Appendix G

COASTAL ZONE MANAGEMENT FEDERAL CONSISTENCY EVALUATION

FLORIDA COASTAL ZONE MANAGEMENT PROGRAM
FEDERAL CONSISTENCY EVALUATION PROCEDURES

Tamiami Trail Modifications
Dade County, Florida

1. Chapter 161, Beach and Shore Preservation. The intent of the coastal construction permit program established by this chapter is to regulate construction projects located seaward of the line of mean high water and which might have an effect on natural shoreline processes.

Response: The proposed plans and information will be submitted to the state in compliance with this chapter. Construction will not be located seaward of the line of mean high water or where it might have an effect on natural shoreline processes.

2. Chapters 163 (part II), 186, and 187, County, Municipal, State and Regional Planning. These chapters establish the Local Comprehensive Plans, the Strategic Regional Policy Plans, and the State Comprehensive Plan (SCP). The SCP sets goals that articulate a strategic vision of the State's future. Its purpose is to define in a broad sense, goals, and policies that provide decision-makers directions for the future and provide long-range guidance for an orderly social, economic, and physical growth.

Response: The proposed project has been coordinated with various Federal, State, and local agencies during the planning process. The proposed project involves identifying a means for conveying increased flows of water under U.S. Highway 41 (Tamiami Trail) to the Everglades National Park (ENP) as part of the Modified Water Deliveries (MWD) Program to restore natural hydrologic conditions in ENP. The project would provide for the enhancement and assist in the restoration of the Everglades ecosystem. The project is in full compliance with the goals of this chapter.

3. Chapter 252, Disaster Preparation, Response and Mitigation. This chapter creates a state emergency management agency, with the authority to provide for the common defense; to protect the public peace, health and safety; and to preserve the lives and property of the people of Florida.

Response: The proposed project would have little or no impact on disaster preparation. Full conformance and compliance consistent with the efforts of Division of Emergency Management is intended.

4. Chapter 253, State Lands. This chapter governs the management of submerged state lands and resources within the state. This includes archeological and historical resources; water resources; fish and wildlife resources; beaches and dunes; submerged grass beds and other benthic communities; swamps, marshes and other wetlands; mineral resources; unique natural features; submerged lands; spoil islands; and artificial reefs.

Response: Each type of resources protected to the extent practicable under this statute is addressed in the EIS. The project is aimed at providing for full conformance and compliance with the goals of this chapter.

5. Chapters 253, 259, 260, and 375, Land Acquisition. This chapter authorizes the state to acquire land to protect environmentally sensitive areas.

Response: Implementation of the proposed plan does not require State acquisition of lands for the purposes of protection of environmentally sensitive areas.

6. Chapter 258, State Parks and Aquatic Preserves. This chapter authorizes the state to manage state parks and preserves. Consistency with this statute would include consideration of projects that would directly or indirectly adversely impact park property, natural resources, park programs, management or operations.

Response: To the northern boundary of the project area is Water Conservation Area 3B (WCA-3B) of the South Florida Water Management District, the Francis S. Taylor Wildlife Management Area. The Florida Fish and Wildlife Conservation Commission (FWC) manages this area for recreation. The project is not anticipated to adversely affect state lands; in fact, the proposed project attempts to restore hydrologic flows from WCA-3B to ENP. Full conformance and compliance with the requirements for protecting these resources is intended.

7. Chapter 267, Historic Preservation. This chapter establishes the procedures for implementing the Florida Historic Resources Act responsibilities.

Response: This project will be coordinated with the State Historic Preservation Officer (SHPO). Historic Property investigations were conducted in the project area. An archival and literature search, in addition to an archaeological survey of the proposed project area, was conducted. Based on previous cultural resource surveys, the proposed project area contained four sites considered potentially eligible for listing in the National Registry of Historic Places (NRHP), and coordination with SHPO will continue. The project is consistent with the goals of this chapter.

8. Chapter 288, Economic Development and Tourism. This chapter directs the state to provide guidance and promotion of beneficial development through encouraging economic diversification and promoting tourism.

Response: This project would not adversely impact beneficial development, economic diversification, or tourism. Contribution from the project area to the State's tourism economy will not be compromised by project implementation. The recommended plan may enhance tourism traffic in the area as the elevated portion of the highway will offer an unimpeded view of the ENP.

