TRANSPORTATION NETWORK INVENTORY

Rule 9J-5.019(2), Florida Administrative Code (FAC), requires the Transportation Element (TE) be based upon the following data:

- General location of the transportation system features;
- Existing functional classification and maintenance jurisdictions;
- Transit trip generators and attractors;
- Designated transportation facilities for hurricane evacuation;
- Existing peak hour; peak direction of level of service for roads, transit facilities, and corridors or routes; and,
- Capacity of significant parking facilities.

The Transportation Network Inventory addresses these requirements. The transportation system encompasses the following network functional components:

- Roadways,
- Public transit,
- Bikeways,
- Pedestrian ways,
- Waterways,
- Airports, ports
- Railways,
- Recreational facilities, and
- Intermodal facilities.

ROADWAY NETWORK INVENTORY

The roadway network includes the following features: roadway segments or links, road intersections, bridges, rights-of-way, signalization, signage, roadway amenities, and significant parking facilities. This subsection also presents safety-related roadway network data.

A roadway segment or link is a portion of a roadway defined for the purpose of traffic analysis. The segment origination and termination points are typically signalized intersections or the point where the number of lanes on a roadway change. Segments can be classified by lanes, direction, land access, and the type of division between two directions.

Functional Classification and Number of Lanes

Rule 9J-5.019(2)(a)8, FAC, requires the existing functional classification and maintenance responsibilities for all roads be shown on the existing transportation map series. Functional classification was developed for transportation planning purposes and is the grouping of roadways by the character of service they provide. Functional classification is based on the Federal Functional Classification System, pertinent to urban areas (road located within an adjusted census urban area boundary). The classifications include:

- Principal Arterial
- Minor Arterial
- Collector Road
- Local Road

A road is classified based upon its most significant trip purpose; however, a road may serve more than one significant trip purpose. The federal functional classification system recognizes twelve (12) significant trip purposes. Table 2.9 lists the significant trip purposes related to each functional classification. Figure 2.14 shows the functional classification of the City's roadway network.

There are 29.9 miles of arterial roadways within the City of Plantation. Arterial roadways are classified as either principal or minor. A roadway serving only one of the arterial road purposes is classified as a minor arterial, while one serving more than a single purpose is classified as a principal arterial road. All limited access highways and roads which connect urbanized areas are considered to serve several trip purposes, and thus are classified as principal arterial roads.

There are 19.9 miles of County and City collector roadways within the City. An urban collector road's purpose is to provide access to minor public facilities, cross-connection between roads, access to concentrated land use areas, and access to diffuse land use areas.

Local roads provide primary direct public access to abutting land uses. They are not intended as facilities for regional trips by motorized vehicles. Local roads are typically two-lane undivided roadways.

In 1995, the Florida Legislature enacted amendments to Chapter 335, FS. Section 335.04 was repealed and replaced by Section 335.0415, entitled "Public road jurisdiction and transfer process." The new section deletes all references to the functional classification system, but states that the jurisdiction of public roads and the responsibility for operation and maintenance within the right-of-way of any road within the state, county, and municipal road system shall be that which exists on July 1, 1995.

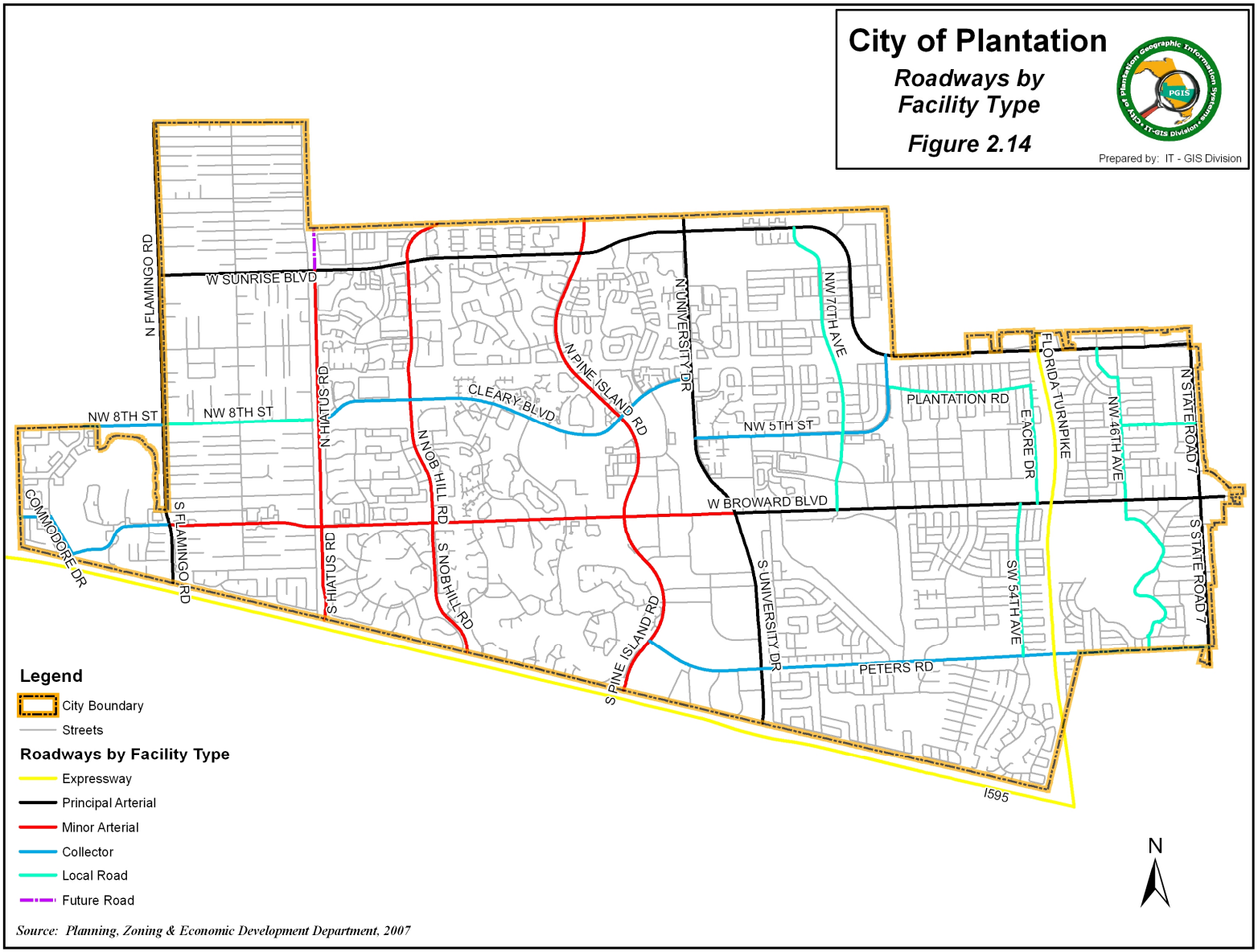
The functional classifications within this section of the City of Plantation Transportation Element are consistent with the Broward County functional classification map. The map shows classification and maintenance responsibility for roadways in the City of Plantation.

Table 2.9
Functional Classification by Trip Purpose

Trip Purpose	Functional Classification
Travel to and through urbanized areas	Arterial
Travel to and through small urban areas	Arterial
National defense	Arterial
Interstate and regional commerce	Arterial
Access to airports, seaports, and major rail terminals or intermodal facilities	Arterial
Access to major public facilities	Arterial
Interconnection of major thoroughfares	Collector
Access to minor public facilities	Collector
Interconnection of minor thoroughfares	Collector
Access to concentrated land use areas	Collector
Access to diffuse land use areas	Collector
Travel between home, work, entertainment, and shopping destinations and nearest road on the primary network composed of arterial and collector roads	Local

Source: Highway Functional Classification Concepts, Criteria and Procedures, Federal Highway Administration (2015).

The Florida Intrastate Highway System (FIHS) is defined by Section 334.03, FS as a system of limited access and controlled access facilities on the State Highway System, which have the capacity to provide high-speed and high-volume traffic movements in an efficient and safe manner. FIHS roadways must be identified for two reasons. Firstly, Rule 9J-5.019, FAC, requires the FDOT level of service standard to be applied to FIHS roads. Secondly, Rule 9J-5.019, FAC, requires the establishment of strategies to facilitate local traffic use of alternatives to the FIHS. The city includes 3.1 miles of FIHS roadways.


City of Plantation
Roadways by Facility Type
Figure 2.14
Prepared by: IT - GIS Division
N FLAMINGO RD
W SUNRISE BLVD
N HIATUS RD
N NOB HILL RD
N PINE ISLAND RD
N UNIVERSITY DR
NW 7CTH AVE
FLORIDA TURNPIKE
N STATE ROAD 7
NW 8TH ST
NW 8TH ST
CLEARY BLVD
NW 5TH ST
PLANTATION RD
E ACRE DR
NW 46TH AVE
W BROWARD BLVD
COMMODORE DR
S FLAMINGO RD
S HIATUS RD
S NOB HILL RD
S PINE ISLAND RD
S UNIVERSITY DR
SW 54TH AVE
S STATE ROAD 7
PETERS RD
I595
Legend
City Boundary
Streets
Roadways by Facility Type
Expressway
Principal Arterial
Minor Arterial
Collector
Local Road
Future Road
N
Source: Planning, Zoning & Economic Development Department, 2007

Rule 9J-5.019(2)(a)(9), FAC, requires the number of through lanes for each roadway be identified on an existing transportation map or map series. Figure 2.15 depicts the lane characteristics of the existing roadway network consistent with the rule requirement.

City of Plantation Roadway Facilities Network Description

An Overview of the Basic Network is described below and illustrated in the maps of Figure 2.14, Roadway Functional Classification, and Figure 2.15, Roadway Type and Number of Lanes.

Florida Intrastate Highway System:

North-South

Florida's Turnpike - 3.1 miles

I-595 – 6.7 miles

Arterial Roadways:

North-South	East-West
U.S. 441 (State Road 7) - 3.8 miles	Sunrise Boulevard (State Road 838) - 9.6mi.
University Drive (State Road 817) - 4.7 miles	Broward Boulevard (State Road 842) 7.9 mi.
	Peters Road (County Arterial) - 3.9 miles

Collector Roadways:

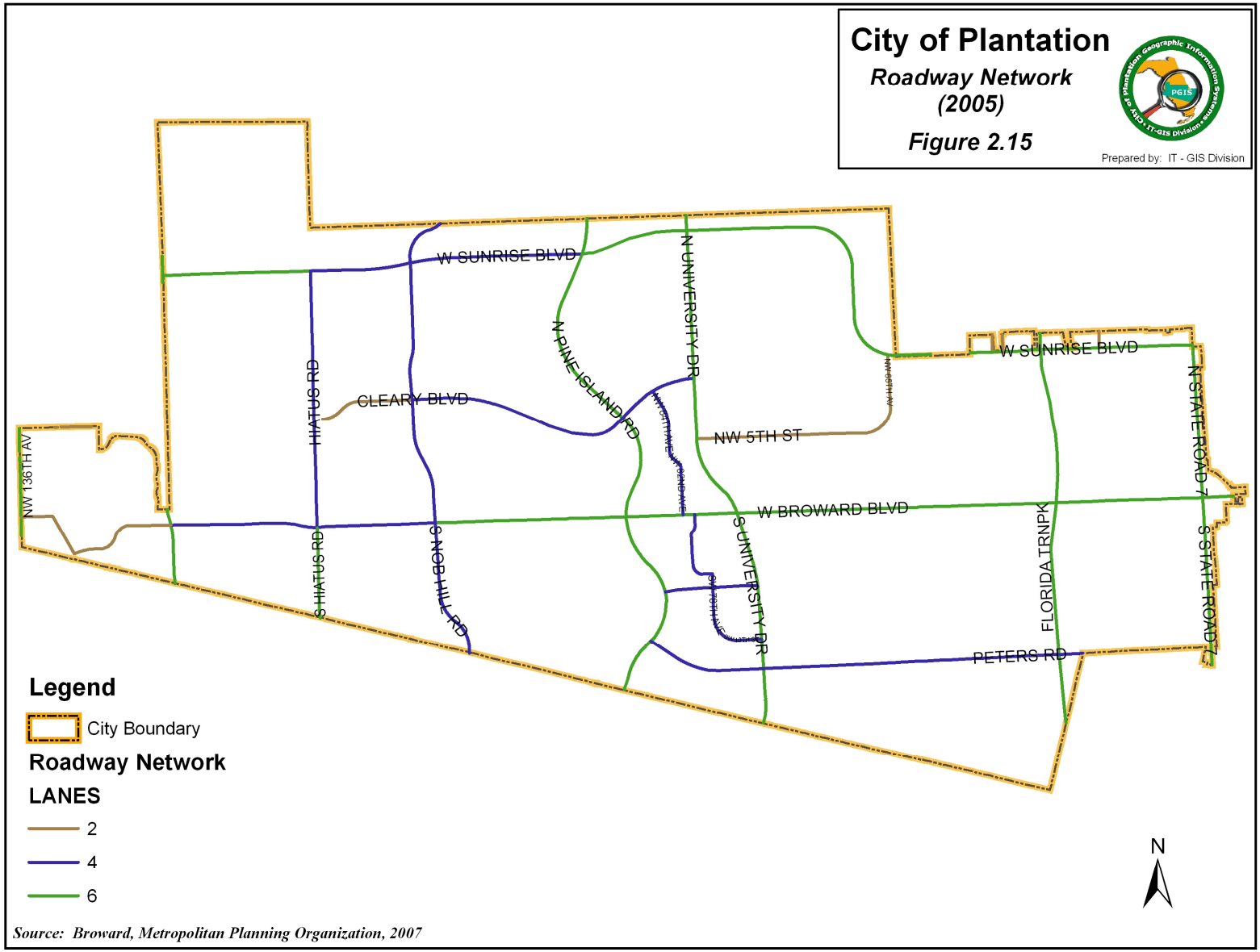
North-South	East-West
NW 70'" Avenue - 2.0 miles	Cleary Boulevard - 4.0 miles
Pine Island Road - 3.9 miles	5th Street - 1.8 miles
Nob Hill Road - 3.3 miles	Peters Road - 3.9 miles
Commodore Drive 1.0 mile	

Significant Local Roadways:

North-South	East-West
NW 70th Avenue	Cleary Boulevard
NW 46th Avenue	NW 5th Street

U.S. 441 and Florida's Turnpike extend from north to south Florida. The Turnpike is used by both residents and visitors to travel through the City of Plantation with interchanges provided at Sunrise Boulevard and 1-595/State Road 84. University Drive connects Dade County to Broward County and will extend into Palm Beach County in the future.

Sunrise Boulevard and Broward Boulevard are State Principal Arterials east of University Drive, and County Minor Arterials west of it. These roads provide east-west access from Plantation easterly to Interstate 95 and the City of Fort Lauderdale. Both roadways were widened west of


City of Plantation
Roadway Network
(2005)
Figure 2.15
Prepared by: IT - GIS Division
W SUNRISE BLVD
N UNIVERSITY DR
N PINE ISLAND RD
W SUNRISE BLVD
N STATE ROAD 7
HIATUS RD
CLEARY BLVD
NW 5TH ST
NW 136TH AV
W BROWARD BLVD
S HIATUS RD
S NOB HILL RD
S UNIVERSITY DR
FLORIDA TRNPK
S STATE ROAD 7
PETERS RD
Legend
City Boundary
Roadway Network
LANES
2
4
6
N
Source: Broward, Metropolitan Planning Organization, 2007

University Boulevard to serve the residential growth in western Plantation and parts of Broward County west of Plantation.

Roadway Network - Other Components

Other components of the City's roadway network are described as follows.

A bridge is a structure, including supports, erected over a depression or an obstruction, such as water, a highway, or railway, which has a track or passageway for carrying traffic or other moving loads. The bridges, culverts, pedestrian and railroad overpasses and tunnels in the City total 93. Among these, 9 are maintained by the FDOT, 8 are County maintained, and 76 are municipally maintained.

Right-of-way often is the major cost for many of the transportation improvement projects; therefore, the acquisition of the needed land should be planned far in advance of the scheduled construction time. The Broward County Trafficways Plan, administered by the Broward County Planning Council, is a roadway right-of-way preservation plan. To accommodate the impacts of new development, right-of-way is dedicated by developing parcels to provide for an adequate regional roadway network. A dedication for at least half of the roadway width that the Trafficways Plan calls for is normally required at the platting stage. Where right-of-way cannot be dedicated as a condition of development order approval, right-of-way is acquired through condemnation. Currently there are four main classifications designated in the Trafficways Plan: limited access/controlled; arterial; collector; and one-way pair. The right-of-way width for the limited access and controlled freeways is 325 feet; for arterial roadways, it varies from 100 to 200 feet; for collector roads, it ranges from 70 to 94 feet; and for one-way pairs, the range is from 42 to 54 feet.

Signalization is an important part of the roadway system. It controls the flow of traffic, therefore, it affects the traffic volume passing through a particular intersection. For isolated (non-system or uncoordinated) operation, the signal type indicates the degree to which a traffic signal's cycle length, phase plan, and phase times are preset or actuated. There are currently two types of signals in use: Actuated signals and Semi-actuated signals. Intersections that have actuated signals will have vehicle detectors for all approaches. Each phase is subject to a minimum and maximum green time and some phases may be "skipped" if no vehicle demand is detected. Intersections installed with semi-actuated signals only have detectors located on the minor street. The signal is set such that the green is always on the major street unless a vehicle is detected on the minor street. The pre-timed signal has preset sequence of phases in repetitive order. Each phase has a fixed green time and change interval that is repeated in each cycle. The Broward County Traffic Engineering Division is responsible for maintaining all signal systems in the County.

Signing and markings are features of traffic control and operation that must be considered in the geometric layout of each facility. The City, FDOT, and Broward County create and maintain signing and marking on their functionally assigned roadways.

Landscaping is the primary highway amenity. Landscape design of roadway serves functional, as well as aesthetic purposes. Plants can serve functions of glare reduction, acoustical control,

erosion control, and traffic control if they are well chosen and placed. Plants also can create and define spaces, support adjacent land uses, and influence traffic speeds on local roads. The City makes extensive use of, and maintains landscaping throughout its roadway system to protect the quality of life of residents and visitors to the City.

Broward County has adopted as part of the concurrency management system, transit oriented concurrency. Policy 1.1.18, Policy 1.1.19, Policy 1.1.20, 1.5.3, and Objective 1.6 and it's related policies have been added or amended to comply with the County's transit oriented concurrency. Broward County has divided the county into districts. The City of Plantation is located within the Central District, which is a transit oriented district. The Central District boundaries are described in the data and analysis section of the Broward County Transportation Element and Map 3-13 of the Broward County Comprehensive Plan.

The Central District is distinguished by the predominance of east-west travel, with the Interstate 595 corridor being the most heavily used transportation corridor. The transit routes on the major east-west roadways within the District are characterized by high ridership and frequent service. The parallel routes on Broward, Sunrise, and Oakland Park Boulevards all have 20 minute headways, and average over 35 passengers per hour. Data on existing transit service indicates that over 75% of the area within the District is served by transit. Some district priorities are increased coverage (circulators and shuttles), and improve quality of bus stops, and decrease travel time on buses.

The County worked closely with each municipality to develop each of the transit oriented districts.

The County Transportation Element Data and Analysis outlines the blend of level of service criteria that is used for the transit oriented concurrency.

