

SECTION 3.0

DESCRIPTION OF AFFECTED ENVIRONMENT

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3.1 INTRODUCTION

This section describes the existing environment of the area affected by the Proposed Action or alternatives as required by Council on Environmental Quality (CEQ) Guidelines (40 CFR Section 1502.15), and the Bureau of Indian Affairs (BIA) National Environmental Policy Act (NEPA) Handbook (59I AM 3-H).

Resource areas or issues that are described in this section include:

| Section | Resource Area/Issue |
|----------------|--|
| 3.2 | Geology and Soils |
| 3.3 | Hydrology and Water Quality |
| 3.4 | Air Quality |
| 3.5 | Biological Resources |
| 3.6 | Cultural and Paleontological Resources |
| 3.7 | Socioeconomic Conditions and Environmental Justice |
| 3.8 | Transportation/Traffic |
| 3.9 | Land Use and Planning |
| 3.10 | Utilities and Public Services |
| 3.11 | Noise |
| 3.12 | Hazards and Hazardous Materials |
| 3.13 | Aesthetics |

3.2 GEOLOGY AND SOILS

This section describes the existing environmental conditions for the project site. Issues appearing in this section include geological setting, topography, soils and soil conditions, seismicity, and mineral resources. The general and site-specific discussion of land resources contained herein provides the environmental baseline by which environmental impacts are identified and measured. Environmental impacts are discussed in **Section 4.2**.

3.2.1 ENVIRONMENTAL SETTING

The project site is located within the City of Coconut Creek (City) in the north-central portion of Broward County (County), Florida. The City encompasses approximately 12.7 square miles and is located immediately south of Palm Beach County and is generally located between the Florida Everglades, to the west, and the Atlantic Ocean, to the east.

TOPOGRAPHY

The project site, as well as a majority of land in the City, has a relatively flat topography. The project site's average elevation is approximately 14 feet National Geodetic Vertical Datum (NGVD), according to the U.S. Geological Survey (USGS) 7.5-Minute Quadrangle Map of the area (**Figure 1-2**). The project site is developed with the entrance to the existing Coconut Creek Casino, surface parking lots, a multi-story parking structure, and man-made retention ponds. The man-made retention ponds or lakes located on the project site serve the drainage demands of the existing impervious surfaces on the project site as well as surrounding lands within the City's Commerce Center development district. The pond system is described in "Water Resources" **Section 3.3**.

Static ground water levels in the area have ranged from approximately 7 to 14 feet NGVD for extreme record periods, averaging about 9 feet NGVD, with the average depth from surface being 3 feet. Average topographic land surface in the project vicinity is approximately 14 feet NGVD.

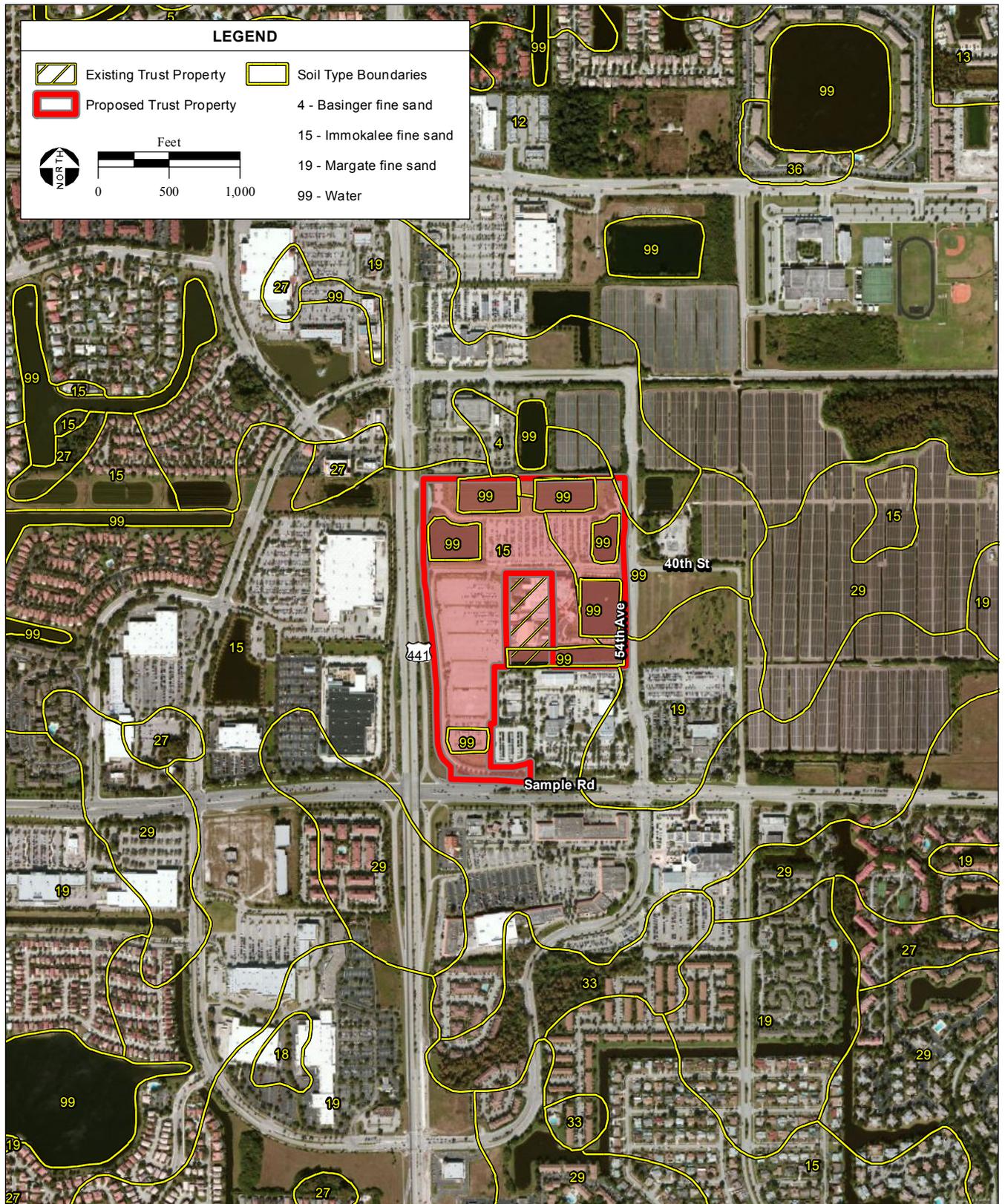
SOILS/GEOLOGY

The U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) online Soil Survey for Broward County (NRCS, 2010), identifies three soil types that have been mapped within the project site. These soil types include: Basinger fine sand (4); Immokalee fine sand (15); and Margate fine sand (19). All three of these soils exhibit hydric characteristics as listed on the NRCS' List of Hydric Soils in Broward County (NRCS, 2011). A map of these soil types is provided as **Figure 3.2-1**

Characteristics of each soil type are described below.

Basinger Fine Sand Series

As noted above, Basinger fine sand (4), 0 to 2 percent slopes, exhibits hydric characteristics (NRCS, 2011). This soil is primary found in drainageways on marine terraces within linear or concave landscapes. The parent material is composed of sandy marine deposits with a shallow depth to water table of approximately 0 to 10 inches. The depth to a restrictive geologic feature is 80 inches. This soil is



SOURCE: USDA NRCS SSURGO Soils Database, Soil Survey of Broward County, FL, 2004-2010; Friedmutter Group, 6/2010; Aerial Express aerial photograph, 4/2008; AES, 2012

Seminole Fee-to-Trust Project EIS / 210520 ■

Figure 3.2-1
Soil Types

classified as poorly drained and it has a low available water capacity of approximately 5.4 inches (NRCS, 2011).

Immokalee Fine Sand Series

Similar to the Basinger fine sand series, the Immokalee fine sand series (15) exhibits hydric characteristics and is commonly found in flatwoods on marine terraces (NRCS, 2010; 2011). The depth to a restrictive geologic feature is 80 inches. This soil is classified as poorly drained with a shallow depth to water table of approximately 6 to 18 inches. The underlying parent material is sandy marine deposits. The available water capacity of this soil is low at approximately 5.4 inches (NRCS, 2011).

Margate Fine Sand Series

The Margate fine sand (19) is similar to the Basinger and Immokalee fine sands described above. This soil is known to exhibit hydric characteristics and it occurs in drainage-ways on marine terraces (NRCS, 2010; 2011). The parent material of this soil is sandy marine deposits over limestone. The depth to water table is 0 inches. In comparison, the depth to a restrictive geologic feature is relatively shallow at 20 to 40 inches to lithic bedrock. This soil is known to occasionally pond; further, the available water capacity is very low at approximately 1.8 inches (NRCS, 2011).

LIQUEFACTION

Liquefaction is the temporary transformation of saturated, non-cohesive material from a relatively stable, solid condition to a liquefied state as a result of increased soil pore water pressure. Soil pore water pressure is the water pressure between soil particles. Liquefaction occurs most often in non-marine soils if three factors are present: seismic activity, loose sand or silty soil, and shallow ground water. Liquefaction potential has been found to be greatest where the groundwater is within a depth of 50 feet or less, and submerged loose, fine sands occur within that depth. Liquefaction potential decreases with increasing grain size and clay and gravel content, but increases as the ground acceleration and duration of shaking increases.

Due to the coastal location of the project site, the underlying soils have a low to very low susceptibility to liquefaction.

SEISMICITY

The State of Florida lies on the trailing edge of the North American tectonic plate. There are no known active faults in southern Florida. The entire State of Florida lies in an area of low seismic risk, and the historical earthquakes have been low in magnitude and frequency. No earthquakes have ever had epicenter beneath the state (Florida Department of Environmental Protection, 2011).

MINERAL RESOURCES

The most significant mineral resource in southern Florida is limestone. The project site is located upon the Miami Limestone geological formation, which stretching along southeastern Florida from Palm Beach County to the north to southern Dade County (USGS, 2011). Limestone quarries are located within the County and Miami-Dade County to the south. These quarries dredge limestone for use as cement and

roadway aggregate (Florida Department of Environmental Protection, 2011). There are no known mineral resources or active mineral resource processors on or in the immediate vicinity of the Project Site.

3.3 WATER RESOURCES

This section describes the existing hydrological setting, including water quality, on the project site and vicinity, as well as the various relevant hydrology and water quality regulations and policies that pertain to the project site. The general and site-specific discussion of hydrology and water quality contained herein provides the environmental baseline by which environmental impacts are identified and measured. Environmental impacts are discussed in **Section 4.0**.

3.3.1 REGULATORY SETTING

FEDERAL REGULATORY SETTING

Clean Water Act

The Clean Water Act (CWA) (33 U.S.C. 1251-1376), as amended by the Water Quality Act of 1987, is the major federal legislation governing water quality. The objective of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” The United States Environmental Protection Agency (USEPA) is the federal agency charged with implementing the CWA. Various permitting programs under the CWA have been delegated to the states, including the State of Florida. However, the USEPA has delegated authority to the Seminole Tribe of Florida (STOF) to implement the CWA on tribal lands in the State of Florida.

Beneficial Uses and Impaired Water Bodies

Sections 303 and 304 of the CWA outline provisions for the development of water quality standards, identification of impaired water bodies, and improvement of water quality throughout the nation. States are required to designate beneficial uses for jurisdictional waters (regardless of existing quality). Section 303(d) of the CWA requires states to identify water bodies within their planning jurisdiction that are impaired in such a manner that beneficial uses cannot be maintained. States are also required to develop total maximum daily loads (TMDLs), which are qualitative and quantitative measures designed to improve water quality to maintain designated beneficial uses. TMDLs establish limits for total pollution loading in waters that do not currently meet, or are not expected to meet, applicable water quality standards. The USEPA has delegated the authority to administer these sections of the CWA on tribal lands to STOF.

Water Quality Certification

Section 401 (Water Quality Certification) requires conformity between a federal permit for and the ability of a state to comply with other sections of the CWA. Under Section 401, an applicant must verify to the federal permitting agency that the permitted action would not impede the ability of the state (in which the project is located) to comply with other provisions of the CWA. On fee lands in the State of Florida, Section 401 Water Quality Certification is the responsibility of the Florida Department of Environmental Protection (DEP), while on trust lands this certification is the responsibility of STOF per delegated authority from the USEPA.

National Pollutant Discharge Elimination System

Section 402 of the CWA establishes a national permitting system known as the National Pollutant Discharge Elimination System (NPDES) that regulates the discharge of pollutants (except for dredged or

fill material, which is covered under Section 404 of the CWA) during construction activities into waters of the United States. Project applicants that propose construction activities with the potential to discharge pollutants into waters of the U.S. are required to obtain a NPDES construction general permit. If issued, the construction general permit includes both technology-based and water quality-based discharge limitations (Waste Discharge Requirements) and site specific best management practices (BMPs) to reduce potential discharge of construction related pollutants. Although STOF is the delegated CWA authority on tribal lands in the State of Florida, the USEPA is the permitting agency for Federal NPDES construction general permits.

Point Source Pollution

In Florida, the USEPA has delegated control of the NPDES permitting program to the DEP for point source pollution (§403.0885, F.S.). All proposed projects that have stormwater discharge associated with large or small construction activities to surface waters of the state must obtain either a generic permit pursuant to Chapter 62-621, Florida Administrative Code (F.A.C), or an individual permit issued pursuant to Chapter 62-620, F.A.C.

Federal policy (40 CFR 131.6) specifies that each state must develop, adopt, and retain an anti-degradation policy to protect the minimum surface water quality necessary to support existing uses. Each state must also develop procedures to implement the anti-degradation policy through water quality management processes. The anti-degradation program for each state includes policy and implementation methods consistent with the provisions outlined in 40 CFR 131.12 (USEPA, 1994). Florida's anti-degradation policy is outlined below under State Regulatory Setting.

Non-Point Source Pollution

The NPDES program also regulates certain non-point sources of pollution, including stormwater runoff associated with construction activities, industrial activities, and municipal separate storm sewer systems. Construction activities include clearing, grading, excavation, dewatering of shallow groundwater, stockpiling, and reconstruction of existing facilities involving removal and replacement. Applicants with construction projects disturbing five or more acres of soil are required to file for coverage under the NPDES permitting process. In 1999, the CWA was amended to require construction sites disturbing one to five acres to file for coverage under the NPDES permitting process. For federal projects, the applicant must apply for coverage under the USEPA's general NPDES permit for construction. In Florida, regulation for non-point source pollution is under the jurisdiction of local partnerships between the DEP, the State's five water management districts (WMDs), the Department of Community Affairs, local governments, and the private sector. Each NPDES permit contains limits on pollutant concentrations of wastes discharged to surface waters to prevent degradation of water quality and protect beneficial uses.

All project proponents are required to submit a complete Notice of Intent (NOI) to the DEP before use of the generic permit for stormwater discharge (Chapter 62-621, F.A.C.). The generic permit also requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP contains a site map showing drainage patterns; approximate slopes after major grading activities; areas of soil disturbance; location of all major structural and non-structural controls; outline of all areas that are not to be disturbed; the location of expected stabilization practices; wetlands and surface waters; and the locations where stormwater may discharge to surface water sources. The SWPPP must list BMPs that

will be implemented during construction and operation to address stormwater runoff rates and quality and dewatering provisions. BMPs include the following categories:

- Site planning considerations such as preservation of existing vegetation;
- Dewatering provisions to prevent contact with surface water resources such as land application for non-contaminated sources at rates preventing runoff, treatment for contaminated sources and associated land disposal, use for dust suppression, or disposal at a permitted facility such as a wastewater treatment plant;
- Vegetation stabilization through methods such as seeding and planting;
- Physical stabilization through use of dust control and stabilization measures;
- Diversion of runoff by utilizing earth dikes and temporary drains and swales;
- Velocity reduction through measures such as slope roughening/terracing; and
- Sediment trapping/filtering through use of silt fences, straw bales, sand bag filters, and sediment traps and basins.

Both the USEPA and the DEP have issued general permits that cover stormwater discharges associated with construction activities. As with permits for point sources, the USEPA is the permitting authority for federal projects and for project located on tribal lands in the State of Florida, and the DEP is the permitting authority for other projects located in the state.

Safe Drinking Water Act

Minimum national drinking water standards are established through the 1974 Safe Drinking Water Act (42 U.S.C. § 300f *et seq.*) (amended in 1986 and 1996). Contaminants of concern relevant to domestic water supply are defined as those that pose a public health threat or that alter the aesthetic acceptability of the water. The USEPA regulates these types of contaminants through the development of national primary Maximum Contaminant Levels (MCLs) for finished water. These are legally enforceable standards that apply to public water systems. These standards are established to protect human health by limiting the levels of contaminants in drinking water. The USEPA also defines National Secondary Drinking Water Regulations (secondary standards). These secondary standards are non-enforceable. They regulate contaminants that cause cosmetic effects or aesthetic effects. A list of primary and secondary MCLs can be found online at: <http://www.epa.gov/safewater/contaminants/index.html>.

The Safe Drinking Water Act additionally established requirements and provisions for the Underground Injection Control (UIC) Program. The Federal UIC Program is responsible for regulating the permitting, construction, operation, and closure of injection wells that place fluids underground for storage or disposal (USEPA, 2012).

Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA) is responsible for determining flood elevations and floodplain boundaries based on U.S. Army Corps of Engineers studies. Floodplain management is addressed in Executive Order 11988, which requires the evaluation of actions taken in a floodplain. Specifically, the order states that agencies shall first determine whether the proposed action will occur in a floodplain. Second, if an agency proposes to allow an action to be located in a floodplain, “the agency shall consider alternatives to avoid adverse effects and incompatible development in the floodplains.”

Finally, if the only practicable alternative action requires siting in a floodplain, the agency shall “minimize potential harm to or within the floodplain.”

FEMA is also responsible for distributing Flood Insurance Rate Maps (FIRMs), which are used in the National Flood Insurance Program (NFIP). These maps identify the locations of special flood hazard areas, including 100-year and 500-year floodplains. A 100-year flood event is defined as a flood event which would have a one in 100 chance of occurring each year. A 500-year flood event is defined as a flood event which would have a one in 500 chance of occurring each year.

FEMA restricts cumulative development from increasing the water surface elevation of the base flood by more than one foot within the floodplain. These standards are implemented at the local level through state-mandated local ordinance as described below under Local Regulatory Setting.

Coastal Zone Management Act

In 1972, the U.S. Congress passed the Coastal Zone Management Act (CZMA) (16 U.S.C. § 1452 Congressional declaration of Policy [Section 303]). Administered by the National Oceanic and Atmospheric Association’s (NOAA) Office of Ocean and Coastal Resource Management, this act empowers U.S. coastal states to develop comprehensive management programs that would balance and encourage economic growth and development while protecting valuable coastal natural resources. If the plan created by the coastal state is approved by NOAA, then the coastal state is authorized to review select federal activities and projects for consistency. This authority is referred to as “federal consistency” and it allows states to review such things as federal licenses or permits, activities conducted by or on behalf of a federal government agency, federally funded activities, and permits issued under the Outer Continental Shelf Lands Act for offshore minerals exploration or development. CZMA requires that federal activities be fully compatible with the coastal state’s approved management plan. The coastal state must agree with or object to the federal activity according to federal regulations at 15 CFR 930.

The Florida Coastal Management Program (FCMP) was approved by NOAA in 1981 and is codified in Chapter 380, Part II, Florida Statute (F.S). Comprised of 24 Florida Statutes, the FCMP is managed through a framework of nine state agencies and five water management districts. The designated lead agency is the DEP, which in turn manages and communicates the state’s final consistency decision to all applicable federal agencies for all actions other than the permits issued under the CWA Section 404 and Section 10 of the Rivers and Harbors Act. Consistency decisions on those types of permits are made through the wetland resource or the Environmental Resource Permits approval or denial process under Chapter 373, Part IV, F.S.

STOF Environmental Resource Management Department

The USEPA has delegated authority to STOF to implement the federal CWA on trust property within the State of Florida. To comply with CWA requirements, STOF Tribal Council created the Environmental Resource Management Department (ERMD) in 1987, to protect and conserve the Tribe’s land and water. The Seminole Water Commission and the ERMD have developed rules, water use criteria, management systems, water quality standards, and monitoring programs to protect water quality within the boundaries of the Tribe’s reservations and trust lands. Existing water management documents include the 1987 Water Rights Compact between STOF, the State of Florida, and the South Florida Water Management District (SFWMD) to protect the waters of the Tribe’s reservations and trust lands (STOF, 2012) and the

Seminole Tribal Water Code. The purpose of the Tribal Water Code “is to establish tribal law regulating the use and management of all water and water resources under the legal control of the Tribe, and to provide for enforcement of these rules on all persons engaged in well construction or other activities on reservation or Tribal Trust Lands, in accord with the provisions of the Compact; the Manual; and any applicable federal law; in cooperation with the State and the District” (STOF, 2012). The Water Rights Compact applies only to reservation and trust lands that had been established when the Compact was signed in 1987. The Tribal Water Code applies to tribal reservations and trust lands regardless of when the reservation or trust was established.

STATE REGULATORY SETTING

NPDES Permitting Program

In Florida, the USEPA has delegated NPDES permitting authority on non-federal lands to the DEP. Therefore, projects under the jurisdiction of the State (such as the components of the project alternatives proposed for development on lands held in fee title) must apply to the DEP for individual permits. For example, construction projects that disturb more than one acre of land and are under the jurisdiction of the State must apply for coverage under the State’s generic permit: Rule 62-621.300(4) F.A.C., the Generic Permit for Stormwater Discharge from Large and Small Construction Activities.

Environmental Resource Permit

In accordance with the SFWMD, all proposed construction projects on non-federal lands that will increase, decrease, or divert surface water runoff and contribute to pollution must file for an Environmental Resource Permit (ERP) (Chapter 373, Part IV F.S.) The SFWMD issues all ERPs for residential and commercial developments in the south Florida area, including the City of Coconut Creek (City). A complete ERP package consists of an ERP application, demonstration of ownership and/or other legal interests in the property, aerial photographs of the site, an assessment of any wetlands or other environmentally sensitive areas that are on the property, mitigation report, a master plan delineating the location of all water bodies, water control structures, and basin boundaries signed and sealed by a Florida Registered Professional Engineer, and the appropriate permit application processing fee.

Waters Classification and Anti-degradation Policy

The CWA requires that the surface waters of each state be classified according to designated uses (40 CFR 131.10(a)). Florida has five classes with associated designated uses which are arranged in order of degree of protection required, with Class I having the most stringent water quality protection and Class V having the least (62-302.400 F.A.C.)

- Class I - Potable Water Supplies
- Class II - Shellfish Propagation or Harvesting
- Class III - Recreation, Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife
- Class IV - Agricultural Water Supplies
- Class V - Navigation, Utility and Industrial Use.

Class I, II, and III surface waters share water quality criteria established to protect fish consumption, recreation, and the propagation and maintenance of a healthy, well-balanced population of fish and

wildlife. The water storage basins at the project site are designated as Class III; all surface waters in the state of Florida are Class III unless described in rule 62-302.400 F.A.C.

Florida's anti-degradation policy, Rules 62-302.300 and 62-4.242 F.A.C., allows for protection of water quality above the minimum required for a classification. If the DEP finds that the discharge from a proposed project or expansion of an existing discharge will not reduce the quality of the receiving waters below the classification established for them, it will permit the discharge if such degradation is necessary or desirable under federal standards and under circumstances which are clearly in the public interest, as well if all DEP requirements are met. However, if it is found that the new or existing discharge will reduce the quality of the receiving waters below the classification established or violate any DEP rule or standard, it shall refuse to permit the discharge.

LOCAL REGULATORY SETTING

Broward County

The Broward County Board of Commissioners established Chapter 27 of the Broward County Code, also known as the Broward County Natural Resource Protection Code, to protect and preserve the natural resources of Broward County (County). For any proposed project on non-federal land, Article I, §27-66 of the code requires obtaining a Development and Environmental Regulation Division Environmental Review Approval of the appropriate construction plans. Broward County's Development and Environmental Regulation Division (DERD) ensures that the regional impacts of any proposed development are addressed through the provision of adequate facilities and services, and that plans for such developments comply with the Land Development Code and the Natural Resource Protection Code. DERD develops and recommends policies as well as works to identify, monitor, enforce, and protect natural resources and environmental quality with respect to air, surface water, groundwater, wastewater, soil, beach erosion, hazardous materials, biohazards, solid waste management, wetlands, and other activities associated with the enhancement and protection of the natural resources of the County.