9. Chapters 334 and 339, Transportation. This chapter authorizes the planning and development of a safe, balanced and efficient transportation system.

Response: Tamiami Trail is not one of the "officially designated" evacuation routes authorized for reverse-laning. However, due to its location as the southern-most east-west artery in the state, Tamiami Trail provides critical eastbound and westbound coast-to-coast access between Miami and Naples. The use of Tamiami Trail as an "implied" evacuation route would require that the highway's evacuation route capabilities be maintained during hurricane season. This may influence construction phasing and maintenance of traffic flows during construction. The project will be consistent with the goals of this chapter.

10. Chapter 370, Saltwater Living Resources. This chapter directs the state to preserve, manage and protect the marine, crustacean, shell and anadromous fishery resources in

state waters; to protect and enhance the marine and estuarine environment; to regulate fishermen and vessels of the state engaged in the taking of such resources within or without state waters; to issue licenses for the taking and processing products of fisheries; to secure and maintain statistical records of the catch of each such species; and, to conduct scientific, economic, and other studies and research.

Response: The proposed project would not adversely impact saltwater living resources. Based on overall impacts of the project, the project is consistent with the goals of this chapter.

11. Chapter 372, Living Land and Freshwater Resources. This chapter establishes the Game and Freshwater Fish Commission and directs it to manage freshwater aquatic life and wild animal life and their habitat to perpetuate a diversity of species with densities and distributions which provide sustained ecological, recreational, scientific, educational, aesthetic, and economic benefits.

Response: The project has been closely coordinated with the FWC and should have no significant adverse effects on freshwater aquatic or wild animal life. The project is expected to benefit wildlife through its contribution toward the hydrologic restoration of Northeast Shark River Slough in ENP.

12. Chapter 373, Water Resources. This chapter provides the authority to regulate the withdrawal, diversion, storage, and consumption of water.

Response: The project sponsor is the South Florida Water Management District. The plans for withdrawal, diversion, storage, and consumption of water are fully coordinated with the sponsor, and a recommendation would be made with full concurrence from the State.

13. Chapter 376, Pollutant Spill Prevention and Control. This chapter regulates the transfer, storage, and transportation of pollutants and the cleanup of pollutant discharges.

Response: The contractor must comply with all applicable local, State and Federal environmental laws. Compliance with State law will require the contractor to obtain a General Construction National Pollutant Discharge Elimination System (NPDES) Permit. The NPDES program requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP), which will address the storage, generation, and disposal of hazardous and toxic substances. All activities will conform to state regulations.

14. Chapter 377, Oil and Gas Exploration and Production. This chapter authorizes the regulation of all phases of exploration, drilling, and production of oil, gas, and other petroleum products.

Response: This project does not involve the exploration, drilling or production of gas, oil or other petroleum products. Therefore, this chapter does not apply to the proposed project.

15. Chapter 380, Environmental Land and Water Management. This chapter establishes criteria and procedures to assure that local land development decisions consider the regional impact nature of proposed large-scale development. This chapter also deals with the Area of Critical State concern program and the Coastal Infrastructure Policy,

Response: The proposed project will not promote any large-scale development or have an impact defined as regional development. Therefore, the project is consistent with the goals of this chapter.

16. Chapter 381 (selected subsections on on-site sewage and disposal systems) and 388 (Mosquito/Arthropod Control). Chapter 388 provides for a comprehensive approach for abatement or suppression of mosquitoes and other pest arthropods within the state.

Response: The projects will not further the propagation of mosquitoes or other pest arthropods.

17. Chapter 403, Environmental Control. This chapter authorizes the regulation of pollution of the air and waters of the state by the Florida Department of Environmental Regulation [now a part of the Florida Department of Environmental Protection (FDEP)].

Response: The project is in compliance with both the Clean Water Act of 1972 and the Clean Air of 1970. This project is being fully coordinated with FDEP. Full compliance with State regulations is accomplished.

18. Chapter 582, Soil and Water Conservation. This chapter establishes policy for the conservation of the state soil and water through the Department of Agriculture. Land use policies will be evaluated in terms of their tendency to cause or contribute to soil erosion or to conserve, develop, and utilize soil and water resources both onsite or in adjoining properties affected by the project. Particular attention will be given to projects on or near agricultural lands.

