

# PLANNING CONTEXT

The Pembroke Pines Mobility Hub Master Plan builds upon the existing physical context in and surrounding the Hub study area, and the policy context provided by prior and ongoing planning efforts. This Planning Context section summarizes relevant physical conditions and the relevant adopted policies and recommendations from recent planning efforts of the City and others. The resulting understanding of the transportation and development environment in the Pembroke Pines Hub study area, together with the accompanying Market Analysis, informs the Mobility Hub Planning Framework.

With the assistance of the Planning and Economic Development Department, the consulting team conducted site visits, stakeholder outreach and a review of

## FIGURE C-1: RENDERING OF PEMBROKE PINES CITY CENTER

Source: Terra



relevant documentation to gain an understanding of factors impacting the need for mobility improvements in the Hub study area. Current policies are supportive of multi-modal improvements. Now that the Pines City Center (as depicted in Figure C-1) is nearing completion, specific implementation strategies are timely.

The Hub study area is currently served by one Broward County Transit (BCT) route and a robust community shuttle system. Integration of these services, and planning for future BCT service upgrades, are both needed. Current market interest and development opportunities offer the potential for successful near-term and long-term multi-modal strategies.

This section documents relevant findings regarding:

- the **REGIONAL CONTEXT** impacting the Pembroke Pines Hub study area, including surrounding areas that can be better connected to the City Center via multiple modes of travel;
- the **TRANSPORTATION CONTEXT**, including existing and planned transit services, the existing roadway network, and the existing pedestrian and biking environment; and
- the **DEVELOPMENT CONTEXT**, including existing land use, current zoning, and the prevailing development character in the area.

Feedback collected during **STAKEHOLDER OUTREACH** early in the planning process is also summarized. Outreach consisted of meetings with agencies, a joint meeting of all City of Pembroke Pines Advisory Boards, and both in-person and online surveys to gather input from current and potential future transit riders.

**Adopted Policies Reviewed**

Documentation reviewed for this report included the following:

- **City of Pembroke Pines Comprehensive Plan** (as amended October 2, 2013).<sup>1</sup>
- **Commitment 2040 – The Long Range Transportation Plan (LRTP) for Broward County** (current through April 12, 2018).<sup>2</sup>
- **City of Pembroke Pines Future Land Use Map** (current through June 2018).<sup>3</sup>
- **City of Pembroke Pines 2014-2019 Economic Development Strategic Plan**, August 2014 (adopted September 17, 2014).<sup>4</sup>
- **City of Pembroke Pines Green Plan**, October 28, 2014.<sup>5</sup>
- **Hollywood/Pines Boulevard Congestion Management Process/Livability Planning Project**, December 2013.<sup>6</sup>
- **City of Pembroke Pines Streetscape Design Guidelines**, July 6, 2012.<sup>7</sup>
- **Hollywood/Pines Boulevard Multimodal Corridor Study**, September 2004.<sup>8</sup>
- **City of Pembroke Pines Zoning Map** (current through June 2018).<sup>9</sup>
- **City of Pembroke Pines Code of Ordinances** (current through March 21, 2018).<sup>10</sup>

**REGIONAL CONTEXT**

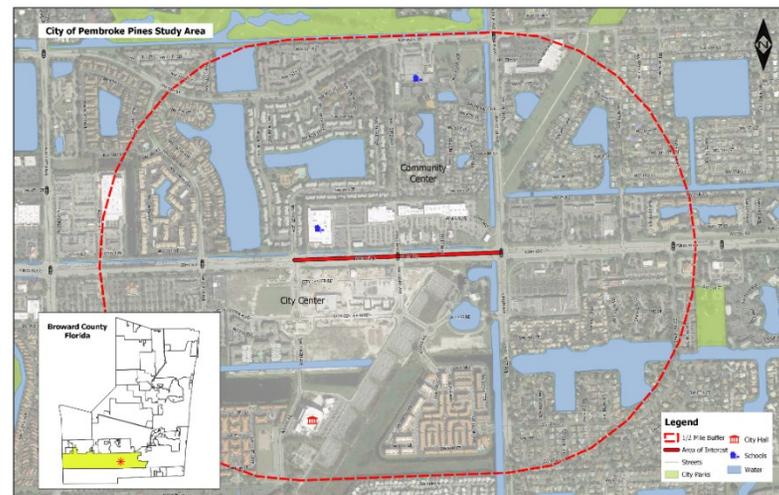
The study area for the Pembroke Pines Mobility Hub Master Plan encompasses the newly developed Pines City Center at the southwest corner of Pines Boulevard and Palm / 101<sup>st</sup> Avenue and its immediate surroundings. The Pines City Center is comprised of commercial uses, multi-family residential uses, and the new Charles F. Dodge City Hall complex, with a few site proposals still in

review. A long-established shopping center that also includes a charter school facility is located immediately to the north within the study area, with a variety of predominantly residential land uses extending north and south. Regional access to the Pines City Center area is provided by Flamingo Road about 1.5 miles west and an interchange with I-75 at Pines Boulevard approximately 3.5 miles west, and University Boulevard and an interchange with Florida’s Turnpike approximately 2 and 4 miles east, respectively. Figure C-2 depicts the focused study area for the Mobility Hub that is documented and discussed in this report.

As depicted on Figure C-3, regional destinations extending west along Pines Boulevard include C B Smith Park west of Flamingo Road and Pembroke Lakes Mall between Flamingo and Hiatus Roads. To the east are several regional auto dealers, North Perry Airport and Broward College-South, past University Drive.

**FIGURE C-2: STUDY AREA FOR MOBILITY HUB DATA COLLECTION**

(not to scale)

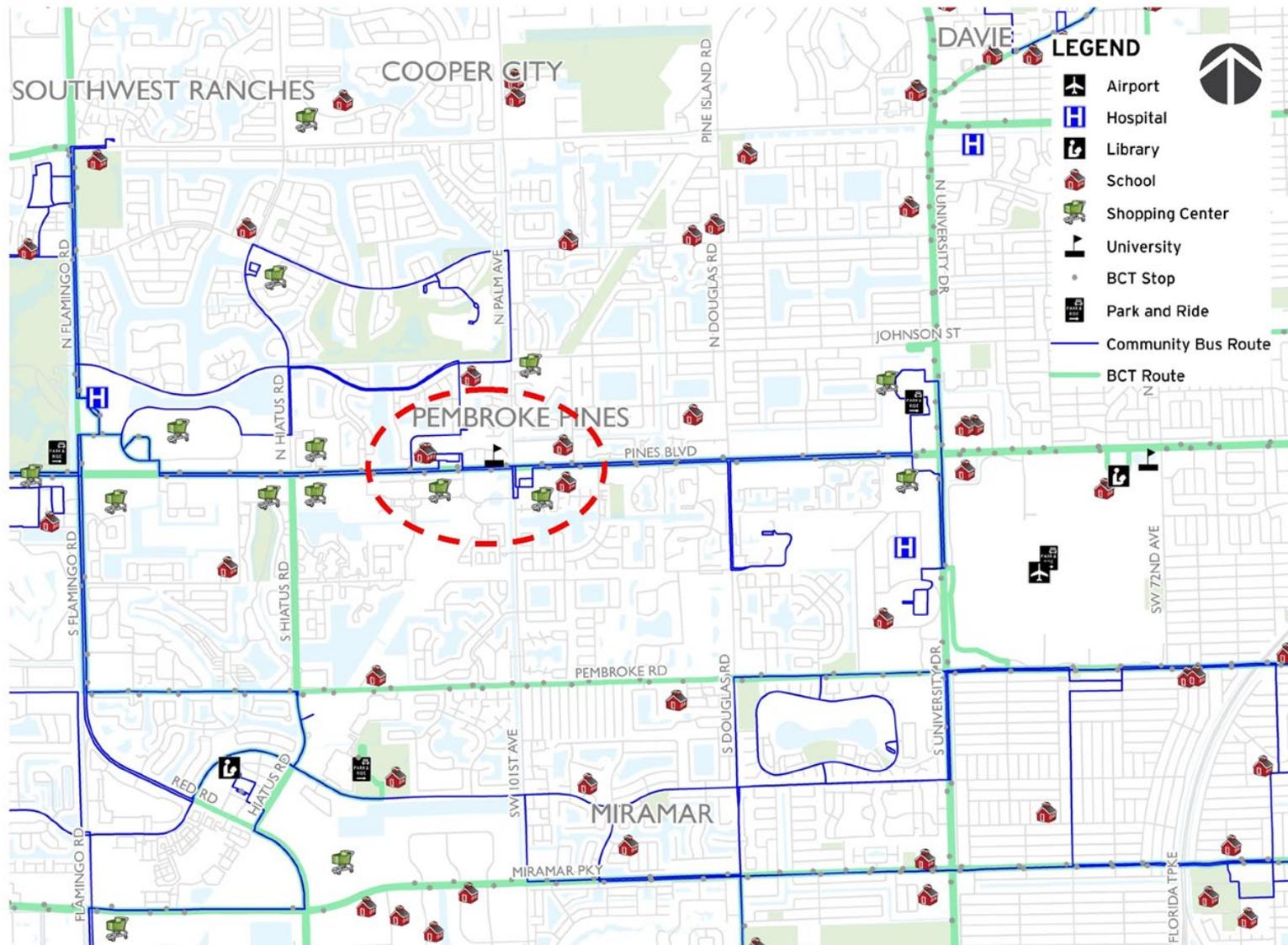


<sup>1</sup> <https://www.ppines.com/374/Comprehensive-Plan>  
<sup>2</sup> <http://www.browardmpo.org/index.php/core-products/long-range-transportation-plan-lrtp>  
<sup>3</sup> <https://www.ppines.com/DocumentCenter/View/689/FLUM?bidId=>  
<sup>4</sup> <https://www.ppines.com/DocumentCenter/View/3883/Pembroke-Pines-EDSP-2014-2019?bidId>  
<sup>5</sup> <https://www.ppines.com/DocumentCenter/View/2656/greenplan?bidId>

<sup>6</sup> <http://www.browardmpo.org/index.php/major-functions/congestion-management-process-livability-planning>  
<sup>7</sup> <https://www.ppines.com/DocumentCenter/View/737/Streetscape-Design-Guidelines?bidId=>  
<sup>8</sup> [http://www.browardmpo.org/images/WhatWeDo/HollywoodPines\\_Final.pdf](http://www.browardmpo.org/images/WhatWeDo/HollywoodPines_Final.pdf)  
<sup>9</sup> <https://www.ppines.com/DocumentCenter/View/731/Zoning?bidId>  
<sup>10</sup> [http://www.amlegal.com/codes/client/pembroke-pines\\_fl/](http://www.amlegal.com/codes/client/pembroke-pines_fl/)

FIGURE C-3: REGIONAL CONTEXT OF THE PEMBROKE PINES MOBILITY HUB STUDY AREA

(not to scale)



## TRANSPORTATION CONTEXT

Information regarding current and planned transit service in the Pembroke Pines Hub study area is summarized in this section, including a summary of community shuttle service. Documentation of the existing pedestrian and bicycle network and the roadway network is also included. Relevant planning recommendations from prior planning studies are also summarized. The information provides a consistent “baseline” understanding of the existing mobility network upon which recommendations for Hub-related multimodal investments and longer-term mobility initiatives can be developed.