SIGNIFICANT PARKING FACILITIES INVENTORY

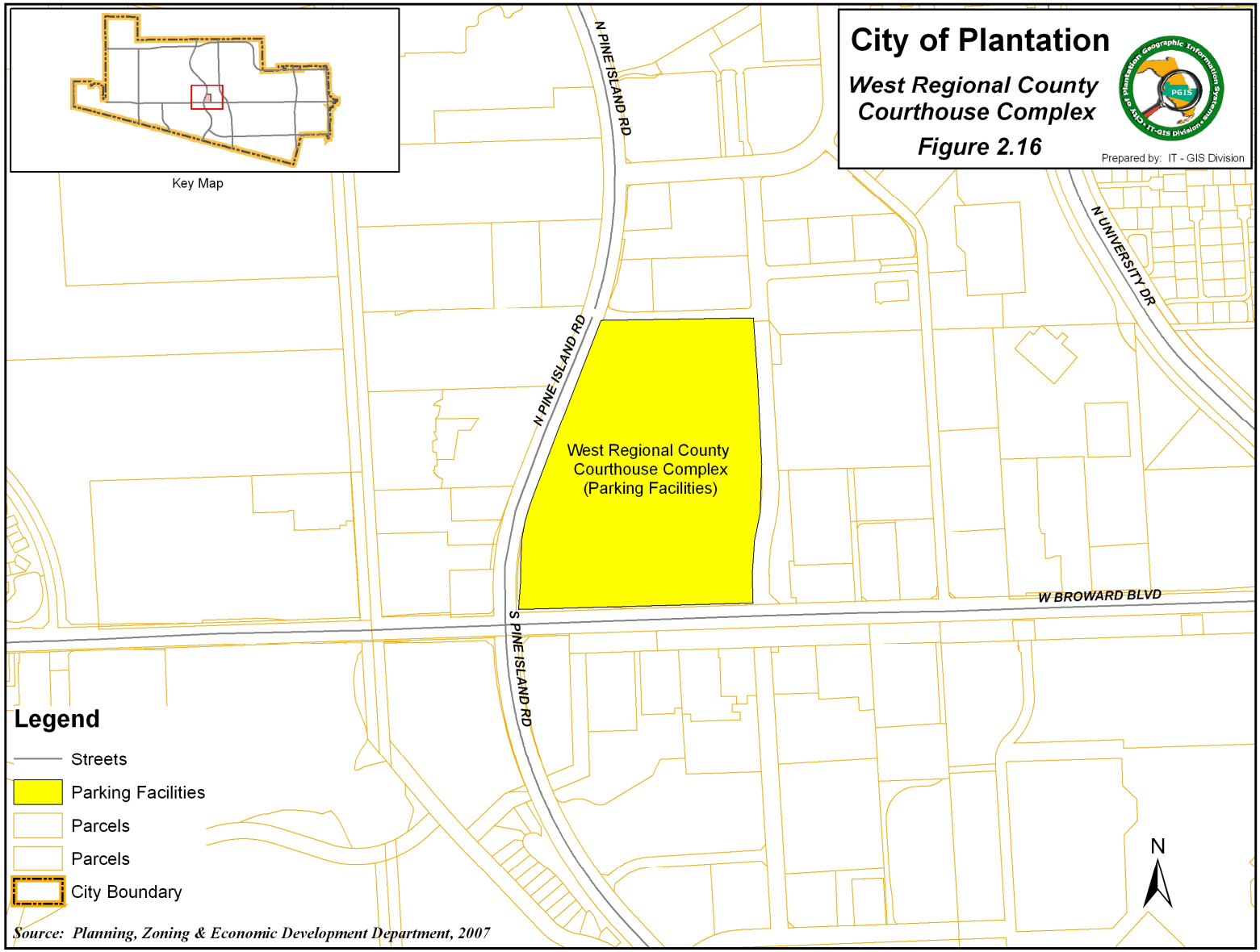
Significant public parking facilities in the City are defined as those public facilities that are of 500 or more parking spaces. Long-term parking facilities are defined as more than a day parking duration. Significant public parking facilities inside the City of Plantation include:

- West Regional Courthouse and Library at Broward Boulevard and Pine Island Road (location shown in Figure 2.16) — 989 long-term spaces

TRANSIT NETWORK INVENTORY

<u>The Role of the County</u>

Currently, the Broward County government provides all of the mass transit service within the City of Plantation. The Division of Mass Transit (BCT) is part of the Department of Public Services reporting to the County Manager and County Commission. This Division provides all of the regular bus service. The County School Board provides service to school children and the County Social Services Division provides specialized service for the elderly and handicapped.


City of Plantation
West Regional County Courthouse Complex
Figure 2.16
Prepared by: IT - GIS Division
Key Map
N PINE ISLAND RD
N PINE ISLAND RD
N UNIVERSITY DR
West Regional County Courthouse Complex (Parking Facilities)
W BROWARD BLVD
S PINE ISLAND RD
Legend
Streets
Parking Facilities
Parcels
Parcels
City Boundary
Source: Planning, Zoning & Economic Development Department, 2007
N

Amtrak's New York-Miami trains provide rail service in the eastern part of the County, to the east of Plantation. The Tri-County Commuter rail service uses the same corridor. A high-speed rail line is in the planning stages but its corridor and pattern of stops remain to be determined.

Although the County Commissioners are ultimately responsible for bus service in Plantation, City officials do have input through their membership on both the Metropolitan Planning Organization (MPO) and the Transportation Coordinating Committee (TCC). As a condition of receiving Federal mass transit funds, these two entities must approve several important transportation planning and funding documents including the annual Transportation Improvement Program (TIP) and Unified Planning Work Program. These together with the Transportation Element of the County Comprehensive Plan and the County Transit Development Plan (TDP) provide the County-wide planning framework for transit.

The County's Transit Strategy

The TDP outlines a basic service or route pattern whereby major east-west and north-south trunk lines are identified. They in turn are supplemented with feeder and express routes. The plan's goal is to devote special attention to growth areas, major generators, and high traffic congestion corridors. The plan then outlines standards for headways, hours of service, and service to medium and high-density development area.

The new County Mass Transit Element emphasizes designated Public Transportation Corridors characterized by traffic congestion, future population increases and strong travel desire lines. Consideration is being given to improved transit services in these corridors. There are three designated Public Transportation Corridors: Broward Boulevard, University Boulevard, and SR 7. The implications for Plantation are discussed later in this report.

Rather than repeat the County-wide details contained in the plans enumerated above, this element concentrates upon an analysis and recommendations for the City of Plantation but based upon the Countywide framework.

Transit Corridors and Transit Terminals

The West Regional County Complex (shown in Figure 2.16), located at the intersection of Broward Boulevard and Pine Island Drive is a Major Bus Transfer Terminal. It serves six Broward County Transit (BCT) bus routes: Route 2, Route 12, Route 22, Route 36, and Route 56. The West Regional County Complex is capable of servicing up to nine routes and has 989 parking spaces for commuter parking for park-and-ride operations.

By Resolution No. 6779, passed and adopted by the City Council on February 28, 1996, the City of Plantation expressed its opposition to any study for, or recommendation to Broward County which proposed the extension of any fixed rail transit system or the construction of any additional vehicular travel lanes for the purpose of operating a bus transit system within the portion of the University Drive Corridor lying within the City of Plantation. The City's opposition was based on its concerns for the residents adjacent to the roadway that would bear the burden of additional noise, dust, exhaust fumes, and have the privacy of their homes substantially reduced.

Major Routes

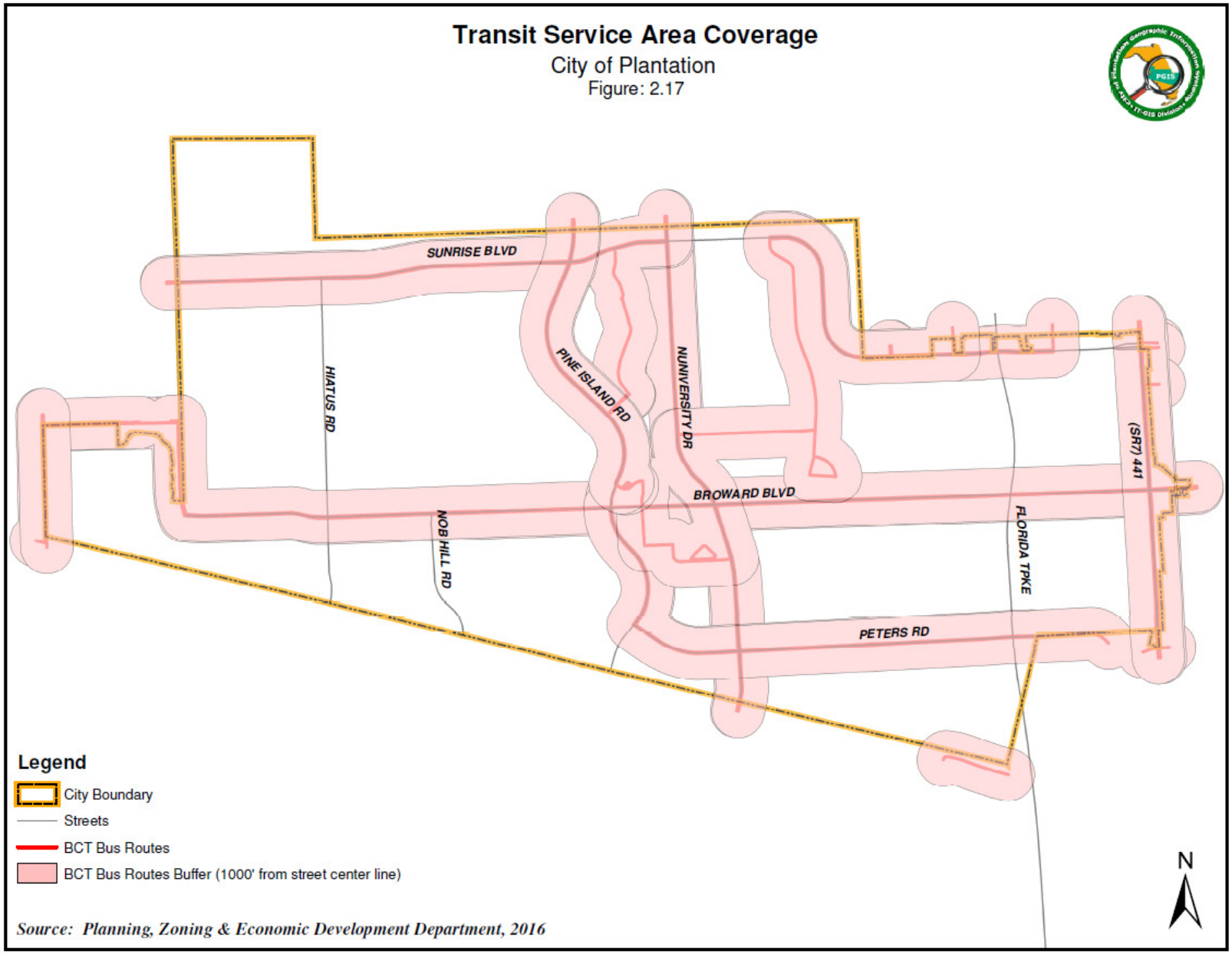
Each of the seven routes serving the City are listed below with some analysis of each one. The alignments of these routes are illustrated in Figure 2.17. It should be noted that Routes 9 and 81 contain segments that briefly touch the eastern corners of Plantation but they are not included in this analysis since they provide little direct service to the City. The following provides pertinent 2004 operating characteristics, and Table 2.10 provides statistics for the analysis of each route.

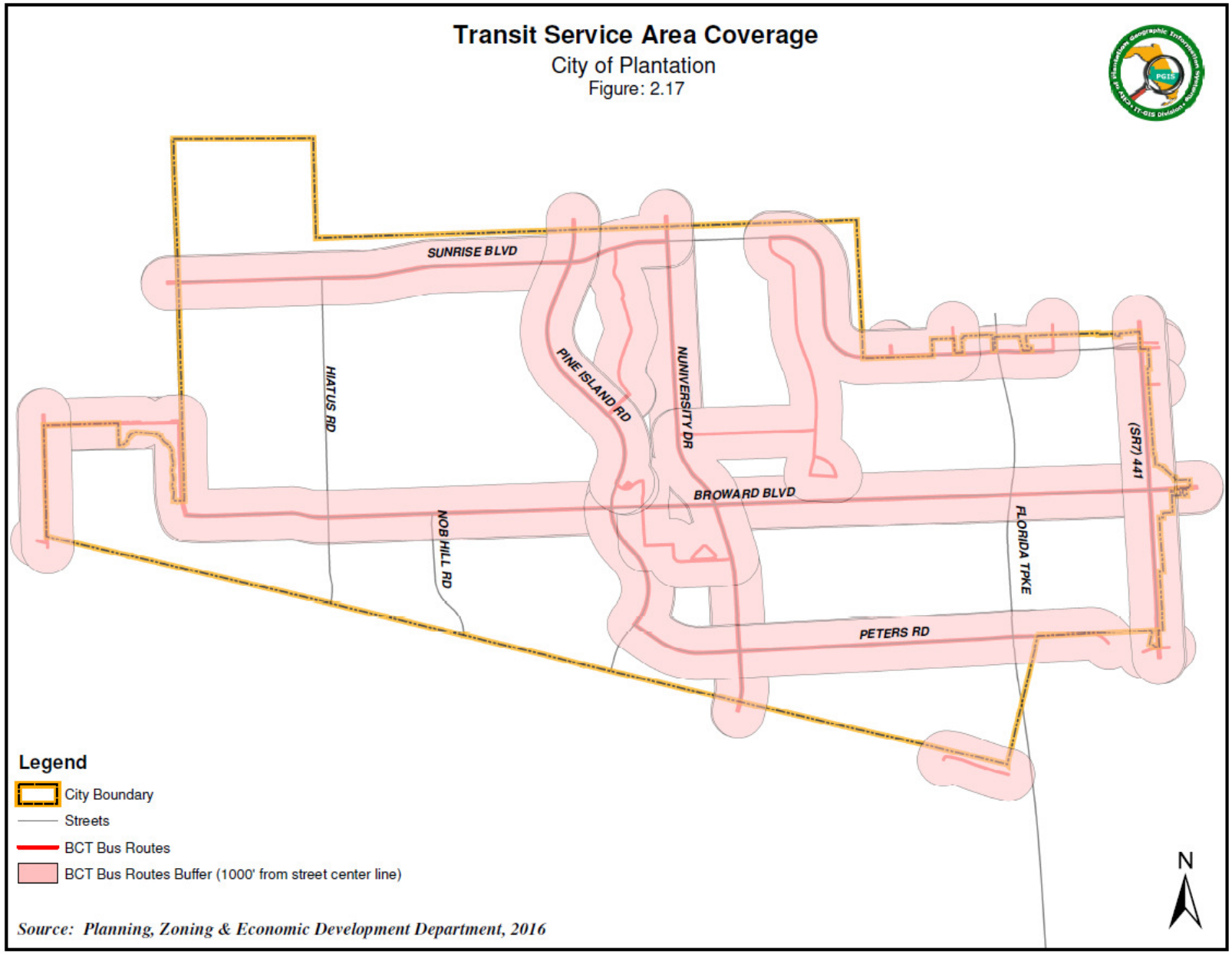
Route 2

- This major north-south trunk line provides service along University Drive from Hollywood Boulevard to Sample Road.
- During peak and off-peak hours, there are 14 buses with a headway of 20 minutes, and 10 buses with a headway of 30 minutes. On Saturday, there are 9 buses that operate with a headway of 30 minutes, and on Sunday there are 6 buses that operate with a headway of 45 minutes.
- Ridership has increased by 7.0% from 362,329 in Oct. 2003 to 381,612 by Oct. 2004.
- All buses are wheelchair-accessible.
- Comment: This route is important, given present and projected traffic congestion on University Drive.

Route 12

- This north-south/east-west feeder line provides service between Young Circle (Hollywood) and the West Regional Courthouse Terminal (Plantation), via Sheridan Street, Davie Road, Nova Drive, and University Drive.
- During peak and off-peak hours, there are four buses operating on this route, with a weekday headway of 40 minutes. On Saturday and Sunday, there are 3 buses that operate with a headway of 45 minutes.
- Ridership has increased by 1.2% from 93,066 in Oct. 2003 to 94,141 by in Oct. 2004.
- All buses are wheelchair-accessible.


Transit Service Area Coverage
City of Plantation
Figure: 2.17
SUNRISE BLVD
HIATUS RD
PINE ISLAND RD
NUNIVERSITY DR
BROWARD BLVD
NOB HILL RD
FLORIDA TPKE
(SR7) 441
PETERS RD
Legend
City Boundary
Streets
BCT Bus Routes
BCT Bus Routes Buffer (1000' from street center line)
N
Source: Planning, Zoning & Economic Development Department, 2016


Transit Service Area Coverage
City of Plantation
Figure: 2.17
SUNRISE BLVD
HIATUS RD
PINE ISLAND RD
NUNIVERSITY DR
BROWARD BLVD
NOB HILL RD
FLORIDA TPKE
(SR7) 441
PETERS RD
Legend
City Boundary
Streets
BCT Bus Routes
BCT Bus Routes Buffer (1000' from street center line)
N
Source: Planning, Zoning & Economic Development Department, 2016

Route 18

- This major north-south trunk line provides service along State Road 7 from the Margate Terminal to the Golden Glades Park-and-Ride.
- During peak and off-peak hours, there are 17 buses operating on this route, with weekday headways of 15 minutes and 30 minutes during peak hours. On Saturday, there are 12 buses that operate with a headway of 20 minutes, and on Sunday there are 7 buses that operate with a headway of 30 minutes.
- Ridership has decreased by 1.4% from 758,679 in Oct. 2003 to 747,766 by Oct. 2004.
- All buses are wheelchair-accessible.
- Comment: This route is important, given present and projected traffic congestion on State Road 7. Also, there is a higher potential for bus ridership given the transit-dependent populations along this corridor.

Route 22

- This major east-west trunk line provides service along Broward Boulevard from the Central Terminal (downtown Fort Lauderdale) to the Sawgrass Mills Mall (Sunrise).
- During peak and off-peak hours there are 6 buses operating on this route during weekdays, with headways of 20 minutes. On Saturday and Sunday, there are 5 buses that operate with a headway of 30 minutes.
- Ridership has decreased by 2.2% from 228,029 in Oct. 2003 to Oct. 223,066 by 2004.
- All buses are wheelchair-accessible.
- Comment: This route provides direct access to downtown Ft. Lauderdale and the Tri-Rail Station on Broward Boulevard.

Route 30

- This east-west feeder line provides service between the Central Terminal in downtown Fort Lauderdale, and the West Regional Courthouse Terminal in Plantation via Peters Road and Davie Boulevard.
- During peak and off-peak hours there are 3 buses operating on this route, with a headway of 30 minutes. On Saturday and Sunday, there are 2 buses that operate with a headway of 45 minutes.
- Ridership has increased on this route by 11.6% from Oct. 112,679 in 2003 to Oct. 125,722 by 2004.
- Buses are not wheelchair-accessible.

Route 36

- This major east-west trunk line provides service from A-1-A to Sawgrass Mills Mall (Sunrise), via Sunrise Boulevard.
- During peak and off-peak hours there are 10 buses operating on this route, with a headway of 20 minutes. On Saturday and Sunday, there are 7 buses that operate with a headway of 30 minutes.
- Ridership has increased by 7.2 % from Oct. 391,762 in 2003 to Oct. 419,788 by 2004.
- All buses are wheelchair-accessible.

Route 56

- This feeder route connects high-density residential areas within the Cities of Plantation, Sunrise, Lauderhill, and Lauderdale Lakes with local shopping areas.
- During peak and off-peak hours there are seven buses operating on this route, with a headway of 30 minutes. On Saturday, there are 5 buses with a headway of 40 minutes, and on Sunday there are 4 buses with a headway of 45 minutes.
- Ridership has increased by 13.8% from Oct. 106,339 in 2003 to Oct. 120,992 by 2004.
- All of the buses are wheelchair-accessible.
- Comment: This route provides service along Northwest 70th Avenue to the Central Plantation Business District (Broward and Fashion Malls).

Stops and Amenities

Within the City of Plantation there are currently 276 County and 35 City transit stops with 136 benches and 30 bus shelters to serve Broward County Transit routes. The number of benches and stops is significant because it influences the attractiveness of bus service to potential riders. The City of Plantation in conjunction with other agencies, is in the process of designing and installing bus stop shelters along University Drive and Broward Boulevard.