Response: The proposed project is not located on or near agricultural lands, including those considered to be prime and/or unique farmlands. Full compliance with State regulations is anticipated.

Appendix H

REAL ESTATE APPENDIX

DRAFT
November 2005

Tamiami Trail Modification
Revised General Re-evaluation Report
Modified Water Deliveries to Everglades National Park

REAL ESTATE PLAN

APPENDIX H

October 2005 ct

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1. STATEMENT OF PURPOSE

a. This Real Estate Plan is tentative in nature for planning purposes only and both the final real property acquisition lines and the real estate cost estimates provided are subject to change even after approval of the Modified Water Deliveries to Everglades National Park, Tamiami Trail General Re-evaluation Report.

b. A Real Estate Design Memorandum (REDM) was prepared and approved for the Modified Water Deliveries to Everglades National Park General Design Memorandum (GDM); however, both the REDM and GDM only addressed a portion of Tamiami Trail.

2. AUTHORIZATION

The Everglades National Park Protection and Expansion Act (PL 101-299, Section 104, 16 U.S.C. Part 410r-5 et seq.), December 1989, authorized the Secretary of the Army to undertake certain actions to improve water deliveries to Everglades National Park (ENP) to the extent practicable to restore natural hydrologic conditions. This act provides the underlying authority for this project. The Act directed the U.S. Army Corps of Engineers (USACE) to address restoration of water deliveries and natural hydrological conditions.

The 1992 General Design Memorandum (GDM) and its associated Final Environmental Impact Statement (FEIS) called for in the Act was completed in June 1992. The 1992 GDM/FEIS is the authorizing document for structural modifications and additions to deliver water for ecosystem restoration in ENP.

3. PROJECT DESCRIPTION

Under the Modified Waters Deliveries to Everglades National Park Project, authorized by the Everglades National Park Protection and Expansion Act of 1989, water deliveries to the ENP will be improved as a step to restore natural hydrologic conditions and increased flows to the ENP. Water from Water Conservation Area 3B will enter the L-29 Canal, pass under Tamiami Trail and enter the ENP.

The study area is located in the west central portion of Miami-Dade County, Florida. The areas subject to direct impacts from the project are on either side of U.S. Highway 41, Tamiami Trail. The Tamiami Trail, the L-29 Canal and the L-29 Levee on the north side of the canal form the southern boundary of Water Conservation Area (WCA) 3B. The south side of the Tamiami Trail is bounded primarily by ENP.

The limits of the project begin at S-334 slightly more than one mile west of the intersection of Krome Avenue (State Road 997) and the Tamiami Trail and extend westward along the highway approximately 10.7 miles to Water Control Structure S-333. The L-29 Canal (Tamiami Canal) runs along the north side of the Tamiami Trail through this area. The project limits are bounded at each end by water control structures, S-333 on the west and S-334 on the east.

The tentatively selected plan (TSP) is described as removing a portion of the existing roadway and constructing a raised profile roadway consisting of two 12-foot wide travel lanes and 8-foot wide shoulders on each side of the roadway. Five feet of this shoulder would be paved and a guardrail would be located at the outside edges of the shoulders. There will be two bridges constructed, one two-mile bridge on the western side of the project and one one-mile bridge on the eastern side of the project. Both bridges will provide two 12-foot wide travel lanes with two 10 foot wide shoulders and safety barriers. Connecting roads intersecting the bridged portions of the project would be provided for access to Everglades Safari and Jefferson Pilot Communications site.

There are six privately owned parcels located along the trail that are authorized for acquisition by Department of Interior (DOI) as part of Everglades National Park Protection and Expansion Act of 1989. The DOI, thru the National Park Service, is evaluating through a General Management Plan, the appropriate use and disposition of these parcels. Specifically, Section 103. (d) of the Everglades National Park Protection and Expansion Act of 1989 authorizes DOI to “negotiate and enter into concession contracts with the owners of commercial airboat and tour facilities in existence on or before January 1, 1989..”. DOI and the landowners may enter into such agreements. The general management plan is addressing this issue. Current owners of these parcels are identified as: Florida Power and Light, Radio One, Coopertown, Gator Park, Everglades Safari and Jefferson Pilot Communication Site. The proposed location of the two mile bridge on the western end of the project may effect the day to day operations of the Everglades Safari. The parking along the road frontage and a pavilion may be lost due to bridge construction. Site plans for this property are located at the end of this appendix. Information on these six privately owned tracts is insufficient at this time to determine exactly what estate will be required for acquisition. The necessary real estate interests in land, if any, will be developed at PED and documented in a supplemental real estate appendix that will be provided to higher headquarters for review and approval. Due to the construction schedules, the Corps may acquire the real estate interests necessary for the project on behalf of DOI. This topic will be further addressed in PED.

