

D9.0 POTABLE WATER PIPELINES

FPL is seeking certification for new potable water pipelines as an associated linear facility of the Project. The potable water pipeline corridor is approximately nine miles in length, from the MDWASD potable water main located near Florida's Turnpike and SW 137th Avenue/Tallahassee Road, to the Site as shown in Figure D9.0.0-1. The potable water pipelines will serve the incremental needs of the Project and will be owned and operated by MDWASD to a point on the Turkey Point plant property, with the remaining portion owned and operated by FPL. Figure D9.0.0-2 presents the potable water pipeline corridor on a recent aerial.

D9.1 Maps

Maps providing information required by the draft FDEP Application Instruction are included in this section for the potable water pipeline corridor segment from SW 137th Avenue/Tallahassee Road and SW 288th Street/Bougainville Road, to SW 137th Avenue/Tallahassee Road and SW 328th Street/North Canal Drive. The remaining potable water pipeline corridor segments are within the roadway improvement corridor segments proposed for the Project described in detail in Section R9.0.

D9.2 Project Description

The potable water pipeline corridor from the MDWASD potable water main will originate from a location near Florida's Turnpike and SW 137th Avenue/Tallahassee Road (i.e., SW 137th Avenue and SW 288th Street/Bougainville Road) and end at the Site. The potable water pipeline corridor is approximately nine miles in length (see Figures D9.0.0-1 and D9.0.0-2). The pipelines would consist of up to 30-inch-diameter pipe, or equivalent, installed below ground except where needed to cross canals. The entire length of the pipelines will be installed within established rights-of-way.

From the connection with MDWASD, the potable water pipeline corridor will travel south along SW 137th Avenue/Tallahassee Road to SW 328th Street/North Canal Drive. This portion of SW 137th Avenue/Tallahassee Road is a four-lane roadway with curbs and gutters, sidewalks, and a divided landscaped median. The pipelines will be installed within the road rights-of-way. There is one bridge canal crossing within this segment (SFWMD Mowry Canal; C-103) and the pipeline crossing would either be on the east or west side of the bridge. The crossing of the North Canal along SW 137th Avenue/Tallahassee Road is by culverts and the pipeline crossing will be under

the road/median. At SW 328th Street/North Canal Drive, the potable water pipeline corridor proceeds eastward on SW 328th Street/North Canal Drive to SW 117th Avenue. This portion of the roadway is currently a two-lane paved road located immediately south of North Canal. As described in Subsection R9.2, this segment of the roadway improvements is proposed to be expanded to four lanes as part of the Project. At SW 117th Avenue, the potable water pipeline corridor turns south and follows SW 117th Avenue to SW 344th Street/Palm Drive. This portion of SW 117th Avenue is currently a two-lane paved road with swale drainage and is proposed to be expanded to four lanes as described in Section R9.0. The potable water pipeline corridor continues along SW 117th Avenue south of SW 344th Street/Palm Drive to SW 359th Street. There is an existing unpaved road in this segment and a four-lane roadway is proposed as part of the Project. The potable water pipeline corridor travels eastward along the proposed four-lane roadway at SW 359th Street and would follow this alignment into the Site.

D9.3 Corridor

D9.3.1 Corridor Selection

The corridor for the potable water pipelines was selected to utilize, to the greatest extent practicable, existing infrastructure in order to minimize environmental impacts. Environmental impacts would be minimized by installing the pipelines in established rights-of-way.

D9.3.2 Corridor Description

The potable water pipeline corridor is 330 ft wide. The potable water pipelines rights-of-way will be located within and/or adjacent to existing or planned roads and rights-of-way. For the potable water pipelines segment along SW 137th Avenue/Tallahassee Road from SW 288th Street/Bougainville Road to SW 328th Street/North Canal Drive, the pipelines would be installed under the medians or roads. Figures R9.3.2-1, R9.3.2-4, and R9.3.2-6 show typical details for construction roadway improvements within SW 328th Street/North Canal Drive, SW 117th Avenue, and SW 359th Street, respectively. As shown in these figures, the pipelines would be installed within the roadway improvements and existing rights-of-way.

D9.3.3 Alternate Corridors

No alternate corridors are proposed for the potable water pipelines.

D9.3.4 Access Roads

The potable water pipelines will be accessible from public roads and the FPL access road for Units 6 & 7 (SW 359th Street). No other access roads will be required.

D9.3.5 Cost Projections

The costs for the potable water pipelines are under development. Final cost ranges will incorporate a number of contributing factors: rights-of-way acquisition, the need for construction access, fill requirements, and engineering design and construction costs. The exact location of the pipelines within a certified corridor will be determined following corridor certification and selection of the rights-of-way within the corridor. The actual cost of the potable water pipelines will depend on the final location of the rights-of-way within the corridor, ultimate design, costs of right-of-way, other location-specific conditions, and conditions of certification.

Since commencement of construction is several years from this application, the impacts to final cost of market variations in materials, equipment, and labor are difficult to predict. The detailed location and design of the potable water pipelines will be determined following corridor certification and, where necessary, selection of the rights-of-way within the corridor.

D9.3.6 Social and Political Environment of the Corridor Area

D9.3.6.1 Governmental Jurisdictions

The new potable water pipelines proposed for certification will be located in unincorporated southeastern Miami-Dade County and the City of Homestead. The pipelines will be installed within established rights-of-way, with access available from existing public roads or the roadway improvements described in Section R9.0.

Figure D9.3.6-1 presents the governmental jurisdictions within one-half mile of the potable water pipeline corridor for the segment from SW 137th Avenue/Tallahassee Road and SW 288th Street/Bougainville Road to SW 137th Avenue/Tallahassee Road and SW 328th Street/North Canal Drive. Within this portion of the approximately one-half-mile-wide area, two jurisdictions have been identified: U.S. Department of Defense – Homestead Air Reserve Base and the City of Homestead. Portions of the potable water pipeline corridor overlap areas identified for roadway improvements in Section R9.0. Subsection R9.3.6.1 presents information on governmental jurisdictions for the potable water pipeline corridor segment from SW 137th Avenue/Tallahassee Road and SW 328th Street/North Canal Drive to the Site.

D9.3.6.2 Zoning and Land Use Plans

The PPSA, comprising Sections 403.501 through 403.518, F.S., is the process for licensing of certain electrical generating power plants and associated facilities such as pipelines. While most large-scale developments typically require permits and approvals from local, regional, and state agencies, certain power plants and associated facilities receive all necessary regulatory approvals through the PPSA process. All procedures for the issuance of local, regional, and state permits and/or approvals are preempted by the PPSA, and only a certification is issued. Unless a variance, exemption, or exception is approved through the PPSA process, all applicable nonprocedural requirements of the agencies and local governments are applied to the pipeline certified corridor through the agency and governmental review and any appropriate conditions of certification.

Florida law excludes electrical transmission lines and certain other linear utility facilities (e.g., pipelines) from the definition of *development* that is subject to local government comprehensive plans, zoning ordinances, and land development regulations [see Section 163.3164(6), F.S.]. Therefore, under Florida law, the potable water pipeline corridor described herein is not subject to land use planning or zoning regulations (see also Section 403.50665, F.S.).

To assist in characterizing the areas through which the potable water pipeline corridor is located, the following subsections describe the various future land use categories and zoning districts crossed by the potable water pipeline corridor.

Comprehensive Plans

Miami-Dade County has adopted a CDMP to meet the requirements of the Local Government Comprehensive Planning and Land Development Regulation Act, Chapter 163, Part II, F.S., and Chapter 9J-5, F.A.C. The Miami-Dade County CDMP was last revised in October 2006.

The City of Homestead has adopted a City of Homestead Comprehensive Plan (Part 1 Goals, Objectives and Policies) to meet the requirements of the Local Government Comprehensive Planning and Land Development Regulation Act, Chapter 163, Part II, F.S., and Chapter 9J-5, F.A.C. The Homestead CDMP was last revised in November 2005.