Table 2.10
Broward County Transit System
Route by Route Ridership (Annual)

Route	January 2015	January 2016	% Change
2	645,617	632,211	-2.1
12	186,708	153,347	-17.9
18	673,923	576,595	-14.4
22	482,678	419,107	-13.2
30	268,424	223,339	-16.8
36	612,552	553,537	-9.6
56	37,776	34,879	-7.7

Table 2.11
Population Characteristics from the 2010 Census

Census Tract	Total Population	Percent	Population 65 and over
601.21	6,846	8.05%	453
601.22	4,480	5.27%	399
605.01	5,997	7.05%	750
605.03	4,734	5.57%	445
605.04	4,510	5.30%	528
605.05	4,206	4.95%	1,571
606.03	4,409	5.18%	306
606.05	3,402	4.00%	210
606.06	5,379	6.33%	863
606.07	2,757	3.24%	466
606.08	6,543	7.70%	1,037
606.09	3,252	3.82%	309
607	3,159	3.71%	488
608.01	1,871	2.20%	239
608.02	6,270	7.38%	610
609	4,266	5.02%	700
610.01	6,166	7.25%	1,038
610.02	7,847	9.23%	926
Total	84,955	100.00%	11,338
			13.34%

BICYCLE NETWORK INVENTORY

Bicycle Network Components and Facilities

The bicycle network includes bicycle facilities and services designed to enable and encourage the use of bicycles for recreational and utilitarian purposes. Recreational trips include travel for leisure, enjoyment, or pleasure and utilitarian trips include travel for work or errands. Bicycle facilities include bikeways, bicycle parking racks, and may include bicycle lockers, showers, and other amenities in future developments.

A bikeway is any road, path or way which is open to bicycle travel and from which motor vehicles are excluded. Bikeways may be located within a roadway right-of-way, but are usually within an independent right-of-way.

A bike path is a bikeway that is physically separated by an open space or barrier. All bikeways carry recreational and utilitarian trips, but bike paths are secluded from traffic and may entice additional recreational riders. Therefore, bike paths also are considered greenways in the recreational traffic network.

A bicycle lane is a portion of a roadway that has been designated by striping, signage, and pavement markings for the preferential or exclusive use of bicycles. Unlike bike paths, bike lanes are not physically separated from traffic.

A wide curb lane is similar to a bicycle lane, and is the outermost lane of a roadway, for vehicle travel, which has been expanded in width. Wide curb lanes are not designated by striping or pavement markings. Wide curb lanes are at least 14 feet wide, but may be wider in circumstances where it has been determined additional rider safety measures are required. Because wide curb lanes are not physically separated from motorized traffic, they are not considered bikeways. Newly constructed or improved roadways within the County's jurisdiction incorporate this design.

Bicycle racks and lockers are used for bicycle parking. Bicycle parking racks are available at County government facilities, including the West Regional Courthouse and Library. Traditional bicycle parking racks provide minimal security when bikes are left alone for long periods of time. Bicycle storage lockers provide additional security from theft and protection from inclement weather by enclosing the entire bike.

Bicycle services include bicycle repair services~~,~~ and educational programs.

The *Broward County Bicycle Suitability Map* displays bikeways and designates traffic interaction ratings, but does not designate routes. It was determined the suitability map is more advantageous than a route map because the user may choose a course of travel based upon ability and confidence. The map also provides bicycle related information including traffic laws, bicycle repair shops, clubs, and regional park facilities.

PEDESTRIAN NETWORK INVENTORY

The pedestrian ways network includes pedestrian facilities and services. Pedestrian facilities are designed to ensure safety and allow access to pedestrian ways. Pedestrian ways are any road, path or way open to traffic afoot and from which motor vehicles are excluded. Pedestrian networks and amenities include, but are not limited to, sidewalks, designated crosswalks, walkways, pedestrian signal phasing, curb cuts, and additional lighting.

A regionally significant pedestrian way is intended to facilitate short trips, as well as longer trips in conjunction with public transit. Regionally significant pedestrian ways are those pedestrian facilities on both sides of a roadway functionally classified as either a collector or arterial road. These pedestrian ways would include the sidewalks and related facilities along SR 7, University Drive, Pine Island Road, SR 84, Peters Road, Broward Boulevard, and Sunrise Boulevard.

Locally significant pedestrian ways are those sidewalks, walkways, and crosswalks which connect places which are not feasibly or practically accessible by automobile, such as in a downtown. These pedestrian ways include those sidewalks and related facilities along NW 5th Street, NW 65th Avenue, and NW 70th Avenue.

Locally significant pedestrian ways should include pedestrian friendly urban design, connecting residences, restaurants, cultural sites, parks, and shops. Bicycles in these areas should be separated from pedestrian movement. Policy 2.4.1 states that the internal circulation for the Plantation Midtown District be improved. This would include pedestrian access to internal transportation facilities.

Pedestrian Network Components

Sidewalks are required adjacent to Trafficways delineated on the Broward County Trafficways Plan, and all functionally classified County Collector roads. Sidewalks must be a minimum of five feet wide on both sides of all these roadways.

Crosswalks provide pedestrians with connections between sidewalks and walkways. Crosswalks are located at road intersections and mid-block locations that attract heavy pedestrian traffic, such as schools and parks. Well marked crosswalks provide safe paths for pedestrians by alerting drivers of the potential for pedestrians crossing the street.

Pedestrian walkways are exterior paths with a prepared surface intended for pedestrian use. These include designated walking areas in parking lots, parking garages, plazas, and other public places. Pedestrian walkways may be marked or unmarked.

Pedestrian networks and amenities include, but are not limited to, sidewalks, designated crosswalks, walkways, pedestrian signal phasing, curb cuts, and additional lighting.

Signals indicate to the pedestrian when it is safe to cross the street and are typically used at busy intersections in conjunction with crosswalks. At wide intersections, pedestrians often have difficulty crossing the street during the window of safety. In these circumstances, pedestrian signal phasing should be reviewed.

Pedestrian amenities are primarily designed to promote a pleasurable walking experience. Amenities include benches, fountains, landscaping, lighting, and other urban design features.

WATERWAY NETWORK INVENTORY

Waterway facilities include those water bodies navigable from the Atlantic Ocean, and water-dependent transportation facilities, such as ports, marinas and boat ramps. Waterway services are those that serve navigation, such as passenger and freight services.

Broward County's navigable water bodies are the Atlantic Ocean, the Intracoastal Waterway, the New River and its tributaries, the Dania Cut-off Canal, the Middle River and its tributaries, and the Pompano Canal. These canals and others were dredged for development, but also serve as transport waterways for pleasure craft, water taxies, and other vessels. Water features are divided into two (2) categories: the Intracoastal Waterway and Other Navigable Waters.

The Intracoastal Waterway does not extend to the City of Plantation. The City of Plantation's waterways are only the New River Canal, an inland extension of the New River, and some of its tributaries in the southern neighborhoods of the City. Due to bridge height limitations, there are no significant marinas or marine facilities west of SR 7 along the New River Canal. The navigable waters of the City of Plantation are therefore, only useful for small, private pleasure vessels.

PORTS, AVIATION, AND RELATED FACILITIES INVENTORY

There are four aviation facilities and one port facility that serve Broward County, and the City of Plantation.

1. The Fort Lauderdale/Hollywood International Airport is the primary commercial service facility. The airport is classified as a medium hub, and provides commercial, charter and general air service through 24 airlines and a helicopter service. The airport is located in the southeast portion of Broward County.

2. The Fort Lauderdale Executive Airport is a general aviation facility that is a designated reliever for Fort Lauderdale/Hollywood International Airport. The primary function of this airport is to serve corporate aircraft. The airport is located in the northeast portion of Broward County.

3. North Perry Airport is a general aviation facility. The primary function of this airport is to relieve Fort Lauderdale/Hollywood International Airport of excess small general aviation traffic. The airport is located in the southwest portion of Broward County.

4. Pompano Airpark is a general aviation facility. The primary function of this airport is for recreational, instructional, and short range business flying. The airport is located in the northeast portion of the County.

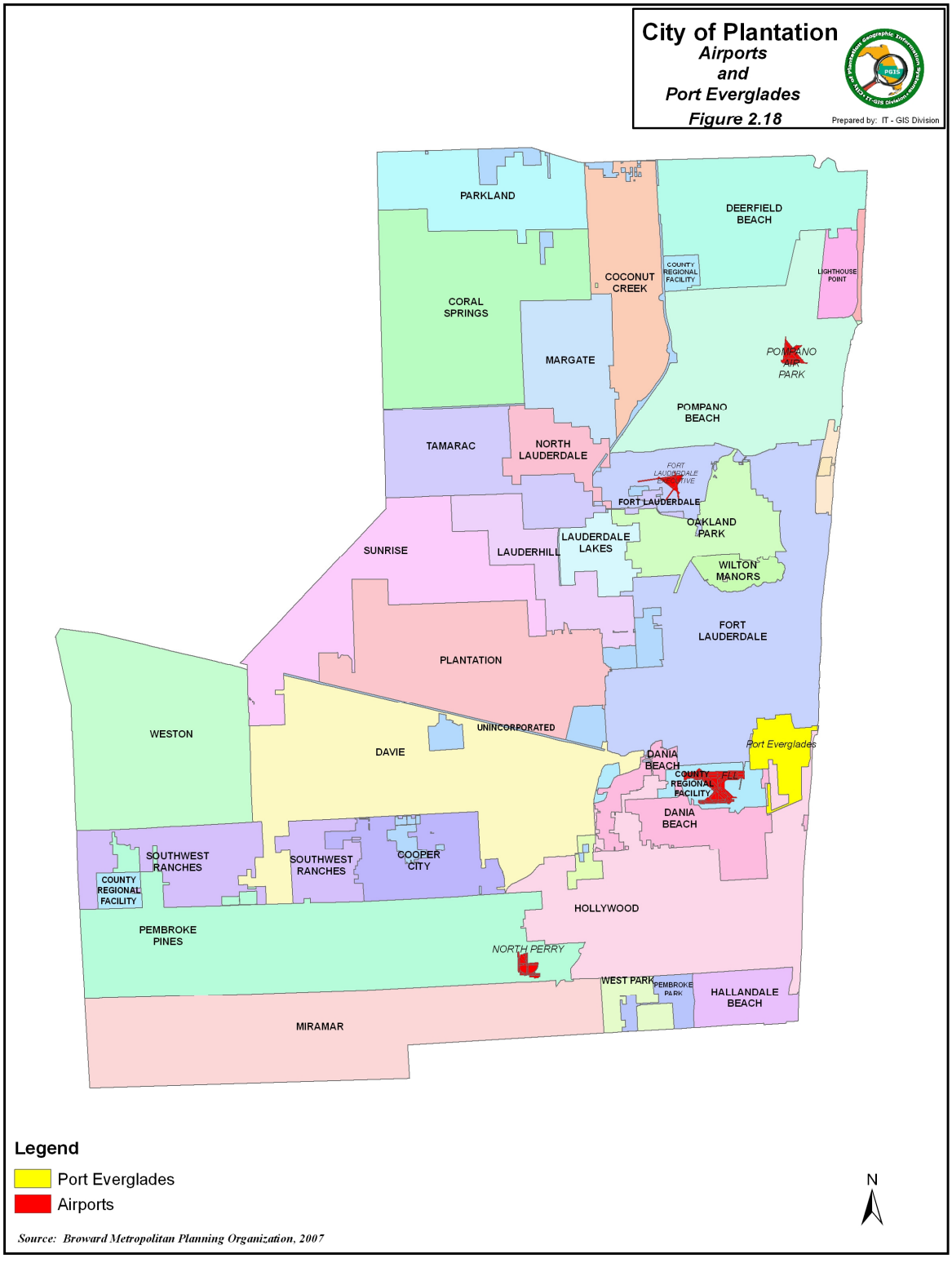
5. Port Everglades
   The seaport of Port Everglades is located at the adjoining City limits of Fort Lauderdale, Hollywood and Dania. The port facility consists of approximately 2,100 acres of which 910 acres are owned by the Port Authority. The port maintains warehousing and storage facilities, and has seven passenger terminals and another under construction. Foreign trade zone #25 is also located within the jurisdiction of the Port.

Figure 2.18 shows all port and airport facilities that serve Broward County in relation to the City of Plantation. Four primary corridors provide Plantation residents with access to all listed facilities: State Road 84, I-595, University Drive, and Florida's Turnpike. The Fort Lauderdale/Hollywood International Airport is more accessible, with an approximate travel time of 12-15 minutes, from Plantation along I-595.

RAILWAY FACILITIES INVENTORY

There are no existing or planned railway facilities within the City. Plantation residents, as part of a larger metropolitan county, are served by facilities operated and maintained by other jurisdictions.

As there are no railway or related facilities within the City of Plantation's jurisdiction, the specific data requirements listed in Chapter 163.3177(7)(b) F.S. have been omitted in this element, yet are included in the Broward County Comprehensive Plan.


City of Plantation
Airports
and
Port Everglades
Figure 2.18
Prepared by: IT - GIS Division
PARKLAND
DEERFIELD BEACH
COCONUT CREEK
COUNTY REGIONAL FACILITY
LIGHTHOUSE POINT
CORAL SPRINGS
MARGATE
POMPANO AIR PARK
POMPANO BEACH
TAMARAC
NORTH LAUDERDALE
FORT LAUDERDALE EXECUTIVE
FORT LAUDERDALE
OAKLAND PARK
SUNRISE
LAUDERHILL
LAUDERDALE LAKES
WILTON MANORS
FORT LAUDERDALE
PLANTATION
UNINCORPORATED
WESTON
DAVIE
Port Everglades
DANIA BEACH
COUNTY REGIONAL FACILITY
DANIA BEACH
SOUTHWEST RANCHES
SOUTHWEST RANCHES
COOPER CITY
COUNTY REGIONAL FACILITY
HOLLYWOOD
PEMBROKE PINES
NORTH PERRY
WEST PARK
PEMBROKE PARK
HALLANDALE BEACH
MIRAMAR
Legend
Port Everglades
Airports
N
Source: Broward Metropolitan Planning Organization, 2007

RECREATIONAL TRANSPORTATION NETWORK INVENTORY

The primary intent of the recreational traffic network is to provide travel oriented passive and active outdoor recreational opportunities. The recreational transportation network includes facilities such as greenways, blueways, and those bikeways located within regional parks.

Greenways

The term "greenways" was popularized during the 1950s and 1960s to describe vegetated corridors used primarily for outdoor recreational pursuits such as walking, jogging, hiking, and horseback-riding. The greenway concept is becoming widely recognized as a cost-effective approach to open space protection. Most are linear, connective, and vegetated. Greenways typically follow physical linear features of the landscape, both natural and man-made, and customarily provide connections between hubs, such as parks, cultural and historic sites, and developed areas. The connective aspect of greenways occasionally provides the opportunity for utilitarian use, but the primary use is recreational. Greenways commonly include vegetative buffers, offering environmental benefits, such as stormwater filtration and crucial wildlife habitat. A functional greenway system consists of three components, hubs, links, and sites. Hubs represent the origin and destination points of the greenway and serve as a foundation for the system. Links are the paths and natural areas that provide the connections between hubs. Sites are spots located along or nearby greenways that are noteworthy for ecological, historical, cultural, or scenic value. Greenways often extend across jurisdictional boundaries, therefore, the implementation of the greenway concept is often accomplished through the establishment of interlocal partnerships.

Blueways

As marine recreation becomes more popular, and water sports participants attempt to use unfamiliar waterways, a greater demand has arisen for additional amenities to ensure a safe and enjoyable experience. Blueways, which borrows its concept from greenways, uses navigable waterways as a means of providing the opportunities for nature appreciation, historical and cultural education, environmental awareness, and safe navigation. The navigable waterways of a blueway serve as the links; whereas, various features on land, including parks, museums, and developed areas, serve as hubs and sites. Blueways can be especially effective when used in conjunction with greenways.

The Broward Urban River Trails Task Force, comprised of citizens, elected officials, and government staff, was formed following the Broward County Urban River Greenway Assembly in 1994 to create amenities along the New River and the waters that feed into it, and to encourage navigation. Four blueway links, which collectively form a 26 mile loop, have been identified to establish the framework of the trail. These four blueway links wind through the City of Dania, the Town of Davie, the City of Fort Lauderdale, the City of Hollywood, the City of Plantation, and the City of Wilton Manors. The Broward County Department of Natural Resource Protection has coordinated with the Florida Greenways Coordinating Council to include the trail in the Florida Greenways System. The trail is intended to enhance recreational opportunities, promote neighborhood revitalization, provide historical and cultural education opportunities, and support economic development.

Park Bikeways

Bikeway facilities for recreational trip purposes are provided in the City of Plantation in conjunction with Broward County, at Plantation Heritage Park. Maintained by Broward County, the park includes a 1.25 mile recreational bikeway. This condition of this facility is currently rated by the County as very good.

INTERMODAL FACILITIES INVENTORY

There are no existing or planned intermodal facilities within the City. Plantation residents, as part of a larger metropolitan county, are served by facilities operated and maintained by other jurisdictions.

As there are no railway or related facilities within the City of Plantation's jurisdiction, the specific data requirements listed in Chapter 163.3177(7)(b) F.S. have been omitted in this element, yet are included in the Broward County Comprehensive Plan.

TRANSPORTATION NETWORK EXISTING AND FUTURE CONDITIONS ANALYSIS

Roadway Conditions – Level of Service

Florida law requires transportation level of service (LOS) standards be adopted for roads and public transit facilities within the local government's jurisdiction. Level of service standards for other transportation facilities, such as bikeways and airports, are optional. The City of Plantation applies transportation LOS standards through its Concurrency Management System only to roadways and public transit. The Level of Service Standard for the City of Plantation roadways is LOS "D".

The concept of "levels of service" is defined as a qualitative measure of satisfaction describing operational conditions within a traffic stream and their perception by motorists. A level of service definition generally describes these conditions in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience and safety. Generally, drivers' satisfaction is dependent on vehicular density, speed, delay, and ability to maneuver.

Six levels of service are defined for each type of facility for which analysis procedures are available. They are given letter designations, from "A" to "F", with level of service "A" representing the best operating conditions and level of service "F", the worst. In general, the various levels of service are defined as follows for uninterrupted flow facilities:

Level of Service "A" represents free flow. This is a condition of free flow, accompanied by low volumes and high speeds. Traffic density will be low, with uninterrupted flow speeds controlled by driver desires, speed limits, and physical roadway conditions. There is little or no restriction in maneuverability due to the presence of other vehicles, and drivers can maintain their desired speeds with little or no delay.

Level of Service "B" is in the range of stable flow. This occurs in the zone of stable flow, with operating speeds beginning to be restricted somewhat by traffic conditions. Drivers still have reasonable freedom to select their speed and lane of operation. Reductions in speed are not unreasonable, with a low probability of traffic flow being restricted. The lower limit (lowest speed, highest volume) of this level of service has been used in the design of rural highways.

Level of Service "C" is in the range of stable flow. This is still in the zone of stable flow, but speeds of maneuverability are more closely controlled by the higher volumes. Most of the drivers are restricted in their freedom to select their own speed, change lanes, or pass. A relatively satisfactory operating speed is still obtained, with service volumes suitable for urban design practice.

Level of Service "D" represents high-density, but stable, flow. This level of service approaches unstable flow, with tolerable operating speeds being maintained, though considerably affected by changes in operating conditions. Fluctuations in volume and temporary restrictions to flow may cause substantial drops in operating speeds. Drivers have little freedom to maneuver, and

comfort and convenience are low. These conditions can be tolerated, however, for short periods of time.

Level of Service "E" represents operating conditions at or near the capacity level. This cannot be described by speed alone, but represents operations at lower operating speeds, typically, but not always, in the neighborhood of 30 miles per hour, with volumes at or near the capacity of the highway. Flow is unstable, and there may be stoppages of momentary duration. This level of service is associated with operation of a facility at capacity flows.

Level of Service "F" is used to define forced or breakdown flow. This describes a forced-flow operation at low speeds, where volumes are below capacity. In the extreme, both speed and volume can drop to zero. These conditions usually result from queues of vehicles backing up from a restriction downstream. The section under study will be serving as a storage area during parts or all of the peak hour. Speeds are reduced substantially and stoppages may occur for short or long periods of time because of the downstream congestion.

The 2000 Highway Capacity Manual (HCM) bases the levels of service for roadways on the speeds and maximum service flow (MSF). The analysis for signalized intersections is based on "stopped delay" per vehicle. Un-signalized intersection LOS is based on the "critical gap" between vehicles to accept vehicles crossing or merging with the major street flow. Table 2.12 summarizes the HCM thresholds and average criteria for each level of service.