The DERD's Surface Water Management Section is responsible for the licensing of all construction of surface water management systems as required by the Broward County Code of Ordinances (Chapter 27, Article V), as well as the renewal of operation licenses, surface water management permitting, compliance and enforcement responsibilities under Chapter 373, Part IV, F.S. and the rules agreed upon in the Delegation Agreement Among the Florida Department of Environmental Protection, the SFWMD, and the Broward County Board of County Commissioners. Projects in the County's jurisdiction that are nonresidential, or residential and larger than a duplex, must meet the drainage criteria set forth in Chapter 27, Article VI, §27-215 of the code and will be referred to DERD's Surface Water Management Section for evaluation with the possibility of requiring a Surface Water Management license.

The County's communities have adopted and enforced floodplain management regulations based on available maps provided by FEMA (44 CFR 60.2(h)). As mentioned in the above section *Federal Emergency Management Agency*, FEMA restricts cumulative development from increasing the water surface elevation of the base flood by more than one foot within the floodplain. The County's Water Resources Division, with the cooperation of other County agencies, assists in maintaining FEMA's flood insurance program, NFIP. Created by Congress in 1968, NFIP helps property owners financially protecting themselves in case of flooding. Using FIRMs, FEMA works with the County and Coconut Creek to determine insurance rates (Code of Ordinances for Coconut Creek, Chapter 10, §10-6). Because

the Proposed Project is located in Zone X of the FIRM, the property lies in an area determined to be outside the 500-year floodplain and therefore has moderate to low flooding risk.

City of Coconut Creek Comprehensive Plan: Conservation Element

Chapter 163, Part II, F.S., the Local Government Comprehensive Planning and Land Development Regulation Act, seeks to strengthen the existing role and powers of local governments in the establishment of comprehensive and forward thinking plans to help guide and control future development. The City of Coconut Creek 2007 Comprehensive Plan's (Plan) was developed in order to institute long-term goals for development throughout the City in accordance with Chapter 163, Part II F.S., Rules 9J-5 and 9J-11 F.A.C., as well as consistency with the *Strategic Regional Policy Plan for South Florida*. Elements of the Plan include Future Land Use, Transportation, Housing, Infrastructure, Conservation, Recreation and Open Space, Intergovernmental Coordination, and Capital Improvements.

The goal of the Conservation Element of the Plan is to conserve, protect, and appropriately manage the use of natural resources within the City while maintaining and enhancing environmental quality. Objectives include ensuring the protection of native vegetation in landscapes; maintaining and implementing measures for protecting publicly owned and privately owned environmental resources; ensure construction and mining activities do not adversely affect air, water, and land quality; and protect and preserve water resources in the City.

City of Coconut Creek Municipal Code: Excavation, Grading, and Earthwork Construction Ordinance

Chapter 13, §13-88, Code of Ordinances for Coconut Creek, states that all developers must obtain approval of plans from the city engineer for all proposed engineering work such as drainage, paving and grading, water and wastewater, utilities, roads, and sidewalks prior to submittal of all building permits. A permit (Chapter 13, §13-40, Code of Ordinances for Coconut Creek) is required to perform engineering work including drainage, paving and grading, earthwork, water and wastewater, roads, sidewalks, as well as all other engineering categories listed by the State of Florida and Broward County Licensing Board as requiring an engineering contractor's license. Fees must be paid prior to issuance, and permits may become invalid after one hundred days from issuance date if work has not begun. A renewal fee will be assessed in cases of invalid permits, as well as permitted work that has been suspended in excess of 90 days. This requirement does not typically apply to federal lands.

City Municipal Code: Flood Damage and Prevention

As some areas of the City are susceptible to flooding, Chapter 10, §10-7, Code of Ordinances for Coconut Creek states that any development shall require a Development Permit that is in conformance with the C.C.M.C. provisions for flood control. This is to ensure the protection of human life; minimize the expenditure of public monies for expensive flood control projects, as well as rescue and relief efforts associated with flooding; minimize damage to public facilities and utilities, as well as ensure a stable tax base by providing for the sound use and development of flood-prone areas to minimize future flood blight areas; and to ensure that future homeowners are notified that their property is in a flood area. Using a FIRM, FEMA works with Coconut Creek to determine locations of potential flooding as well as insurance rates (Chapter 10, §10-4, Code of Ordinances for Coconut Creek).

3.3.2 ENVIRONMENTAL SETTING

SURFACE WATER FEATURES

Watershed

The project site (bound by farm lands and minimal development on the north, Sample Road on the south, SR-7/US 441 on the west and NW 54th Avenue/Wochna Blvd on the east) lies within the Northwest (NW) basin of the much larger (8,370 acres) Cocomar Water Control District (CWCD) service area. The drainage for the 105-acre Commerce Center area that includes the project site consists of a series of interconnected drainage basins on-site and canal access to temporarily allow surface water flow into the CWCD Southwestern (SW) Basin (until such time as water from the site can flow into the CWCD Northwestern (NW) Basin) (**Appendix B**). Surface water elevations within these interconnected drainage basins are controlled by the Broward County Water Management District through a system of weirs, pumps, canals, and storage ponds.

Drainage

The project site lies within the CWCD service area. The annual wet season occurs between the months of May and October, with sea breezes caused by heating of the land surface resulting wind during the afternoons and intense rainfall storms in the early evenings. Rainfall amounts vary greatly year by year, but the County receives an average of approximately 60 inches per year. Evapotranspiration represents the most significant loss from water balance in South Florida, with some estimates indicating that almost 50 percent of the rain that falls on the County returns to the atmosphere.

The project site is located in the 105.23-acre Commerce Center of Coconut Creek drainage area, which is regulated by a single Master Drainage Permit (No. 06-00551-S) issued by the SFWMD. Currently, in accordance with the Master Drainage Permit, the drainage system within the project site flows into the CWCD SW Basin via the C-14 Canal. STOF-owned property, including the project site, is drained through a series of interconnected drainage basins, of which 12.93 acres are located on the project site. Additional storage is provided in a 1.48-acre drainage basin located northeast of the project site across NW 54th. The recently developed 1.99-acre retention pond on Tract B is in addition to required SFWMD permit acreages.

Through the Master Drainage Permit, the project site is permitted to drain into the NW Basin via the C-5 Canal which ultimately discharges into the Hillsboro Canal to the north. However, a link to the C-5 Canal does not currently exist and excess run-off from the site is permitted to temporarily discharge into the SW Basin through the C-14 Canal. Existing connections to the NW Basin are located to the east of the project site on the Johns Family Trust Property, a property included within the Coconut Creek MainStreet Master Plan area. The connection point to the C-5 Canal and the NW Basin is located approximately 1,200 feet northeast of the project site. Currently, run-off from the project site to the C-14 Canal is conveyed through a culvert that contains a 3-inch notched weir that restricts allowable discharge to accommodate a 25-year storm event. If runoff exceeds the 25-year storm event, water backs up behind the weir. The weir regulates discharge downstream to a 700-foot long irrigation canal along the north side of Sample Road where it ultimately discharges through a 60-inch diameter culvert crossing under Sample Road and into the CWCD SW basin.

Hurricanes

Hurricanes are common in Florida and there is a high probability of hurricane events occurring along the eastern shoreline of Broward County. However, ongoing hurricane storm surge mitigation practices lessen the vulnerability of coastal assets.

Floodplain

Because the Proposed Project is located in Zone X of the FEMA FIRM, the property lies in an area determined to be outside the 500-year floodplain and therefore has moderate to low flooding risk (FEMA, 1986).

Surface Water Quality

Generally, surface water quality deteriorates during the summer months due to urban runoff caused by rainfall. When combined with high water temperatures, the runoff creates a concentrated nutrient environment for the growth of algae, bacteria, and hyacinth which deplete the water of dissolved oxygen. Toxic materials such as hydrocarbons, pesticides, and heavy metals as well as construction detritus flow out of urban development areas through drainage waters, increasing pollution levels and can create a negative impact on surface water quality.

Since 1972, Broward County has maintained a surface water quality monitoring network in partnership with the SFWMD who performs water quality analysis on all samples collected. Chapter 27 of the Broward Code of Ordinances provides for the management of water resources and ensures that the County, working in coordination with the DEP as well as the SFWMD, is responsible in establishing and enforcing water quality standards for surface waters as part of its continued duty to ensure water pollution control and abatement.

GROUNDWATER

Groundwater Quality

The primary groundwater for Broward County is the Biscayne Aquifer. Underlying an area of about 4,000 square miles, the Biscayne Aquifer is a highly permeable and shallow aquifer composed of sandy, porous limestone and sandstone. The Biscayne Aquifer is unconfined and as such its water table fluctuates in direct response to variations in precipitation such as water table levels and surface water drainage. Naturally, the aquifer recharges from rainwater infiltration, but it also receives some recharge from lateral flow from the Everglades. The Biscayne Aquifer has transmissivities in excess of 7 million gallons per day (MGD) per foot of drawdown (SFWMD, 2006).

Because part of the aquifer extends eastward under the Atlantic Ocean and is connected hydrologically to the Gulf of Mexico, saltwater intrusion is a consistent concern. If fresh groundwater levels are not high enough, there is insufficient pressure to keep saltwater from flowing into the groundwater supply and causing contamination of drinking water wells and other freshwater sources (USGS, 1990). To diminish saltwater intrusion effects, Broward County, in cooperation with local governments and SFWMD, works to ensure that the level of fresh groundwater remains stable through recharge programs in order to keep enough pressure to preserve the freshwater quality the aquifer (B.C.P.C. 6.01.03). Programs include improving and expanding water conservation strategies, protecting freshwater resources like canals and waterways to encourage recharge, and building water storage basins to capture stormwater drainage.

Since the Biscayne Aquifer is a shallow groundwater aquifer, its proximity to the surface leaves it vulnerable to various types of contamination including waste from failing septic systems, leaking petroleum storage tanks, and hazardous materials. If a septic system or storage tank is older, it might not be as effective as it once was at containing or treating the harmful material, thereby allowing it to flow into the aquifer and into the drinking water supplies. In response, Broward County is working with municipalities to help with the conversion from septic tanks to sewer systems, clean up leaking petroleum sites, and removing, recycling, and cleaning up hazardous waste sites.

One other groundwater source for Broward County is the Floridian Aquifer. Underlying the entire state, the Floridian Aquifer is located stratigraphically below the Biscayne Aquifer and is comprised of limestone of variable thickness and permeability. Although this aquifer is used throughout the state as a water source, its use in southern Florida is limited due to its brackish quality. However, the Floridian Aquifer is now being considered as a potential water source to supplement the Biscayne Aquifer as population in Broward County is expected to increase by 27% to 2.2 million people by 2025.

Local Groundwater Supply Systems

Review of Broward County groundwater supply data concluded that the closest active groundwater supply well to the project site is located approximately 7,500 feet away along the Sawgrass Expressway within the Broward County Northwest Well Field. The Northwest Well Field is one of two groundwater supply systems that provide water supply for customers and a majority of the municipalities within Broward County. Municipal groundwater providers the City of Coral Springs and the City of Margate use groundwater from well fields located approximately 7,600 feet west and 8,000 feet south of the project site, respectively.

The Biscayne Aquifer, the unconfined underlying aquifer, provides groundwater to a majority of the population of Southeastern Florida. The Biscayne Aquifer has been subject to intensive development for municipal, irrigation, and industrial use. Approximately 4 million people in southeastern Florida rely on public-water supplies from the Biscayne Aquifer system. About 330 million gallons of water per day are pumped from the Biscayne Aquifer (Broward County, 2011).

3.4 AIR QUALITY

This section describes existing conditions related to air quality for the proposed project. The general and site-specific description of air quality contained herein provides the environmental baseline by which direct, indirect, and cumulative environmental effects are identified and measured in **Section 4.4**.

3.4.1 REGULATORY CONTEXT

The Federal Clean Air Act (CAA) was enacted to protect and enhance the quality of the nation's air resources to benefit public health, welfare, and productivity. Basic components of the CAA and its amendments include national ambient air quality standards (NAAQS) for major air pollutants and state implementation plans (SIPs). The United States Environmental Protection Agency (USEPA) is the federal agency responsible for identifying criteria air pollutants (CAPs), establishing NAAQS, and approving and overseeing state air programs as they relate to the CAA.

CRITERIA AIR POLLUTANTS

CAPs are common pollutants that have been identified as being detrimental to human health. CAPs are used as indicators of regional air quality. The USEPA has designated six CAPs: ozone (O₃), carbon monoxide (CO), particulate matter (PM), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and lead (Pb).

OZONE

Photochemical reactions involving reactive organic gases (ROG) and oxides of nitrogen (NO_x) resulting from the incomplete combustion of fossil fuels are the largest source of ground-level O₃. Because photochemical reaction rates depend on the intensity of ultraviolet light and air temperature, ozone is primarily a summer air pollution problem. O₃ is considered a regional pollutant, as the forming reaction occurs over time and downwind from the sources of the emissions.

CARBON MONOXIDE

CO is a colorless, odorless gas formed when carbon in fuel is not fully combusted. It is a component of motor vehicle exhaust, which contributes about 56 percent of all CO emissions nationwide. Other non-road engines and vehicles (such as construction equipment and boats) contribute about 22 percent of all CO emissions nationwide. Higher levels of CO generally occur in areas with heavy traffic congestion. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust. High CO concentrations occur in areas of limited geographic size, sometimes referred to as hot spots. Since CO concentrations are strongly associated with motor vehicle emissions, high CO concentrations generally occur in the immediate vicinity of roadways with high traffic volumes and traffic congestion, active parking lots, and in automobile tunnels. Areas adjacent to heavily traveled and congested intersections are particularly susceptible to high CO concentrations.

PARTICULATE MATTER (PM₁₀ AND PM_{2.5})

Particle pollution is a mixture of microscopic solids and liquid droplets suspended in air. This pollution, also known as particulate matter, is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, soil or dust particles, and allergens (such as fragments of pollen or mold spores). The size of particles is directly linked to their potential for causing health problems.

Particulate matter less than 10 micrometers (μm) in diameter (PM_{10}) and 2 μm in diameter ($\text{PM}_{2.5}$) pose the greatest public health concerns, because they can traverse deep into the lungs (PM_{10}) and can be small enough to enter the bloodstream ($\text{PM}_{2.5}$).

NITROGEN DIOXIDE

NO_2 is a brownish, highly reactive gas present in all urban environments. The major artificial sources of NO_2 are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines. The combined emissions of NO and NO_2 are referred to as NO_x , which are reported as equivalent NO_2 . Because NO_2 is formed and depleted by reactions associated with photochemical smog (ozone), the NO_2 concentration in a particular geographical area may not be representative of the local NO_x emission sources.

SULFUR OXIDES AND LEAD

The standards for sulfur oxides (SO_x) and Pb are either being met or are unclassified throughout the country. Many of the sources for these CAPs have either been eliminated or industry standard source pollution control techniques have dramatically reduced emissions. For example, Pb has been removed from gasoline, coal-fueled power plants have improved stack-scrubbing technology prior to emissions for SO_x , and low-sulfur diesel fuel is being required throughout the county. National pollutant trends for SO_x and Pb show that emission levels are on a steady decline.

HAZARDOUS AIR POLLUTANTS

In addition to the above-listed criteria pollutants, Hazardous Air Pollutants (HAP) is group of pollutants of concern. HAPs are listed airborne chemicals developed by the USEPA. Sources of HAPs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, cigarette smoke, and motor vehicle exhaust. Cars and trucks release at least forty different HAPs. HAPs are less pervasive in the urban atmosphere than criteria air pollutants, but are linked to short-term (acute) or long-term (chronic or carcinogenic) adverse human health effects. Currently, there are over 188 HAPs listed by the USEPA. The majority of the estimated health risk from HAPs can be attributed to relatively few compounds. The most important, in terms of health risk, are benzene, formaldehyde, 1,3-butadiene, and acetaldehyde. Health effects of HAPs can include cancer, birth defects, and neurological damage.

Environmental tobacco smoke (ETS) is a complex mixture of thousands of gases and fine particulate matter; many of these compounds have been defined by the USEPA as HAPs. The composition will vary depending on heat of combustion, tobacco content and additives present, and type of filter material used. Researchers distinguish cigarette smoke as being comprised of two main components: mainstream and side stream smoke. ETS is a combination of exhaled mainstream smoke, side stream smoke, and compounds that diffuse through the cigarette paper.

NATIONAL AMBIENT AIR QUALITY STANDARDS

The established maximum concentrations for the six CAPs are known as NAAQS. Concentrations above these time-averaged limits are anticipated to cause adverse health effects to sensitive receptors. The CAA established primary and secondary NAAQS. Primary standards set limits to protect public health, while secondary standards set limits to protect public welfare, including protection against decreased visibility,

damage to animals, crops, vegetation, and buildings. For some of the CAPs, more than one averaging time standard has been identified in order to address the typical exposures found in the environment. The USEPA has established violation criteria for each CAP. For example, in order to constitute a violation, the NAAQS for O₃ must be exceeded on more than three days in three consecutive years. On the other hand, if the CO NAAQS is exceeded on more than one day in any given year, a violation has occurred. Refer to **Table 3.4-1** for the violation criteria and the various averaging times for each CAP.

TABLE 3.4-1
NATIONAL AMBIENT AIR QUALITY STANDARDS

| Pollutant | Symbol | Average Time | Standard (ppm) | Standard (ug/m3) | Violation Criteria |
|---|-------------------|------------------------|----------------|------------------|---|
| Ozone | O ₃ | 8 hours | 0.075 | N/A | If exceeded more than 3 days in 3 years |
| Carbon monoxide | CO | 8 hours | 9 | N/A | If exceeded more than 1 day per year |
| | | 1 hour | 35 | N/A | If exceeded more than 1 day per year |
| Nitrogen dioxide | NO ₂ | Annual Arithmetic Mean | 0.053 | 100 | If exceeded |
| | | 1 hour | 0.001 | N/A | If exceeded |
| Sulfur dioxide | SO ₂ | 1 hour | 0.075 | 196 | If exceeded |
| PM ₁₀ | PM ₁₀ | 24 hours | N/A | 150 | If exceeded |
| PM _{2.5} | PM _{2.5} | Annual Arithmetic Mean | N/A | 15 | If exceeded more than 1 day per year |
| | | 24 hours | NA | 35 | |
| Lead particles | Pb | Calendar quarter | N/A | 1.5 | If exceeded more than 1 day per year |
| NOTES: All standards are based on measurements at 25°C and 1 atmosphere pressure. National standards shown are the primary (health effects) standards. N/A = not applicable; ppm = parts per million; ug/m3 = micrograms per cubic meter. SOURCE: USEPA, 2011 | | | | | |

The USEPA identifies areas throughout the United States that meet the NAAQS, these areas are labeled either attainment or unclassifiable. Areas that do not meet the NAAQS are labeled either “nonattainment” or “maintenance.”

The USEPA further classifies nonattainment areas according to the regions potential to meet the NAAQS. There are five classes of nonattainment areas: maintenance (recently became compliant with the NAAQS), marginal (relatively easy to obtain levels below the NAAQS), serious, severe, and extreme (will be difficult to reach levels below NAAQS). The CAA uses the classification system to design clean-up requirements appropriate for the severity of the pollution and set realistic deadlines for reaching clean-up goals. Attainment and nonattainment areas are identified through monitoring. Unclassifiable areas are those for which air monitoring has not been conducted but are assumed to be in attainment for the NAAQS. States, municipal statistical areas, air basins, and counties that contain areas of nonattainment must take steps towards attainment by a specific timeline. These steps are consolidated within the state

implementation plan (SIP) as mandated by the CAA. The SIP sets forth the state's strategy for achieving federal air quality standards. The SIP is not a single document, but a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls. All of the items that are included in the SIP are published in the Code of Federal Regulations. Because Broward County is in attainment or unclassified for all criteria pollutants under the NAAQS, the state of Florida is not required to prepare a SIP for Broward County.

GENERAL CONFORMITY

Under the General Conformity Rule; updated in 2010, the lead agency with respect to a federal action is required to demonstrate that the proposed federal action conforms to the applicable SIP before the action is taken. There are two phases to a demonstration of general conformity:

- 1) The Conformity Review process, which entails an initial review of the federal action to assess whether a full conformity determination is necessary, and
- 2) The Conformity Determination process, which requires that a proposed federal action be demonstrated to conform to the applicable SIP.

The Conformity Review requires the lead agency to compare estimated emissions to the applicable general conformity *de minimus* threshold(s). If the emission estimates from step one is below the applicable threshold(s), then a general conformity determination is not necessary and the full Conformity Determination is not required. If emission estimates are greater than *de minimus* levels, the lead agency must conduct a formal Conformity Determination.

CLIMATE CHANGE

FEDERAL

Climate change is a global phenomenon attributable to the sum of all human activities and natural processes. A recent federal guidance on climate change is the USEPA's Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions, released on February 18, 2010. The Draft Guidance provides that a NEPA climate change analysis shall provide quantification and mitigation to reduce GHG emissions. The guidance also provides that 25,000 metric tons of GHG emissions per year may be a helpful guideline to assist lead agencies in making informed decisions on climate change impacts resulting from a project subject to NEPA. The guidance notes that the 25,000 metric tons is not a threshold for evaluating climate change on the project level.

In 1997, the Council on Environmental Quality (CEQ) circulated an internal draft memorandum (CEQ, 1997a) on how global climate change should be treated for the purposes of the National Environmental Policy Act (NEPA). The CEQ draft memorandum advised federal lead agencies to consider how proposed actions subject to NEPA would affect sources and sinks of green house gases (GHGs). During the same year, CEQ released guidance on the assessment of cumulative effects in NEPA documents (CEQ, 1997b). Consistent with the CEQ draft memorandum, climate change impacts were offered as one example of a cumulative effect.

The following are recent federal regulatory actions related to climate change that are germane to the Seminole Fee-to-Trust project:

- In response to the FY2008 Consolidated Appropriations Act (H.R. 2764; Public Law 110–161), EPA has issued the Final Mandatory Reporting of GHG Rule. Signed by the Administrator on September 22, 2009, the rule requires in general that suppliers of fossil fuels and industrial GHGs, manufacturers of vehicles and engines outside of the light duty sector, and facilities that emit 25,000 metric tons or more of GHGs per year to submit annual reports to USEPA. The rule is intended to collect accurate and timely emissions data to guide future policy decisions on climate change.
- On September 30, 2009, the USEPA proposed new thresholds for GHG emissions that define when a CAA permit under the New Source Review and Title V operating permit programs would be required.
- Executive Order (EO) 13514, “Federal Leadership in Environmental, Energy, and Economic Performance,” was signed on October 5, 2009 and contains various sustainability and efficiency goals for federal agencies. Central to EO 13514 are new requirements for federal Agencies to establish GHG emissions reductions by 2020 relative to a 2008 baseline.
- On December 15, 2009, the USEPA issued a finding that the changes in the climate caused by GHG emissions endanger the public health and welfare (74 Fed. Reg. 66496).

STATE

Until the project site is brought into federal trust, STOF would abide by the State of Florida regulatory framework to reduce climate change impacts:

- Senate Bill 888 (2006) created a new Section in Chapter 377, F, S., “Florida Renewable Energy Technologies and Energy Efficiency Act”, development of renewable energy technologies, Florida Energy Commission, tax credits/incentives for renewable energy development, matching grants.
- EO 07-126: “Leadership by Example: Immediate Actions to Reduce GHGs. The EO requires a 10 percent reduction in GHG by 2012, a 25 percent reduction by 2017, and a 40 percent reduction by the year 2025.
- EO 07-127: “Immediate Actions to Reduce GHG Emissions within Florida: (Maximum emission levels from GHGs and targeted reductions by 2050).
- EO 07-128: “Florida Governor’s Action Team on Energy and Climate Change”. EO 07-128 requires the establishment of a Climate Action Team (CAT), which would provide GHG reduction strategies. In 2008 the CAT developed Florida’s Energy and Climate Action Plan, which provides strategies for reducing GHG emissions in Florida.
- Co-Sponsored (CS)/House Bill (HB) 7123, 2007: Florida Legislature directed the Florida Building Commission to develop the model Green Building Ordinance and Climate Action Team to meet EW 07-126 reduction goals.
- HB 7135, 2008: Create 50 percent more energy efficient buildings by 2015.

SOUTH FLORIDA REGIONAL COUNCIL OF GOVERNMENTS

The South Florida Regional Council of Governments is administering an USEPA grant to study the potential effects to seven south Florida Counties from a 5-foot rise in sea level during a 200-year period.