## TRANSIT SERVICE

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### Existing Service

There is one BCT Route within the Hub study area, Route 7 which is a major east-west line providing service along Pines Boulevard from U.S. 1/Federal Highway to U.S. 27. The Hub study area is also served by three community shuttle routes operated by the City:

#### Route 7

- A major east-west line provides service along Pines Boulevard from U.S. 1/Federal Highway to U.S. 27
- Services 716,380 passengers annually (July 2017 to July 2018)

#### Pembroke Pines Blue East (Route 726)

- A Community Shuttle servicing the eastern portion of Pembroke Pines from University Drive to the Southwest Focal Point Community Center, primarily along Pines Boulevard
- Route was recently updated in 2017
- Services 6,536 passengers annually (July 2017 to July 2018)
- A free service Tuesday, Wednesday, Friday from 9 AM to 3:25 PM

#### Pembroke Pines Blue West (Route 727)

- A Community Shuttle servicing the central portion of Pembroke Pines from Century Village off SW 136 Avenue to the Southwest Focal Point Community Center, via Palm and Pines
- Route was recently updated in 2017
- Services 6,638 passengers annually (July 2017 to July 2018)
- A Free service Tuesday, Wednesday, Friday from 8 AM to 3:15 PM

#### Pembroke Pines Gold East (Route 725)

- A Community Shuttle servicing the central portion of Pembroke Pines from the Southwest Pines Focal Point Community Center to Century Village off SW 136 Avenue, via Johnson and Hiatus
- Route was recently updated in 2017
- Services 69,105 passengers annually (July 2017 to July 2018)
- A free service Monday through Saturday from 7 AM to 7:21 PM

Figure C-4 shows the transit network in the Hub study area. Figure C-5 shows the citywide transit network that feeds into the Hub study area, along with existing nearby park-and-ride facilities.

### Other Pembroke Pines Routes

#### Route 2

- A major north-south line provides service along University Drive from Westview Drive in Coral Springs to NW 207<sup>th</sup> Street in Miami- Dade County
- Services 1,227,607 passengers annually (July 2017 – July 2018)

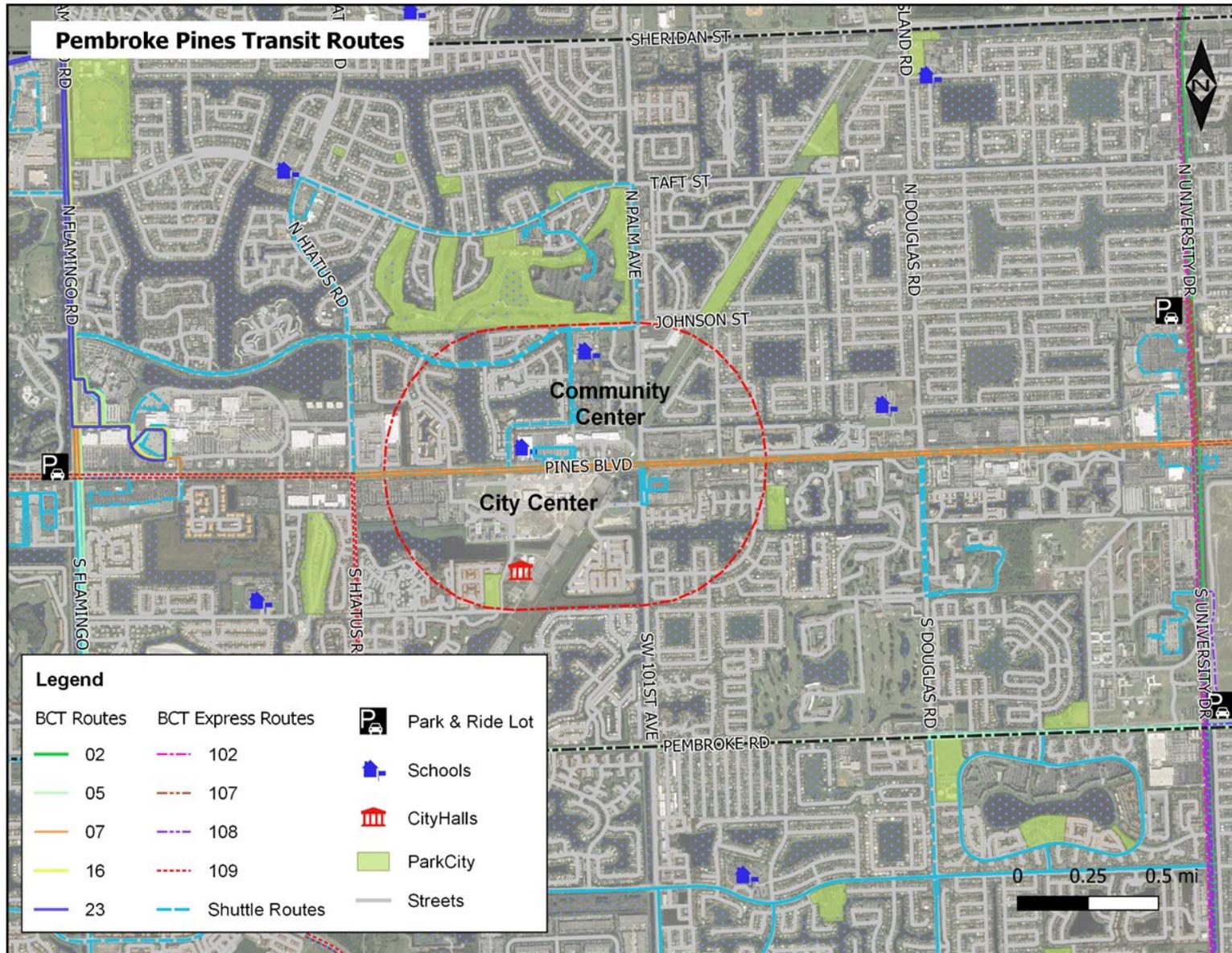
#### Route 5

- An east-west feeder line provides service along Pembroke Road from Hallandale Beach City Hall to the Pembroke Lakes Mall, just west of the Hub study area
- Services 264,211 passengers annually (July 2017 to July 2018)

FIGURE C-4: STUDY AREA TRANSIT NETWORK



FIGURE C-5: CITYWIDE TRANSIT NETWORK



**Other Pembroke Pines Routes - Continued**

**Route 16**

- An east-west feeder line providing service primarily along Stirling Road from Dania Beach to the Pembroke Lakes Mall, just west of the Hub study area
- Services 161,399 passengers annually (July 2017 to July 2018)

**Route 23**

- A north-south feeder line providing service primarily along Weston Road from the Sawgrass Mills Mall to the Pembroke Lakes Mall, just west of the Hub study area
- Services 57,504 passengers annually (July 2017 to July 2018)

**Route 102**

- A major north-south line provides limited service stops along University Drive from Westview Drive in Coral Springs, to the Golden Glades Park and Ride in Miami-Dade
- Services 155,778 passengers annually (July 2017 – July 2018)

**95 Express (Route 107)**

- An express bus service from University Drive/Pines Boulevard to the Miami Civic Center and Downtown Miami
- Services 32,342 passengers annually (July 2017 to July 2018)

**95 Express (Route 108)**

- An express bus service from North Perry Airport on SW 72<sup>nd</sup> Avenue/Pembroke Road to the Culmer Metrorail Station and University Miami Hospital
- Services 82,879 passengers annually (July 2017 to July 2018)

**95 Express (Route 109)**

- An express bus service from CB Smith park on Flamingo Road/Pines Boulevard to Downtown Miami/Brickell
- Services 116,994 passengers annually (July 2017 to July 2018)

**Pembroke Pines Gold West (Route 725)**

- A Community Shuttle servicing the central western portion of Pembroke Pines from Century Village off SW 136<sup>th</sup> Avenue to Walmart off Pines Boulevard and SW 184<sup>th</sup> Avenue
- Services 33,705 passengers annually (July 2017 to July 2018)
- A Free service Monday through Saturday from 7 AM to 7:21 PM

**Pembroke Pines Green (Route 724)**

- A Community Shuttle servicing the western most portion of Pembroke Pines from Westfork Plaza off Pines Boulevard and Dykes Road to Holly Lake mobile home park off U.S. 27
- Services 41,678 passengers annually (July 2017 to July 2018)
- A Free service Monday through Saturday 7:45 AM to 7:55 PM

**Transportation Options (TOPS) is a county paratransit service**

- Provides service within Hub study area – no specific data for City
- Cost is \$3.50 per one-way trip
- Services 719,850 passengers annually (July 2017-July 2018)

**Headways and Spans of Service**

Route 7 provides weekday, Saturday, and Sunday service. Table C-1 provides a summary of the weekday service. The route provides service exceeding 15 hours per day with approximately 25-minute headways.

**TABLE C-1: WEEKDAY TRANSIT HEADWAYS AND SPAN OF SERVICE**

| Pines Blvd & University Dr Bus Stop |                 |       |   |                                     |       |       |       |   |
|-------------------------------------|-----------------|-------|---|-------------------------------------|-------|-------|-------|---|
| Route                               | Span of Service |       | Ave Span of Service Weekday [Hours]:[Min] | Peak Hour Headway Weekday [minutes] |       |       |       | Peak Hour Headway Weekday Ave [minutes] |
|                                     | WB              | EB    |   | WB AM                               | EB AM | WB PM | EB PM |   |
| Route 7                             | 17:44           | 17:31 | 17:37                                     | 0:27                                | 0:23  | 0:23  | 0:24  | 0:24                                    |

**Bus Stop Types and Activity**

There are three different types of bus stops ranging from a bus stop sign with street furniture to a BCT bus shelter provided on Pines Boulevard serving Pines City Center and the surrounding commercial centers.

Figure C-6 provides a map of bus stop locations by type, and Figures C-7 and C-8 depict boardings and alightings. Note the most current boarding and alighting data available from BCT is for the year 2014, when much of Pines City Center was still vacant.

Figures C-7 and C-8 indicate that there is moderate transit activity with the most activity occurring at the bus stop east of Palm Avenue on Pines Boulevard experiencing 78 boardings and 70 alightings, followed by a grouping of stops in proximity to Pines City Center with fewer boardings and alightings.

Note that the City of Pembroke Pines has a community shuttle service also, for which stop-level data is not available. The Green Route was established in 1994, the Gold route in 2003, and the Blue route in 2010. The service was modified in 2017 to accommodate the expansive growth the City has undergone in the last 20 years. The shuttles operate 12 hours each day Monday through Saturday except for the Blue Routes, which operate approximately 6 hours per day, three days per week. Changes implemented in 2017 included splitting the Gold and Blue routes into an east and west shuttle, covering the span of the entire City with several transfer points in between shuttles, and improving connections to the various BCT routes throughout the City. The community shuttle routes carry an average of over 185,000 passengers annually, with the Gold Route servicing the most passengers, averaging over 110,000 passengers annually. The Blue Route services almost 9,000 passengers annually.



