Miami-Dade County
Preliminary Truck Parking Assessment

Parcel Naming Convention & Folio Numbers:

Parcel No. 1: 05-3013-002-0010

Parcel No. 2: 30-6935-000-0400

Parcel No. 3: 30-6935-000-0061

Parcel No. 4: 30-7902-000-0040

Parcel No. 5: 30-7902-000-0021

3/12/2019

Carlos A. Castro
District Freight Coordinator

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Executive Summary

With trucks moving approximately 75% of its annual freight tonnage, Miami-Dade County is highly dependent on the trucking industry for its transportation needs. Fueled by economic growth, safety concerns, and the real estate market, the County faces a severe shortage of truck parking spaces. Understanding this issue, the County has identified five (5) parcels for potential truck parking development (see **Figure A**). This memorandum aims to preliminarily assess the viability of truck parking development at these five (5) locations.

Following a modified methodology from that outlined in FDOT's *Assessment for Potential Truck Parking Locations within Miami-Dade County (FM# 439150-1-12-01)*, completed in August 2018, this assessment looks at three (3) tiers. The first tier determines each parcel's legal, geometric, and geographical characteristics such as zoning, land use, and accessibility. The second tier assesses each site's environmental characteristics; focusing on eight (8) environmental issues – surrounding existing land use, existing neighborhood features, noise abatement, Wellfields, contamination, flood zones, wetlands, and critical habitats. The third tier looks at freight transportation demand based on existing literature and engineering judgement.

Of the five (5) identified Miami-Dade County-owned parcels for potential truck parking development, two (2) parcels were determined to be suitable for such use (see **Table A**). These parcels, numbered 2 and 3, are in the Homestead Base census-designated area. This area has a very small estimated truck parking demand as compared to the rest of the County (2010 demand is estimated at 553 truck parking spaces as compared to 5,490 truck parking spaces in northwest Miami-Dade County). Parcels 2 and 3 are anticipated to provide a minimum of 303 and 466 parking spaces, respectively, assuming ten (10) truck spaces per acre. While truck parking is feasible in both parcels, project development risks exist for both parcels given these locations are near residential areas (approximately 50% of the land use within a 1-mile buffer of Parcel 2 and 41% within Parcel 3 are comprised of residential units). **Table 13** provides a list of benefits and disadvantages for each site.

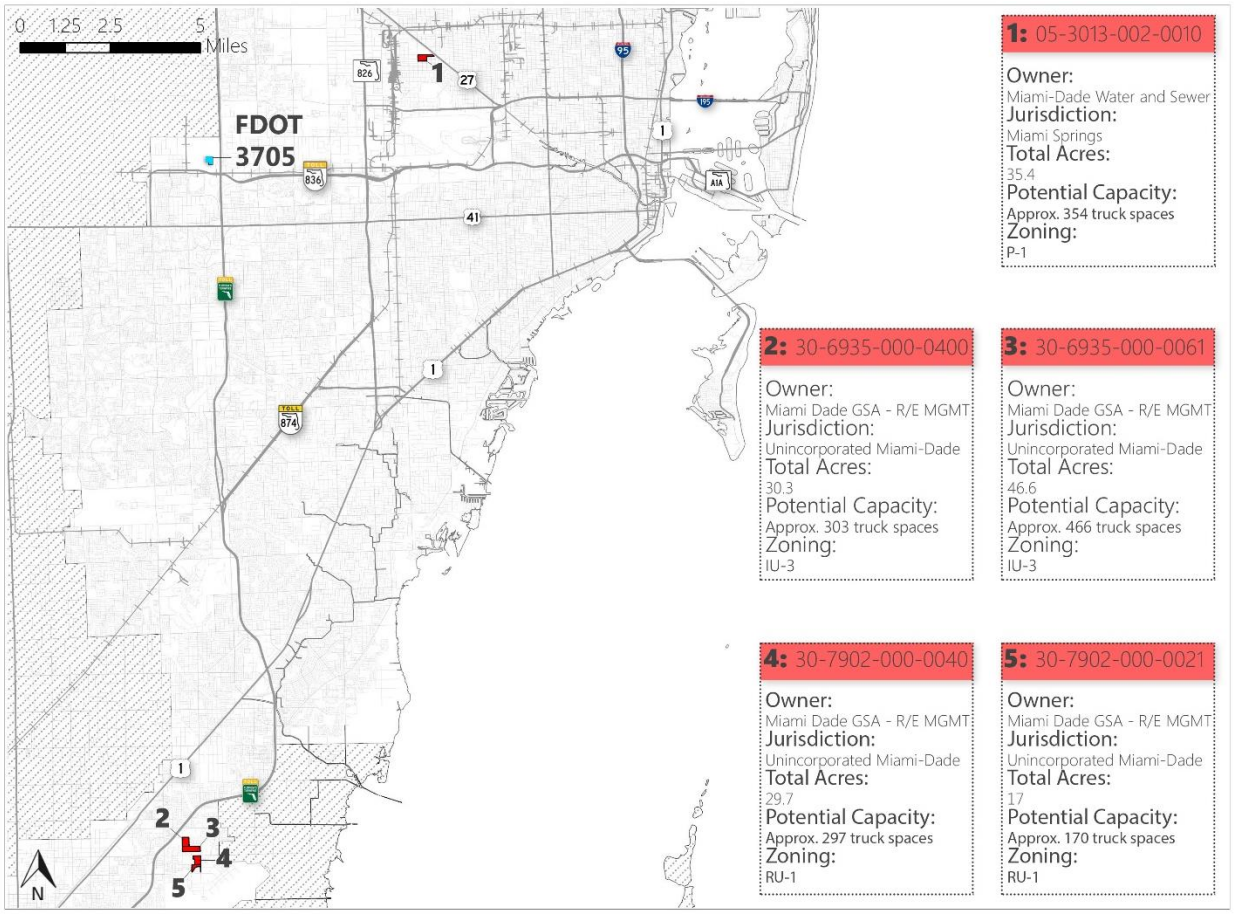

Figure A: Proposed Miami-Dade Owned Parcels for Potential Truck Parking Development

Table A: Truck Parking Feasibility Assessment

Parcel Number	Folio Number	Feasibility Assessment
1	05-3013-002-0010	Unfeasible
2	30-6935-000-0400	Feasible
3	30-6935-000-0061	Feasible
4	30-7902-000-0040	Unfeasible
5	30-7902-000-0021	Unfeasible

Table B: Benefits and Disadvantages of each Parcel

Parcel Number	Benefits	Disadvantages
1	• Inside UDB • Serves the biggest sub market in the County (Airport/Doral with 59,510,516 square feet of industrial real estate) • Serves the highest demand for truck parking (estimated at 5,490 in 2010)	• Zoning Code does not allow truck parking development • Existing land use is not compatible with truck parking • Future land use is not compatible with truck parking • Well pumping station located within this site • Lowest accessibility ranking • Least compatible with surrounding land use (31%) • Adjacent to Miami Springs Senior High School and Dove Avenue Park
2	• Zoning Code allows truck parking development • Existing land use is compatible with truck parking • Inside UDB • High accessibility ranking • Adjacent to new FedEx Ground distribution center	• Future land use is not compatible with truck parking
3	• Zoning Code allows truck parking development • Existing land use is compatible with truck parking • Inside UDB • Adjacent to new FedEx Ground distribution center • Largest parcel	• Future land use is not compatible with truck parking
4	• Existing land use is compatible with truck parking • Inside UDB	• Zoning Code does not allow truck parking development • Future land use is not compatible with truck parking
5	• Existing land use is compatible with truck parking • Inside UDB • Most compatible with surrounding land use (70%)	• Zoning Code does not allow truck parking development • Future land use is not compatible with truck parking

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Introduction

Miami-Dade County is a multicultural hub that serves as the "Gateway to the Americas" for the movement of goods and people. With Miami International Airport (MIA) ranking first in international freight and third in international passengers among United States airports in 2017, and PortMiami servicing over 5.5 million cruise passengers and 9.6 million freight tons, Miami is enjoying the benefits of bolstering freight, logistics, and tourism industries. However, these benefits come with growing pains that echo a nationwide transportation challenge. With trucks moving approximately 75% of its annual freight tonnage[1], Miami-Dade County is highly dependent on the trucking industry for its transportation needs. Fueled by economic growth, safety concerns, and the real estate market, the County faces a severe shortage of truck parking spaces.

This shortage has been studied by the County's Transportation Planning Organization (TPO) and the Florida Department of Transportation (FDOT). In its 2010 *Comprehensive Parking Study for Freight Transport in Miami-Dade County*, the County determined a total deficit of 10,195 intrastate/short-haul and 1,825 interstate/long-haul truck parking spaces. This deficit was determined to be greater in the northern half of the County given this area of the County houses MIA, PortMiami, and the greatest inventory of warehouse/industrial land use (see **Figure 1** and **Table 1**).

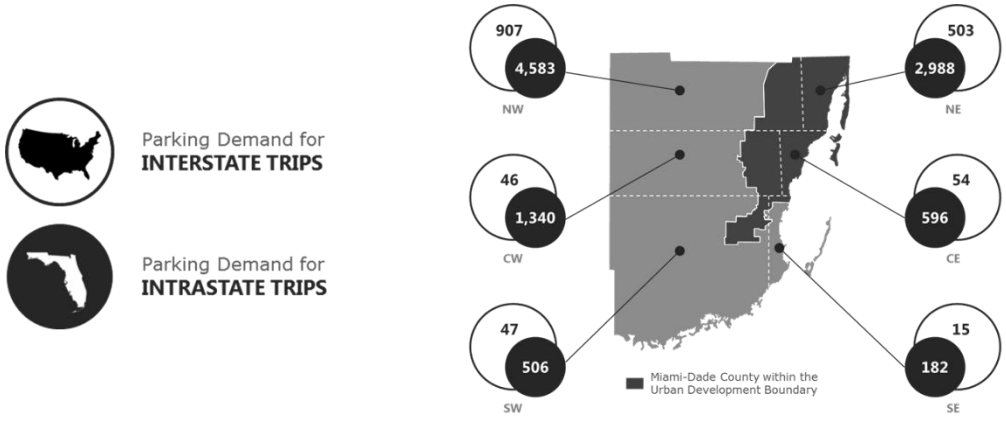

Figure 1: Miami-Dade County 2010 Estimated Truck Parking Deficit

[1] Cambridge Systematics. *Transportation and Economic Impacts of the Freight Industry in Miami-Dade County*. Miami-Dade Metropolitan Planning Organization, Dec. 2011, *http://miamidadetpo.org/library/studies/transportation-and-economic-impacts-of-the-freight-industry-final-report-2011-12.pdf*

Table 1: Miami-Dade Industrial Market Statistics (Q4 2018)[2]

Submarket	Total Inventory (Sq. Ft.)	Under Construction (Sq. Ft.)	Average Asking Lease Rate ($/Sq. Ft./Industrial Gross Lease Rate)
Airport/Doral	59,510,516	208,000	10.28
Medley	43,128,546	350,000	9.10
Central Dade	38,318,817	59,959	8.64
North Central Dade	37,359,688	1,666,238	8.97
Hialeah	13,632,107	0	8.69
Kendall/Tamiami	12,364,984	0	11.06
Miami Lakes	8,355,691	724,117	9.41
Hialeah North	2,834,536	614,207	9.00
South Dade	4,812,833	0	10.07
North East Dade	2,832,607	0	12.78
Total	**220,315,789**	**3,008,314**	**9.44**

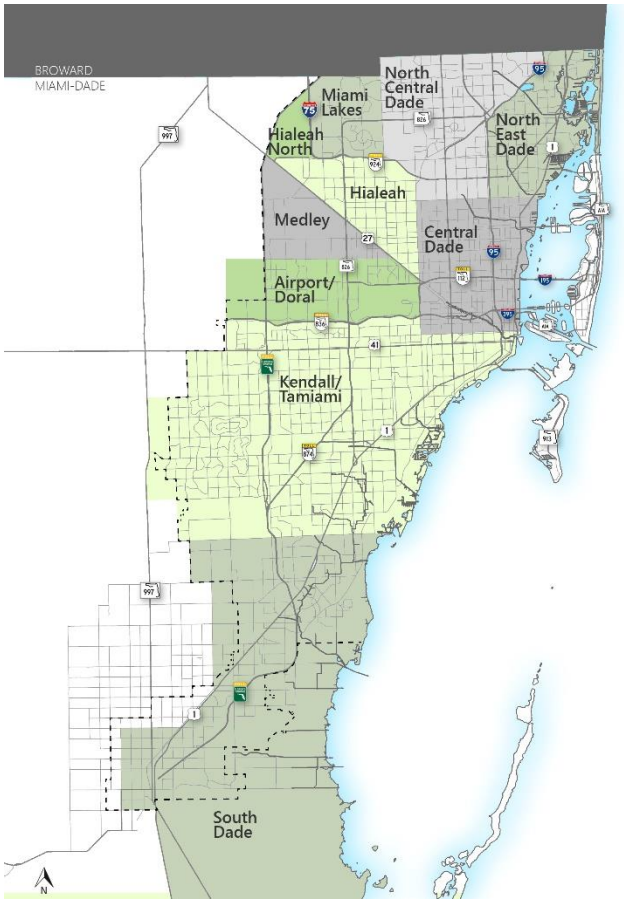

Figure 2: Miami-Dade Industrial Submarkets[2]

[2] CBRE Research. *Miami Industrial MarketView Q4 2018*. CBRE, 2019 https://www.cbre.com/research-and-reports/Miami-Industrial-MarketView-Q4-2018

To address the truck parking shortage the *Comprehensive Parking Study* provided a preliminary list of eighty-four (84) potential locations for truck parking development. Hence, in 2012 the TPO sponsored a second study to further assess these locations and prepare a business model and implementation action plan[3]. The assessment resulted in twelve (12) locations deemed suitable for truck parking. Soon after, FDOT began a Planning and Conceptual Engineering (PACE) Study for two (2) of these locations located in the northwest quadrant of the State Road 821 (SR 821)/Homestead Extension of Florida's Turnpike (HEFT) and NW 12th Street interchange (see **Figure 3**). Through coordination with multiple agencies and in partnership with the County, only one (1) of these locations was determined to be developed as a truck parking facility. The other abutting parcel was prioritized as a park-and-ride facility (Dolphin Transit Station).

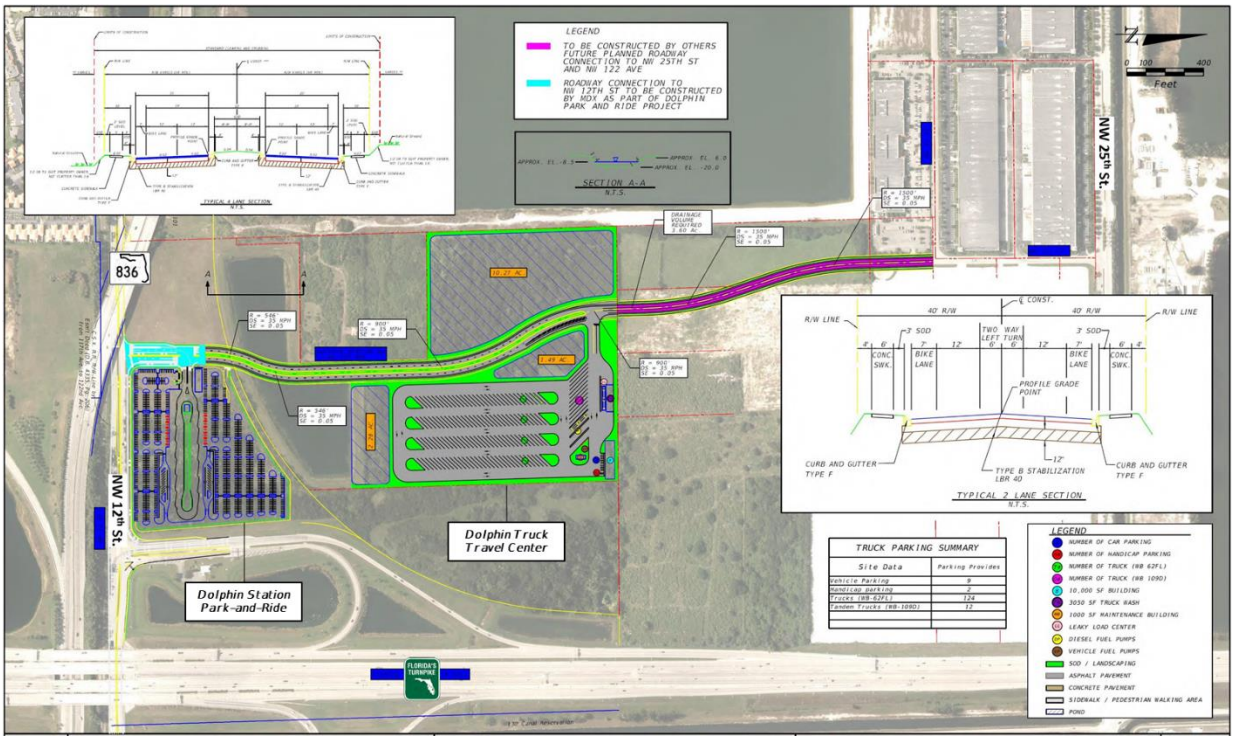

Figure 3: Dolphin Station Park-and-Ride and Dolphin Truck Travel Center Recommended Layout

[3] Kimley-Horn and Associates, Inc. *Development of Truck Parking Facilities in Miami-Dade County Phase II – Options for Implementation*. Miami-Dade Metropolitan Planning Organization, Nov. 2012, *http://miamidadetpo.org/library/studies/development-of-truck-parking-facilities-phase-ii-options-for-implementation-final-2012-08.pdf*

With the conclusion of the PACE Study in October 2015, the State and the County began separate Project Development and Environmental (PD&E) studies to begin the preliminary engineering design of these locations (see FDOT Financial Number 437143-1-22-01 and 437533-1-21-01). Through the PD&E process the parcel intended to be developed as a truck parking facility was found unsuitable for such use. Hence, the PD&E study for the truck parking facility was put in abeyance while the Dolphin Station park-and-ride advanced through project development and is now due to begin operations soon.

Figure 4: Location Map of Parcel 30-3936-000-0105

Purpose

Given these developments, FDOT began a request for sealed bids for the surplus parcel (FDOT Parcel 3705/Folio Number 30-3936-000-0105) where the truck parking facility was intended to be developed. FDOT expects a good return on the sale of this property to pursue the development of a truck parking facility elsewhere. Understanding this issue, the County has identified five (5) parcels for potential truck parking development through the Board of County Commissioner Resolution No. 516-18 and the TPO Governing Board Resolution No. 24-18. This memorandum aims to preliminarily assess the viability of truck parking development in five (5) proposed Miami-Dade owned vacant parcels. **Figure 5** illustrates the location of these five (5) parcels within the County and provides an estimate of truck parking spaces using the TPO criteria of 10 spaces per acre[3].

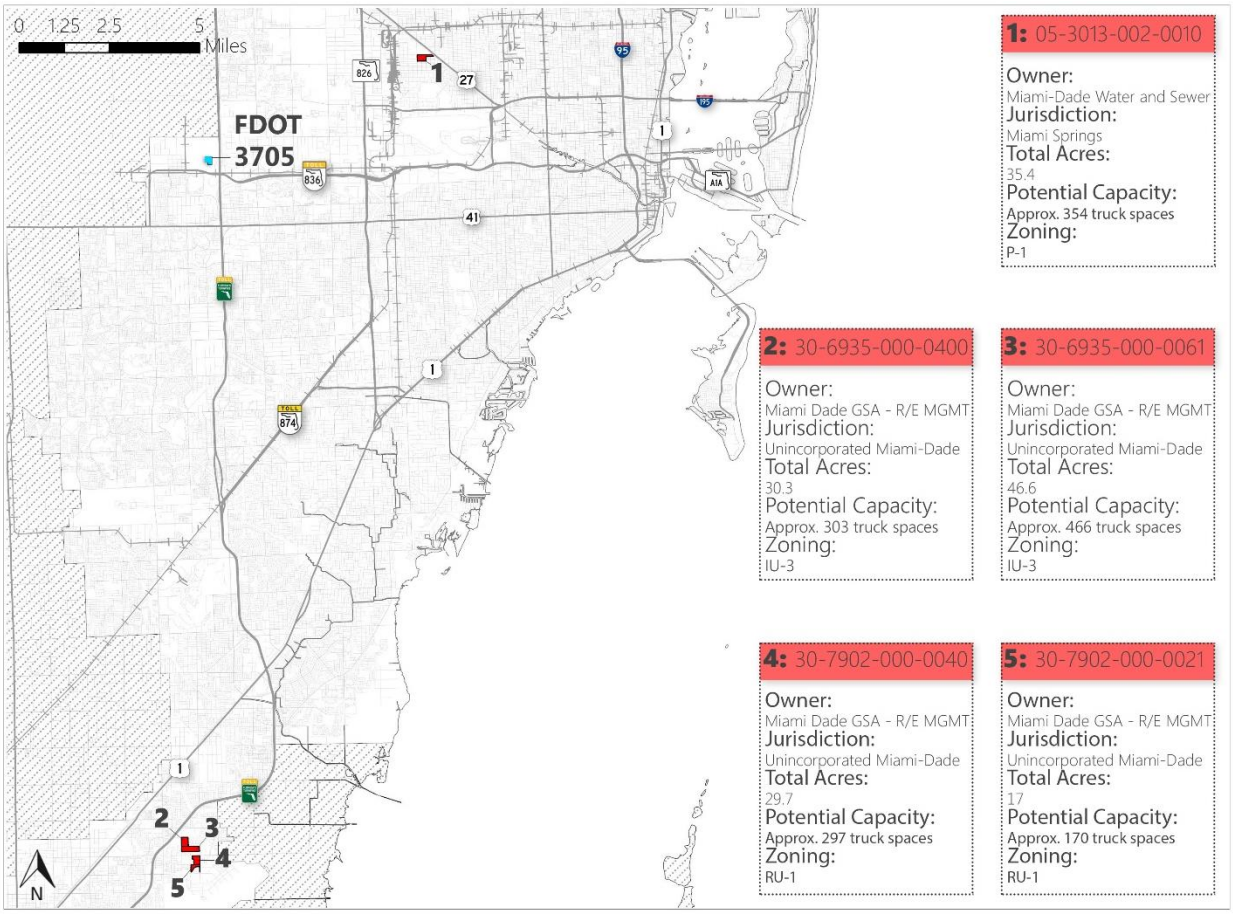

Figure 5: Proposed Miami-Dade Owned Parcels for Potential Truck Parking Development

Methodology

This truck parking assessment follows a modified methodology from that outlined in FDOT's *Assessment for Potential Truck Parking Locations within Miami-Dade County*[4]. Completed in August 2018, this study independently evaluated the potential truck parking locations included in the TPO's second *Comprehensive Truck Parking* study[3]. Using FDOT planning and PD&E criteria, the independent evaluation developed a tiered analysis for determining feasible truck parking parcels based on a preliminary analysis, a detailed screening, and an engineering feasibility.

For this assessment, the first tier determines each parcel's existing condition. This tier focuses on legal, geometric, and geographical characteristics such as zoning, land use, and accessibility. The second tier assesses each site's environmental characteristics and with a focus on eight (8) environmental issues – surrounding existing land use, existing neighborhood features, noise abatement, Wellfields, contamination, flood zones, wetlands, and critical habitats. The third tier looks at freight transportation demand based on existing literature and engineering judgement. The data analyzed was obtained from Miami-Dade County Property Appraiser website, FDOT's Area of Interest Geographical Information System (GIS) analysis report, and Google Earth®. Note that FDOT's GIS analysis report uses various databases including the census block data, South Florida Water Management District data, Florida Department of Environmental Protection data, and others.

[4] Gannett Fleming. *Assessment for Potential Truck Parking Locations within Miami-Dade County – Final Report*. Florida Department of Transportation, Aug. 2018, https://freightmovesflorida.com/resource-repository/?search&resource-categories%5B0%5D=146

Tier 1 – Physical and Legal Characteristics

Figure 5 summarizes the municipality and zoning codes for each parcel. According to Section 33-124.1 of the Miami-Dade County Code of Ordinances, "*all vehicles, other than recreational vehicles exceeding twenty (20) feet in length or more than eight (8) feet in height from the ground including, but not limited to, tow trucks, dump trucks, construction or earth moving vehicles or equipment, and semi-tractors and trailers are prohibited from parking in all residentially zoned districts.*" Automobile or truck parking, other than for new vehicles such as for dealers, are not specifically permitted in the following business zoned districts: BU-1 (Neighborhood Business District), BU-1A (Limited Business District), and BU-2 (Special Business District). In agriculturally zoned areas (AU), parking or storage of commercial vehicles is allowed only if the vehicles are for agricultural purposes. Within the City of Miami Springs, trucks designed for commercial use of carriage are restricted from parking in single family residential, multi-family residential, public properties, church-use only, and some business/commercial zoning districts[5]. **Table 2** lists the zoning codes where truck parking is specifically allowed by code.