The future land uses that are traversed by the potable water pipeline corridor for the segment from SW 137th Avenue/Tallahassee Road and SW 288th Street/Bougainville Road to SW137th Avenue/Tallahassee Road and SW 328th Street/North Canal Drive are shown in Figure D9.3.6-2. The corridor

traverses the following Miami-Dade County Future Land Use categories: Agriculture; Business and Office; Industrial and Office; Low Density Residential; Low-Medium Density Residential; and, Medium Density Residential. The corridor traverses the following City of Homestead Future Land Use categories: Light Commercial, Medium Density Residential, Low Density Residential, Heavy Commercial, Industrial Use, and Agriculture. The relevant future land use categories are described in the Future Land Use Element of the CDMP, which is included in Appendix 10.5. Subsection R9.3.6.1 presents future land use information for the potable water pipeline corridor from SW 137th Avenue/Tallahassee Road and SW 328th Street/North Canal Drive to the Site.

Utility uses are allowed in these future land use categories by definition and/or when deemed to be in the public interest and when the proposed utility demonstrates consistency with the adopted goals, objective, and policies of the CDMP. This is consistent with the allowance for such pipelines in every land use category under Florida law, as previously referenced.

Zoning

The Miami-Dade County LDC and the City of Homestead Code of Ordinances have been adopted to implement the policies and objectives of the respective Comprehensive Plans and to regulate land development within the respective jurisdictional boundaries. The LDC incorporates a zoning map that depicts the zoning categories of lands lying within unincorporated Miami-Dade County. The Code of Ordinances incorporates a zoning map that depicts the zoning categories of lands lying within the City of Homestead. Figure D9.3.6-3 presents the zoning maps for Miami-Dade County and the City of Homestead that are traversed by the potable water pipeline corridor for the segment from SW 137th Avenue/Tallahassee Road and SW 288th Street/Bougainville Road to 137th Avenue/Tallahassee Road and SW 328th Street/North Canal Drive. Subsection R9.3.6.2 presents zoning information for the potable water pipeline corridor segment from SW 137th Avenue/Tallahassee Road and SW 328th Street/North Canal Drive to the Site.

The potable water pipeline corridor traverses the following Miami-Dade County zoning designations: Agricultural District (AU), Neighborhood Business District (BU-1), Limited Business District (BU-1A), Industrial, Heavy Manufacturing (IU-2), Interim District (GU), Single Family Residential District (RU-1), Modified Single Family Residential District (RU-1MA), Zero Lot Line Development Single Family (RU-1Z), Minimum Apartment House District (RU-3M), and Townhouse District (RU-TH).

The potable water pipeline corridor traverses the following City of Homestead zoning designations: Agricultural District (AU), Liberal Business District (B-3), Government Property District (GP), Planned Unit Developments (PUD), and Single-Family Residential District (R-1).

D9.3.6.3 Easements, Title, Agency Works

The potable water pipeline corridor is within areas that have been designated as public rights-of-way by Miami-Dade County. With the expansion of the roadways, certain easements from governmental agencies may be required depending upon the final design. The Mowry Canal (C-103) crossing on SW 137th Street/Tallahassee Road may require an easement from the SFWMD.

D9.3.6.4 Vicinity Scenic, Cultural, and Natural Landmarks

Figure D9.3.6-1 presents governmental jurisdictions that are within one-half mile of the potable water pipeline corridor for the segment from SW 137th Avenue/Tallahassee Road and SW 288th Street/Bougainville Road to SW 137th Avenue/Tallahassee Road and SW 328th Street/North Canal Drive, including landmarks with natural, scenic, or cultural significance. As shown in Figure D9.3.6-1, the Portofino Bay Open Space Park and the Homestead Air Reserve Base are located within one-half-mile of the potable water pipeline corridor. Subsection R9.3.6.4 presents information on scenic, cultural, and natural landmarks in the vicinity of the potable water pipeline corridor segment from SW 137th Avenue/Tallahassee Road and SW 328th Street/North Canal Drive to the Site.

D9.3.6.5 Archaeological and Historical Sites

The potable water pipeline corridor for the segment from SW 137th Avenue/Tallahassee Road and SW 288th Street/Bougainville Road to SW 137th Avenue/Tallahassee Road and SW 328th Street/North Canal Drive is collocated with existing linear facility rights-of-way and includes minimal areas of undisturbed lands. Archaeological or historic resources located in the area to be traversed by this segment would likely have already been discovered or affected by previous activity (i.e., the construction of the four-lane SW 137th Avenue/Tallahassee Road from SW 288th Street/Bougainville Road to SW 328th Street/North Canal Drive). The probability of work associated with the installation of potable water pipelines uncovering such resources is very small. As described in Subsection R9.3.6.5, no previously recorded archaeological sites, archaeological zones, historic structures, historic districts, historic linear resources, historic cemeteries, or historic bridges were identified within 500 ft of the access roads and bridges for the potable water pipeline corridor segment from SW 137th Avenue/Tallahassee Road and SW 328th Street/North Canal Drive to the Site.

D9.3.7 Biological and Physical Environment of the Corridor Area

D9.3.7.1 Land Use/Vegetation

The potable water pipeline corridor is located along existing roads, some of which will also be improved. Dominant land use and vegetative communities within the corridor and within one-half mile of the corridor include a number of developments of varying densities including fixed single family units (FLUCFCS 121), mobile home units (FLUCFCS 122), medium-density under construction (FLUCFCS 129), fixed single-family units with six or more dwellings (FLUCFCS 131), multiple dwelling units (FLUCFCS 133, 134), high-density under construction (FLUCFCS 139), commercial and services (FLUCFCS 140, 149), other light industrial (FLUCFCS 155), military (FLUCFCS 173), airports (FLUCFCS 811), and roads and highways (FLUCFCS 814). Agricultural land uses and vegetative communities include row crops (FLUCFCS 214), field crops (FLUCFCS 215), citrus groves (FLUCFCS 221), tree nurseries (FLUCFCS 241), herbaceous dry prairie (FLUCFCS 310), shrub and brushland (FLUCFCS 320), Brazilian pepper (FLUCFCS 422), melaleuca (FLUCFCS 424), hardwood-coniferous mixed (FLUCFCS 434), man-made canals (FLUCFCS 510), and reservoirs (FLUCFCS 530).

Figure D9.3.7-1 presents land use and land cover within and adjacent to the corridor classified according to the FLUCFCS (FDOT, 1999) for the potable water pipeline segment from SW 137th Avenue/Tallahassee Road and SW 288th Street/Bougainville Road to SW 137th Avenue/Tallahassee Road and SW 328th Street/North Canal Drive. Land cover and land use are mapped at Level III; each vegetative community is described in more detail in Subsection D9.3.7.3 for this segment. Subsection R9.3.7.1 presents land use and cover for the potable water pipeline corridor segment from SW 137th Avenue/Tallahassee Road and SW 328th Street/North Canal Drive to the Site. Vegetative communities for this corridor segment are presented in Subsection R9.3.7.1.

D9.3.7.2 Affected Waters and Wetlands

The potable water pipelines will be installed along SW 137th Avenue/Tallahassee Road from SW 288th Street/Bougainville Road south to SW 328th Street/North Canal Drive within the existing median or roadways. This median is currently landscaped with sod, mulch, and a variety of regularly spaced hardwood and palm trees. From this segment of the potable water pipeline corridor to the Site, the pipelines will be installed within the proposed roadway improvements (see Subsection R9.3.7.2). Surface water features within the roadway improvement corridors include canals, which typically occur on the borders of roadside rights-of-way, freshwater marshes, exotic wetland hardwoods, and mixed hardwood wetlands. Any impacts to wetlands associated with the

roadway improvements will be addressed in accordance with FDEP, USACE, and DERM requirements and are discussed in detail in Appendix 10.4. Unavoidable wetland impacts resulting from construction of the roadway improvements and the potable water pipelines will be mitigated in consultation with the FDEP, USACE, and DERM. BMPs, such as silt fencing and floating turbidity curtains, will be used to prevent secondary impacts to surface waters or wetlands associated with construction of the roadway improvements and installation of the potable water pipelines.