BROWARD COUNTY

The Broward County Board of County Commissioners passed Resolution 2008-442 in June 2008, which created the Broward County Climate Change Task Force (Task Force). The Task Force develops recommendations for a coordinated countywide strategy in mitigating the causes, and addressing the local implications of global climate change. The Task Force initiated the development of the 2010 Broward County Climate Change Action Plan, which contains 126 recommendations to reduce the affects of global climate change. The recommendations include information on planning horizon, status of action, likely responsible County entity, potential community partners, estimated resources required, and performance measures (Broward County, 2008).

CITY OF COCONUT CREEK

Although the City of Coconut Creek 2007 Comprehensive Plan does not include any goals or policies regarding climate change, the City adopted a Green Plan (Resolution 2009-139, Appendix G) that contains a series of actions meant to “conserve energy and water, reduce waste, improve community participation, and demonstrate environmental stewardship while achieving greenhouse gas reductions.”

3.4.2 PROJECT SITE

The primary factors affecting the climate in the vicinity of the project site are latitude and its proximity to the Gulf Stream current of the Atlantic Ocean. Summers are hot and marked by high humidity, averaging 84 degrees Fahrenheit (°F), with frequent thunder storms, which can trigger rapid drops in temperature of 10 to 20 °F. Winter is the dry season, which last from November through April. Winters are warm and with average high temperatures of 82 °F. However, Broward County experiences occasional cold fronts during this period, bringing low in the 40s °F, lasting only for a few days.

As stated above, Broward County, including the project site, has been designated attainment under the NAAQS for all criteria pollutants. Primary sources of GHG emissions in the vicinity of the Proposed Project include marine and land vehicles, trucks, airplanes, and natural gas dispensing stations. The land uses immediately surrounding the project site are mainly commercial, agriculture, and undeveloped land. The nearest sensitive receptors to air quality effects are residences located approximately 1,400 feet southwest of the project site. The nearest school is the Monarch High School located approximately 2,000 feet northeast of the eastern edge of the project site. There are no hospitals within one-mile of the project site.

3.5 BIOLOGICAL RESOURCES

This section describes the existing biological resources that occur on and in the vicinity of the project site. This assessment of existing onsite conditions is based on a biological field survey, conducted to document existing habitat types and assess the potential for occurrence of federally listed species within the project site, as well as a search and review of available records and literature, and information provided by the United States Fish and Wildlife Service (USFWS). The general and site-specific discussions of biological resources contained herein provide the environmental baseline concerning environmental impacts that were identified and measured. Impacts to biological resources as a result of the Proposed Action are discussed in **Section 4.0**. A copy of the Biological Assessment (BA) prepared for the project is attached as **Appendix A**.

3.5.1 REGULATORY SETTING

FEDERAL

Federal Endangered Species Act

The USFWS and National Marine Fisheries Service (NMFS) implement the Federal Endangered Species Act (FESA) (16 USC Section 1531 et seq.). Under the FESA, federally listed threatened and endangered species (50 CFR Section 17) are protected from take (defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct) unless a FESA permit or exception applies, including a Section 10 incidental take permit is granted or a Section 7 consultation and a Biological Opinion (BO) with incidental take provisions is provided. Pursuant to the requirements of the FESA, agencies that undertake any action authorized, funded, or carried out by that agency must determine whether any federally listed species have the potential to occur within a proposed project site or the action area and if the proposed project would have any impacts upon such species. Under the FESA, habitat loss is considered an impact to a listed species. These agencies are also required to determine whether the project is likely to jeopardize the continued existence of any species proposed for listing under the FESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC Section 1536 et seq.). Project-related impacts to these species, or their habitats, would be considered significant under the National Environmental Policy Act (NEPA) and would require mitigation. The USFWS also maintains a list of candidate species, which are considered during environmental review, though they are not formally protected under the FESA. Candidate species may become proposed for official listing.

Critical habitat is defined in Section 3 of the FESA as (i) the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the FESA, on which are found those physical and biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species (16 USC Section 1531 et seq.).

Wetlands and Other Waters of the U.S.

The U.S. Army Corps of Engineers (USACE) has primary federal responsibility for administering regulations that concern waters of the U.S., including wetlands, under Section 404 of the Clean Water Act (CWA). Section 404 regulates the discharge of dredged and fill material into waters of the U.S. The

USACE requires that the project proponent obtain a permit if a project places structures within, over, or under navigable waters and/or discharging dredged or fill material into waters below the ordinary high water mark (OHWM). Wetlands and other water features that lack a hydrologic connection to navigable waters of the U.S. and a nexus to interstate and foreign commerce are not regulated by the CWA and do not fall under the jurisdiction of the USACE. Such features are called “isolated” (DOE, 2003).

Waters of the U.S. are defined as “All waters used in interstate or foreign commerce; all interstate waters including interstate wetlands; all other waters such as intrastate lakes, rivers, streams (including intermittent and ephemeral streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes or natural ponds, where the use, degradation, or destruction of which could affect interstate commerce; impoundments of these waters; tributaries of these waters; or wetlands adjacent to these waters” [Section 404 of the CWA; 33 Code of Federal Regulations (CFR) Part 328]. The OHWM defines the limit of USACE jurisdiction for non-tidal waters (including non-tidal perennial and intermittent watercourses and tributaries to such watercourses) in the absence of adjacent wetlands.

The OHWM is defined as “The line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” (Section 404 of the CWA; 33 CFR Part 328).

Wetlands are defined as “Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (Section 404 of the CWA; 33 CFR Part 328).

The USACE and the United State Environmental Protection Agency (USEPA) issued the *U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook* (hereafter, “USACE JD Guidelines”) on May 30, 2007 to provide guidance based on the Supreme Court’s decision regarding *Rapanos v. United States* and *Carabell v. United States* (Rapanos decision) [Rapanos vs. U.S., No. 04-1034 (June 19, 2006) and *Carabell v. U.S.*, No. 04-1384 (September 27, 2004)] (USACE, 2007). The Rapanos decision provides standards that distinguish between traditional navigable waters (TNWs), relatively permanent waters (RPWs) with perennial or seasonal flows, and non-relatively permanent waters (non-RPWs). Wetlands and non-TNWs adjacent to TNWs are subject to CWA jurisdiction if: the water body is relatively permanent; or if a water body abuts or is tributary to a RPW; or if a water body, in combination with all wetlands adjacent to that water body, has a significant nexus with TNWs. The significant nexus standard will be based on evidence applicable to ecology, hydrology, and the influence of the water on the “chemical, physical, and biological integrity of downstream traditional navigable waters” (USACE, 2007). Isolated wetlands are not subject to CWA jurisdiction based on the Supreme Court’s decision regarding the Solid Waste Agency of Northern Cook County (SWANCC decision) (*Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, No. 99-1178, January 9, 2001) (DOE, 2003).

In addition, ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water are generally not defined as waters of the U.S. because

they are not tributaries to downstream TNWs, nor do they have a significant nexus to downstream TNWs (45, 48, and 51 CFR subsections 62732, 62747, 21466, 21474, 41206, and 41217).

Migratory Bird Treaty Act

Most bird species are protected under both federal and state regulations, especially those that are breeding, migratory, or of limited distribution. Under the Migratory Bird Treaty Act (MBTA) of 1918 (16 USC Sections 703-712) federally listed (50 CFR Section 10), migratory bird species, their nests, and their eggs are protected from injury or death, and any project-related disturbances during the nesting cycle. As such, any potential project-related disturbances must be reduced or eliminated during the nesting cycle.

Bald and Golden Eagle Protection Act

The Bald Eagle Protection Act was originally enacted in 1940 to protect bald eagles and was later amended in 1962 to include golden eagles (16 USC Subsection 668-668d). This act prohibits the taking or possession of and commerce in bald and golden eagles, parts, feathers, nests, or eggs with limited exceptions where expressly allowed by the Secretary of the Interior. The act imposes criminal and civil sanctions as well as an enhanced penalty provision for subsequent offenses.

3.5.2 ENVIRONMENTAL SETTING

The project site is located in the City of Coconut Creek (City) in Broward County, Florida. The Atlantic Ocean is roughly 7.5 miles to the east and the City of Miami is located approximately 40 miles to the south. The Loxahatchee National Wildlife Refuge is located approximately 6 miles west of the project site. Land uses in the vicinity include moderate to dense commercial and residential areas. The surrounding region is highly developed. The topography of the City is essentially flat with natural ground elevations ranging from 12 to 16 feet above mean sea level (City of Coconut Creek, 2007).

The regional climate is hot during the summer with temperatures around 80 to 90 degrees Fahrenheit (F). The winters are generally mild with temperatures in the mid 60s. The warmest month of the year is August, which has an average high temperature of 92 °F. The coldest month of the year is January with an average low temperature of 58 °F. Temperature variations between night and day tend to be fairly limited during the summer, with an average difference of only 17 degrees between the high and low daily temperatures. Similarly, during the winter, daily high and low temperature differences are around 19 degrees F. The average annual precipitation within the City is 57 inches. The summer months tend to be wetter than the winter months and the wettest month of the year is June, which has an average rainfall of 7.3 inches (IDcide, 2011).

Because the project site is highly developed, terrestrial wildlife habitat is limited. Landscaped areas dominated by ornamental (cultivated) and non-native species comprise the majority of the green space interspersed throughout the project site. Common ornamental and non-native species identified in within the project site during the field survey included: Trumpet tree (*Tabebuia* sp.), Coco plum (*Chrysobalanus icaco*), Earleaf acacia (*Acacia auriculiformis*), Bougainvillea (*Bougainvillea* sp.), and purple fountain grass (*Pennisetum setaceum* 'Rubrum'). A comprehensive list of all plant species observed within the project site is included as Appendix A of the Biological Assessment (**Appendix A**).

3.5.3 FIELD SURVEY

A reconnaissance-level field survey of the project site was performed by Analytical Environmental Services (AES) biologist Jessica Griggs on September 15, 2010. During the survey, fauna and flora were noted and identified to the lowest possible taxon. Habitat types occurring within the project site were characterized and evaluated for their potential to support regionally occurring federally listed species. Habitat types, potentially jurisdictional water features, and other biologically sensitive features were recorded using global positioning system (GPS) technology or evaluated using aerial photography.

Current uses on the project site include paved and structured parking areas, internal roads, and retention ponds. There are three retention ponds for stormwater collection located on the east and south portions of the site. Four additional retention ponds surround the northern parking lot and northern boundary of the project site. The southwest corner of the project site is bounded by Sample Road and State Route 7/US 441. This area currently contains a retention pond and a paved parking lot. A commercially developed area outside of the project site to the south contains a car dealership.

3.5.4 HABITAT TYPES

Terrestrial habitats observed within the project site include developed and ruderal/disturbed. These habitats are described below. Aquatic habitats located within the project site include manmade retention ponds and a manmade seasonal wetland. Habitat types within the project site are illustrated in **Figure 3.5-1**. A summary of the approximate acreages of the terrestrial and aquatic habitat types identified within the project site is provided in **Table 3.5-1**. Photographs of representative habitat types found within the project site are illustrated in **Figures 3.5-2** and **3.5-3**.

TABLE 3.5-1
SUMMARY OF HABITAT TYPES WITHIN THE PROJECT SITE

| | Habitat Type | Acres ¹ | Percent Area |
|--|---------------------------|--------------------|--------------|
| Terrestrial Habitats | Developed | 24.37 | 54.10 |
| | Ruderal/Disturbed | 5.99 | 13.29 |
| Aquatic Habitats | Stormwater retention pond | 14.45 | 32.10 |
| | Manmade seasonal wetland | 0.23 | 0.51 |
| TOTAL | | 45.04 | 100 |
| NOTE: ¹ Data rounded to two decimal places. Acreages of habitat features are approximate. SOURCE: AES, 2011. | | | |

DEVELOPED AREA

Developed land is the predominant feature on the project site. Facilities associated with the adjacent casino and parking areas constitute the majority of the current land uses within the project site (**Figure 3.5-1**). Limited wildlife habitat is available in these areas. The only onsite vegetation is located in landscaped areas immediately adjacent to the existing facilities, parking areas, or paved roads. These landscaped areas included many non-native or cultivated shrub species as well as some native tree species. Examples of plant species observed in the developed areas included: bushy bluestem (*Andropogon glomeratus*), red maple (*Acer rubrum*), saw palmetto (*Serena repens*), Florida royal palm

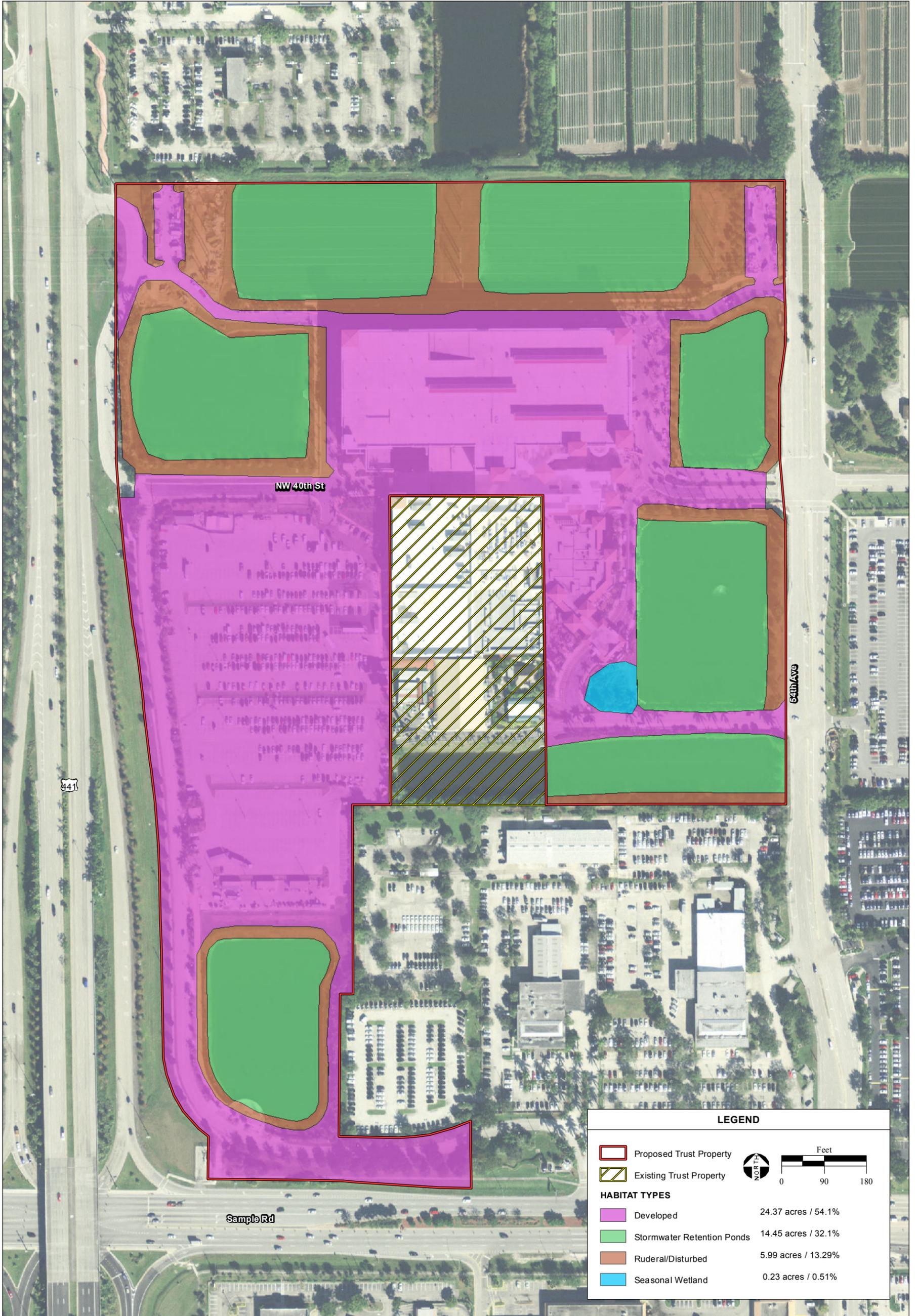


Figure 3.5-1
Habitat Types



PHOTO 1: View west of northern retention basins 2 and 3 from the northeast corner of the project site (Tract G).



PHOTO 3: View east of retention basin 4 located to the east of the casino entrance (Tract D).



PHOTO 2: View east of the southern linear retention basin to the south of the casino (Tract 65).



PHOTO 4: View west of the manmade seasonal wetland (Tract D).



PHOTO 5: View east of the stormdrain in the manmade seasonal wetland (Tract D).



PHOTO 7: View north of retention basin 1 in Tract H.



PHOTO 6: View east of the manmade seasonal wetland with retention basin 4 located in the background (Tract D).



PHOTO 8: View northwest of retention basin 1 in Tract H.

(*Roystonea regia*), coco plum (*Chrysobalanus icaco*), trumpet tree (*Tabebuia* sp.), southern live oak (*Quercus virginiana*), and earleaf acacia (*Acacia auriculiformis*). Representative photographs of this habitat type are found in **Figures 3.5-2** and **3.5-3**.

RUDERAL/DISTURBED

Ruderal/disturbed habitat includes areas that are highly disturbed by human activities. These areas include the grassy margins of the onsite retention ponds, which are routinely mowed. Additionally, the landscaped areas surrounding the existing facilities, parking areas, and onsite roads, are regularly trimmed and maintained. Plant species observed in these areas included Johnson grass (*Sorghum halepense*), Bermuda grass (*Cynodon dactylon*), red maple, saw palmetto, Florida royal palm, and coco plum. Representative photographs of this habitat type are found in **Figures 3.5-2** and **3.5-3**.

STORMWATER RETENTION PONDS

The existing on-site stormwater drainage system is comprised of seven retention ponds, culverts, and piping for the conveyance of stormwater off-site. The on-site system is interconnected to a local drainage system (Commerce Center of Coconut Creek) which serves to collect, convey, attenuate, and discharge runoff while meeting the required water quality and allowable discharge rates established by the existing Master Permit (No. 06-00551-S) issued by the Cocomar Water Control District (Keith and Schnars, 2008). The manmade retention ponds are regularly maintained. The grassy banks surrounding the retention ponds contain Bermuda grass (*Cynodon dactylon*) and Johnson grass (*Sorghum halepense*) and are regularly mowed. Vegetation is regularly removed from the bottom of the ponds to enhance functionality for use in stormwater retention. The retention ponds are relatively uniform with steep sides and depths ranging up to 25 feet. At the time of the site visit, posted signs prohibiting fishing and swimming were noted. The two northernmost ponds (ponds 2 and 3) have an approximate size of 245 feet by 430 feet as noted during the site visit. The two ponds located immediately to the east and west of the northern parking area (ponds 7 and 1 respectively) are smaller in size, at approximately 370 feet by 330 feet (for the western pond) and 170 feet by 275 feet (for the eastern pond). The retention pond located directly to the east of the existing trust (pond 4) measures approximately 375 feet by 265 feet. The long, rectangular pond to the south of the existing trust on Tract D (pond 5) is approximately 785 feet by 105 feet. The pond on the southern portion of Tract B (pond 6) is approximately 360 feet by 240 feet. Representative photographs of the retention ponds are found in **Figures 3.5-2** and **3.5-3**.

MANMADE SEASONAL WETLAND

There is one manmade seasonal wetland located on Tract D. This seasonal wetland was created as part of the overall landscaping design for the adjacent existing trust property; as a result, non-native and native plant species are present in this area. At the time of the September 15, 2010 site visit, there was ponded water within the wetland. The seasonal wetland is regulated by a pump that is located between the two larger retention ponds directly to the east and south of the wetland. In this way, water levels in the wetland are mechanically maintained to mimic natural conditions. There were two drains located within the wetland. One was a steel grate on the ground surface and the other was raised on a 2 foot high concrete box. Mulch and ornamental plants for landscaping purposes surrounded the wetland area. At the time of the site visit, the soils were saturated within the upper 5 inches. The soil within the wetland was a clay loam. The primary hydric soil indicator for the soil sample was Muck Presence (A8) (LRR U) and the soil was noted to have a greasy texture (USACE, 2008; Appendix D of **Appendix A**). Soil in the surrounding landscaped area (upland) was observed to be primarily fill material. Primary wetland

hydrology indicators included the presence of Surface Water (A1), High Water Table (A2), and Inundation Visible on Aerial Imagery (B7) (USACE, 2008; Appendix D of **Appendix A**). Native plant species observed within the wetland included: arrow arum (*Peltandra virginica*), common water nymph (*Najas guadalupensis*), pickerelweed (*Pontederia cordata*) and southern cattail (*Typha domingensis*). Non-native plant species included Egyptian papyrus (*Cyperus papyrus*) and swamp rose mallow (*Hibiscus grandiflorus*). Photographs of the seasonal wetland are included in **Figure 3.5-3**.

3.5.5 WILDLIFE

At the time of the site visit, no fish or invertebrates were observed in the water edges of the retention ponds. However, several wading birds were observed along the banks of the two northern retention ponds, to the north of the upper parking lot. These bird species included: little blue heron (*Egretta caerulea*), tricolored heron (*Egretta tricolor*), and snowy egret (*Egretta thula*). The presence of waterfowl may indicate that small fish or insects inhabit these northern ponds. An osprey (*Pandion haliaetus*) was observed soaring above the project site, but it did not perch in any of the onsite trees or hunt within the retention ponds. The retention pond located on Tract D to the east of the existing trust property contains a large fountain in the center, which re-circulates water within the pond. A list of all wildlife species identified during the field visit is included in the Biological Assessment (BA) (**Appendix A**).

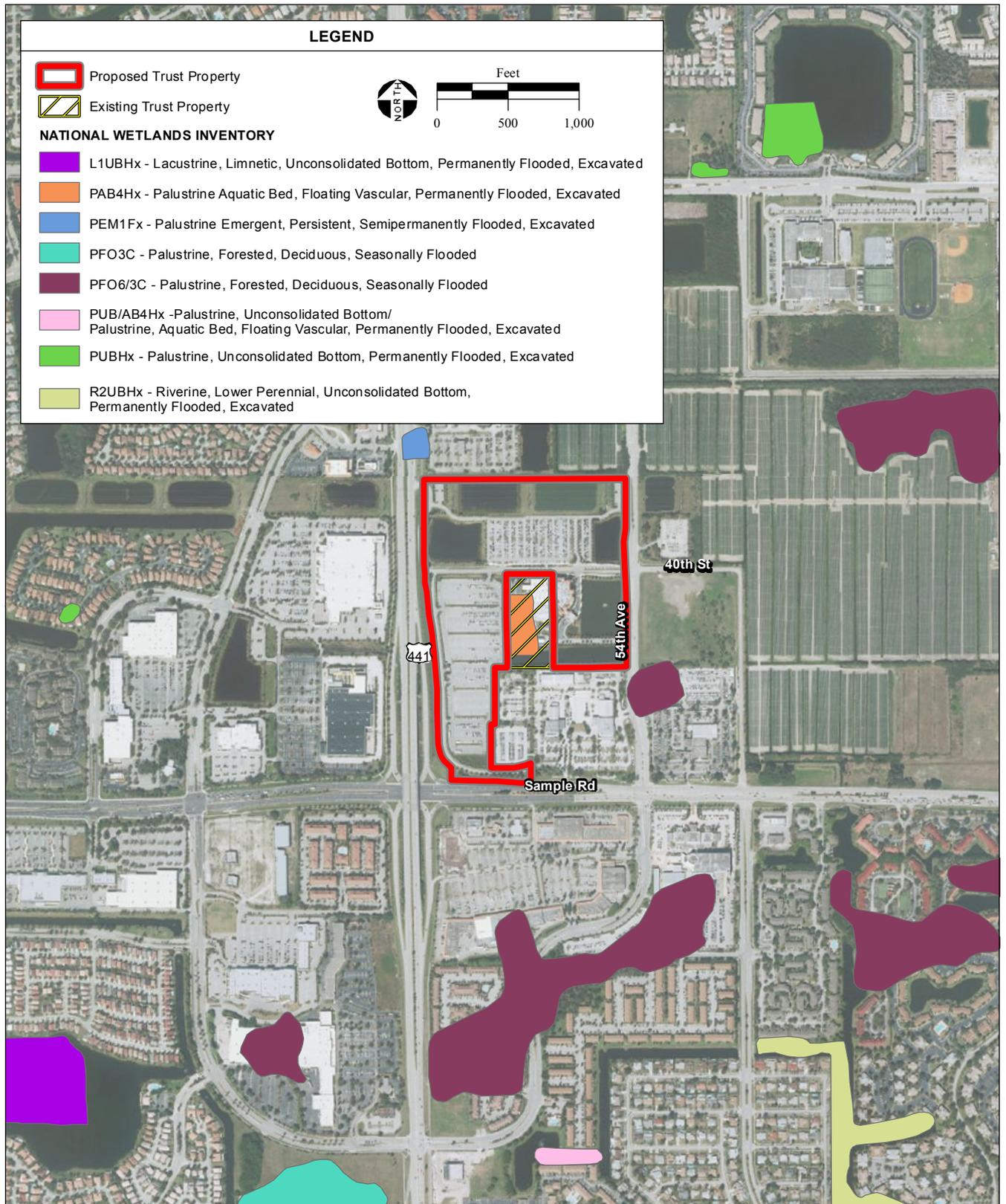
3.5.6 NATIONAL WETLANDS INVENTORY

The USFWS National Wetlands Inventory (NWI) was used to detect any previously mapped aquatic features within the study area (USFWS, 2011). There were no previously mapped wetland features identified by the NWI within the project site. The NWI map of the project site is presented in **Figure 3.5-4**. There is a 16.25 acre Cypress/Palustrine wetland located east and slightly north of the project site on the Johns Family Trust property. As documented in the Commerce Center of Coconut Creek Development of Regional Importance (DRI) this wetland is connected to ditches included in the internal drainage system within the Johns Family Trust Property, the C-5 Canal, and the CWCD NW Basin. Water elevation within this wetland is artificially controlled on a seasonal basis by the CWCD through weirs and pumps. The DRI, as modified, requires a “Monitoring and Maintenance Program for the existing cypress wetland area” (Appendix G, Ordinance No. 167-97), as well as a site design that avoids the wetland and maintains hydrologic connectivity.