Table 2: Municipal Zoning Codes that allow Truck Parking

Municipality	Zoning Code	Description
Unincorporated	BU-3	Liberal Business District
Unincorporated	IU-1	Industrial, Light Manufacturing
Unincorporated	IU-2	Industrial, Heavy Manufacturing
Unincorporated	IU-3	Industrial, Unlimited Manufacturing
Unincorporated	IU-C	Industrial District
Miami Springs	Northwest 36th Street District	Roughly bounded by NW 57th Avenue on the west, the Miami Canal (C-6) on the east, NW 36th Street on the south, and Fairway Drive/Oakwood Drive on the north
Miami Springs	Abraham Tract District	Roughly bounded by SR 953/LeJeune Road on the west, NW South River Drive on the east, NW 31st Street on the south, and SR 112/Airport Expressway on the north
Miami Springs	Airport/Golf District	Roughly bounded by NW 57 Avenue on the west, Deer Run on the east, Fairway Drive on the south, and the Miami Springs Golf and Country Club on the north
Miami Springs	Hotels/Motels	Parking allowed on an overnight basis so long as such vehicles have vacated the parking areas by nine o'clock of the morning following the overnight parking

[5] Section 150-015 of the Miami Springs Code of Ordinances
https://library.municode.com/fl/miami_springs/codes/code_of_ordinances?nodeId=TITXVLAUS_CH150ZOCO_ARTIINGE_S150-015PACOVELI

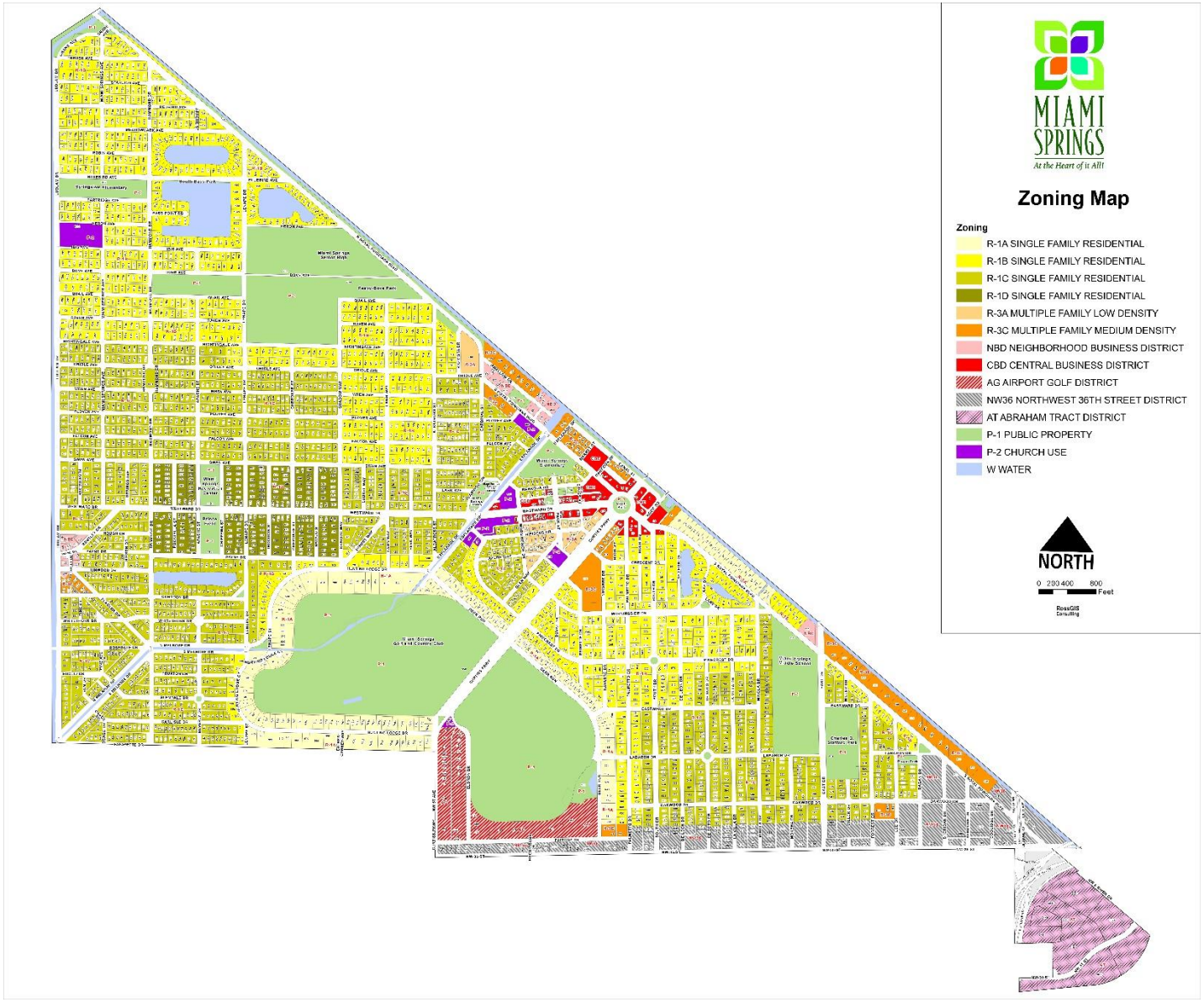

Figure 6: City of Miami Springs Zoning Map

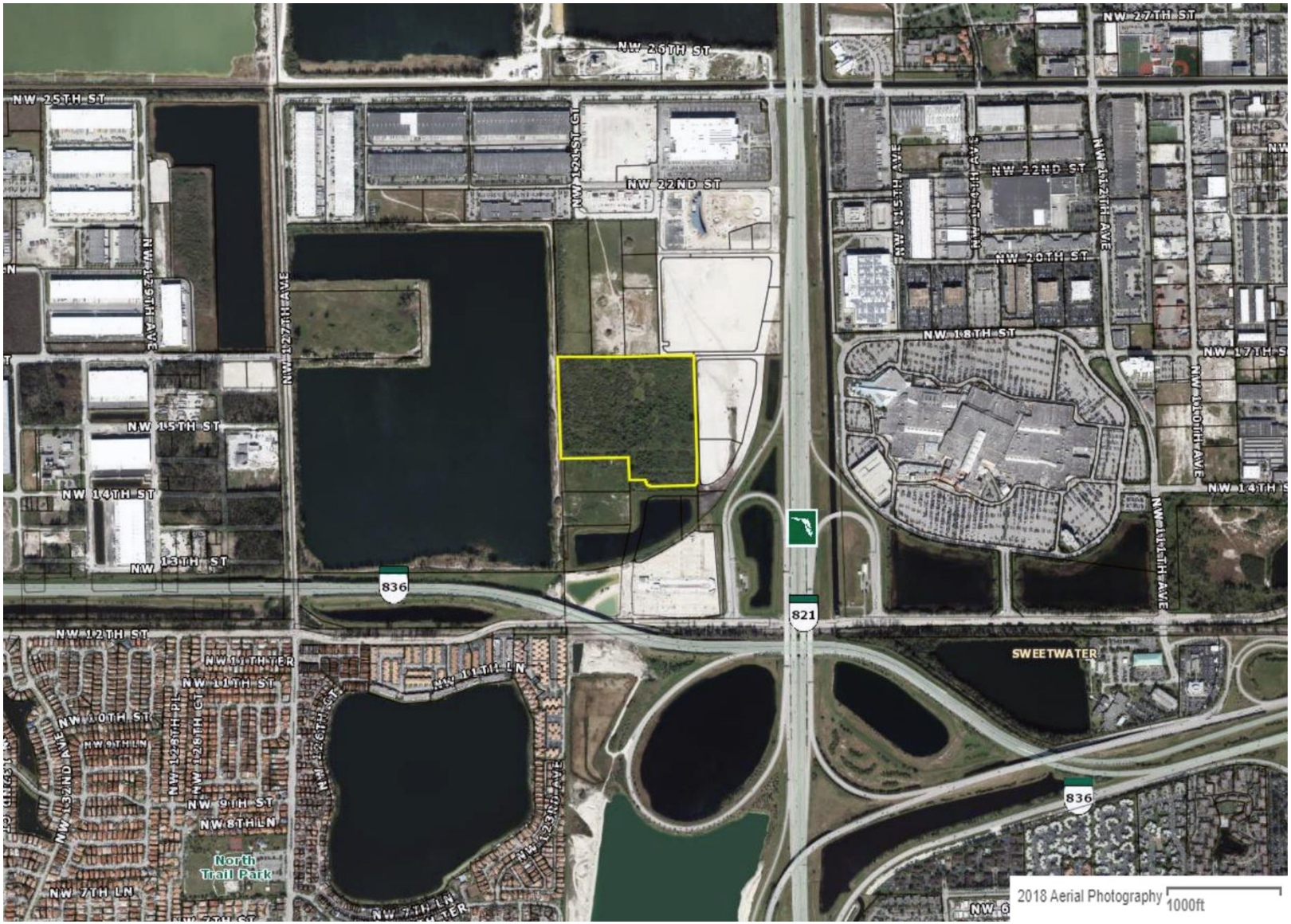

Figure 7: FDOT Parcel 3705

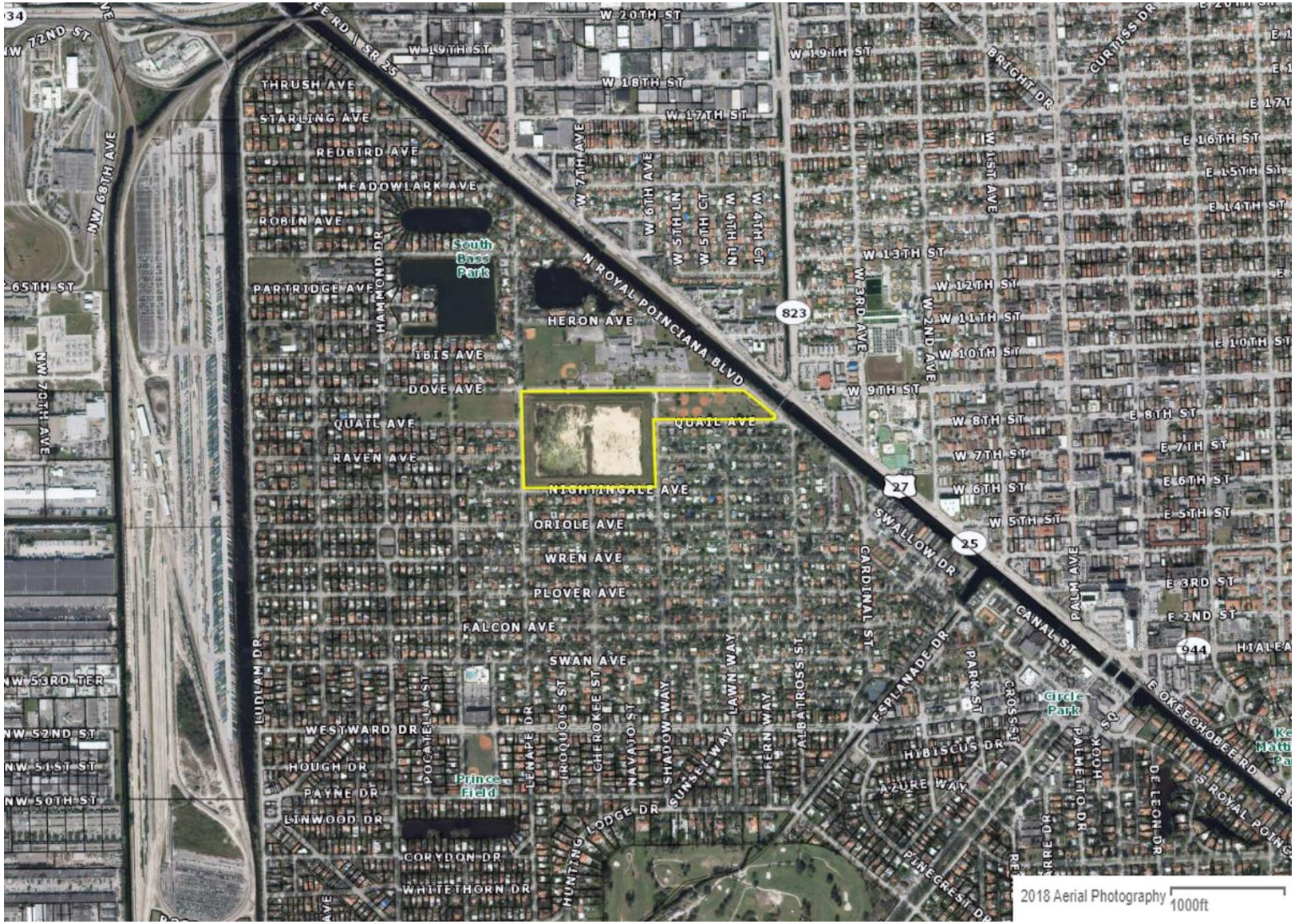

Figure 8: Miami-Dade County Parcel 1

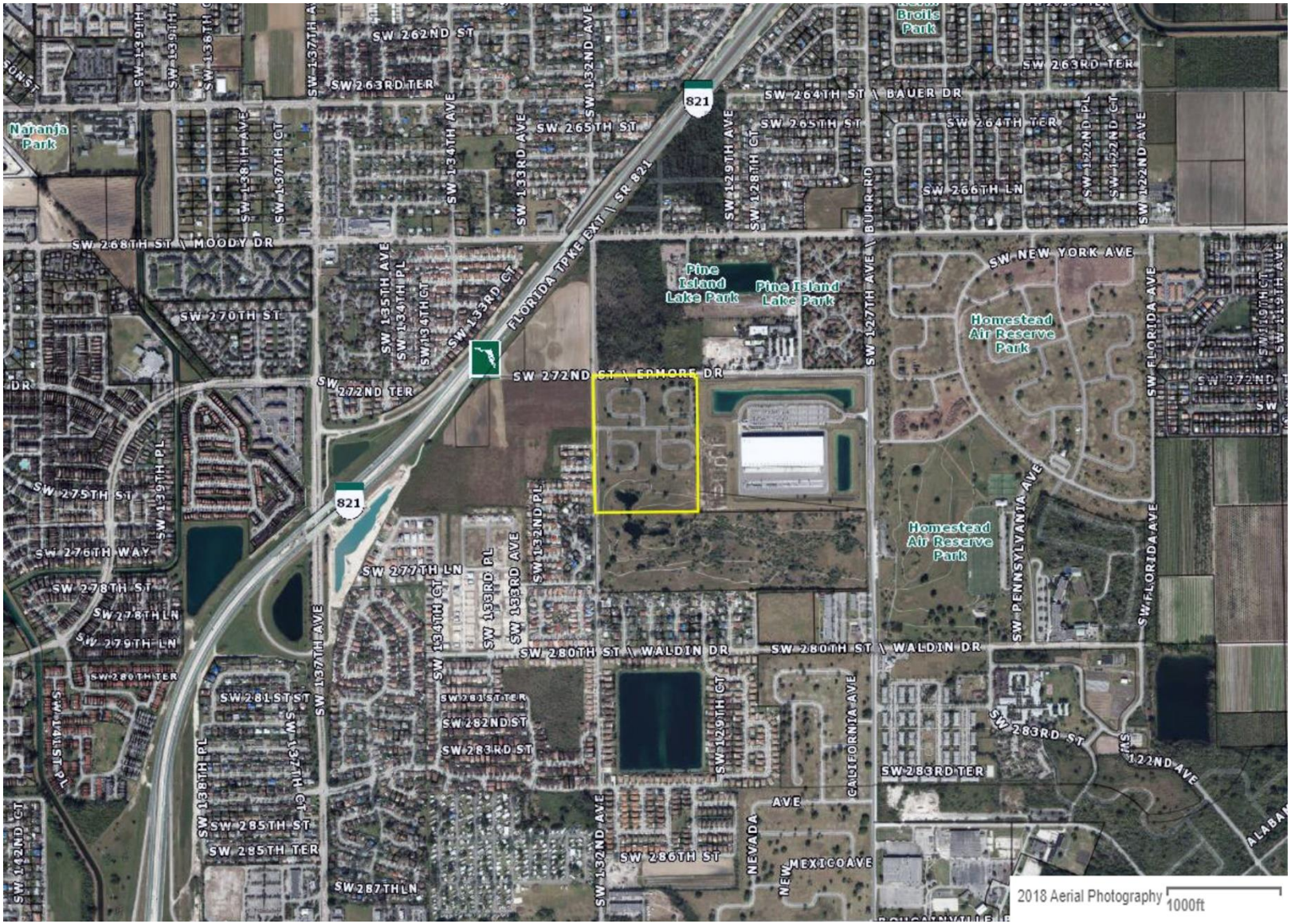

Figure 9: Miami-Dade County Parcel 2

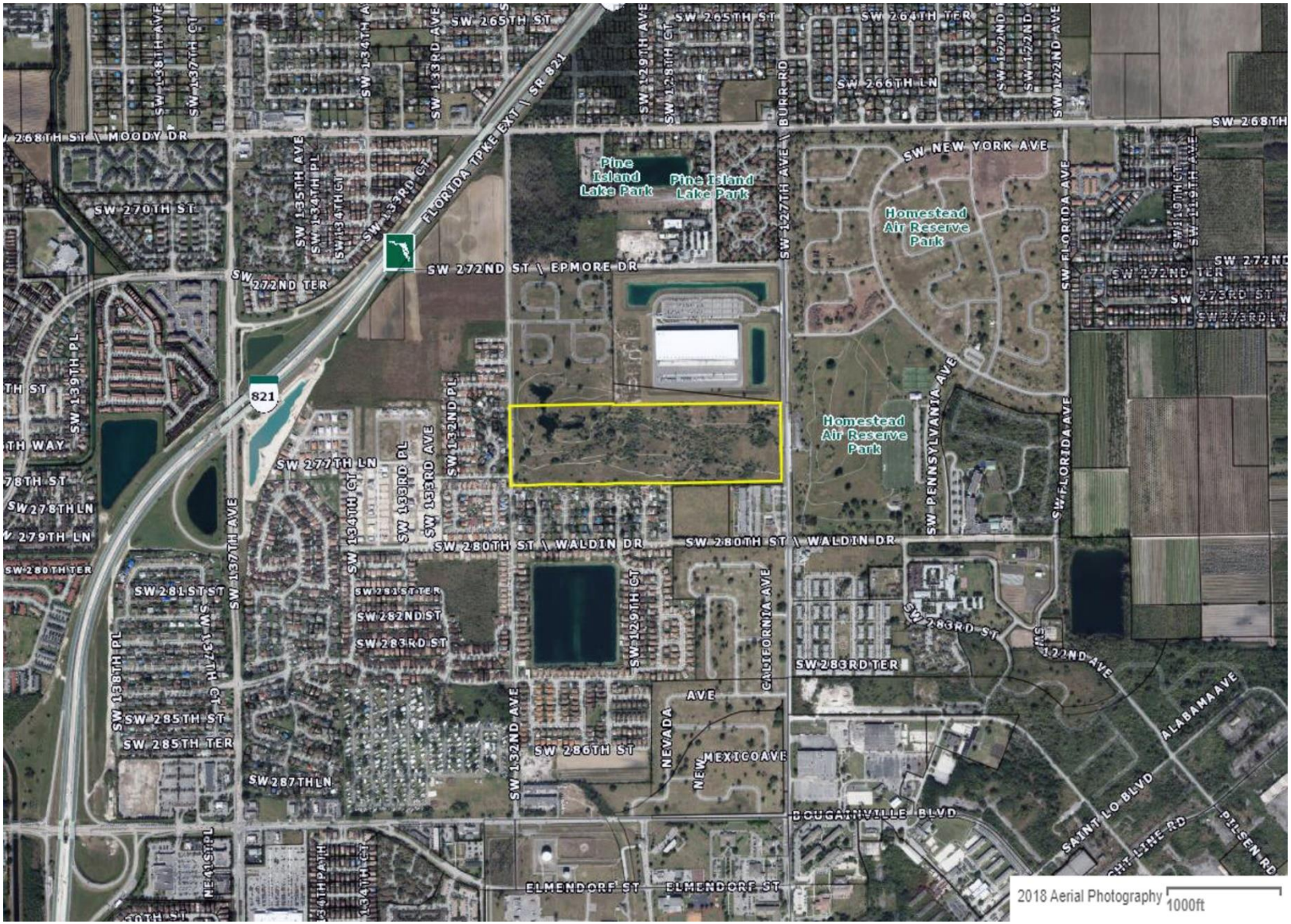

Figure 10: Miami-Dade County Parcel 3

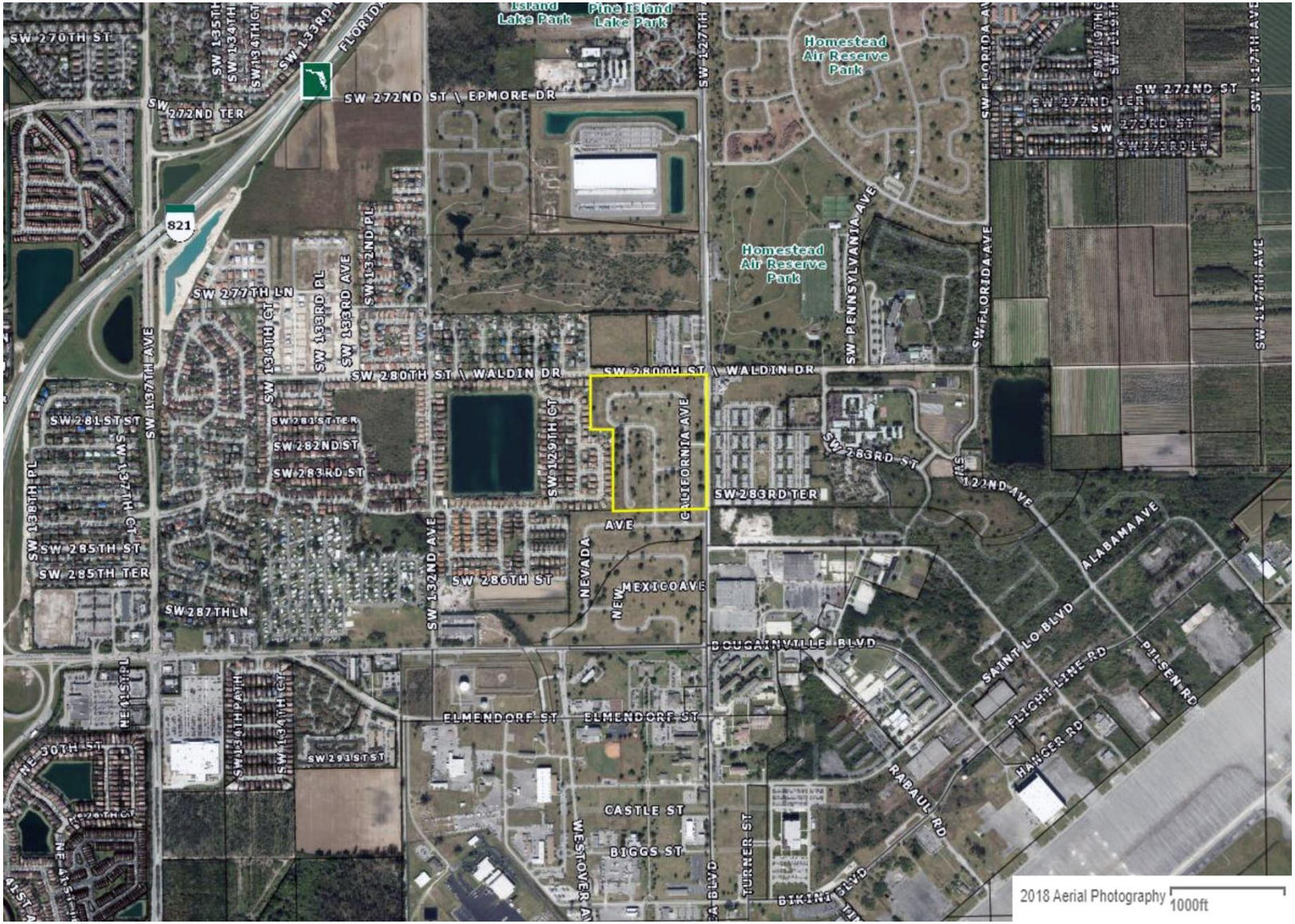

Figure 11: Miami-Dade County Parcel 4

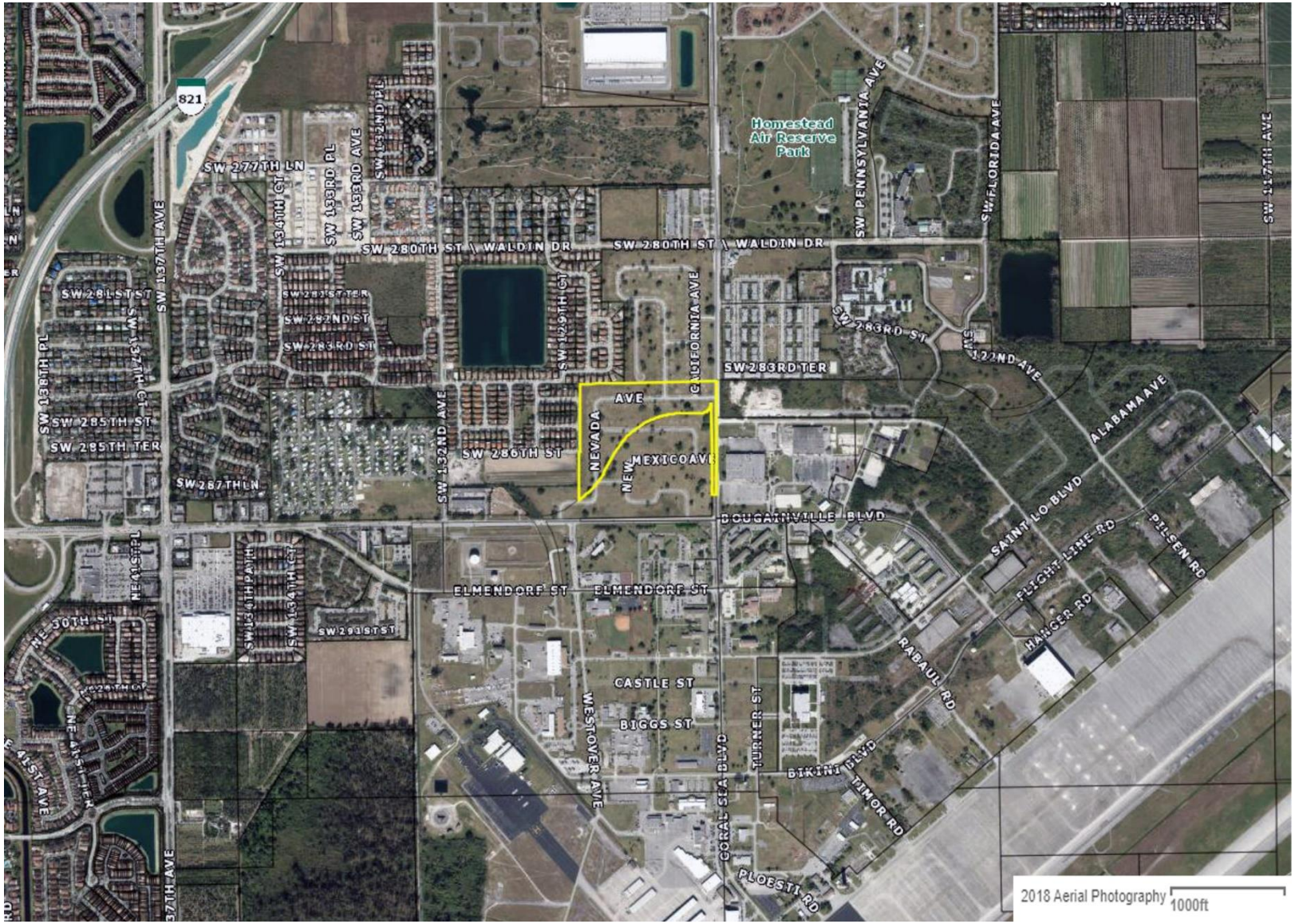

Figure 12: Miami-Dade County Parcel 5

Table 3: Municipality and Zoning

Parcel Number	Folio Number[6]	Owner[6]	Municipality[6]	Primary Zone[6]	Municipal Zoning[6]	Truck Parking Permissible?
FDOT 3705	30-3936-000-0105	FDOT	Unincorporated	8900 Interim (Awaiting Specific Zoning)	GU (Interim District - Uses depend on character of neighborhood, otherwise EU-2 standards apply)	Yes
1	05-3013-002-0010	Miami-Dade Water and Sewer	Miami Springs	8000 Community Facilities	P-1 (Public Property)	No
2	30-6935-000-0400	Miami-Dade County GSA - R/E MGMT	Unincorporated	7600 Intensive Use	IU-3 (Industrial Districts, unlimited manufacturing)	Yes
3	30-6935-000-0061	Miami-Dade County GSA - R/E MGMT	Unincorporated	7600 Intensive Use	IU-3 (Industrial Districts, unlimited manufacturing)	Yes
4	30-7902-000-0040	Miami-Dade County GSA - R/E MGMT	Unincorporated	0100 Single Family (General)	RU-1 (Single-family Residential District 7,500 sq. ft. net)	No
5	30-7902-000-0021	Miami-Dade County GSA - R/E MGMT	Unincorporated	0100 Single Family (General)	RU-1 (Single-family Residential District 7,500 sq. ft. net)	No