Table 2.12
Level of Service - Highway Capacity Manual

Urban Street Class	I	II	III	IV
Range of free-flow speeds (FFS)	55 to 45 mi/h	45 to 35 mi/h	35 to 30 mi/h	35 to 25 mi/h
Typical FFS	50 mi/h	40 mi/h	35 mi/h	30 mi/h
LOS	Average Travel Speed			
A	>42	>35	> 30	>25
B	>34-42	>28-35	> 24-30	>19-25
C	>27-34	>22-28	> 18-24	>13-19
D	>21-27	>17-22	> 14-18	>9-13
E	>16-21	>13-17	> 10-14	>7-9
F	≤16	≤13	≤10	≤7

Free Flow speed is adjusted for median type, lane width, lateral clearance, access point density, and vehicle mix. Signalized arterials are also effected by signal density, critical intersection, average, and weighted g/C time, progression, and arrival patterns.

Although a decrease in LOS is generally considered an adverse impact on the quality of life of residents and visitors, increasing the LOS (satisfaction) for vehicular traffic may cause adverse impacts to other aspects of the quality of life. Furthermore, the affect of traffic LOS on land development, economic development, and property value are not clear. Attempts to increase traffic LOS must be balanced with other planning concerns. For example:

- Attempting to increase vehicular LOS, many of the County's signalized intersections may reduce the protected pedestrian phase time. This is especially problematic on multi-lane arterials with left turn phases. Where pedestrians need to cross, a protected phase should provide time to cross the entire roadway unless there is sufficient refuge in the median. Average pedestrian speed is 4.0- feet per second.

- Increasing speed, improving signal progression, and decreasing interruptions, increases the LOS on an urban arterials and collectors, but decreases pedestrian safety.

- Increasing the satisfaction of drivers, creates a greater reluctance for the commuters to use transit and other alternative modes, and leads to even greater dependence on and demand for private vehicular travel.

Rule 9J-5.0055(2)(c), FAC, requires the City of Plantation to adopt adequate LOS standards for local roads. Consistent with Broward County, the City proposes to adopt the generalized two-way peak hour volumes for Florida's Urbanized Areas at the LOS "D" standard. In the 1989 Traffic Circulation Element, the roadway LOS "D" standard was measured by the average annual daily traffic (AADT) volumes; however, state law now requires the LOS standard be measured by peak-hour volumes. The City of Plantation will continue to use the LOS "D" standard as the roadway concurrency standard. The two-way peak hour LOS "D" standard volumes are

calculated by multiplying the AADT volumes by the statewide average of 0.093. This average is also the Planning Analysis Hour Factor or K factor (K100). According to the FDOT 2002 *Level of Service Handbook,* it is "the 100th highest demand volume hour of the year for a roadway section" or "the ratio of the 100th highest volume hour of the year to the annual average daily traffic." Broward County is using the two-way peak hour volumes instead of the directional peak hour volumes because the FDOT also uses two-way peak hour volumes.

Policy 1.1.2 defines the City' LOS standard for non-FIHS facilities and transportation facilities functionally classified as a collector road or higher, excluding expressways. Policy 1.1.3 defines how the City will implement the two-way peak-hour LOS standard. Essentially, this policy clarifies that consistent with Broward County, the City will implement the peak-hour LOS standard using the Planning Analysis Hour Factor, until such time as the County has completed the study and modified its TRIPS model to identify peak-hour levels of service by roadway segment.

Rule 9J-5.0055(2)(c), FAC, requires the City to adopt the LOS standards established by the Florida Department of Transportation by rule for facilities on the Florida Intrastate Highway System (FIHS). There is one FIHS roadway that is within the City: Florida's Turnpike. The City has adopted as the LOS standard for this FIHS facility, LOS "D" using generalized two-way peak hour volumes, for urbanized areas with population over 5,000.

Policy 1.1.7 addresses the 110-Percent Maintain policy for the City's roadways. The 1989 Traffic Circulation Element recognized that certain roadway segments were already above capacity and that the complete prohibition of development due to the over-capacity of these roadway segments could lead to substantial litigation. Consequently, a policy was adopted allowing development to continue provided the over capacity roadway did not increase by more than 10 percent above the existing LOS on the roadway. The City proposes to continue maintaining the 110 percent maintain LOS as a LOS standard for roadways that are over capacity in the County's current TRIPS model; however, the 110 percent maintain is now being calculated at the two-way peak-hour. Policy 1.1.7 addresses the 110 percent maintain LOS standard. The 110 percent maintain LOS roadway segments within the City include segments of:

- University Drive
- State Road 7
- SR 84
- Sunrise Boulevard

<u>LOS Methodology</u>
The existing levels of service on the roadway links were prepared by using the following methodology, consistent with the current LOS analysis used by Broward County for the Broward County Comprehensive Plan, Transportation Element:

The LOS is expressed as bi-directional, peak hour values. Until the County's TRIPS model is updated to provide peak hour values by link, the Statewide Planning Analysis K_{100} Factor is applied. The analysis procedure is outlined below:

1. Annual average daily traffic (AADT) volumes were collected from available sources including FDOT, Broward County and other reports or studies conducted within the area. The AADT values are multiplied by roadway specific planning analysis factors, which are calculated based upon Table 4-4, Generalized Two-Way Peak Hour Volumes for Florida's Urbanized Areas, contained in *FDOT's 2002 Quality/Level of Service Handbook*.

2. Tables 3provides the Peak Hour Traffic (PHT) for vehicles on the City's roadways. Table 3 is for the existing conditions in 2015 and the future conditions Year 2040. The future conditions are based on the County's TRIPS model, and the City's Future Land Use Map.

3. The bi-directional peak hour capacity volumes are those that are used by FDOT, contained in Table 4-4of the *FDOT's 2002 Quality/Level of Service Handbook* . They are based on facility type, number of lanes, and the spacing of signalized intersections for interrupted flow facilities.

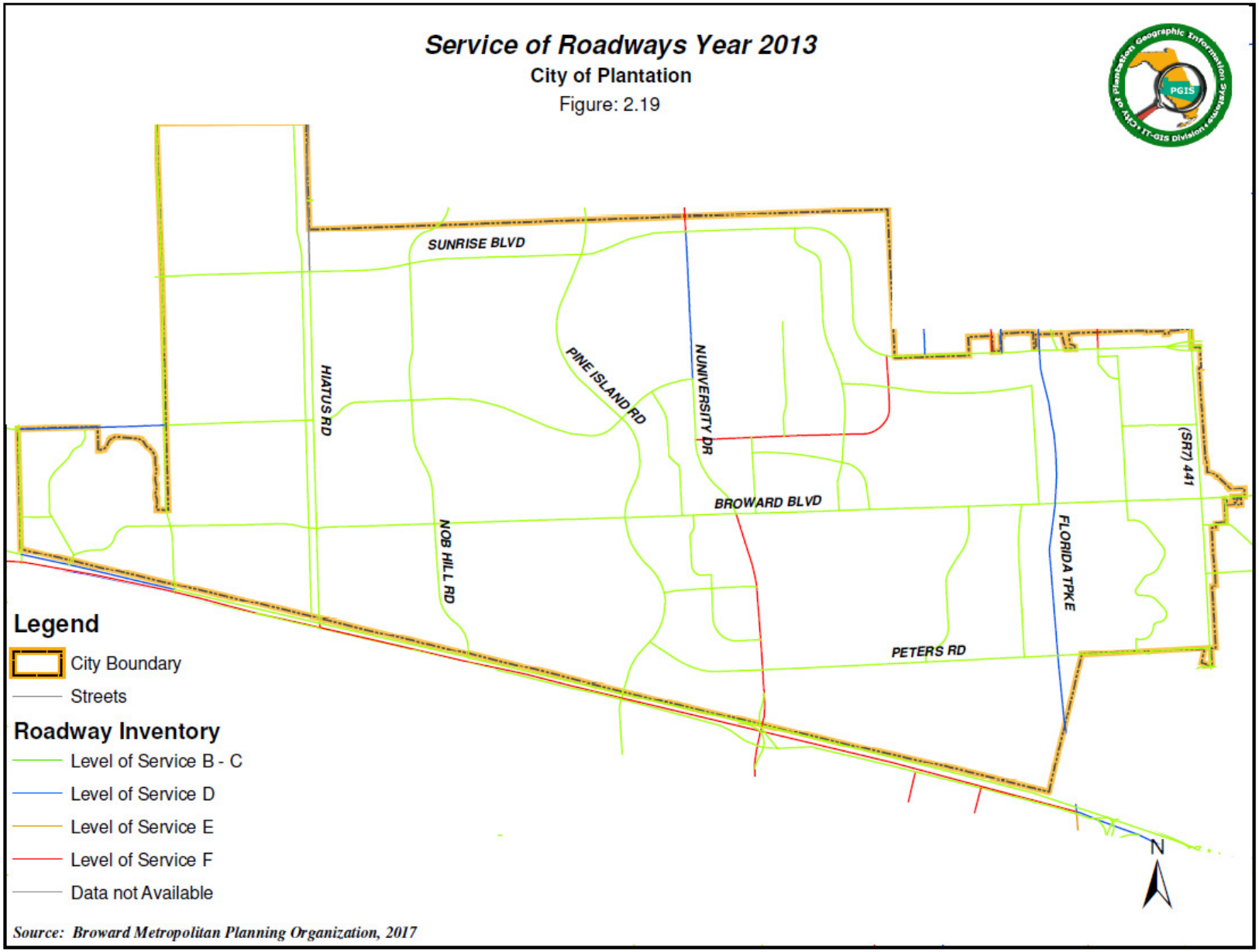
4. The peak hour traffic volumes were divided by the peak hour link capacity to obtain the V/C ratio for the roadway segment.

5. The existing LOS for the segment was then obtained by comparing the calculated V/C ratio to the V/C ranges indicated above. The LOS designations are also given in Table 4-4 directly for threshold volumes by facility type, lanes, and signalization. Levels of Service (LOS) are indicated in Tables 3.

ROADWAY LEVEL OF SERVICE CONDITIONS -EXISTING YEAR 2015, LONG TERM HORIZON 2040

The following tables and maps summarize the results for the roadway level-of-service conditions in the City of Plantation for the 2015 existing condition, and the long-term planning horizon year 2040.

Year 2015 LOS and 2040 Projected LOS Table 2.13 Figures 2.19 and 2.20


Service of Roadways Year 2013
City of Plantation
Figure: 2.19
SUNRISE BLVD
HIATUS RD
PINE ISLAND RD
NUNIVERSITY DR
BROWARD BLVD
NOB HILL RD
FLORIDA TPKE
(SR7) 441
PETERS RD
N
Legend
City Boundary
Streets
Roadway Inventory
Level of Service B - C
Level of Service D
Level of Service E
Level of Service F
Data not Available
Source: Broward Metropolitan Planning Organization, 2017

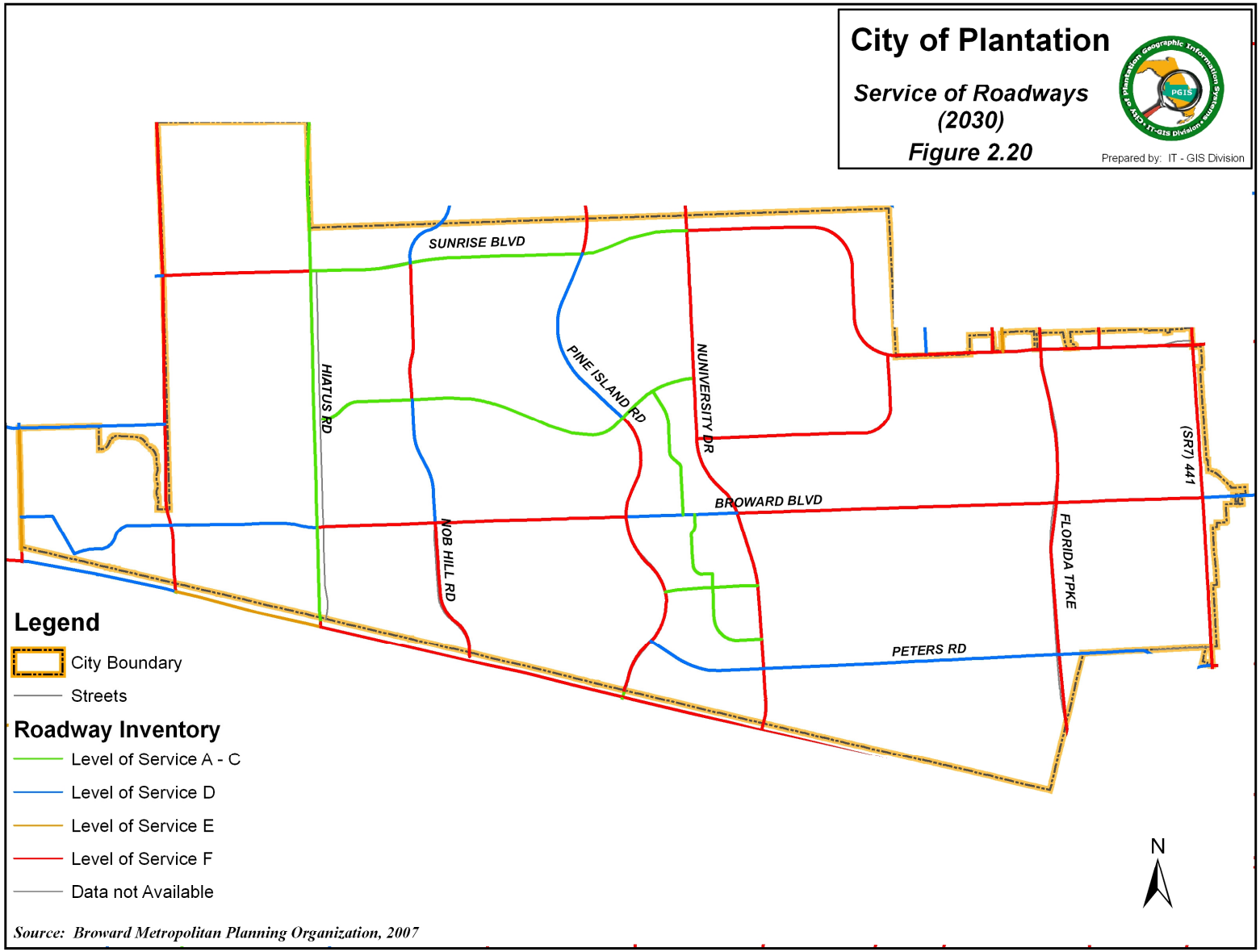

City of Plantation
Service of Roadways (2030)
Figure 2.20
Prepared by: IT - GIS Division
SUNRISE BLVD
HIATUS RD
PINE ISLAND RD
NUNIVERSITY DR
BROWARD BLVD
NOB HILL RD
FLORIDA TPKE
(SR7) 441
PETERS RD
Legend
City Boundary
Streets
Roadway Inventory
Level of Service A - C
Level of Service D
Level of Service E
Level of Service F
Data not Available
N
Source: Broward Metropolitan Planning Organization, 2007

Table 2.13
City of Plantation
2013 LOS and 2035 Future Roadway Capacity Analysis

		2013					2013				2035				
		Design	Daily Conditions				Peak Hour Conditions				Design	Daily Conditions			
N/S Roadway	Segment	Code	AADT	Capacity	V/C	LOS	Volume	Capacity	V/C	LOS	Code	Volume	Capacity	V/C	LOS
SW 136 Ave	N of SR 84	632	20500	56905 r	0.36	C	1948	5121 r	0.38	C	622	29276	56905 r	0.51	C
NW 136th Ave	N of NW 3 St	632	20500	56905 r	0.36	C	1948	5121 r	0.38	C	622	33265	56905 r	0.58	C
Flamingo Rd	N of SR 84	622	36000	59900	0.60	C	3420	5390	0.63	C	622	46452	59900	0.78	C
Flamingo Rd	N of Broward Blvd	622	36000	59900	0.60	C	3420	5390	0.63	C	622	41910	59900	0.70	C
Flamingo Rd	N of Cleary Blvd	622	32500	59900	0.54	C	3088	5390	0.57	C	622	39492	59900	0.66	C
Flamingo Rd	N of Sunrise Blvd	622	41500	59900	0.69	C	3943	5390	0.73	C	622	40660	59900	0.68	C
Hiatus Rd	N of SR 84	622	20000	56905 r	0.35	C	1900	5121 r	0.37	C	622	30721	56905 r	0.54	C
Hiatus Rd	N of Broward Blvd	422	15500	37810 r	0.41	C	1473	3401 r	0.43	C	422	27339	37810 r	0.72	C
Hiatus Rd	N of Cleary Blvd	422	15500	37810 r	0.41	C	1473	3401 r	0.43	C	422	37370	37810 r	0.99	D
Hiatus Rd	N of Sunrise Blvd	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	422	39053	37810 r	1.03	F
Nob Hill Rd	N of SR 84	422	26500	37810 r	0.70	C	2518	3401 r	0.74	C	422	39903	37810 r	1.06	F
Nob Hill Rd	N of Broward Blvd	422	28500	37810 r	0.75	C	2708	3401 r	0.80	C	422	32696	37810 r	0.86	C
Nob Hill Rd	N of Cleary Blvd	422	27500	37810 r	0.73	C	2613	3401 r	0.77	C	422	29128	37810 r	0.77	C
Nob Hill Rd	N of Sunrise Blvd	422	32000	37810 r	0.85	C	3040	3401 r	0.89	C	422	31174	37810 r	0.82	C
Pine Island Rd	N of SR 84	622	45500	56905 r	0.80	C	4323	5121 r	0.84	C	622	62579	56905 r	1.10	F
Pine Island Rd	N of Peters Rd	622	44000	56905 r	0.77	C	4180	5121 r	0.82	C	622	62672	56905 r	1.10	F
Pine Island Rd	N of Broward Blvd	622	37000 e	56905 r	0.65	C	3515	5121 r	0.69	C	622	55703	56905 r	0.98	D
Pine Island Rd	N of Cleary Blvd	622	34500	56905 r	0.61	C	3278	5121 r	0.64	C	622	45316	56905 r	0.80	C
Pine Island Rd	N of Sunrise Blvd	622	36000	56905 r	0.63	C	3420	5121 r	0.67	C	622	44730	56905 r	0.79	C
University Dr	N of SR 84	622	69500	59900	1.16	F	6603	5390	1.22	F	622	82506	59900	1.38	F
University Dr	N of Peters Rd	622	57385	59900	0.96	C	5452	5390	1.01	F	622	67379	59900	1.12	F
University Dr	N of Broward Blvd	622	52500	59900	0.88	C	4988	5390	0.93	C	622	53253	59900	0.89	C
University Dr	N of Cleary Blvd	622	55500	59900	0.93	C	5273	5390	0.98	D	622	60923	59900	1.02	F
University Dr	N of Sunrise Blvd	622	58500	59900	0.98	D	5558	5390	1.03	F	622	65830	59900	1.10	F
Florida's Turnpike	N of SR 84	611	99000	116600	0.85	D	9405	10060	0.93	D	1011	201815	194500	1.04	E
NW 47 Ave	N of Sunrise Blvd	264	18500	13320	1.39	F	1758	1197	1.47	F	264	18773	13320	1.41	F
SR 7	N of SR 84	622	50500	59900	0.84	C	4798	5390	0.89	C	622	63444	59900	1.06	F
SR 7	N of Broward Blvd	622	42500	59900	0.71	C	4038	5390	0.75	C	622	49159	59900	0.82	C
SR 7	N of Sunrise Blvd	622	52000	59900	0.87	C	4940	5390	0.92	C	622	59219	59900	0.99	D