3.5.7 WATERS OF THE U.S.

During the field assessment, the project site was informally assessed for potential waters of the U.S. in a manner consistent with the Supreme Court’s decision regarding *Rapanos v. United States* and *Carabell v. United States* (USACE, 2007). The decision provides standards that distinguish between TNWs, RPWs, and non-RPWs. Wetlands adjacent to non-TNWs are subject to CWA jurisdiction if:

- The waterbody is relatively permanent;
- The waterbody abuts an RPW; or
- The waterbody, in combination with all wetlands adjacent to that water body, has a significant nexus with TNWs.



SOURCE: U.S. Department of the Interior, Fish and Wildlife Service, National Wetlands Inventory, 1984; Friedmutter Group, 6/2010; Aerial Express aerial photograph, 2/16/2010; AES, 2012

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Figure 3.5-4
National Wetlands Inventory

The significant nexus standard is based on evidence applicable to ecology, hydrology, and the influence of the water on the “chemical, physical, and biological integrity of downstream traditional navigable waters” (USACE, 2007). Isolated wetlands are not subject to CWA jurisdiction, based on the Supreme Court’s “SWANCC decision” regarding Solid Waste Agency of Northern Cook County (DOE, 2003).

During the September 15, 2010 field survey, an informal wetland delineation was conducted within the project site. The delineation was conducted in accordance with the 1987 *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987). The field survey included the mapping of paired data point sets to evaluate whether the three parameter criteria (vegetation, soil, and hydrology) supported a wetland or upland determination. At wetland locations, one point was situated outside the limits of the estimated wetland area and the other point was situated within the estimated wetland area. Data sheets that document the basis for determining whether an area qualifies as a wetland were prepared for representative locations and are included as Appendix D of **Appendix A**.

Aquatic features within the project site include seven retention ponds and one manmade seasonal wetland. The seven retention ponds constitute the onsite stormwater drainage system that is used to collect and convey stormwater runoff from surrounding impervious surfaces off-site. The development of the seventh retention pond occurred after the 2010 field visit. The seven retention ponds are created and managed to attenuate stormwater flows and the manmade seasonal wetland is regulated by a pump in order to mechanically control water levels to mimic natural conditions. Artificial control of the retention ponds and seasonal wetland does not provide a significant nexus to a down stream traditional water and the results of the delineation concluded that no jurisdictional waters of the U.S. were identified onsite. A complete discussion of the analysis is provided in **Appendix A**.

3.5.8 FEDERALLY LISTED SPECIES

A complete list of the regionally occurring, federally listed and candidate status species for Broward County, as listed by the USFWS, is included as Appendix A of **Appendix A** (USFWS, 2010a). The list contains 27 species, specifically: 4 mammal species, 7 reptile species, 8 bird species, 1 coral species, 1 fish species, 4 plant species, and 2 invertebrate species. An analysis to determine which of these federally listed and candidate species have the potential to occur within the project site was conducted. The habitat requirements for each federally listed and candidate species were assessed and compared with the type and quality of habitats observed onsite during the field survey. Regionally occurring federally listed or candidate species were eliminated from further analysis based on factors such as: the project site was outside the known elevation range and/or geographic distribution, the project site lacked suitable habitat and/or soil/substrate, or because federally listed plants were not observed within suitable habitat within the species’ blooming season.

A review of onsite conditions and habitat requirements for each of the 27 listed species concluded that there is no suitable habitat for any of these species on the project site. The rationales as to why these species were determined not to have the potential to occur within the project site are summarized in Appendix B of **Appendix A**. For this reason, these species are not discussed further in this section.

The USFWS previously issued a letter dated October 31, 2005 in regards to the Environmental Assessment (EA) previously prepared in support of the Tribe’s fee-to-trust application (USFWS, 2005). This EA included the same parcels as those evaluated under the current Proposed Project. Therefore, the

recommendations provided by the USFWS and the BIA concerning the assessment of impacts to the federally endangered wood stork (*Mycteria americana*) were analyzed in the BA (**Appendix A**). The USFWS letter indicated that the project site is located within a core foraging area (CFA) for six wood stork nesting colonies (USFWS, 2005). Therefore, for this species in particular, an in-depth discussion and analysis of the potential for wood stork to occur within the project site is presented in the BA. A species description of the wood stork is provided below.

A new Biological Assessment was submitted to the USFWS in July 2011 and on August 15, 2011 the USFWS concurred with the Section 7 determination that the project “may affect, but is not likely to adversely affect” the wood stork and concluded that no additional action is required (**Appendix A**).

WOOD STORK (*MYCTERIA AMERICANA*)

Federal Status: Endangered

Critical Habitat Designation/Recovery Plan: The U.S. nesting population of wood storks was listed as endangered by the USFWS on February 28, 1984 [Federal Register 49 (4): 7332-7335]. The wood stork is included under the 2007 South Florida Multispecies Recovery Plan (USFWS, 2007). Critical habitat has not been designated for this species. The USFWS South Florida Ecological Services Office recognizes a 29.9 kilometer (18.6 mile) CFA around all known wood stork colonies in south Florida (USFWS, 2010b). As indicated above, the project site occurs within a CFA of six wood stork nesting colonies (USFWS, 2005).

Habitat and Biology: Wood storks use freshwater and estuarine wetlands as feeding, nesting, and roosting sites. A description of foraging and nesting habitat requirements and behavior is provided in the following paragraphs.

Foraging

The wood stork typically utilizes freshwater marshes, ponds, ditches, tidal creeks and pools, impoundments, pine/cypress depressions, and swamp sloughs for foraging (USFWS, 2005). They forage most effectively in shallow water areas with highly concentrated prey, such as wetland depressions subject to seasonal drying (USFWS, 2005). According to the *Habitat Management Guidelines for the Wood Stork in the Southeast Region* (USFWS Management Guidelines), wood storks are especially sensitive to environmental conditions at feeding sites; thus, birds may fly relatively long distances either daily or between regions annually, seeking adequate food and resources (USFWS, 1990). Wood storks feed primarily (often almost exclusively) on small fish between 1 and 8 inches in length. The USFWS Management Guidelines describes successful foraging sites as those where the water is between 2 to 14 inches deep. Good feeding conditions usually occur where water is relatively calm and uncluttered by dense thickets of aquatic vegetation. Often a dropping water level is necessary to concentrate fish at suitable densities for the wood stork to forage effectively. Conversely, a rise in the water level, especially when it occurs abruptly, disperses fish and reduces the value of a site as feeding habitat (USFWS, 1990).

As defined by the USFWS in the *South Florida Programmatic Concurrence on Wood Stork* (USFWS, 2010b), suitable foraging habitat (SFH) for wood stork includes:

“wetlands that typically have shallow-open water areas that are relatively calm and have a permanent or seasonal water depth between 5 to 38 centimeters (2 to 15 inches). Other shallow non-wetland water bodies are also SFH. SFH supports and concentrates, or is capable of supporting and concentrating, small fish, frogs, and other aquatic prey. Examples of SFH include, but are not limited to, freshwater marshes, small ponds, shallow, seasonally flooded roadside or agricultural ditches, seasonally flooded pastures, narrow tidal creeks or shallow tidal pools, managed impoundments, and depressions in cypress heads and swamp sloughs.”

Foraging Behavior

As noted in *Wood Stork Conservation and Management for Landowners*, unlike most other wading birds wood storks feed by tactilocation or “touch” (USFWS and UGA, 2001). Wood storks use their partially open bills to rummage through water seeking contact with a prey item. Once the wood stork feels the prey item, it quickly snaps its beak shut, thereby retrieving the prey out of the water. For this reason, wood storks “feed most efficiently in wetland habitats that have dense or crowded prey items, such as [those that] might occur in a drying wetland during the late summer months” (USFWS and UGA, 2001). Further, with their tactile method of feeding, ponds “with steep edges and water at least 1.5 feet deep, are not good feeding habitats for storks” (USFWS and UGA, 2001).

Nesting

In regards to nesting, the USFWS Management Guidelines state that wood storks nest in colonies and will return to the same colony site for many years so long as the site and surrounding feeding habitat continue to supply the needs of the colony (USFWS, 1990). Wood storks require between 110 and 150 days for the annual nesting cycle, from the period of courtship until the nestlings become independent. Nesting activity may begin as early as December or as late as March in the southern Florida colonies. Thus, nesting colonies may be active until June or July in South Florida. Colony sites may also be used for roosting by wood storks at other times of the year. Almost all recent nesting colonies in the southeastern U.S. have been located either in woody vegetation over standing water, or on islands surrounded by broad expanses of open water. The most dominant vegetation in swamp colonies has been cypress, although wood storks also nest in swamp hardwoods and willows (USFWS, 1990).

Regional Distribution: Wood storks that nest in the southeastern U.S. appear to represent a distinct population, separate from the nearest breeding population in Mexico. Wood storks in the southeastern U.S. have recently (since 1980) nested in colonies scattered throughout Florida, and at several central-southern Georgia and coastal South Carolina sites. Banded and color-marked wood storks from central and southern Florida colonies have dispersed during non-breeding seasons as far north as southern Georgia, the coastal counties in South Carolina, and southeastern North Carolina, and as far west as central Alabama and northeastern Mississippi. Wood storks from a colony in south-central Georgia have wintered between southern Georgia and southern Florida (USFWS, 1990).

3.6 CULTURAL AND PALEONTOLOGICAL RESOURCES

This section describes the regulatory setting and existing environmental setting as it relates to cultural and paleontological resources located within and near the Seminole Tribe of Florida (STOF) fee-to-trust project site. The environmental setting with respect to cultural resources is contained in **Section 3.6.2**, while the paleontological setting is described in **Section 3.6.4**. The general and site-specific profiles of resources contained herein provide the environmental baseline by which environmental impacts are identified and measured. An analysis of potential environmental impacts is discussed in **Section 4.0**. A copy of the Cultural Resources Reconnaissance Survey and response letter from the Florida State Historic Preservation Officer (SHPO) are attached as **Appendix F**.

3.6.1 CULTURAL RESOURCES REGULATORY SETTING

Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, and/or scientific importance. Numerous laws, regulations, and statutes at the federal, state, and local level govern archaeological and historic resources deemed to have scientific, historic, or cultural value. The pertinent regulatory framework of these laws is summarized below.

FEDERAL

National Historic Preservation Act

Section 106 of the National Historic Preservation Act (NHPA) as amended, and its implementing regulations found in 36 Code of Federal Regulations (CFR) Part 800, require federal agencies to identify cultural resources that may be affected by actions involving federal lands, funds, or permitting. The significance of the resources must be evaluated using established criteria outlined in 36 CFR 60.4, as described below.

If a resource is determined to be a *historic property*, Section 106 of the NHPA requires that effects of the development on the resource be determined. A historic property is defined as:

“...any prehistoric or historic district, site, building, structure or object included in, or eligible for inclusion in the National Register of Historic Places, including artifacts, records, and material remains related to such a property...”(NHPA Sec. 301[5]).

If a historic property would be adversely affected by development, then prudent and feasible measures to avoid or reduce adverse impacts must be taken. The State Historic Preservation Officer (SHPO) must be provided an opportunity to review and comment on these measures prior to project implementation.

The criteria for listing on the National Register of Historic Places (NRHP), defined in 36 CFR 60.4, are as follows:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, association, and:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history;
- B. That are associated with the lives of persons significant in our past;
- C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That has yielded, or may be likely to yield, information important to prehistory or history.

Sites younger than 50 years, unless of exceptional importance, are not eligible for listing in the NRHP.

In addition to meeting at least one of the criteria listed above, the property must also retain enough integrity to enable it to convey its historic significance. The National Register recognizes seven aspects or qualities that, in various combinations, define integrity (NPS, 1990). These seven elements of integrity are: location, design, setting, materials, workmanship, feeling, and association. To retain integrity, a property will always possess several, and usually most, of these aspects.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA), 25 USC 3001 *et seq.*, provides a process for museums and Federal agencies to return Native American cultural items – human remains, funerary objects, sacred objects, or objects of cultural patrimony – to lineal descendants, and culturally affiliated Indian tribes and Native Hawaiian organizations. NAGPRA includes provisions for unclaimed and culturally unidentifiable Native American cultural items, intentional and inadvertent discovery of Native American cultural items on Federal and Tribal lands, and penalties for noncompliance and illegal trafficking.

Archaeological Resources Protection Act of 1979

The Archaeological Resources Protection Act of 1979 (ARPA) (PL 96-95; 16 U.S.C. 470aa-mm), provides for the protection of archaeological resources and sites which are on public and Indian lands, and fosters increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals having collections of archaeological resources and data which were obtained before October 31, 1979. ARPA also provides for penalties for noncompliance and illegal trafficking.

National Environmental Policy Act

The National Environmental Policy Act (NEPA) requires that federal agencies take all practical measures to “preserve important historic, cultural, and natural aspects of our national heritage.” The NEPA mandate for considering the impacts of a federal project on important historic and cultural resources is similar to that of Section 106 of the NHPA, and the two processes are generally coordinated when applicable. Section 800.8(a) of NHPA’s implementing regulations provides guidance on coordination with NEPA.

STATE REGULATIONS

Chapter 267, Florida Statutes

The State of Florida's antiquities law (Chapter 267, Florida Statutes) and administrative rules (Chapters 1A-31 and 1A-32) govern the use of publicly-owned archaeological and historical resources situated on state property, both on land and in the water. The Florida Statutes provide guidance for assessment of possible adverse impacts to cultural resources, designated as any prehistoric or historic district, site, building, structure, or object listed (or eligible for listing) in the NRHP, or otherwise of architectural, historical, or archaeological value.

3.6.2 CULTURAL SETTING

PROJECT SITE

The majority of the 45-acre project site has been cleared, graded, and paved with surface level parking and structured parking, stormwater retention ponds, and access roadways. The remainder of the site is used for landscaping along the border of the property and within the parking areas. The northern portion of the site is transected by high-voltage transmission lines. The project site is bordered by highways and arterials (State Route 7 (SR-7) [aka Highway 441] and Sample Road), a local street (NW 54th Avenue) and a parking lot to the north. Surrounding areas beyond the project boundary has been developed for commercial and residential development. A majority of the surrounding area was developed within the past 50 years and most, if not all, of the structures in the area do not possess historical significance

An archaeological and historical literature and background information search was conducted by J. Pepe (2005) for the STOF (**Appendix F**). This search was conducted from May through June 2005 to identify the types, locations, and chronologies of known cultural resources within the project area. Information and archival sources used in the search include public records on file with the Florida Master Site File (FMSF) and unpublished cultural resource management reports on file with the STOF Tribal Historical Preservation Officer (THPO). Additional sources of information include a review of modern and historic aerial photographs and quadrangle maps. Results of the historic literature and background information research indicate that no archaeological surveys were conducted within the project area prior to 2005. Further, results of previous studies in Broward County indicate that prehistorical archaeological sites typically are situated on rises or hammock tree islands (Carr et al 1991, 1993, 1995); these conditions are not present within the project area. Additionally, no historic or religious properties were found to be located on the site during the 2005 Reconnaissance Survey (**Appendix F**).

NATIVE AMERICAN OCCUPATION

The timeline of prehistoric Native American occupation as it is currently understood is provided here through synthesis of works by Milanich and Fairbanks (1980), Griffen (2002), and Anderson and Sassaman (2004). The sequence is divided somewhat arbitrarily into four periods: the Pre-Archaic or Paleoindian Period (before 10,000 B.C.), Archaic Period (9,500-1,200 B.C.), Terminal or "Transitional" Archaic (1,200 B.C. - A.D. 1513), Historic Period (A.D. 1513-1812), and the American Period (A.D. 1812-modern era). The prehistoric record is very poorly represented in portions of southeastern Florida and therefore draws heavily on archaeological investigations from other portions of the state.

The Pre-Archaic (PaleoIndian Period): Before 10,000 B.C.

Current evidence suggests that PaleoIndian populations entered Florida sometime between 12,000 and 15,000 years ago, a time in which the Florida peninsula was largely subtropical sandy scrub environment. Inferences based on limited preservation and comparatively few archaeological sites suggest that the Pre-Archaic Period was a time of relatively small populations following a highly mobile lifestyle.

The Archaic Period: 9,500-1,200 B.C.

The Archaic Period in Florida is generally described as a time interval in which hunting and gathering groups intensively collected wild plant foods and animal resources, prior to evidence of domesticated plants or animals. There is evidence of intensive occupation of some coastal areas by approximately 4,000 B.C. and the abundant marine resources available to support sedentary occupations.

The Historic Period (A.D. 1513- ~1812)

The Historic Period is often distinguished regionally after initial contact with Europeans and relies on written descriptive accounts. The first recorded contact with native peoples in Florida was with the Calusa during Ponce de León's expedition in 1513, followed soon afterwards by other Spanish explorations: Francisco Hernández de Córdoba landed in southwest Florida in 1517, Pánfilo de Narváez's expedition in 1528, Hernando de Soto's expedition of 1539, and others. The early historic sequence is often referred to as the "Mission Period" because of the system of missions that was sponsored soon after initial Spanish contact. Spain eventually ceded Florida to Great Britain in 1763 and evacuated some of the Indians of south Florida to Cuba. The fate of those that remained behind is not well understood, but some members may have been absorbed into the Seminole people (McMahon and Marquardt 2004; see McGoun 1993:114).

The American Period (A.D. 1812- Modern Era)

The early American Period in Florida is largely defined by conflicts resulting from U. S. expansion into the state and the ensuing wars with other colonial powers (e.g. British) and native peoples. The early history of Creek-speaking people in Florida is not well documented, especially before ca. 1700, but they may have ties that extend before this time to the Hitchiti-speaking Apalache, a native people who lived along the Apalachicola River at time of Spanish contact. Among these are the Seminole people, who descended from Creek bands and spoke at least seven known languages, including Alabama, Hitchiti, Koasati, Muscogee, Natchez, Shawnee, and Yuchi. The Seminole coalesced in northern Florida and made their way into the Everglades as a result of U.S. military pressure. By the late 18th century, some members had settled near Brooksville, Florida and turned primarily to raising cattle. Early Florida Seminole sites are distinguished from predecessors in part by the style of small triangular points, associations in material culture with raising cattle (absent pens), horticulture, and widespread adoption of some European items. Pottery is distinctive and remains among the most conservative elements of Seminole culture until at least partial replacement by metal containers (Sturtevant and Cattelino 2004; Milanich and Fairbanks 1980).

The history of the Seminole is very poorly known in large part because of a sequence of conflicts often described by historians as the War of 1812 (1812-1815), the Creek Wars (ca. 1813-1814), and as three separate Seminole Wars (intermittently ca. 1817-1842). It was, in fact, during U.S. military pursuit of Seminoles in this region that many of the first systematic recorded explorations were taken for parts of

Florida. In response, many Seminole resorted to dispersed settlements in the Everglades area and practiced small field horticulture supplemented by hunting and gathering. Seminole camps avoided contact with outsiders, emphasizing seclusion and mobility. During the Civil War era of the mid-1860s and decades following afterwards, relatively small populations of perhaps less than 300 individuals made their living in the Everglades and other margins of established communities (Griffen 2002; see Sturtevant and Cattelino 2004).

PREVIOUS CULTURAL RESOURCES STUDIES

Archaeological

No previous studies to identify cultural resources occurred within the project area before the 2005 STOF Cultural Resources Reconnaissance investigation (**Appendix F**). Results of the archaeological and historical reconnaissance are on file at the Florida State Historical Preservation Office (DHR Project File No. 2005-12651).

SUMMARY OF CULTURAL RESOURCES WITHIN THE PROJECT AREA

The 2005 STOF Cultural Resources Reconnaissance investigation (**Appendix F**) found no significant cultural resources within the project area. A literature review conducted as part of this study did not find any previous documented cultural resource investigations of the project area.

3.6.3 PALEONTOLOGICAL RESOURCES REGULATORY SETTING

Paleontological resources are the traces or remains of prehistoric plants and animals. Such remains often appear as fossilized or petrified skeletal matter, imprints or endocasts, and reside in sedimentary rock layers. Paleontological resources are protected by several federal and state regulations and policies including the Antiquities Act and NEPA.

FEDERAL

Antiquities Act

Passed in 1906, the Antiquities Act prohibits the collection, destruction, injury, or excavation of “any historic or prehistoric ruin or monument, or any object of antiquity” that is situated on federal land without permission of the appropriate land management agency. While neither the Antiquities Act nor its implementing regulations (found at 43 CFR 3) explicitly mention fossils or paleontology, the inclusion of “object[s] of antiquity” in the Antiquities Act has been interpreted to extend to paleontological resources by many federal agencies. As such, projects involving federal lands require permits for paleontological resource evaluation and mitigation efforts that involve excavation, collection, and retention.

National Environmental Policy Act

NEPA’s requirement that federal agencies take all practical measures to “preserve important historic, cultural, and *natural aspects* of our national heritage” has been widely interpreted to cover paleontological resources potentially impacted by federal projects (emphasis added). Thus, whenever possible, mitigation measures are recommended to lessen impacts to paleontological resources as a result of federal projects.

3.6.4 PALEONTOLOGICAL ENVIRONMENTAL SETTING

Paleontological resources are considered important for their scientific and educational value. Fossil remains of vertebrates are considered significant. Invertebrate fossils are considered significant if they function as index fossils. Index fossils are those that appear in the fossil record for a relatively short and known period of time, allowing geologists to interpret the age range of the geological formations in which they are found. This section presents documentation on reported paleontological deposits on the project site and surrounding region.

SITE AND REGIONAL GEOLOGY

As described in **Section 3.2**, project site is within the Miami Limestone geological formation, which dates to the Pleistocene epoch (Scott, et al., 2001). Miami Limestone is characterized by cross bedded oolitic facies in the east and bryozoans facies in the west. The parent material for the oolitic facies was the ooid sand from an offshore bar, which when moved by tidal action is reformed into the oolitic facies. The bryozoan facie is formed in the lagoon type environments located to the west of the sandbar that produced the ooid sand of the oolitic facies. The bryozoan facie is marked by the remains of abundant moss animals that lived in the shallow lagoon environments of the parent material (Whitman 1997).

A search of the University of California Paleontology Museum's (UCMP) database indicates that 51 paleontological specimens have been reported in Broward County (UCMP, 2010). A total of six specimens were among the bivalvia class and 44 were among the gastropoda class, both of which are invertebrate. Of the 51 specimens listed in the UCMP for Broward County, a total of 31 were within the Pompano or Pompano Beach locality, located approximately 8 miles to east of the project site. A search of the Florida Museum of Natural History (FLMNH) database indicated two paleontological specimens were reported in Broward County (FLMNH, 2010a). The FLMNH Invertebrate database indicates that a total of 868 specimens have been encountered within Broward County (FLMNH, 2010b).