[6] Miami-Dade Office of the Property Appraiser

Table 4: Existing and Future Land Use

Parcel Number	Primary Land Use[7]	Existing Land Use[7]	Future Land Use[8]	Compatible with Truck Parking?
FDOT 3705	8080 Vacant Governmental	Vacant Government owned	Restricted Industrial and Office	Yes
1	8080 Vacant Governmental	Wellfields and Municipal Operated Parks	Institutions, Utilities, and Communications	No
2	8080 Vacant Governmental	Vacant Government Owned	Low Density Residential	Yes
3	8080 Vacant Governmental	Vacant Government Owned	Low Density Residential	Yes
4	8080 Vacant Governmental	Vacant Government Owned	Low Density Residential	Yes
5	8080 Vacant Governmental	Vacant Government Owned	Low Density Residential	Yes

Table 5: Lot Size and Estimated Value

Parcel Number	Lot Size (Sq. Ft.)[7]	Estimated Truck Parking Spaces[3]	Estimated Market Value[7]*	Estimated Value per Sq. Ft.[7]	Estimated Value per Truck Parking Space
FDOT 3705	2,071,291.00	475	$2,764,921.00	$1.33	$5,820.89
1	1,542,460.00	354	$3,189,250.00	$2.07	$9,009.18
2	1,319,432.00	303	$6,597,160.00	$5.00	$21,772.81
3	2,029,460.00	466	$10,147,300.00	$5.00	$21,775.32
4	1,293,732.00	297	$1,930,500.00	$1.49	$6,500.00
5	738,908.28	170	$1,102,595.00	$1.49	$6,485.85

*Note that the Miami-Dade County's Office of the Property Appraiser estimated market value may not accurately reflect the property's real market value. The Property Appraiser, Miami-Dade County, and all entities responsible for this report assume no liability for the property value information presented in this report

[7] Miami-Dade County Regulatory and Economic Resources Department Planning Research & Economic Analysis Section
[8] Miami-Dade County Adopted 2020 and 2030 Land Use Map

Table 6: Special Designations and Location within the Urban Development Boundary (UDB)

Parcel Number	Community Development District[7]	Community Redevelopment Area[7]	Empowerment Zone[7]	Enterprise Zone[7]	Urban Development Boundary (UDB)[7]
FDOT 3705	None	None	None	None	Inside
1	None	None	None	None	Inside
2	None	None	None	None	Inside
3	None	None	None	None	Inside
4	None	None	None	None	Inside
5	None	None	None	None	Inside

Table 7: Parcel Accessibility

Parcel Number	Nearest Freeway or Expressway	Number of Signalized Intersections to Nearest Freeway or Expressway*	Nearest Arterial	Lane Capacity of Nearest Arterial	Lane Width of Adjacent Roadway (Ft.)	Pavement Condition of Adjacent Roadway	Need for Access Road Construction
FDOT 3705	HEFT 0.5 miles	0/0	NW 12th St. 0.25 miles	2 WB; 2 EB	12	Paved	Yes
1	SR 826 2.4 miles	5/1	US 27 1.4 miles	3 SB; 3 NB	10	Paved	No
2	HEFT 1.4 miles	2/0	SW 288th St. 0.90 miles	2 WB; 2 EB	11	Paved	No
3	HEFT 2.1 miles	3/0	SW 288th St. 0.65 miles	2 WB; 2 EB	11	Paved	No
4	HEFT 1.7 miles	2/0	SW 288th St. 0.35 miles	2 WB; 2 EB	11	Paved	No
5	HEFT 1.5 miles	2/0	SW 288th St. 0.20 miles	2 WB; 2 EB	11	Paved	No

*Note number of signalized intersections to nearest interstate, freeway, or expressway is stated in the format X/Y, where X = signalized intersections and Y = signalized railroad crossings

Miami-Dade Property Appraiser estimated market value is presented as a measure for comparison only. This measure does not accurately reflect real market rates. Each property should be professionally assessed by a real estate appraiser to obtain a more accurate measure of real market value. Based on the FDOT surplus advertisement, FDOT has appraised Parcel 3705 at a minimum of $25,120,000.00; equivalent to $12.13 per square foot. One comparable sale was found for the Miami-Dade County Parcels 2 – 5 which are located within or near the Homestead Base census-designated place. The comparable sale occurred in June 2017 for two parcels, Folio Number 30-6935-032-0010 and 30-6935-032-0020, totaling 2,137,034 square feet and valued at $38,348,000. This sale is equivalent to $17.95 per square foot. A new FedEx Ground distribution center was recently constructed in the parcels. Hence, the value of the comparable sale anticipated the expected use of the parcels which is comparable to a potential truck parking facility.

Parcel accessibility was measured by using average miles travelled to access the interstate, freeway, or expressway system. Engineering judgement was applied to determine the route most favorable by and for truck drivers; that is, the route that is least disruptive to the surrounding environment, requires passing the least number of tolling gantries, and is nearest to the parcel. This means that the shortest route to the highway system was not always the route evaluated. For example, Parcel 1 is in a highly residential area of Miami Springs. If truck drivers where to access this facility they could travel along Curtis Parkway, which connects NW 36th Street and US 27/SR 25/Okeechobee Road, or along North Royal Poinciana Boulevard which parallels US 27 and connects to NW 74th Street and SR 934/Hialeah Expressway. If trucks were to travel along Curtis Parkway, they would traverse through the City's central business district and would have to use unfavorable infrastructure such as roadways with on-street angle parking and a traffic circle. If trucks were to travel along North Royal Poinciana Boulevard they would avoid these issues and impact fewer residents given one side of the street faces towards the Miami Canal (C-6).

A similar case occurs with Parcel 2 which can be accessed from three (3) interchanges without incurring any additional tolling cost:

- HEFT and SW 112th Avenue (Exit 9)
- HEFT and SW 137th Avenue/Speedway Boulevard (Exit 6)
- HEFT and SW 288th Street/Biscayne Drive (Exit 5)

Assuming most truckers will travel southbound on the HEFT to access this location, the shortest route is through Exit 9. However, this requires truckers to use a clover leaf exit ramp and travel along a segment of SW 268th Street with multiple driveways to single family homes. If truckers are guided to use Exit 6, they avoid an extra signalized intersection and multiple friction points with vehicular traffic. This is the same situation for Parcel 3.

For Parcels 4 and 5, the nearest interchange was assumed to be Exit 5. This route takes trucks through the nearest arterial, SW 288th Street. This route, however, is not ideal given a school zone exists from approximately Old Biscayne Drive to SW 132nd Avenue.

Tier 2 – Environmental Characteristics

The environmental impacts of developing a truck parking facility can be significant if not managed, avoided, minimized, or mitigated appropriately. Due to the large and heavy nature of trucks, these vehicles require large quantities of diesel, oil, and other synthetic materials that may lead to contamination. Furthermore, trucks usually generate substantial noise even though new technologies are gradually resolving this issue. There is also a higher inherent risk of operating large and heavy vehicles given that the bigger mass may lead to more severe accidents at lower speeds. Hence, it is essential to properly locate truck parking facilities and route drivers in a manner that minimizes environmental impacts. This tier looks at eight (8) critical environmental characteristics for successful development of truck parking facilities.

Figure 13: Alternate Route from Parcel 1 to US 27

Figure 15: Alternate Route from Parcel 2 to HEFT/SR 821

Figure 14: Preferred Route from Parcel 1 to US 27

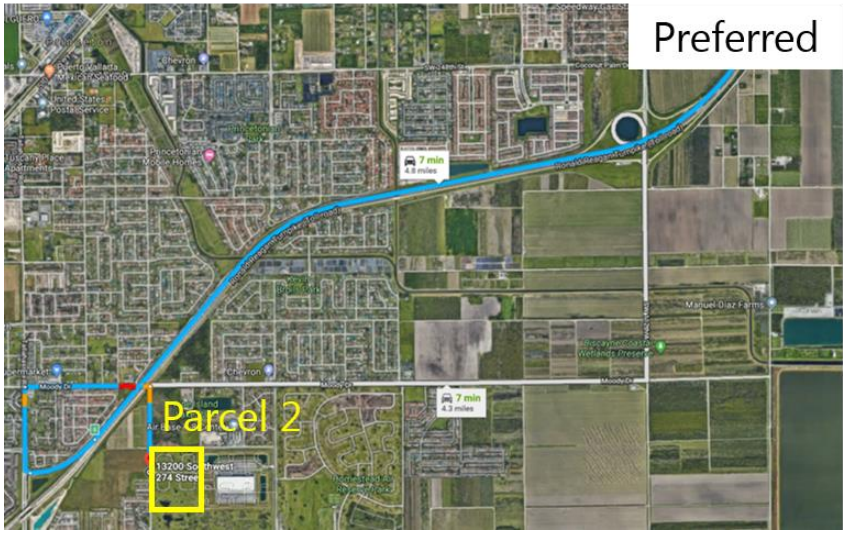

Figure 16: Preferred Route from Parcel 2 to HEFT/SR 821

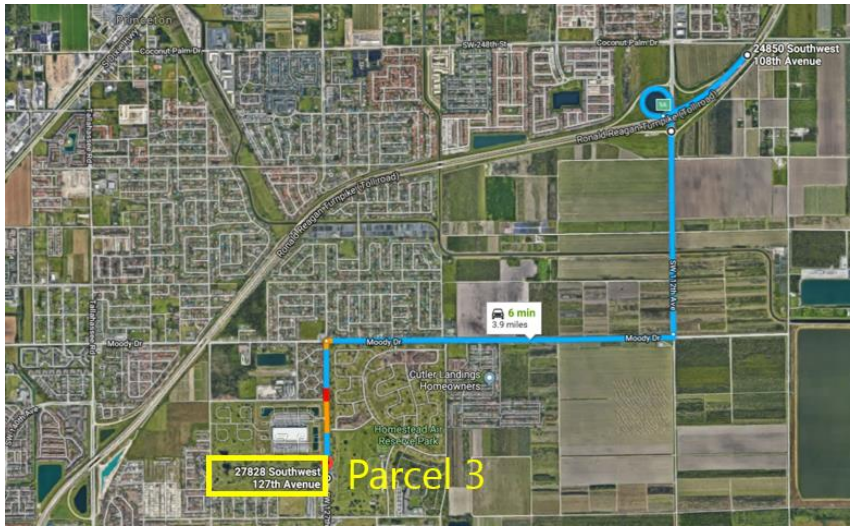

Figure 17: Alternate Route from Parcel 3 to HEFT/SR 821

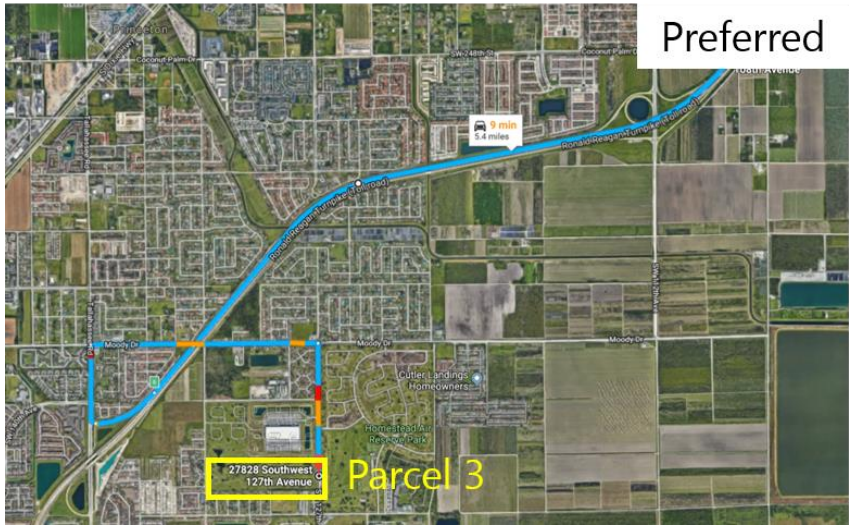

Figure 18: Preferred Route from Parcel 3 to HEFT/SR 821

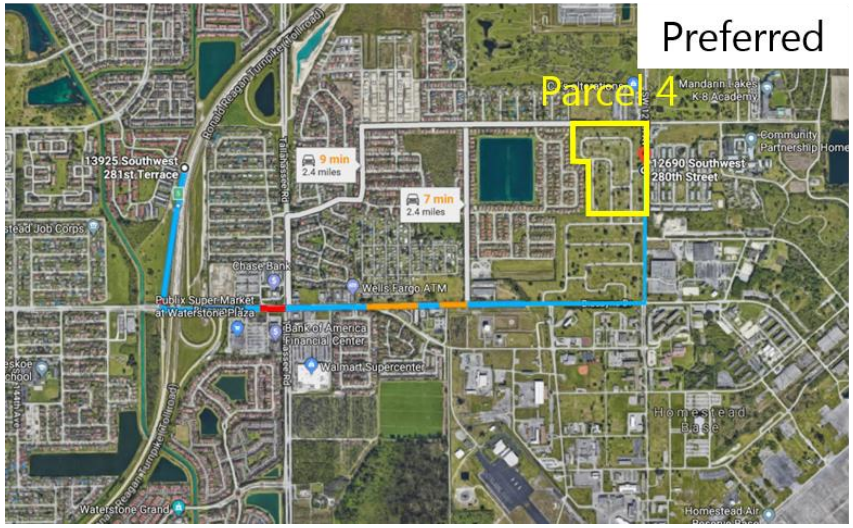

Figure 19: Preferred Route from Parcel 4 to HEFT/SR 821

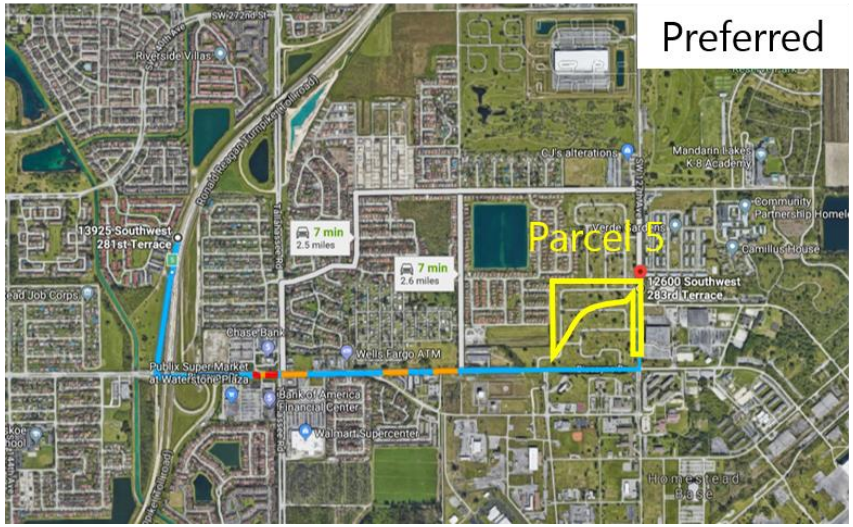

Figure 20: Preferred Route from Parcel 5 to HEFT/SR 821

Surrounding Existing Land Use

The surrounding land use is critical in determining if a truck parking facility will be in harmony with its physical environment. Truck parking facilities along the border of residential and industrial districts may face greater scrutiny and public concern as compared to facilities engulfed by industrial activity. Like the zoning and land use analyses, this issue expands the compatibility judgement based on surrounding activities. The following conclusions can be determined from **Table 8** and **Figure 21** through **Figure 25**:

- Parcel 1
  - Adjacent to the Miami Springs Senior High School and Dove Avenue Park
  - Approximately 70% of the surrounding land use is incompatible with truck parking (i.e. comprised of institutional, educational, residential, recreational, and environmental land uses)
- Parcel 2
  - Adjacent to the new Homestead FedEx Ground distribution center
  - Approximately 60% of the surrounding land use is incompatible with truck parking
- Parcel 3
  - Adjacent to the new Homestead FedEx Ground distribution center
  - Approximately 52% of the surrounding land use is incompatible with truck parking
- Parcel 4
  - Approximately 39% of the surrounding land use is incompatible with truck parking
- Parcel 5
  - Approximately 30% of the surrounding land use is incompatible with truck parking

Table 8: Surrounding Existing Land Use

Parcel Number	Industrial, Utilities or Transportation (%)	Commercial and Services (%)	Farmland (%)	Institutional or Educational (%)	Single Family (%)	Multi-family (%)	Recreational or Environmental (%)
FDOT 3705	86.07	1.47	0.00	0.00	9.90	2.56	0.00
1	24.96	5.38	0.37	3.82	52.6	3.02	9.85
2	12.32	2.62	24.86	3.3	38.09	11.83	6.98
3	16.97	2.72	27.93	2.79	30.91	10.23	8.45
4	30.03	3.60	27.36	2.73	20.39	5.58	10.31
5	41.03	5.30	23.77	2.70	13.68	1.40	12.12