		2013					2013				2035				
		Design	Daily Conditions				Peak Hour Conditions				Design	Daily Conditions			
E/W Roadway	Segment	Code	AADT	Capacity	V/C	LOS	Volume	Capacity	V/C	LOS	Code	Volume	Capacity	V/C	LOS
SR 84	E of SW 136 Ave	423	44500	47760	0.93	C	4228	4296	0.98	D	423	54704	47760	1.15	F
SR 84	E of Flamingo Rd	423	41000	47760	0.86	C	3895	4296	0.91	C	423	77772	47760	1.63	F
SR 84	E of Hiatus Rd	423	28000	47760	0.59	C	2660	4296	0.62	C	423	49710	47760	1.04	F
SR 84	E of SW 100 Ave	423	37500	47760	0.79	C	3563	4296	0.83	C	423	72420	47760	1.52	F
SR 84	E of Pine Island Rd	423	39500	47760	0.83	C	3753	4296	0.87	C	423	66877	47760	1.40	F
SR 84	E of University Dr	423	40000	47760	0.84	C	3800	4296	0.88	C	423	48789	47760	1.02	F
I-595	E of SW 136 Ave	621	125000 e	116600	1.07	E	11875	8840	1.34	F	1221	163635	256600	0.64	C
I-595	E of Flamingo Rd	621	182000	116600	1.56	F	17290	8840	1.96	F	1221	142417	256600	0.56	B
I-595	E of Hiatus Rd	621	182000	116600	1.56	F	17290	8840	1.96	F	1221	168936	256600	0.66	C
I-595	E of SW 100 Ave	621	182000	116600	1.56	F	17290	8840	1.96	F	1221	187956	256600	0.73	C
I-595	E of Pine Island Rd	621	182000	116600	1.56	F	17290	8840	1.96	F	1221	186778	256600	0.73	C
I-595	E of University Dr	821	182000	154300	1.18	F	17290	13390	1.29	F	1221	237837	256600	0.93	D
I-595	E of Davie Rd	821	182000	154300	1.18	F	17290	13390	1.29	F	1221	155336	256600	0.61	B
I-595	E of Fla Turnpike	621	90500	116600	0.78	C	8598	8840	0.97	D	1221	170580	256600	0.66	C
Peters Rd	E of Pine Island Rd	474	19000	35820	0.53	C	1805	3222	0.56	C	474	26284	35820	0.73	C
Peters Rd	E of University Dr	474	22000	35820	0.61	C	2090	3222	0.65	C	474	25930	35820	0.72	C
Davie Blvd	E of SR 7	422	30000	39800	0.75	C	2850	3580	0.80	C	422	35091	36500	0.96	D
Broward Blvd	E of SW 136 Ave	264	2400	13320	0.18	C	228	1197	0.19	C	264	12919	13320	0.97	D
Broward Blvd	E of Commodore Dr	264	2600	13320	0.20	C	247	1197	0.21	C	264	4797	13320	0.36	C
Broward Blvd	E of Flamingo Rd	422	17200 e	37810 r	0.45	C	1634	3401 r	0.48	C	422	26496	37810 r	0.70	C
Broward Blvd	E of Hiatus Rd	422	22000	37810 r	0.58	C	2090	3401 r	0.61	C	422	25597	37810 r	0.68	C
Broward Blvd	E of Nob Hill Rd	622	29000	56905 r	0.51	C	2755	5121 r	0.54	C	622	42122	56905 r	0.74	C
Broward Blvd	E of Pine Island Rd	622	38500	56905 r	0.68	C	3658	5121 r	0.71	C	622	38859	56905 r	0.68	C
Broward Blvd	E of University Dr	622	47000	59900	0.78	C	4465	5390	0.83	C	622	49779	59900	0.83	C
Broward Blvd	E of SR 7	622	41500	59900	0.69	C	3943	5390	0.73	C	622	62978	59900	1.05	F
NW 5 St	E of University Dr	264	15000	13320	1.13	F	1425	1197	1.19	F	264	18780	13320	1.41	F
NW 8 St	E of Sawgrass Xway	464	5600	29160	0.19	C	532	2628	0.20	C	464	6436	29160	0.22	C
NW 8 St	E of NW 136 Ave	264	8000	13320	0.60	D	760	1197	0.63	D	264	9830	13320	0.74	D

		2013					2013				2035				
		Design	Daily Conditions				Peak Hour Conditions				Design	Daily Conditions			
E/W Roadway	Segment	Code	AADT	Capacity	V/C	LOS	Volume	Capacity	V/C	LOS	Code	Volume	Capacity	V/C	LOS
Cleary Blvd	E of Hiatus Rd	274	9400	15930	0.59	C	893	1440	0.62	C	274	8149	15930	0.51	C
Cleary Blvd	E of Nob Hill Rd	474	13000	35820	0.36	C	1235	3222	0.38	C	474	13803	35820	0.39	C
Cleary Blvd	E of Pine Island Rd	474	15500	35820	0.43	C	1473	3222	0.46	C	474	18313	35820	0.51	C
Sunrise Blvd	E of SW 136 Ave	622	38500	59900	0.64	C	3658	5390	0.68	C	622	46250	59900	0.77	C
Sunrise Blvd	E of Flamingo Rd	622	33500	59900	0.56	C	3183	5390	0.59	C	622	55804	59900	0.93	C
Sunrise Blvd	E of Hiatus Rd	622	36000	59900	0.60	C	3420	5390	0.63	C	622	46612	59900	0.78	C
Sunrise Blvd	E of Nob Hill Rd	622	33000	59900	0.55	C	3135	5390	0.58	C	622	44259	59900	0.74	C
Sunrise Blvd	E of Pine Island Rd	622	37500	59900	0.63	C	3563	5390	0.66	C	622	47090	59900	0.79	C
Sunrise Blvd	E of University Dr	622	39500	59900	0.66	C	3753	5390	0.70	C	622	53889	59900	0.90	C
Sunrise Blvd	E of NW 65 Ave	622	48000	59900	0.80	C	4560	5390	0.85	C	622	80979	59900	1.35	F
Sunrise Blvd	E of Fla Turnpike	622	50000	59900	0.83	C	4750	5390	0.88	C	622	73314	59900	1.22	F
Sunrise Blvd	E of SR 7	622	54500	59900	0.91	C	5178	5390	0.96	C	622	61068	59900	1.02	F
Sunrise Blvd	E of SW 136 Ave	622	38500	59900	0.64	C	3658	5390	0.68	C	622	46250	59900	0.77	C

e - estimated traffic volumes;

capacity - maximum LOS "D" service volume, not actual capacity;

r - maximum LOS "D" service volume reduced by 5%

Roadway Conditions – LOS Standard Exemptions

Vested Rights

There is an exemption for proposed development found to have vested rights with regard to any affected road segment in accordance with the provisions of Chapter 163, Part II, Florida Statutes, or a common law vested rights determination. The proposed development must meet concurrency for any road segment for which a vested rights determination has not been made. Policy 1.1.4 (a) maintains the vested rights exemption.

De Minimis Impacts

Rule 9J-50055(3)(c)6., FAC, creates a traffic concurrency exception for those developments deemed to have a de minimis impact, provided all conditions must be met to qualify. Policy 1.1.4 (b) provides the criteria required by the City of Plantation to satisfy the de minimus requirement.

Projects that Promote Public Transportation

Section 163.3164(28), FS, defines projects that promote public transportation as those projects which directly affect the provisions of public transit, including transit terminals, transit lines and routes, separate lanes for the exclusive use of public transit services, transit stops, and office buildings or projects that include fixed-rail or transit terminals as part of the building. The purpose of this flexible transportation concurrency option is to reduce the adverse impact that transportation concurrency may have on the promotion of public transportation. Policy 1.1.4 (c) maintains this exemption.

Urban Redevelopment Projects

Rule 9J-50055(3)(c) 5., FAC, provides for a proposed urban redevelopment project, located within a defined and mapped existing urban services area as established pursuant to the City's comprehensive plan, to not be subject to the traffic concurrency requirement. A previously existing development is defined in the rule as "the actual previous built use which was occupied and active within a time period established in the local government comprehensive plan." Policy 1.1.4 (d) maintains this exemption.

Development of Regional Impact.

There is an exemption for a development permit issued in accordance with and as authorized by an approved Development of Regional Impact (DRI) development order which development order was either issued prior to the adoption of the City's 1989 Comprehensive Plan or was issued after being reviewed for concurrency. Policy 1.1.4 (e) maintains this exemption.

Florida Quality Development.

There is an exemption for a development permit issued in accordance with and as authorized by an approved Florida Quality Development (FQD) development order which was either issued prior to the adoption of the City's1989 Comprehensive Plan or was issued after being reviewed for concurrency. Policy 1.1.4 (f) maintains this exemption

Constrained Roadways

Constrained roadways are roads that can not be expanded by the addition of two or more through-lanes because of physical, environmental or policy constraints. Physical constraints

primarily occur when intensive land use development is immediately adjacent to roads, thus making expansion costs prohibitive. Environmental and policy constraints primarily occur when decisions are made not to expand a road based of environmental, historical, archaeological, aesthetic or social impact considerations.

The City addresses LOS standard for constrained roadways in Policy 1.1.9. The policy ensures adequate facility capacity will be provided to serve the existing and future land uses as demonstrated by the Transportation Element's data and analysis. Establishment of a constrained roadway LOS standard is in effect, determined on a case-by-case or road by road basis.

Concurrency Management System

The Concurrency Management System (CMS) as implemented by the City provides a development order or permit shall be issued when a roadway exceeds its adopted LOS standard provided one or more of the mitigation measures listed in Policy 1.1.5. Policies 1.1.6 and 1.1.10 also address the City's roadway concurrency management system.

Transit Oriented Concurrency:

Broward County has adopted as part of the concurrency management system, transit oriented concurrency. Policy 1.1.18, Policy 1.1.19, Policy 1.1.20, Policy 1.5.3, and Objective 1.6 and it's related policies have been added or amended to comply with the County's transit oriented concurrency. Broward County has divided the county into districts. The City of Plantation is located within the Central District, which is a transit oriented district. The Central District boundaries are described in the data and analysis section of the Broward County Transportation Element and Map 3-13 of the Broward County Comprehensive Plan.

The Central District is distinguished by the predominance of east-west travel, with the Interstate 595 corridor being the most heavily used transportation corridor. The transit routes on the major east-west roadways within the District are characterized by high ridership and frequent service. The parallel routes on Broward, Sunrise, and Oakland Boulevards all have 20 minute headways, and average over 35 passengers per hour. Data on existing transit service indicates that over 75% of the area within the District is served by transit. Some district priorities are increased coverage (circulators and shuttles), and improve quality of bus stops, and decrease travel time on buses.

The County worked closely with each municipality to develop each of the transit oriented districts.

The County Transportation Element Data and Analysis outlines the blend of level of service criteria that is used for the transit oriented concurrency.

Roadway Conditions – Safety

A safe roadway network enhances the protection of life, public well being and enjoyment, and property. Safety aspects include crash indicators, access management standards, and hurricane evacuation.

Crash Indicators

The City's Police Department maintains records of traffic incidents that occur within the City, regardless of whether the road is within the City's, County's, or State's jurisdiction. Based upon the Police Department records, the ten highest accident locations have been provided in Table 2.14. These locations are also shown in Figure 2.21, Highest Accident Locations.

Table 2.14
Highest Accident Locations, 2015

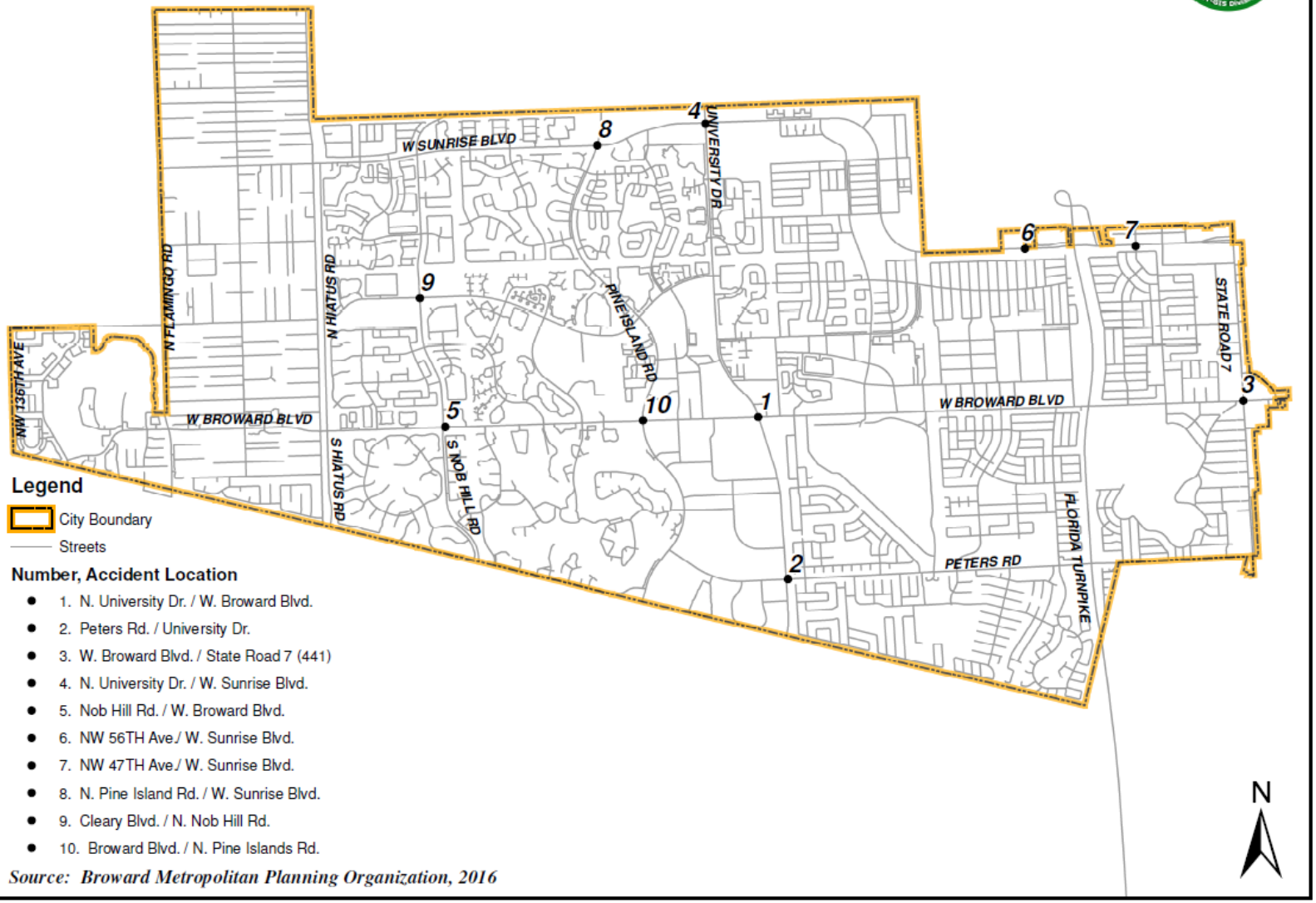
Location/Intersection	***Total***
N. University Dr./W. Broward Blvd.	109
Peters Rd./S. University Dr.	84
W. Broward Blvd./State Road 7 (441)	83
N. University Dr./W. Sunrise Blvd.	81
Nob Hill Rd./W. Broward Blvd.	64
NW 56th Ave./W. Sunrise Blvd.	56
NW 47th Ave./W. Sunrise Blvd.	44
N. Pine Island Road/W. Sunrise Blvd.	38
Cleary Blvd/ N. Nob Hill Rd.	26
Broward Blvd/N. Pine Island Rd.	49

Source: Plantation Police Department, 2015

Highest Accident Locations

City of Plantation

Figure: 2.21



Source: Broward Metropolitan Planning Organization, 2016

Hurricane Evacuation

Another roadway safety concern is the evacuation of the Coastal High Hazard Area, generally defined as the areas east of the Intracoastal Waterway. No land area within the City of Plantation is within the Coastal High Hazard Area, and designated Hurricane Evacuation Routes are east of the City. The Florida's Turnpike, and the connection from the east along Sunrise Boulevard to the Turnpike, as well as SR 84 to I-95, SR7, University Drive, Pine Island Road, Nob Hill Road, and Flamingo Road, would be significantly impacted by an evacuation.

Transit – Existing and Future Conditions

Major Trip Generators and Attractors

One of the primary determinants of the need for and the success of transit service is the character of land uses and their density. Mixed uses, by situating trip origins and destination within the same area encourage and support transit usage to the greatest extent.

Major transit trip generators include land uses with medium and high-density residential use. These areas are especially good generators if the demographics exhibit high concentrations of population segments that are likely to be transit dependent.

Most trips are either home-based, or pass-by trips. Home based trips are trips from home to other locations and back. Pass-by trips increases the complexity of providing transit service over low and medium density areas, without central commercial districts. Pass-by trips are typically home based, except that several stops are made for different purposes, usually errand type shopping destinations. These and other commercial uses make up the majority of home-based and pass-by trip destinations for both shopping purposes and employment.

For a community and target population, major transit trip attractors can be identified. These locations are large-scale institutions and centers of activity that motivate a significant proportion of the target populations' trip making activity. The major trip attractors may include:

- Schools
- Parks, Recreational Facilities, and Community Centers
- Shopping / Commercial Centers
- Hospitals and Major Medical Complexes
- Major intermodal transfer locations

Major Transit Trip Generators in Plantation are shown in Figure 2.22, and Major Transit Trip Attractors in Plantation are shown in Figure 2.23.

The major retail hub is made up by The Fountains, Broward Mall, and the Fashion Mall. This retail center serves more as a regional hub than a local retail area even though from a regional perspective, it has endured aggressive competition from Sawgrass Mills, a mega-regional mall west of the City. Transit service to the area is provided by BCT's Route 2. Transit numbers show that ridership to the complex is far lower than it should be for this major activity concentration. Transit facilities are not conveniently located to the entrances of the malls. Bus stops are located within the University Drive right-of-way, a busy arterial. There are no bus shelters or clear pedestrian paths to reach the malls. The medical complex near the malls are similarly serviced with a low level of amenities and conveniences.

The City's major employers include American Express, Broadspire, DHL, and Motorola. Their employees mostly commute to work by car. These type of major employers are good candidates for lunch time transit circulation from these locations as generators to the malls and business districts as attractors, especially in the City's Plantation Midtown District.

Major parks with multiple recreation facilities were also identified as possible destinations where transit may be available as an option to reach these facilities. Unfortunately, except for high-school students, parents are reluctant to allow their elementary or middle school children to take public transit. High school students, located at Plantation High School, South Plantation High School, and American Heritage would be good targets for transit ridership although most are reaching driving ages. These schools are located in different areas of the City. Transit service for after school activities has been tried in other nearby cities, but was not successful in obtaining parental acceptance.

Table 2.15 identifies both existing and future major trip generators/attractors within the City. These locations are shown in Figures 2.22 and 2.23.