PALEONTOLOGICAL SUMMARY

The presence of paleontological resources at any particular site is influenced by geological composition resulting from formation processes occurring over long periods of time. Fossils typically reside in sedimentary layers, and may or may not become mineralized dependent upon the mineral composition within their depositional environment.

Despite numerous invertebrate fossil specimens documented near the project site, indicators of *unique paleontological resources* within the project site are absent in the sources consulted. The geologic formation upon which the project site is located has produced few significant paleontological specimens of scientific consequence and thus would not be likely to yield unique paleontological resources. Furthermore, no unique geologic features are known to exist within the project site.

No such resources were recorded as observed in the course of a surface reconnaissance and desktop survey by members of STOF that conducted the 2005 survey (Pepe, 2005).

3.7 SOCIOECONOMIC CONDITIONS AND ENVIRONMENTAL JUSTICE

This section describes the existing socioeconomic conditions and environmental justice issues that pertain to the Proposed Action. Issues addressed in this section include population, housing, economy, employment, income, schools, property taxes, crime, minority communities, and income status. The description of existing socioeconomic conditions provides the baseline by which environmental impacts are measured. Potential environmental impacts are discussed in **Section 4.0**.

3.7.1 SOCIOECONOMIC CHARACTERISTICS OF THE SEMINOLE TRIBE OF FLORIDA

As reported by the Bureau of Indian Affairs (BIA) in 2013, which represents the most recent data available, the Seminole Tribe of Florida (STOF) has a total membership of 3,680 individuals. **Table 3.7-1** shows the population distribution and labor status of STOF tribal members. The majority of STOF tribal members are between the ages of 16 and 64. Of the 3,165 members, 1,438 members are under 16 years of age, 1,625 members are ages 16 through 64, and 102 members are age 65 and over.

TABLE 3.7-1
SEMINOLE TRIBE OF FLORIDA POPULATION AND LABOR FORCE ESTIMATES

| | Members |
|---------------------------------------|--------------|
| Membership | 3,680 |
| Under age 16 | 791 |
| Age 16 through 64 | 2,558 |
| Age 65 and over | 331 |
| Available for Work (Total Workforce) | Not Reported |
| Employed | Not Reported |
| Not Employed | Not Reported |
| Employed, but below poverty threshold | Not Reported |
| SOURCE: BIA, 2013. | |

3.7.2 SOCIOECONOMIC CHARACTERISTICS OF COCONUT CREEK AND BROWARD COUNTY

POPULATION

Regional

As shown in **Table 3.7-2**, the population of Broward County as of 2014 was 1,869,235 people. The population of the City of Coconut Creek (City) in 2014 was 58,536 or 3.1 percent of Broward County's total population.

Population Trends

Using estimates provided by the U.S. Census Bureau, the population of Broward County grew from 1,623,018 in 2000 to 1,766,620 in 2005, an increase of approximately 8.3 percent. Between 2005 and 2010, Broward County's population decreased to approximately 1,748,066, a total decrease of about 1.1

percent. Between 2010 and 2014, Broward County's population increased to approximately 1,869,235, a total increase of 6.9 percent. The population of the City increased by 21.4 percent from 43,566 residents in 2000 to 52,909 residents in 2010. Between 2010 and 2014 the City's population increased to approximately 58,536, a total increase of 10.6 percent. Overall, the population in the State of Florida has increased from 15,982,378 in 2000 to 19,905,569 in 2014, an increase of approximately 24.5 percent.

TABLE 3.7-2
REGIONAL POPULATION

| Location | Population | | | | |
|-----------------------|------------|------------|------------|------------|------------|
| | 2000 | 2005 | 2010 | 2014 | 2015 |
| State of Florida | 15,982,378 | 17,783,868 | 18,801,310 | 19,905,569 | 20,271,272 |
| Broward County | 1,623,018 | 1,766,620 | 1,748,066 | 1,869,235 | N/A |
| City of Coconut Creek | 43,566 | 49,890 | 52,909 | 58,536 | N/A |

SOURCE: U.S. Census Bureau, 2010, U.S. Census Bureau, 2005, U.S. Census Bureau, 2014a; U.S. Census Bureau, 2014b;; U.S. Census Bureau, 2015.

HOUSING

In 2010, Florida was estimated to have approximately 8,989,580 housing units, of which approximately 1,573,176 or 17.5 percent were vacant. In the same year, Broward County had a vacancy rate of approximately 15.3 percent, which was slightly lower percentage of vacant units compared to the State of Florida. From 2007 through 2010, the City was estimated to have approximately 25,926 housing units, of which approximately 3,163 or 12.2 percent were vacant, which was lower than the vacancy rate for both the State of Florida and Broward County. As shown in **Table 3.7-3**, in 2010 there were estimated to be 810,388 housing units in Broward County, of which 124,341 units (15.3 percent) were vacant (U.S. Census Bureau, 2010). Between 2000 and 2010, both the City and Broward County experienced steady housing growth. Between 2010 and 2014 Broward County experienced a growth in housing stock, but at a decreased rate compared to the 2000 to 2010 period. Based on the information presented in **Table 3.7-3**, it was determined that the total number of housing units in Broward County tends to increase annually by approximately 0.95 percent, while the percentage of vacant units tends to increase annually by approximately 0.85 percent.

TABLE 3.7-3
REGIONAL HOUSING

| Location | 2000 | | 2005 | | 2010 | | 2014 | |
|-----------------------|-------------|----------|---------------|---------------|-------------|----------|---------------|---------------|
| | Total Units | % Vacant | Total Units | % Vacant | Total Units | % Vacant | Total Units | % Vacant |
| State of Florida | 7,302,947 | 13.2 | 8,256,847 | 14.6 | 8,989,580 | 17.5 | 9,144,250 | Not Available |
| Broward County | 741,043 | 11.6 | 790,308 | 13.0 | 810,388 | 15.3 | 817,277 | Not Available |
| City of Coconut Creek | 22,144 | 9.4 | Not Available | Not Available | 25,926 | 12.2 | Not Available | Not Available |

Source: U.S. Census Bureau, 2014c, 2014d, and 2015.

An affordability analysis of market rate rental units prepared for the Broward County Housing Council (Housing Council, 2011) indicates that “Rents are generally affordable for other household income categories, though affordability gaps exist for households at the lower end of the workforce (less than 100 percent of median) household income category. As previously noted, apartment rents for 2-3 bedroom units in many of Broward County’s largest municipalities are well above the County average, including Fort Lauderdale, Miramar, Plantation, Hollywood, Davie and Coral Springs” (Housing Council, 2011). In 2010, there were 181,576 housing units in communities within 10 miles of the project site (Broward Housing Council, 2011). Of this total, there were 15,687 housing units listed for sale and 27,753 units available for rent (Broward Housing Council, 2011). The median sales price for a single-family home in Broward County was \$182,750 in 2011 and the average price for a condominium was \$81,987 during the same year (Broward Housing Council, 2011). Prices for single-family homes within 10 miles of the site averaged \$215,000 in Plantation, \$200,000 in Coral Springs, \$182,000 in Deerfield Beach, and \$163,000 in Pompano Beach (Broward Housing Council, 2011). Monthly rents within 10 miles of the site ranged from \$897 to \$1,106 for a one-bedroom unit, \$1,100 to \$1,373 for a two-bedroom unit, and \$1,323 to \$1,681 for a three-bedroom unit (Broward Housing Council, 2011).

EMPLOYMENT

As shown in **Table 3.7-4**, Broward County had 1,002,081 people in its labor force and a 4.7 percent unemployment rate in 2015. The labor force is generally defined as employed workers and unemployed workers actively looking for work. Compared to Broward County unemployment rates, the City was 4.5 percent during 2015.

TABLE 3.7-4
REGIONAL LABOR FORCE ESTIMATES (2015)

| Location | Labor Force | Unemployed | Unemployment Rate |
|--|--------------------|-------------------|--------------------------|
| State of Florida | 9,579,900 | 494,100 | 5.2 |
| Broward County | 1,002,081 | 47,119 | 4.7 |
| City of Coconut Creek | N/A | N/A | 4.5 |
| SOURCE: Bureau of Labor Statistics, October 2015 (State of Florida and Broward County), Homefacts (Coconut Creek). | | | |

In November of 2015, the U.S. unemployment rate was 5.0 percent (Bureau of Labor Statistics 2015); higher than the unemployment rate in Broward County. Between 2007 and 2009, Broward County lost 56,500 private sector jobs (Broward Housing Council, 2011). Since 2000, the labor force in Broward County has increased by an average rate of 1.6 percent each year.

The economic base of Broward County and South Florida is largely support by the non-durable service-providing industries. These industries comprise 90 percent of the employment base in Broward County (Broward Housing Council, 2011). The largest industries in the City include: professional, scientific, and technical services; educational services; health care and social assistance, arts, entertainment, and recreation, and other services (except public administration) (U.S. Census Bureau, 2000).

INCOME

The estimated median household income of Broward County was \$48,063 in 2008 (Broward Housing Council, 2011) and is currently estimated at \$51,251 (U.S. Census Bureau, 2014). The City had a median household income slightly less than the County at \$49,427 in 2010 (U.S. Census Bureau, 2010). The median household income of Broward County was slightly higher than the median household income for Florida, which was \$47,661 in 2010 (U.S. Census Bureau, 2010). The median hourly wage in Broward County was \$14.97, which translates to an annual salary of \$31,137 based on a 40-hour work week (Broward Housing Council, 2011).

PROPERTY TAXES

The Project Site consists of Broward County Tracts B, C, D, G, H, and I (Assessor's Parcel Identification Numbers (PINs): 484218030021, 484218030030, 484218030080, 484218030040, 484218230010, 484218230011, and 484218230012). The Broward County Assessor's Office has records of the value of each parcel. From these records, the total assessed taxable value for these parcels in 2011 was \$30,362,110, and the total property tax value for these parcels for fiscal year 2011 was approximately \$715,494. Fiscal year 2015 information provided by Broward County, indicates that assessed taxable value of the parcels is \$65,609,710 and total property tax value in 2015 is \$1,928,086 (Broward County, 2015). A portion of the property taxes collected by the County are distributed to local districts, agencies, and the City to fund public services. Local and regional services funded with property taxes include the following: the School Board of Broward County, Broward Addiction Recovery Center, Detention/Corrections Facilities, Broward County Emergency Management Division, County Fire/Rescue Services (Air Rescue, Hazardous Materials, and Technical Rescue Team), Broward County Human Services Department, specialized Broward County Sheriff's Department services (Aviation Unit, Bomb Squad, Counter-Terrorism Unit, Gang Unit, and SWAT Team), County medical examiner services, roadway construction maintenance activities, Broward County Transit Authority, and the County tourism development Board.

STOF has committed to make payments to the City of Coconut Creek in lieu of taxes for the ad valorem taxes as well as certain non-ad valorem assessment related to fire-rescue services in the Municipal Service Providers Agreement (MSPA) with the City of Coconut Creek (**Appendix G**).

CRIME

Table 3.7-5 shows crimes reported in Broward County and crime rates in Florida for 2010.

TABLE 3.7-5
BROWARD COUNTY 2010 OFFENSES KNOWN TO LAW ENFORCEMENT AND FLORIDA CRIME RATE PER
100,000 PEOPLE

| Area | Population | Violent crime | Murder and nonnegligent manslaughter | Forcible Rape | Robbery | Aggravated Assault | Property Crime | Burglary | Larceny/Theft | Motor Vehicle Theft |
|----------------|------------|---------------|--------------------------------------|---------------|---------|--------------------|----------------|----------|---------------|---------------------|
| Broward County | 1,748,066 | 292 | 1 | 13 | 92 | 186 | 956 | 234 | 665 | 57 |
| Florida | 18,801,310 | 612.5 | 5.5 | 29.7 | 166.7 | 410.6 | 3,840.8 | 981.1 | 2,588.6 | 271.1 |

SOURCE: Federal Bureau of Investigation, 2010.

Crime in Broward County dropped in 2010 compared with the earlier year for all categories except burglary which increased by roughly five percent. The majority of all crimes reported in Broward County in 2010 were categorized as property crimes. A property crime for these statistics includes the offenses of burglary, larceny-theft, motor vehicle theft, and arson. The object of the theft-type offenses is the taking of money or property, but there is no force or threat of force against the victims (Federal Bureau of Investigation, 2010).

SCHOOLS

Broward County Public Schools (BCPS) is the nation's sixth largest school district and the largest fully-accredited school system in the country. BCPS consists of 305 schools, including: 140 elementary schools, one kindergarten-through-eighth-grade school, 41 middle schools, 32 high schools, 19 adult schools (including centers), three virtual schools, and 75 charter schools. Enrollment in the BCPS for the 2011/2012 school year totaled 258,803 students (BCPS, 2012). A total of approximately 14,232 instructional staff members, 1,345 administrators, and 10,424 clerical and support staff members were employed with the BCPS during the 2011/2012 school year. The annual budget (July 1, 2011 – June 30, 2012) for BCPS is approximately \$2.56 billion, including \$1.91 billion within the general budget and \$0.65 billion within the capital budget (BCPS, 2012). The annual budget for the school district dropped from \$3.5 billion for the 2010-2011 school year (BCPS, 2011) to \$2.56 billion for the 2011-2012 school year. The City is located within the BCPS district boundary. Seven public schools are located in the City, including three elementary schools, one middle school, one adult high school, and three high schools. Three private schools are also located within the City. Monarch High School is the closest school to the site, located across Cullum Road approximately 3,000 feet northeast of the center of the project site.

3.7.3 ENVIRONMENTAL JUSTICE

REGULATORY SETTING

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations, as amended, directs federal agencies to develop an Environmental Justice Strategy that identifies and addresses disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations. The Council on Environmental Quality (CEQ) has oversight responsibility of the federal government's compliance with Executive Order 12898 and the National Environmental Policy Act (NEPA). The CEQ, in consultation with the U.S. Environmental Protection Agency (USEPA) and other agencies, has developed guidance to assist federal agencies with their NEPA procedures so that environmental justice concerns are effectively identified and addressed.

According to guidance from the CEQ (1997b) and USEPA (1998), agencies should consider the composition of the affected area to determine whether minority populations, low-income populations, or Indian tribes are present in the area affected by a proposed action and, if so, whether there may be disproportionately high and adverse environmental effects to those populations. Communities may be considered "minority" under the executive order if one of the following characteristics apply:

- The cumulative percentage of minorities within a Census tract is greater than 50 percent (primary method of analysis).

- The cumulative percentage of minorities within a Census tract is less than 50 percent, but the percentage of minorities is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis (secondary method of analysis).

According to USEPA, either the county or the state can be used when considering the scope of the “general population.” A definition of “meaningfully greater” is not given by the CEQ or USEPA, although the latter has noted that any affected area that has a percentage of minorities above the state’s percentage is a potential minority community and any affected area with a minority percentage double that of the state’s is a definite minority community under Executive Order 12898 (USEPA, 1998).

Communities may be considered “low-income” under the executive order if one of the following characteristics applies:

- The median household income for a Census tract is below the poverty line (primary method of analysis).
- Other indications are present that indicate a low-income community is present within the Census tract (secondary method of analysis).

In most cases, the primary method of analysis will suffice to determine whether a low-income community exists in the affected environment. However, when a Census tract income may be just over the poverty line or where a low-income pocket within the tract appears likely, the secondary method of analysis may be warranted. Other indications of a low-income community under the secondary method of analysis include limited access to health care, overburdened or aged infrastructure, and dependence on subsistence living.

AFFECTED ENVIRONMENT

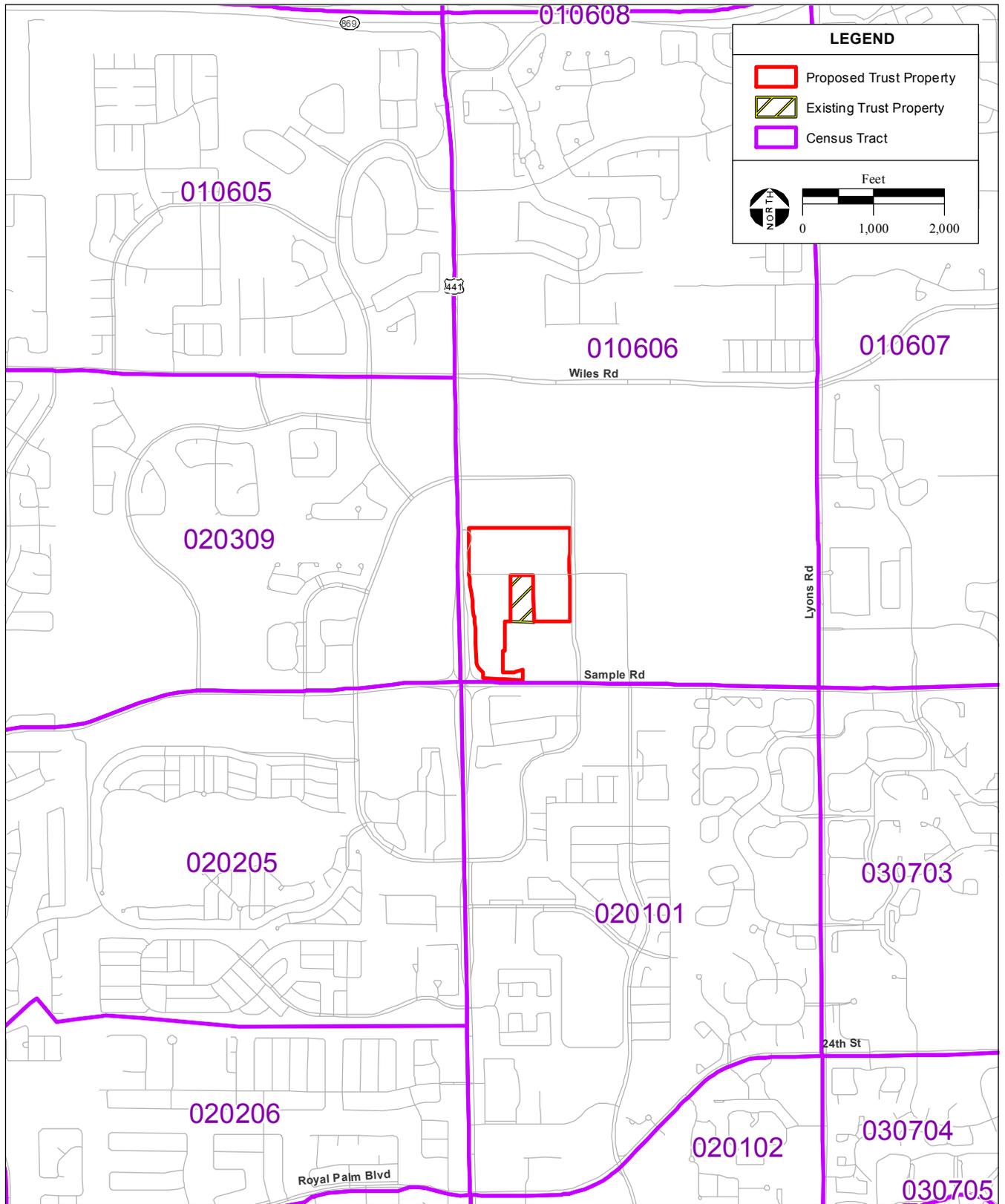
To determine whether a proposed action is likely to have disproportionately high and adverse effects on a population, agencies must identify a geographic scale for which they will obtain demographic information. Census tracts are a small, relatively permanent statistical subdivision of a county delineated by a local committee of Census data users for the purpose of presenting data. Census tracts are designed to be relatively homogeneous units with respect to population characteristics, economic status, and living conditions at the time of establishment. Therefore, statistics of Census tracts provide a more accurate representation of a community’s racial and economic composition.

Census tracts that were analyzed for the project include Census Tract 106.06, which contains the Project Site, and Census tracts that are adjacent to Census Tract 106.06, including: Census Tracts 106.05, 203.09, 202.05, 201.01, 307.03, 106.07, and 106.08 (**Figure 3.7-1**).

RACE

The following races are considered minorities under the executive order:

- American Indian or Alaskan Native
- Asian or Pacific Islander



SOURCE: U.S. Census Bureau, 2000 Census; AES, 2011

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Figure 3.7-1
Census Tracts Surrounding Project Site

- Black, not of Hispanic origin
- Hispanic

Populations of two or more races and populations classified as “Other” were also considered to be minority races for the purpose of the environmental justice analysis.

The U.S. Census Bureau’s American Community Survey five-year estimate data for 2005 through 2009 represents the most current racial data available by Census tract. Since the data was reported, the racial composition of the Census tracts is not expected to have changed substantially. Conservative assumptions will be applied to any borderline situations where a minor change in racial composition could affect the minority status of a Census tract. **Table 3.7-6** displays the population of each minority race by Census tract in the vicinity of the project site.

As shown in **Table 3.7-6**, each of the Census tracts in the vicinity of the project site are characterized by a minority population below 50 percent of the overall population. The minority population in the project area is below the 50 percent threshold; as such, no minority communities have been identified in the vicinity of the project site. However, the project itself would directly impact members of the Seminole Tribe; therefore, though analysis of Census tract demographics as a whole does not reflect existence of a minority community. To ensure a conservative analysis the Seminole Tribe is considered to be a minority community that would be affected by the Proposed Action.

TABLE 3.7-6
MINORITY POPULATION – PROJECT SITE AND NEARBY CENSUS TRACTS

| Census Tract | Total Population | White (alone) | Black or African American (alone) | American Indian or Alaska Native (alone) | Asian (alone) | Native Hawaiian or Other Pacific Islander (alone) | Other Race (alone) | Two or More Races | Hispanic or Latino (of any race) | Total Minority Population | Percent Minority |
|-----------------------|------------------|---------------|-----------------------------------|--|---------------|---|--------------------|-------------------|----------------------------------|---------------------------|------------------|
| City of Coconut Creek | 50,543 | 32,604 | 5,442 | 0 | 1,683 | 0 | 342 | 308 | 10,044 | 17,939 | 35.5% |
| 106.05 | 7,161 | 5,055 | 408 | 22 | 438 | 0 | 0 | 78 | 1,160 | 2,106 | 29.4% |
| 106.06 | 5,162 | 3,272 | 690 | 0 | 53 | 0 | 130 | 0 | 1,017 | 1,890 | 36.6% |
| 106.07 | 8,968 | 4,581 | 1,622 | 0 | 518 | 0 | 38 | 399 | 1,810 | 4,387 | 48.9% |
| 106.08 | 8,657 | 5,332 | 824 | 0 | 276 | 0 | 0 | 56 | 2,169 | 3,325 | 38.4% |
| 201.01 | 6,830 | 4,636 | 735 | 0 | 234 | 0 | 0 | 58 | 1,67 | 2,194 | 32.1% |
| 202.05 | 5,577 | 2,932 | 1,086 | 0 | 394 | 0 | 0 | 102 | 1,063 | 2,645 | 47.4% |
| 203.09 | 5,578 | 3,927 | 373 | 0 | 278 | 0 | 0 | 92 | 908 | 1,651 | 29.6% |
| 307.03 | 4,643 | 3,488 | 724 | 0 | 40 | 0 | 0 | 0 | 391 | 1,155 | 24.9% |

SOURCE: U.S. Census Bureau, 2005-2009 American Community Survey

INCOME

According to the 2011 Broward County Affordable Housing Needs Assessment prepared for the Broward Housing Council, “the economic base of Broward County and South Florida is largely supported by the non-durable service-providing industries. These industries currently comprise 90 percent of Broward County’s employment base.” The report also states that “while service- providing industries are

essential to South Florida's tourism-base economy and do offer livable wages among many of the associated occupations, the vast preponderance of employment is found in low-wage earning occupations. In fact, the 2011 median hourly wage for all occupations in Broward County is \$14.97 which translates to an annual salary of \$31,137 based on a 40-hour work week (Housing Council, 2011). Median household income in Broward County was \$48,063 in 2008 (Housing Council, 2011).

Jobs that pay between 81 and 120 percent of average median income (AMI) are classified as "Workforce Income" and jobs that pay less than 80 percent of AMI are classified as "Low Income." The 80 percent AMI threshold for Broward County is \$11.97 hour or \$24,910 annually. The 120 percent of AMI threshold is \$17.96 hour or \$37,365 annually. As of December 2011, the federal minimum wage was \$7.25 per hour and the minimum wage in Florida was \$7.67 per hour (U.S. Department of Labor, 2012).