*Above are four examples of existing bus stops found along Pines Boulevard in the Hub study area. Top left: Bus stop type 1 at Pines and 103<sup>rd</sup>. Top right: Bus stop type 2 at Pines and 108<sup>th</sup>. Middle left: Bus stop type 3 on Pines east of Palm. Middle right: bus stop type 1 at Pines west of Palm. The bottom image represents a typical existing community shuttle stop (not in the Hub study area).*

FIGURE C-6: BUS STOP TYPES

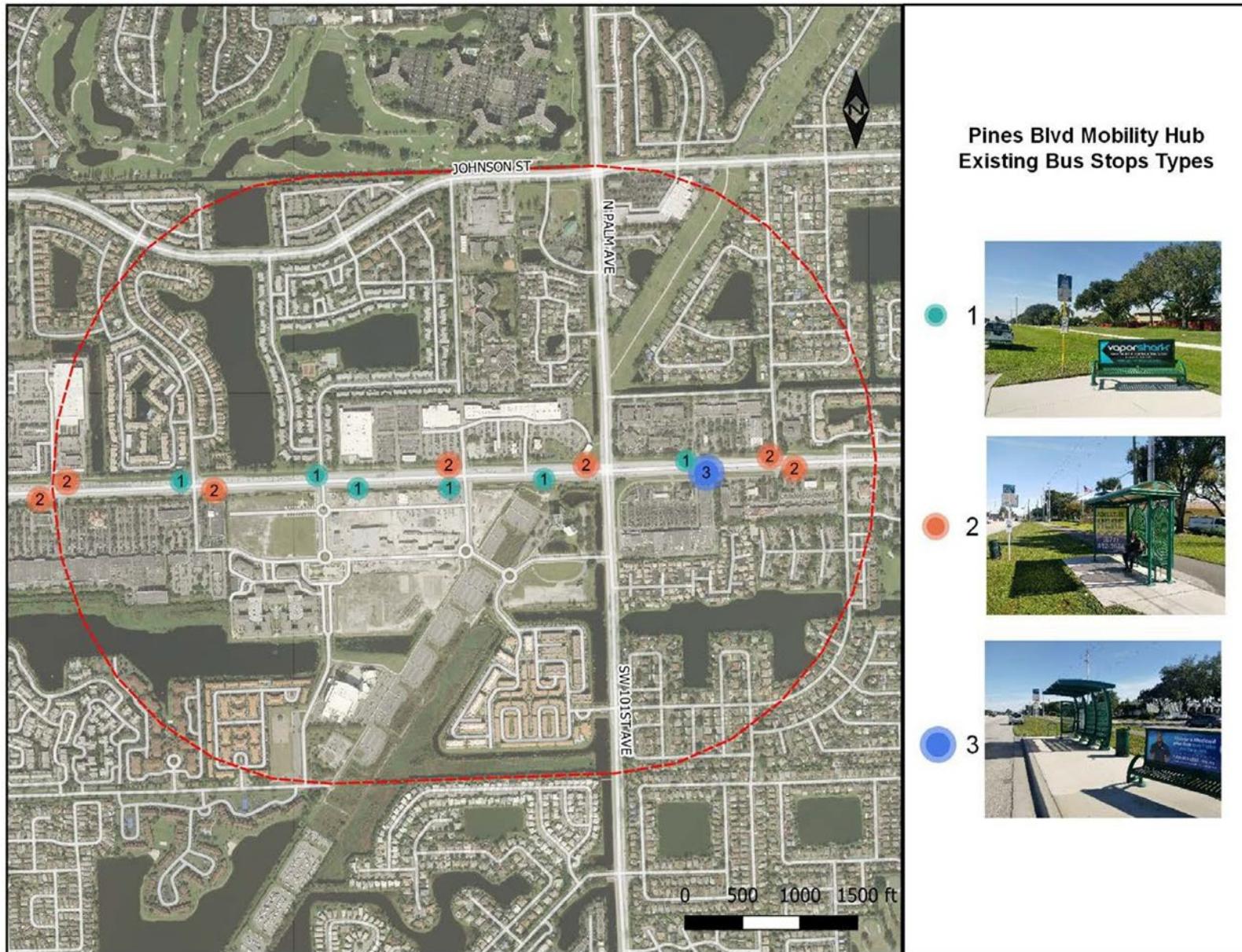
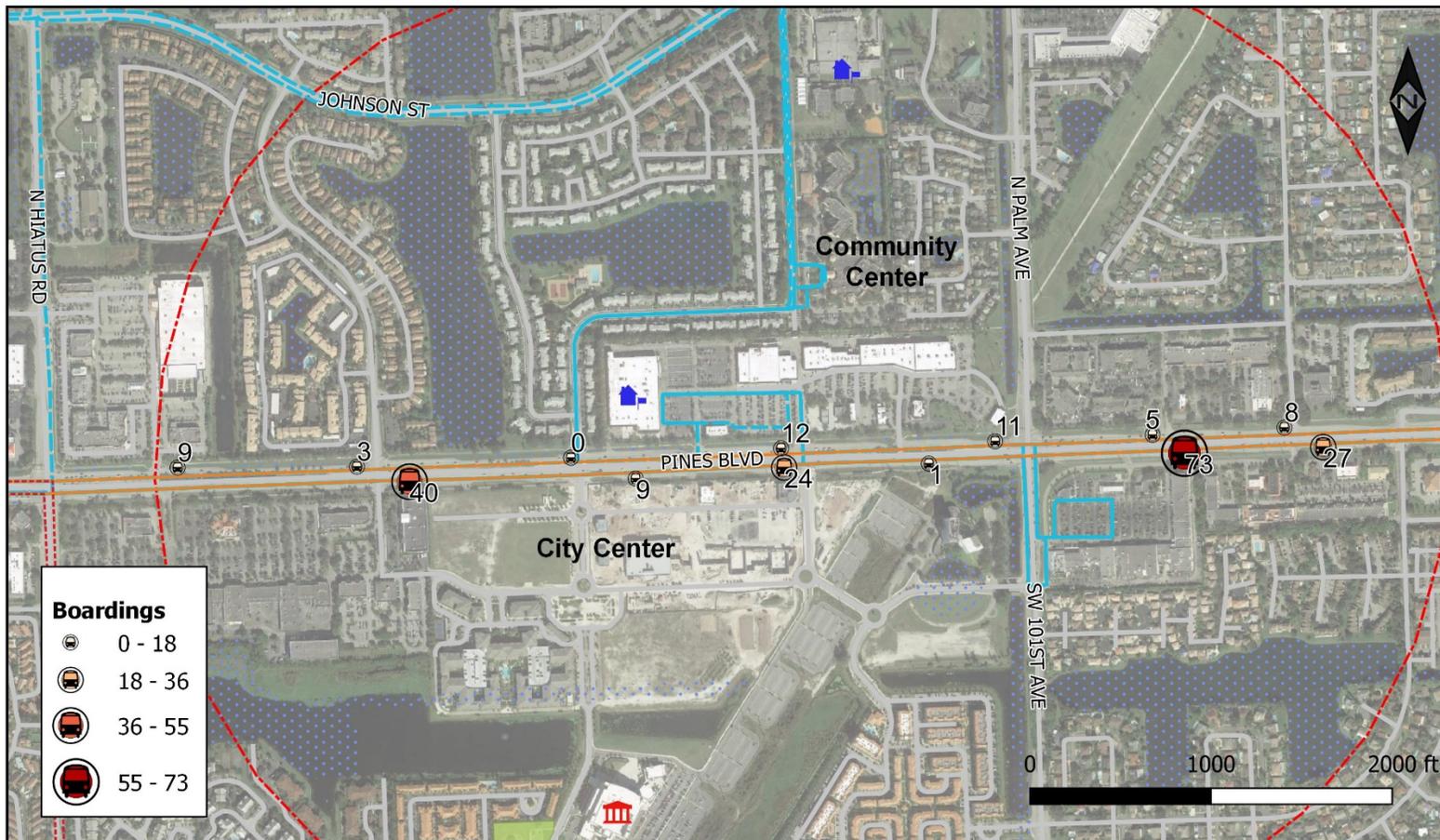


FIGURE C-7: TRANSIT BOARDING ACTIVITY (BCT ROUTE 7)



**CITY OF PEMBROKE PINES BUS RIDERSHIP DATA  
BOARDINGS & ALIGHTINGS  
Weekdays - Daily Average**

- BCT Route 7      — Blue East Route      - - - 1/2 Mile Buffer      ····· Water
- Gold Route      — Streets      ■ City Parks
- Blue West Route      🏠 Schools      🏛️ City Hall

Disclaimer: This data is based on available weekday samples from Automatic Passenger Counters (APC) between Jan. 19, 2014 - Mar 2, 2014. Please note that BCT has known technical issues with APC sensors that have caused sampling and counting errors. It is recommended that all APC ridership statics are validated with on-board surveys.

3/22/2019

FIGURE C-8: TRANSIT ALIGHTING ACTIVITY (BCT ROUTE 7)



**CITY OF PEMBROKE PINES BUS RIDERSHIP DATA  
BOARDINGS & ALIGHTINGS  
Weekdays - Daily Average**

- BCT Route 7      — Blue East Route      - - - 1/2 Mile Buffer      ····· Water
- Gold Route      — Streets      ■ City Parks
- Blue West Route      🏠 Schools      🏛️ City Hall

Disclaimer: This data is based on available weekday samples from Automatic Passenger Counters (APC) between Jan. 19, 2014 - Mar 2, 2014. Please note that BCT has known technical issues with APC sensors that have caused sampling and counting errors. It is recommended that all APC ridership statics are validated with on-board surveys.

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### Field Observations of Transit Use

Field observation undertaken at the West Regional Terminal is fully documented under separate cover in a report entitled “City of Pembroke Pines Data Collection and Transit Count Summary.” The results of the observation are summarized below.

MIOVision Cameras were deployed on December 5, 2018 and placed at seven (7) locations within the study area. Five (5) cameras were placed along Pines Boulevard to document pedestrian, bicycle and transit use along Pines Boulevard over a 24-hour period. Videos were viewed by engineering technicians to document peak period activity from 7 AM to 9 AM and 4 PM to 6 PM.

The Route 7 schedule provided by Broward County Transit does not list every stop along the route. The study area falls in between two primary stops published within the schedule, the Pines Boulevard/University Drive stop and the Pembroke Lakes Mall stop. Using the times that the bus travels in between these two stops, a total of four buses travel eastbound and four buses travel westbound through the study area during the AM weekday and Saturday AM peak times, while a total of five buses travel eastbound and another five travel westbound during the PM weekday peak times. During Saturday PM peak times, four buses travel eastbound and four buses travel westbound. Bus operators only stop within the study area if they observe people waiting at the stops or a rider indicates they must alight at the stop.

The data collection results for the study area indicate that there was a total of 46 transit riders accessing Route 7 bus stops along Pines Boulevard between 7 AM to 9 AM and 4 PM to 6 PM on Thursday, December 6, 2018 and Saturday, December 8, 2018. Morning peak period use was 19 transit riders and evening peak period resulted in 27 transit riders, with 18% more transit users during evening peak periods. Thirty transit riders were observed during the weekday peak period with 16 transit riders during the weekend peak period. During weekend peak periods, there were three times the number of users that alighted Route 7 than boarded. Approximately twice as many transit users access Route 7 during the weekday versus the weekend.

All but two transit users accessing the bus stops along Pines Boulevard within the study area walked to or from their designated bus stop, traveling in all directions along Pines Boulevard. Three (3) of the 46 transit riders were traveling with a bicycle, and two (2) transit users alighting were observed getting picked up by a vehicle at the bus stop. Some pedestrians were observed utilizing crosswalks at SW 103<sup>rd</sup> and SW 106<sup>th</sup> Avenues, in addition to utilizing the existing sidewalks to access the bus stop or walk to their destination from alighting the bus. Transit users at the SW 103<sup>rd</sup> Avenue bus stops were also observed crossing Pines Boulevard without utilizing the existing crosswalks, many times crossing where the bus stops are located. Due to the placement of the cameras, it was difficult to discern the origins or destinations of the transit users.