Table 2.15
Major Trip Generators/Attractors in Plantation

Plantation General Hospital	Southpointe Office Park
Jewish Community Center	Precision Response Corporation
Plantation Pointe (Motorola)	American Express
West Regional Courthouse and Library	West Regional Medical Center
University of Phoenix	Broward Mall
The Regency	The Fountains Shopping Center
Cornerstone (DHL)	Broadspire
Broward County Governmental Center	Trade Station
Nations Health	

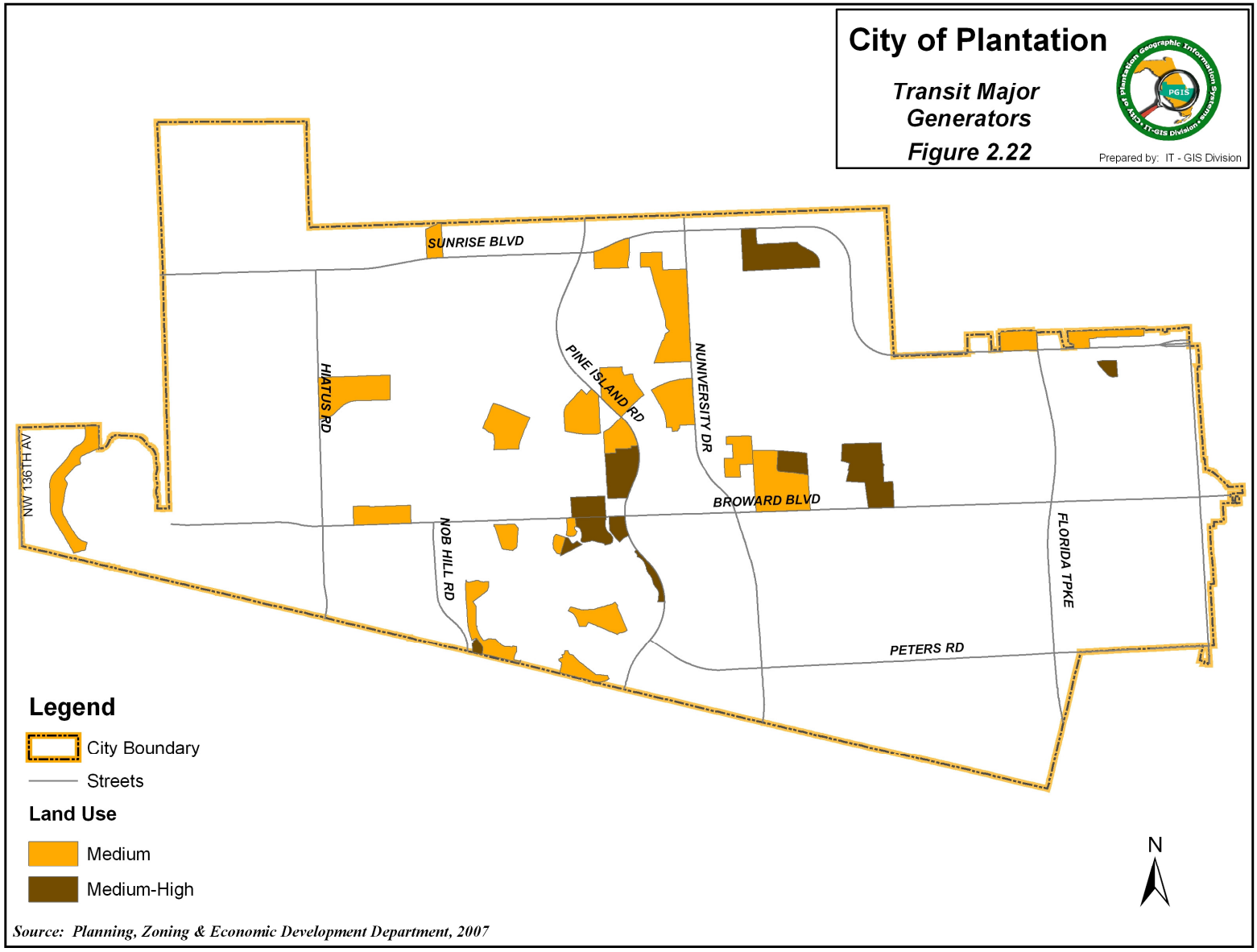
Source: City of Plantation Planning Department, 2015

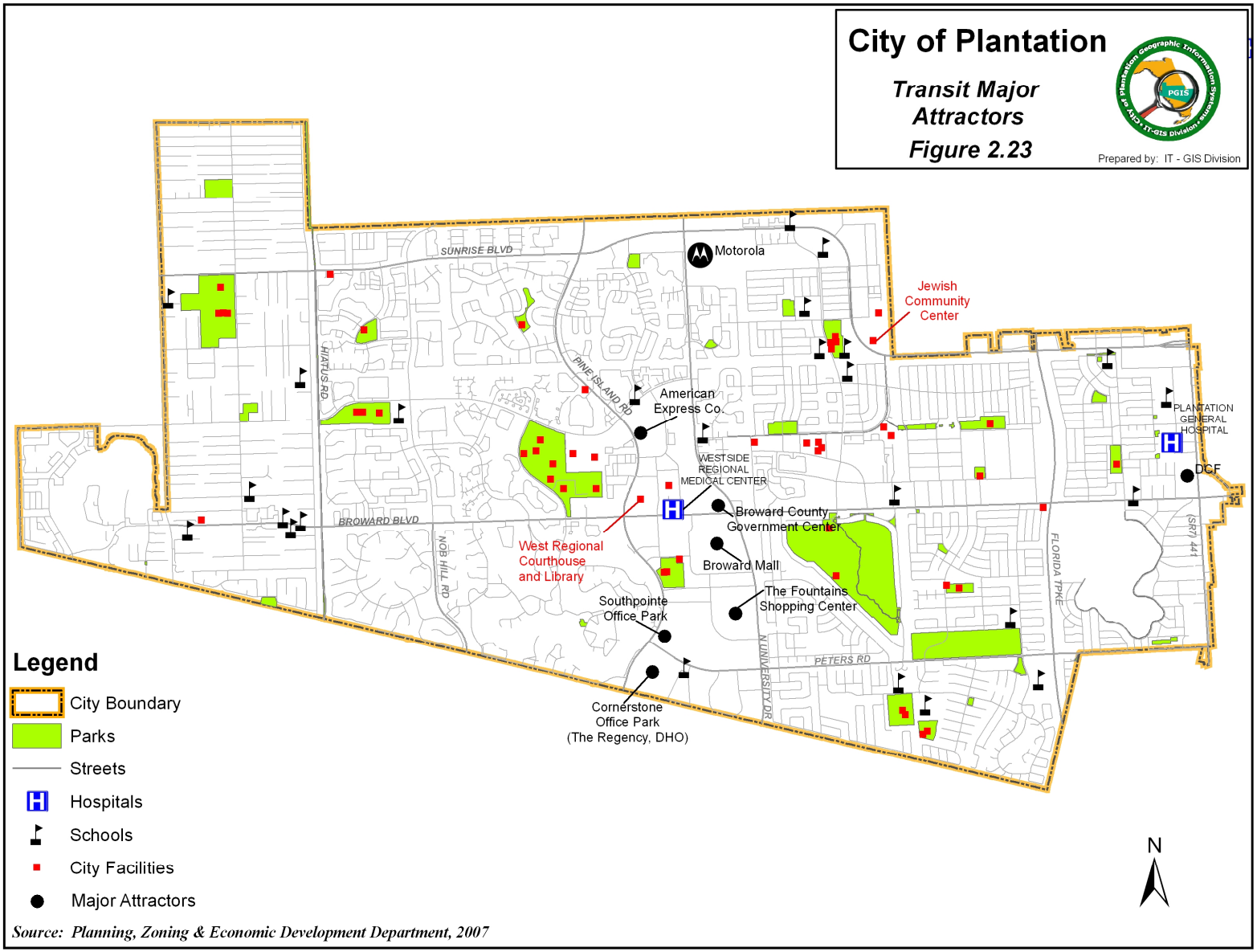
Transit Service Area Coverage

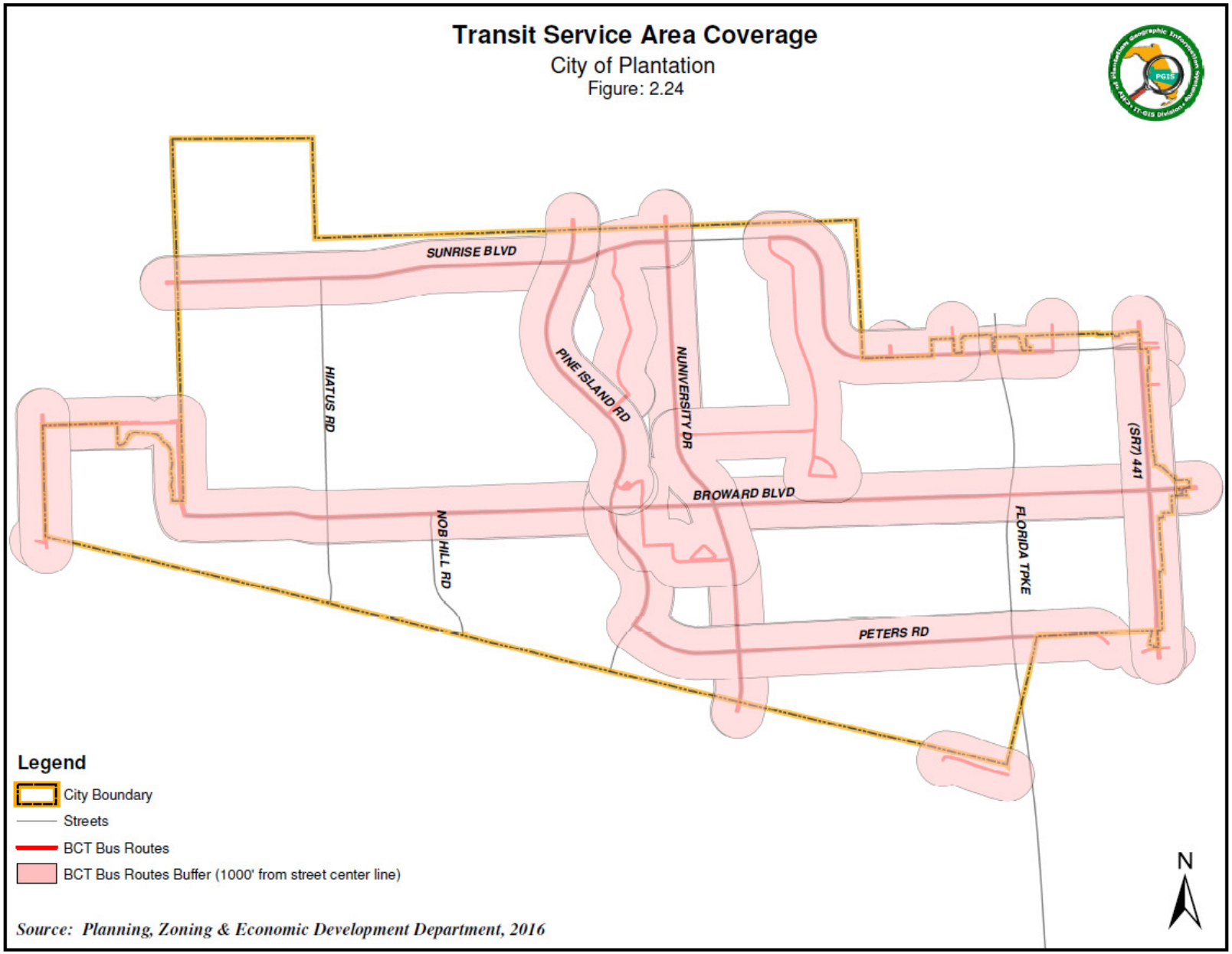
Transit service area coverage is the land that is covered by a band of a 1,000-foot walking distance on either side of transit route. When mapped, this band provides a rough, visual measure of the availability of transit service throughout an area, and quickly shows areas where transit service can be considered too far away for people to walk. Figure 2.24 shows the land areas within the City of Plantation that are covered in the transit service areas of the BCT Routes.

As an aggregate measure, it does not fully demonstrate the availability of service. For example, one covered block may be served by frequent bus arrivals, and multiple routes to various destinations, while another covered block may be served by a single route with 60 minutes of waiting time between arrivals. Both will be shown as within the transit service area; however, they represent widely varied levels of service and willingness for riders to use transit.

Broward County has introduced into its updated Transportation Element a different performance measure: Function Service Area Coverage. The County has set its goals as maintaining 75% functional service area coverage within the Transit Oriented Concurrency Districts, which Plantation is in. This means that is provides coverage (1/2-mile band width) to 75% of land areas that are medium or high density residential, and non residential land uses that are transit trip attractors (does not include agricultural, some government, some industrial, preservation, open space, vacant lands).


City of Plantation
Transit Major Generators
Figure 2.22
Prepared by: IT - GIS Division
SUNRISE BLVD
HIATUS RD
PINE ISLAND RD
NUNIVERSITY DR
NW 136TH AV
BROWARD BLVD
NOB HILL RD
FLORIDA TPKE
PETERS RD
Legend
City Boundary
Streets
Land Use
Medium
Medium-High
N
Source: Planning, Zoning & Economic Development Department, 2007


City of Plantation
Transit Major Attractors
Figure 2.23
Prepared by: IT - GIS Division
SUNRISE BLVD
BROWARD BLVD
HIATUS RD
PINE ISLAND RD
NOB HILL RD
UNIVERSITY DR
PETERS RD
FLORIDA TPKE
(SR7) 441
Motorola
Jewish Community Center
American Express Co.
WEST SIDE REGIONAL MEDICAL CENTER
PLANTATION GENERAL HOSPITAL
DCF
Broward County Government Center
West Regional Courthouse and Library
Broward Mall
The Fountains Shopping Center
Southpointe Office Park
Cornerstone Office Park (The Regency, DHO)
Legend
City Boundary
Parks
Streets
Hospitals
Schools
City Facilities
Major Attractors
N
Source: Planning, Zoning & Economic Development Department, 2007


Transit Service Area Coverage
City of Plantation
Figure: 2.24
SUNRISE BLVD
HIATUS RD
PINE ISLAND RD
NUNIVERSITY DR
BROWARD BLVD
NOB HILL RD
FLORIDA TPKE
(SR7) 441
PETERS RD
Legend
City Boundary
Streets
BCT Bus Routes
BCT Bus Routes Buffer (1000' from street center line)
N
Source: Planning, Zoning & Economic Development Department, 2016

Bicycle Network Existing Conditions

The Broward County Bicycling Advisory Committee completed a short-range and long-range plan as the minimum necessary to accommodate bicycle traffic in the City of Plantation.

In 1989, the City Council endorsed the Priority Path System (PPS) by motion. The PPS includes a bike-path map and corresponding City Code citations at Section 23 123(a)(2) that they be included in the approvals of new developments. The PPS supplements the County Bikeways Plan and Greenways Plans providing connections between existing residential areas, City parks, schools, and shopping areas with County bikeways. Based on the current implementation of both the City's and the County's plans, the existing Bicycle Facility Network is shown in Figure 2.25. The network is mostly comprised of bicycles sharing the roadway as an interim step prior to the construction of bike lanes. The PPS provides for a six-foot wide sidewalk, primarily for pedestrians and less-experienced bike riders, along all streets designated in the plan as "primary bikeways", and the provision for a 14-foot curb lane for recreational biking on new or widened streets. It recommends six-foot walkways where eight-foot wide bikeways could not be constructed due to narrow rights-of-way. Implementation of this plan has been initiated.

Pedestrian Network Existing Conditions

The pedestrian ways network includes pedestrian facilities and services. Pedestrian facilities provide access to serve existing land uses and are designed to ensure safety, and allow access to pedestrian ways. Pedestrian ways are any road, path or way open to traffic afoot and from which motor vehicles are excluded. Pedestrian ways and networks include, but are not limited to, sidewalks, crosswalks, walkways, pedestrian signal phasing, curb cuts, and additional lighting.

Regionally significant pedestrian ways and locally significant pedestrian ways are described by location in the Inventory Section of this Transportation Element. Pedestrian ways should include pedestrian friendly urban design, connecting residences, restaurants, cultural sites, parks, and shops. Bicycles in these areas should be separated from pedestrian movement.

<u>Pedestrian Level of Circulation</u>
Policy 2.4.1 provides that internal circulation and locally significant pedestrian ways, for the Plantation Midtown district be improved. To this extent, the City will improve facilities based on community input and qualitative data. The City has not determined measurable pedestrian mobility standards to determine level of Circulation within the pedestrian network.

As a primarily residential community with a highly developed hierarchy of street function, pedestrian facility needs have only been established for the Plantation Midtown district and transportation corridors. Pedestrian mobility is addressed for each within the respective planning processes. General pedestrian mobility standards will be developed when called for by the City's residential communities

Pedestrian Facility Standards

The City requires pedestrian facilities on City streets for new construction be consistent with accepted engineering standards.

- Sidewalks must be a minimum of five feet wide on both sides of all these roadways.

- Crosswalks are located at road intersections and mid-block locations that attract heavy pedestrian traffic, such as adjacent to schools and in business districts. They are determined by warrant analyses.

- Curb cuts and ramps provide accessibility for the disabled and are located and designed in accordance with the guidelines established by the Americans with Disabilities Act.

- Pedestrian signals indicate to the pedestrian when it is safe to cross the street and are used at all intersections in conjunction with crosswalks. Signal timing is not maintained by the City and any changes require coordination with the County.

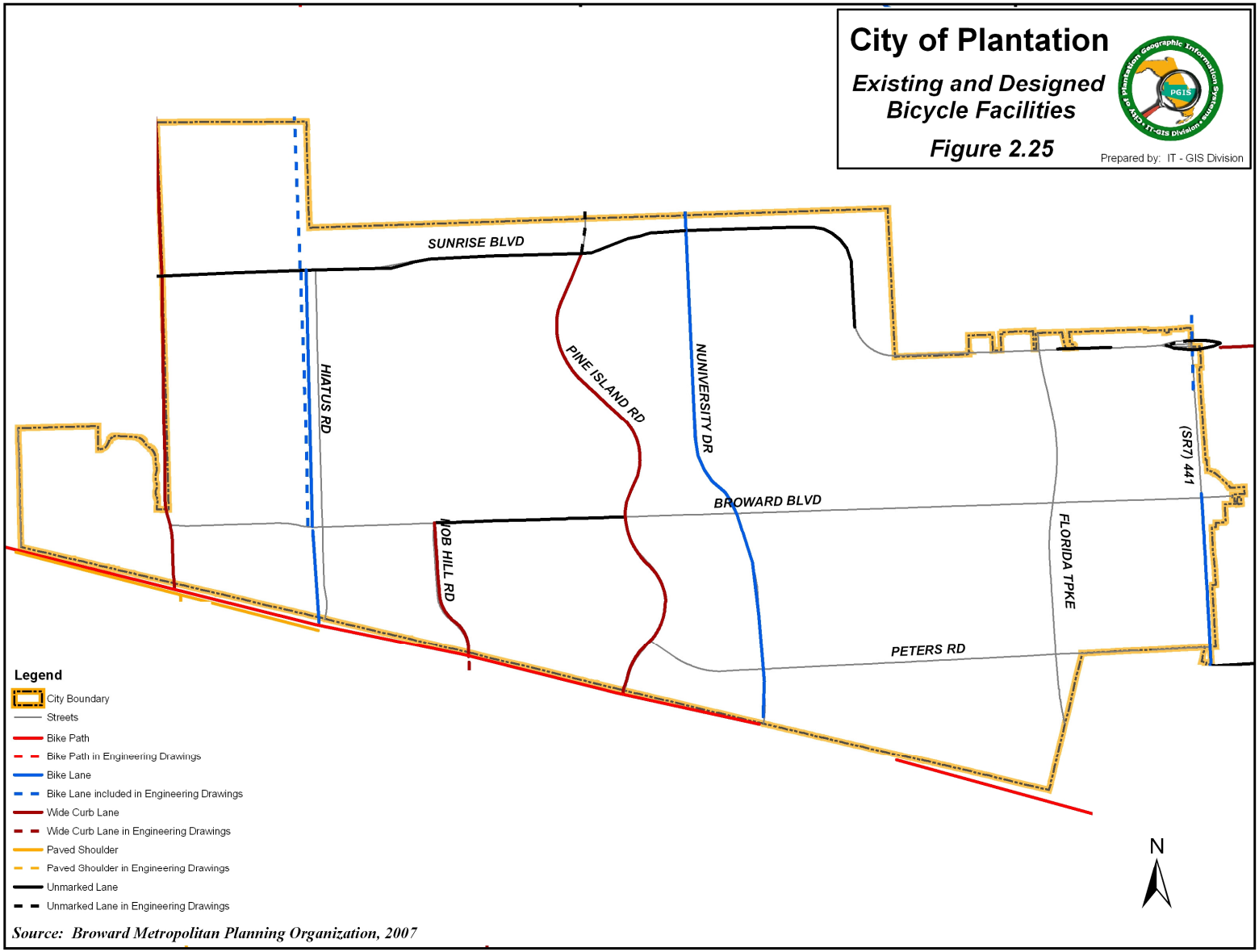
- Pedestrian amenities are primarily designed to promote a pleasurable walking experience. Amenities include benches, fountains, landscaping, lighting, and other urban design features, and are located where there is established community need.

Waterway Network Existing Conditions

Water-dependent transportation facilities are those that can only be carried out on, in, or adjacent to water areas because the facility requires access to the water body for waterborne transportation including seaports, marinas, and marine recreational facilities.

Pleasure boating at all levels is growing in popularity every year. As more and more recreational marine vessels continue to use the waterways for recreation, safe boating becomes increasingly important to prevent crashes, injury and death.

Marine safety of the City's waterways is addressed in Transportation Element Policy 7.1.1. This broad-based Policy addresses waterway safety by participating with the County to limit boat speeds, maintain County-owned boat ramps, and assess the manatee protection plan.


City of Plantation
Existing and Designed Bicycle Facilities
Figure 2.25
Prepared by: IT - GIS Division
SUNRISE BLVD
HIATUS RD
PINE ISLAND RD
NUNIVERSITY DR
(SR7) 441
BROWARD BLVD
NOB HILL RD
FLORIDA TPKE
PETERS RD
N
Legend
City Boundary
Streets
Bike Path
Bike Path in Engineering Drawings
Bike Lane
Bike Lane included in Engineering Drawings
Wide Curb Lane
Wide Curb Lane in Engineering Drawings
Paved Shoulder
Paved Shoulder in Engineering Drawings
Unmarked Lane
Unmarked Lane in Engineering Drawings
Source: Broward Metropolitan Planning Organization, 2007

Ports, Aviation, and Related Facilities

Adequate facilities are available and accessible to Plantation residents, there are no existing or planned port or aviation facilities within the City. Plantation residents, as part of a larger metropolitan county, are served by facilities operated and maintained by other jurisdictions.