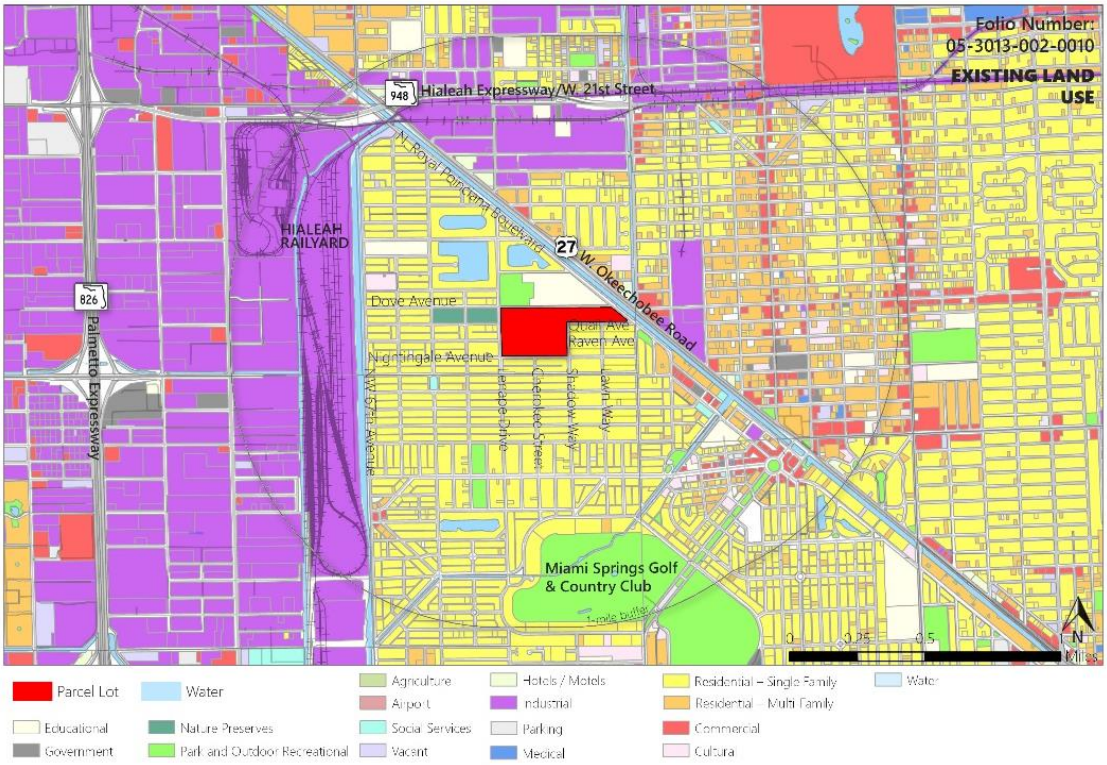

Figure 21: Miami-Dade County Parcel 1 Surrounding Land Use

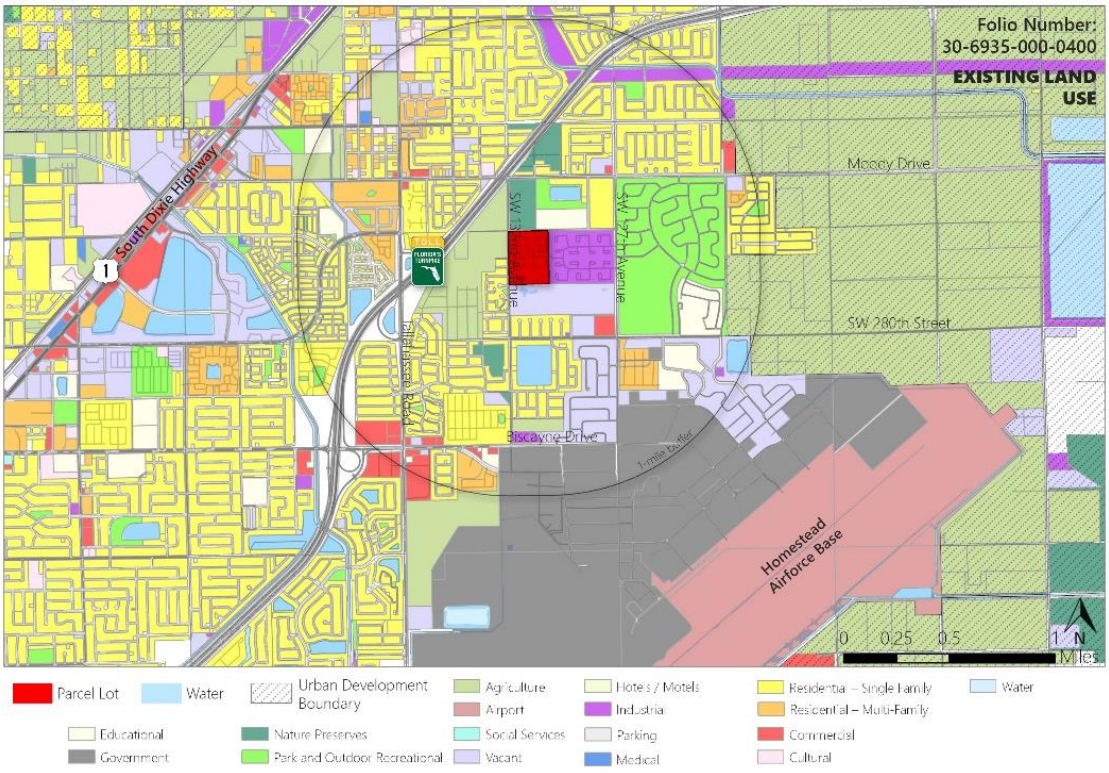

Figure 22: Miami-Dade County Parcel 2 Surrounding Land Use

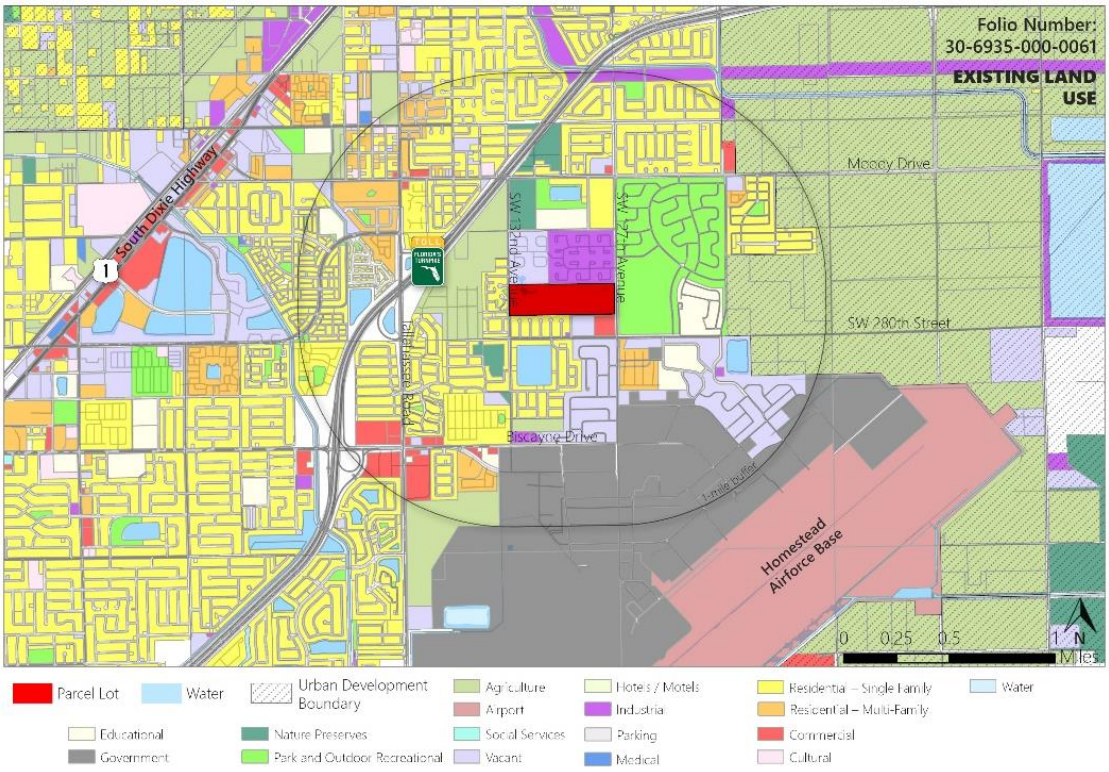

Figure 23: Miami-Dade County Parcel 3 Surrounding Land Use

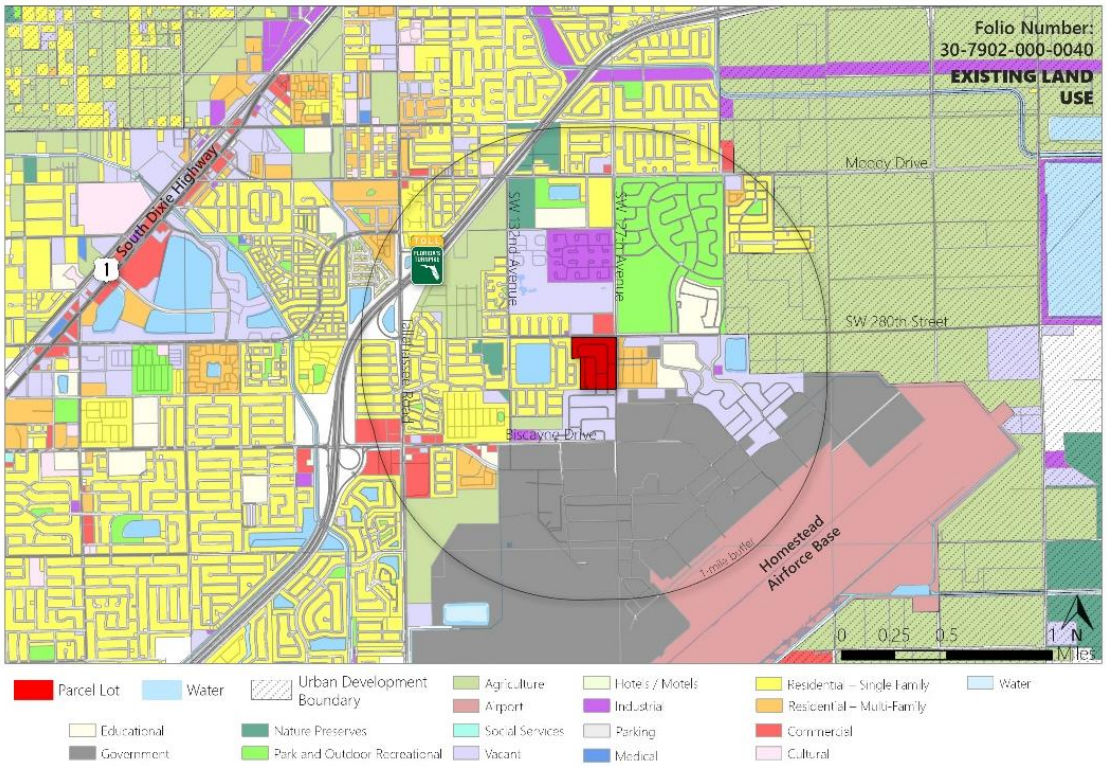

Figure 24: Miami-Dade County Parcel 4 Surrounding Land Use

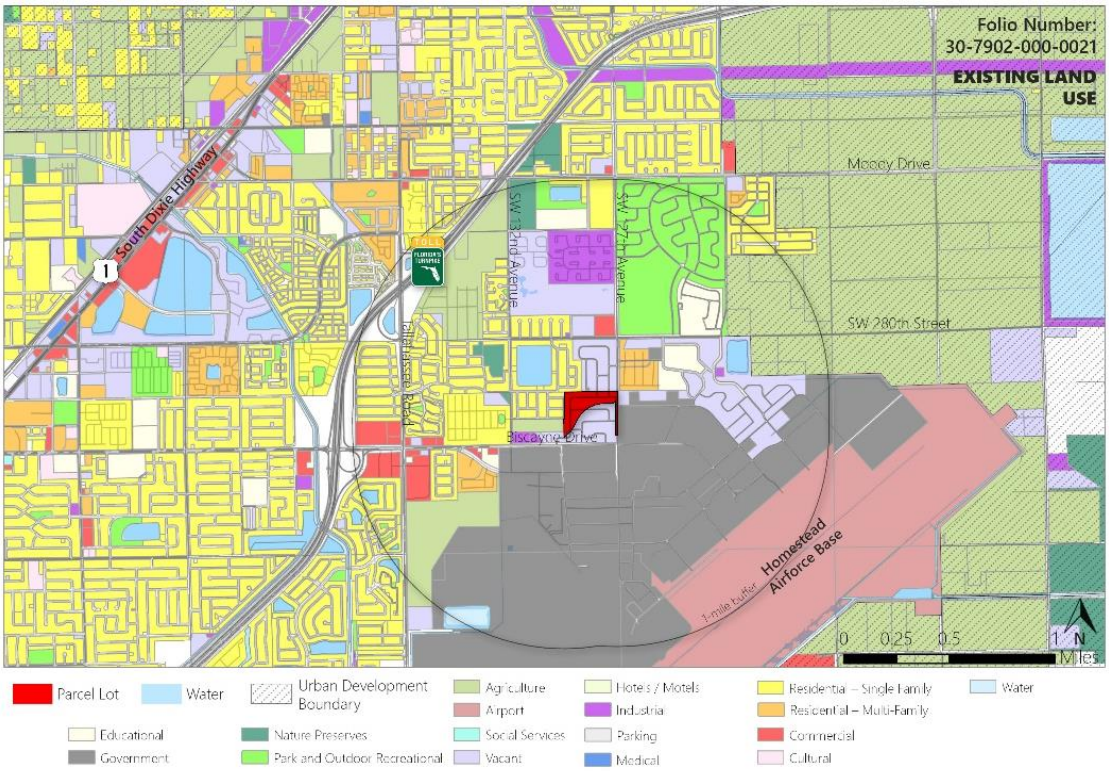

Figure 25: Miami-Dade County Parcel 5 Surrounding Land Use

Neighborhood Features

The neighborhood features explored are sensitive locations to noise and industrial uses. Some of these features are schools, libraries, daycares, universities/colleges, and hospitals. The location of emergency response stations was also examined to understand proximity to beneficial services. **Table 9**,

Table 10, and **Figure 26** through **Figure 30,** summarize the quantity and location of observed neighborhood features.

Table 9: Neighborhood Features

Parcel Number	Community Centers	Golf Courses	Parks	Trails	Schools	Assisted Housing	Health Care Facilities	Social Services	Group Care	Religious Centers
FDOT 3705	0	0	0	0	2	0	0	0	3	0
1	8	1	17	3	31	3	23	2	46	31
2	3	0	4	1	12	2	3	3	21	8
3	4	0	4	0	12	2	3	2	20	6
4	2	0	2	0	8	0	3	2	17	2
5	1	0	2	0	8	0	3	2	13	0

Table 10: Emergency Response

Parcel Number	Law Enforcement	Fire Stations
FDOT 3705	1	0
1	1	1
2	0	0
3	0	0
4	0	1
5	0	1

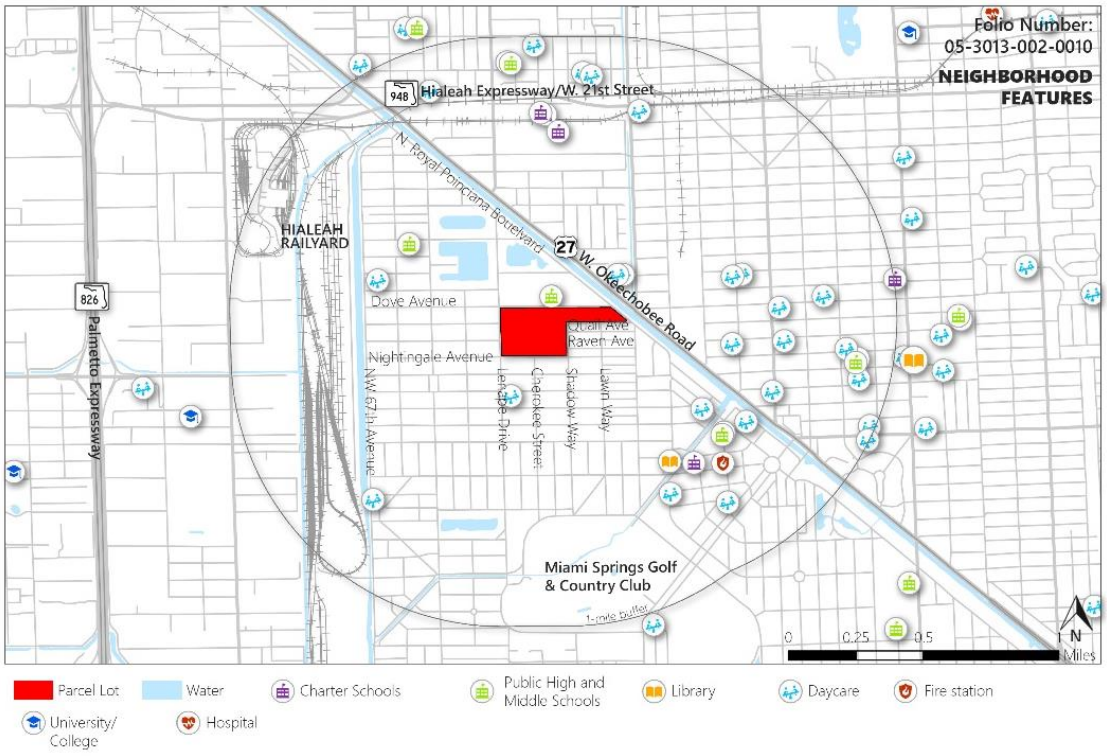

Figure 26: Miami-Dade County Parcel 1 Neighborhood Features

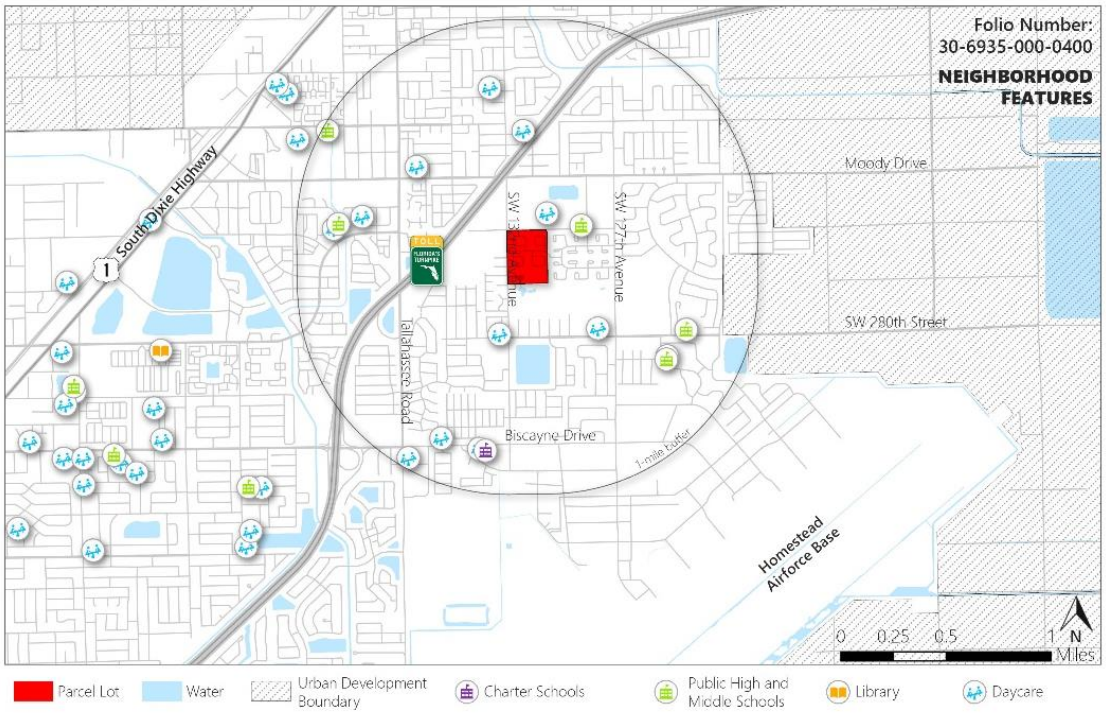

Figure 27: Miami-Dade County Parcel 2 Neighborhood Features

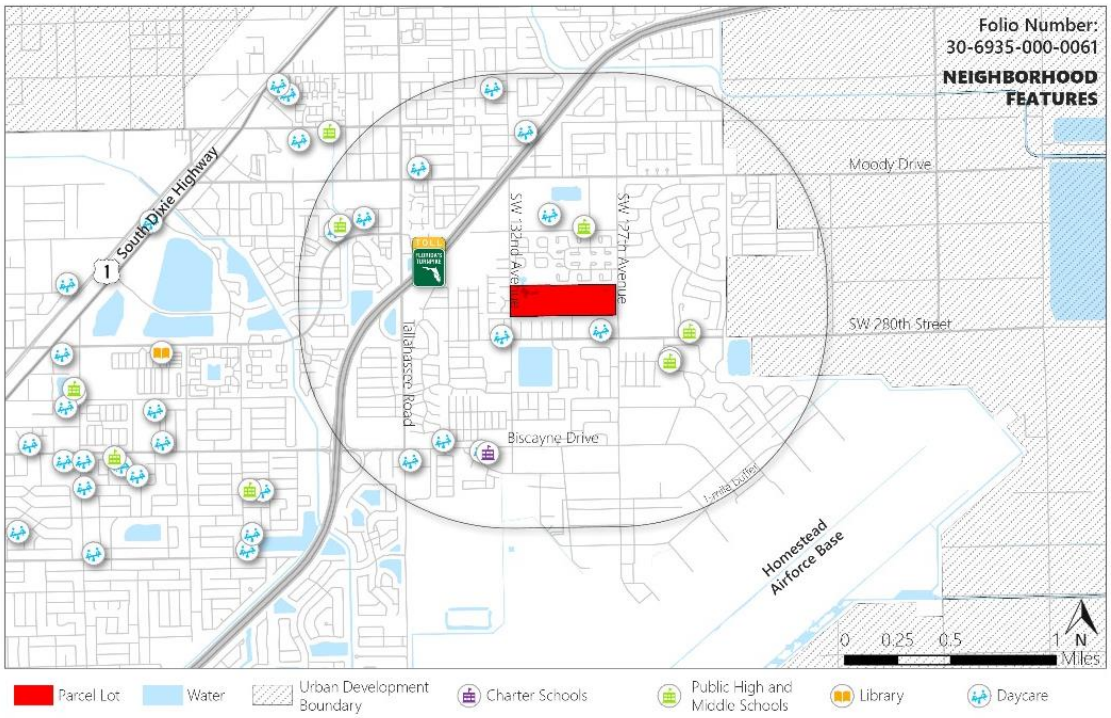

Figure 28: Miami-Dade County Parcel 3 Neighborhood Features

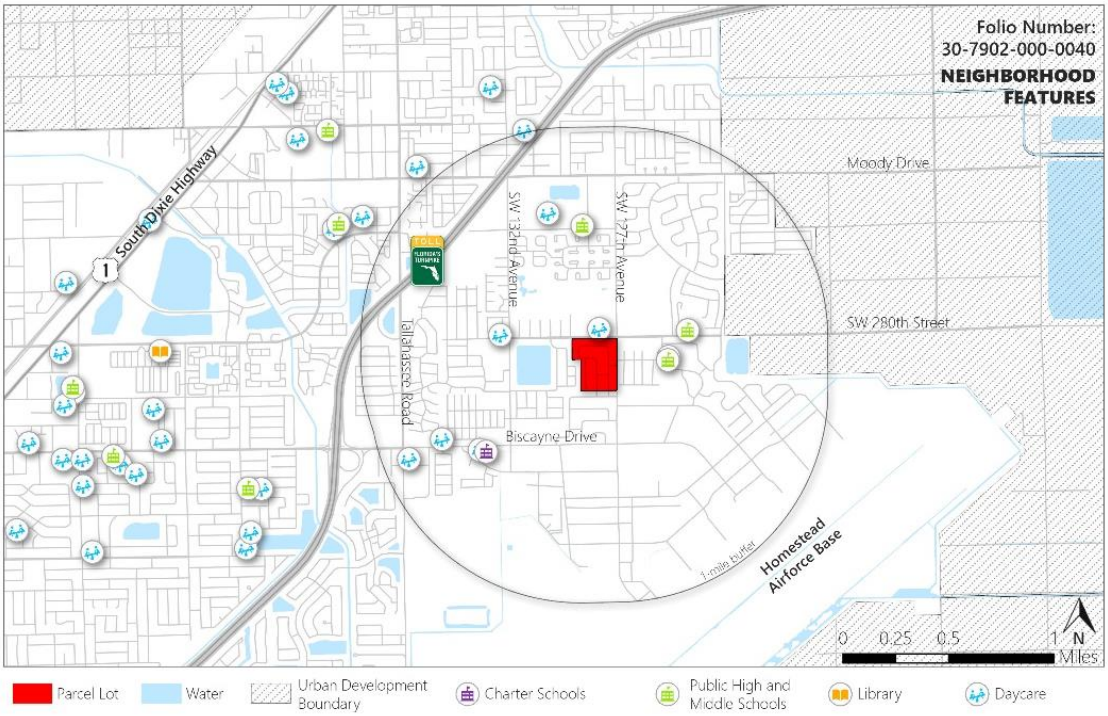

Figure 29: Miami-Dade County Parcel 4 Neighborhood Features

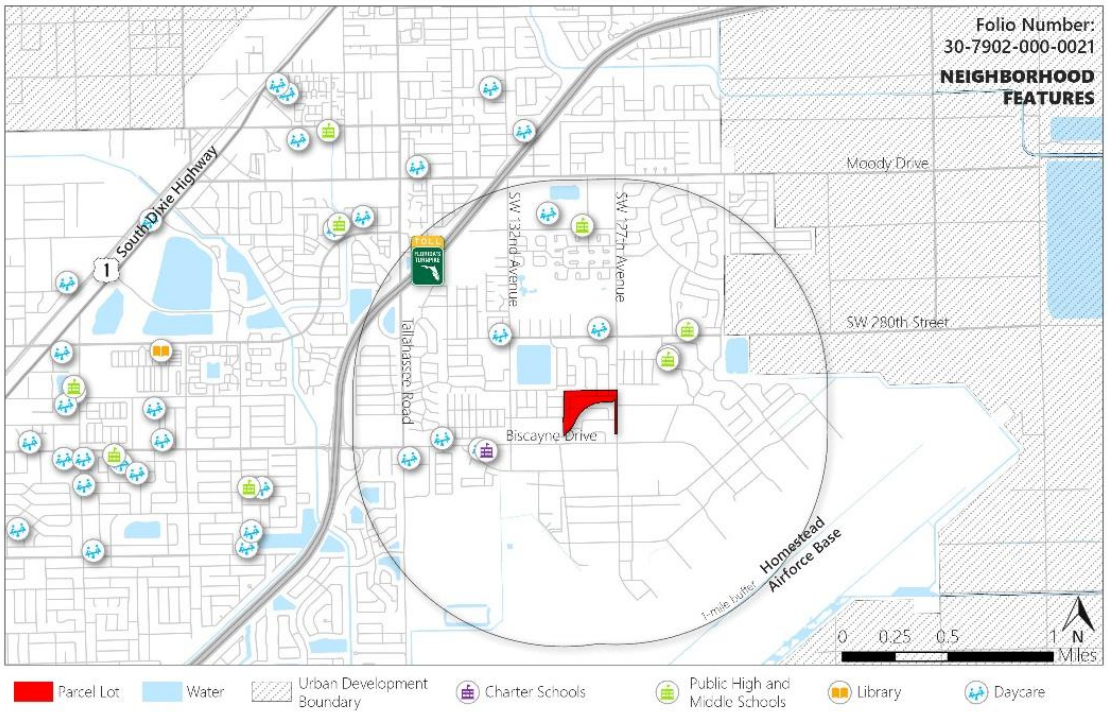

Figure 30: Miami-Dade County Parcel 5 Neighborhood Features

Noise Abatement

Noise abatement was measured following Part 2, Chapter 18 of the FDOT PD&E Manual. This table ranks land uses based on their noise sensitivity from A being the most sensitive to F/G being the least sensitive. The following list orders each parcel from most significant impacts to least based on the quantity of noise sensitive receptors within a 1-mile buffer of each parcel.

- Miami-Dade County Parcel 1
- Miami-Dade County Parcel 2
- Miami-Dade County Parcel 3
- Miami-Dade County Parcel 4
- Miami-Dade County Parcel 5
- FDOT Parcel 3705