D9.3.7.3 Ecology

Species–Environmental Relationships

The following subsections include descriptions of important flora and fauna within and surrounding the potable water pipeline corridor along SW 137th Avenue/Tallahassee Road from SW 288th Street/Bougainville Road south to SW 328th Street/North Canal Drive. The discussion includes information related to the occurrence of important species found and the value of the habitats present in this segment of the potable water pipeline corridor. Details of threatened, endangered, and plant or animal species of special concern (listed species) observed or potentially occurring within the roadway improvement corridors and surrounding area are provided below following the discussion of non-listed species. Subsection R9.3.7.3 presents ecology information for the potable water pipeline corridor segment from SW 137th Avenue/Tallahassee Road and SW 328th Street/North Canal Drive to the Site.

Terrestrial and Wetland Ecosystems–Flora

The following descriptions of primary flora habitats within the potable water pipeline corridor are categorized according to the FLUCFCS. Figure D9.3.7-1 shows land use and vegetative communities within the corridor and the one-half-mile area surrounding the corridor.

Developed Lands (FLUCFCS 121, 122, 129, 131, 133, 134, 139, 140, 149, 155, 173, 811, and 814) – Developed areas of mixed densities occur within the corridor along SW 137th Avenue. These areas contain a variety of landscaping trees, shrubs, and sod. This land use provides limited habitat for wildlife or listed species of plants/animals.

Agricultural Lands (FLUCFCS 214, 215, 221, and 241) – Areas of row crops, field crops, citrus groves, and tree nurseries are common within the corridor adjacent to SW 137th Avenue/Tallahassee Road. These are agricultural areas cleared of natural vegetative communities, topographically graded,

and converted to commercial production of vegetables, palm trees, and orange trees. These intensive agricultural land uses provide limited habitat for wildlife or listed species of plants/animals.

Herbaceous Dry Prairie (FLUCFCS 310) – There is one area designated as herbaceous dry prairie adjacent to SW 288th Street/Bougainville Road. This area is an open grassed field with electric transmission lines traversing the southern half. This maintained grass land provides limited habitat for wildlife or listed species of plants/animals.

Shrub and Brushland (FLUCFCS 320) – There is one small area designated as shrub and brushland adjacent to SW 137th Avenue/Tallahassee Road. This area is dominated by broomsedge (*Andropogon virginicus*), bitter galberry (*Ilex glabra*), wax myrtle (*Myrica cerifera*), Brazilian pepper (*Schinus terebinthifolius*), Australian pine (*Casuarina equisetifolia*), and slash pine (*Pinus elliottii*).

Exotic Hardwoods (FLUCFCS 422, 424) – Areas of exotic hardwoods dominated by Brazilian pepper and melaleuca (*Melaleuca quinquenervia*) occur within the corridor adjacent to SW 137th Avenue/Tallahassee Road. In addition to the nuisance exotic species, additional species commonly observed within these areas include Australian pine, willow, groundsel tree (*Baccharis halimifolia*), elderberry (*Sambucus canadensis*), primrose willow, cattail (*Typha latifolia*), paragrass (*Urochloa mutabilis*), and torpedo grass (*Panicum repens*).

Hardwood-Coniferous Mixed (FLUCFCS 434) – A small strip of hardwood-coniferous mixed occurs adjacent to and on the west side of Florida's Turnpike. This area is dominated by a mix of hardwood species including the nuisance exotic species Brazilian pepper and melaleuca, and also contains scattered pines. This area is far removed from any proposed activity and is situated between Florida's Turnpike and a large residential development which limits its value to wildlife or listed species of plants/animals.

Canals (FLUCFCS 510) – Canals bisect and parallel the potable water pipeline corridor associated with SW 137th Avenue/Tallahassee Road. In-stream vegetation is minimal within the man-made canals adjacent to existing roadways, due to the steep slopes and minimal littoral zone. Emergent and floating leaved species typical of the canals include spatterdock (*Nuphar luteum*), water lettuce (*Pistia stratioides*), and water hyacinth (*Eichhornia crassipes*), while the banks contain beggarticks (*Bidens* sp.), primrose willow (*Ludwigia* sp.), Brazilian pepper, willow (*Salix caroliniana*), and ragweed (*Ambrosia artemisiifolia*).

Reservoirs (FLUCFCS 530) – There are numerous reservoirs within the one-half-mile radius of SW 137th Avenue/Tallahassee Road. These are stormwater treatment facilities for the adjacent developments, and these ponds are maintained as required by SFWMD and FDEP. Due to the steep slopes, minimal littoral zone, and sodded banks, native vegetation is minimal.

Terrestrial and Wetland Ecosystems–Fauna

Wildlife habitats in the potable water pipeline corridor have been altered significantly from their natural states for the development of existing residential developments, commercial developments, roadways, and canals. The conversion of additional areas to agricultural uses such as tree nurseries, in conjunction with the widespread occurrence of exotic species of vegetation, principally Brazilian pepper and Australian pine, reduces the quantity and quality of native habitat. Wildlife utilization of the potable water pipeline corridor includes those species typical of disturbed areas of southeast Florida. A discussion of habitat quality and wildlife species observed or likely to occur within the potable water pipeline corridor and surrounding areas follows.

Agricultural Lands (FLUCFCS 214, 215, 221, and 241) – These upland communities within the potable water pipeline corridor and adjacent areas provide limited habitat for wildlife or listed species of plants/animals. Only common species of wildlife typically utilize tree nurseries or areas of upland Brazilian pepper, such as mockingbird (*Mimus polyglottis*), loggerhead shrike (*Lanius ludovicianus*), black vulture (*Coragyps atratus*), turkey vulture (*Cathartes aura*), mourning dove (*Zenaida macroura*), red-winged blackbird (*Agelaius phoeniceus*), ground dove (*Columbina passerina*), cattle egret (*Bubulcus ibis*), Eastern cottontail rabbit (*Sylvilagus floridanus*), raccoon (*Procyon lotor*), and the exotic species brown basilisk (*Basiliscus vittatus*).

Herbaceous Dry Prairie (FLUCFCS 310) – This upland community within the potable water pipeline corridor and adjacent areas provides limited habitat for wildlife or listed species of plants/animals. Only common species of wildlife typically utilize the open grass and adjacent trees, such as mockingbird, loggerhead shrike, black vulture, turkey vulture, mourning dove, red-winged blackbird, ground dove, cattle egret, Eastern cottontail rabbit, raccoon, and the exotic species brown basilisk.

Shrub and Brushland (FLUCFCS 320) – This upland community within the potable water pipeline corridor and adjacent areas provides limited habitat for wildlife or listed species of plants/animals. Only common species of wildlife typically utilize these densely vegetated areas, such as mockingbird,

loggerhead shrike, black vulture, turkey vulture, mourning dove, red-winged blackbird, ground dove, cattle egret, Eastern cottontail rabbit, raccoon, and the exotic species brown basilisk.

Exotic Hardwoods (FLUCFCS 422, 424) – These upland communities within the potable water pipeline corridor and adjacent areas provide limited habitat for wildlife or listed species of plants/animals. Only common species of wildlife typically utilize these densely vegetated areas, such as mockingbird, loggerhead shrike, black vulture, turkey vulture, mourning dove, red-winged blackbird, ground dove, cattle egret, Eastern cottontail rabbit, raccoon, and the exotic species brown basilisk.

Hardwood-Coniferous Mixed (FLUCFCS 434) – This upland community is located between Florida's Turnpike and a large area of high-density residential development and, thus, provides limited habitat for wildlife or listed species of plants/animals. Only common species of wildlife typically utilize these densely vegetated areas, such as mockingbird, loggerhead shrike, black vulture, turkey vulture, mourning dove, red-winged blackbird, ground dove, cattle egret, Eastern cottontail rabbit, raccoon, and the exotic species brown basilisk.