As there are no port, aviation and related facilities within the City of Plantation's jurisdiction, the specific data requirements listed in Chapter 163.3177(7)(b) F.S. have been omitted in this element, yet are included in the Broward County, City of Fort Lauderdale, City of Pompano Beach and Port Everglades comprehensive plans.

Railway Facilities

Adequate facilities are available and accessible for the City of Plantation's freight movement, commuter, and passenger needs. There are no existing or planned railway facilities within the City. Plantation residents, as part of a larger metropolitan county, are served by facilities operated and maintained maintained by other jurisdictions.

As there are no railway or related facilities within the City of Plantation's jurisdiction, the specific data requirements listed in Chapter 163.3177(7)(b) F.S. have been omitted in this element, yet are included in the Broward County Comprehensive Plan.

Recreational Transportation – Existing Conditions

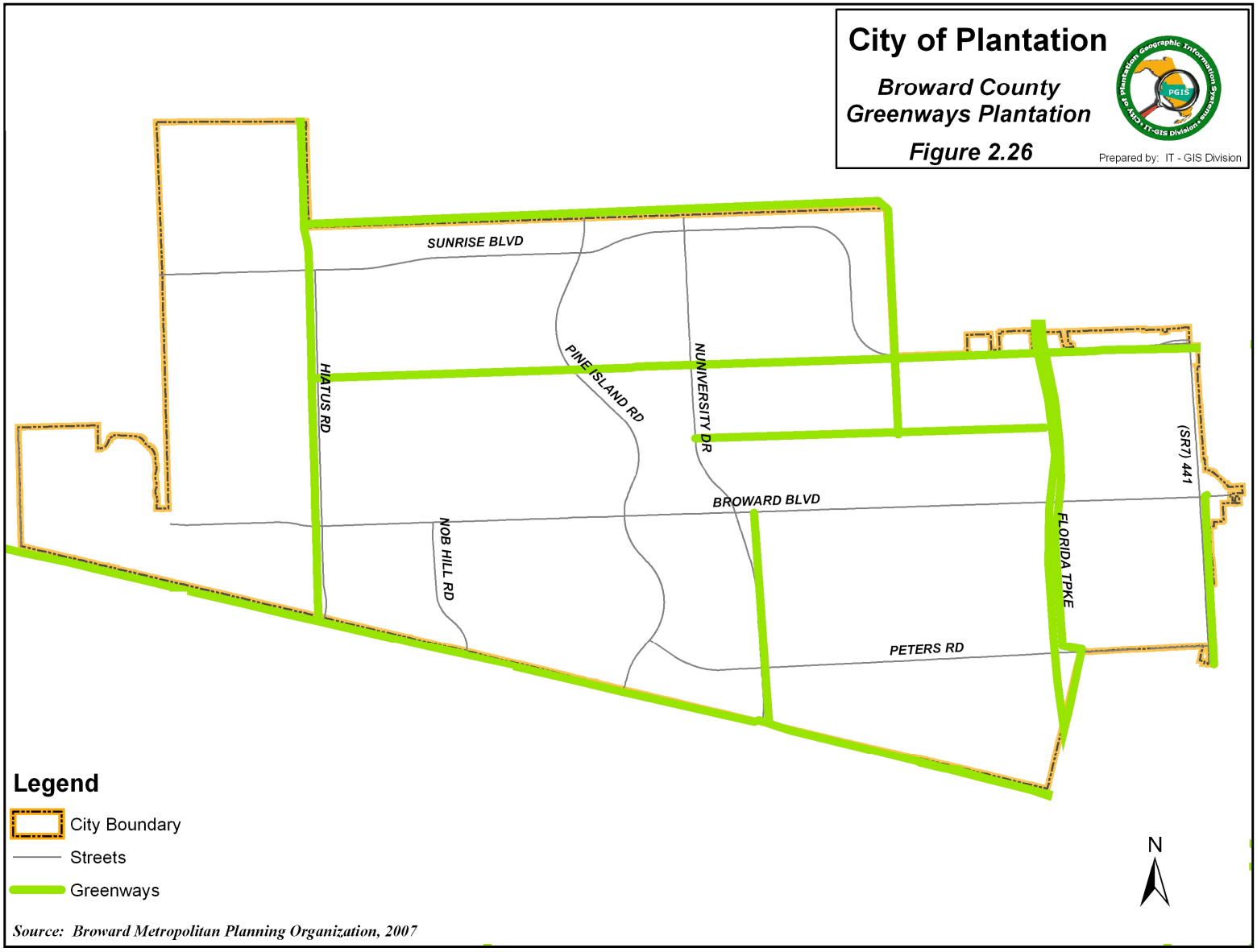
The primary intent of the recreational traffic network is to provide travel oriented passive and active outdoor recreational opportunities. The recreational transportation network includes facilities such as greenways, blueways, and those bikeways located within regional parks.

One of the blueway links, which collectively form a 26 mile loop through the County is partially within the City of Plantation. It is the Broward Blueway Downtown and North Fork. It begins at Broward Boulevard just west of US 1 and extends in a northwesterly direction to Sunrise Boulevard.

Park Bikeways

Bikeway facilities for recreational trip purposes are provided in the City of Plantation in conjunction with Broward County, at Plantation Heritage Park. Maintained by Broward County, the park includes a 1.25 mile recreational bikeway. This condition of this facility is currently rated by the County as very good.

A copy of the Broward County Greenways System is included in Figure 2.26


City of Plantation
Broward County
Greenways Plantation
Figure 2.26
Prepared by: IT - GIS Division
SUNRISE BLVD
HIATUS RD
PINE ISLAND RD
NUNIVERSITY DR
(SR7) 441
BROWARD BLVD
NOB HILL RD
FLORIDA TPKE
PETERS RD
Legend
City Boundary
Streets
Greenways
N
Source: Broward Metropolitan Planning Organization, 2007

Intermodal Facilities

Adequate facilities are available and accessible to Plantation's needs. There are no existing or planned intermodal facilities within the City. Plantation residents, as part of a larger metropolitan county, are served by facilities operated and maintained maintained by other jurisdictions.

As there are no railway or related facilities within the City of Plantation's jurisdiction, the specific data requirements listed in Chapter 163.3177(7)(b) F.S. have been omitted in this element, yet are included in the Broward County Comprehensive Plan.

TRANSPORTATION NETWORK ANALYSIS AND RECOMMENDATIONS

Existing Roadway Deficiencies

Existing roadway deficiencies are evident from the capacity analysis of roadway segments illustrated in Figures 2.19, and listed in Table 2.13. Potential roadway deficiencies are indicated as level of service (LOS) "E" or F". This finding denotes existing system needs for which the City, County and State must plan necessary roadway improvements, transportation system management (TSM) strategies, or transportation demand management (TDM) strategies

FDOT Jurisdiction
Roadways under the FDOT maintenance jurisdiction that are currently operating below LOS "D" based on the 2103 FDOT Generalized LOS tables, LOS D volume are as follows:

Table 2.16
Existing State Roadway Deficiencies

Roadway	From	To	LOS	LOS Std.
University Drive	SR84	Peters Rd	F	D
University Drive	Peters Rd	Broward Blvd	F	D

Broward County Jurisdiction
Roadways under the County's maintenance jurisdiction that are currently operating below LOS "D" based on FDOT capacity volumes are as follows:

Table 2.17
Existing County Roadway Deficiencies

Roadway	From	To	LOS	LOS Std.
N/A				

City of Plantation Jurisdiction
Roadways under the City's maintenance jurisdiction that are currently operating below LOS "D" based on FDOT capacity volumes are as follows:

Table 2.18
Existing City Roadway Deficiencies

Roadway	From	To	LOS	LOS Std.
NW 5th St. / 65th Av.	University Drive	Sunrise Boulevard	F	D

Existing Roadway Improvements Recommendations

Improvements to address existing roadway deficiencies are implemented by the Broward County MPO *Transportation Improvement Plan* (TIP) for these State-maintained roadways within 5 years, and the *City of Plantation Capital Improvements Plan* (CIP). The necessary improvements are addressed by roadway jurisdiction in the Tables 2.19, 2.20 and 2.21 below.

Table 2.19
Existing State Roadway Deficiencies Improvement Recommendations
FDOT Jurisdiction

Roadway	From	To	LOS	Improvements
N/A				

No improvements, unless listed above, are anticipated or listed in the Broward County MPO *Transportation Improvement Plan* (TIP) for these State-maintained roadways within the immediate future.

Table 2.20
Existing County Roadway Deficiencies Improvement Recommendations
Broward County Jurisdiction

Roadway	From	To	LOS	Improvements
N/A				

Table 2.21
Existing City Roadway Deficiencies Improvement Recommendations
City of Plantation Jurisdiction

Roadway	From	To	LOS	Improvements
Citywide	N/A	N/A	N/A	See below

The Five Year Schedule (2016 to 2021) in the CIP shows an allocation of $2,630,000 for street resurfacing, and $20,000 for road improvements and pedestrian amenities within the Plantation Midtown District. The necessary improvements may also be addressed in the long term.

The City shall continue to respond to identified deficiencies, balancing needs to increase capacity with other planning considerations for alternative transportation modes, the preservation of its residents' quality of life, and public safety.

Future Forecast Roadway Deficiencies

Projections of the future traffic circulation levels of service and system needs are based upon the future land uses shown on the Future Land Use map. These projections serve as a basis for determining the need for new roadway facilities and expansions to support planned development and to maintain adopted LOS standards.

In order to project future traffic conditions, the Broward County MPO and Broward County Transportation Services prepares 2030 Long Range Transportation Plan. Data was obtained for each of the County's Traffic Analysis Zones (TAZs), including: 1) the study area and its analysis zones, 2) urban activities, 3) the transportation system and 4) trip-making characteristics. Specifically, data concerning housing, automobile ownership, population, school enrollment, employment and special generators were collected and projected to the Year 2040.

The number of trips were determined and assigned to the transportation network for each-of the TAZs as "productions" or "attractions". The modal split (by car or public transportation) was included in the assignment process in order to forecast the assignments to the network. The result of this computer modeling procedure was the Year 2040 Network, with AADT volumes and number of roadway lanes. The AADT volumes were converted to peak hour bi-directional volumes using the Statewide Planning value for the K_{100} factor.

The procedure used for analyzing the projected system needs was similar to that utilized for analyzing the existing roadway deficiencies, assuming a desired LOS for collector and arterial roadways within the City. This analysis entailed the calculations of V/C ratios for the roadway segments with forecast traffic volumes for the Year 2040.

Future roadway deficiencies are identified for the short long-term Horizon Year 2040. The forecast deficiencies are illustrated in Figures 2.20 and listed in Tables 2.22, 2.23, and 2.24.

Potential roadway deficiencies are indicated as level of service (LOS) "E" or F". This finding denotes existing system needs for which the City, County and State must plan necessary roadway improvements, transportation system management (TSM) strategies, or transportation demand management (TDM) strategies

FDOT Jurisdiction

Roadways under FDOT jurisdiction that forecast to be operating below LOS "D" based on FDOT capacity volumes are listed in Table 2.22 for the Year 2040.

Table 2.22
Future Forecast State Roadway Deficiencies - Year 2040

Roadway	From	To	LOS	LOS Std.
University Dr.	SR 84	Peters Road	F	D
University Dr.	Peters Road	Broward Blvd.	F	D
University Dr.	Broward Blvd.	Cleary Blvd.	F	D
University Dr.	Cleary Blvd.	Sunrise Blvd.	F	D
University Dr.	Sunrise Blvd.	City Limits	F	D
State Rd 7	Davie Blvd	Broward Blvd.	F	D
State Rd 7	Broward Blvd	Sunrise Blvd.	F	D
State Rd 7	Sunrise Blvd	City Limits	F	D
FL Turnpike	SR 84	Sunrise Blvd.	F	D
Broward Blvd	University	SR 7	F	D
Sunrise Blvd	NW 65 Ave	FL Turnpike	F	D
Sunrise Blvd	FL Turnpike	SR 7	F	D
Sunrise Blvd	SR 7	City Limits	F	D

These links exceed the FDOT's and City's adopted LOS "D" service standard.

Various improvements are anticipated and listed in the Broward County MPO TIP, and/or the *Year 2040 Long Range Transportation Plan*. The necessary improvements are addressed in the recommendations.

Broward County Jurisdiction

Roadways under Broward County's jurisdiction that are forecast to be operating below LOS "D" based on FDOT capacity volumes are listed in Table 2.23 for the Year 2040.

Table 2.23
Future Forecast County Roadway Deficiencies - Year 2040

Roadway	From	To	LOS	LOS Std.
Broward Blvd	Nob Hill Road	Hiatus Rd	F	D
Sunrise Boulevard	Flamingo Road	Pine Island Road	F	D

These links exceed Broward County and the City's adopted LOS "D" service standard.

Improvements are identified in the Broward County MPO TIP. The necessary improvements are addressed in the recommendations.

City of Plantation Jurisdiction

Roadways under the City's maintenance jurisdiction that are forecast to be operating below LOS "D" based on FDOT capacity volumes are listed in Table 2.24 for the Year 2040.

Table 2.24
Future Forecast City Roadway Deficiencies - Year 2040

Roadway	From	To	LOS	LOS Std.
NW 5th St. / 65th Av.	University Drive	Sunrise Boulevard	F	D

This link exceeds the City's adopted LOS "D" service standard.

No improvements are specified in the short-term 5-year horizon or long term horizon. Recommendations are addressed in the Recommendations Section of this Transportation Element.

Future Roadway Improvements Recommendations

Improvements to address future roadway deficiencies are implemented by the MPO's *Year 2030 Long Range Transportation Plan* (LRTP). The MPO Year 2030 Long Range Transportation Plan does not have any roadway improvements listed within the City limits. Capacity improvements that include roadway expansions are illustrated in Figure 2.27, Year 2030 Future Roadway Network.

FDOT Jurisdiction

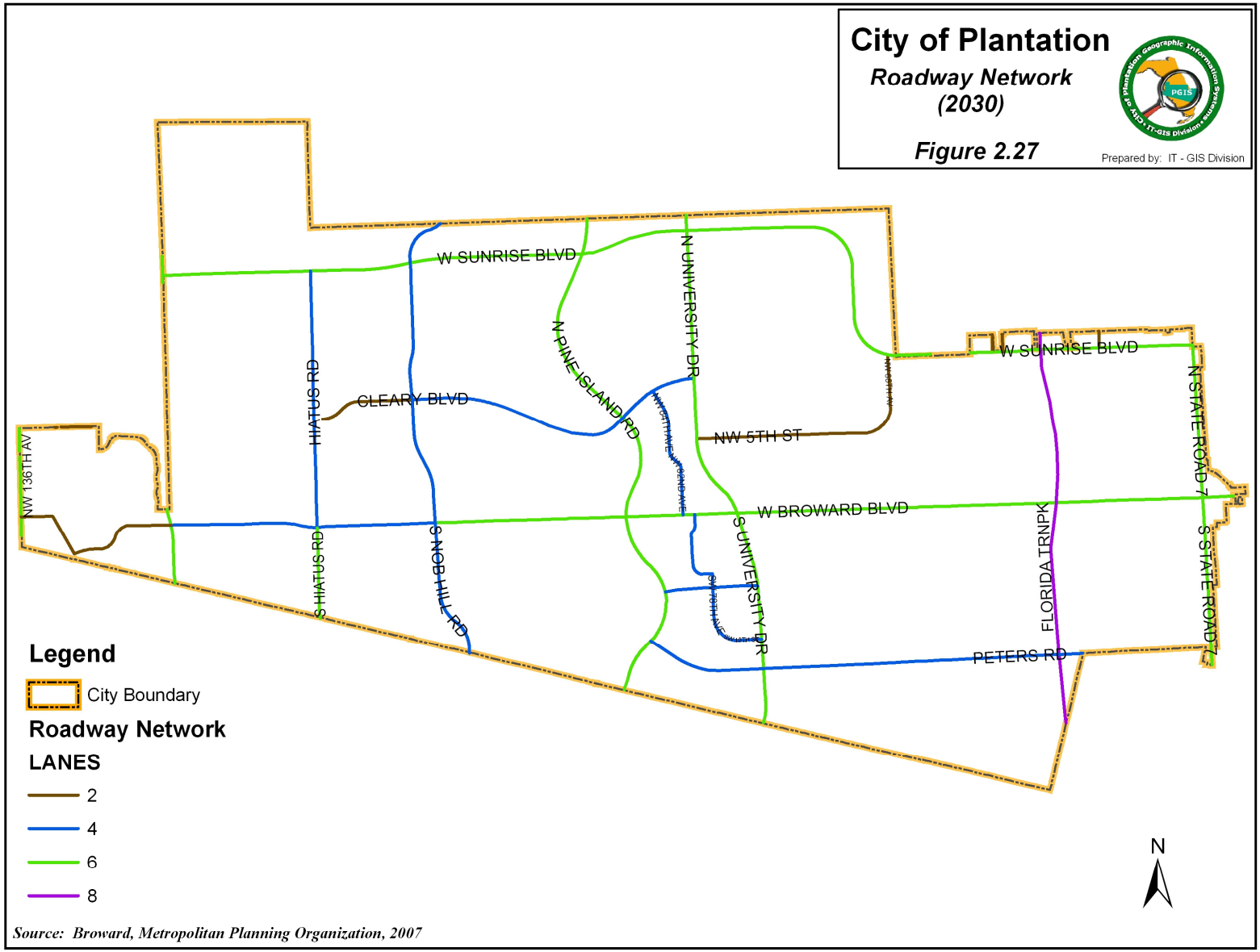
The Broward County MPO 2040 Long Range Transportation Plan does not list any long range state projects within the City of Plantation.

Broward County Jurisdiction

The Broward County MPO 2040 Long Range Transportation Plan does not list any long range County roadway improvements in the cost feasible plan.

City of Plantation Jurisdiction

The Broward County MPO 2040 Long Range Transportation Plan does not list any long range City roadway improvements in the cost feasible plan.



Source: Broward, Metropolitan Planning Organization, 2007

Transportation Corridors

Transportation Corridors are major routes used for moving people and goods by one or more transportation options. (*Strategic Regional Policy Plan for South Florida*, South Florida Regional Planning Council, 1995). The purpose of corridor designation and subsequent planning is to relieve congestion by increasing people carrying capacity through the use of high occupancy vehicles. These corridors are Sunrise Boulevard and State Road 7, shown in Figure 2.28. Activity and issues related to two of these corridors is described below.

By Resolution No. 6779, passed and adopted by the City Council on February 28, 1996, the City of Plantation expressed to Broward County its opposition to any study for, or recommendation to Broward County which proposed the extension of any fixed rail transit system or the construction of any additional vehicular travel lanes for the purpose of operating a bus transit system within the portion of the University Drive Corridor lying within the City of Plantation. The City's opposition was based on its concerns for the residents adjacent to the roadway that would bear the burden of additional noise, dust, exhaust fumes, and have the privacy of their homes substantially reduced.

It is also the City's intent to support the State Plan, policies, and Rule, as well as the County and the MPO to coordinate in the planning and implementation of transportation demand management strategies. To this extent, the City has expressed its concerns, that such planning and potential implementation be of the highest caliber, such that the City's residents are not burdened by regional transportation initiatives. As such, the City has implemented its resolve to address its concerns, coordinate with the agencies' transportation plans, and support the State transportation initiatives for outstanding TDM strategies through Objective 5.1, and Policy 1.5.4. Policy 1.5.4 provides for the development of performance standards, guidelines, and requirements to assure that the planning and implementation of any fixed transit infrastructure does not reduce safety, the enjoyment, or otherwise adversely impact the City's residents. The Policy also calls for the development of a review procedure to assure fair and substantive review of proposed transit infrastructure plans.