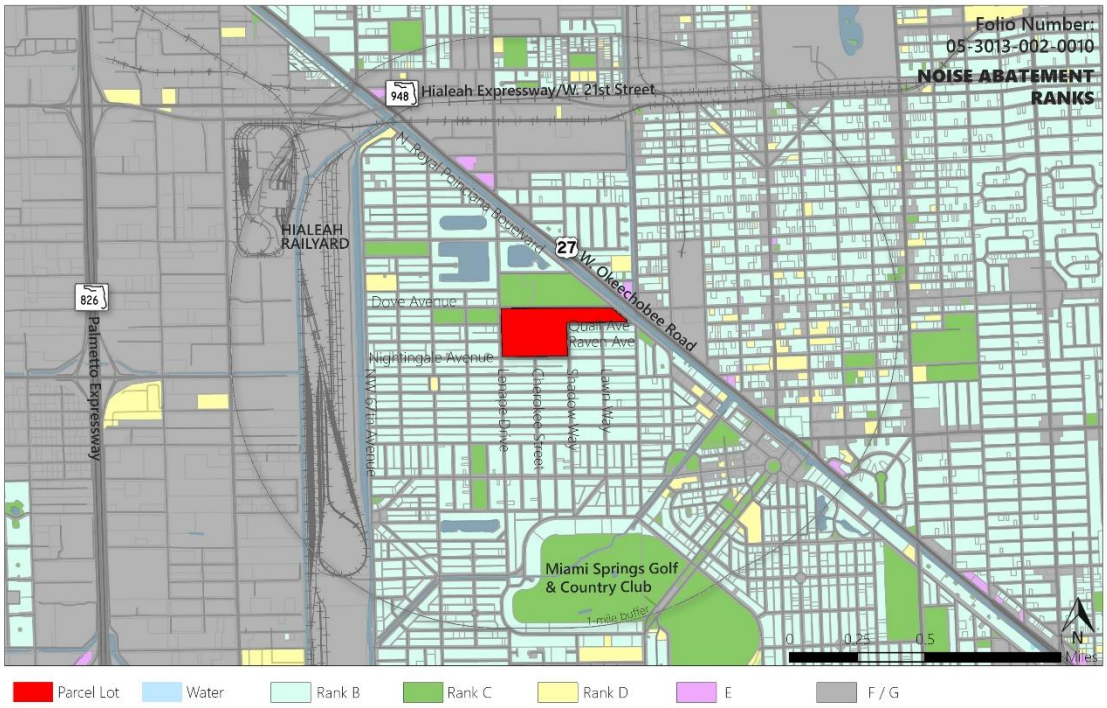

Figure 31: Miami-Dade County Parcel 1 Noise Sensitive Receptors

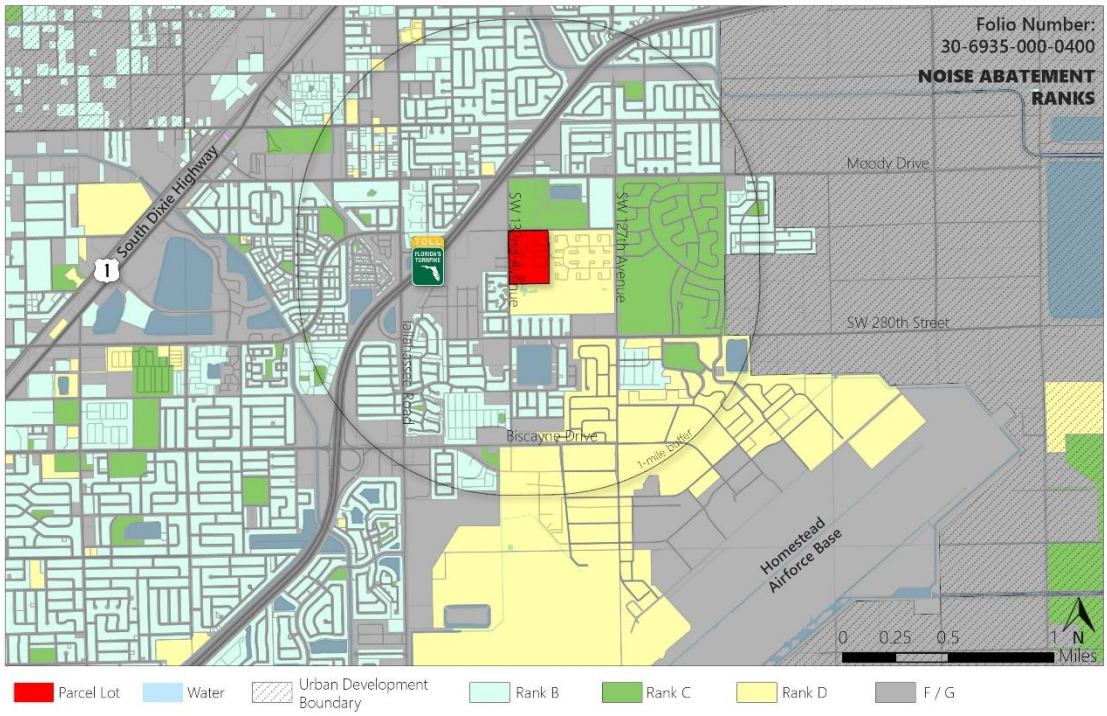

Figure 32: Miami-Dade County Parcel 2 Noise Sensitive Receptors

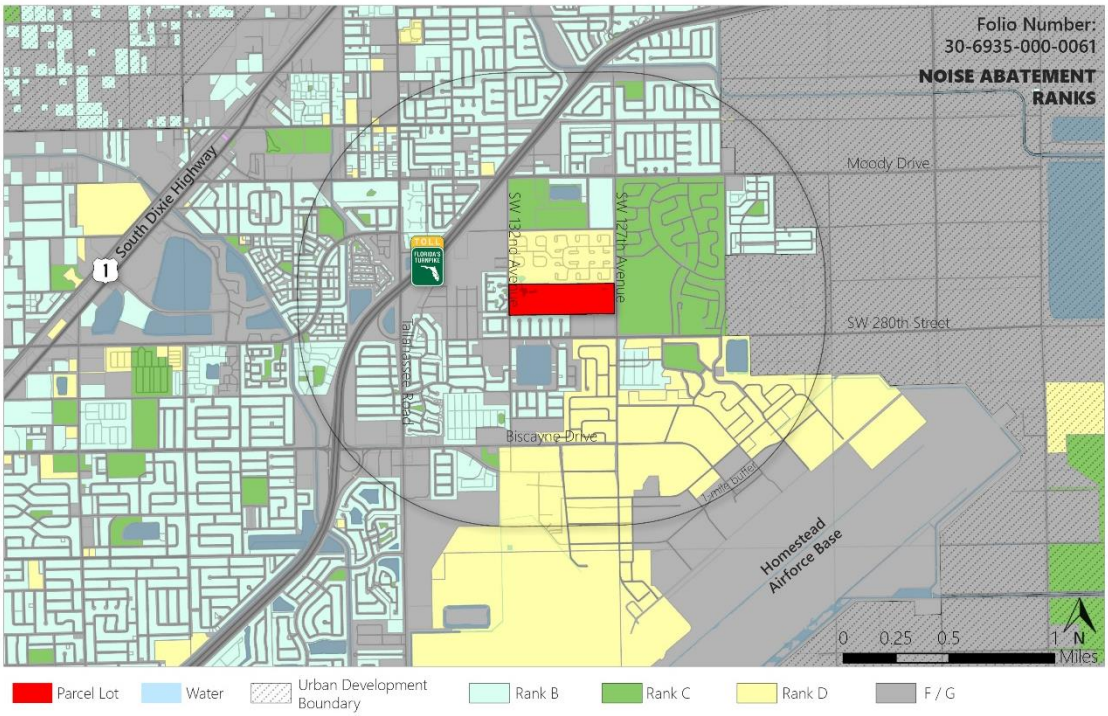

Figure 33: Miami-Dade County Parcel 3 Noise Sensitive Receptors

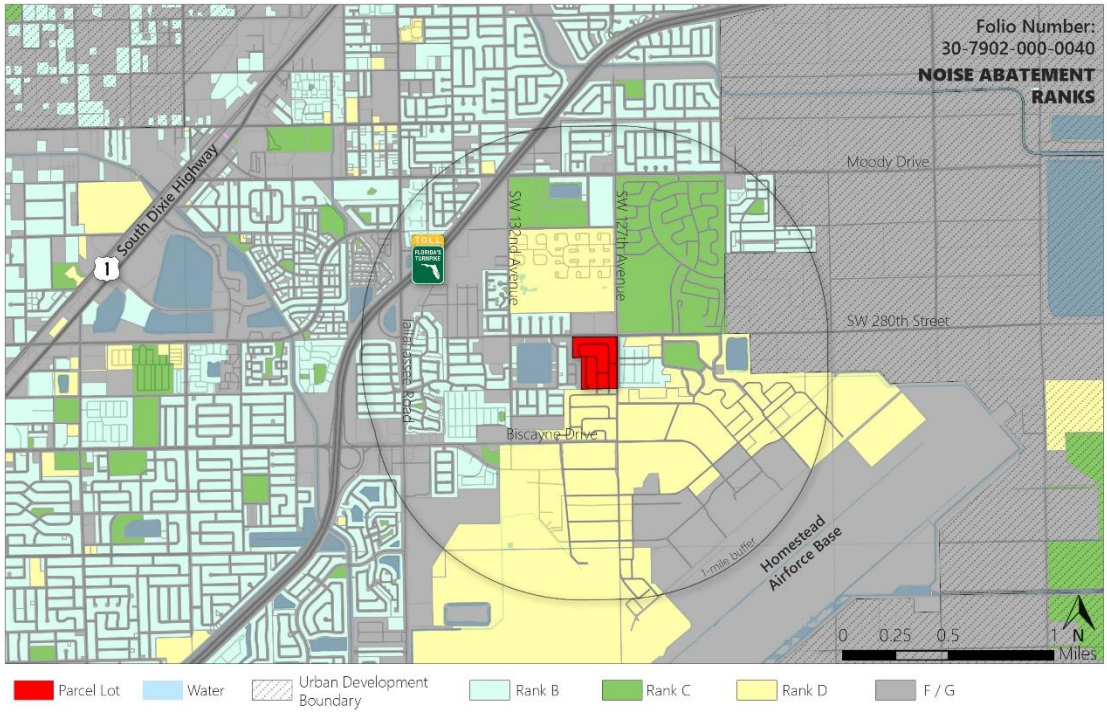

Figure 34: Miami-Dade County Parcel 4 Noise Sensitive Receptors

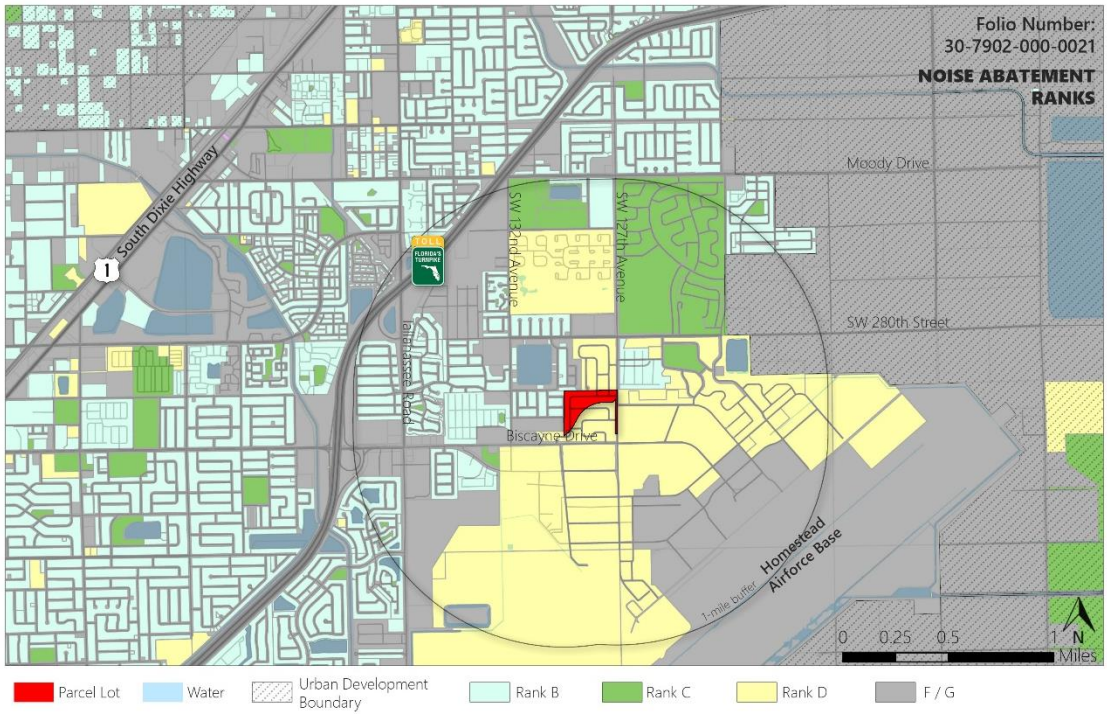

Figure 35: Miami-Dade County Parcel 5 Noise Sensitive Receptors

Wellfield Protection Areas

Miami-Dade County's potable water comes from the Biscayne Aquifer which is easily replenished through the County's limestone rock formation. This makes the aquifer vulnerable to contamination. Hence, the County has developed Wellfield Protection Areas to regulate potential contaminants within the drawdown areas of potable water wells. These areas are regulated by Chapter 24, Article III, Division 2 of the County's Code of Ordinances which restricts the handling of hazardous materials and specific activities within Wellfield Protection Areas. This is significant for truck parking development given that limitations apply to diesel fueling and transportation of certain materials. **Figure 36** through **Figure 40** illustrate the location of Wellfield Protection Areas near each parcel. The following list orders each parcel from most impact to least impact based on the category and quantity of Wellfield Protection Area within a 1-mile buffer.

- Miami-Dade County Parcel 1
- FDOT Parcel 3705
- Miami-Dade County Parcel 5
- Miami-Dade County Parcel 3
- Miami-Dade County Parcel 4
- Miami-Dade County Parcel 2

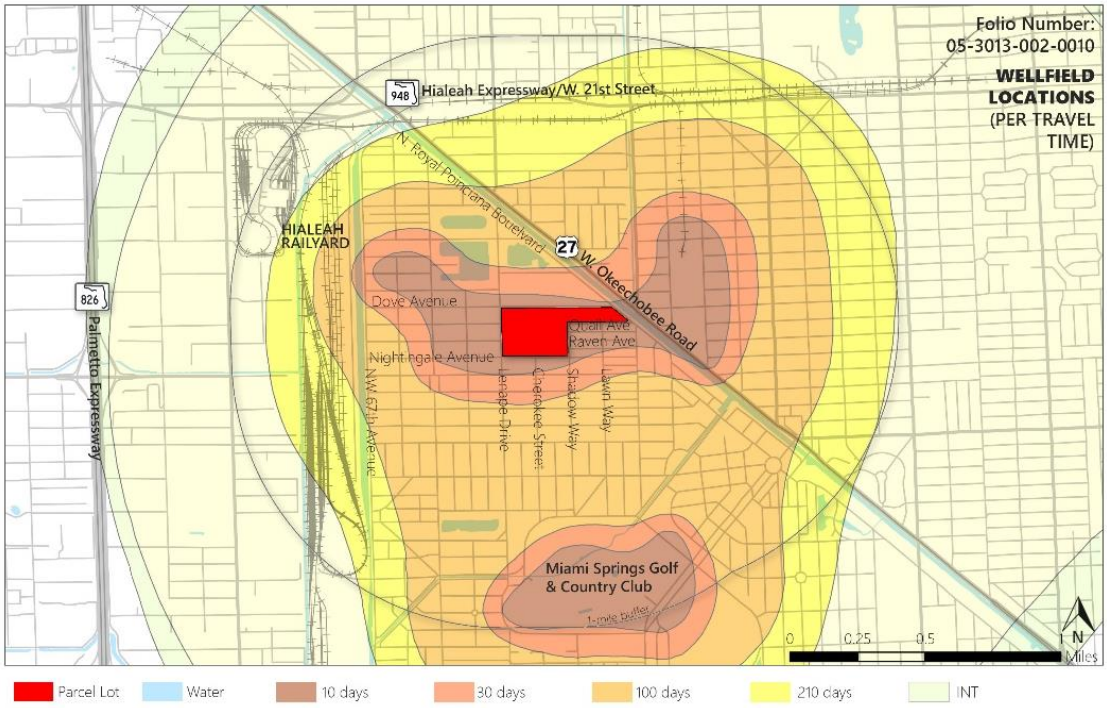

Figure 36: Miami-Dade County Parcel 1 Wellfield Protection Areas

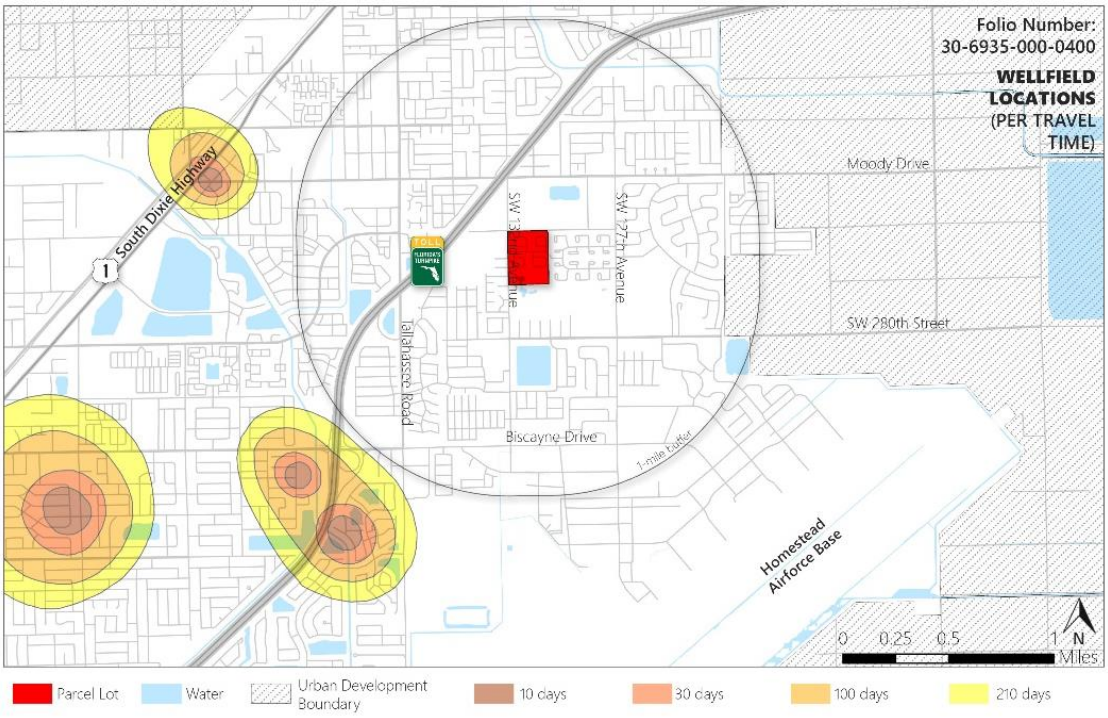

Figure 37: Miami-Dade County Parcel 2 Wellfield Protection Areas

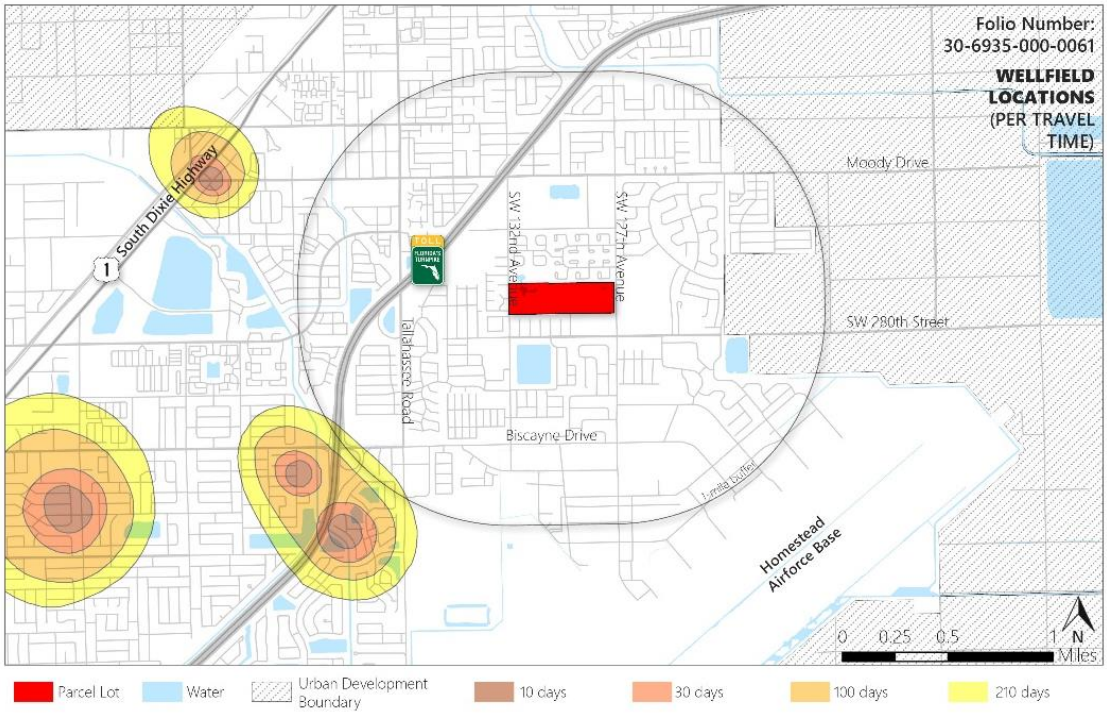

Figure 38: Miami-Dade County Parcel 3 Wellfield Protection Areas

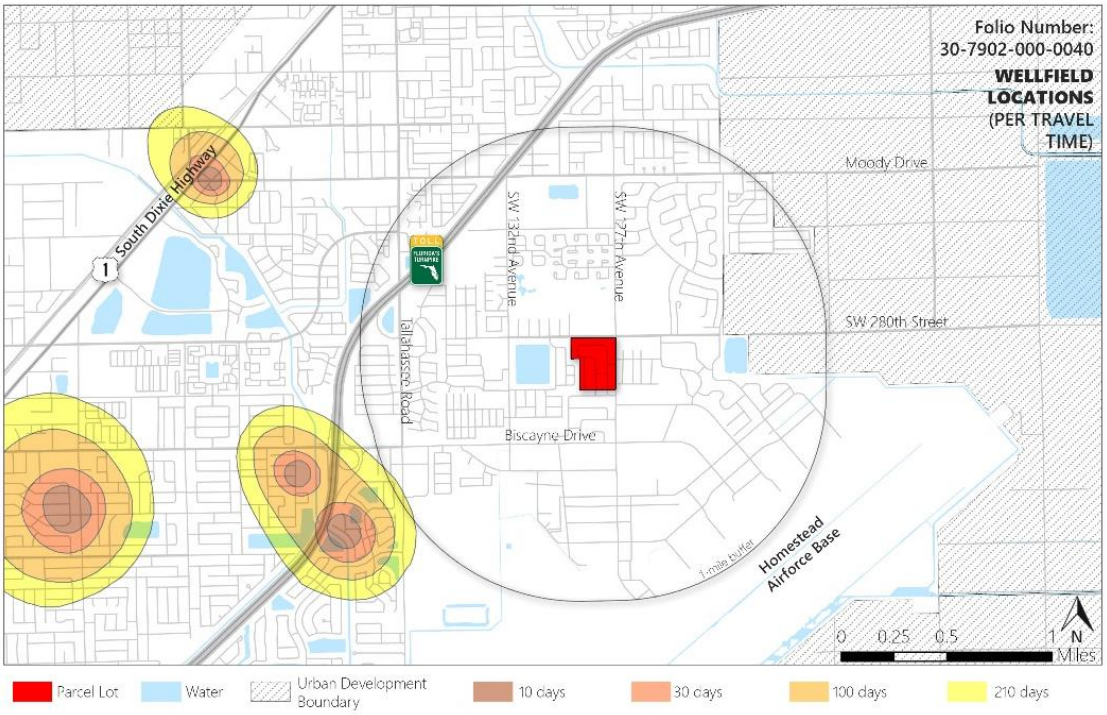

Figure 39: Miami-Dade County Parcel 4 Wellfield Protection Areas

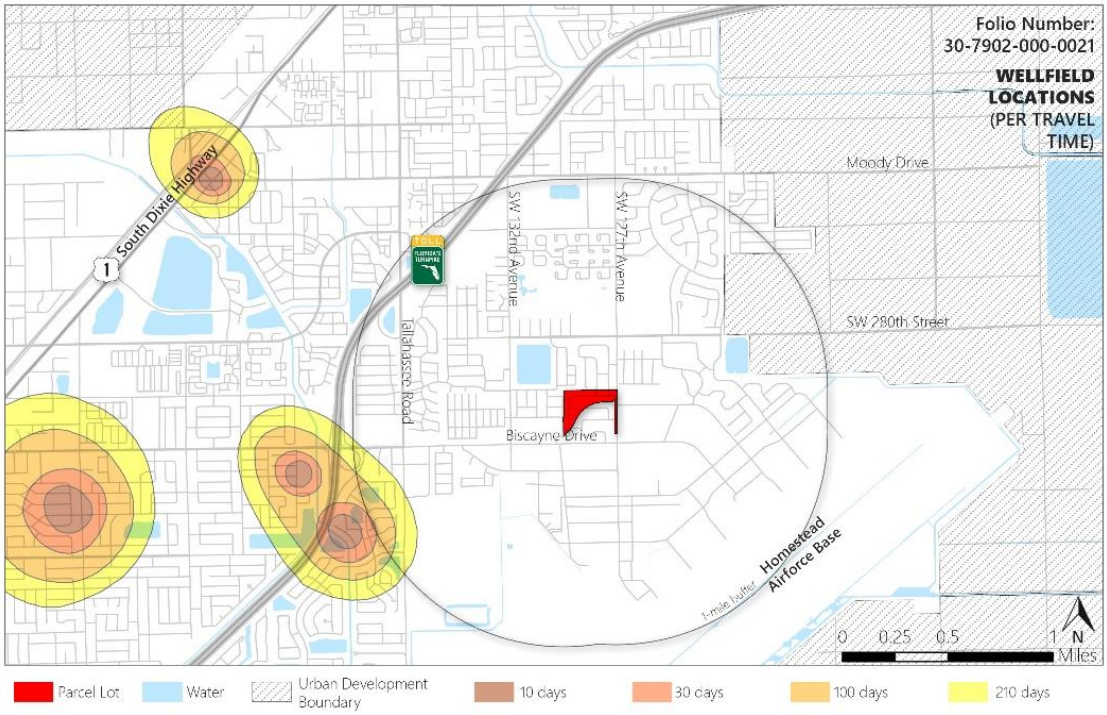

Figure 40: Miami-Dade County Parcel 5 Wellfield Protection Areas

Contaminated Locations

Miami-Dade County's Department of Environmental Resources publishes a GIS file of locations where environmental contamination of the soil or groundwater has been documented. This issue is explored to avoid the concentration of contaminates in an area and to reduce the costs associated with contamination remediation of existing sites. **Figure 41** to **Figure 45** illustrate the surrounding contaminated sites for each of the proposed Miami-Dade parcels. **Table 11** summarizes the total number of contaminated sites within a 1-mile buffer of each parcel.

Table 11: Contaminated Locations

Parcel Number	Parcel Contaminated?	Contaminated Sites within 1-mile
FDOT 3705	No	6
1	No	9
2	No	16
3	No	16
4	No	16
5	No	16