The U.S. Census Bureau's American Community Survey five-year estimate data for 2005 through 2009 represents the most current household income data available by Census tract. The use of older income data is expected to result in a conservative estimate of income, given that income levels tend to rise over time due to inflation. **Table 3.7-7** displays the median household income and poverty threshold for each identified Census tract. A low-income community is defined as a Census tract where the median household income falls below the poverty limit.

TABLE 3.7-7
HOUSEHOLD INCOME – PROJECT SITE AND NEARBY CENSUS TRACTS

| Census Tract | Median Household Income | Average Household Size | Poverty Threshold |
|-----------------------|-------------------------|------------------------|-------------------|
| City of Coconut Creek | \$48,556 | 2.33 | \$17,098 |
| 106.05 | \$103,043 | 3.25 | \$21,954 |
| 106.06 | \$74,237 | 2.82 | \$17,098 |
| 106.07 | \$62,188 | 2.89 | \$17,098 |
| 106.08 | \$56,250 | 2.73 | \$17,098 |
| 201.01 | \$48,457 | 2.02 | \$17,098 |
| 202.05 | \$66,600 | 2.45 | \$17,098 |
| 203.09 | \$71,571 | 2.74 | \$17,098 |
| 307.03 | \$46,806 | 2.09 | \$17,098 |

SOURCE: U.S. Census Bureau, 2005-2009; U.S. Census Bureau, 2009

As shown in **Table 3.7-7**, the median household income of each Census tract surveyed in the vicinity of the project site was greater than the poverty threshold. The poverty threshold for each Census tract was determined from the average household size of the Census tract (U.S. Census Bureau, 2005-2009). The poverty threshold assumes average household size is conservatively rounded up to the nearest person (U.S. Census Bureau, 2009). None of the identified Census tracts have a median household income less than the determined poverty thresholds; therefore, no low-income communities have been identified in the vicinity of the project site.

3.8 TRANSPORTATION/CIRCULATION

This section describes the existing environmental conditions for the proposed development of a fee-to-trust project on Seminole Tribe of Florida (STOF) lands within the City of Coconut Creek (City). The general and site-specific description of transportation and circulation contained herein provides the environmental baseline by which direct, indirect, and cumulative environmental effects are identified and measured in **Chapter 4.0**. Additional details about the transportation network and traffic circulation are provided in Appendix E, Transportation Planning Study.

3.8.1 EXISTING CIRCULATION NETWORK

The project site is bordered by State Route 7/US-441 (SR-7/US-441) to the west, NW 54th Street to the east, Sample Road to the south, and commercial development and open space to the north. **Figure 3.8-1** shows the existing transportation network and location of the study intersections.

Roadway Segments

The major roadways located in the vicinity of the project site are described below:

Sample Road (SR-834) between SR-7/US-441 and Lyons Road is a six-lane, divided arterial with a posted speed limit of 45 miles per hour (mph).

Wiles Road between SR-7/US-441 and Lyons Road is a four-lane, divided arterial with a posted speed limit of 50 mph.

SR-7/US-441 between Sample Road and Wiles Road is a six-lane, divided arterial with a posted speed limit of 50 mph.

Lyons Road between Sample Road and Wiles road is a six-lane, divided arterial with a posted speed limit of 45 mph.

Cullum Road between SR-7/US-441 and NW 54th Avenue is a four-lane, divided local collector facility. West of SR-7/US-441 the roadway is known as Turtle Creek Drive. An extension of Cullum Road is proposed to the east of NW 54th Avenue, to be extended to Banks Road as a committed project associated with City approved development on the project site. The City approved development, including off-site traffic improvements, is titled the Seminole Planned MainStreet Development District (PMDD). Proposed improvements between NW 54th Avenue and Banks Road include the extension of the four lane roadway. Between Banks Road and Lyons Road to the east, Cullum Road is a two-lane road, a section of which, between Lyons Road and the Promenade, is currently closed to traffic and overgrown with vegetation.

NW 54th Avenue between Sample Road and Cullum Road is a four-lane, divided local collector. This roadway is also known as Wochna Boulevard. NW 54th also functions as one of the segments of a loop road system that circumvents the general area of the SR-7/US-441 and Sample Road interchange.

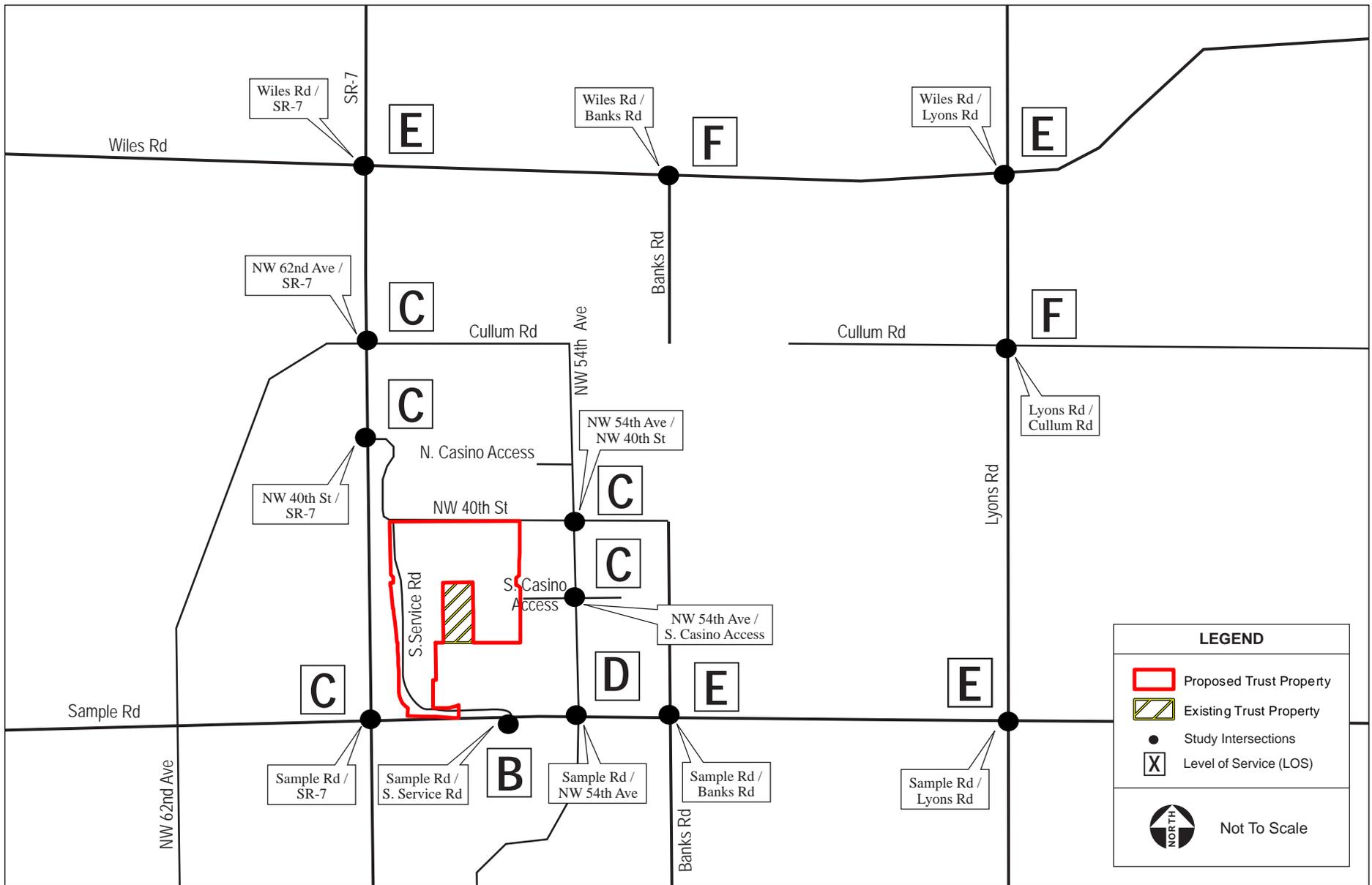


Figure 3.8-1
Transportation Network and Study Intersections

NW 40th Street Between NW 54th and SR-7/US-441 was vacated by the City in 2011 and ownership transferred to STOF. Prior to vacation, NW 40th Street was a two-lane local street that provided access between NW 54th and SR-7/US-441. Access is now provided via Cullum Road to the north.

Intersections

The geometry and control of study intersections located in the vicinity of the project site is described below:

Sample Road and SR-7/US-441 is a four-way signalized intersection with southbound / northbound on and off ramps to SR-7/US-441. The eastbound / westbound approaches include one right turn lane and five through lanes. The on-ramps include two lanes and the off-ramps include two left turn lanes and one right turn lane. The on-ramp approaches consist of three through lanes and two left turn lanes.

Sample Road and South Service Road is a two-way unsignalized intersection with stop control on the Sample Road approaches. The eastbound approaches have four through lanes and the westbound approach has three through lanes and one dedicated right turn lane. The southbound approach has a dedicated right turn lane.

Sample Road and NW 54th Avenue is a signalized intersection. The eastbound approach has three through lanes and a left and right turn lanes and the westbound approaches has two through lanes and a left and right turn lane. The northbound / southbound approaches have two through lanes and a left and right turn lane.

Sample Road and Banks Road is a two-way stopped controlled intersection. The northbound and southbound approaches have dedicated right turns, while the eastbound approach has three through lanes and a dedicated left and right turn lane. The westbound approach has a shared through/right turn lane, two through lanes and a right turn lane.

Sample Road and Lyons Road is a signalized intersection. All approaches have three through lanes with two dedicated left turn lanes and one dedicated right turn lane.

SR-7/US-441 and Cullum Road is a signalized intersection. The northbound / southbound approaches have three through lanes, one right turn lane, and two left turn lanes. The westbound approach has two dedicated through lanes and a dedicated left and right turn lane. The eastbound approach has a shared through/left turn lane and a dedicated right turn lane.

SR-7/US-441 and Wiles Road is a signalized intersection. The SR-7/US-441 approach has three through lanes, one right turn lane, and two left turn lanes. The Wiles Road approach has two through lanes, two left turn lanes and one right turn lane.

Lyons Road and Cullum Road is an unsignalized intersection. The northbound / southbound approaches have three dedicated through lanes and one dedicated left and right turn lanes. The eastbound / westbound approaches have a shared through/right turn lane and a dedicated left turn lane.

Lyons Road and Wiles Road is a signalized intersection. The Lyons Road approach (NB) has three through lanes, one right turn lane, and two left turn lanes. The southbound approach has two through lanes, one through/right and two left turn lanes. The Wiles Road approach has two through lanes, two left turn lanes, and one right turn lane.

NW 54th Avenue and South Casino Access is an unsignalized intersection. The eastbound approach has a shared through/left/right turn lane and the westbound approach has a shared right/left turn lane. The northbound approach has a dedicated through and left turn lanes and the southbound approach has three dedicated through lanes and right and left turn lanes.

Banks Road and Wiles Road is an unsignalized intersection. The eastbound approach has two through lanes and a left turn lane. The westbound approach has two through lanes and a left turn lane. The northbound approach has a dedicated left and right turn lane. There is no approach from the south.

Existing Improvement Agreements

In March 2007, Broward County passed Resolution 87-1077 that finds that the conditions of the Development Order for the Commerce Center Development of Regional Impact satisfy the provisions of Chapter 5, Article IX, Broward County Code of Ordinances, the Broward County Land Development Code, Sections 5-182(a) and 5-198(a), which require adequacy of the Regional Transportation network as a condition for approval of a development permit. This finding is based upon STOF agreeing to widen a portion of Sample Road in lieu of road impact fees assessed on the Commerce Center of Coconut Creek Development of Regional Impact.

3.8.2 LEVEL OF SERVICE STANDARDS

Traffic congestion is generally measured in terms of level of service (LOS). Peak hour LOS at critical off-site and driveway intersections (listed above) was determined using the methodology described in the 2000 Highway Capacity Manual (Transportation Research Board, 2000). In accordance with the 2000 Highway Capacity Manual, intersections are rated between LOS A and F, with LOS A being freely flowing traffic conditions and LOS F being forced flow or over-capacity conditions. The LOS at intersections is measured in terms of average delay per vehicle in seconds. For unsignalized intersections, the LOS is determined by the worst approach at the intersection (i.e. the intersection leg with the most delay, usually the minor leg). For signalized intersections, the LOS is determined as an average delay for all the entering vehicles. The LOS intersection criteria are listed in **Table 3.8-1**.

TABLE 3.8-1
INTERSECTION LEVEL OF SERVICE CRITERIA

| Level of Service | Control Delay(Seconds Per Vehicle) | |
|------------------|------------------------------------|--------------------------|
| | Unsignalized Intersections | Signalized Intersections |
| A | ≤10 | ≤10 |
| B | >10 - ≤15 | >10 - ≤20 |
| C | >15 - ≤25 | >20 - ≤35 |
| D | >25 - ≤35 | >35 - ≤55 |
| E | >35 - ≤50 | >55 - ≤80 |
| F | >50 | >80 |

SOURCE: Keith and Schnars, 2012, (**Appendix E**).

EXISTING CONDITIONS – STUDY INTERSECTIONS

A Traffic Planning Study (TPS) was prepared to assess traffic counts, existing roadway geometry, and existing development conditions in the vicinity of the project site (**Appendix E**). The results serve as a baseline from which the 2012, 2015, 2020 and 2035 year traffic volume projections are derived (**Section 4.8**). Traffic analyses were completed to evaluate the operational conditions of the following 13 study intersections:

1. Sample Road and SR-7/US-441
2. Sample Road and South Service Road
3. Sample Road and NW 54th Avenue
4. Sample Road and Banks Road
5. Sample Road and Lyons Road
6. SR-7/US-441 and NW 40th Street (This is not a through street, but would provide access from SR-7/US-441 to the western portion of the site.)
7. SR-7/US-441 and Cullum Road
8. SR-7/US-441 and Wiles Road
9. Lyons Road and Cullum Road
10. Lyons Road and Wiles Road
11. NW 54th Avenue and South Access
12. NW 54th Avenue and 40th Street (This would not be a through street but would provide access to the eastern portion of the site.)
13. Banks Road and Wiles Road

Traffic counts were collected in July and September 2009 and May 2010 between the hours of 3:00 pm and 6:00 pm. The PM peak hour varied depending on the intersection. TPS - Figure 3 shows the existing lane geometry and traffic controls at the 13 study intersection and Figure 4 shows the existing traffic volumes (**Appendix E**). **Figure 3.8-1** above shows the location of the study intersections.

Afternoon peak-hour traffic delays and LOS, for existing study intersections listed above, are shown in **Table 3.8-2**.

TABLE 3.8-2
EXISTING PM PEAK HOUR CONDITIONS

| Intersections | Traffic Control | Existing PM Peak Traffic | |
|--|-----------------|--------------------------|-----|
| | | Delay | LOS |
| Sample Road and SR-7/US-441 | S | 23.5 | C |
| Sample Road and South Service Road | U | 15.1 | C |
| Sample Road and NW 54 th Avenue | S | 38.9 | D |
| Sample Road and Banks Road | U | 18.6 | C |
| Sample Road and Lyons Road | S | 79.2 | E |
| SR-7/US-441 and NW 40 th Street | U | 18.3 | C |
| SR-7/US-441 and Cullum Road | S | 28.9 | C |
| SR-7/US-441 and Wiles Road | S | 72.0 | E |
| Lyons Road and Cullum Road | U | 25.5 | D |
| Lyons Road and Wiles Road | S | 76.6 | E |
| NW 54 th Avenue and South Access | U | 16.9 | C |
| NW 54 th Avenue and 40 th Street (EBR) | U | 12.4 | B |
| Banks Road and Wiles Road (NB Approach) | U | 20.5 | C |
| NOTES: U = unsignalized; S = signalized. | | | |
| SOURCE: Keith and Schnars, 2012, (Appendix E). | | | |

3.8.3 TRANSIT SERVICES

The general vicinity of the project site is currently served by four Broward County Transit (BCT) bus routes (Route 441 Breeze, Route 18, Route 31, and Route 34), two City of Coconut Creek community bus routes (Route N and S), and one City of Margate community bus route (Route A). The services provided by BCT and the two communities provide alternate travel modes for residents of the City, the surrounding communities, and Broward County. Direct service to the project site is provided by Route N, a fixed City community bus route. The nearest transit station is located at the intersection of Sample Road and NW 62nd Street/Turtle Creek Drive, which serves as an important transit transfer node for the project vicinity, including routes S, A, 18, 34, 441 Breeze. BCT future development plans, provided in the Transit Development Plan (TDP), include the development of a transit station at the northeast corner of SR-7 and Sample Road. Bus route numbers and frequency are provided in the TPS in **Appendix E**.

Annual route ridership data provided by BCT indicates that three of the four BCT transit routes serving the project vicinity rank within the top 50 percent of the best performing routes (Keith and Schnars, 2012). The current levels of ridership on these transit routes are provided in the TPS (**Appendix E**).

There are several improvements that are targeted by BCT to better serve the project site. These improvements have been identified in the TPS (**Appendix E**).

There is no rail service in the vicinity of the Proposed Project. The nearest rail service is located approximately 4.5 miles east at the Pompano Beach Tri-Rail station.

3.8.4 BIKE AND PEDESTRIAN FACILITIES

Several roadways within the study area have bicycle facilities. These bicycle facilities range from marked bike lanes to wide curb shoulders. A description of the existing bicycle facilities in the project vicinity are provided in the TPS (**Appendix E**). The 2035 Light Rail Transit Plan (LRTP) identifies five cost effective bicycle projects within the general area of the project site (Keith and Schnars, 2012).

Sidewalk facilities exist on both sides of all major roadways with the project area with a few exceptions; along both sides of SR-7/US-441 south of Sample Road and on the west side of Lyons Road south of Sample Road. Pedestrian crossings do not exist at SR-7/US-441 and Sample Road. The 2035 LRTP has identified two cost effective sidewalk projects in the project area (**Appendix E**).

3.9 LAND USE AND PLANNING

This section contains a discussion of the regional land use setting and framework by which land use is guided and regulated in the area. This section also describes existing land uses for the site and adjacent properties. It should be noted that once the federal government acquires land in trust for the Seminole Tribe of Florida (STOF), the site would not be subject to municipal land use regulations. Only tribal land use regulations are applicable on trust lands. The Tribal Government relies upon the Tribal Council, the governing body of the Tribal Government, to guide and regulate land use on tribal lands. However, STOF has agreed, pursuant to the Coconut Creek Fee-to-Trust Mitigation Agreement with the City of Coconut Creek (**Appendix H**), that any development of the trust property will comply with the approved *Seminole Planned MainStreet Development District for the Seminole Tribe of Florida* (Seminole PMDD; **Appendix H**).

3.9.1 REGIONAL SETTING AND LOCAL SETTING

The City of Coconut Creek (City) is located in southwestern Florida, in the north-central portion of Broward County. The City encompasses approximately 12.7 square miles and is located immediately south of Palm Beach County and is generally located between the Florida Turnpike, to the east, and State Route 7 (SR-7) / U.S. Route 441 (US-441), to the west.

The project site consists of 6 tracts of land totaling approximately 45-acres located in the western portion of the City of Coconut Creek. The project site parcels surround the existing STOF trust property that houses the Coconut Creek Casino, commercial developments, and open space. The project site is mostly developed as STOF currently operates non-gaming activities associated with the existing casino on Tract D and surface parking lots for the existing casino on the remaining tracts (see **Figure 1-3**). Tracts I, G, and H contain a multi-story parking structure. In addition, Tracts D, B, G, and H contain stormwater retention basins. NW 40th Street was a City controlled road which was vacated by the City and Broward County in 2011 (City Ordinance 2011-003; Broward County Ordinance 2011-004; recorded at Broward County Plat Book 179, Page 171) and transferred to STOF. Development of the existing parking structure occurred after the vacation of 40th Street. Existing land uses immediately adjacent to the project site include large car dealerships to the south, southeast, and north; agriculture to the east and northeast; and a surface parking lot to the east across NW 54th Avenue. US-441/ SR-7 and Sample Road are six-lane principal arterials which border the site to the west and south, respectively. Principal arterials connect two or more urban districts, regions, areas, or communities (City of Coconut Creek, 2007). Properties to the west and south are under the jurisdiction of the City of Coral Springs and the City of Margate, respectively, and consist of residential and commercial uses including big box retail, strip malls, and restaurants.

3.9.2 PROJECT SITE AND VICINITY LAND USE SETTING

Land use planning and development for the project site is guided by the City of Coconut Creek Zoning Ordinance, the *MainStreet Design Standards* (City of Coconut Creek, 2008) as modified by the *Seminole Planned MainStreet Development District for the Seminole Tribe of Florida* (Seminole PMDD; **Appendix H**), and *City of Coconut Creek Comprehensive Plan* (City of Coconut Creek, 2007). While local land use policies would not apply to lands taken into federal trust, impacts to the surrounding

community may occur in terms of the relation of the Proposed Project to growth and development visions described in these guidance documents.

CITY OF COCONUT CREEK LAND DEVELOPMENT CODE

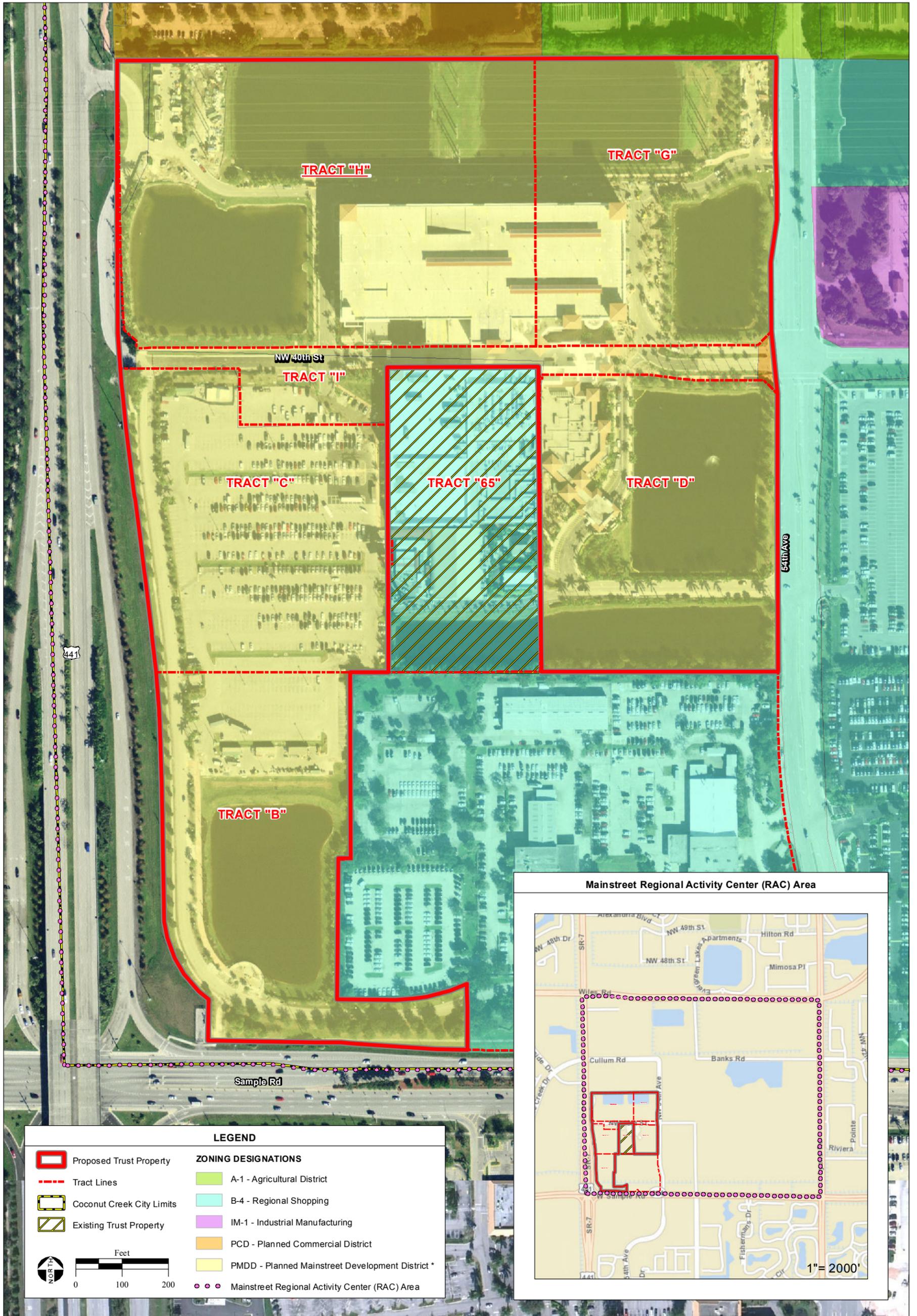
The project site is located within the MainStreet Regional Activity Center (RAC) Area. The RAC Area is comprised of approximately 430-acres, approximately 290-acres of which are currently undeveloped or being utilized for agricultural purposes (City of Coconut Creek, 2008). **Figure 3.9-1** depicts the boundaries of the MainStreet RAC Area and the current zoning designations of the project site. As defined within Sections 13-360 through 13-362 of the City of Coconut Creek Land Development Code (LDC), the MainStreet RAC Area is intended encourage the creation of a district that would attract and retain sustainable development through mixed-use commercial development. To guide the review for any new development in the MainStreet RAC Area and for any modification to, or reconstruction of, existing buildings or uses, the City of Coconut Creek adopted the MainStreet Design Standards, which are described in greater detail below. The project site is zoned as a Planned MainStreet Development District (PMDD; City Ordinance 2011-005). The PMDD is a zoning designation for properties within the MainStreet RAC Area that have proposed, pending, or constructed projects that have been approved by the City Commission as being consistent with the MainStreet Design Standards.