<u>Broward Boulevard Transportation Corridor</u>

In coordination with the MPO and the FDOT, Broward County has taken an active role in the preparation of corridor studies. The *Broward Boulevard Corridor Study* resulted in a Joint Participation Agreement (JPA) and demonstration projects designed to increase transit ridership along the Broward Boulevard Corridor. A portion of this funding has been used to begin implementation of 15-minute frequency of service for the main line bus route along Broward Boulevard. The JPA also calls for consideration of a number of other initiatives, including, but not limited to market surveys, neighborhood transit planning efforts, express service, pedestrian amenities, traffic operations, marketing strategies, and continued study and refinement of street design improvements and other recommendations identified in the *1989 Broward Boulevard Corridor Multi-Modal Study.*

Related to the Broward Boulevard Project, is the selection of the Broward Boulevard Corridor as an "Eligible Designated Transit Corridor" for inclusion in the 1993 Florida Transportation Plan. This designation was an initial step toward the development of a corridor that may ultimately support a fixed-guideway transit operation. The program initially provided for interim

improvements such as bus lanes, express service, and improved passenger and pedestrian amenities. At the same time, transit supportive land use and urban design policies have been put into place to encourage transit-oriented development and redevelopment along the corridor.

By Resolution No. 6779, passed and adopted by the City Council on February 28, 1996, the City of Plantation expressed to Broward County its opposition to any study for, or recommendation to Broward County which proposed the extension of any fixed rail transit system or the construction of any additional vehicular travel lanes for the purpose of operating a bus transit system within the portion of the University Drive Corridor lying within the City of Plantation. The City's opposition was based on its concerns for the residents adjacent to the roadway that would bear the burden of additional noise, dust, exhaust fumes, and have the privacy of their homes substantially reduced.

It is also the City's intent to support the State Plan, policies, and Rule, as well as the County and the MPO to coordinate in the planning and implementation of transportation demand management strategies. To this extent, the City has expressed its concerns, that such planning and potential implementation be of the highest caliber, such that the City's residents are not burdened by regional transportation initiatives. As such, the City has implemented its resolve to address its concerns, coordinate with the agencies' transportation plans, and support the State transportation initiatives for outstanding TDM strategies through Objective 5.1, and Policy 1.5.4. Policy 1.5.4 provides for the development of performance standards, guidelines, and requirements to assure that the planning and implementation of any fixed transit infrastructure does not reduce safety, the enjoyment, or otherwise adversely impact the City's residents. The Policy also calls for the development of a review procedure to assure fair and substantive review of proposed transit infrastructure plans.

Sunrise Boulevard Transportation Corridor

Broward County has taken an active role in preparing corridor studies, in conjunction with the Broward MPO, FDOT, and the local municipalities. In a Joint Participation Agreement, the Corridor 2003 study for Sunrise Boulevard demonstrates projects designed to increase transit ridership. Transit ridership along this corridor is currently strong.

In 2003, the Sunrise Boulevard corridor study was undertaken to develop recommendations and strategies to alleviate congestion, improve transportation deficiencies and improve overall mobility. The focus of the study was to develop strategies (other than roadway widening) that are reasonable and capable of implementation by the target year of 2005. The strategies in this corridor study reflect a harmonization of traditional improvements such as traffic signal timing to more advanced applications such as intelligent transportation systems. A strong emphasis was on providing intermodal improvements ranging from completion of sidewalks to the development of transit transfer hubs. The study blends the pedestrian, bike, automobile, and transit.

State Road 7 Transportation Corridor

The City has been involved in significant ongoing activities toward supporting Policy 3.5.7 of the Broward County Transportation Element. Over the past ten years, several initiatives have been studied in an effort to revitalize the State Road 7 Corridor (Plantation Gateway). As one of

the City's public transportation corridors, it is the only one that lies fully within the urban infill area (UIA) east of the Florida Turnpike. In 1998, through the Safe Neighborhood Act, the City prepared a "Safe Neighborhood Plan" for the SR-7 Corridor, and a Safe Neighborhood designation was received from the State. Through these efforts, a Gateway 7 Redevelopment Plan was prepared, a Plantation Gateway Advisory Board was established, and an additional 2-mil tax was imposed on the property owners for improvements. Streetscape improvements, landscape improvements, and signage improvements were implemented to demonstrate redevelopment efforts in the planning stages.

In 1998, visioning sessions and design workshops were held with residents and business owners as part of the process to focus on uses and development standards for the Plantation Gateway. In February, 1999, the City began implementing approved plans. The following projects have been developed and implemented.

1. Coordinating with Broward County Mass Transit, prototype bus shelters, signage, trash receptacles, and pavers are being installed throughout the Plantation Gateway District.

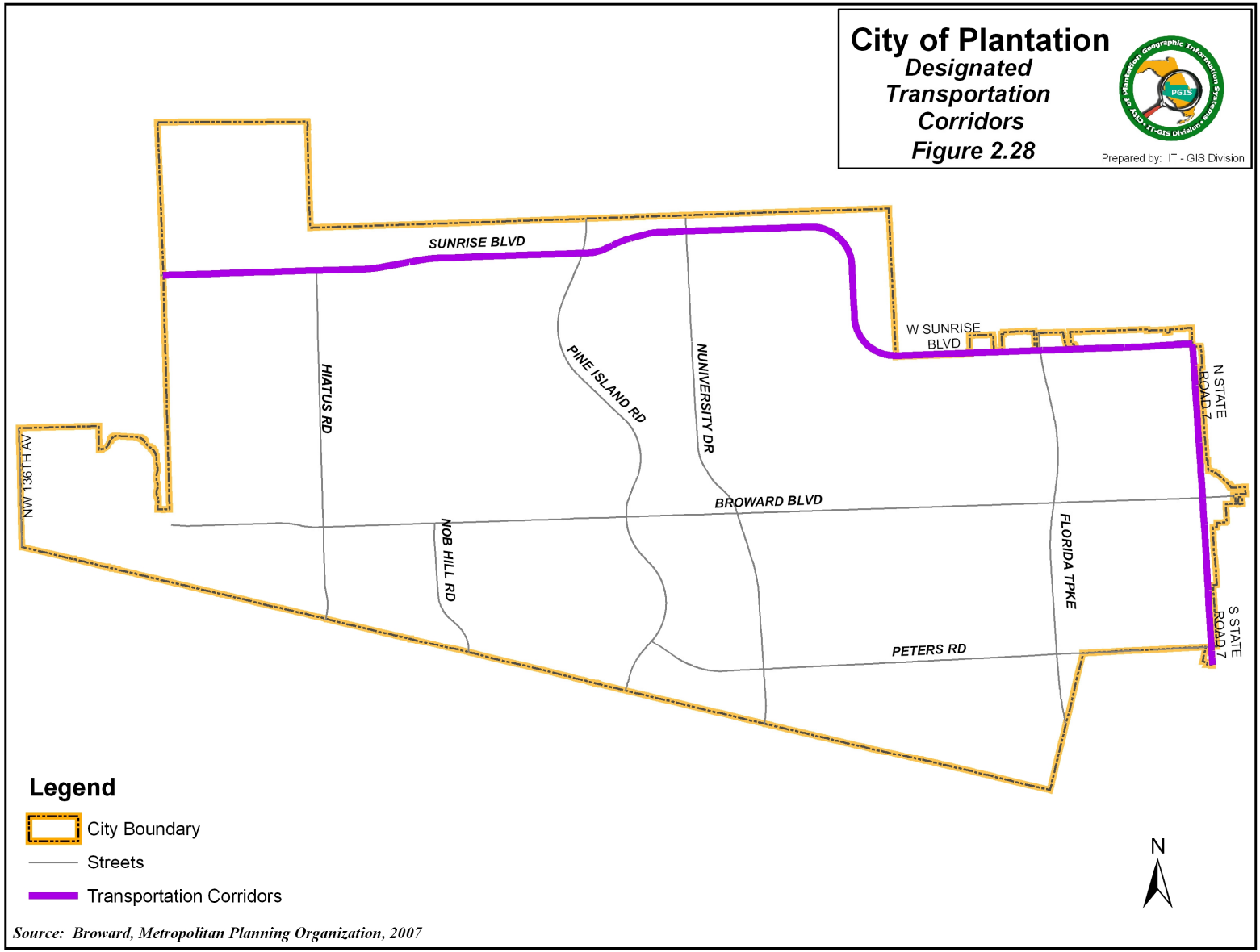
2. Landscape and on-street parking improvements are being designated and constructed for dead-end streets along the corridor.

3. Monument entryway features and landscape improvements are being designed to earmark the District.

4. Ordinances refining permitted and prohibited uses have been included in the City's land development code.

5. Ordinances refining development standards have been implemented into the City's land development code.

These activities have been incorporated as Policy 2.3.4, and Policy 6.1.7 (more specific to pedestrian and bicycle issues in these corridors), which have been added to address the City's ongoing commitment to redeveloping public transportation corridors for balanced, multimodal transportation.


City of Plantation
Designated Transportation Corridors
Figure 2.28
Prepared by: IT - GIS Division
SUNRISE BLVD
W SUNRISE BLVD
HIATUS RD
PINE ISLAND RD
NUNIVERSITY DR
N STATE ROAD 7
NW 136TH AV
BROWARD BLVD
NOB HILL RD
FLORIDA TPKE
S STATE ROAD 7
PETERS RD
Legend
City Boundary
Streets
Transportation Corridors
N
Source: Broward, Metropolitan Planning Organization, 2007

Transit Network

Transit Network Needs

Currently the main provider of public transportation in the City of Plantation is Broward County Transit (BCT). BCT operates nine bus routes that serve the City. Service is fairly extensive and operates on attractive headways and with reasonable fares.

Three major factors influencing the demand for public transportation are income, age and population density.

- The City of Plantation has a median household income of approximately $66,647 per year approximately $14,679 higher than the average for Broward County.

- Although some areas of the city are aging, overall only 14.9% of the population is 65 years of age and over, below the 15.7% average for Broward County.

- In general, land use in the City of Plantation is characterized by relatively low residential densities. Overall, population density in the City of Plantation is approximately 4,000 persons per square mile.

Although the demographics in the City of Plantation are not particularly supportive of public transportation, there are factors which support the City's considering the implementation of some form of municipal transit system. The primary reasons for consideration are:

- the desire to enhance the quality of life in the City;
- the desire to improve the mobility of transit dependent persons; and
- the desire to enhance the economic base of the City by expanding employment options to lower income residents.

An important factor recognized by some advocates of public transportation is the fact that, as the age of the population of the City increase, a higher percentage of the population tends to grow more dependent on public transportation. Thus, as time goes by, public transportation becomes a quality of life issue for these members of the community.

Major Regional Mass Transit Investments

See Transportation Corridors Section, page 2.98.

Bicycle Network

Bicycle Network Needs

The existing Bicycle Facility Network Map shows that very little of the City's or County's bike plans have been implemented to date. The safety of recreational, commuter, and other utility cyclists will be improved by the implementation of the Broward County Bicycle Facilities Network Plan (BCBFNP), and the City of Plantation Priority Path System (PPS). The

implementation of these plans will replace shared lane space with exclusive bike lanes on many of the City's arterial and collector roadways. In addition, recreational bike paths completely separate from roadway rights-of-way, and signed paths along local roads will be implemented.

Bicycle Network Recommendations

The City of Plantation should continue to implement its own Priority Path System in Coordination with the Broward County Bicycle Advisory Committee, and the Broward County Greenways Plan, shown in Figure 2.26. The existing and designed bicycle facilities are shown in Figure 2.29.

The City's Plan will also designate criteria for the construction of the bike paths through the undeveloped areas and establish corridors through existing residential areas. See also Recreation Element.

The PPS provides for a six-foot wide sidewalk, primarily for pedestrians and less-experienced bike riders, along all streets designated in the plan as "primary bikeways", and the provision for a 14-foot curb lane for recreational biking on new or widened streets. It recommends six-foot walkways where eight-foot wide bikeways could not be constructed due to narrow rights-of-way. Implementation of this plan has been initiated.

Pedestrian Network

Pedestrian Network Needs

The pedestrian ways network includes pedestrian facilities and services. Pedestrian facilities are designed to ensure safety, provide access to serve existing land uses, and allow access to pedestrian ways. Regionally significant pedestrian ways should include pedestrian friendly urban design, connecting residences, restaurants, cultural sites, parks, and shops. Bicycle traffic should be separated.

Policy 2.4.1 provides that internal circulation, locally significant pedestrian ways, for the downtown business district be improved. To this extent, the City will improve facilities based on community input and qualitative data.

The City will determined general, City-wide measurable pedestrian mobility standards when called for by the City's residential communities

The City maintains pedestrian facilities on City streets consistent with accepted engineering standards. These include: sidewalks, crosswalks, ADA curb cuts, and pedestrian amenities.

Pedestrian Network Recommendations

The recommendations to improve the pedestrian infrastructure are implemented by:

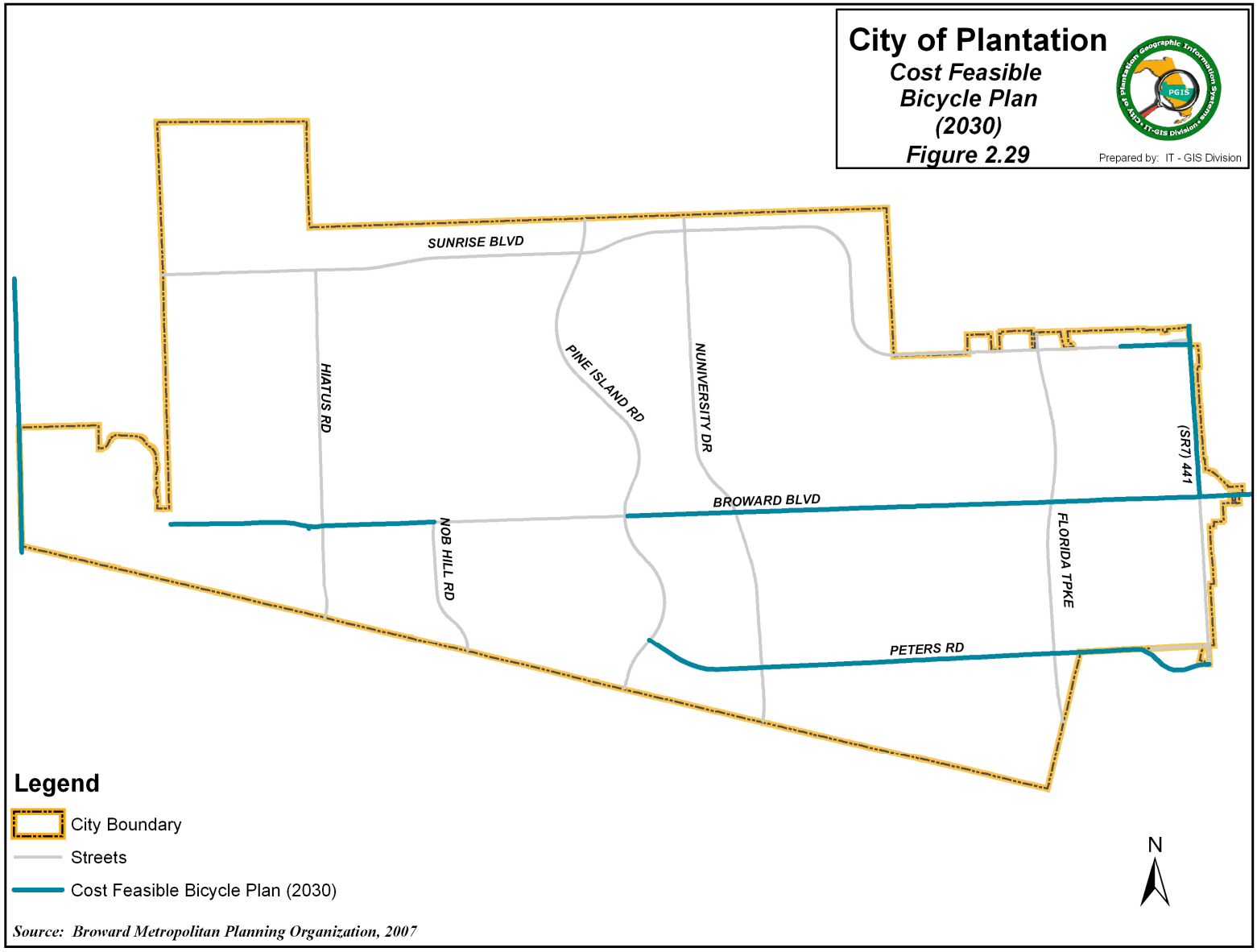
1. the recommendations to improve the Plantation Midtown District internal circulation (Policy 2.4.1);

2. recommendations and activities to improve transit access, amenities, and infrastructure along transportation corridors.

3. pedestrian infrastructure improvement consistent with the City's PPS.

4. the City's coordination and support of Broward County's pedestrian network, and recreational network activities. This includes coordination with the Broward County Bicycle Coordinator to initiate a program to identify high frequency pedestrian crash locations, and develop strategies and monitoring programs to increase safety at these locations.

5. the City's coordination and support of the Broward County Greenways network.


City of Plantation
Cost Feasible
Bicycle Plan
(2030)
Figure 2.29
Prepared by: IT - GIS Division
SUNRISE BLVD
HIATUS RD
PINE ISLAND RD
NUNIVERSITY DR
(SR7) 441
BROWARD BLVD
NOB HILL RD
FLORIDA TPKE
PETERS RD
Legend
City Boundary
Streets
Cost Feasible Bicycle Plan (2030)
N
Source: Broward Metropolitan Planning Organization, 2007

Waterway Network

Waterway Network Needs

Water-dependent transportation facilities are those that can only be carried out on, in, or adjacent to water areas because the facility requires access to the water body for waterborne transportation including seaports, marinas, and marine recreational facilities. In Plantation, water-dependent facilities could only include limited marine recreational facilities.

Pleasure boating at all levels is growing in popularity every year. As more and more recreational marine vessels continue to use the waterways for recreation, safe boating becomes increasingly important to prevent crashes, injury and death.

Waterway Network Recommendations

Marine safety of the City's waterways is addressed in Transportation Element Policy 7.1.1. This broad-based Policy addresses waterway safety by participating with the County to limit boat speeds, maintain County-owned boat ramps, and assess the manatee protection plan.

The City should continue to coordinate and support the County's efforts to create an integrated waterway transportation network. The City does not support that the waterways transportation network include any of the water control facilities included in the "Old Plantation Water Control District"

Ports, Aviation, and Related Facilities

Adequate facilities are available and accessible to Plantation residents, there are no existing or planned port or aviation facilities within the City. Plantation residents, as part of a larger metropolitan county, are served by facilities operated and maintained maintained by other jurisdictions.

As there are no port, aviation and related facilities within the City of Plantation's jurisdiction, the specific data requirements listed in Chapter 163.3177(7)(b) F.S. have been omitted in this element, yet are included in the Broward County, City of Fort Lauderdale, City of Pompano Beach and Port Everglades comprehensive plans.

Railway Facilities

Adequate facilities are available and accessible for the City of Plantation's freight movement, commuter, and passenger needs. There are no existing or planned railway facilities within the City. Plantation residents, as part of a larger metropolitan county, are served by facilities operated and maintained maintained by other jurisdictions.

As there are no railway or related facilities within the City of Plantation's jurisdiction, the specific data requirements listed in Chapter 163.3177(7)(b) F.S. have been omitted in this element, yet are included in the Broward County Comprehensive Plan.

Recreational Transportation Network

Blueway Needs

One of the blueway links, which collectively form a 26 mile loop through the County is partially within the City of Plantation. It is the Broward Blueway Downtown and North Fork. It begins at Broward

Boulevard just west of US 1 and extends in a northwesterly direction to Sunrise Boulevard.

Park Bikeways Needs

A 1.25 mile bikeway facility for recreational trip purposes is provided in the City of Plantation in conjunction with Broward County, at Plantation Heritage Park. This condition of this facility is currently rated by the County as very good. There are no current needs that have been identified for park bikeways in the City of Plantation.

Recreational Transportation Network Recommendations

The City should continue to coordinate and support the County's efforts to create an integrated recreational transportation network. The City does not support that the Blueways recreational network include any of the water control facilities included in the "Old Plantation Water Control District"

Intermodal Facilities

Adequate facilities are available and accessible to Plantation's needs. There are no existing or planned intermodal facilities within the City. Plantation residents, as part of a larger metropolitan county, are served by facilities operated and maintained maintained by other jurisdictions.

As there are no railway or related facilities within the City of Plantation's jurisdiction, the specific data requirements listed in Chapter 163.3177(7)(b) F.S. have been omitted in this element, yet are included in the Broward County Comprehensive Plan.