAL STREETS MASTERPLAN

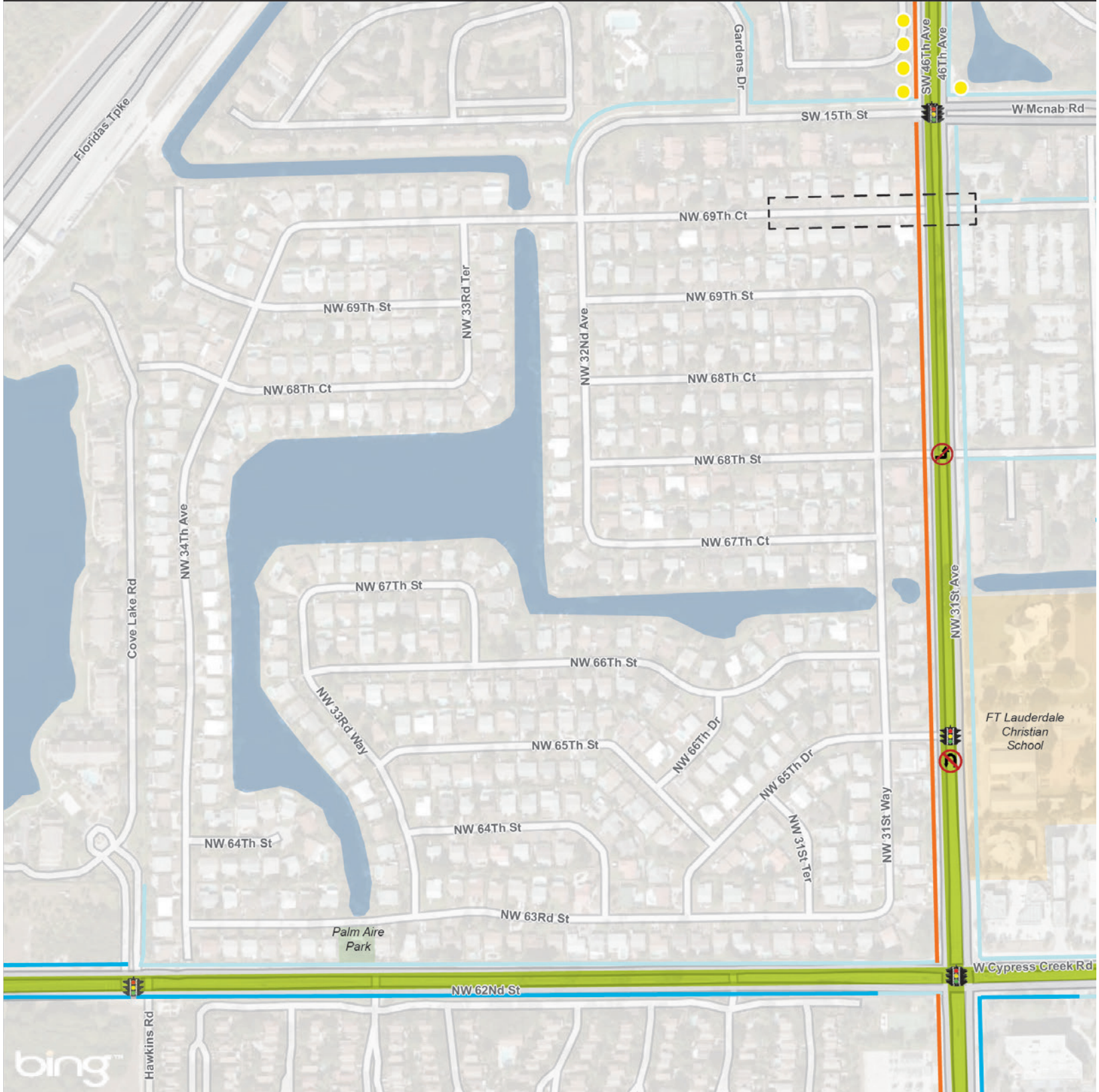
The External Streets Masterplan considers the two roadways that bound the Village: Cypress Creek Road and NW 31st Avenue. Additionally, it considers improvements that may impact other roads external to the Village. Although they are utilized by pedestrians, bicyclists, and transit riders, none of the streets currently have bicycle facilities and Cypress Creek Road does not have pedestrian facilities on the south side in front Palm Aire Village West. Additionally, both streets suffer from congestion during the morning and afternoon rush hours, which causes access issues for residents entering and exiting the Village.

The main goal of the External Streets Masterplan is to improve these streets for pedestrians, bicyclists, and transit riders. The external streets are owned by Broward County, and therefore the final definition and implementation of improvements are up to the County. Although this plan is part of the overall Palm Aire Village West Neighborhood Masterplan, they are County roads and they 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 masterplan 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 17 displays the External Streets Masterplan.

FIGURE 17

EXTERNAL STREETS MASTERPLAN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EVALUATE / IMPROVE STREET LIGHTING AT MCNAB ROAD

NW 31st Avenue at McNab Road. Credit: Kittelson & Associates, Inc.