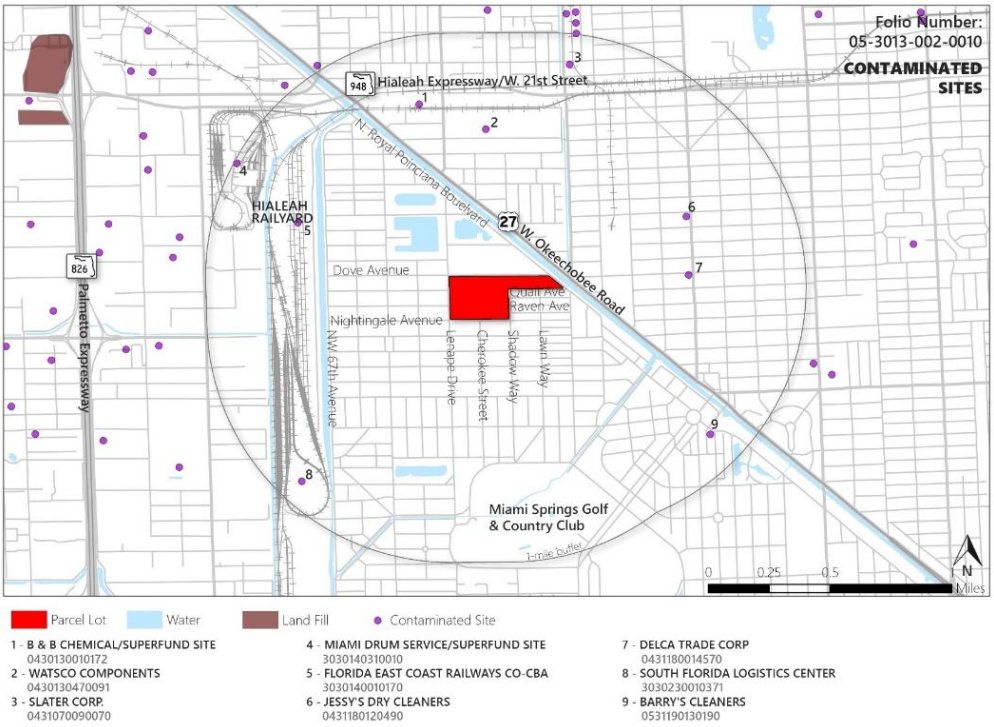

Figure 41: Miami-Dade County Parcel 1 Surrounding Contaminated Sites

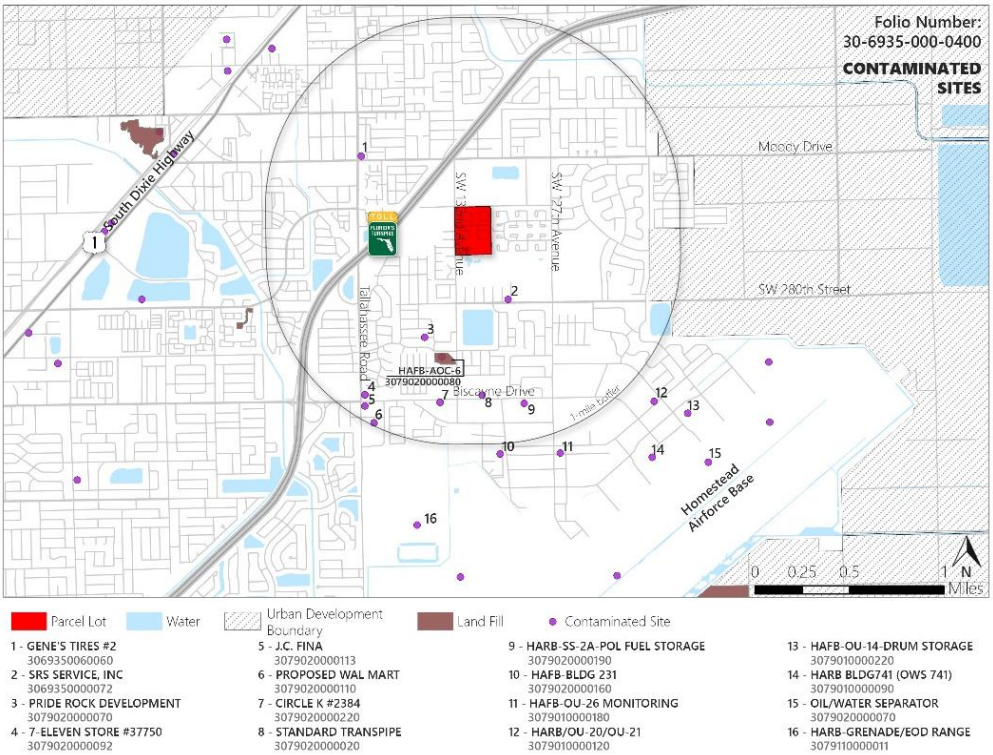

Figure 42: Miami-Dade County Parcel 2 Surrounding Contaminated Sites

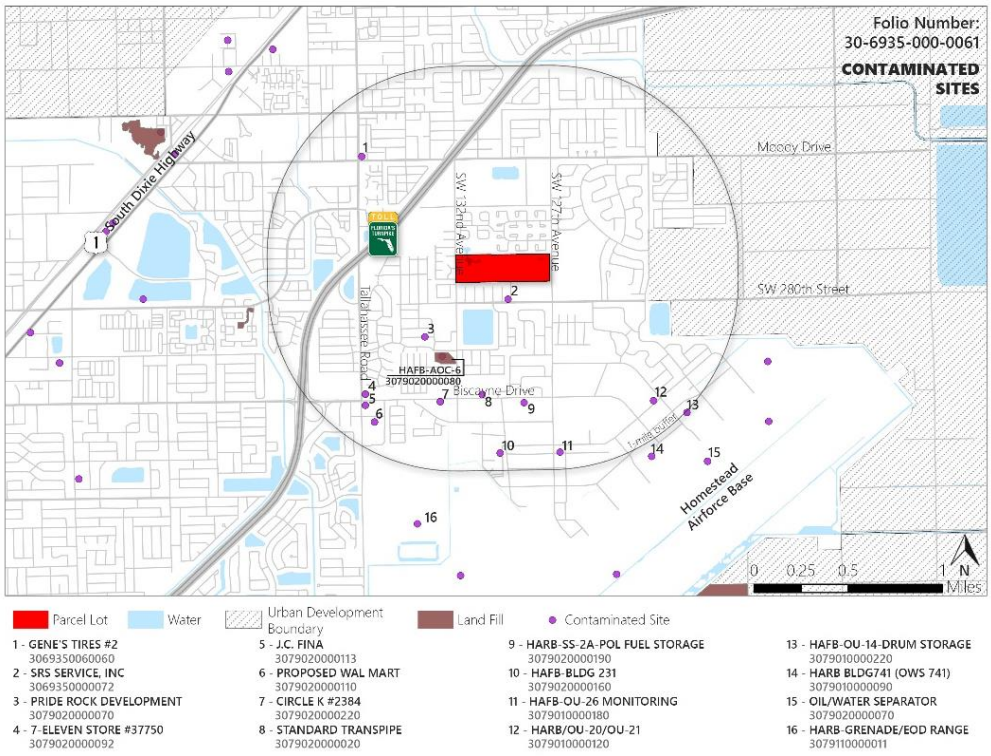

Figure 43: Miami-Dade County Parcel 3 Surrounding Contaminated Sites

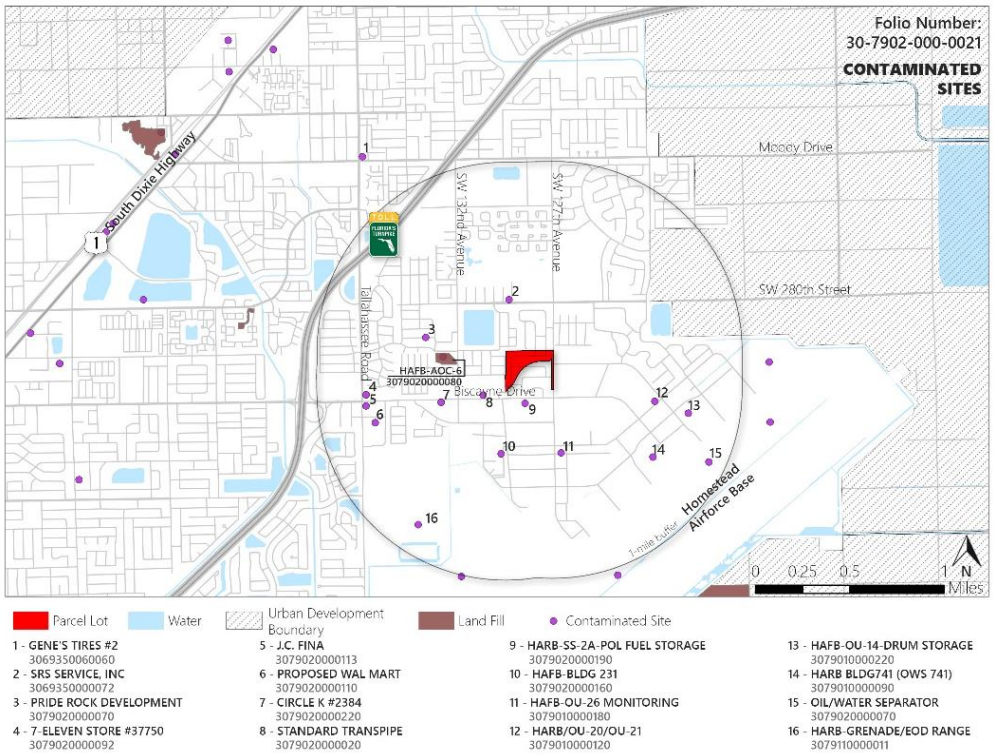

Figure 44: Miami-Dade County Parcel 4 Surrounding Contaminated Sites

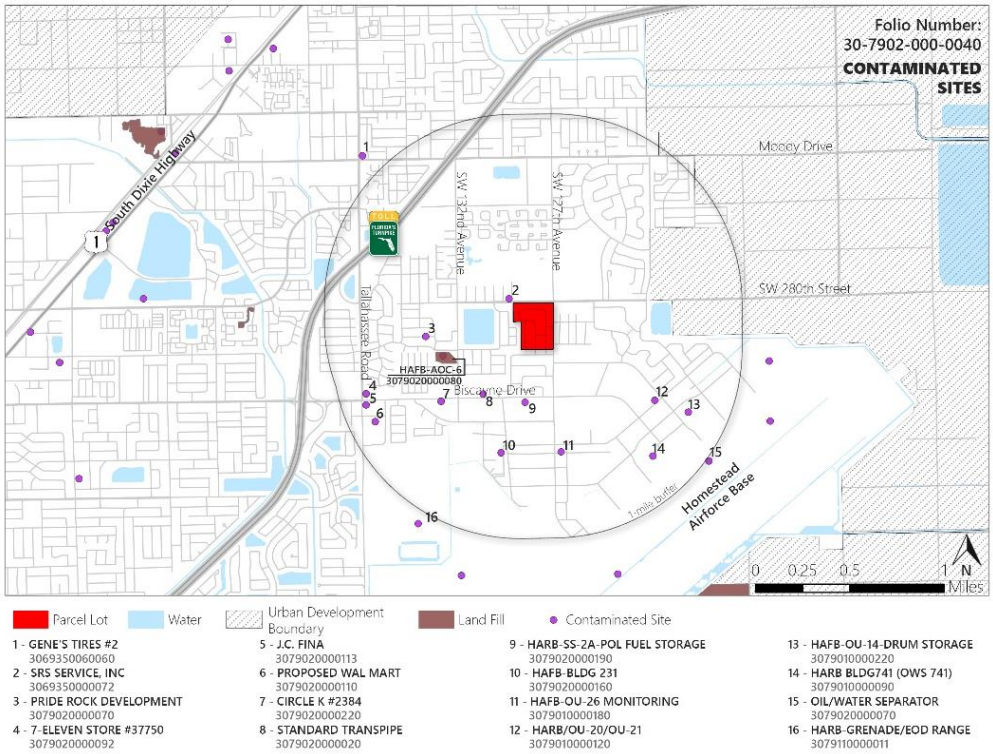

Figure 45: Miami-Dade County Parcel 5 Surrounding Contaminated Sites

Flood Zones

Parcels located within designated flood zones by the Federal Emergency Management Administration (FEMA) may require improved drainage infrastructure and site grading to protect the longevity of infrastructure investments. This increases development cost and, more importantly, may decrease usable area for truck parking. Special Flood Hazard Areas (SFHA) are zones labeled AE or AH which have a 1-percent annual chance of flooding (or 100-year flood). Zones labeled X (shaded) have a moderate flood hazard and are in the limits of the base flood and the 0.2-percent annual chance (or 500-year) flood. The areas of minimal flood hazard, which are outside the SFHA and at a higher elevation than the 0.2-percent annual chance flood, are labeled Zone X (unshaded). The following list orders each parcel from greatest to lowest flood hazard.

- FDOT Parcel 3705
- Miami-Dade County Parcel 1
- Miami-Dade County Parcel 2
- Miami-Dade County Parcel 3
- Miami-Dade County Parcel 4
- Miami-Dade County Parcel 5

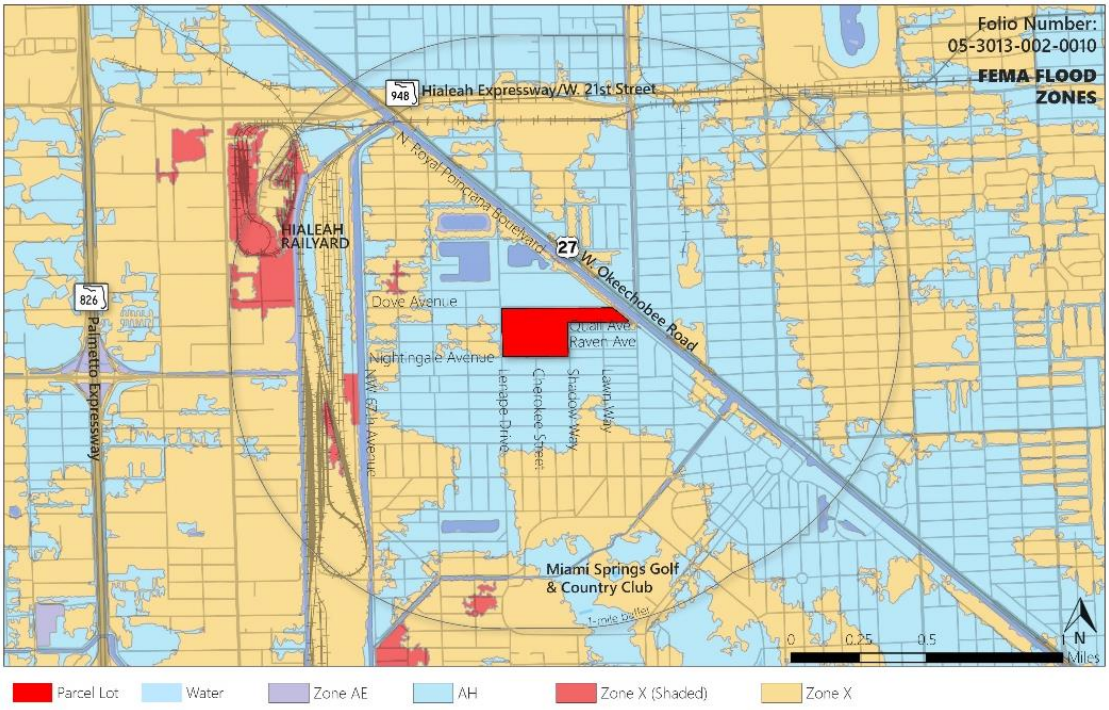

Figure 46: Miami-Dade County Parcel 1 Flood Zones

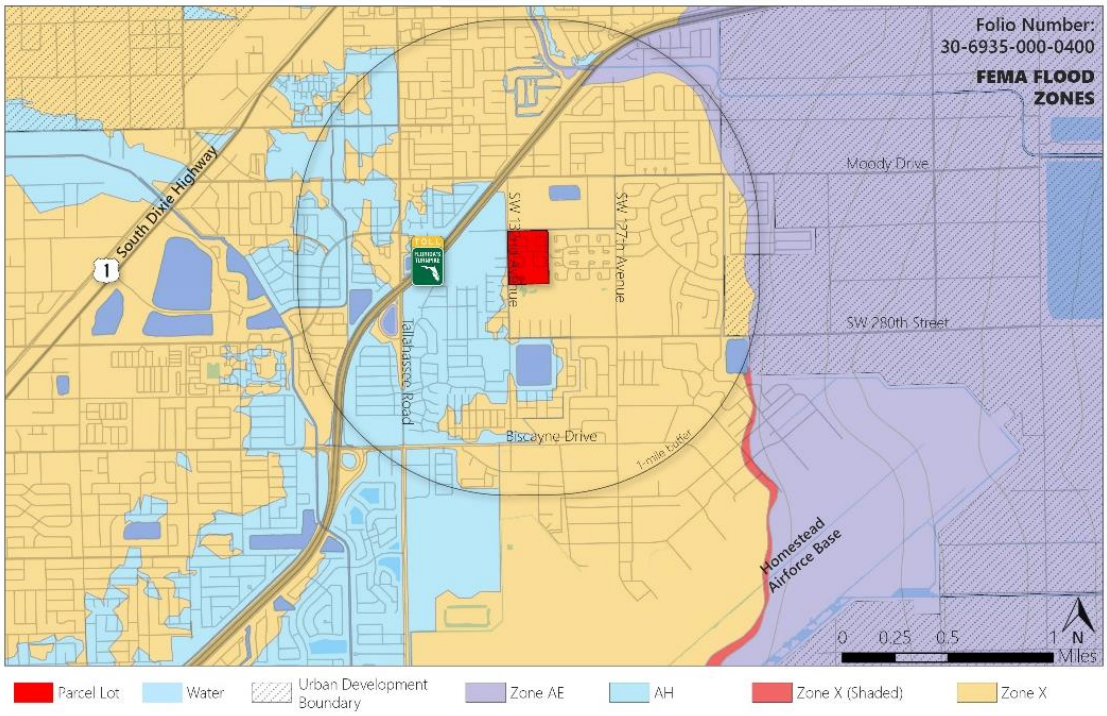

Figure 47: Miami-Dade County Parcel 2 Flood Zones

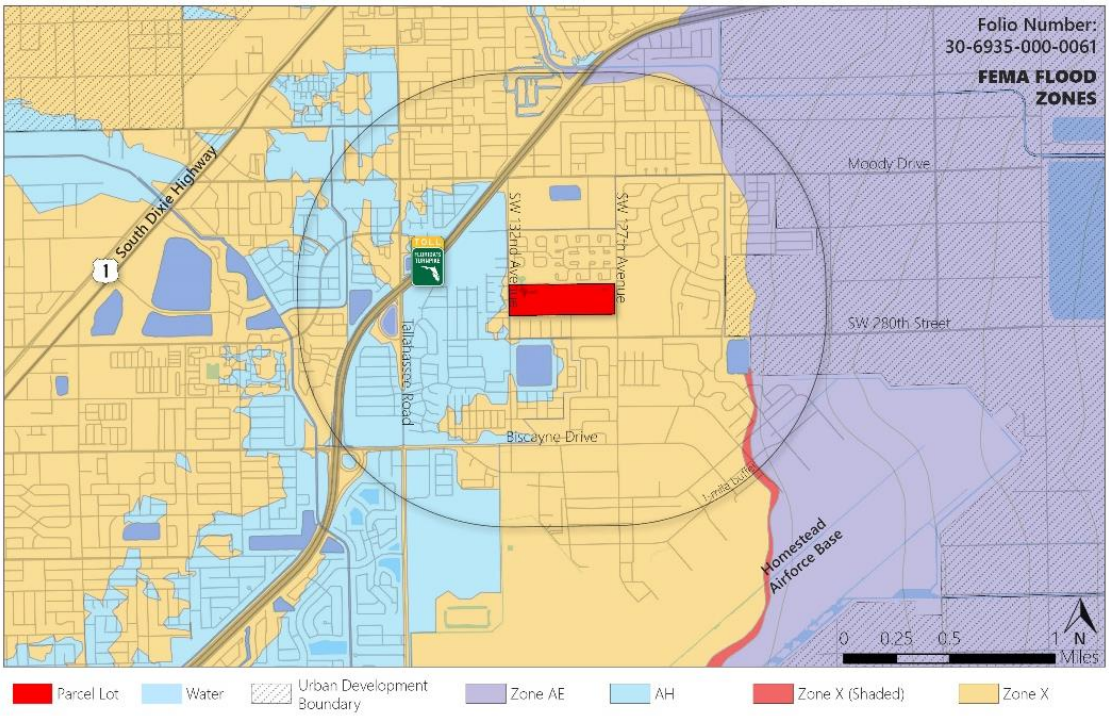

Figure 48: Miami-Dade County Parcel 3 Flood Zones

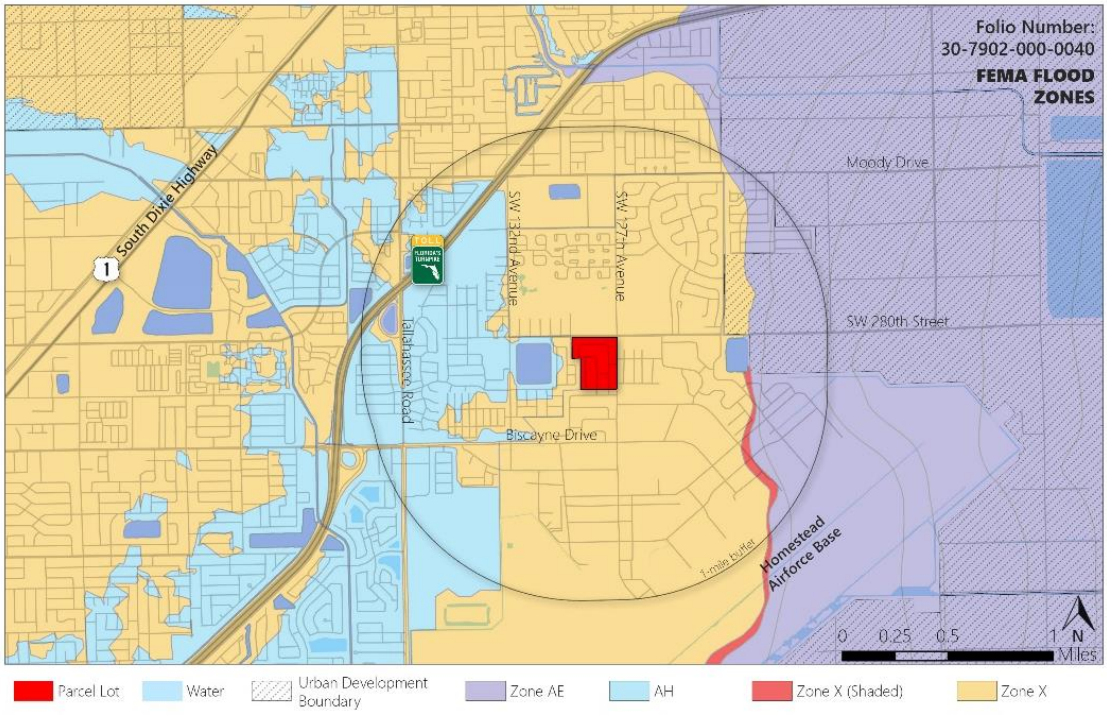

Figure 49: Miami-Dade County Parcel 4 Flood Zones

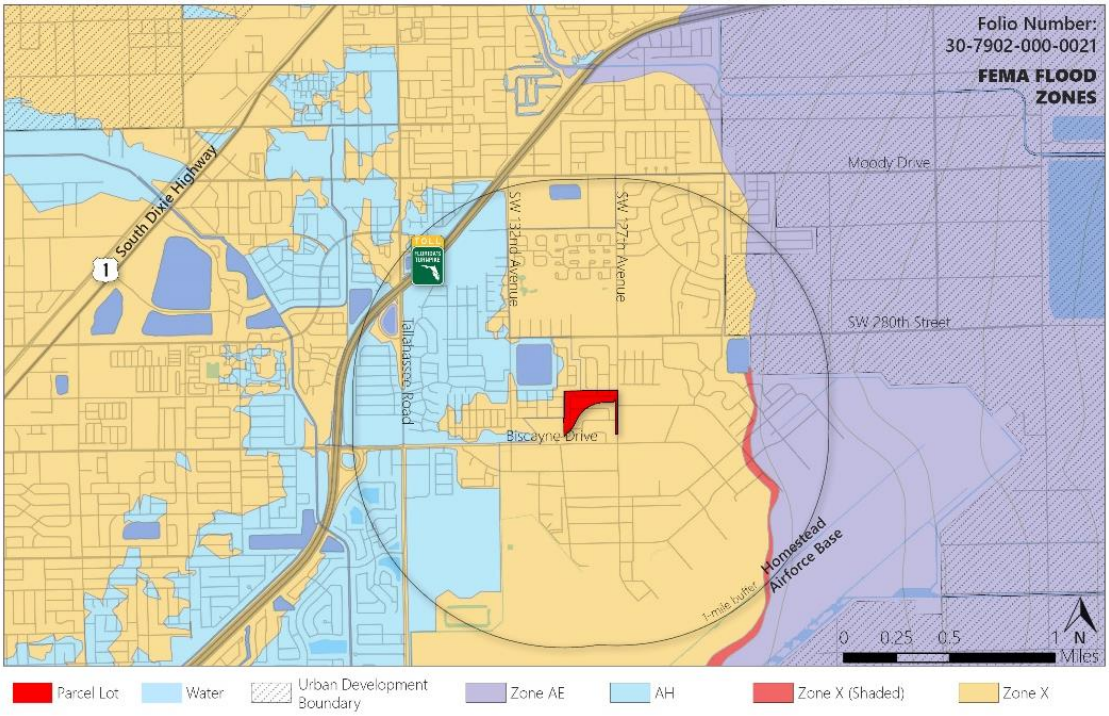

Figure 50: Miami-Dade County Parcel 5 Flood Zones

Wetlands

Wetlands are sensitive environmental soils and plants that need protection or remediation if impacted. This may increase the cost associated with any infrastructure project. None of the Miami-Dade parcels impact wetlands. FDOT Parcel 3705 is fully encompassed by hydric soils and is in close proximity to depressional soils.