Consideration for the justification for any ramps to access Jefferson Pilot Communication and Everglades Safari will be addressed in PED. Lands required for the ramps will be included in the perpetual right of way for the bridge construction. No access ramps are required for the one-mile bridge.

The Airboat Association of Florida is the owner of a piece of land that lies within the area determined to possibly be affected by the project. At this time, there is insufficient information available to determine the exact estate(s) necessary for the project with the exception of a perpetual road easement along the northern boundary of that tract of land. This particular parcel was specifically excluded from the boundary of the Everglades National Park map at or about the time Public Law 101-229 was enacted. The necessary interest in lands, if any, to be acquired over Tract 500 will be determined at PED. The tract consists of 10 acres and is valued at approximately $1,000,000.00 simply as a worst case scenario should a comprehensive flowage easement or greater interest be required. Consideration will be given to some or all of the land for a temporary construction area. Relocation assistance benefits regarding the tenant-caretaker and his family are estimated at $50,000 for residential and $50,000 for moving expenses.

The proposed primary disposal area for this project consists of approximately 15 acres and is located south of Richmond Drive in the Rocky Glades area on lands authorized as part of the C&SF C-111 Project. No costs are included in this project for these lands since SFWMD will certify and receive credit as part of the C-111 Project. SFWMD will be asked to certify these lands prior to award of the construction contract.

The proposed staging/work areas will be located within the existing FDOT right of way, SFWMD lands or on Government owned lands. No costs are included in this report.

A borrow area is not needed for this project since the material required for construction will be purchased from a commercial source. The commercial source is the most suitable source of material located in the area. The possible use of a borrow area will be discussed further at PED.

Neither the Government nor the South Florida Water Management District currently has any defined rights to flow water through the existing culverts under Tamiami Trail. These culverts were installed by the Florida Department of Transportation to discharge waters from the L-29 canal to the lands being acquired for the Everglades National Park Expansion area and to prevent erosion of the roadbed of Tamiami Trail. The culverts were in place at the time the L-29 canal was transferred to the SFWMD for the C&SF project. The construction and replacement of the portion of Tamiami Trail will be a facility relocation and will require a relocation contract to be executed between the Florida Department of Transportation and the Federal Government. As part of the relocation contract, FDOT will grant to the Federal government the right to replace/construct the existing facility and a perpetual channel improvement easement for conveyance of water under the roadway. FDOT will grant to SFWMD the right to operate and maintain the conveyance features located under the Tamiami Trail. An alternative to acquiring the temporary easements for construction, operation and maintenance may be to acquire irrevocable permits from Florida Department of Transportation, if more appropriate.

The terms of the permits would have to provide substantially the same rights. The supplementary real estate appendix will document the legal sufficiency and acceptability of an irrevocable permit by means of a legal opinion executed by a real estate attorney authorized to approve title concluding that the permit constitutes an interest in land under the laws of the State of Florida and is acceptable under the Department of Justice Title Standards.

The Department of Interior will grant the Florida Department of Transportation a perpetual road easement, or alternative document with equivalent rights, for the ENP lands required for construction, operation and maintenance of the road. After these rights have been conveyed to FDOT, the USACE will have the right to construct on these lands by rights granted via the relocation agreement. Acreage required for construction is estimated to be 35 acres.

The USACE will grant the FDOT a perpetual road easement for the lands required for construction, operation and maintenance of the relocated road purchased from private parties.

4. SPONSOR OWNED LANDS

A. FEDERAL

The Department of Interior, National Park Service, Everglades National Park owns lands south of Tamiami Trail.

B. NON-FEDERAL

Lands immediately north of the project are owned in fee or controlled by South Florida Water Management District.

Florida Department of Transportation owns or controls lands within the existing roadway.