Weekend bus ridership was only half of weekday ridership, and weekend bus alightings were three times more than weekend boardings. Weekday bus boardings and alightings were similar, with total evening peak hour alightings more than morning peak hour alightings. More transit riders rode eastbound during the weekday evening peak period than the morning peak period.

The camera located at Pines Boulevard and SW 103<sup>rd</sup> Avenue captured the bus stops located on the north and south side of Pines Boulevard. This camera also captured the most transit use, with 15 total transit riders using the westbound bus stop and 14 total transit riders using the eastbound bus stop. This camera also captured the most buses stopping within the study area: three (3) westbound buses stopped during the morning peak period and four (4) westbound buses stopped during the evening peak period. All other cameras captured less than four (4) buses stopping within the study area. Only one transit rider in total, with a bicycle, was observed utilizing the bus stop located near Pines Boulevard and Palm Avenue, moving eastbound, during the weekend.

Key findings from the field observation of transit use include:

- Highest ridership was observed at the bus stops at the Pines and 103<sup>rd</sup> intersection.
- A total of 46 transit riders on Route 7 in the study area were observed for the weekend and weekday peak period, with higher weekday ridership.

## BIKE AND PEDESTRIAN NETWORK

### Existing Network

The Hub study area overall has a lack of roadway, pedestrian, and bicycle network connectivity. The area has been planned and developed for compartmentalized development where parcels are separated by canals and other physical barriers. Movement between and through developments often occurs through parking lots from site to site and most of the lots have been designed without pedestrian facilities except along the storefronts.

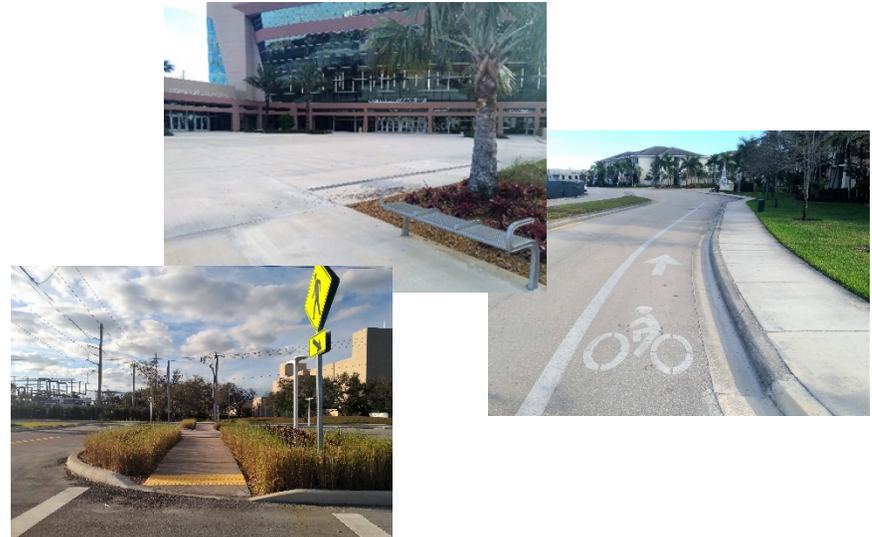
Figure C-9 provides an inventory of pedestrian and bicycle facilities for the primary and secondary roadway network. There is only one bicycle facility on the primary roadway, Pines Boulevard. The map shows that for the most part sidewalks exist on both sides of the road for all major arterial and collector roads except for sections of:

- Palm Avenue where a sidewalk does not exist on the west side of the road, next to the canal, due to limited right-of-way.
- Shopping centers on the northwest, northeast, and southeast corners of Pines Boulevard and Palm Avenue have been designed for vehicle access with limited pedestrian facilities.
- Pines City Center has been developed with an emphasis on pedestrian facilities, creating a walkable environment throughout the complex.

### Pedestrian Bicycle Crashes

Florida Department of Transportation (FDOT) crash data for 2013 to 2017 pedestrian and bicycle related crashes, prior to Pines City Center completion, is shown on Figure C-10. Crash incidents are focused on the Pines Boulevard corridor, with 15 total crashes occurring as follows:

- 8 Pedestrian Crashes with Injuries, several in midblock locations
- 3 Bicycle Crashes with Injuries
- 2 Pedestrian Crashes without Injuries
- 2 Bicycle Crashes without Injuries
- 0 Fatalities



*Photo group above: Recent City Center multi-modal features – plaza, parking lot walkways, and bike lanes. Photo group below: Current pedestrian connection between shopping center and neighborhood to north, typical sidewalk and crossing at Pines, intersection of Pines and Palm.*



FIGURE C-9: PEDESTRIAN AND BICYCLE NETWORK

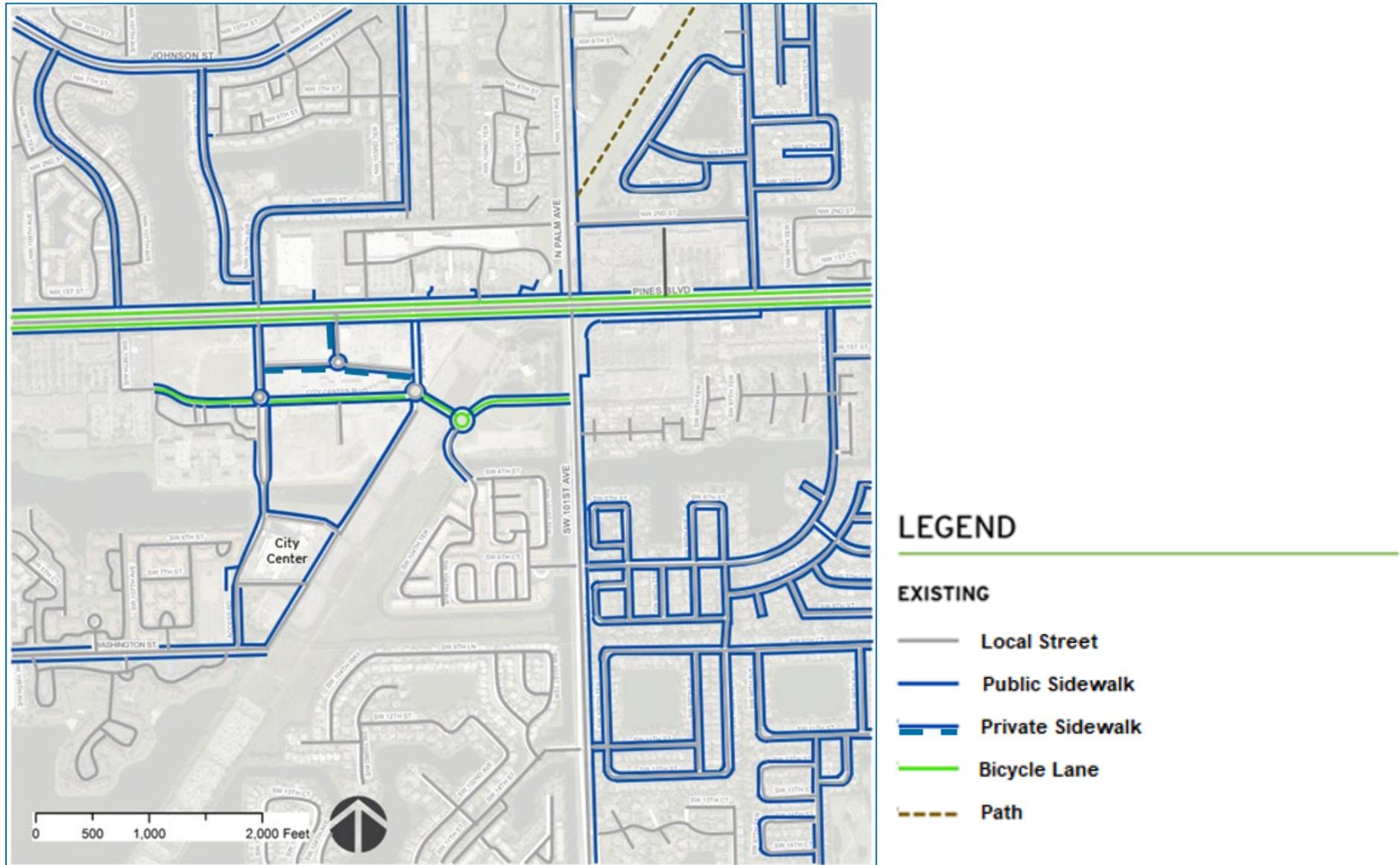


FIGURE C-10: PEDESTRIAN AND BICYCLE CRASH HISTORY



## ROADWAY NETWORK

Figure C-11 depicts the jurisdictions of roadways and location of signalized intersections in the Hub study area for ease of reference. The network is clearly hierarchical, with primary access from Pines Boulevard and Palm Avenue to local public streets at limited points, and then to neighborhoods comprised primarily of private streets. This pattern is reinforced by the barriers created by detention facilities throughout the study area.

Field observation undertaken at two intersections in the Hub study area is fully documented under separate cover in a report entitled “City of Pembroke Pines Data Collection and Transit Count Summary.” The results of the observation are summarized below.

Two (2) MIOVision Cameras were placed at the intersections of Pines Boulevard and the unsignalized Access Road Entrance at Palm Avenue to collect multi-modal turning movement counts on December 6, 2018 and December 8, 2018. Traffic counters were also deployed on Pines Boulevard and Palm Avenue to collect 72-hour traffic counts from Thursday, December 6 through Saturday, December 8, 2018.

The analysis was conducted using Synchro simulation software and the results indicates that the signalized intersection of Pines and Palm operates poorly at level of service (LOS) at weekday and weekend peak periods, except for the WB approach operating at LOS D during the AM peak period. The unsignalized intersection at Palm Avenue and Access Road Entrance operates well at LOS A during peak hours for the NB and SB approaches as they are free flowing. WB operates poorly at LOS of F during the weekday and weekend peak periods. Synchro could not determine the delay and LOS for the EB approach at the unsignalized intersection due to the high through movement of NB and SB traffic during the weekday peak hours. Weekend peak period operation for EB operates poorly at LOS E and F. Vehicles turning left from either the EB or WB approach at the unsignalized intersection of Palm Avenue and the Access Road Entrance must make a two-stage maneuver; this two-stage maneuver is difficult to perform due to the high through-traffic movement during peak periods.

A total of 62 pedestrians and 10 bicyclists were observed at the two intersections during the weekday peak periods. A total of 39 pedestrians and 21 bicyclists were counted at the two intersections for weekend peak periods. Most of the pedestrian activity occurred on the east side of Palm Avenue during both weekend and weekday peak periods, with a total of 61 pedestrians observed at the Palm Avenue and the Access Road Entrance intersection during the weekend and weekday peak periods.