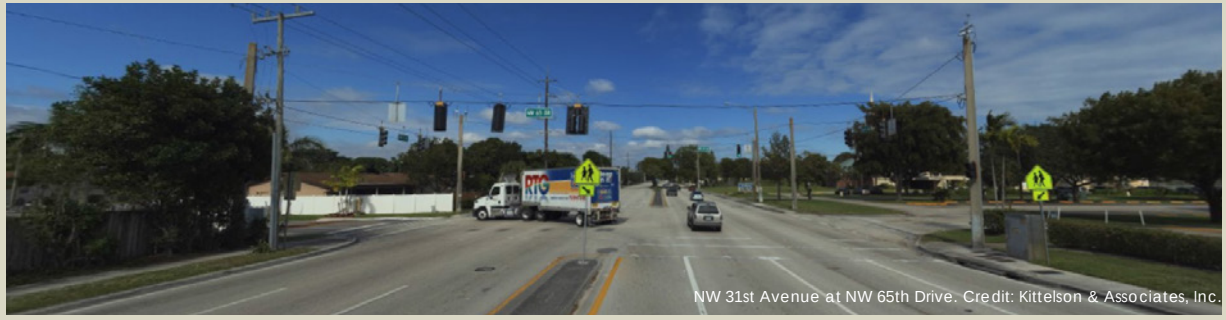
Twenty eight crashes were observed at the intersection of NW 31st Avenue and McNab Road. Residents noted that the intersection is not well lit. Upon review of the crash data, it was found that many of these crashes occurred at night. To address this, it is recommended that a lighting study be undertaken at the intersection and that new lighting be installed.

PROHIBIT LEFT-TURNS DURING THE PEAK HOUR FROM NW 68TH STREET

NW 31st Ave at NW 68th Street. Credit: Kittelson & Associates, Inc.

Throughout the study, neighbors noted that drivers attempting to turn left out of the village on to NW 31st Avenue cause traffic to back up into the Village along NW 68th Street. However, this is an important access point and does not suffer from congestion outside of the morning and evening rush hour periods. In order to address this, it is recommended that eastbound to northbound left turns be prohibited at the intersection of NW 31st Avenue and NW 68th Street from 8:00 to 10:00 AM and from 4:00 to 6:00 PM. To maintain access, left turns will be permitted for the remainder of the day.

PROHIBIT U-TURNS AT NW 65TH DRIVE



NW 31st Avenue at NW 65th Drive. Credit: Kittelson & Associates, Inc.

There are a high number of U-Turns at the intersection of NW 65th Drive and NW 31st Avenue, causing congestion at the intersection. The number of U-Turns suggests that in addition to making U-Turns to access local businesses, drivers may be avoiding the westbound left-turn queue at Cypress Creek Road by driving through the intersection, making a U-Turn at NW 65th Drive, and turning right onto Cypress Creek Road. To discourage this, it is suggested that U-Turns be prohibited at this intersection. Those making U-Turns to access the businesses on NW 31st Avenue will still be able to do so further north.

ADJUST SIGNAL TIMING

NW 31st Avenue at NW 65th Drive. Credit: Kittelson & Associates, Inc.

NW 31st Avenue at NW 65th Drive. Credit: Kittelson & Associates, Inc.

From 8:00 to 10:00 AM and 4:00 to 6:00 PM, traffic backs up along NW 31st Ave and blocks access and egress to the Village. A signal timing analysis along NW 31st Ave found that reducing the signal cycle at the intersection of NW 31st Ave and NW 65th Dr from 180 to 90 seconds can help prevent traffic from backing up through the intersection. It can also give left turning residents a greater chance at a green light to exit the Village. It should not interrupt the overall signal coordination. "Don't Block the Box" striping and signage could also help to keep drivers from blocking the intersection. Long wait times and queues were reported by the residents at McNab Rd and Cypress Creek Rd as well, and a more in depth signal timing study is recommended to address this.

NEW SIDEWALK

Wide Sidewalk in Flagler Village. Credit: Kittelson & Associates, Inc.

Missing Sidewalk at Bus Stop on Cypress Creek Road. Credit: Kittelson & Associates, Inc.

The external streets have the potential to facilitate pedestrian trips to support transit and connect to local destinations, however some are lacking sidewalks. In order to allow for this and to improve pedestrian comfort, sidewalks should be constructed on both sides of the external streets. The sidewalks should be at least 5' wide, although 8-10' sidewalks are preferable where feasible. Where possible, sidewalks should be separated from the street by a 3' grass buffer and should be shaded by trees. The construction of sidewalks may occur as part of a larger project or incrementally as redevelopment occurs.