5. ESTATES

A. STANDARD ESTATES

CHANNEL IMPROVEMENT EASEMENT

A perpetual and assignable right and easement to construct, operate and maintain channel improvement works on, over and across (*The land described in Schedule A*) (*Tracts Nos._____, _____ and _____*) including the right to clear, cut, fell, remove and dispose of any and all timber, trees, underbrush, buildings, improvements and/or other obstructions therefrom; to excavate, dredge, cut away, and remove any and all of said land and to place thereon dredge or spoil material;

and for such other purposes as may be required in connection with said work of improvement; reserving, however, to the owners, their heirs and assigns, all such rights and privileges as may be used without interfering with or abridging the rights and easements hereby acquired.

TEMPORARY WORK AREA EASEMENT

A temporary easement and right-of-way in, on, over and across (*The land described in Schedule A*) (*Tracts Nos._____, _____ and _____*), for a period not to exceed ____ months, beginning with date possession of the land is granted to the United States, its representatives, agents and contractors as a work area, including the right to move, store and remove equipment and supplies and erect and remove temporary structures on the land and to perform any other work necessary and incident to the construction of _____ Project, together with the right to trim, cut, fell and remove therefrom all trees, underbrush, obstructions, and any other vegetation, structures, or obstacles within the limits of the right-of-way; reserving, however, to the landowners, their heirs and assigns, all such rights and privileges as may be used without interfering with or abridging the rights and easement hereby acquired; subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

PERPETUAL ROAD ACCESS EASEMENT

A perpetual and assignable easement and right-of-way in, on, over and across the land described in Schedule A (and known as Tract ____) for the location, construction, operation, maintenance, alteration, replacement of a road and appurtenances thereto; together with the right to trim, cut, fell and remove therefrom all trees, underbrush, obstructions and other vegetation, structures, or obstacles within the limits of the right-of-way; subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines

TEMPORARY ACCESS ROAD EASEMENT

A temporary and assignable easement and right-of-way in, on, over and across the land described in Schedule A (Tract ___) for a period not to exceed _____ months, beginning with date possession of the land is granted to the United States, its representatives, agents and contractors for the location, construction, operation, maintenance, alteration, replacement of a road and appurtenances thereto; together with the right to trim, cut, fell and remove therefrom all trees, underbrush, obstructions and other vegetation, structures, or obstacles within the limits of the right-of-way; subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

FLOWAGE EASEMENT (Permanent Flooding)

The perpetual right, power, privilege and easement permanently to overflow, flood and submerge (the land described in Schedule A)(Tracts Nos. _____, _____ and _____)(and to maintain mosquito control) in connection with the operation and maintenance of the _____ project as authorized by the Act of Congress approved _____ and the continuing right to clear and remove any brush, debris and natural obstructions which, in the opinion of the representative of the United States in charge of the project, may be detrimental to the project, together with all right, title and interest in and to the timber, structures and improvements situate on the land (excepting _____ (here identify those structures not designed for human habitation which the District Engineer determines may remain on the land)); provided that no structures for human habitation shall be constructed or maintained on the land, that no other structures shall be constructed or maintained on the land except as may be approved in writing by the representative of the United States in charge of the project, and that no excavation shall be conducted and no landfill placed on the land without such approval as to the location and method of excavation and/or placement of landfill; 3/ the above estate is taken subject to existing easements for public roads and highways, public utilities, railroads and pipelines; reserving, however, to the landowners, their heirs and assigns, all such rights and privileges as may be used and enjoyed without interfering with the use of the project for the purposes authorized by Congress or abridging the rights and easement hereby acquired; provided further that any use of the land shall be subject to Federal and State laws with respect to pollution.

3/ If sand and gravel or other quarriable material is in the easement area and the excavation thereof will not interfere with the operation of the project, the following clause will be added: "excepting that excavation for the purpose of quarrying (sand) (gravel) (etc.) shall be permitted, subject only to such approval as to the placement of overburden, if any, in connection with such excavation;"

FLOWAGE EASEMENT (Occasional Flooding)