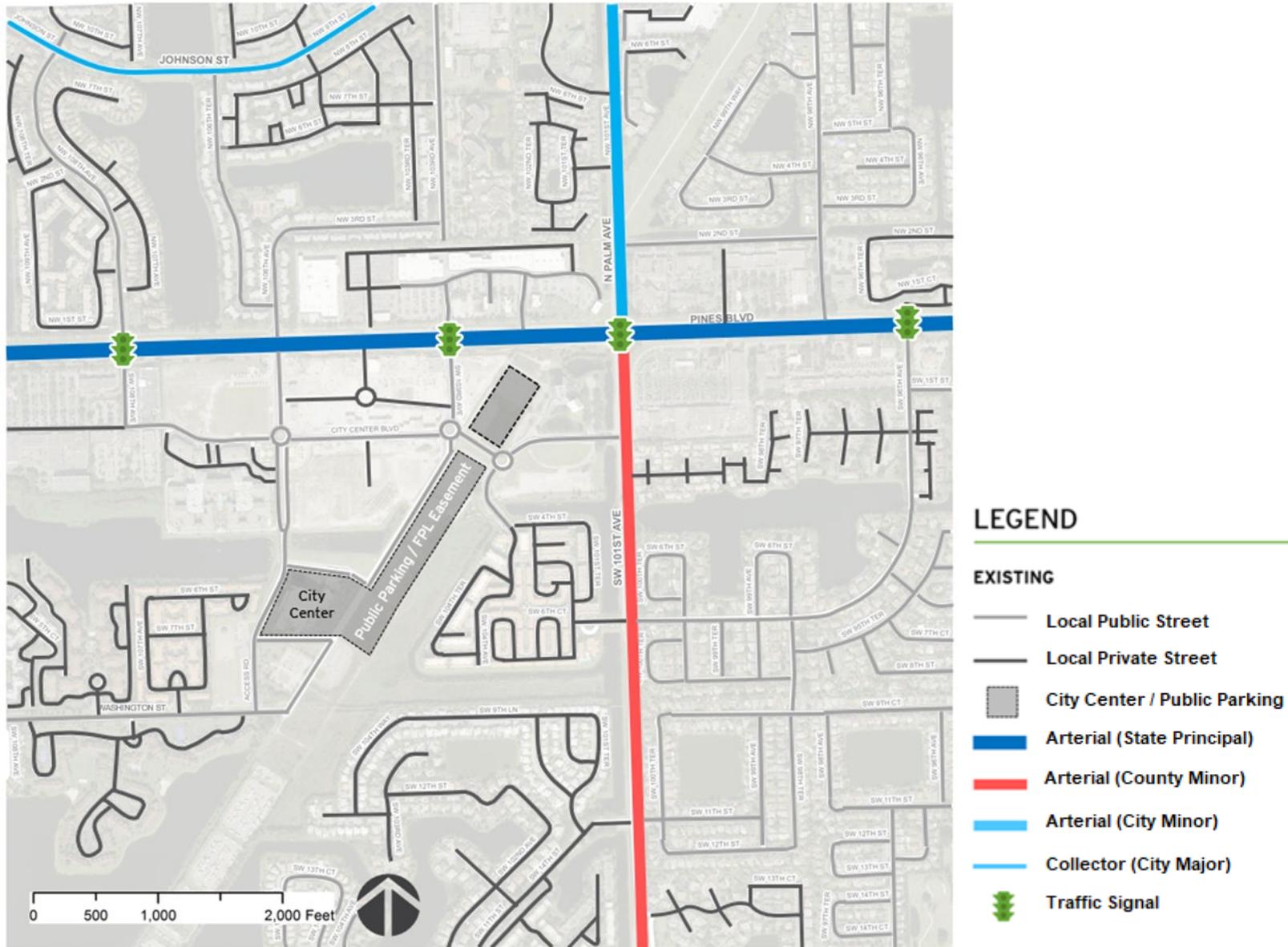
Key findings from observation of intersections include:

- The Pines Boulevard and Palm Avenue intersection operates at a LOS F during the weekend and weekday peak periods.
- Evening peak periods had more traffic than morning peak periods.
- Left turns at the unsignalized intersection at Palm Avenue and Access Road Entrance requires a two-stage maneuver; and are difficult during peak traffic periods due to the amount of through traffic.
- Most traffic coming from the Access Road Entrance turns right onto Palm Avenue during both weekend and weekday peak periods.
- Most pedestrian activity occurred along the east side of Palm Avenue.
- Most bicycle activity occurred on Pines Boulevard during the weekend.



*Images at left: Recent City Center development, with sidewalk connections, and ample pedestrian areas at new commercial. Top image: Current lack of pedestrian facilities along Palm Avenue.*

FIGURE C-11: EXISTING ROADWAY NETWORK



**LEGEND**

**EXISTING**

- Local Public Street
- Local Private Street
- City Center / Public Parking
- Arterial (State Principal)
- Arterial (County Minor)
- Arterial (City Minor)
- Collector (City Major)
- Traffic Signal

## SELECTED PREVIOUS RECOMMENDATIONS

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Various transportation related planning recommendations exist within the documents and ordinances listed in the Planning Context introduction. These recommendations vary from regionwide to district specific. The most relevant recommendations from these plans/ordinances are summarized below.

### City of Pembroke Pines Comprehensive Plan (2013)

The Transportation Element of the Comprehensive Plan is the City’s long-term plan for a multimodal transportation system that places an emphasis on public transit. Pines Boulevard is identified with approximately 200 feet of right-of-way dedication varying from east to west. Pines Boulevard is classified as a State Principal Arterial. Palm Avenue south of Pines Boulevard is classified as a County Minor Arterial, and north of Pines Boulevard Palm Avenue is classified as a City Minor Arterial.

The City’s transit vehicle inventory consists of 22 shuttle vehicles that are wheelchair accessible and have a seating capacity of 20 passengers. BCT updates and maintains the City’s Bus Stop Inventory, according to the BCT inventory, the City has 225 bus stops, 25 shelters, 187 benches, and 33 bays/right turn lanes, with two buses operating on the Green Route and three buses operating on the Gold Route. Since adoption of this plan, the City also operates two additional buses on a Blue Route.

The document identifies pedestrian ways throughout the City, including a comprehensive list of missing sidewalk segments for all major roads within the City. The west side of Palm Avenue has been identified within the study along a canal right-of-way, construction within the canal right-of-way requires coordination and permitting through the appropriate drainage district and the South Florida Water Management Districts. A policy has been added providing for the City’s Environmental Services Division to research the feasibility of constructing sidewalks within canal rights-of-way, in addition to prepare a feasibility study by 2011 which provides for the elimination of all missing sidewalk links. The Palm Avenue sidewalk has been identified as a cost feasible project through 2030. Currently, the City allocates \$100,000 annually to repair and replace missing sidewalk links with most of the budget going to repairs and a cost

estimate of \$250,000 to replace missing sidewalk links. Pedestrian and bikeway services are provided by the City’s Environmental Services Division.

Pines Boulevard between NW 64<sup>th</sup> Avenue and NW 196<sup>th</sup> Avenue, which falls within the Hub study area, has been identified as an area where pedestrian crossovers with extended sidewalks have been constructed because of expanded roadway sections. Pedestrian crossovers improve access to residential and commercial areas. Both Pines Boulevard and Palm Avenue have been identified as bikeways within the Hub study area, bicycle racks are required at all government and community facilities.

An intermodal facility is a facility designed to relate two or more modes of transportation using single or closely related transportation facility and service. There are currently no intermodal facilities within the Hub study area. TE Policy 2.5.2 (3) provides for the City to continue coordination with BCT, FDOT, the MPO and other entities to investigate the need for additional intermodal facilities in the City. The City has adopted several policies to support pedestrian and bicycle facilities.

Both Pines Boulevard and Palm Avenue within the Hub study area is projected to approach overcapacity by 2030, with Pines Boulevard east of Palm Avenue already identified as overcapacity. As of 2005, LOS along Pines Boulevard for the Hub study area is D/F, with the area west of Palm at a “D,” and the area east of Palm at an “F.” Palm Avenue’s LOS is B/C, with the area south of Pines Boulevard at a “B,” and the area north of Pines Boulevard at a “C.”

### Commitment 2040 – The Long Range Transportation Plan for Broward County (2018)

Broward County’s LRTP, amended in April 2018, is a multi-modal transportation plan which expands over 20 years, looking at the region and future needs. The plan emphasizes moving people, creating jobs and strengthening communities. The Metropolitan Planning Organization (MPO) is the agency responsible for creating local transportation policy and identifying the best use of federal and state tax dollars on transportation projects.

The Plan builds on existing transportation assets, identifies deficiencies in these facilities, and recommends actions that maintain or improve quality of life. The Plan seeks to update the Mobility Hub concept to maximize a Mobility Hub's economic and transit potential. In addition, the Plan seeks to provide a list of 50 regional significant projects (10 transit and 40 roadway), to construct, operate, and maintain by and through 2040.

This study is a direct result of the Long-Range Transportation Plan along with several other bicycle and pedestrian improvements within and surrounding the Hub study area.

### City of Pembroke Pines 2014-2019 Economic Development Strategic Plan (2014)

Completed in August 2014, the Economic Development Strategic Plan is the City's five-year economic blueprint.

Within the Hub study area, the Plan discusses development efforts since 2014. Within the Hub study area is the City's "Downtown," or City Center, which features 2,215 dwelling units consisting of mid-rise, townhomes, multi-family, and affordable housing units. City Center also consists of 80,000 square feet of industrial, 358,000 square feet of commercial, and 120,000 square feet of office uses. Additionally, a 175,000 square feet, multi-purpose Civic Center houses City Hall above a 35,000 square feet flexible concert, meeting, and event space and a separate 11,000 square feet two-story art gallery.

Opportunities within the Hub study area include traffic, mass transit, public transportation, and completion of City Center. Some of the weaknesses identified include traffic and need for transit, aging population, and planning and zoning issues. Strengths identified include quality of life, location, education, diversity, and pro-business environment. Threats include traffic related issues, decreasing housing values, and aging housing stock.

The following strategies have been identified within the Plan that are in alignment with the current study:

- Strategy 1.1.3: Emphasis strategic regional location
- Strategy 1.1.4: Promote Quality of Life

- Strategy 1.1.6: Promote City Center as the new Downtown
- Strategy 1.2.1: Continue to actively promote responsible growth
- Strategy 1.2.3: Adopt Vision of Balanced Growth
- Strategy 1.2.4: Continue to support and fund infrastructure needs for economic growth. *This objective aims to improve transportation infrastructure to encourage business growth. The need for an integrated countywide transit system is listed as a key strategy.*
- Strategy 4.2.1: Continue to support development of City Center
- Strategy 4.2.5: Develop underutilized parcel next to City Center for regional uses
- Strategy 4.2.8: Improve aesthetic quality of common areas, medians, and swales through improved landscaping and maintenance
- Strategy 5.1.1: Conduct an inventory of roadway deficiencies at key development sites
- Strategy 5.1.2: Develop a Funding Plan to improve roadway deficiencies
- Strategy 5.3.1: Collaborate with regional stakeholders to establish a comprehensive regional transit plan
- Strategy 6.1.2: Promote Civic Center as a regional business venue and cultural asset
- Strategy 6.2.2: Encourage housing density within the Central and Eastern sections of the City

### City of Pembroke Pines Green Plan (2014)

The Pembroke Pines Green Plan was completed in 2014 by City staff as the City's framework to create a more livable community. Chapter 3 of the document focuses on the Built Environment and Transportation; the following Goals and Objectives are in alignment with our study focus:

Goal 3.2: The City promotes and encourages smart growth principles when and where feasible. Smart growth principles include creating walkable neighborhoods and transportation choices. Future Objectives under this goal include adopting complete streets principles and encouraging new development to abide by Complete Streets and Smart Growth Principles.