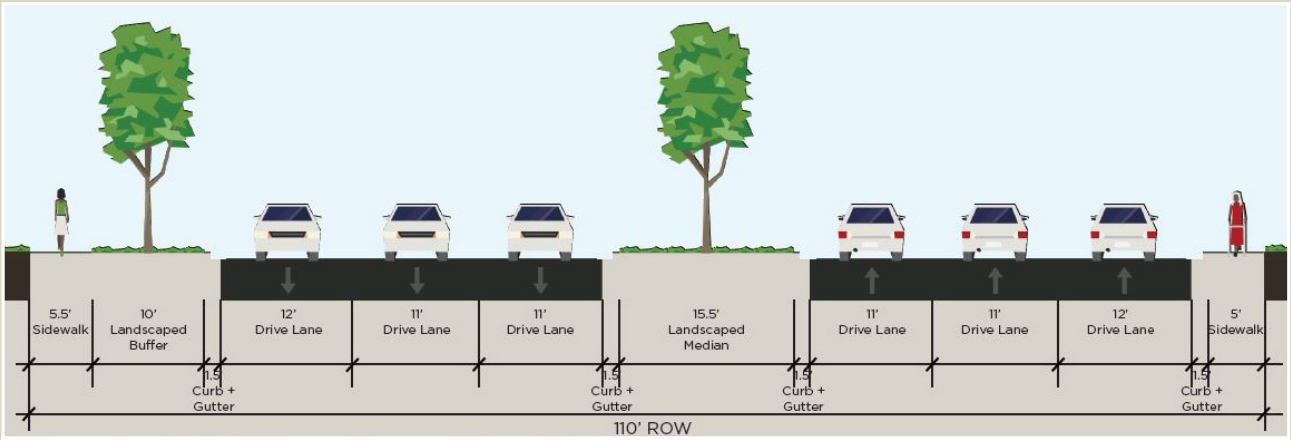
EVALUATE/RELOCATE SCHOOL BUS STOP

It was noted by neighbors that many parents from within and outside of the Village park their cars along NW 69th Court to wait for the school bus. This blocks traffic and makes it hard for residents to use this exit, and can potentially create an unsafe condition. It is recommended that alternative locations be considered for the school bus stop that will not cause such conditions, such as in a parking lot. One example of such a location is the community center for the condominium neighborhood to the north. Placing the stop in such a location would provide off-street parking for parents and give children a safe place to wait. This would require close coordination between the County and the associated property owner(s), and therefore requires further study.

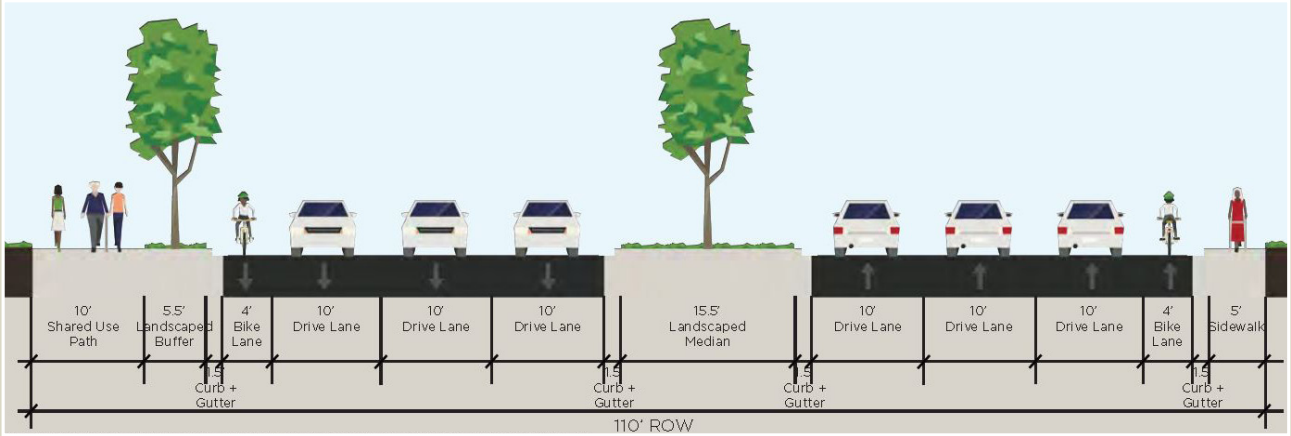
SHARED USE PATH & BIKE LANES ON NW 31ST AVENUE

Connecting the Blocks, Fort Lauderdale's Multimodal Connectivity Plan, recommends that NW 31st Ave be redesigned as a 4 lane road with a two-way center left-turn lane, shade trees, wide sidewalks, bike lanes, and pedestrian scale lighting. While this long term solution may be ideal, there is room for improvement in the short term as well. Creating a 10' shared use path on the west side of the street can provide ample space for pedestrians and bicyclists and can enhance north-south connectivity to recreational destinations such as the Fern Forrest Nature Center, the Cypress Creek Greenway, and the C-11 Canal Trail. By narrowing the vehicle lanes, on-street bike lanes can also be incorporated, as seen above.

The Broward County Complete Streets Resolution requires minimum 11' lanes on collectors and above with speeds over 40 miles per hour. NW 31st Ave is a state collector with speeds of 45 miles per hour, and so a variance would need to sought to complete this short term restriping strategy. Otherwise, the recommendation in the Connecting the Blocks or other solutions that may require roadway reconstruction may be appropriate and should be considered if and when the project is moved forward.



EXISTING SECTION ON NW 31ST AVENUE (LOOKING NORTH)



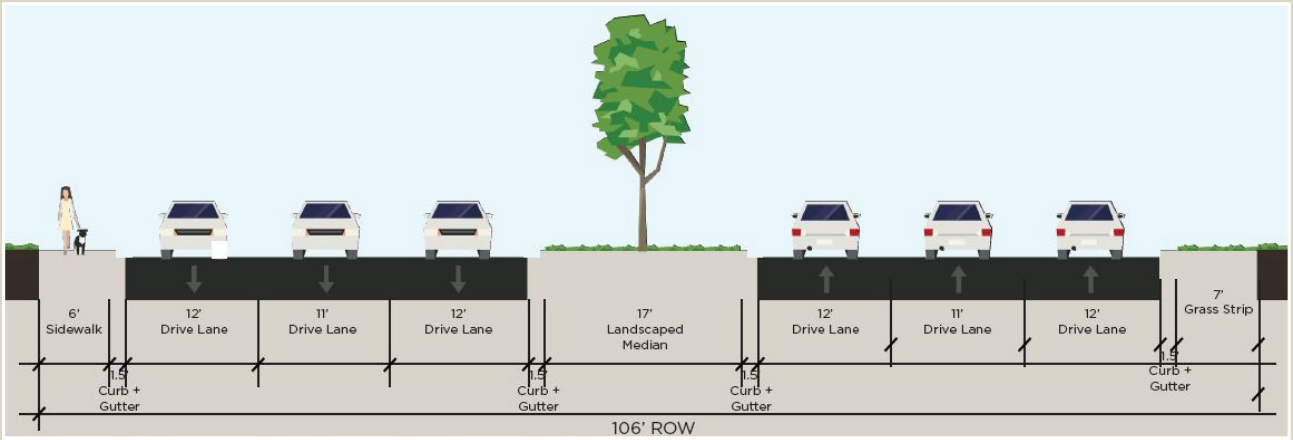
PROPOSED SECTION ON NW 31ST AVENUE (LOOKING NORTH)