Canals and Reservoirs (FLUCFCS 510, 530) – The artificial canals and stormwater ponds within the potable water pipeline corridor and surrounding area contain relatively steep slopes and limited littoral zone vegetation, reducing the quality of wildlife habitat. Common avian species utilizing these habitats include moorhen (*Gallinula chloropus*), green heron (*Butorides virescens*), great egret (*Casmerodias albus*), anhinga (*Anhinga anhinga*), cattle egret, cormorant (*Phalacrocorax auritis*), great blue heron (*Ardea herodias*), belted kingfisher (*Ceryle alcyon*), and osprey (*Pandion haliaetus*).

Canals adjacent to SW 137th Avenue/Tallahassee Road and SW 320th Street provide habitat for common freshwater forage fishes, such as mosquitofish (*Gambusia holbrooki*), sailfin molly (*Poecilia latipinna*), and least killifish (*Heterandria formosa*), as well as sunfish (*Lepomis* sp.), gar (*Lepisosteus* sp.), and exotic species commonly inhabiting canals of Miami-Dade County, such as peacock bass (*Cichla ocellaris*), spotted tilapia (*Tilapia mariae*), blue tilapia (*Oreochromis aureus*), Mayan cichlid (*Cichlasoma urophthalmus*), jaguar guapote (*Cichlasoma managuense*), and oscar (*Astronotus ocellatus*).

Listed Species—Flora and Fauna

Listed species are those plant and animal species that are designated by FFWCC, FDACS and/or USFWS as threatened, endangered, or of special concern. Listed species known to occur in Miami-

Dade County and their probability of occurrence along the potable water pipeline corridor and the roadway improvement corridor are identified in Subsection R9.3.7-1, Table R9.3.7-1, and discussed below. In addition, the FNAI database of documented occurrences of listed species was consulted to identify known occurrences of any listed species within one-half mile of the potable water pipeline corridor and the roadway improvement corridor. Figure D9.3.7-2 presents FNAI species occurrences in the segment from SW 137th Avenue/Tallahassee Road and SW 288th Street/Bougainville Road to SW 137th Avenue/Tallahassee Road and SW 328th Street/North Canal Drive. Subsection R9.3.7.3 presents the information on listed species for the potable water pipeline corridor segment within the roadway improvement corridor from SW 137th Avenue/Tallahassee Road and SW 328th Street/North Canal Drive Street to the Site.

Listed plant species observed or likely to occur within the potable water pipeline corridor and adjacent area include the state-threatened mullein nightshade (*Solanum donianum*), pinelink (*Bletia purpurea*), and Bahama brake (*Pteris bahamensis*), as well as the state-endangered Lamark's trema (*Trema lamarckianum*), all of which are found within disturbed uplands such as the areas adjacent to the existing roadway of SW 359th Street. Based on existing habitat and results of field surveys, there is a moderate probability of occurrence for a number of listed plants within the potable water pipeline corridor.

The FNAI database indicated the occurrences of listed plants in the vicinity of the potable water pipeline corridor, including the state-threatened pineland noseburn (*Tragia saxicola*), Krug's holly (*Ilex krugiana*), pineland jacquemontia (*Jacquemontia curtissii*), mangrove berry (*Psidium longipes*), Bahama brake (*Pteris bahamensis*), Bahama sachsia (*Sachsia polycephala*), locustberry (*Byrsonima lucida*), silver palm (*Coccothrinax argentata*), and Christmas berry (*Crossopetalum ilicifolium*) as well as the state-endangered Porter's broad-leaved spurge (*Chamaesyce porteriana*), rockland painted-leaf (*Euphorbia pinetorum*), and Florida lantana (*Lantana depressa* var. *depressa*) all of which are found at least 750 ft east of the potable water pipeline corridor and SW 137th Avenue/Tallahassee Road.

Listed species of animals observed or likely to occur within or adjacent to the potable water pipeline corridor include wading birds associated with canals and stormwater ponds. Listed wading birds observed or likely to forage within the corridor include white ibis, little blue heron, tricolored heron, snowy egret, roseate spoonbill, and wood stork. In addition, the canals provide habitat for the American alligator and potential habitat for the American crocodile. According to the FNAI

database, no listed species have been documented within the potable water pipeline corridor. Listed species observed or potentially utilizing habitats within the corridor are described below.

White Ibis (*Eudocimus albus*) – SSC – The white ibis is listed as a species of special concern by the FFWCC, but is not federally listed by the USFWS. White ibis are likely to forage within freshwater marsh habitats and along the banks of canals within the potable water pipeline corridor.

Little Blue Heron (*Egretta caerulea*) – SSC – The little blue heron is listed as a species of special concern by the FFWCC, but is not listed federally. Little blue herons are likely to forage on the edges of canals and stormwater ponds within and adjacent to the corridor.

Tricolored Heron (*Egretta tricolor*) – SSC – The tricolored heron is listed as a species of special concern by the FFWCC, but is not listed federally. No tricolored herons were observed within the potable water pipeline corridor, although it is likely that they occasionally utilize freshwater canals and stormwater ponds for foraging.

Snowy Egret (*Egretta thula*) – SSC – The snowy egret is listed as a species of special concern by the FFWCC, but is not listed federally by the USFWS. Snowy egrets have been observed along the edges of the canals and stormwater ponds within the corridor.

Roseate Spoonbill (*Platalea ajaja*) – SSC – The roseate spoonbill is listed as a species of special concern by the FFWCC, but is not listed federally by the USFWS. Although no individuals were observed, it is likely that they occasionally utilize mangrove and freshwater marsh wetlands within and adjacent to the corridor for foraging.

Wood Stork (*Mycteria americana*) – E – The wood stork is listed as endangered by the FFWCC and USFWS. Although no individuals were observed within the corridor, based on available habitat, it is probable that wood storks occasionally forage in stormwater ponds, shallow freshwater marsh, and mangrove habitats adjacent to existing roadways.

Reddish Egret (*Egretta rufescens*) – SSC – The reddish egret is classified as a species of special concern by the FFWCC, but is not listed federally by the USFWS. Although none were observed within or adjacent to the corridor, it is likely that they occasionally utilize freshwater marsh, canal, and mangrove habitats in the area for foraging.

White-Crowned Pigeon (*Patagioenas leucocephala*) – T – The white-crowned pigeon is classified as threatened by the FFWCC, but is not listed federally by the USFWS. No individuals were observed within the potable water pipeline corridor or surrounding area. However, based on suitable foraging habitat in the form of fruit-bearing tropical hardwoods, it is probable that the white-crowned pigeon utilizes wooded areas adjacent to the corridor.

Limpkin (*Aramus guarauna*) – SSC – The limpkin is classified as a species of special concern by the FFWCC, but is not listed federally by the USFWS. No individuals were observed; however, due to the presence of stormwater ponds and irrigation canals, there is a moderate probability that the limpkin may forage within areas adjacent to the corridor.

Florida Manatee (*Trichechus manatus latirostris*) – E - The manatee is listed as endangered by the FFWCC and USFWS. Although no individuals were observed within the corridor, based on available habitat, it is probable that manatees occasionally occur within the canals adjacent to SW 137th Avenue/Tallahassee Road, SW 320th Street, SW 328th Street/North Canal Drive and SW 344th Street/Palm Drive.

Mangrove Rivulus (*Rivulus marmoratus*) – SSC – The mangrove rivulus is classified as a species of special concern by the FFWCC, but is not listed federally by the USFWS. No individuals were observed; however, due to the presence of suitable mangrove habitat and other surface waters, it is likely that the mangrove rivulus occurs within or adjacent to the corridor.

American Alligator (*Alligator mississippiensis*) – SSC/T – The American alligator is listed as a species of special concern by the FFWCC, and is federally listed by the USFWS as threatened due to similarity of appearance with the endangered American crocodile (*Crocodylus acutus*). Alligators are known to utilize the canals within the corridors.