Goal 3.3: The City encourages the principles of Transit-Oriented Development (TOD) within the older, more populated areas of the City, with the following initiatives being undertaken:

- Support for transit hubs throughout the City
- Park and ride location at Pines Boulevard and Flamingo Road
- Collaboration with County and MPO in their efforts to establish transit-oriented corridors
- Encourage the use of public transit
- Future Objective 3.3.1 supports and encourages transit communities via continued work with the MPO, exploring the purchasing of parcels located along the Pines Boulevard corridor for development, improving walkability by providing shade and canopy where feasible throughout the City, identifying and creating safe bicycle paths to travel throughout the City, and encouraging the installation of bicycle racks within commercial and business centers.

Goal 3.4: The City is dedicated to mobility and access to transit for all users. The City operates a community shuttle with three routes throughout the City connecting to the regional bus system.

- Future Objective 3.4.1 encourages shelter and shade at all bus stops, continued monitoring and assessment of the City's bus network to ensure coverage and identify gaps to modify routes as appropriate, work with the County to identify the need for an express bus west of I-75, the creation of car share or car pool program for residents, work with communities to ensure pedestrian access to commercial centers, and continued promotion and exploration of alternative transportation options for residents, visitors, and workers in the City.

Goal 6.1: The City has been a leader when it comes to policies, procedures, and becoming more aware of the growing threat of unsustainable practices.

- Future Objective 6.1.1 highlights exploring the creation of a carshare/rideshare program for City employees to reduce vehicle miles traveled.

- Future Objective 6.2.1 highlights exploring the feasibility and cost savings associated with an interdepartmental car share program where City staff or departments could check out a vehicle when in need.

#### Hollywood/Pines Boulevard Congestion Management Process/Livability Planning Project (2013)

Completed in December 2013, the project combines the Broward MPO's Congestion Management Process and Livability Planning study approaches. The Congestion Management Process identifies, develops, prioritizes, and implements short-term multimodal congestion management and mobility enhancement strategies, while Livability Planning studies are intended as the first step in implementing the Mobility Hub concept of Broward MPO's 2035 LRTP.

Within the Hub study area, a Community Hub was identified at the Pines Boulevard and Palm Avenue intersection. The study identifies a Community Hub as a hub served by premium rapid bus service and more likely to attract local trips than regional trips and is the least intense of the hubs. The study identifies several improvements within the Hub study area and groups these improvements within three groups, in addition to providing multiple recommendations along the corridor.

Of the many recommendations provided, the following recommendations apply to the Hub study area:

- Provide sidewalk along the west side of Palm Avenue
- Enhance and modify the location of bus stops at various locations
- Evaluate the potential for right-turn queue jump lanes pending completion of the FDOT Pilot Project at Palm Avenue
- Improve pedestrian design features and/or enhance crosswalk lighting to improve safety/mobility at the Pines/Palm intersection

Furthermore, the study provides a series of scenario planning examples using quantitative and qualitative analysis. These examples use urban design and planning principles as a guide for transforming the Hollywood/Pines Corridor over the long term into a more transit-supportive, multimodal environment. These

principles include connectivity, public realm, site orientation, ground floor design/use, and transition to neighborhoods for multi-modal development.

### City of Pembroke Pines Streetscape Design Guidelines (2012)

The Streetscape Design Guidelines was prepared by consultant Miller Legg in 2012. The Hub study area is located within the Central District of the design guidelines and has been identified as an Urban Arterial. The guidelines introduce a number of recommendations including a plant palette for each district, sectionals, and intersection and median improvements. In addition to the landscape guidelines, hardscape guidelines are provided and recommended via street furniture, lighting, and branding. Mobility improvements include bus stop minimum requirements:

- All new commercial developments, multifamily development, or single-family subdivision shall be located within one quarter mile of an adequate bus stop. If no adequate bus stop is located within this distance, the development shall provide it.
- All bus stops shall be paved.
- All bus stops shall have a minimum lighting level of one-foot candle. The lighting for the bus shelters shall utilize solar power alternatives and LED lighting to enhance sustainability.
- All bus stops shall be landscaped with canopy trees or large palms to provide additional shade.
- All bus stops shall be connected to the existing pedestrian system by a paved accessible walkway.
- Bus stops located within Intersection Influence Zones, Urban Arterial or Gateway locations shall be paved with specialty pavement.

Furthermore, the guidelines identify streetscape improvements within each district. The Hub study area recommendations include pedestrian interconnections/path along Washington Street, the Florida Power and Light (FPL) easement and NW 103<sup>rd</sup> Avenue, improved canal crossing along Palm Avenue and Washington Street, the addition of a sidewalk on the west side of Palm Avenue, and aesthetic improvements at Pines Boulevard and Palm Avenue intersection.

Since the completion of the Streetscape Design Guidelines, many of the recommendations have been implemented, within the Hub study area the City has created pedestrian interconnections at Pines City Center, Washington Street and the FPL easement, wayfinding signage in the area, along with median and landscape improvements through the site plan process.

### Hollywood/Pines Boulevard Multimodal Corridor Study (2004)

The Multimodal Corridor Study was completed in 2004 by consultant Kimley-Horn and Associates, Inc. for the Broward MPO to develop a congestion management system to improve travel along the corridor. Strategies in the Hub study area are listed by mode in Table C-2.

Since the completion of the study several of the improvements have been completed along the corridor. Within the Hub study area bicycle lanes now exist along Pines Boulevard, bus shelters have been installed at the location recommended above, and missing sidewalk links to many bus stops along the corridor have been completed. Bicycle racks can be found at many shopping centers along Pines Boulevard, including the newly constructed Pines City Center.

### City of Pembroke Pines Code of Ordinances (2018)

One of the City's ordinances regarding mixed-use development states that this type of use should promote a pedestrian friendly environment and reduce traffic generation. Pedestrian movement and safety shall be given priority. Internal roadways shall be "pedestrian friendly" including the use of pavers, wide sidewalks, narrow vehicular lanes, and parallel parking. Major parking areas shall be located to encourage walking and discourage internal vehicle trips among the various buildings and uses.

**TABLE C-2: CORRIDOR STRATEGIES BY MODE**

| Mode       | Strategy                        | Description  |
|------------|---------------------------------|--|
| Pedestrian | Sidewalk Connection             | Construct new sidewalk - west side of Palm Avenue  |
| Bicycle    | Proposed Bicycle Lanes          | From NW 155 <sup>th</sup> Ave to NW 83 <sup>rd</sup> Ave                                   |
|            | Bicycle Parking                 | Provide covered bicycle parking at multimodal locations and bike parking where appropriate |
| Transit    | Bus Shelters                    | EB, 500 ft east of Palm Ave, ID - 2910   |
|            | Far Side Bus Bay                | Palm Ave (westbound)   |
|            | Headway Reductions              | Route 7 (30 to 20 minutes)   |
|            | Express Bus Service             | Route 7 limited stop from Pembroke Lakes Mall to Downtown Hollywood NTC                    |
| Multimodal | “Enhanced” Benches and Shelters | Multimodal hubs  |
|            | TDM Strategies                  | Work with SFCS   |
|            | ITS Strategies                  | ATIS improvements and passenger kiosks   |
| Roadway    | Intersection Improvements       | Trailblazer signage for guidance and awareness of facility                                 |
|            |                                 | Pines Blvd and Palm Ave – Construct SB through lane  |

## PROGRAMMED AND PLANNED PROJECTS

Planning and programming documents were reviewed including the Broward MPO Year 2019 to 2023 Transportation Improvement Program (TIP), the MPO 2040 LRTP, and projects identified to be funded with the recently approved Broward County 2018 Penny Surtax.

BCT’s new Transit Development Plan (TDP), adopted in December 2018, identifies improvements to transit service levels in the 10-Year Vision Plan Network (by 2028), and new Rapid Bus service on Pines Boulevard in the 30-Year Vision Plan (by 2048). The recent passage of the countywide surtax initiative now offers a new predictable and reliable funding source to increase transit routes and service levels over the long-term.

Tables C-3 and C-4 provide the planned and programmed improvements.

**TABLE C-3: BROWARD COUNTY 2040 LRTP PROJECTS**

| LRTP ID | Project                        | Description                              | Location        | Cost     | Time Period |
|---------|--------------------------------|--|-----------------|----------|-------------|
| 8       | SR 820/ Hollywood/ Pines Blvd. | Upgrades to support enhanced bus service | US 27 to SR A1A | \$86.3 M | 2015-2025   |

**TABLE C-4: BROWARD COUNTY 2018 PENNY SURTAX INITIATIVE PROJECTS**

| No. | Description                               | Year | Capital Cost |
|-----|---|------|--------------|
| 1   | Video detection predictive maintenance    | 2020 | \$1,680,000  |
| 2   | Future technology adaptation              | 2020 | \$47,500,000 |
| 3   | New bus routes: Johnson St.               | 2025 | NA           |
| 4   | Intersection improvement: Pines Blvd.     | 2027 | \$1,400,000  |
| 5   | New sidewalks: Palm Ave.                  | 2027 | \$569,000    |
| 6   | New bus routes: Palm Ave.                 | 2028 | NA           |
| 7   | Rapid bus routes: Hollywood / Pines Blvd. | 2030 | NA           |
| 8   | Mast arm intersection upgrades: Palm Ave. | 2037 | \$600,000    |

*Note: 2019-2028 TDP projects are included in the 2018 penny surtax initiative. No projects for TIP.*

## DEVELOPMENT CONTEXT

Due to proactive efforts to implement the recommendations of the 2014 Pembroke Pines Economic Development Strategic Plan, the Pines City Center has emerged as a new residential and retail/entertainment destination, in addition to the civic amenities provided by the adjacent Charles F. Dodge City Center.

Pines City Center planning has focused on facilitating redevelopment efforts and improving the physical character of the area in a way that provides connectivity between new commercial areas and adjacent existing shopping centers, supporting pedestrian mobility and providing several access routes to help relieve traffic congestion. Significant private investment in commercial and residential development has occurred, and most recently the focus has shifted to finalizing development approvals for the remaining sites located between 103<sup>rd</sup> Avenue and 101<sup>st</sup> Avenue at the east end of the redevelopment.

The sections that follow document the “baseline” development pattern and character features in the area, summarize relevant zoning and development standards, and present the elements of the “vision” for future development in the Pines City Center that are particularly relevant for mobility planning. Mobility Hub recommendations will expand upon this broader vision to support the improved integration, function, and visibility of multimodal options as the Pines City Center continues to evolve.

## DEVELOPMENT PATTERN

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Recently, the Pines City Center has become an active concentration of commercial and residential uses, including some development sites still in construction or in final approval with the City. Figure C-12 depicts the current arrangement of land uses in the Pines City Center area, generalized to show the overall pattern rather than parcel-level detail. A more generalized pattern of land uses, and an understanding of the orientation of and access to these uses, are most relevant to the development of multimodal strategies.

**COMMERCIAL** uses (shown in red on Figure C-12) include the new development south of Pines Boulevard between 106<sup>th</sup> and 103<sup>rd</sup> Avenues,

flanked by an established shopping center to the west and pending commercial development parcels east of 103<sup>rd</sup> Street on either side of a FPL easement. Commercial uses are also located farther east along Pines Boulevard, and directly across Pines Boulevard to the north. These shopping centers are laid out in a traditional auto-oriented pattern that positions storefronts toward dedicated off-street parking, with stand-alone out lot structures.