Note: This cross section is conceptual and was created to provide an example of one possible scenario to be studied further in the future. Before any cross section change is made, further study should be undertaken to understand the constraints of the roadway and determine final design.

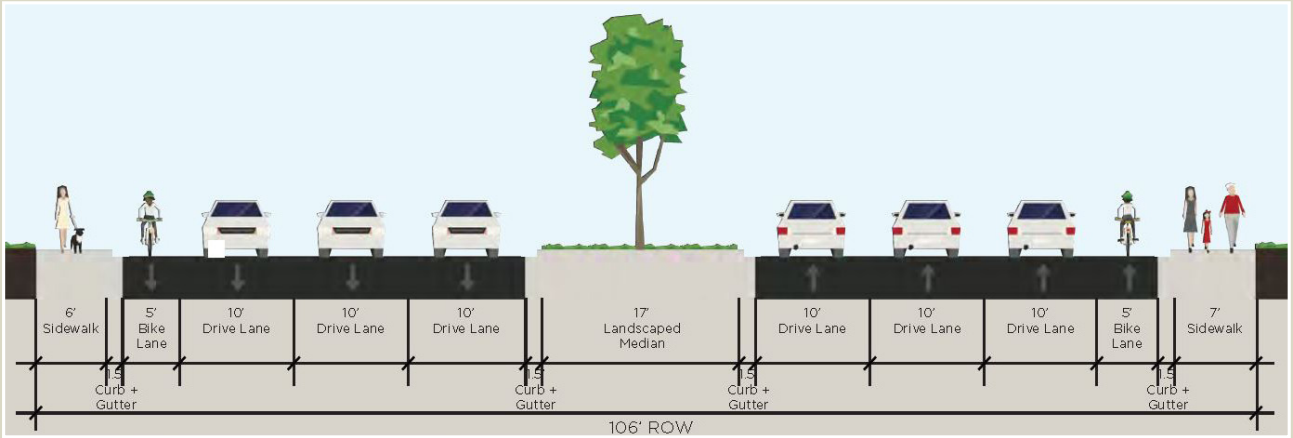
5’ BIKE LANES & SIDEWALKS ON CYPRESS CREEK ROAD

Connecting the Blocks recommends that the vehicle lanes be narrowed on Cypress Creek Road and bike lanes be striped. State policy requires these lanes to be buffered where space is available to provide a greater level of comfort and safety to riders. If right-of-way does not allow for buffers, 5’ bike lanes should be painted. While further study is required to determine the precise cross section, a conceptual cross section was created. This cross section proposes restriping the lanes to 10’ to provide space for bike lanes within the existing roadway. Additionally, sidewalks are present only on the south side of the road. If the road is eventually fully reconstructed, it should be developed to accommodate buffered bike lanes.

The Broward County Complete Streets Resolution requires minimum 11’ lanes on collectors and above with speeds over 40 miles per hour. Cypress Creek Road is a County Principal Arterial with speeds of 45 miles per hour, and so a variance would need to sought to complete this restriping strategy. Otherwise, other solutions that may require roadway reconstruction may be appropriate and should be considered if and when the project is moved forward.



EXISTING SECTION ON CYPRESS CREEK ROAD (LOOKING WEST)



PROPOSED SECTION ON CYPRESS CREEK ROAD (LOOKING WEST)

Note: This cross section is conceptual and was created to provide an example of one possible scenario to be studied further in the future. Before any cross section change is made, further study should be undertaken to understand the constraints of the roadway and determine final design.

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.

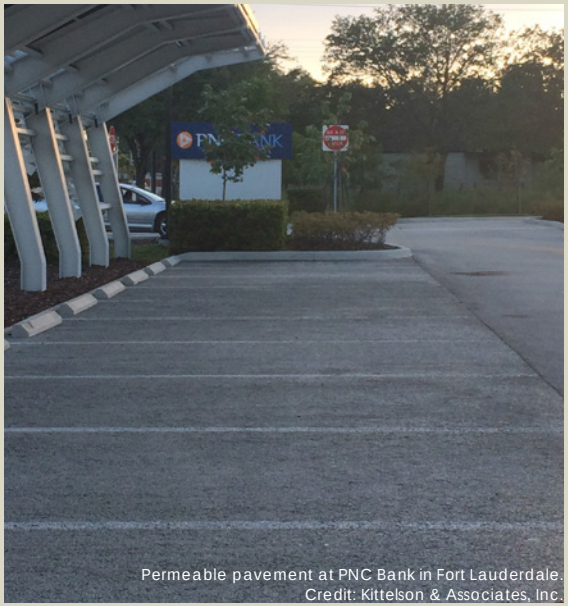
In recognition and support of the City's goals and vision, it is recommended that strategies to support sustainability be woven throughout the improvements recommended in the Palm Aire Village West Neighborhood Mobility Masterplan. The strategies discussed can be incorporated into the design of some 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 18 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 masterplan 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 Streets Masterplan, 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. Costs for closing the pedestrian entrance on NW 34th Avenue are not included because it will be completed as part of a previously funded project that is currently under design.