As shown on **Figure 3.9-1**, properties to the east of the project site are zoned as Regional Shopping (B-4) and Industrial Manufacturing (IM-1). The Regional Shopping District allows for a broad range of office and retail uses, include some that generate heavy traffic such as large scale, shopping center type developments. The Industrial Manufacturing District allows for a wide range of industrial and warehouse uses including those that have moderate external impacts and, therefore, could potentially create a nuisance or hazard. Properties north of the project site are zoned as Planned Commercial District (PCD) and Agriculture (A-1). The PCD is intended to provide flexibility on the use and design of structures and lands involved in non-residential development to be constructed in accordance with the City of Coconut Creek Comprehensive Plan. The purpose of the Agricultural District is to permit agricultural production and related rural activities and to protect undeveloped areas from premature or substandard urban development (City of Coconut Creek LDC).

MAINSTREET DESIGN STANDARDS

The MainStreet Design Standards supplement the City of Coconut Creek LDC and serve as an overall design framework for future projects within the MainStreet RAC Area. The MainStreet Design Standards outline design requirements for the RAC Area as a whole as well as requirements for the four sub-districts identified within the standards. The design standards for the district as a whole include requirements regarding streetscape, right-of-ways, plaza and open space, building design, and sustainable and green components. Requirements specific to the four sub-districts govern allowable building uses, densities, and heights only. The project site is within the MainStreet Mixed-Use Transit (MS-T) sub-district that covers areas adjacent to SR-7 which have already been developed with successful commercial uses. In order to capitalize on commercial opportunities from adjacency to SR-7, the MS-T sub-district provides general standards and incentives for future redevelopment focused towards transit orientated development (City of Coconut Creek, 2008).

Because the MainStreet Design Standards serves only as a design framework for future projects within the RAC Area, it does not have the effect of rezoning any property within the area. Each project



* Ordinance 2011-005 of the City of Coconut Creek passed on January 27, 2011

proposed within the RAC Area must apply to be rezoned as a PMDD. The rezoning application must clearly demonstrate consistency with the MainStreet Design Standards. In the event the application does not meet certain standards, reasons must be identified why standards cannot be achieved, and alternate solutions must be provided that maintain the overall concept of the RAC Area. If the application is determined to be adequately consistent with the MainStreet Design Standards and is approved by the City Commission, the ordinance enacting the PMDD zoning incorporates the development standards provided within the application and makes them binding on the developer (City of Coconut Creek, 2008).

The City Commission approved the Seminole PMDD and rezoning of the project site in January 2011 (City Ordinance 2011-005) (**Appendix G**). The Seminole PMDD establishes the development standards for current and future development on the project site. The development program within the Seminole PMDD is identical to Alternative A, as described in **Section 2.0**. As required, the Seminole PMDD demonstrates consistency with the MainStreet Design Standards and identifies design standards that were modified or not included due to the nature of the development program (Table 1 of **Appendix H**).

CITY OF COCONUT CREEK COMPREHENSIVE PLAN

The *City of Coconut Creek Comprehensive Plan* (Comprehensive Plan; City of Coconut Creek, 2007) includes the goals, objectives, and policies for future development within the City. The Comprehensive Plan contains eight elements, including the Future Land Use Element which outlines the principles and performance standards to be followed for control and distribution of land development and population densities within the City of Coconut Creek. In order to maintain a flexible land use plan and evolve with market and demographic trends, the City of Coconut Creek established the RAC land use designation to facilitate the construction of a significant mixed-use development. The boundaries of the RAC land use designation correspond directly with the MainStreet RAC Area described above, which includes the project site.

3.9.3 AGRICULTURE

FARMLAND PROTECTION POLICY ACT

The Farmland Protection Policy Act (FPPA) is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that federal programs are administered in a manner compatible with state and local units of government, as well as private farmland protection programs and policies (7 U.S.C. § 4201).

The Natural Resource Conservation Service (NRCS) is responsible for implementation of the FPPA and categorizes farmland in a number of ways. These categories include: prime farmland, farmland of statewide importance, and unique farmland. Prime farmland is considered to have the best possible features to sustain long-term productivity. Farmland of statewide importance includes farmland similar to prime farmland, but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Unique farmland is characterized by inferior soils and generally needs irrigation depending on climate.

The Land Evaluation and Site Assessment is a numeric rating system used by the NRCS to evaluate the relative agricultural importance of farmlands. This evaluation is completed on Form AD 1006, the Farmland Conversion Impact Rating (FCIR) Form.

PROJECT SITE SETTING

The U.S. Department of Agriculture (USDA) performs a state-by-state census of agriculture every five years. The National Agriculture Statistical Service (NASS) collects census data from a list of all known potential agriculture operators. The census reports on various statistics relating to crop yields, farm acreage, and farm economics. According to the *2007 Census of Agricultural Crop Report*, 8,737 acres (or approximately 1.0 percent) of the total 766,016 acres in Broward County, were used for farming purposes. The market value of agricultural product sold by the 547 farms in Broward County in 2007 was approximately \$50,294,000 (NASS, 2007).

Although the Johns Family Trust conducts agricultural activities on their property to the east and northeast of the project site, there are no farming operations on the site or infrastructure that would support land cultivation. Since the project site is currently developed, the project site is not subject to protection under the FPPA.

3.10 UTILITIES AND PUBLIC SERVICES

This section addresses existing public services and utilities relating to the Seminole Tribe of Florida (STOF) fee-to-trust property. The issues that are addressed include: water supply, wastewater, solid waste, energy, telecommunications, natural gas, law enforcement, fire protection, and emergency medical services.

3.10.1 EXISTING SETTING

WATER SUPPLY

The City of Coconut Creek Water and Wastewater Utility (CCWWU) provides water services to approximately 11,064 customers in the City of Coconut Creek (City). CCWWU infrastructure includes two 2,000,000 gallon water storage tanks and 192 miles of pipeline infrastructure (City of Coconut Creek, 2011).

CCWWU obtains water through a service agreement with the Broward County Water and Wastewater Service (BCWWS). Prior to distribution through CCWWU distribution lines, water is treated at Broward County's District 2A Water Treatment plant. The source of BCWWS water is groundwater from the Biscayne Aquifer. Current production wells in the BCWWS system have depths between 100 and 200 feet. The South Florida Water Management District (SFWMD) has indicated that groundwater supply within southeastern Florida is sufficient to supply anticipated growth (SFWMD, 2006).

Because the majority of the project site is used for parking and does not generate demand for potable water, most of the site is not connected to CCWWU water service. However, the adjacent Coconut Creek Casino is connected to the CCWWU through existing 12-inch and 8-inch diameter water supply pipelines located along the recently vacated NW 40th Street, NW 54th Street, and surrounding roadways. The City and STOF have entered into a Municipal Services Provider Agreement (MSPA) and four separate water and wastewater agreements to provide water and wastewater services to existing structures on the project site, as well as the existing Coconut Creek Casino development located on federal trust land (Tract 65). These agreements obligate the City to provide water service, and require the City to have adequate infrastructure capacity to meet on-site water demand. To facilitate development on the project site through existing development agreements (PMDD) between STOF and City, the City has guaranteed "reserve capacity" from Broward County and has provided transmission infrastructure to supply the future water supply demand of development (Coconut Creek, 2012). This reserve capacity equals a future use of approximately 420,000 gpd (PMDD, **Appendix H**; City of Coconut Creek, 2011).

WASTEWATER SERVICE

A portion of the project site is currently served by a wastewater connection to the City wastewater conveyance system. The wastewater connection was developed as prescribed in the existing wastewater service agreements between STOF and the City (**Appendix G**). The City currently has three master lift stations located within the city limits and 157 miles of wastewater conveyance lines, including lines surrounding the project site. The adjacent Coconut Creek Casino is currently connected to a conveyance line within the NW 40th Street utility easement. City wastewater conveyance lines are connected to the Broward County regional wastewater treatment system. The City has guaranteed and paid for "reserve

capacity” from Broward County to meet the future demand for wastewater treatment associated with the proposed development of the project site.

The Broward County North Regional Wastewater Treatment Plant (WWTP) is located approximately 3.6 miles southeast of the project site at 2401 North Powerline Road in the City of Pompano Beach. The treatment plant is a sequencing batch reactor, which treats wastewater and then discharges effluent to the Atlantic Ocean. The WWTP has a permitted capacity of 95-million gallons per day (MGD). Estimated average 2011 annual flows, including proposed development flows, are 65.3 MGD (Broward County, 2012). The North Regional WWTP additionally includes a reclaimed water treatment plant that provides filtration and disinfection. Reclaimed water is currently provided for irrigation and other non-potable uses (Broward County, 2011a). Reclaimed water is currently not available to customers in the vicinity of the project site. CCWWU has future infrastructure plans to provide reclaimed water to customers for non-potable water uses.

SOLID WASTE SERVICE

The City of Coconut Creek Department of Public Works prepares and updates the local solid waste management plan for the City. In 1986 Broward County and a majority of the cities within the County (including the City) entered into an Interlocal Agreement for Solid Waste Disposal Services that created the Broward Solid Waste Disposal District (Disposal District). The current Interlocal Agreement dated January 28, 2012 between the City and the County is in effect until July 2, 2018. The Disposal District is responsible for disposal of all solid waste delivered by haulers from the participating cities and the unincorporated areas of the County. Solid Waste and Recycling Services is the County agency responsible for administering service contracts in the Disposal District.

The State of Florida Solid Waste Management Facilities guidelines contain siting criteria, design and performance standards, and closure and post-closure maintenance requirements for landfill facilities in the state. The information can be found in Florida Administrative Code Chapters 62-701.

Local Solid Waste Collection

All Service Refuse currently provides solid waste collection to the project site and the adjacent Coconut Creek Casino per the MSPA, and the City through a franchise agreement with the City.

Under a service agreement between Broward County and Wheelabrator on behalf of the Disposal District municipalities, including the City of Coconut Creek, all municipal solid waste is delivered to one of the two Wheelabrator waste-to-energy (resource recovery) facilities. These facilities are capable of handling a combined total of approximately 1.6 million tons of waste a year, which is equivalent to 2,250 tons at each facility per day. The Disposal District solid waste supply currently uses approximately 66 percent of the available capacity (Broward County, 2011b).

Solid waste collected in the City is transferred to the North Broward County Resource Recovery facility, located at 2600 NW 48th Street, in the City of Pompano Beach. Ultimate disposal of remaining ash would occur at the Central Disposal Sanitary Landfill, which currently accepts approximately 1,500,000 tons per year with an average of 10,000 tons daily (Broward County, 2011b). The landfill accepts all non-hazardous wastes, including construction and demolition materials.

ELECTRICITY, NATURAL GAS AND TELECOMMUNICATIONS

The project site is within the Florida Power and Light (FPL) service territory. FPL supplies electricity to approximately 4.5 million customers throughout Florida. The FPL service territory is supplied by 14 substations, 1.3 million overhead poles, and 70,000 miles of overhead and underground transmission lines. A majority of the FPL electricity is generated by NextEra Energy, Incorporated nuclear power plants located in Florida, Wisconsin, Iowa, and New Hampshire.

An FPL substation is located to the immediate east of the project site across NW 54th Street. This substation provides electrical utilities to the project site through overhead utilities lines along NW 54th and NW 40th Streets. The existing connection to these overhead lines is located on the project site. The subject property currently uses approximately 1,159 kilovolts-amps of electricity (STOF, 2008).

Peoples Gas (PG) provides natural gas to the project site, as well as 330,000 other residential and commercial customers within southern Florida. The nearest natural gas line to the project is a 4-inch line along NW 40th Street.

AT&T provides local telephone service to the project site. It also provides internet, wireless phone, and long distance phone services.

LAW ENFORCEMENT***Coconut Creek Police Department***

The project site is located within the jurisdiction of the City of Coconut Creek Police Department (CCPD), which has one station: located at 4800 West Copans Road, in Coconut Creek. The CCPD consists of 91 sworn officer positions and 134 total staff. CCPD serves approximately 52,000 individuals in the incorporated areas of the City (CCPD, 2011). The CCPD is divided into the traffic unit, street crimes, community involvement, investigations, and support branches. CCPD funding comes from the City budget. The Florida State Highway Patrol has police jurisdiction on the adjacent SR-7/US-441. The most recent statistics for crimes occurring within the City are shown in **Table 3.10-1**.

TABLE 3.10-1
CITY OF COCONUT CREEK 2006

| Crime | Number of Incidents |
|-------------------------------------|----------------------------|
| Homicide | 0 |
| Forcible Rape | 7 |
| Robbery | 24 |
| Aggravated Assault | 72 |
| Burglary | 1,096 |
| Larceny Theft | 801 |
| Motor Vehicle Theft | 120 |
| Arson | 2 |
| Total | 2,122 |
| Source: City of Coconut Creek, 2011 | |

The City is divided into six police protection zones; the project site is located in Zone 4. Zone 4 encompasses the project site and areas within the City limits to the east of the project site between Sample Road (south) and Wiles Road (north), and averages about 350 calls per year (Avello, 2011). Typically, Zone 4 is staffed by a single officer during each shift (Avello, 2011).

The CCPD Communications Center (Communications Center) handles emergency and non-emergency calls from residences within the City limits, including the project site. The Communications Center is staffed 24-hours per day by a trained dispatcher (CCPD, 2011).

The Broward County Sheriff's Department provides additional support services for incidents within the City. These services include canine (K-9) units, a SWAT team, and a bomb squad. The K-9, SWAT, and bomb squad are multi-jurisdictional and shared with other cities within Broward County.

Subjects arrested within the City are taken to Broward County Jail facilities for holding and incarceration. The Broward County Department of Detention operates the following four jail facilities within Broward County (Broward County Sheriff's Office, 2011).

- The Main Jail staff includes approximately 400 custody officers and civilian staff members. The Main Jail is a high security facility with a capacity of 1,538 inmates. The jail also is the central intake facility where all incoming arrestees are booked and processed.
- The Joseph V. Conte Facility, a medium security detention facility, houses 1,328 inmates with a staffing level of 231 detention deputies.
- The North Broward Bureau, a minimal to medium security detention facility, houses 1,200 inmates. Female offenders and female juveniles are housed primarily at the North Broward Bureau.
- The Paul Rein Detention Facility, a medium-high security detention facility, houses 1,020 male and female inmates. The facility is staffed by 200 detention deputies.

Seminole Tribal Police

If the project site were to be taken into Federal trust for STOF, first response law enforcement services would be provided by the Seminole Police Department. The Seminole Police Department is an accredited Bureau of Indian Affairs (BIA) department which provides law enforcement services to all STOF tribal properties.

In 2006 the Seminole Police Department and the CCPD entered into an amended MSPA and a Mutual Aid Agreement for operational assistance on tribal lands (**Appendix G**). These agreements provide for cross jurisdictional assistance for law enforcement activities within federal trust property.

FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

The Margate - Coconut Creek Fire District (MCCFD) provides fire protection services to the City and the neighboring City of Margate. MCCFD provides fire protection and emergency medical services to approximately 90,000 residents over 23 square miles. Primary services include emergency and non-emergency response, basic and advanced life support, hazardous materials response, and medical

transport. MCCFD also works with the Broward County Fire Marshal to enforce the fire code and provide public education and outreach. The MCCFD is funded primarily by property tax revenues. Fire protection services to the project site and the existing trust property (Tract 65) are provided by MCCFD per the 1999 MSPA.

MCCFD operates four fully staffed fire stations within the cities of Coconut Creek and Margate. The department is staffed by 103 full-time firefighters/paramedics, 3 firefighter/emergency medical technicians (EMTs), and 7 administration positions. Equipment includes a 75-foot aerial ladder truck, 3 fire engines, and 5 advanced life support ambulance staffed at the paramedic level (City of Margate, 2011). The closest station to the project site is located in the City of Margate at 5395 Northwest 24th Street, approximately 1.7 miles south of the project site.

The MCCFD received 5,724 calls for service in 2008 (the most recent year available). Average response time for calls of service within the City of Coconut Creek is 6 minutes 10 seconds (City of Coconut Creek, 2011).

The Northwest Medical Center is the nearest hospital to the Project Site. Northwest Medical Center is located 2 miles south of the project site at 2801 North State Road 7, in the City of Margate.

Broward County Emergency Management Division (BCEMD) provides emergency services in Broward County including, ambulance contract oversight, and emergency management. The City also works with BCEMD to coordinate emergency response plans for natural disasters, hazardous materials spills, and large scale emergency events (City of Coconut Creek, 2011).

Seminole Public Safety Plan

STOF and the City have prepared a Public Safety Plan, which identifies public safety features and commitments to be included on the project site (STOF, 2008). This Public Safety Plan indicates appropriate agency responsibilities, equipment requirements, and design standards for fire and law enforcement (**Appendix G**). The design commitments within the Public Safety Plan include on-site security systems, fire sprinklers, and fire truck access requirements.

3.11 NOISE

This section addresses the regulatory policies and existing regional conditions for noise. This section also presents the criteria used in **Chapter 4.11** to evaluate the significance of noise impacts to the environment.

3.11.1 REGULATORY SETTING

FEDERAL

The Federal Highway Administration (FHWA) provides construction noise level thresholds in its Construction Noise Handbook, 2006, which are provided in **Table 3.11-1**. Sound levels are measured on a logarithmic scale and commonly described as decibels (dB) or Hourly A-weighted (dBA). A detailed discussion is presented below in **Section 3.9.2**.

TABLE 3.11-1
FEDERAL CONSTRUCTION NOISE THRESHOLDS

| Noise Receptor Locations and Land-Uses | Daytime (7 am - 6 pm) | Evening (6 pm - 10 pm) | Nighttime (10 pm - 7 am) |
|--|---|---------------------------|--|
| | dBA, Leq ¹ | | |
| Noise-Sensitive Locations: (residences, Institutions, Hotels, etc.) | 78 or Baseline + 5 (whichever is louder) | Baseline + 5 | Baseline + 5 (if Baseline < 70) Baseline + 3 (if Baseline 70) |
| Commercial Areas: (Businesses, Offices, Stores, etc.) | 83 or Baseline + 5 | None | None |
| Industrial Areas: (factories, Plants, etc.) | 88 or Baseline + 5 | None | None |
| NOTE: 1 - Equivalent continuous sound level (Leq) threshold based on L10 thresholds, Leq threshold were empirically determined (FHWA, 2006). SOURCE: FHWA Construction Noise Handbook, 2006. | | | |

The FHWA establishes Noise Abatement Criteria (NAC) for various land uses that have been categorized based upon activity. Land uses are categorized on the basis of their sensitivity to noise as indicated in **Table 3.11-2**. The FHWA NAC is based on peak traffic hour noise levels. Sensitive receptors with the potential to be impacted by operation of the Proposed Project include residential land uses located north of the project site; therefore, Category E 72 dBA Leq noise standard would apply.

Federal regulations also establish noise limits for medium and heavy trucks (defined as a vehicle weighing more than 4.5 tons, gross vehicle weight rating) under 40 Code of Federal Regulations, Part 205, Subpart B. The federal truck pass-by noise standard is 80 dB at 15 meters (approximately 50 feet) from the vehicle pathway centerline. Federal regulations governing truck manufacturing implement these controls.

TABLE 3.11-2
FEDERAL NOISE ABATEMENT CRITERIA HOURLY A-WEIGHTED SOUND LEVEL DECIBELS¹

| Activity Category | Activity Criteria ² | Evaluation Location | Activity Category Description |
|---|--------------------------------|---------------------|--|
| | Leq (h), dBA ³ | | |
| A | 57 | Exterior | Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. |
| B ⁴ | 67 | Exterior | Residential |
| C ⁴ | 67 | Exterior | Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails and trail crossings. |
| D | 52 | Interior | Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios. |
| E ⁴ | 72 | Exterior | Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F. |
| F | -- | -- | Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, shipyards, utilities (water resources, water treatment, electricity), and warehousing. |
| G | -- | -- | Undeveloped lands that are not permitted |
| NOTES: 1 - Either Leq(h) may be used on a project. 2 - Hourly A-weighted sound level, decibels (dBA). 3 - The leq(h) and l10(h) Activity Criteria values are for impacts determination only, and are not design standards for noise abatement measures. 4 - Includes undeveloped lands permitted for this activity category. SOURCE: FHWA, 2010. | | | |

3.11.2 ENVIRONMENTAL SETTING

Characteristics of Environmental Noise

Acoustical Background and Terminology

Noise is often defined as unwanted sound. Pressure variations occurring frequent enough (at least 20 times per second) for the human ear to detect are called sounds. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second, called hertz (Hz).

The perceived loudness of sounds depends upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable. The decibel scale measures sound levels using the hearing threshold (20 micropascals of pressure) as the point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum (20 Hz to 20,000 Hz). As a result, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz to better represent the human ear's sensitivity to mid-range frequencies. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA). Frequency A-weighting follows an international standard method of frequency de-emphasis and is typically applied to community noise measurements. In practice, the level of a sound source is measured using a sound level meter that includes an electrical filter corresponding to the A-weighting curve. All of the noise levels reported herein are A-weighted unless otherwise stated. **Table 3.11-3** shows the most commonly used noise descriptors.

TABLE 3.11-3
DEFINITION OF ACCOUSTICAL TERMS

| Terms | Definitions |
|--|---|
| Decibel, dB | A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter) |
| Frequency, Hz | The number of complete pressure fluctuations per second above and below atmospheric pressure. |
| A-Weighted Sound Level, dBA | Sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network, which de-emphasizes very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. |
| Equivalent Noise Level, Leq | The average A-weighted noise level during the measurement period. |
| Community Noise Equivalent Level, CNEL | The average A-weighted noise level during a 24-hour day, obtained after adding 5 decibels to measurements taken in the evening (7 to 10 pm) and 10 decibels to measurements taken between 10 pm and 7am. |
| Day/Night Noise Level, Ldn | The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 pm and 7:00 am. |
| Lmax, Lmin | The maximum and minimum A-weighted noise level during the measurement period. |
| Ambient Noise Level | The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location. |
| Intrusive | That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level. |
| Source: FHWA, 2010. | |

Noise Exposure and Community Noise

An individual's noise exposure is a measure of noise over a period of time. **Table 3.11-4** shows examples of noise sources that correspond to various sound levels. The noise levels presented in **Table 3.11-4** are representative of measured noise at a given instant. These levels rarely persist consistently over a long period of time and community noise levels vary continuously due to the contributing sound sources of the ambient noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure. The background noise

level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and atmospheric conditions. What makes community noise constantly variable throughout a day, besides the slowly changing background noise, is the addition of short duration single event noise sources such as aircraft flyovers, moving vehicles, sirens, etc., which are typically readily identifiable to an individual. These successive additions of sound to the community noise environment vary the community noise level from instant to instant, requiring the measurement of noise exposure over a period of time to characterize a community noise environment and evaluate cumulative noise impacts.