The perpetual right, power, privilege and easement occasionally to overflow, flood and submerge (the land described in Schedule A)(Tracts Nos. _____, _____ and _____) (and to maintain mosquito control) in connection with the operation and maintenance of the _____ project as authorized by the Act of Congress approved _____, together with all right, title and interest in and to the structures and improvements now situate on the land, except fencing (and also excepting _____ (here identify those structures not designed for human habitation which the District Engineer determines may remain on the land))4/; provided that no structures for human habitation shall be constructed or maintained on the land, that no other structures shall be constructed or maintained on the land except as may be approved in writing by the representative of the United States in charge of the project, and that no excavation

shall be conducted and no landfill placed on the land without such approval as to the location and method of excavation and/or placement of landfill; 3/ the above estate is taken subject to existing easements for public roads and highways, public utilities, railroads and pipelines; reserving, however, or the landowners, their heirs and assigns, all such rights and privileges as may be used and enjoyed without interfering with the use of the project for the purposes authorized by Congress or abridging the rights and easement hereby acquired; provided further that any use of the land shall be subject to Federal and State laws with respect to pollution.

3/ If sand and gravel or other quarriable material is in the easement area and the excavation thereof will not interfere with the operation of the project, the following clause will be added: "excepting that excavation for the purpose of quarrying (sand) (gravel) (etc.) shall be permitted, subject only to such approval as to the placement of overburden, if any, in connection with such excavation;"

4/ Where substantial residential structures exist in areas subject to very infrequent flooding, and will not interfere with project operations, the following clause may be substituted "(and also excepting the structures(s) now existing on the land, described as _____, which may be maintained on the land provided that no portion of the structure(s) located below elevation _____ feet, mean sea level, shall be utilized for human habitation to the extent that sleeping accommodations will be maintained therein)". The next clause would then be modified to read "provided that no other structures for ..."

FLOWAGE EASEMENT (Portions of Land to be Subjected to Permanent Inundation and Portions to be Subjected to Occasional Flooding)

The perpetual right, power, privilege and easement in, upon, over and across (the land described in Schedule A)(Tracts Nos. _____, _____, and _____) for the purposes set forth below:

a. Permanently to overflow, flood and submerge the land lying below elevation _____(and to maintain mosquito control,) in connection with the operation and maintenance of the _____project for the purposes as authorized by the Act of Congress approved _____, together with all right, title and interest in and to the timber and the continuing right to clear and remove any brush, debris and natural obstructions which, in the opinion of the representative of the United States in charge of the project may be detrimental to the project.

b. Occasionally to overflow, flood and submerge the land lying above elevation _____ (and to maintain mosquito control,) in connection with the operation and maintenance of said project. Together with all right, title and interest in and to the structures and improvements now situate on the land, except fencing above elevation _____(and also excepting _____(here identify those structures not designed for human habitation which the District Engineer determines may remain

on the land))4/ provided that no structures for human habitation shall be constructed or maintained on the land, that no other structures shall be constructed or maintained on the land except as may be approved in writing by the representative of the United Stated in charge of the project, and that no excavation shall be conducted and no landfill placed on the land without such approval as to the location and method of excavation and/or placement of landfill; the above estate is taken subject to existing easements for public roads and highways, public utilities, railroads and pipelines; reserving, however, to the landowners, their heirs and assigns, all such rights and privileges as may be used and enjoyed without interfering with the use of the project for the purposes authorized by Congress or abridging the rights and easement hereby acquired; provided further that any use of the land shall be subject to Federal and State laws with respect to pollution.

4/ Where substantial residential structures exist in areas subject to very infrequent flooding, and will not interfere with project operations, the following clause may be substituted "(and also excepting the structures(s) now existing on the land, described as _____, which may be maintained on the land provided that no portion of the structure(s) located below elevation _____ feet, mean sea level, shall be utilized for human habitation to the extent that sleeping accommodations will be maintained therein)". The next clause would then be modified to read "provided that no other structures for ..."

B. NON-STANDARD ESTATES

To be determined in PED.

6. NAVIGATION SERVITUDE

During the preparation of the 1992 General Design Memorandum and Environmental Impact Statement for the Modified Water Deliveries to Everglades National Park, the title to the lands within the Water Conservation Areas (lands north of Tamiami Trail), the title to lands within the L-29 levee and borrow canal, title to the lands underlying Tamiami Trail were investigated. Title to all these lands were derived from the patents issued by the Untied States of America to the State of Florida pursuant to the Swamp and Overflowed Lands Act of 1850 (codified in Title 43 U.S.C. 981 et seq.). Section 983 of Title 43 put a duty on the Secretary of Interior to make accurate lists and plats of all such lands *(Swamp and Overflowed Lands),* to transmit the lists and plats to the governor of the State and then at the request of the governor to issue patents to the state to convey the land in fee to the state. Under Florida law, Swamp and Overflowed lands were not considered sovereign lands and could be sold to private parties. Most of the lands south of Lake Okeechobee fit into the lands designated by the United States as Swamp and

Overflowed lands conveyed to the State and then sold by the state to private developers or private parties.