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.

FIGURE 18

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.

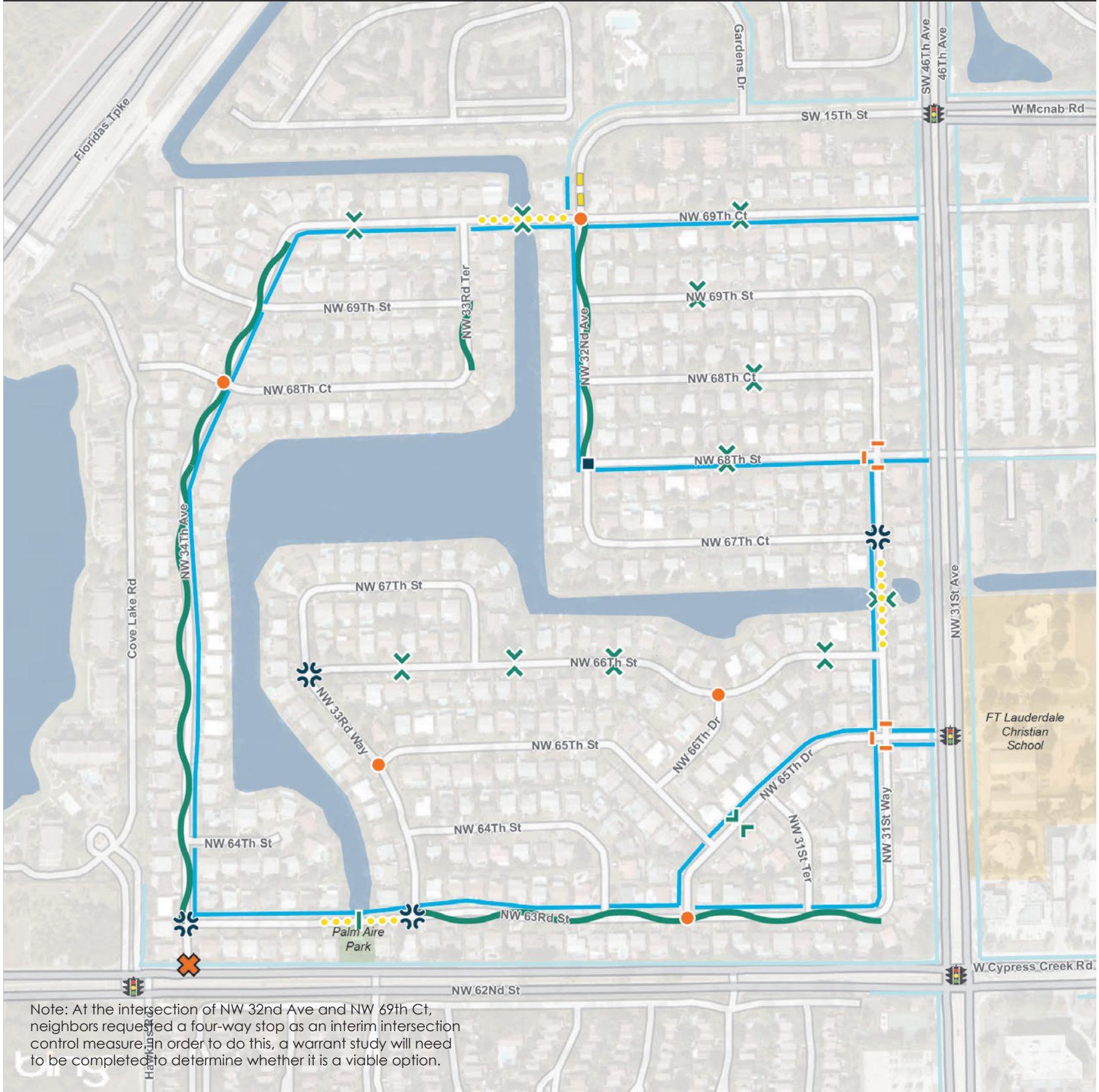
Improvement*		Quantity (Number or total feet)	Per Location Cost** (in 2015 Dollars)		Total Cost** (for all locations in 2015 Dollars)		Timing
			Low End	High End	Low End	High End	
Internal Streets							
Mini Roundabout	3 Legs	3 Locations	$31,900	$35,900	$95,700	$107,700	●
	4 Legs	2 Locations	$40,600	$45,600	$81,118	$91,258	●
Raised Intersection		1 Locations	$23,600	$26,500	$23,600	$26,500	●
Pinch Point		13 Locations	$2,000	$2,300	$26,000	$29,900	●
Tighten Turning Radii		4 Locations	Varies	Varies	$1,400	$1,600	●
Raised Pedestrian Crossing		6 Locations	$5,900	$6,600	$35,400	$39,600	●
Raised Pedestrian Crossing + Pinch Point		1 Location	$3,500	$3,900	$3,500	$3,900	●
5' Sidewalk		10,360 Feet	$39	$44	$404,040	$455,840	●
Mini-Median Island		2 Locations	$13,300	$14,900	$26,600	$29,800	●
Chicane		10 Locations	$29,200	$32,800	$292,000	$328,000	●
Pedestrian Lighting		34 Lights	(Average cost per solar powered pedestrian light in City of Fort Lauderdale)	$4,500	$153,000	$153,000	●
Total Cost					$1,142,318	$1,267,058	

IMPROVEMENT TIMING/PHASING KEY

- ● Less than 2 Years
- ● 2 to 5 Years

Notes:

* Costs for closing the pedestrian entrance on NW 34th Avenue are not included because it will be completed as part of a previously funded project that is currently under design.
**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.