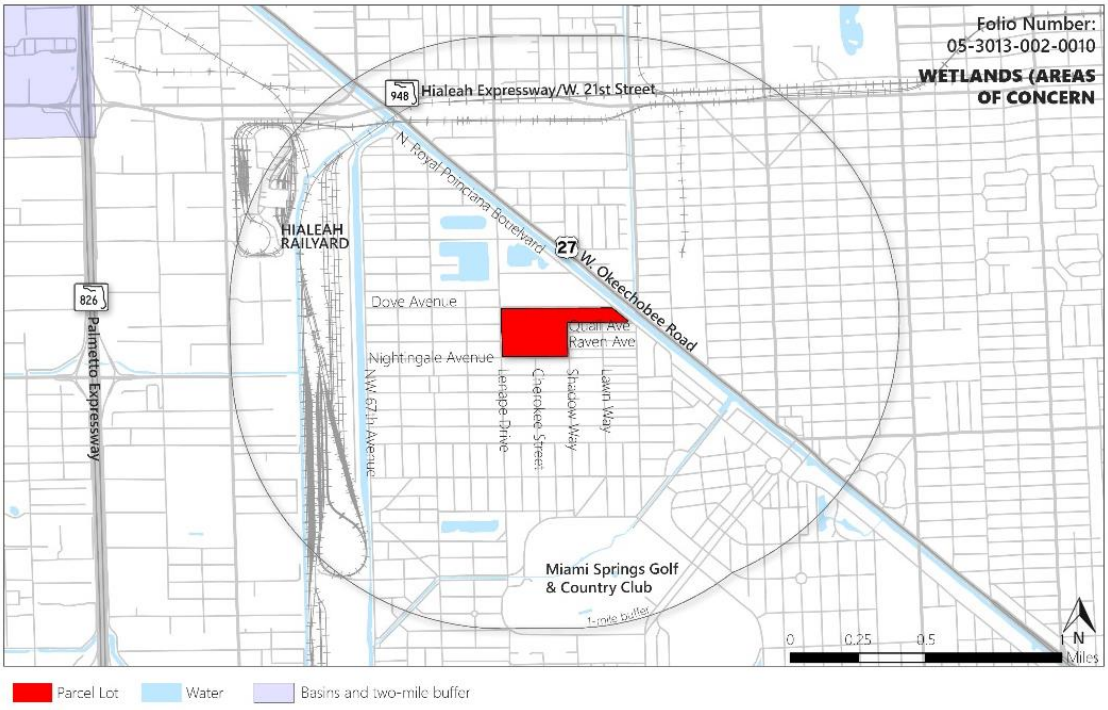

Figure 51: Miami-Dade County Parcel 1 Wetlands

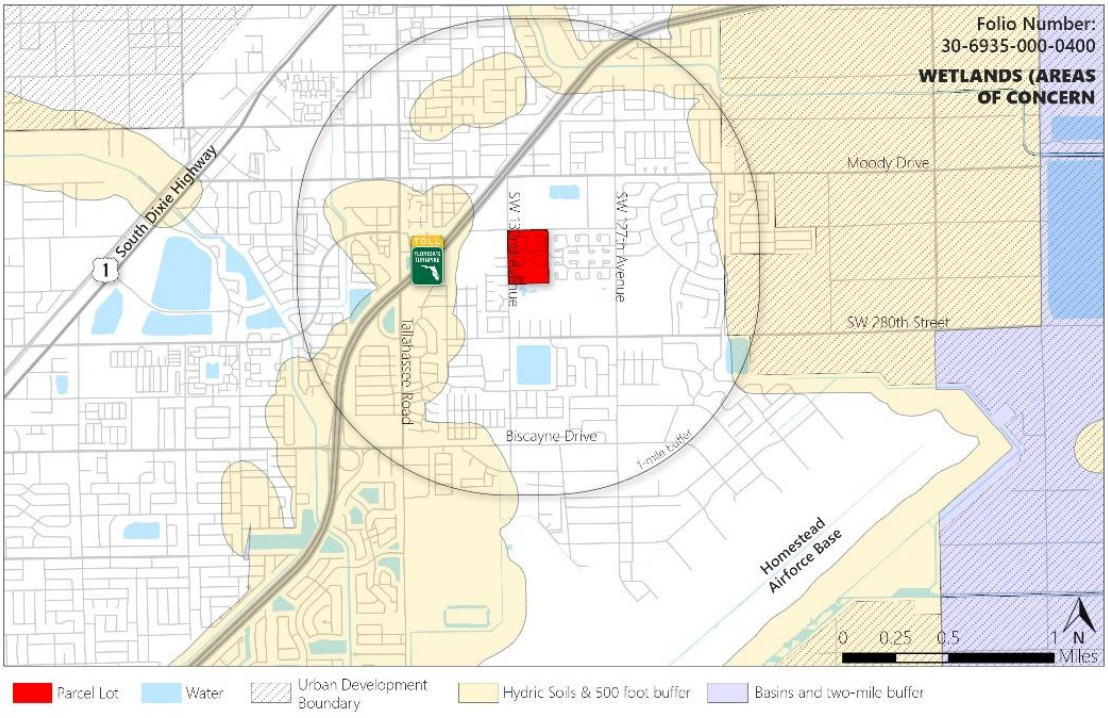

Figure 52: Miami-Dade County Parcel 2 Wetlands

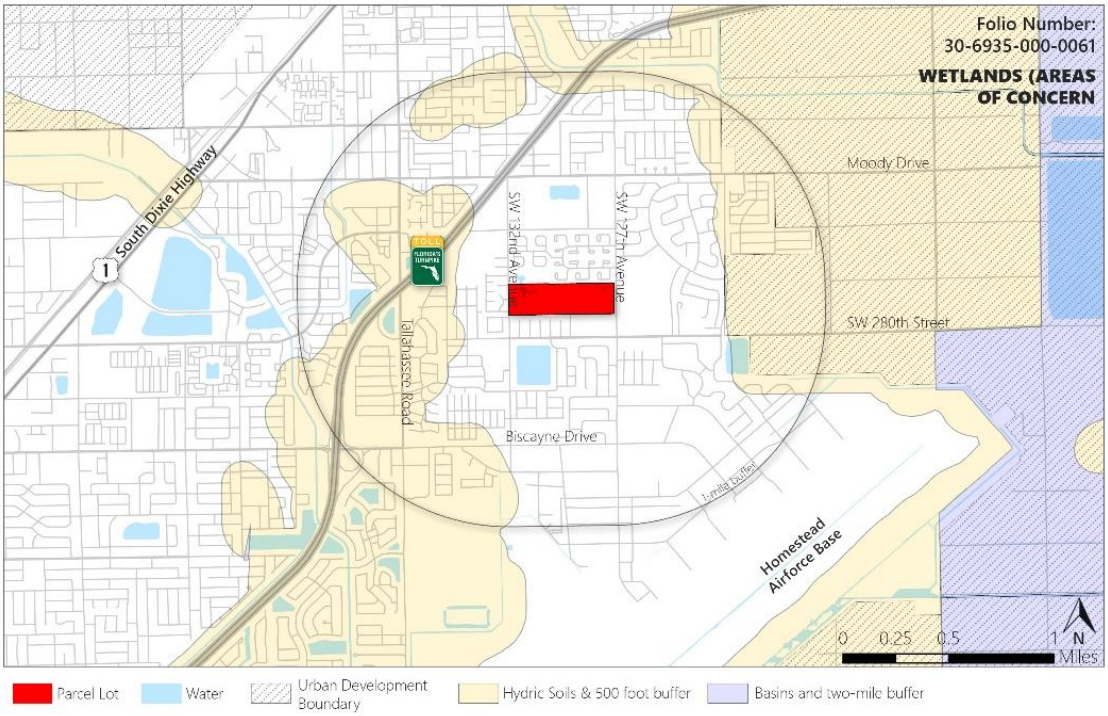

Figure 53: Miami-Dade County Parcel 3 Wetlands

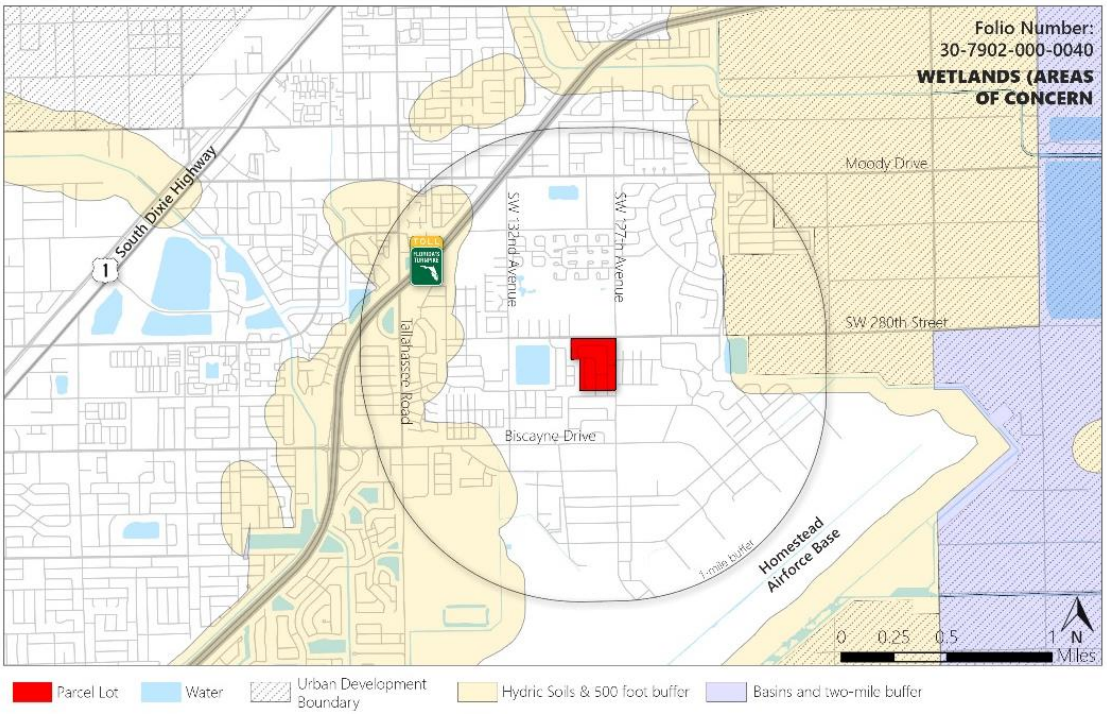

Figure 54: Miami-Dade County Parcel 4 Wetlands

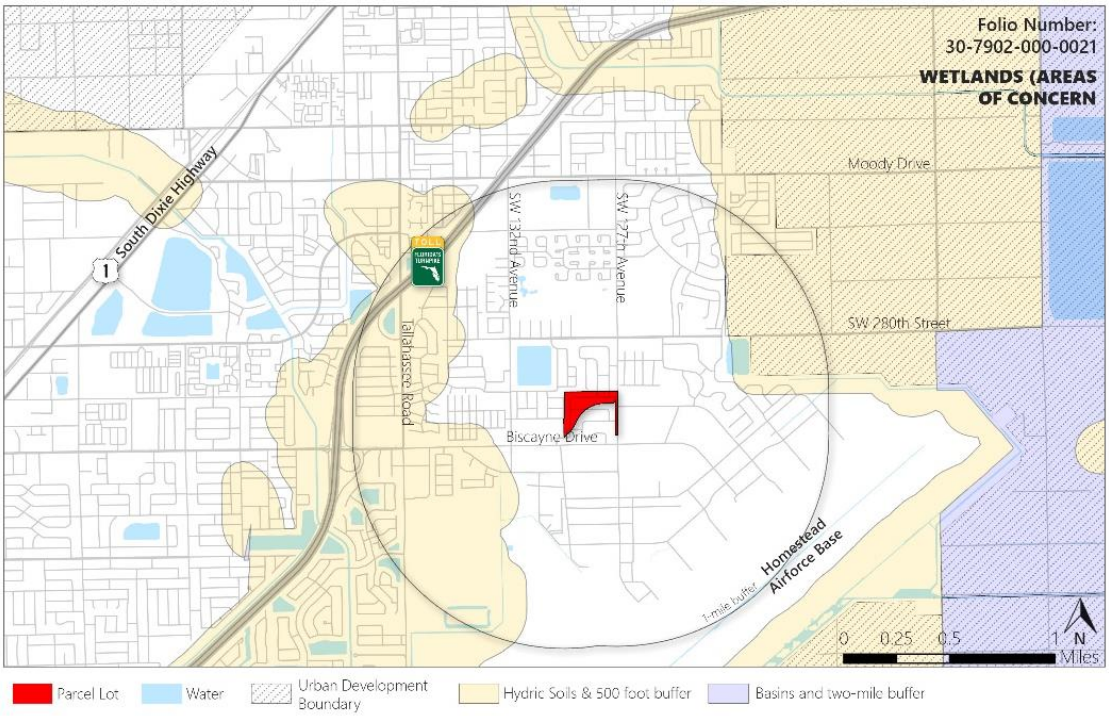

Figure 55: Miami-Dade County Parcel 5 Wetlands

Critical Habitats

Like wetlands, protection of critically endangered wildlife and vegetation is extremely important for the preservation of the natural environment in the County. None of the parcels, including FDOT Parcel 3705, are within critical habitats. However, Parcel 2 abuts a critical habitat for the Strymon acis butterfly.

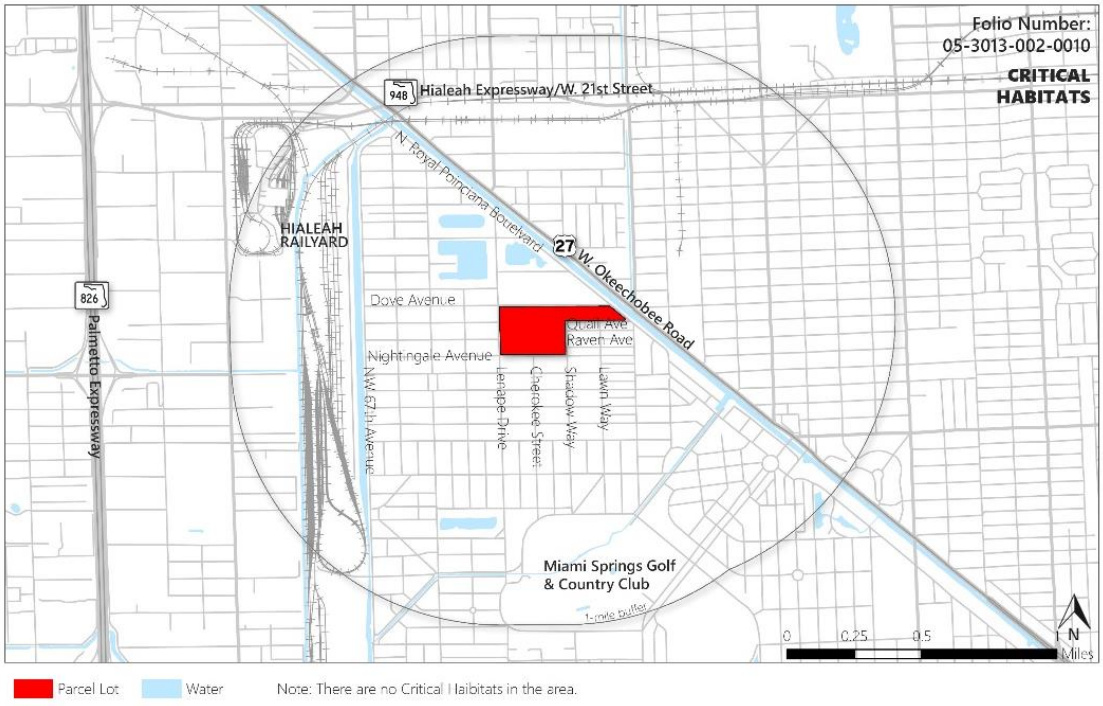

Figure 56: Miami-Dade County Parcel 1 Critical Habitats

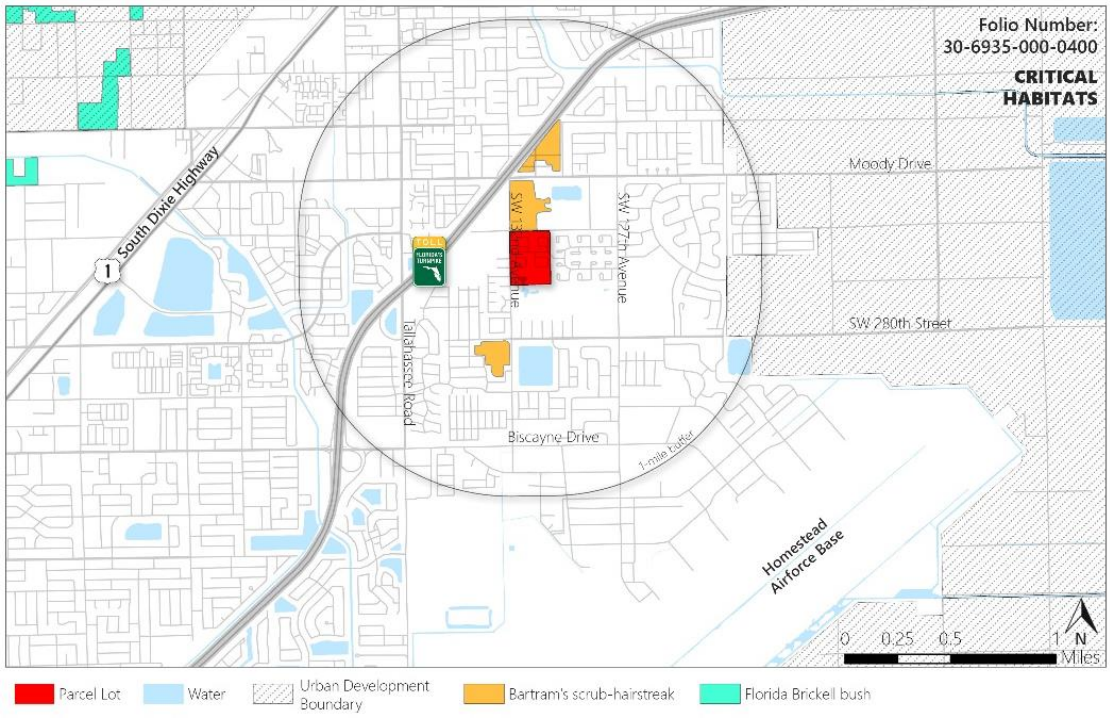

Figure 57: Miami-Dade County Parcel 2 Critical Habitats

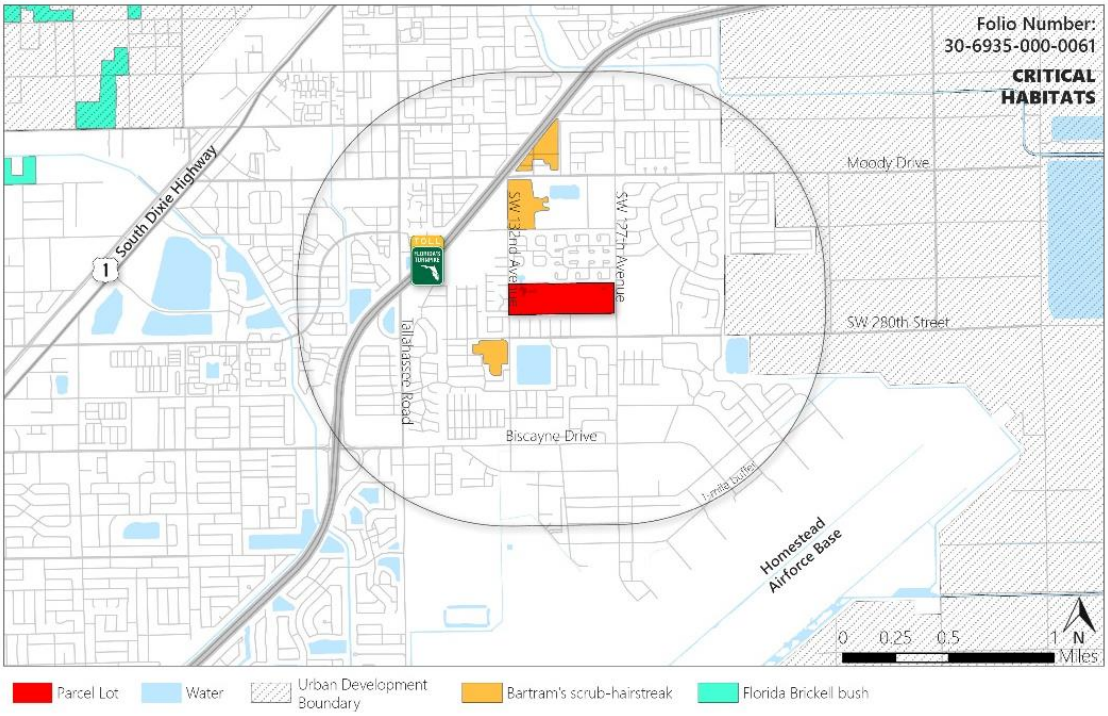

Figure 58: Miami-Dade County Parcel 3 Critical Habitats

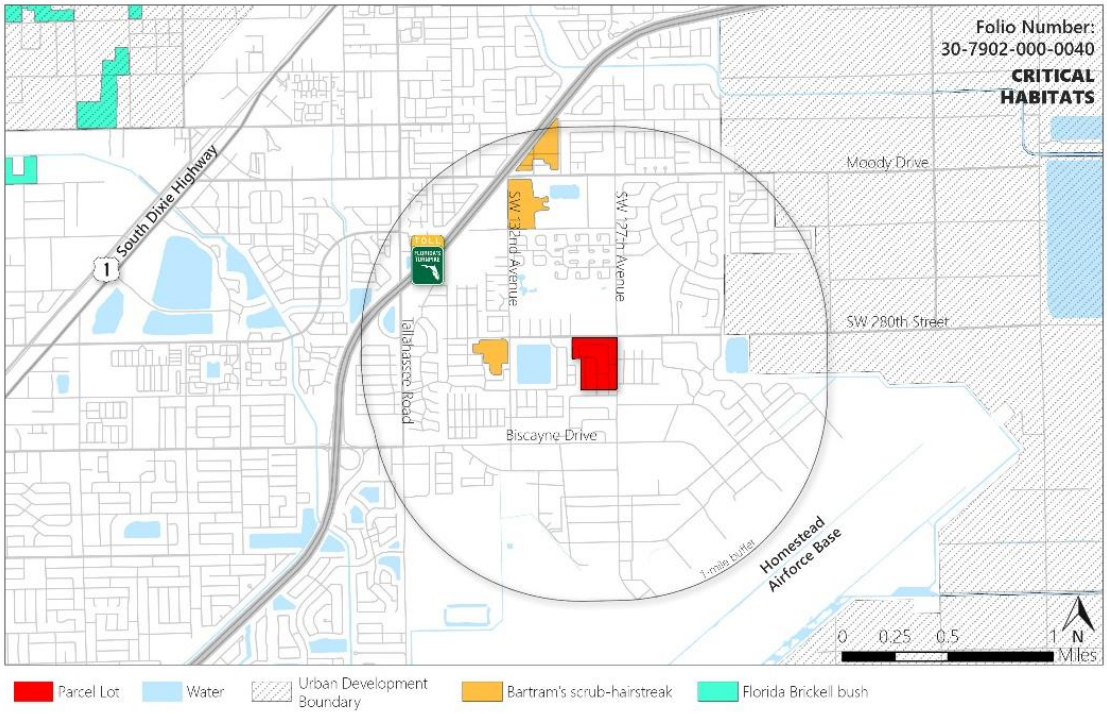

Figure 59: Miami-Dade County Parcel 4 Critical Habitats

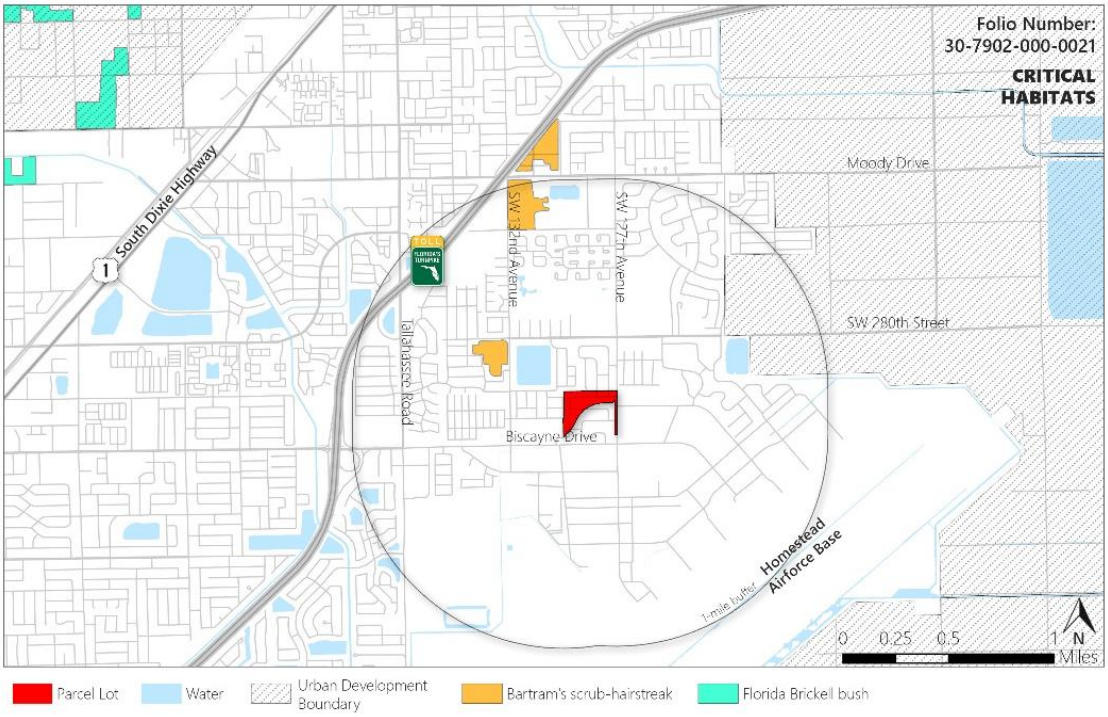

Figure 60: Miami-Dade County Parcel 5 Critical Habitats

Tier 3 – Freight Transportation Demand

Demand for truck parking is evident throughout the County as determined by the TPO'S *2010 Comprehensive Truck Parking Study*. In 2018, the TPO published the *Miami-Dade County Freight Plan Update*. These documents, plus traffic data available through FDOT's traffic online website, were reviewed to understand the freight market around each parcel.

Miami-Dade County Freight Plan Update

The *2018 Freight Plan Update* provides an excellent overview of the County's freight and logistics industry and where it is concentrated. While **Table 1** clearly shows that the Airport/Doral submarket has significantly higher industrial investments than the South Dade submarket, some trucking activity still occurs near Parcels 2 – 5. **Figure 61** through **Figure 63** show the truck Average Annual Daily Traffic (Truck AADT) on the state roads around each parcel. The HEFT around FDOT Parcel 3705 has a Truck AADT of 8,897. US 27 near Parcel 1 has a Truck AADT of 9, 213. The HEFT around Parcels 3 – 5 has a Truck AADT of 6,055.