American Crocodile (*Crocodylus acutus*) – E/T – The American crocodile is classified by the FFWCC as endangered and the USFWS as threatened. The Turkey Point plant cooling canals are known to support a population of American crocodiles, as described in Subsection 3.3.6. Although no individuals have been observed within the aquatic habitats of the potable water pipeline corridor, the area adjacent to the L-31E Canal contains mangrove wetlands that provide potential foraging habitat for the American crocodile.

Aquatic Systems

The only significant aquatic systems along the potable water pipeline corridor are artificial drainage canals and stormwater ponds. The SFWMD canal system is primarily utilized for drainage and water conveyance as part of the SFWMD management of flood control and water supply. The majority of the native vegetation along the banks of the canals has been cleared.

D9.3.7.4 Other Environmental Features

The SFWMD canal system is primarily utilized for drainage and water conveyance as part of the SFWMD management of flood control and water delivery. The construction of the potable water pipelines will require canal crossings involving installation over the Mowry Canal (C-103) on an existing bridge and over North Canal in the culverts. Other environmental features for the potable water pipeline corridor segment from SW 137th Avenue/Tallahassee Road and SW 328th Street/North Canal Drive to the Site are presented in Subsection R9.3.7.4.

D9.4 Effects of Rights-of-Way Preparation and Construction

D9.4.1 Construction Techniques

Typically, pipe installation takes place by excavation and backfill techniques. Before any excavation occurs, underground utilities in the area will be located and clearly marked by Florida State One-Call. To the extent practicable, the potable water pipelines will be installed along with the roadway improvements. All excavated areas will be finished to post-construction contours and conditions as described in Subsection R9.3.2.

The potable water pipeline corridor has been previously impacted and minimal additional clearing will be required. If the pipelines are installed under the median of SW 137th Avenue/Tallahassee Road, some clearing may be required. If necessary, turbidity screens and erosion control devices will be used to minimize impacts to wetlands and water bodies. Open cutting or trenching will be utilized for the pipeline installation. Tracked-hoe machines are typically utilized to excavate the trench to accommodate the pipe. Once a section of trench has been excavated, the pipe is installed in the trench. The remaining part of the trench will be backfilled and compacted with native soil or clean fill, and any excess spoils material will be spread within the limits of construction in the upland areas or removed to an approved area. The contractor will continue down the right-of-way, repeating this process.

Once the construction is complete, the pipelines will be filled with potable water for pressure testing and disinfection. This water will be disposed via the deep injection wells being permitted as part of Turkey Point Units 6 & 7 or other approved methods. Construction stormwater discharges released into waters of the state will be addressed through compliance with Rule 62-621.300(4) (Generic Permit for Stormwater from Large and Small Construction Activities).

The construction of the potable water pipelines will take about one year.

D9.4.2 Environmental Resource Permit (ERP)

The installation of the potable water pipelines will not cause additional impacts to wetlands over those described for the roadway improvements. The information typically provided in an ERP application will be submitted to reviewing agencies for postcertification monitoring of compliance with the Conditions of Certification, as authorized Section 62-17.191, F.A.C. The ERP informational data submittal contained in Appendix 10.4 reflects an enveloping approach for the potable water pipelines portion of the Project.

D9.4.3 Solid Wastes

Solid wastes generated by the clearing of areas for constructing the potable water pipelines are anticipated to be minimal since most of the areas have already been cleared or will be cleared for the roadway improvements. Solid wastes generated will typically consist of unsuitable soils, asphalt, minor amounts of vegetation, and construction debris. All solid wastes will be collected and removed for disposal at a permitted disposal facility. There will be no disposal of debris by burial within areas required for constructing the potable water pipelines.

D9.4.4 Changes to Vegetation, Wildlife, and Aquatic Life

No permanent changes to the vegetation, wildlife, and aquatic systems in the potable water pipelines right-of-way are anticipated. The pipelines will be collocated with existing or planned linear facilities, requiring only a minimal amount of temporary disturbance of altered habitats during installation.

The pipelines will be located within the corridor to avoid traversing wetland areas as much as possible. No temporary or permanent wetland impacts are anticipated for the installation of the potable water pipelines beyond those associated with the roadway improvements.

No impacts to threatened and endangered species are expected. Listed species observed along the corridor are mostly limited to bird species that may relocate to similar habitat during construction activities. Since the potable water pipelines will be located underground, no permanent loss of habitat for threatened and endangered species will occur.

Based on the final designs for the pipelines, any planting required for areas impacted by pipelines will be coordinated through the Miami-Dade County DERM and the Miami-Dade County Park and Recreation Department. The plantings will be native material appropriate to the planting area as verified by DERM and will be Florida Landscape Grade A.

D9.4.5 Impacts to Human Populations

Construction of the potable water pipelines will consist of a series of tasks performed by specialized crews. During the construction period, a particular crew's total time at any given location will be relatively brief. Use of construction equipment may result in temporary noise impacts. Impacts will be brief and intermittent due to the nature of pipeline construction and equipment use. Construction will be scheduled during daylight hours as much as possible to minimize disturbance. Clearing is expected to be minimal because the potable water pipeline corridor follows existing and proposed roadways. The construction contractor will follow Miami-Dade County guidelines for maintenance of traffic, including flagging and use of barriers/warning lights for traffic control, where needed.

Because of the temporary nature of the construction process and the relatively short duration of each phase of construction at any given location, effects experienced by individuals near the potable water pipeline corridor will be minimal.

D9.4.6 Impact on Regional Scenic, Cultural, and Natural Landmarks

No significant impacts to regional scenic, cultural, or natural landmarks are anticipated from the construction of the potable water pipelines for the segment from SW 137th Avenue/Tallahassee Road and SW 288th Street/Bougainville Road to SW 137th Avenue/Tallahassee Road and SW 328th Street/North Canal Drive. Subsection R9.4.6 provides information on potential impacts to regional scenic, cultural, or natural landmarks for the potable water pipelines segment from SW 137th Avenue/Tallahassee Road and SW 328th Street/North Canal Drive to the Site. Construction of the pipelines will take place in areas that have been previously disturbed.

D9.4.7 Impact of Archaeological and Historical Sites

The probability of impacts on undiscovered archaeological and historical sites is considered extremely low due to the fact that the area does not contain known sites and the potable water pipelines will be constructed within or immediately adjacent to previously disturbed areas. If unforeseen archaeological finds are discovered during construction, DHR will be notified. Following a determination of the importance of such finds, FPL will work with DHR to assess mitigation measures necessary to minimize adverse impacts.

D9.5 Postconstruction Impacts and Effects of Maintenance

D9.5.1 Maintenance Techniques

The potable water pipelines will be installed within existing rights-of-way. Any maintenance will be associated with those rights-of-way.

D9.5.2 Multiple Uses

Current uses of the potable water pipeline corridor will continue following installation. These uses include road travel, transmission of electricity from the Turkey Point Plant to the FPL system, and water conveyance in the canals.