Note: At the intersection of NW 32nd Ave and NW 69th Ct, neighbors requested a four-way stop as an interim intersection control measure. In order to do this, a warrant study will need to be completed to determine whether it is a viable option.

6 NEXT STEPS

NEXT STEPS

The Palm Aire Village West Neighborhood Mobility Masterplan 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 Palm Aire Village West. 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 the village residents, however the City of Fort Lauderdale staff intends to help guide the village 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. 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 Palm Aire Village West 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 the village; grants applied for by the village, 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

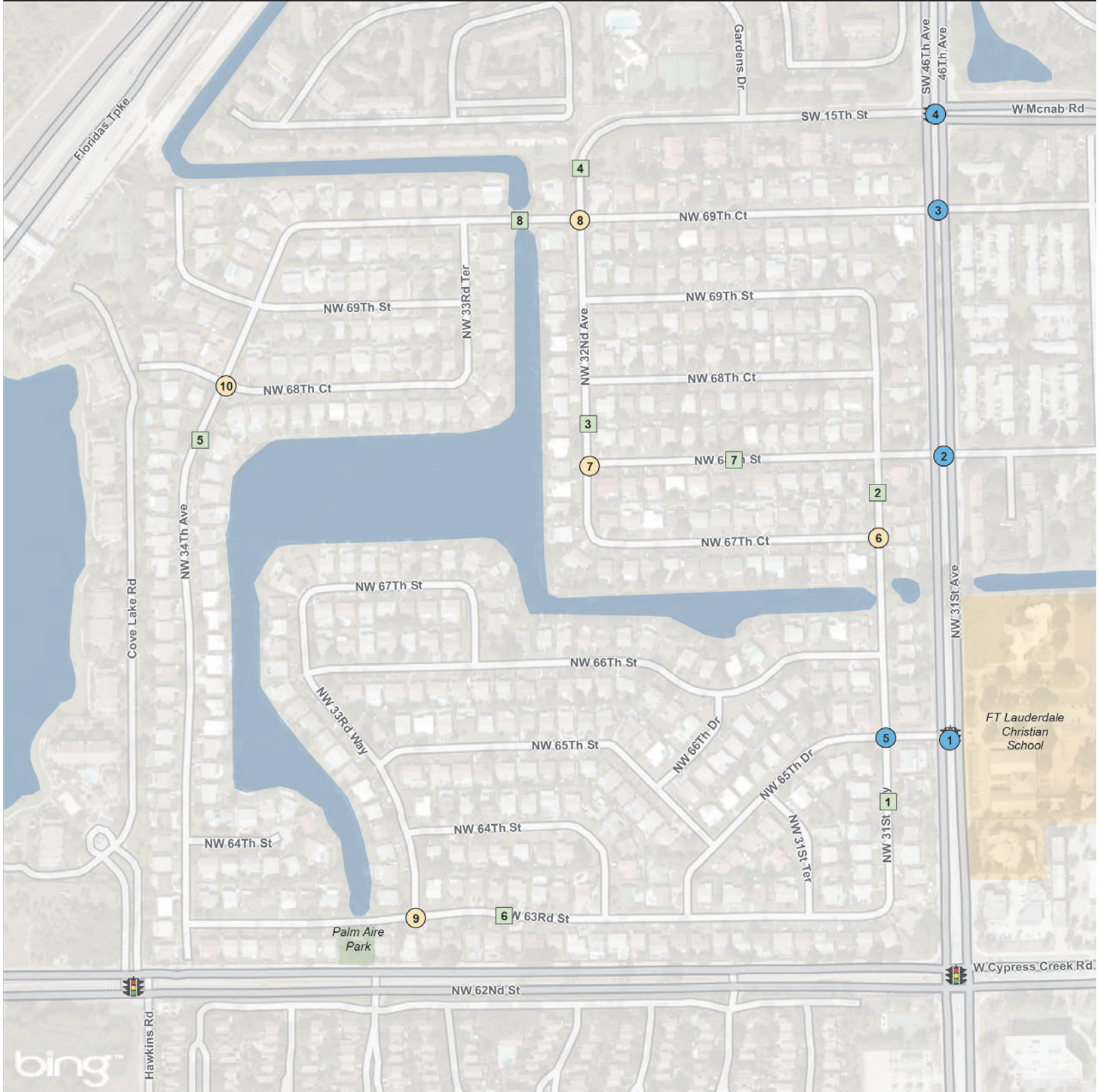
Legend

Counts

- Intersection Turning Movement
- Ped/Bike Volume
- Mid-Block Volume and Speed

0 500 1,000 Feet

N


Floridas Tpke
Gardens Dr
SW 46Th Ave
46Th Ave
SW 15Th St
W Mcnab Rd
NW 69Th Ct
NW 69Th St
NW 33Rd Ter
NW 32Nd Ave
NW 68Th Ct
NW 67Th Ct
NW 67Th St
NW 34Th Ave
Cove Lake Rd
NW 66Th St
NW 33Rd Way
NW 66Th Dr
NW 65Th St
NW 65Th Dr
NW 31St Ave
NW 31St Ter
NW 64Th St
NW 63Rd St
Palm Aire Park
FT Lauderdale Christian School
W Cypress Creek Rd
NW 62Nd St
Hawkins Rd
bing

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.