TABLE 3.11-4
TYPICAL A-WEIGHTED SOUND LEVELS

| Common Outdoor Activities | Noise Level (dBA) | Common indoor Activities |
|-----------------------------------|-------------------|---|
| | 110 | Rock band |
| Jet flyover at 1,000 feet | | |
| | 100 | |
| Gas lawnmower at 3 feet | | |
| | 90 | |
| Diesel truck at 50 feet at 50 mph | | Food blender at 3 feet |
| | 80 | Garbage disposal at 3 feet |
| Noisy urban area, daytime | | |
| Gas lawnmower at 100 feet | 70 | Vacuum cleaner at 10 feet |
| Commercial area | | Normal speech at 3 feet |
| Heavy Traffic at 300 feet | 60 | |
| Rural daytime | | Large business office |
| Quiet urban daytime | 50 | Dishwasher in next room |
| | | |
| Quiet urban nighttime | 40 | Theater, large conference room (background) |
| Quiet suburban nighttime | | |
| | 30 | Library |
| Quiet rural nighttime | | Bedroom at night, concert hall (background) |
| | 20 | |
| | | Broadcast/recording studio |
| | 10 | |
| | 0 | |
| Source: U.S. DOT, 2006. | | |

Nighttime ambient noise levels are typically lower than daytime ambient noise levels. For this reason, and because of the potential for sleep disturbance, people tend to be more sensitive to increased noise levels at night than during the day, and increases in nighttime noise have a far greater impact on the community noise environment than increases in daytime noise.

Effects of Noise on People

The effects of noise on people can be divided into three categories:

1. Subjective effects of annoyance, nuisance, dissatisfaction;
2. Interference with activities such as speech, sleep, and learning; and
3. Physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the third category. There is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists, and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Generally, most noise is generated by transportation systems, primarily motor vehicles, aircraft, and railroads. Poor urban planning may also give rise to noise pollution, since juxtaposing industrial and residential land uses, for example, often adversely affects the residential acoustic environment. Prominent sources of indoor noise are office equipment, factory machinery, appliances, power tools, lighting hum, and audio entertainment systems. An important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment (or ambient noise) to which one has adapted. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Under controlled conditions in an acoustics laboratory, the trained healthy human ear is able to discern changes in sound levels of 1 dBA;
- Outside such controlled conditions, the trained ear can detect changes of 2 dBA in normal environmental noise;
- It is widely accepted that the average healthy ear, however, can barely perceive noise level changes of 3 dBA;
- A change in level of 5 dBA is a readily perceptible increase in noise level; and
- A 10-dBA change is recognized as twice as loud as the original source.

These relationships occur in part because of the logarithmic nature of sound and the decibel system. Noise levels are measured on a logarithmic scale, instead of a linear scale. On a logarithmic scale, the sum of two noise sources of equal loudness is 3 dBA greater than the noise generated by only one of the noise sources (e.g., a noise source of 60 dBA plus another noise source of 60 dBA generate a composite noise level of 63 dBA). To apply this formula to a specific noise source, in areas where existing levels are dominated by traffic, a doubling in traffic volume will increase ambient noise levels by 3 dBA. Similarly, a doubling the number of heavy equipment pieces in use, such as the use of two pieces of equipment where one formerly was used, would also increase ambient noise levels by 3 dBA. A 3 dBA increase is the smallest change in noise level detectable to the average person. A change in ambient sound of 5 dBA can begin to create concern. A change in sound of 7 to 10 dBA typically elicits extreme concern and/or anger.

Noise Attenuation

Stationary “point” sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate of 6 dBA to 7.5 dBA per doubling of distance from the source, depending upon environmental conditions (i.e., atmospheric conditions and noise barriers, either vegetative or manufactured, etc.). Widely distributed noises, such as a large industrial facility spread over many acres or a street with moving vehicles (a “line” source), would typically attenuate at a lower rate, approximately 3 to 4.5 dBA per doubling distance from the source (also dependent upon environmental conditions) (U.S. DOT, 2006). Noise from large construction sites (with heavy equipment moving dirt and trucks entering and exiting the site daily) would have characteristics of both “point” and “line” sources, so attenuation would generally range between 4.5 and 7.5 dBA per doubling of distance.

Vibration

The effects of groundborne vibrations typically cause only a nuisance to people, but at extreme vibration levels, damage to buildings may occur. Although groundborne vibration can be felt outdoors, it is typically an annoyance only indoors, where the associated effects of the building shaking can be notable. Groundborne noise is an effect of groundborne vibration and only exists indoors, since it is produced from noise radiated from the motion of the walls and floors of a room and may consist of the rattling of windows or dishes on shelves.

Peak particle velocity (PPV) is often used to measure vibration. PPV is the maximum instantaneous peak (inches per second) of the vibration signal. Scientific studies have shown that human responses to vibration vary by the source of vibration, which is either continuous or transient. Continuous sources of vibration include construction, while transient sources include truck movements. Generally, the thresholds of perception and annoyance are higher for transient sources than for continuous sources. Structural damage can occur when PPV values are 0.5 inches per second or greater. Annoyance can occur at levels as low as 0.1 inches per second and become strongly perceptible at approximately 0.9 inches per second (U.S. DOT, 2006). **Table 3.11-5** shows PPV vibration levels caused by representative construction equipment.

TABLE 3.11-5
VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

| Equipment | PPV at 25 feet (inches/second) |
|-------------------------|---|
| Large bulldozer | 0.089 |
| Excavator | 0.089 |
| Scraper | 0.089 |
| Loaded trucks | 0.076 |
| Small bulldozer | 0.003 |
| SOURCE: U.S. DOT, 2006. | |

EXISTING NOISE LEVELS AND SOURCES

The area surrounding the project site is primarily commercially developed land with scattered agricultural and residential land uses. The project site is located just east of SR-7/US-441. Traffic on SR-7/US-441 is the primary source of noise in the area. The noise environment at and in the immediate vicinity of the

project site is influenced by commercial activities, heating ventilation and air conditioning systems (HVAC), and noise from the surface roads (NW 54th Avenue and Sample Road), as well as surface parking areas (existing casino and adjacent car lots).

Slightly over 4,000 vehicles travel on SR-7/US-441 between Sample Road and the vacated NW 40th Street during the peak hour between Sample Road and the vacated NW 40th Street (Traffic Impact Analysis, 2012). The area surrounding the project site is mainly commercial with high volumes traffic roadways; therefore, the estimated ambient noise level in the vicinity of the project site is 70 dBA, Leq.

There are no known existing sources of vibrations in the vicinity of the Proposed Project.

SENSITIVE NOISE RECEPTORS

Some land uses are considered more sensitive to ambient noise levels than others, sensitivity being a function of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities involved. Residential, hospital, and school land uses are generally more sensitive to noise than commercial and industrial land uses.

The nearest sensitive noise receptors are single-family residences located approximately 1,400 feet southwest of the project site. The nearest school is the Monarch High School located approximately 2,000 feet north east of the project site. There are no hospitals or other schools within one mile of the project site.

3.12 HAZARDOUS MATERIALS

Hazardous materials are subject to numerous laws and regulations at several levels of government. At the Federal level, human exposure to chemical agents, and in some cases environmental and wildlife exposure to such agents is regulated primarily by four regulatory agencies: the United States Environmental Protection Agency (USEPA), the Food and Drug Administration (FDA), the Occupational Safety and Health Administration (OSHA), and the Consumer Product Safety Commission (CPSC). The CPSC plays a limited role in regulating hazardous substances; it deals primarily with the labeling of consumer products. The FDA also plays a limited role in regulating hazardous substances; it primarily regulates food additives and contaminants, human drugs, medical devices, and cosmetics. In addition to these regulatory agencies, the U.S. Department of Transportation (DOT) regulates the interstate transport of hazardous materials.

In 2003, the Seminole Tribe of Florida (STOF) established a Tribal Response Program (TRP), responsible for investigating, assessing and coordinating the remediation of hazardous and non-hazardous materials on all tribal lands. The TRP protects the surface water, groundwater, soil, sediment, wetlands and wildlife habitat and other environmental resources that may be subject to potential contamination as a result of industrial or agricultural land uses.

3.12.1 SETTING – PROJECT SITE

A reconnaissance level survey for hazardous materials at the project site was conducted on May 4, 2011, by David Sawyer of Analytical Environmental Services (AES). During the site visit there were no visible signs of hazardous materials involvement or gross contamination on the site. Neither discarded chemical products nor drums were observed on the site. AES contacted Joe Red Feather McKnight, Director of Facilities for STOF Coconut Creek properties to inquire about hazardous materials incidents on the project site. Mr. McKnight (McKnight, pers. communication, 2011) stated that no hazardous materials incidences had occurred on the site, nor was there known storage of large quantities of hazardous materials. Small quantities of hazardous materials, including commercial cleaning supplies, and general operational products are stored on the project site.

Phase I Environmental Site Assessment

A Phase I Environmental Site Assessment (Phase I ESA) was conducted for the project area in July 2011 (**Appendix I**). The Phase I ESA includes historical research and regulatory agency database searches within radius parameters of the project site. Additional information from the Broward County Tax Assessor, City of Coconut Creek, and files from the USEPA and Florida Department of Environmental Protection were reviewed. As part of the Phase I ESA, a reconnaissance of the project site and adjacent properties was performed to the extent possible without trespassing on private property. The Phase I ESA was performed in accordance with the standard practice for Bureau of Indian Affairs (BIA) guidelines (602 DM Chapter 2) and American Society of Testing Materials (ASTM) Practice E 1527-05 ESAs, which specifies the appropriate inquiry requirements for the innocent landowner defense under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The purpose of the Phase I ESA is to identify environmental conditions and hazardous materials involvement that may pose a material risk to human health or to the environment, or may in any way affect the planned uses of

the site. Prior to the placement of the project site into federal trust, the site specific Phase I ESA would be updated per Bureau of Indian Affairs (BIA) guidelines (602 DM Chapter 2).

The Phase I ESA (**Appendix H**) did not indicate any obvious signs of hazardous materials involvement on the project site. No recognized environmental conditions (RECs) were observed on the site. As part of the Phase I ESA, regulatory agency databases were searched in an effort to identify current and past locations of hazardous materials generation, uses, or releases. A project area database report (EDR, 2011), was conducted by Environmental Data Resources, Inc. (EDR) on July 11, 2011, for records of known storage tank sites and hazardous materials generation, storage, or contamination on or near project site. EDR uses a geographical information system to plot locations of past and current hazardous materials uses or releases. Databases were searched for sites and listings up to one mile from a point roughly equivalent to the center of the site. The complete list of reviewed databases is provided in the EDR report, and is summarized in **Table 3.12-1**. AES reviewed the database report to determine if any hazardous materials releases have occurred that would affect surface and/or subsurface conditions on the project site.

The project site is listed as a current recipient of a National Pollutant Discharge Elimination System (NPDES) Construction Stormwater General Permit for construction of the parking lot structure.

The database search identified five listed sites within one mile of the project site. The first site is the Johnson-Davis Discharge site, located approximately 0.26 mi southwest of the project site at the corner of Sample Road and SR-7. The Johnson-Davis Site is listed with the State of Florida as a leaking underground storage tank (LUST). In 2000, a 300-gallon diesel tank was punctured causing an emergency spill response action. The cleanup activities and status were closed in 2002 (EDR, 2011).

Dry Clean USA, is located approximately 0.276 mile southeast of the project site at 5528 W. Sample Road. This site is listed under the PRIORITY CLEANERS and Broward County EDIEAR databases as a historic dry cleaning facility. Information provided within the EDR Report state that the dry cleaning facility is no longer in operation (**Appendix H**).

The Coconut Creek Debris Staging Area #1, located 0.29 mile east of the project site at 5250 NW 40th Street is a listed Solid Waste Facility (SWF/LF) by the State of Florida. The site is currently proposed to receive disaster debris (EDR, 2011).

Hess #09513, located 0.325 mile northwest of the project site at 4150 SR-7, is listed by the Florida Department of Environmental Protection (DEP) as an open LUST site. Cleanup of unleaded gasoline is currently required at this site (**Appendix H**).

A third identified LUST site is located 0.45 mile southeast of the project site at 5200 W. Sample Road. The Chevron #202935 site was identified as a discharge site in 1997; however, no cleanup activities were required (EDR, 2011). The Chevron site continues to operate with on-site underground storage tanks that are registered with the DEP and Broward County.

TABLE 3.12-1
ENVIRONMENTAL DATA RESOURCES SUMMARY OF AGENCY DATABASES

| Database | Type of Record | Agency |
|--|---|--------------------------------------|
| NPL | National Priority List | USEPA |
| CORRACTS ¹ | RCRA ² Corrective Actions | USEPA |
| SPL | State equivalent priority | STATE |
| SCL | State equivalent CERCLIS ³ List | STATE |
| CERCLIS/NFRAP ⁴ | Sites currently or formerly under review by EPA | USEPA |
| TSD | RCRA permitted treatment, storage, disposal facilities | USEPA |
| LUST | Leaking Underground Storage Tanks | State Regulatory Commission |
| SWLF | Permitted as solid waste landfills, incinerators or transfer stations | State/Regional Regulatory Commission |
| DEED RSTR | Sites with deed restrictions | STATE |
| CORTESE ⁵ | State index of properties with hazardous waste | STATE |
| TOXIC PITS | Toxic pits cleanup facilities | STATE |
| WATER WELLS | Federal and State Drinking Water Sources | USGS/STATE |
| RCRA Viol | RCRA violations/enforcement actions | USEPA |
| TRIS | Toxic Release Inventory Database | USEPA |
| UST/AST | Registered underground or aboveground storage tanks | STATE |
| HIST UST | Historical UST Registered Database | STATE |
| RCRIS SQG ⁶ | Sites that generate hazardous materials | USEPA |
| HAZNET | Hazardous Waste Information System | STATE |
| State CSCSL NFA | State Confirmed or Suspected Contaminant Site List No Further Action | STATE |
| <p>NOTES: 1 - CORRACTS: Corrective Action Report System, an USEPA database of corrective actions taken at a RCRA regulated site. 2 - RCRA: Resource Conservation and Recovery Act 3 - CERCLIS: Comprehensive Environmental Response, Compensation and Liability Information System 4 - NFRAP: No Further Remedial Action Planned (archived CERCLIS sites). 5 - CORTESE: Based on input from 14 State databases. 6 - RCRIS SQG: Resource Conservation and Recovery Information System Small Quantity Generator. According to Federal guidelines, a SQG produces less than 1,000 kilograms/month of non-acutely hazardous wastes. SOURCE: EDR Report, 2011.</p> | | |

3.13 AESTHETICS

This section describes the existing aesthetics setting on the project site and in the vicinity, and discusses local plans and policies that are relevant to aesthetics. The general and site-specific discussion of aesthetics, including the sensitive visual receptors and sensitive aesthetic resources known to be present in the vicinity, provides the environmental baseline by which environmental impacts are identified and measured. Potential environmental impacts to aesthetics are discussed in **Section 4.13**.

3.13.1 REGULATORY SETTING

If the federal government brings the proposed project site into trust on behalf of the Seminole Tribe of Florida (STOF), the property will not be subject to state or local land use regulations. Only tribal land use regulations are applicable on trust lands. However, the STOF government desires to work cooperatively with local authorities and has agreed to develop the trust lands in a manner that is consistent with City of Coconut Creek (City) MainStreet Design Standards, as agreed upon in the Planned MainStreet Development District (PMDD), 2011 Mitigation Agreement between the City and STOF, and the City's General Plan. The Proposed Project and alternatives have been designed to reflect the following aesthetics-related goals and policies from the City's General Plan.

City of Coconut Creek General Plan

Goals/Objectives

- II-2.5.0 Promote community aesthetics and the compatibility of commercial, office and recreation uses with other land uses. (B.C.P.C. 2.06.00)
- II-9.2.0 Encourage attractive and functional mixed living, working, shopping and recreational activities by establishing within the Coconut Creek Land Use Plan Regional Activity Center (RAC) land use category. (B.C.P.C. 10.02.00)

Policies

- II-2.5.2 Continue to ensure through the Land Development Code that all future commercial uses are subject to site plan review standards which mitigate adverse impacts on adjacent land uses. (B.C.P.C. 2.04.09, 2.04.02)
- II-9.1.3 In order to create aesthetically pleasing living, shopping, working and recreational environments, Coconut Creek shall develop, as needed, and continue to implement land development regulations designed to maximize opportunities for the application of innovative site planning concepts. (B.C.P.C. 10.01.03)

Coconut Creek MainStreet Design Standards

The MainStreet Design Standards are broken into five specific categories including:

1. Streetscape requirements. The design standard for streetscapes addresses natural landscaping features as well as manmade structures located on public spaces.
2. Right-of-way and typical sections. The MainStreet Design specifies right-of-way widths for each road adjacent to the site and interior access roads.

3. Plaza and open space requirements. Describes standards for interior access, design of plazas, and incorporation of public art and open spaces.
4. Building Design. Addresses orientation of buildings to the street, location of uses, building fenestration, and other design issues such as shading and air movement.
5. Sustainable and green components. Established Florida Green Building Coalition “Florida Green Building” as the minimum design standard.

DESCRIPTION OF VIEWSHEDS

Viewsheds and vistas are described by expressing the strength of the viewing experience, framed within the analytical criteria listed below. While the viewing experience is personal and subjective in nature, the application of the below criteria allows for an objective, baseline assessment of the visual environment and subsequent visual impacts.

CRITERIA FOR ANALYSIS

The visual experience within each viewshed is comprised of the following constituent elements:

1. Clarity in Line of Sight—the overall visibility of the object within the viewshed, influenced by such factors as trees, buildings, topography or any other potential visual obstruction within the viewshed.
2. Duration of Visibility—the amount of time the object is exposed to viewers within the viewshed. For example, a passing commuter will experience a shorter period of viewing time than a resident within the viewshed.
3. Proximity of the Viewer—the effects of foreshortening due to the distance of the viewer from the object will influence the dominance of the object in the perspective of the viewer within the viewshed.
4. Number of Viewers—the number of viewers anticipated to experience the visual character of the object in forward-oriented view (i.e., not through a rear-view mirror). A densely populated residential district or a busy highway within the viewshed of the object would present more viewers than unpopulated areas.

3.13.2 ENVIRONMENTAL SETTING

COMMUNITY CHARACTER

The residents of the City benefit from easy access to the ocean and a mild, sub-tropical climate. Much of the City is characterized by residential uses and low-rise (up to three or four stories) commercial and retail development. The project site is located approximately two miles west of Butterfly World. This popular attraction consists of 10 acres of aviaries and botanical gardens, a butterfly farm, and a research facility. The City also includes commercial shopping malls, retail strip development, and automobile dealerships.

The City is highly developed and almost entirely built out; the largest piece of remaining undeveloped land is the Johns Family property located east of the project site across NW 54th Street. The Johns Family property is currently in agriculture (tomatoes), although plans have been filed with the City to develop the site for mixed use commercial, retail, and residential development. Future development within the City would likely occur through redevelopment of exiting low-intensity parcels, such as auto dealerships, for

higher density uses. The City is currently focused on balancing environmentally conscience “green” economic development with open space and recreational areas for residents and visitors.

Due to the large quantity of rainfall (approximately 59 inches per year), the area is verdant with a great deal of grasses, shrubs, and low-lying trees. Vegetation consists of both naturally occurring plants and man-made landscaping. The City is modern and attractive, and shows signs of upkeep and maintenance. Most, if not all, of the properties in the area are well-maintained and have attractive landscaping. Commercial signage is not obtrusive and there is not a great deal of industrial land use in the area. The Central Disposal Sanitary Landfill is located approximately two miles east of the project site along Sample Road, but an earthen berm shields the landfill from view.

PROJECT SITE

The project site is flat and roughly 14 feet above sea level. The project site is currently developed with surface parking, a seven story parking structure, man-made stormwater retention ponds, and a man-made wetland. The parking areas are neat and clean and the landscape plants are appropriate for the area and are well-maintained. Vegetation within the project site consists of man-made landscaping including grasses, shrubs, and palm trees. Vegetation growing on the outside of the parking structure softens the lines of the structure and breaks up the mass of the building. The stormwater retention ponds are bordered by grassy slopes and are well-maintained. The entrance to the adjacent Coconut Creek Casino, on existing trust land, is located on the project site. This adjacent casino structure is appealing and well-maintained. In addition to the structure itself, casino features, such as signs and a water fountain add to the site’s architectural aesthetics. Dominant features in the vicinity include the existing Coconut Creek Casino, State Route 7 (SR-7), and the freeway bridge over Sample Road.

Figures 3.13-1 and 3.13-2 provide a selection of images of the existing project site.

The dominant structure on the project site is a 120 foot sign on Tract C that advertises the existing Coconut Creek Casino located off-site on Tract 65. A large seven story parking structure located on Tracts I, G, and H, provides accessed to the off-site Coconut Creek Casino. The two-story, covered, valet parking and entrance to the casino are located on Tract D on the eastern side of the project site. Tract D also features a fountain within the retention pond and a man-made wetland. Florida Power and Light (FPL) operates a high-voltage electric transmission line that runs east-west across the northern portion of Tracts G and H. This high-voltage electricity transmission corridor continues off-site approximately 1 ¼ miles to the west and two miles to the east. The transmission line is a dominant visual feature onsite that will remain under all of the alternatives under consideration.

Nighttime illumination from parking lot lighting occurs on the project site. Sources of adjacent night lighting that cast onto the project site include the off-site casino entrance and sign.

Because the area is flat and surrounded by landscaping, there are no viewpoints or views to off-site visual resources from the project site. Currently, there are no views of natural water bodies, historic structures, or downtown skylines available from the project site. While surface level parking lots and parking structures generally tend to be unattractive, the onsite landscaping, man-made wetland, and stormwater retention ponds improve the visual quality of the project site.



PHOTO 1: Parcel C Parking Lot and Existing Sign.



PHOTO 2: Parcels C and B, SR-7 Overpass.



PHOTO 3: Parcels C and B, SR-7 Overpass.



PHOTO 1: Tract 65 Casino from Parcel H.



PHOTO 2: FP&L Transmission Corridor from Parcel H.



PHOTO 3: Project Site from SR-7.

VIEWS OF THE PROJECT SITE FROM OFF-SITE LOCATIONS

The project site is situated immediately east of SR-7 and north of Sample Road, and beyond each roadway is a large, retail shopping mall. Views of the site from southwest of SR-7 are partially obstructed by the elevated freeway crossing over Sample Road. The view of the site from north of the project site are broken up by the high voltage transmission lines situated over two stormwater runoff detention ponds. The project site is visible to the east from the currently undeveloped Johns Family property and beyond. The site is also visible from the auto dealers situated southeast of the project site. Patrons of the existing Coconut Creek Casino can view the project site to the north, west, and south. Scenic vistas in the project vicinity are limited due to the flat topography of the area. The locations of off-site viewpoints are described below and shown on **Figure 3.13-3**. Views of the project site from these scenic points are also shown on **Figure 3.13-3**.

Viewpoint A

Viewpoint A is a view looking towards the project site from the apartment/condominium complex located southwest of the project site off SR-7. These residential units are approximately 1,200 feet away from the project site and are the closest sensitive receptors. The sign for the existing Coconut Creek Casino is visible from ground level within the apartment/condominium complex.

Viewpoint B

Viewpoint B is located along SR-7 looking east towards the project site. Although the viewpoint is close to the project site (approximately 400 feet), drivers would see the site for only a short period of time as they travel along SR-7. There is an unobstructed view of the majority of the project site from SR-7.

Viewpoint C

Viewpoint C is from the multifamily housing units at NW 34th Street, west of Banks Road, looking to the northwest. This viewpoint is approximately 2,500 feet away from the project site and foreground views are partially obstructed by a wall around the adjoining property.

Viewpoint D

Viewpoint D is west of the project site across SR-7 and on the far side of the WalMart store and parking lot. This viewpoint is situated near single-family residences along Turtle Creek Drive, approximately 1,700 feet from the project site. The existing Coconut Creek Casino sign is visible from this viewpoint, but the views are partially obstructed by landscaping and the WalMart building.

View Point E

Viewpoint E is a view looking towards the project site from Monarch High School located approximately 3,000 feet northeast of the center of the project site across Cullum Road. The FPL high-voltage transmission lines are visible north of the project site and low-lying vegetation interferes with the view of the project site.



Viewpoint F

Viewpoint F is a view looking across the Johns Family property towards the project site from Lyons Road, south of Cullum Road. The viewpoint is situated in front of the residential community east of Lyons Road. This viewpoint is approximately 4,700 feet from the project site.

Except for Viewpoint B from SR-7, none of these vistas looking toward the project site afford a clear view of the site. Vegetation, other buildings or structures, and roadways interfere with the views of the project site from off-site sensitive receptors.

Views from the Project Site

As stated above, the immediate vicinity surrounding the project site is dominated by commercial uses, roadways, and landscaping vegetation (**Figure 3.13-3**). Views from the project site are limited because the local topography is flat.