D9.5.3 Changes in Species Populations

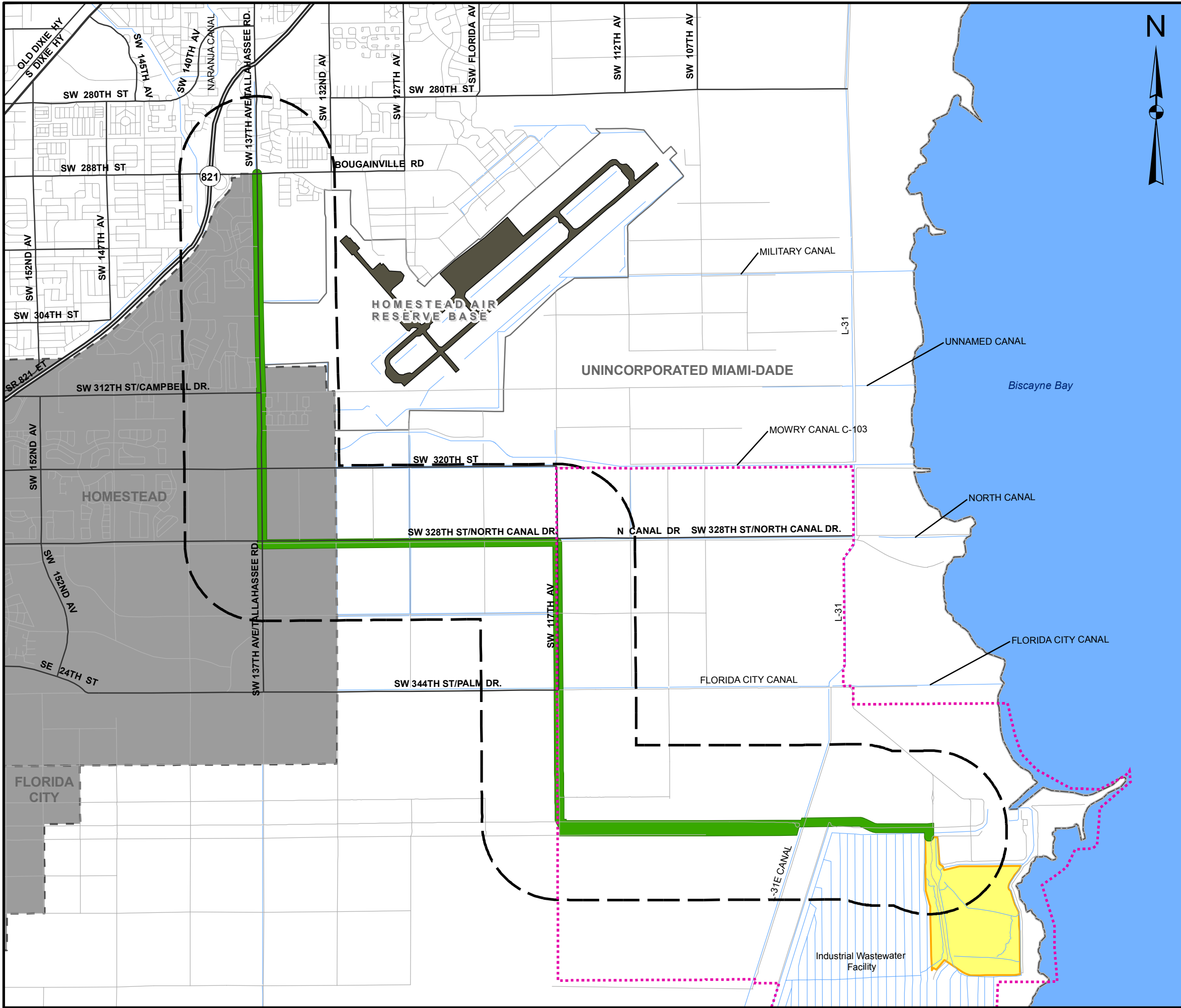
The current vegetative habitat and land uses along the corridor will not be permanently altered through installation of the underground potable water pipelines; no significant changes in species populations are expected upon completion of construction.

D9.5.4 Effects of Public Access

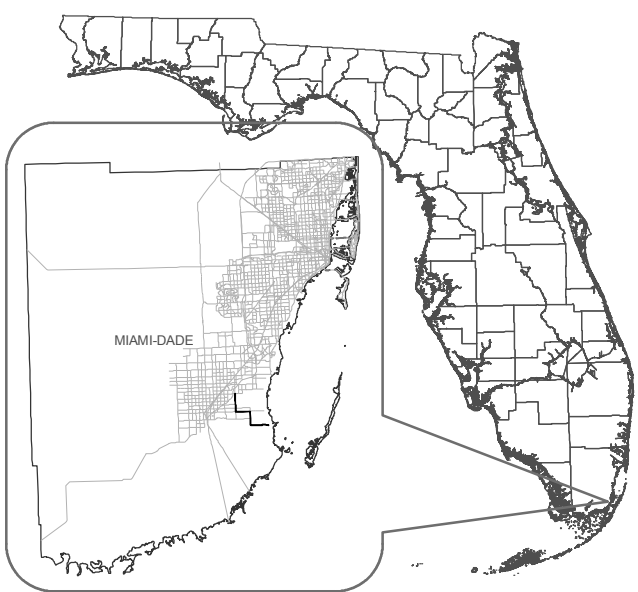
There will be no increase in public access to previously undisturbed areas.

D9.5.5 Other Postconstruction Effects

No other post-construction effects are anticipated.



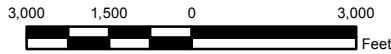
AREA MAP



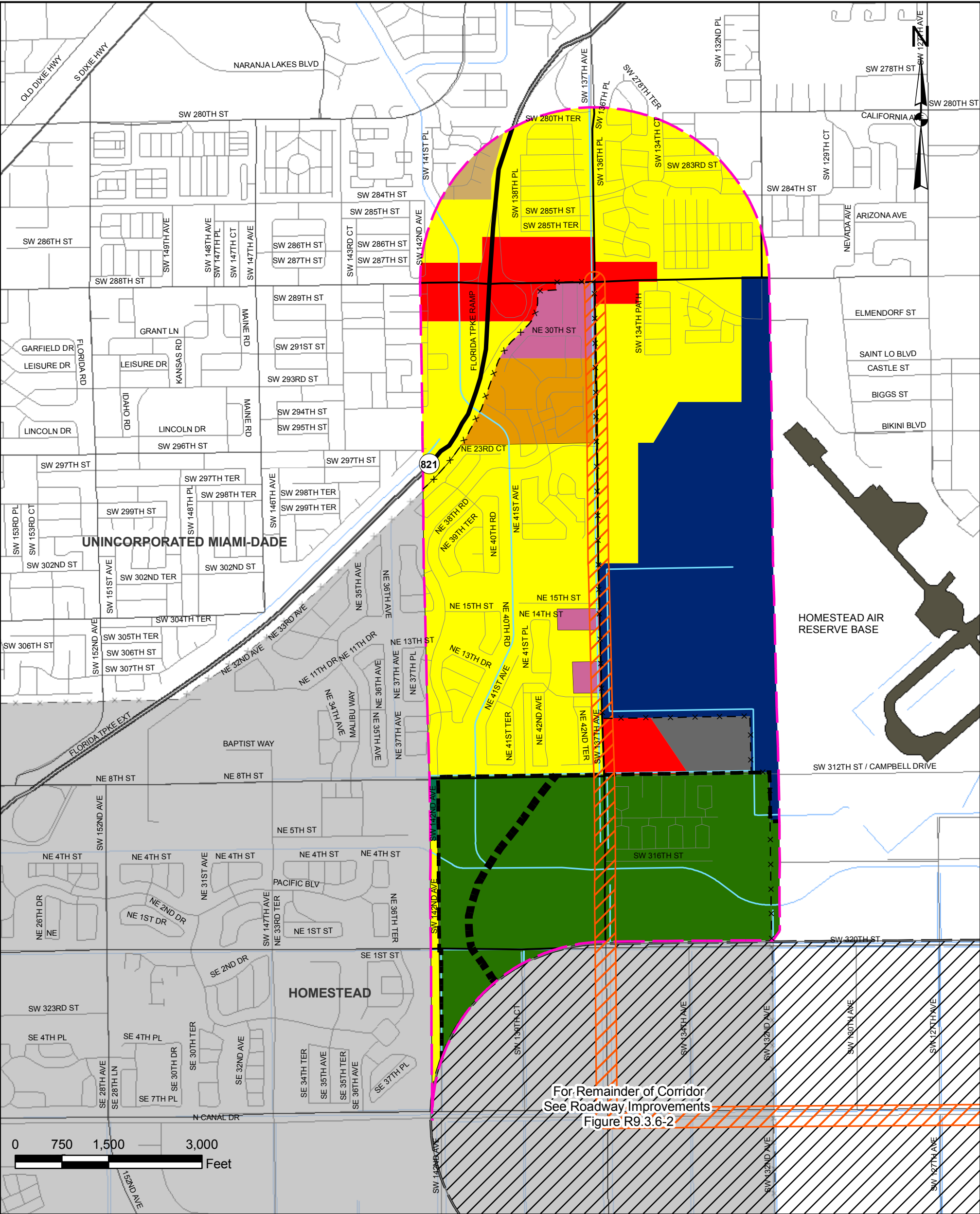
LEGEND

- Turkey Point Units 6 & 7 Site
- Turkey Point Plant Property
- Potable Water Pipeline Corridor
- Potable Water Pipeline 0.5 Mile Area