**OFFICE** uses (shown in blue on Figure C-12) include several single-story buildings that are occupied primarily by medical offices in the northeast quadrant of the intersection of Pines Boulevard and Palm/101<sup>st</sup> Avenue, and two two-story buildings interspersed with commercial uses at the south termination of 108<sup>th</sup> Avenue, south of Pines Boulevard.

**RESIDENTIAL** uses in the Pines City Center study area (shown in shades of yellow on Figure C-12) include a single-family neighborhood, a small two-story apartment complex northeast of Pines and Palm, a single-family neighborhood to the north and just west of Palm, senior housing along 103<sup>rd</sup> Avenue north of the shopping center, townhouses along 106<sup>th</sup> Avenue and 3<sup>rd</sup> Street flanking the shopping center perimeter north of Pines, and newer mid-rise apartment buildings directly south of City Center Boulevard. Current residential typology in the Pines City Center is characterized by relatively isolated pockets of low-density housing in master planned environments, with the exception of the new moderate-density rental apartment communities located within the Pines City Center itself that are accessible by foot or bicycle from the shopping area without crossing a major arterial.

**ACTIVITY GENERATORS** (shown in purple on Figure C-12) encompass a variety of specialized and/or larger scale uses that warrant specific attention during the development of multimodal strategies. These include:

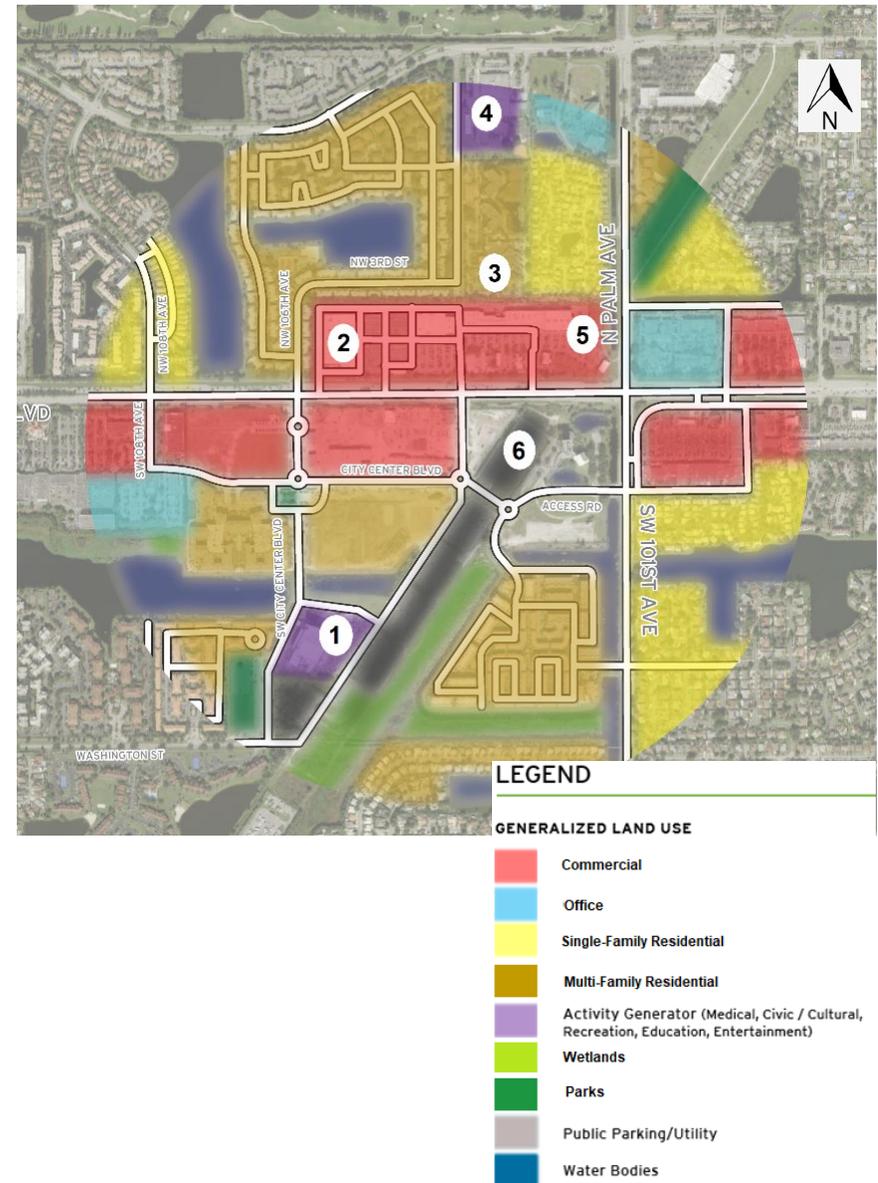
- The **Charles F. Dodge City Center (1)**, south of the Pines City Center commercial and residential areas at the south end of 106<sup>th</sup> Avenue. The City Center facilities can also be accessed via a new roadway running adjacent to the west edge of the FPL easement.
- The **Renaissance Charter School at Pines (2)** occupies a former big box retail structure in the shopping center north of the Pines Boulevard shopping center.
- The **Southwest Focal Point Senior Center (3)** is senior housing facility with a community center that provides various services, activities, classes, and adult daycare used by both residents and non-residents. The facility serves as a hub for community shuttles, as well.
- **Pine Lakes Elementary School (4)** is located north of the senior housing complexes, at 103<sup>rd</sup> Avenue and Johnson Street.
- Additionally, **Vargas University (5)** occupies a storefront in the main commercial structure facing Pines Blvd east of the 103<sup>rd</sup> Avenue intersection.

Significant public parking has been developed within the **FPL easement (6)** between Pines Boulevard and Washington Street (indicated in gray on Figure C-12). The easement extends northeast and southwest from the study area, with a recreational trail extending northeast from Palm Avenue. The FPL Hollybrooke Sub Station is located immediately south of the Dodge City Center.

**OPEN SPACES** (indicated in shades of green on Figure C-12) in the area include a new public park under construction immediately southwest of the Dodge City Center, the recreational trail in the FPL easement extending northeast, and a small scale open space in the core of the Pines City Center area. Additional open space exists as conservation areas in conjunction with drainage facilities, including adjacent to the FPL easement south of Pines Boulevard.

FIGURE C-12: GENERALIZED EXISTING LAND USE PATTERN

(not to scale)



## DEVELOPMENT CHARACTER

The frontage on Pines Boulevard is predominantly low-scale commercial in character, with some two-story office and two- to three-story residential uses behind. Pines Boulevard includes a planted median in some areas, but presents a more rural cross-section overall with limited curbs, wide grassy drainage swales, and sidewalks set back from the roadway itself. Pines Boulevard includes a striped bike lane next to the grassy swale in both directions. The primary east-west roadway internal to the Pines City Center area, running between the commercial and residential uses, also includes an on-street bike lane. The FPL easement running southwest to northeast through the study area, and several retention ponds contribute to the open, low density character of the area.



*Photo group at lower left: Existing uses north of Pines Blvd – Focal Point Senior Center, existing shopping center, charter school in renovated big box store. Photo group at lower right: Pedestrian and biking conditions along Pines Blvd, with new City Center identity and streetscape features at entrance. Photo group at top right: New City Center developments – multi-family residential, commercial, Dodge City Center facility, and typical landscaped commercial parking lot.*



## ZONING AND DEVELOPMENT STANDARDS

The current Future Land Use Plan for the City, which serves as the legal basis for the enforcement of zoning, defines the entire Pines City Center redevelopment area as a Regional Activity Center (RAC), flanked by commercial and residential designations that reflect the existing land use pattern. The residential designations vary in density from an “irregular” nine dwelling units per acre to the southwest, three to five dwelling units per acre in the single-family areas to the south and east, and five to ten dwelling units per acre in the multi-family areas to the east and north.

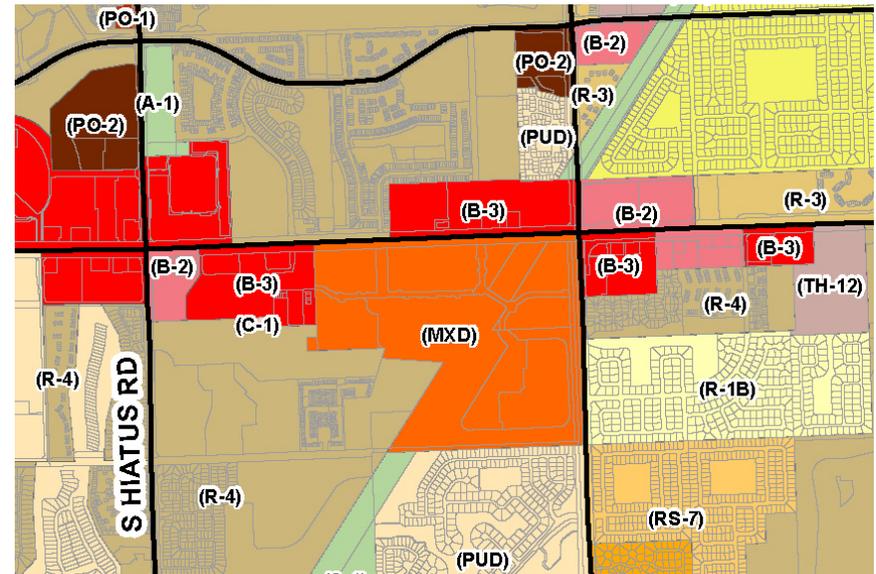
The City’s Economic Development Strategic Plan includes objectives for the Pines City Center area as mixed-use intended to “encourage housing density, promote a wide range of housing products, and meet demand for Transit-Oriented Development.” According to the Plan, the Pines City Center development will feature 1,365 residential units, up to 350 hotel rooms, and mixture of commercial and office uses upon build-out.

Current zoning in the study area, as depicted in Figure C-13, permits the City’s largest swath of mixed-use development (MXD – i.e. the City Center), along with primarily multi-family residential (R-3, R-4), and commercial uses (B-2, B-3). Single family residential is more prevalent east of Palm (R-1B, RS-7). Multi-family densities vary from 5 to 10 dwelling units per acre to the north, west and south of the City Center. Single family developments to the east allow for relatively compact detached residential uses, at 3 to 5 dwelling units per acre.

The MXD area is subject to mixed-use development regulations that are intended to provide flexible design regulations and uses for each project to “encourage innovative development and redevelopment without imposing arbitrary requirements” so development approvals are negotiated on a case-by-case basis.

**FIGURE C-13: EXISTING STUDY AREA ZONING**

Source: City of Pembroke Pines (current as of October 2018)



## STAKEHOLDER OUTREACH

The Broward MPO and consulting team met with the Pembroke Pines Advisory Boards on November 8, 2018 to discuss the project and solicit input regarding local needs, concerns, and priorities towards multimodal mobility. An earlier meeting with City personnel on August 30, 2018 included Planning and Engineering representatives. Meetings were also held with Broward County Planning and Engineering representatives on October 17, 2018, FDOT District 4 Planning and Operations representatives on October 17, 2018, and Broward County Transit representatives on October 18, 2018.

In addition, the City of Pembroke Pines solicited responses to an online survey regarding multimodal mobility experiences and needs. Quest Communications also deployed personnel in the Pines City Center area and at nearby park-and-ride lots to conduct intercept surveys with current public transit users.