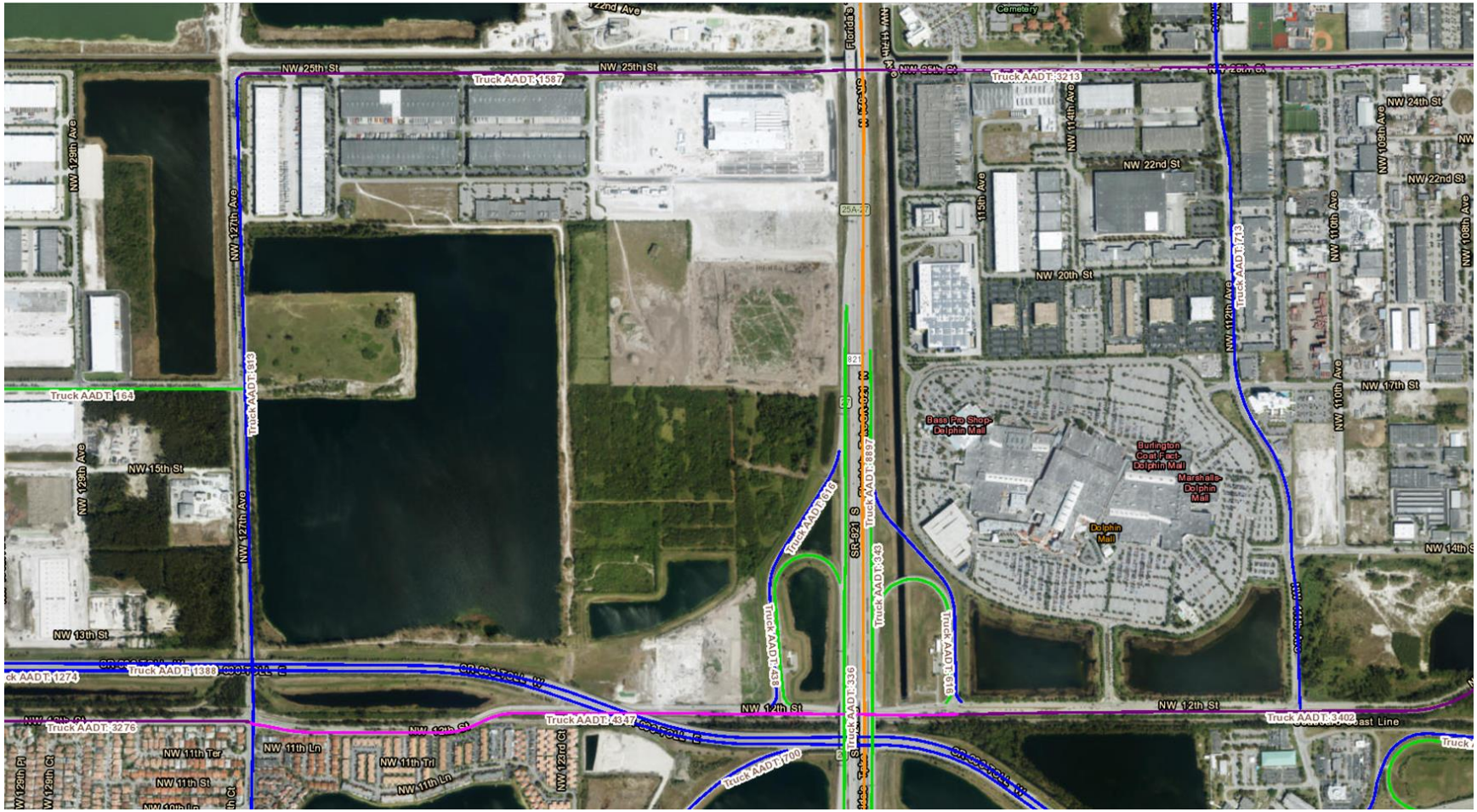

Figure 61: FDOT Parcel 3705 Area Truck AADT

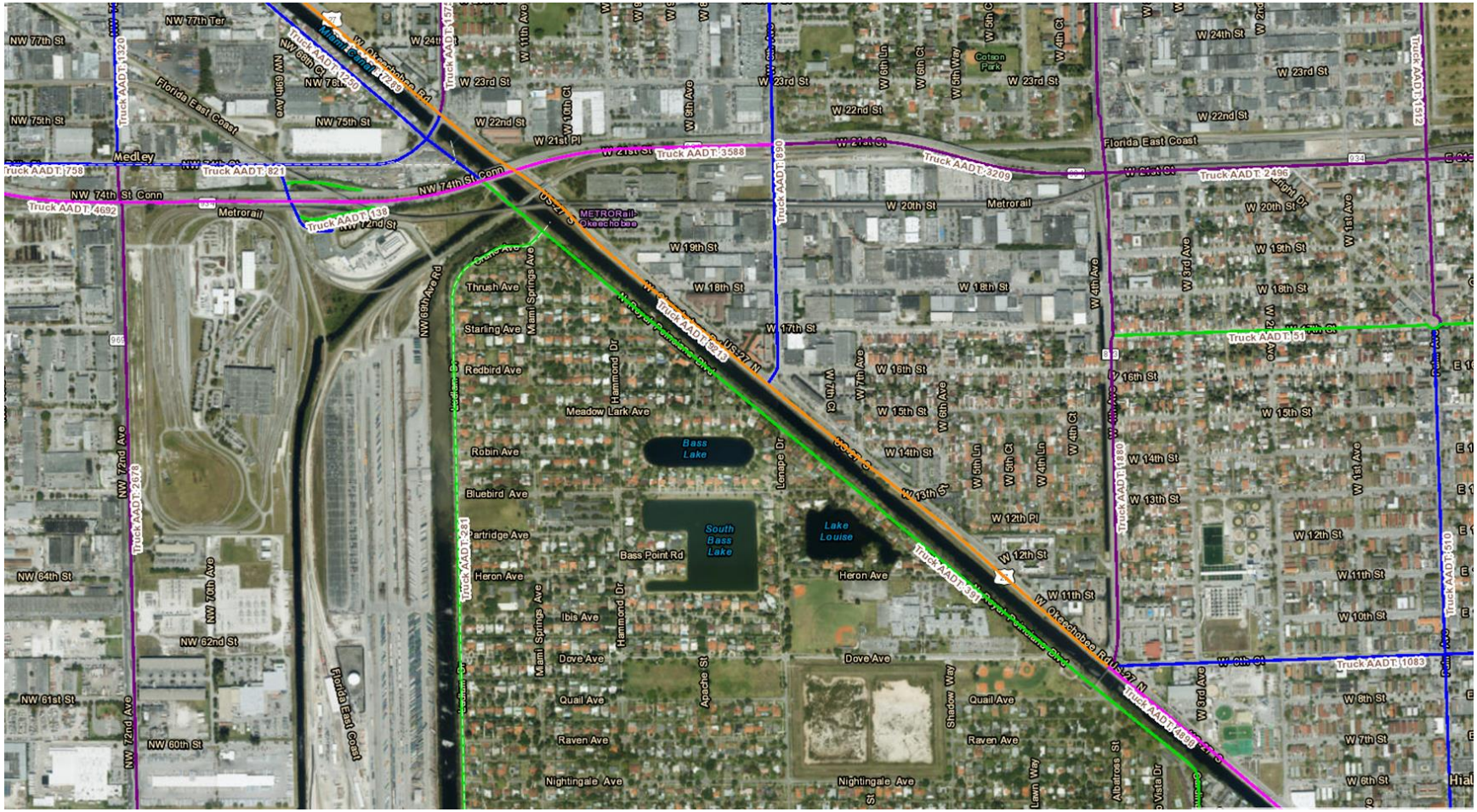

Figure 62: Miami-Dade Parcels 2 Area Truck AADT

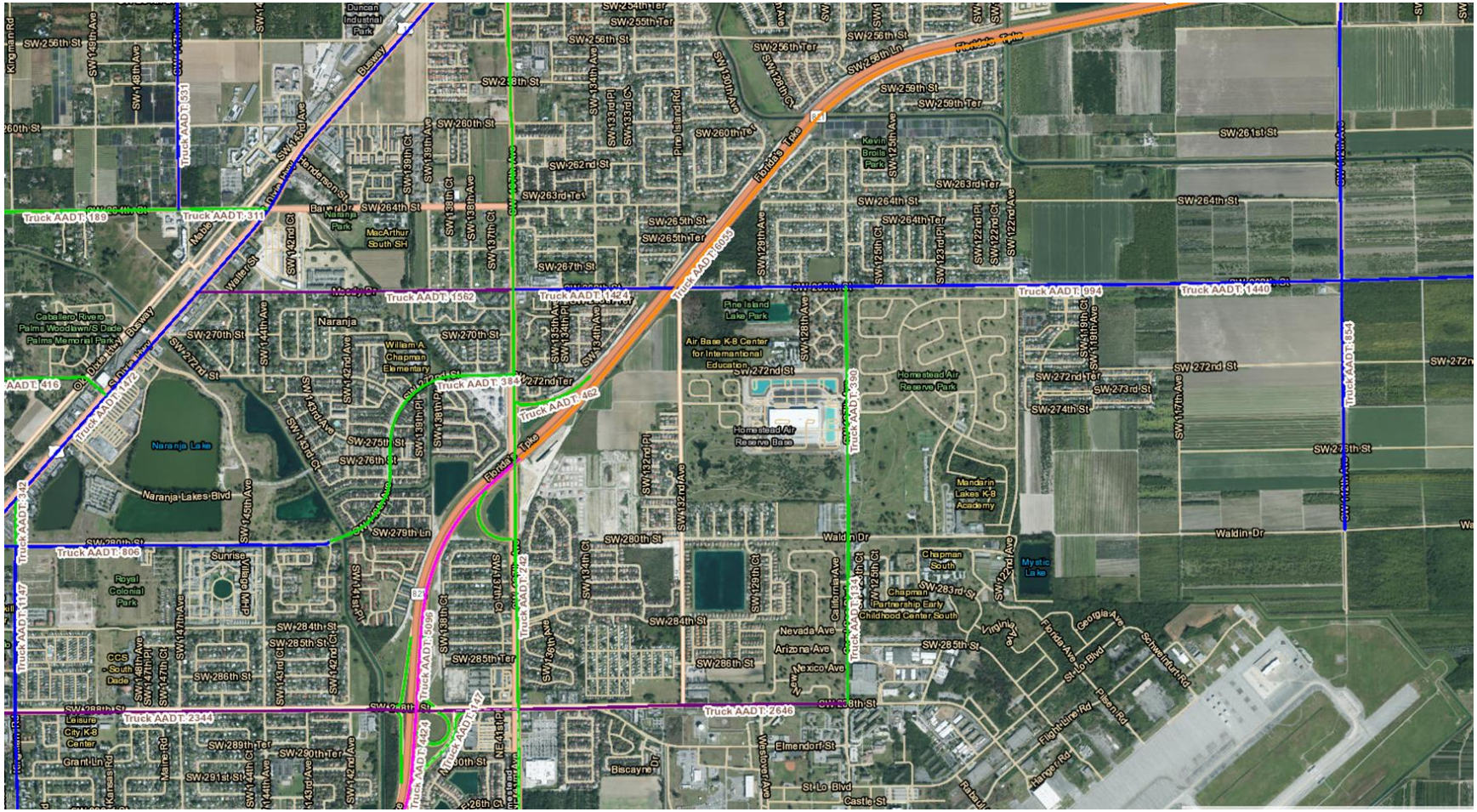

Figure 63: Miami-Dade Parcels 3 – 5 Area Truck AADT

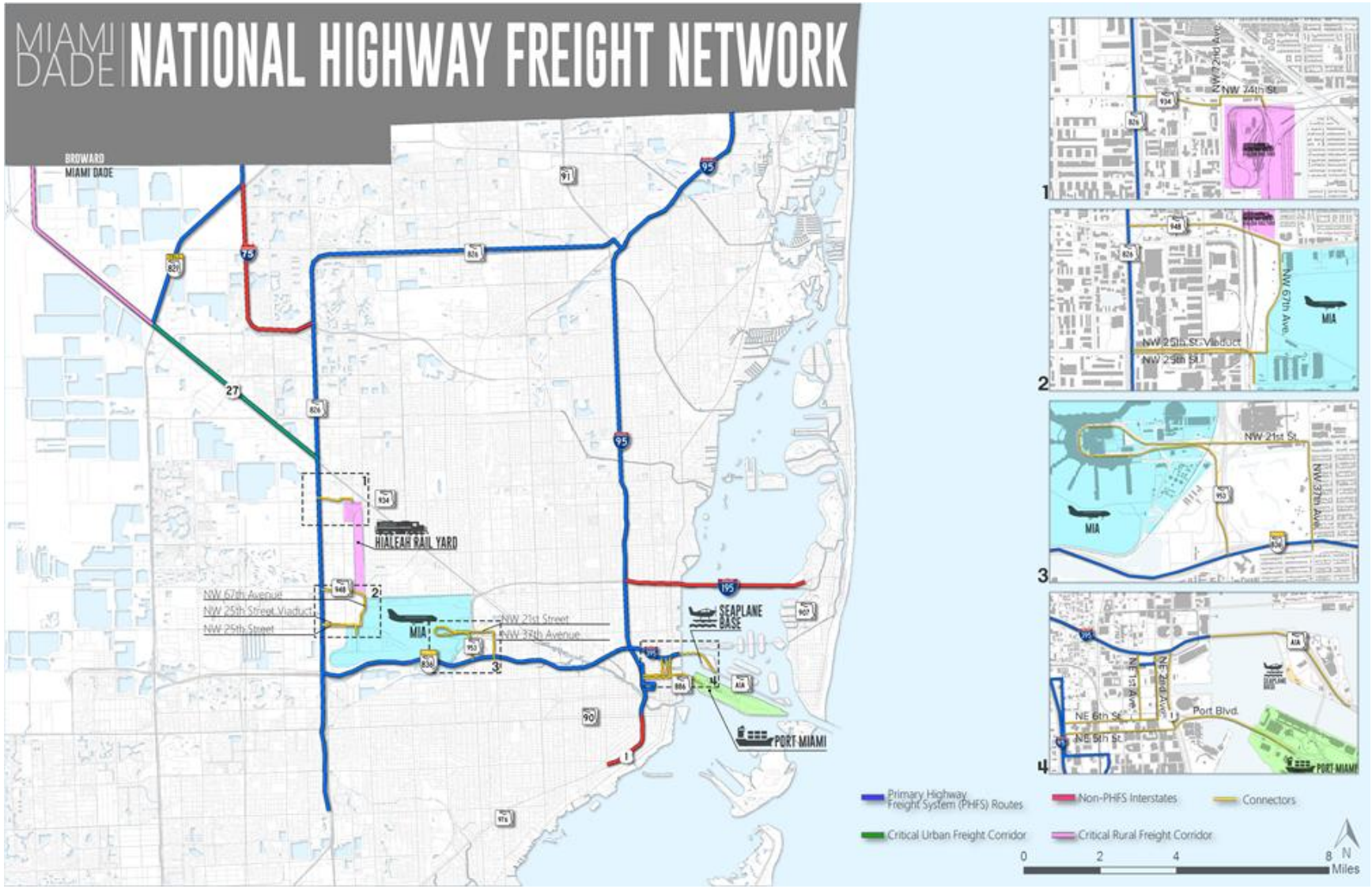

Figure 64: National Highway Freight Network

The National Highway Freight Network designation developed by the Federal Highway Administration (FHWA), shown in **Figure 64**, highlights the County's major freight infrastructure and connectors which are heavily concentrated in the northern half of the County. This trend of significantly higher freight investments and traffic in the northern half of the County is likely to continue in the future as evident by growth projections for MIA and PortMiami. To support this growth, both MIA and PortMiami are looking to expand their cargo infrastructure. The airport has prepared a phased Cargo Optimization, Redevelopment and Expansion (CORE) Plan. The plan includes projects to optimize use of existing cargo facilities to provide additional near-term capacity. This phase will demolish obsolete, costly to maintain, facilities and replace them with a new cargo clearance center. The next phase is to redevelop and construct new cargo facilities on existing MIA property and finally to expand facilities on acquired land.

PortMiami, on the other hand, is landlocked and experiencing significant growth in cruise traffic. One solution that is being studied is the development of an In-land Terminal away from the port that would be connected by roadway and rail. The site could be used for transload, intermodal, and lay-down facilities which would relieve the cargo space needs at the Port. In 2017, the County initiated a study to identify suitable locations. Sixteen (16) locations are currently under review but are all located in the northern half of the County.

Hence, FDOT Parcel 3705 and Parcel 1 serve a larger existing and future freight market than Parcels 3 – 5.

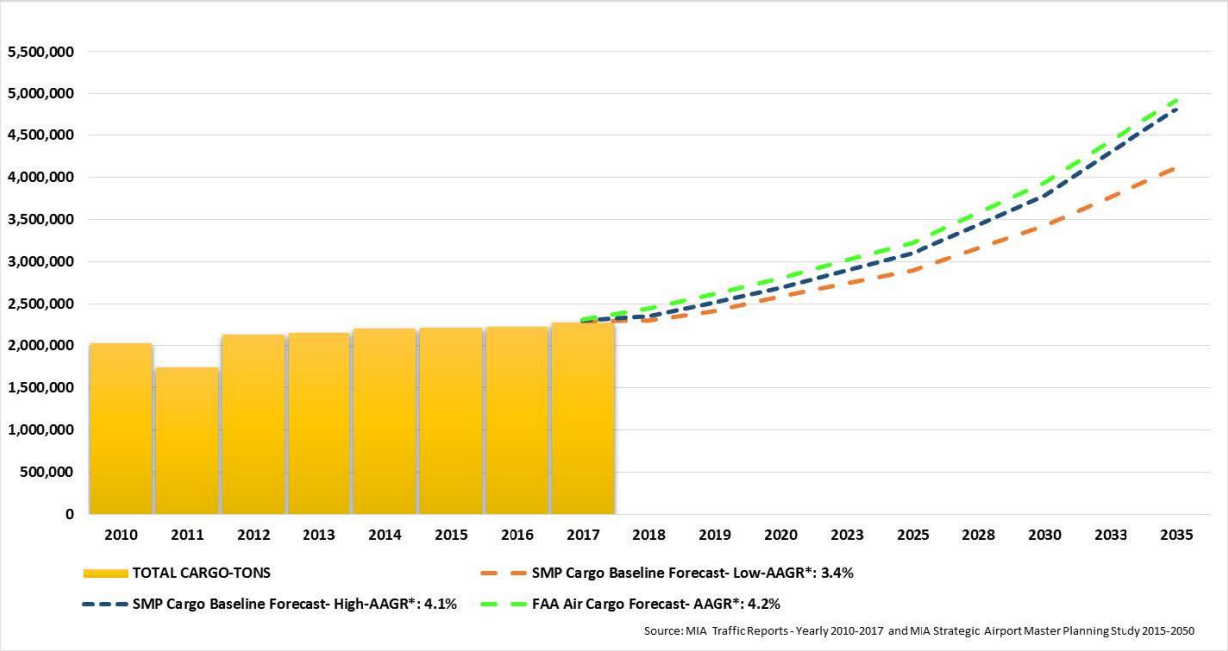

Figure 65: MIA Projected Growth in Cargo Tonnage

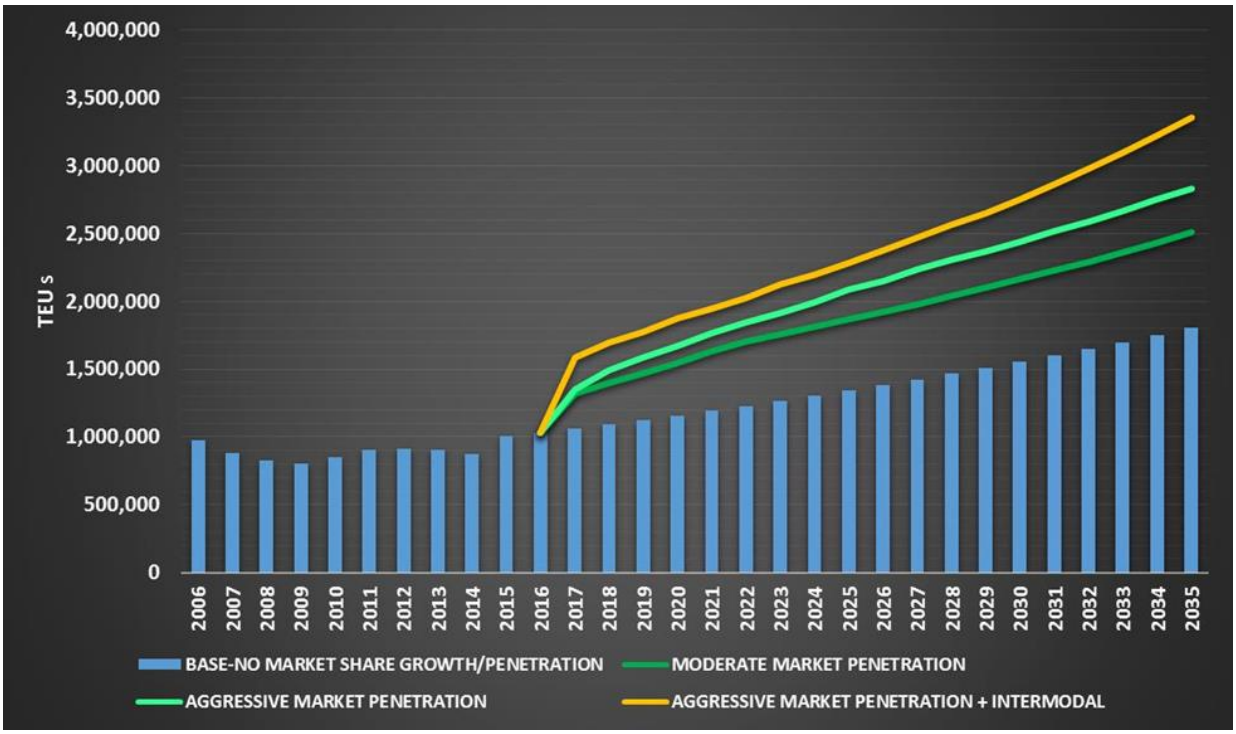

Figure 66: PortMiami Projected Growth in Twenty-Equivalent Units (TEUs)

Figure 67: Rendering of MIA Expanded Cargo Area

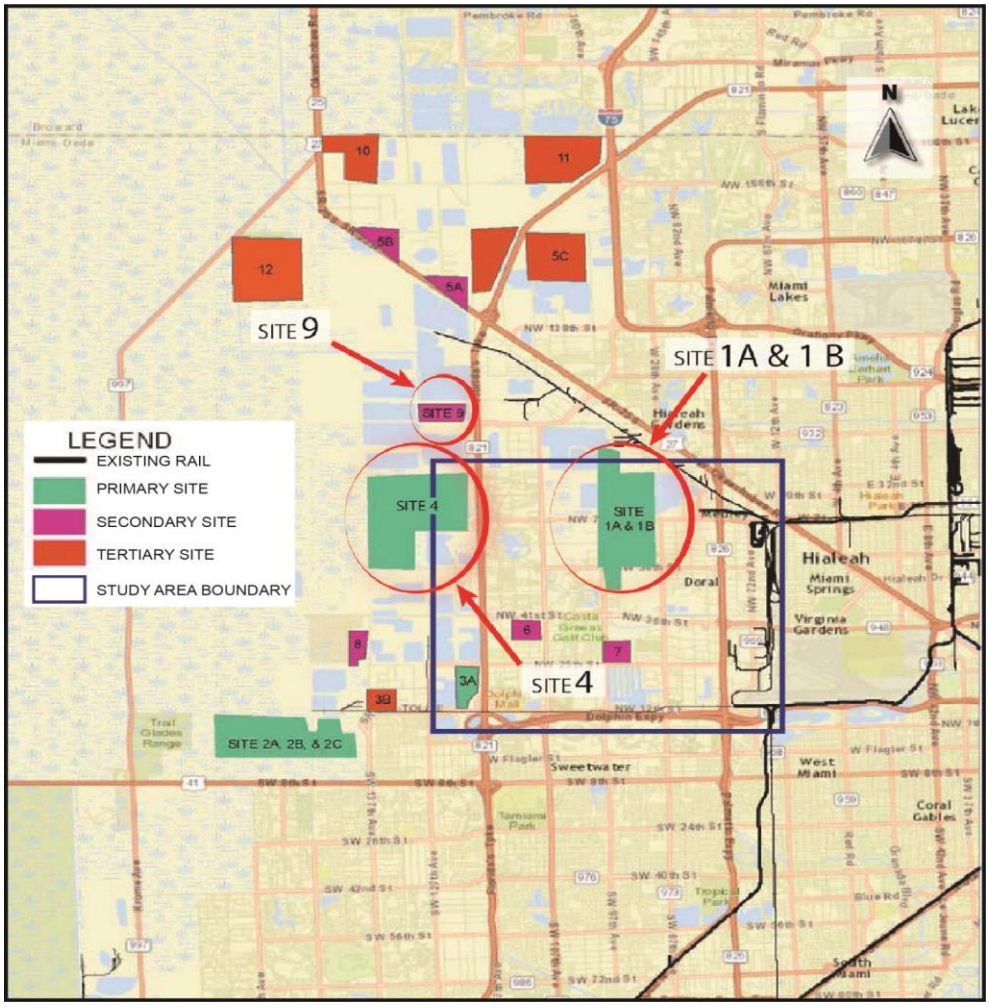

Figure 68: PortMiami Potential In-Land Terminal Locations

Conclusion

Table 14 and **Table 15** provide a summary of the analyses and discussions contained in this technical memorandum. Of the five (5) identified Miami-Dade County-owned parcels for potential truck parking development, two (2) parcels were determined to be suitable for such use (see **Table 12**). These parcels, 2 and 3, are in the Homestead Base census-designated area. This area has a relatively low estimated truck parking demand as compared to rest of the County (2010 demand is estimated at 553 truck parking spaces as compared to 5,490 truck parking spaces in northwest Miami-Dade County). Parcels 2 and 3 are anticipated to provide a minimum of 303 and 466 parking spaces, respectively, assuming 10 truck spaces per acre. While truck parking is feasible in both parcels, project development risks exist for both parcels given these locations are near residential areas (approximately 50% of the land use within a 1-mile buffer of Parcel 2 and 41% within Parcel 3 are comprised of residential units). **Table 13** provides a list of benefits and disadvantages for each site.

Table 12: Truck Parking Feasibility Assessment

Parcel Number	Folio Number	Feasibility Assessment
1	05-3013-002-0010	Unfeasible
2	30-6935-000-0400	Feasible
3	30-6935-000-0061	Feasible
4	30-7902-000-0040	Unfeasible
5	30-7902-000-0021	Unfeasible

Table 13: Benefits and Disadvantages of each Parcel

Parcel Number	Benefits	Disadvantages
1	• Inside UDB • Serves the biggest sub market in the County (Airport/Doral with 59,510,516 square feet of industrial real estate) • Serves the highest demand for truck parking (estimated at 5,490 in 2010)	• Zoning Code does not allow truck parking development • Existing land use is not compatible with truck parking • Future land use is not compatible with truck parking • Well pumping station located within this site • Lowest accessibility ranking • Least compatible with surrounding land use (31%) • Adjacent to Miami Springs Senior High School and Dove Avenue Park
2	• Zoning Code allows truck parking development • Existing land use is compatible with truck parking • Inside UDB • High accessibility ranking • Adjacent to new FedEx Ground distribution center	• Future land use is not compatible with truck parking
3	• Zoning Code allows truck parking development • Existing land use is compatible with truck parking • Inside UDB • Adjacent to new FedEx Ground distribution center • Largest parcel	• Future land use is not compatible with truck parking
4	• Existing land use is compatible with truck parking • Inside UDB	• Zoning Code does not allow truck parking development • Future land use is not compatible with truck parking
5	• Existing land use is compatible with truck parking • Inside UDB • Most compatible with surrounding land use (70%)	• Zoning Code does not allow truck parking development • Future land use is not compatible with truck parking

Table 14: Summary of Parcel Legal, Physical, and Economic Characteristics

Parcel Number	Folio Number	Municipality	Zoning Permits Truck Parking?	Existing Land Use Compatible with Truck Parking?	Future Land Use Compatible with Truck Parking?	Lot Size (Sq. Ft.)	Estimated Truck Parking Spaces	Appraised/Comparable Sale Market Value per Sq. Ft.	Urban Development Boundary (UDB)
FDOT 3705	30-3936-000-0105	Unincorporated	Yes (GU)	Yes (Vacant)	Yes (Restricted Industrial)	2,071,291.00	475	$12.13	Inside
1	05-3013-002-0010	Miami Springs	No (P-1)	No (Wellfield)	No (Institution)	1,542,460.00	354	-	Inside
2	30-6935-000-0400	Unincorporated	Yes (IU-3)	Yes (Vacant)	No (Low Density Residential)	1,319,432.00	303	$17.95	Inside
3	30-6935-000-0061	Unincorporated	Yes (IU-3)	Yes (Vacant)	No (Low Density Residential)	2,029,460.00	466	$17.95	Inside
4	30-7902-000-0040	Unincorporated	No (RU-1)	Yes (Vacant)	No (Low Density Residential)	1,293,732.00	297	$17.95	Inside
5	30-7902-000-0021	Unincorporated	No (RU-1)	Yes (Vacant)	No (Low Density Residential)	738,908.28	170	$17.95	Inside

Table 15: Summary of Parcel Accessibility, Environmental, and Mobility Characteristics

Parcel Number	Nearest Freeway or Expressway	Accessibility Ranking (1 = Highest; 6 = Lowest)	Compatible Land Use within 1-mile Buffer (%)	Total Sensitive Community Features within a 1-mile Buffer	Parcel Contaminated?	Contaminated Sites within 1-mile	Wetland Impacts	Critical Habitat Impacts	Nearest High Truck AADT Corridor	Industrial Real Estate Submarket Served	2010 Estimated Truck Parking Demand
FDOT 3705	HEFT 0.5 miles	1	87.54	5	Potentially (Adjacent to inactive landfill)	6	Yes (Hydric)	No	HEFT 8,897	Airport/Doral (59,510,516 Sq. Ft.)	NW (5,490)
1	SR 826 2.4 miles	6	30.71	165	No	9	No	No	US 27 9, 213	Airport/Doral (59,510,516 Sq. Ft.)	NW (5,490)
2	HEFT 1.4 miles	2	39.8	57	No	16	No	No (Abuts Strymon acis butterfly habitat)	HEFT 6,055	South Dade (4,812,833 Sq. Ft.)	SW (553)
3	HEFT 2.1 miles	5	47.62	53	No	16	No	No	HEFT 6,055	South Dade (4,812,833 Sq. Ft.)	SW (553)
4	HEFT 1.7 miles	4	60.99	36	No	16	No	No	HEFT 6,055	South Dade (4,812,833 Sq. Ft.)	SW (553)
5	HEFT 1.5 miles	3	70.1	29	No	16	No	No	HEFT 6,055	South Dade (4,812,833 Sq. Ft.)	SW (553)