REFERENCES



PROJECT	TURKEY POINT UNITS 6 & 7 PROJECT		
TITLE	POTABLE WATER PIPELINE CORRIDOR LOCATION MAP		
	FILE No.	08387584G001	FIGURE D9.0.0-1
	REV.	0	
	PLOT DATE	6/12/2009	



LEGEND

× —

Municipal Boundaries

Potable Water Pipeline Corridor

Potable Water Pipeline Corridor 0.5 Mile Area

Roadway Improvement Corridor 0.5 Mile Area

2005 Urban Expansion Boundary

2015 Urban Expansion Boundary

Highways

Major Roads

Streets

Canals

City of Homestead

AU - Agriculture

HCU - Heavy Commercial Use

IU - Industrial Use

LCU - Light Commercial Use

LRU - Low Density Residential Use

MRU - Medium Density Residential Use

PMU - Professional Mixed Use

Unincorporated Miami-Dade

Agriculture

Business and Office

Institutions Utilities, and Communications

Low Density

Low-Medium Density

1. Roads, Municipal Boundaries, Miami-Dade County, 1998 / 2006.

2. Unincorporated Miami Dade Future Land Use, Miami-Dade Comprehensive Future Land Use Plan 2015-2025, 2007.

3. City of Homestead Future Land Use, Future Land Use Map, City of Homestead, 2009.

FIGURE

D9.3.6-2

FILE No. 08387564G003

REV. 0

PLOT DATE 6/12/2009

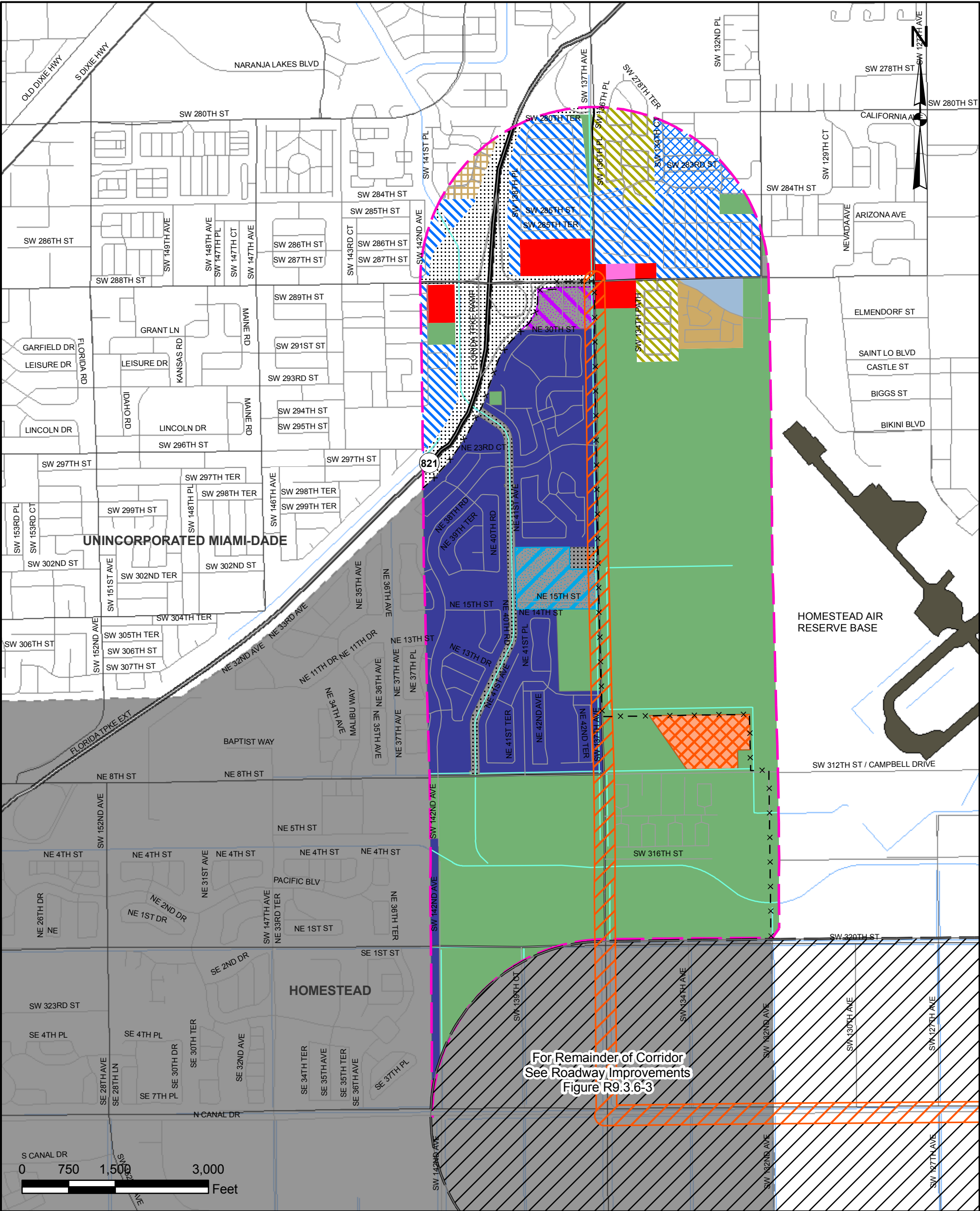
TITLE

POTABLE WATER PIPELINE CORRIDOR FUTURE LAND USE

PROJECT

TURKEY POINT UNITS 6 & 7 PROJECT

FPL



LEGEND

- ✕

 Municipal Boundaries

Potable Water Pipeline Corridor

Roadway Improvement Corridor 0.5 Mile Area