The insights shared regarding both near-term investment opportunities and long-term planning needs in the Pembroke Pines Hub study area collected from these outreach efforts are summarized below.

## CITY AND AGENCY MEETINGS

### PUBLIC TRANSPORTATION

- Pembroke Pines has a strong fixed-route community shuttle system, with a very active bus stop at Pembroke Lakes Mall. Several private shuttles operate in the area already, in addition to the fixed community routes.
- The City of Pembroke Pines is working to establish the viability of a park-and-ride location in the area to serve a “95-Express” type service along I-75 to Miami, and/or other linkages such as to the University Breeze. The City created an abundance of parking in the FPL right-of-way south of Pines Boulevard, where vehicles could be parked while using a potential future transit hub. While existing park-and-ride locations are used by some Pembroke Pines residents now, the City’s desire is to establish a location that offers synergy with the Pines City Center, in addition to the established locations.

- Designated “kiss and ride” locations and drop-off locations for transportation network company (TNC) vehicles such as Lyft and Uber could be identified in the Pines City Center area.

### ROADWAY, BICYCLE AND PEDESTRIAN NETWORK

- Secondary streets could benefit from Complete Streets improvements; for example, there is currently a “cowpath” connection used by students walking west from the Washington Avenue and Hiatus Road intersection.
- Per FDOT, pedestrians using a pedestrian-activated crossing signal can delay signal timing and vehicular flow; this could be a concern especially on Pines Boulevard. Suggested alternatives include high-visibility crossings, improved lighting, and/or a pedestrian bridge, pending a PD&E study.
- City staff have observed that traffic patterns along Pines Boulevard differ on weekdays and weekends.
- FDOT has received complaints about the 106<sup>th</sup> Street and Pines Boulevard intersection, as traffic levels have increased due to Pines City Center development directly to the south. The City is coordinating with FDOT to conduct a safety study.
- Traffic levels are also increasing at the Palm Avenue intersection with City Center Boulevard, with inaccessible conditions for pedestrians due in part to the lack of designated crossings or a sidewalk extending south.
- Pedestrian crossing activity also appears to be increasing at the Pines Boulevard and 103<sup>rd</sup> Street intersection, including school-aged children.
- The City is currently studying options for a bikeshare program, likely to be focused on the Pines City Center area; bicycle parking will therefore be needed not only in locations adjacent to transit stops.

### DEVELOPMENT PATTERN

- The Pembroke Place Shopping Center on the north side of Pines Boulevard is well-occupied but likely in need of a “refresh” to compete with new commercial options in the immediate area. City staff indicated that the property owners may be amenable to a through road connecting residents from the north to Pines Boulevard and across to the new commercial district on the south side of Pines Boulevard.

## SURVEYS

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To assess mobility improvement needs as part of the planning phase, surveys were conducted in-person and online. The data collected identifies usage and user perception about transportation services and their facilities, and how mobility in Pembroke Pines' City Center area could be improved. Results are summarized below, with complete documentation available in a report entitled "Pembroke Pines Mobility Hub Planning Phase Survey Results" available under separate cover.

### Methodology

In-person surveys targeted qualified respondents, in this case, those observed using Broward County transit and community shuttle services, walking, and/or cycling in the study area. The online surveys were available to anyone regardless of whether they currently use transit. The online surveys were distributed by the Broward MPO and available for sharing. Both methodologies were used to provide a broader collection of opinions.

Opinions collected were focused on the following:

- Modes of mobility (transit, TNCs, and walking/cycling) used in the area
- Purpose and frequency of mobility in the area
- Pros and cons of the current mobility services and facilities
- Mobility safety concerns

The in-person surveys were completed on wireless tablets with data collected through an online portal. The link to the online survey was shared electronically to the City of Plantation and through the Broward MPO's communication channels. The survey also included links to the Hub study area map and overall program information. All completed information submitted on the tablets and online was reviewed and analyzed. The tabulation of data resulted in tables and charts (available under separate cover) to quantify transportation and mobility opinions of the City of Pembroke Pines' City Center area.

### Overall Summary

There were 277 completed surveys. Wait times and schedule were improvements that were suggested that could improve transit. For most respondents, installing a crossing at Pines Boulevard and 106<sup>th</sup> Avenue was identified as both an improvement and one that could address the safety concerns. Further improvements to address safety concerns include sidewalks, bike lanes and lighting.

### In-Person Surveys

The in-person survey was conducted in Pembroke Pines City Center on Tuesday, December 18, 2018, during the early morning, mid-day, and late afternoon/evening. A total of 80 questionnaires were completed at the following locations:

- Pines Boulevard at Palm Avenue, 103<sup>rd</sup> and 106<sup>th</sup> Avenues (north and south sides)
- Southwest Focal Pointe Senior Center, 103<sup>rd</sup> Avenue and NW Third Street

Of the total 80 respondents,

- 58% live in City Center, and of those,
  - 40% use transit,
  - 37% use TNCs, and
  - 82% walk/cycle in the area.
- 36% work in City Center, and of those,
  - 60% use transit,
  - 42% use TNCs, and
  - 57% walk/cycle in the area.
- 17% both live and work in City Center, and of those,
  - 38% use transit,
  - 53% use TNCs, and
  - 77% walk/cycle in the area.

- 18% neither live nor work in City Center, and of those,
  - 64% use transit,
  - 28% use TNCs, and
  - 57% walk/cycle in the area.

Overall, of all respondents, 58% use transit frequently to get to work. Transit users identified real time information, wait times, frequency, and timely schedule as improvements that can be made. Amenities that rated poorly are crosswalks, signalization, sidewalks, and bike racks. TNCs were used by 36% of respondents mostly to get to work when the bus is inconvenient. The 67% that walk/cycle in the City Center area do so to shop, work, or connect to bus.

Additional crosswalks (especially noted at Pines Boulevard/106<sup>th</sup> Avenue) and traffic signalization were the improvements that respondents identified as enhancements that could be made for better mobility and safety. Protected bike lanes were identified more so by those who work in City Center. Lighting was identified more so by those who live in City Center. Those who did not live or work in the City Center were more likely to identify traffic as a safety concern in the area.

### Online Surveys

The online survey was available from December 17, 2018 through January 22, 2019. The highest response volume was on January 7 and 14, 2019. A total of 79 surveys were completed.

Of the total 79 respondents,

- 13% live in City Center, and of those,
  - 11% use transit,
  - 30% use TNCs, and
  - 60% walk/cycle in the area.
- 67% work in City Center, and of those,
  - 6% use transit,
  - 30% use TNCs, and
  - 23% walk/cycle in the area.
- 8% both live and work in City Center, and of those,
  - 16% use transit,

- 50% use TNCs, and
- 50% walk/cycle in the area.
- 12% neither live nor work in City Center, and of those,
  - 11% use transit,
  - 33% use TNCs, and
  - 44% walk/cycle in the area.

Overall, of all respondents, only 5% use transit mostly for appointments, 25% use TNCs mostly to go to work, and 28% walk or cycle in the City Center area mostly to exercise or for recreation. Crosswalks, sidewalks, and bike lanes were identified improvements that could address safety concerns. Additional safety concerns are traffic and lack of traffic enforcement.

## PARK-AND-RIDE SURVEYS

To assess the viability of a new I-95 Miami Express Park and Ride facility in City Center, BCT passengers were surveyed to collect data on user perceptions about service and its facilities at two I-95 Express Park and Ride locations in Pembroke Pines: CB Smith Park, approximately two miles west of City Center, and North Perry Airport, approximately five miles east/southeast of City Center. Results are summarized below, with complete documentation available in a report entitled “Pembroke Pines Mobility Hub Park-and-Ride Survey Results” available under separate cover.

### Methodology

The survey focused on the following questions to determine the viability of a Park and Ride service at City Center:

- Method of transportation and distance used to arrive to the Park and Ride location.
- Purpose and frequency of use of the express service.
- Pros and cons of the current services and facilities.

Surveys were collected in-person by Quest team members on wireless tablets with data collected through an online portal. Survey data was collected at the CB Smith Park and Ride from 5:45 AM to 8:45 AM on Thursday, December 19,

2018. Survey data was collected at the North Perry Airport Park and Ride from 5:15 AM to 8 AM on Thursday, January 3, 2019. All data collected was reviewed and analyzed. The tabulation of data resulted in tables and charts (available under separate cover) to quantify transportation and mobility opinions at the I-95 Express lots in the City of Pembroke Pines.

### Overall Summary

Commuters using the I-95 Miami Express Park and Ride services use them because they are convenient, located both near their home and place of employment. Most of the respondents live within five miles from the facility and work near the designated Miami stops. Covered shelter was the top suggested improvements at both locations.

Overall, the 30% that were favorable of a Park and Ride at City Center live in or near the City Center area. The two surveyed facilities have different schedules and Miami destinations. To consider a new facility at City Center, schedules and Miami destinations would need to be studied further.

### CB Smith Park Survey

CB Smith Park and Ride lot is located at 12430 Pines Boulevard in Pembroke Pines, approximately 1.7 miles from I-75, 9.3 miles from I-95, and 3.6 miles from Florida's Turnpike Extension.

The target audience of the survey included commuters using the BCT I-95 Express shuttle service (Route 109) between CB Smith Park/Ansin Sports Center and Miami/Brickell. The service includes connections to Miami-Dade County's Metrorail and Metromover services.

The in-person team met with I-95 Express BCT transit commuters waiting for and getting off buses, Miami-Dade residents arriving to work in western Broward County, and Broward County residents returning home after working an overnight shift in Miami-Dade. Passengers were surveyed at their cars, under the park shelter, and at the I-95 Express bus stop. The team surveyed 48 commuters. The nine-question survey took about five minutes to complete.

Overall, 15% of respondents were in favor of a I-95 Express Park and Ride facility at City Center because it was closer to their home and 85% were not in favor of a Park and Ride facility at City Center because it would be too inconvenient as many of these respondents live near or west of the Flamingo/I-75 corridor. Most of the respondents were satisfied with the service and its distance from their home. Larger covered shelter and security were suggested improvements to the facility.

A unique finding at this location was reverse commuting – commuters traveling from Miami homes to Broward County jobs.

### North Perry Airport Survey

The North Perry Airport Park and Ride lot is located at the northeast corner of Pembroke Road and University Drive, 4.4 miles from I-95, approximately seven miles east of I-75, and 1.7 miles to Florida's Turnpike Extension.

The target audience of the survey included commuters using the BCT I-95 Express shuttle service (Route 108) between North Perry Airport and Miami's Civic Center/Health District. The service connects to the Miami-Dade County's Metrorail service.

The in-person team met with I-95 Express BCT transit commuters waiting for and getting off buses, pedestrians, drop-off passengers. Users were stopped at their cars, as they exited cars at the drop-off location and at the Park and Ride bus bench. The team surveyed 104 I-95 Express commuters. The nine-question survey took about five minutes to complete.

Overall, 37% of the respondents were in favor of a I-95 Express Park and Ride facility at City Center because it would be closer to their home and 63% were not in favor of a Park and Ride facility at City Center because it would be too inconvenient as many of these respondents live close to or east of the airport location. Lighting and covered shelter were facility improvements that were suggested.

Several respondents commented that colleagues that work the overnight shift in the Civic Center / Health District are unable to use the I-95 Express service because of the bus route's schedule.