INTERSECTION IMPROVEMENTS - INTERNAL STREETS

Location	Treatment	Reason	Comments	Prioritization Score	Measure											
					1	2	3	4	5	6	7	8	9	10*	11	12	13
Cypress Creek Road at NW 34th Ave	Close gate	Safety	Being completed as part of wall construction	20	0	0	0	0	0	0	0	0	0		0	2	2
NW 63rd St at NW 34th Ave	Tighten Curb Radii	Traffic Calming		27	2	0	0	0	0	0	1	0	0		0	2	2
NW 63rd St at Palm Aire Park	Raised Crossing and pinch point with signage	Traffic Calming		40	2	0	0	0	2	0	2	0	0		0	2	2
NW 63rd St at NW 33rd Way	Tighten Curb Radii	Traffic Calming		27	2	0	0	0	0	0	1	0	0		0	2	2
NW 63rd St at NW 65th Dr	Mini Roundabout	Traffic Calming		25	1	0	0	0	0	0	1	0	0		0	2	2
NW 65th Dr at NW 31st Way	Raised Pedestrian Crossings at Intersection	Ped Access; Visual cue for vehicles to stop	Also provides drivers with a visual cue regarding where to stop so they don't block intersection	40	2	0	0	0	2	0	2	0	0		0	2	2
NW 65th St at NW 33rd Way	Mini Roundabout	Traffic Calming		25	1	0	0	0	0	0	1	0	0		0	2	2
NW 66th St at NW 33rd Way	Tighten Curb Radii	Traffic Calming	There is a driveway in the intersection; prevents mini-roundabout.	27	2	0	0	0	0	0	1	0	0		0	2	2
NW 66th St at NW 66th Dr	Mini Roundabout	Traffic Calming	Driveways blocking this intersection, need to mitigate.	25	1	0	0	0	0	0	1	0	0		0	2	2
NW 67th Ct at NW 31st Way	Tighten Curb Radii	Traffic Calming		27	2	0	0	0	0	0	1	0	0		0	2	2
NW 68th St at NW 32nd Ave	Raised Intersection	Traffic Calming	There is a driveway in the intersection; prevents mini-roundabout.	27	2	0	0	0	0	0	1	0	0		0	2	2
NW 68th St at NW 31st Way	Raised Pedestrian Crossings at Intersection	Ped Access; Visual cue for vehicles to stop	Also provides drivers with a visual cue regarding where to stop so they don't block intersection	40	2	0	0	0	2	0	2	0	0		0	2	2
NW 68th Ct at NW 34th Ave	Mini Roundabout	Traffic Calming		25	1	0	0	0	0	0	1	0	0		0	2	2
NW 69th Ct at NW 32nd Ave	Mini Roundabout	Traffic Calming	Probably no landscaping due to potential bus route	25	1	0	0	0	0	0	1	0	0		0	2	2

INTERSECTION IMPROVEMENTS - EXTERNAL STREETS

Location	Treatment	Reason	Comments	Prioritization Score	Measure												
					1	2	3	4	5	6	7	8	9	10*	11	12	13
Cypress Creek Road at NW 31st Ave	Evaluate / Adjust Signal Timing	Congestion Relief	County Roadway; Requires further study	16	0	0	0	0	0	0	0	0	0		1	1	2
NW 65th Dr at NW 31st Ave	No U-Turn Sign; Push U-Turn back to 68th Street	Congestion Relief	County Roadway; Requires further study	16	0	0	0	0	0	0	0	0	0		1	1	2
NW 65th Dr at NW 31st Ave	Evaluate / Adjust Signal Timing	Congestion Relief	County Roadway; Requires further study	16	0	0	0	0	0	0	0	0	0		1	1	2
W McNab Road at NW 31st Ave	Evaluate / Adjust Signal Timing	Congestion Relief	County Roadway; Requires further study	16	0	0	0	0	0	0	0	0	0		1	1	2
W McNab Road at NW 31st Ave	Lighting Study	Safety / Crash History	County Roadway; Requires further study	29	2	1	0	0	0	0	1	0	1		1	1	2
NW 68th St at NW 31st Ave	No Left Turn During Peak Hours	Congestion Relief	County Roadway; Requires further study	16	0	0	0	0	0	0	0	0	0		1	1	2