Potable Water Pipeline Corridor 0.5 Mile Area

Canals

Highways

Major Roads

Streets
- AU Agricultural District

B-2 Retail Commercial

B-3 Liberal Buissness

BU-1 Neighborhood Business District

BU-1A Limited Business District

GU Interim District

IU-2 Industrial, Heavy Manufacturing

NONE No Zoning Designated
- PUD Planned Unit Development

R-1 One Family 556-1

RU-1 Single Family Residential District

RU-1MA Modified Single Family Residential

RU-1Z Zero Lot Line Development Single Family

RU-3M Minimum Apartment House District

RU-TH Townhouse District, 8.5 Units/Net Acre

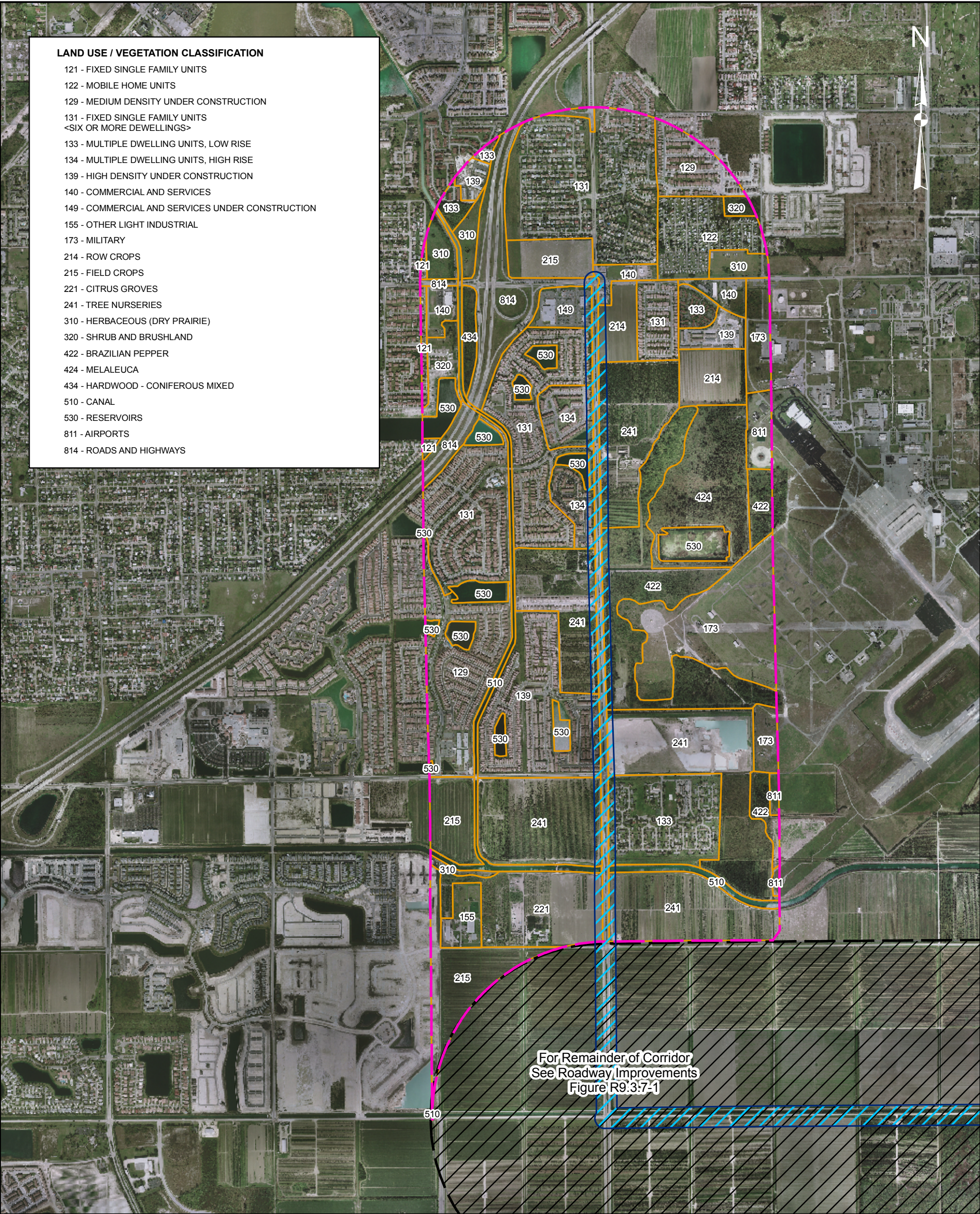
REFERENCES

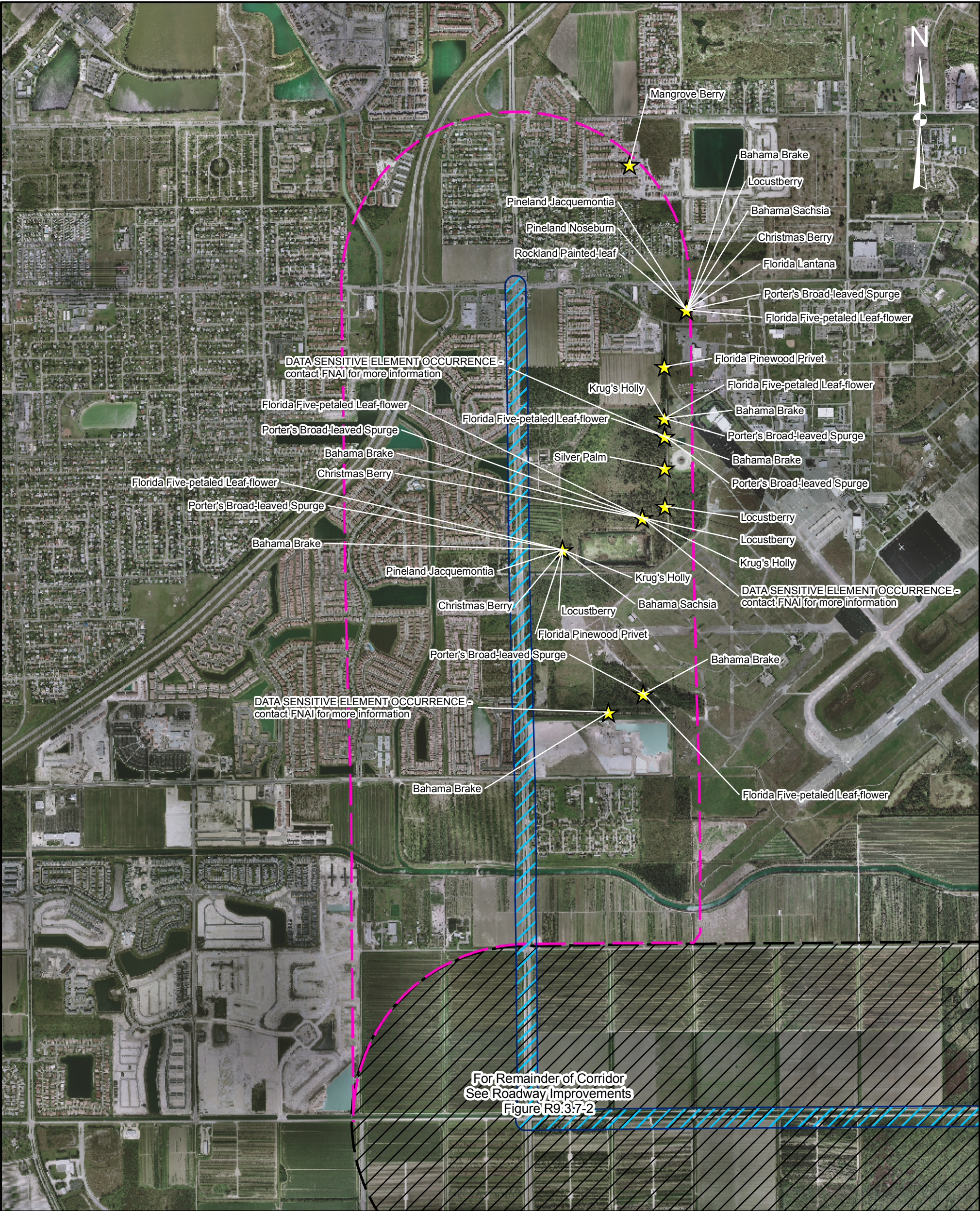
1. Roads, Municipalities, Miami-Dade, 1998 / 2006.
2. Zoning, Miami-Dade, 2007.
3. Zoning, City of Homestead, Official Zoning Map, 2007.

POTABLE WATER
PIPELINE CORRIDOR
ZONING

TURKEY POINT UNITS 6 & 7
PROJECT







LEGEND

- FNAI Species Occurrences
- Potable Water Pipeline Corridor
- Potable Water Pipeline Corridor 0.5 Mile Area
- Roadway Improvement Corridor 0.5 Mile Area

REFERENCES

- Species Occurrences, FNAI, 2008.
- Imagery, Miami-Dade County, 2007.

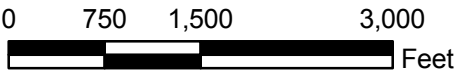


FIGURE D9.3.7-2			FILE No. 08387564G007 REV. 0 PLOT DATE 6/12/2009	TITLE POTABLE WATER PIPELINE CORRIDOR FNAI SPECIES OCCURRENCES	PROJECT TURKEY POINT UNITS 6 & 7 PROJECT	
---------------------------------------	--	--	---	--	--	--