SEGMENT IMPROVEMENTS - INTERNAL STREETS

Street	From	To	Treatment	Reason	Potential Issues	Priority Score	Measure												
							1	2	3	4	5	6	7	8	9	10*	11	12	13
NW 34th Ave	Cypress Creek Road	NW 69th Ct	Chicanes	Traffic Calming		20	0	0	0	0	0	0	0	0	0		0	2	2
NW 34th Ave	Cypress Creek Road	NW 69th Ct	Sidewalk on East Side	Ped/Bike Connectivity		38	2	0	0	0	2	0	0	0	1		0	2	2
NW 33rd Terr	NW 68th Ct	SW 15th St	Chicane between NW 68th Ct and SW 15th St	Traffic Calming		20	0	0	0	0	0	0	0	0	0		0	2	2
NW 63rd St	NE 34th Ave	NW 33rd Way	Pedestrian lighting in front of the park	Safety		28	2	0	0	0	0	0	0	0	1		0	2	2
NW 63rd St	NW 33rd Way	NW 31st Way	Chicanes between NW 33rd Way and NW 31st Way	Traffic Calming		20	0	0	0	0	0	0	0	0	0		0	2	2
NW 63rd St	NW 34th Ave	NW 31st Way	Sidewalk on North side	Ped/Bike Connectivity		38	2	0	0	0	2	0	0	0	1		0	2	2
NW 65th Dr	NW 63rd St	NW 31st Way	Chicane between NW 65th St and NW 31st Terr	Traffic Calming		20	0	0	0	0	0	0	0	0	0		0	2	2
NW 65th Dr	NW 63rd St	NW 31st Ave	Sidewalk on North Side	Ped/Bike Connectivity		38	2	0	0	0	2	0	0	0	1		0	2	2
NW 66th St	NW 66th Dr	NW 31st Way	Pinch Point west of 31st Way	Traffic Calming		20	0	0	0	0	0	0	0	0	0		0	2	2
NW 66th St	NW 33rd Ave	NW 66th Dr	Pinch Point just east of NW 33rd Ave	Traffic Calming		20	0	0	0	0	0	0	0	0	0		0	2	2
NW 66th St	NW 33rd Ave	NW 66th Dr	Pinch Point Just west of the curve	Traffic Calming		20	0	0	0	0	0	0	0	0	0		0	2	2
NW 66th St	NW 33rd Way	NW 33rd Ave	Pinch Point east of NW 33rd Way	Traffic Calming		20	0	0	0	0	0	0	0	0	0		0	2	2
NW 31st Way	NW 66th St	NW 67th Ct	Pinch point at the bridge	Traffic Calming		20	0	0	0	0	0	0	0	0	0		0	2	2
NW 31st Way	NW 66th St	NW 67th Ct	Pedestrian lighting near the bridge	Safety		28	2	0	0	0	0	0	0	0	1		0	2	2
NW 31st Way	NW 63rd St	NW 68th St	Sidewalk on west side	Ped/Bike Connectivity		38	2	0	0	0	2	0	0	0	1		0	2	2
NW 68th St	NW 32nd Ave	NW 31st Ave	Pinch point	Traffic Calming		20	0	0	0	0	0	0	0	0	0		0	2	2
NW 68th Ct	NW 32nd Ave	NW 31st Ave	Pinch point	Traffic Calming		20	0	0	0	0	0	0	0	0	0		0	2	2
SW 15th St	NW 32nd Ave	NW 31st Ave	Pinch point	Traffic Calming		20	0	0	0	0	0	0	0	0	0		0	2	2
NW 69th Ct	NW 33rd Terr	NW 32nd Ave	Pinch point at bridge	Traffic Calming		20	0	0	0	0	0	0	0	0	0		0	2	2
NW 69th Ct	NW 33rd Terr	NW 32nd Ave	Pedestrian lighting near the bridge	Safety		28	2	0	0	0	0	0	0	0	1		0	2	2
NW 69th Ct	NW 32nd Ave	NW 31st Ave	Pinch Point near the entrance	Traffic Calming		20	0	0	0	0	0	0	0	0	0		0	2	2
NW 69th Ct	NW 34th Ave	NW 33rd Terr	Pinch point between 34th Ave and 33rd Terr	Traffic Calming		20	0	0	0	0	0	0	0	0	0		0	2	2
NW 69th Ct	NW 34th Ave	NW 31st Ave	Sidewalk on South Side	Ped/Bike Connectivity		38	2	0	0	0	2	0	0	0	1		0	2	2
NW 32nd Ave	NW 68th St	NW 69th Ct	Chicanes	Traffic Calming		20	0	0	0	0	0	0	0	0	0		0	2	2
NW 32nd Ave	NW 68th St	NW 69th Ct	Sidewalk on West Side	Ped/Bike Connectivity		38	2	0	0	0	2	0	0	0	1		0	2	2
W McNab Rd	NW 68th Ct	NW 31st Ave	Median island approaching the neighborhood	Traffic Calming; Entry Feature		20	0	0	0	0	0	0	0	0	0		0	2	2

SEGMENT IMPROVEMENTS - EXTERNAL STREETS

Street	From	To	Treatment	Reason	Potential Issues	Priority Score	Measure												
							1	2	3	4	5	6	7	8	9	10*	11	12	13
NW 31st Ave	Canal North of Oakland Park Blvd	Canal South of Atlantic Blvd	Shared Use Path on West Side	Ped/Bike Connectivity	This path could connect several parks to the north and south; County Roadway; Requires Coordination	45	2	0	0	1	2	2	0	0	1		1	1	2
NW 31st Ave	Whole area		Bike Lanes on both sides	Ped/Bike Connectivity	County Roadway; Requires Coordination	34	2	0	0	0	0	2	0	0	1		1	1	2
Cypress Creek Road	Whole area		Sidewalk on South Side	Ped/Bike Connectivity	County Roadway; Requires Coordination	35	2	0	0	1	2	0	0	0	1		1	1	2
Cypress Creek Road	Whole area		Bike Lanes on both sides	Ped/Bike Connectivity	County Roadway; Requires Coordination	34	2	0	0	0	0	2	0	0	1		1	1	2
NW 69th Ct	NW 32nd Ave	NW 31st Ave	Consider moving school bus stop	Safety	Requires coordination with County and School Board	19	2	0	0	0	0	0	0	0	0		0	1	2


CITY OF FORT LAUDERDALE