It was determined that the Secretary of Interior had designated all the lands as Swamp and Overflowed lands.

No land in the project area is subject to the navigation servitude.

Additional discussion will be provided in PED.

7. PROJECT MAP

Refer to Appendix D for proposed project map. Descriptions, plats, maps and other graphics showing all lands to be acquired will be provided in the supplementary materials.

8. INDUCED FLOODING

It has been determined that project implementation will cause an increase in duration in the water elevations on lands south of Tamiami Trail, located in the Everglades National Park Expansion Area, being acquired by the National Park Service and on lands owned by the Airboat Association of Florida. Sufficient information is currently not available to determine the exact impacts to this particular tract of land. Once these impacts are further developed, they will be addressed in PED.

During preconstruction engineering and design of the project, lands subjected to induced flooding will be analyzed to determine if structural solutions consistent with restoration would be more cost effective than real estate acquisition. Flood proofing such as modifications to site and structure elevations will be utilized whenever feasible to limit the possibility of impacts. Further analyses will be conducted to determine where structural solutions can be implemented. Relocation assistance will be provided to affected residents and businesses in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Public Law 91-646).

9. REAL ESTATE BASELINE COST ESTIMATE

Real Estate costs are administrative and acquisition costs associated with the relocation of the portion of Tamiami Trail. Estimates are included to cover the costs associated with negotiation of agreement with Florida Department of Transportation and costs associated with the acquisition of the Airboat Association and the other private lands within the Everglades National Park Expansion Area. Costs shown are

worse case scenario costs which include the acquisition of fee simple title to these lands. The actual costs may vary drastically based on more analysis during PED.

Lands and Damages:	$11,503,500
Total Lands and Damages (Rounded):	$11,503,500
Acquisition/Administrative Costs	
Federal	$ 425,000
Non-Federal	$6,000
Public Law 91-646 Payments	$ 365,000
Contingencies (25%) Rounded	$3,074,875
Total Estimates Real Estate Costs (Rounded)	$15,375,000

10. RELOCATION ASSISTANCE BENEFITS

The Osceola Camp (Camp), which is located on the south side of the Tamiami Trail some 0.6 miles east of S-333 is located on land which the Department of Interior (DOI), National Park Service has acquired full fee title, as provided by the Everglades National Park Protection and Expansion Act of 1989. The site will be subject to increased water levels under the Modified Water Deliveries Project.

Structures in the Osceola Camp will have to be raised above the Modified Waters Project higher water levels. Interagency Agreement IA-5000-1-9501 makes such provisions. The Everglades National Park (NPS) has accepted responsibility and will make all necessary arrangements for elevation of the Camp.

Relocation costs for the Airboat Association of Florida parcel will be addressed in PED. No other relocation costs are identified as part of this project. Any relocation costs associated with the lands being purchased by DOI have previously been authorized.

11. MINERALS

No known minerals exist in the project area.

12. NON-FEDERAL SPONSOR'S AUTHORITY TO PARTICIPATE.

The South Florida Water Management District is the non-Federal Sponsor for this project. The South Florida Water Management District was created by virtue of Florida Statutes, Chapter 373, Section .069. The South Florida Water Management District was created to further the State policy of flood damage prevention, preserve

natural resources of the State including fish and wildlife and to assist in maintaining the navigability of rivers and harbors. (There are other enumerated purposes but they are not directly applicable to this project.) The South Florida Water Management District is specifically empowered to

> *Cooperate with the United States in the manner provided by Congress for flood control, reclamation, conservation, and allied purposes in protecting the inhabitants, the land, and other property within the district from the effects of a surplus or a deficiency of water when the same may be beneficial to the public health, welfare, safety, and utility. (Section 373.103)*

To carry out the above purposes, the South Florida Water Management District is empowered to

> *...hold, control, and acquire by donation, lease, or purchase, or to condemn any land, public or private, needed for rights-of-way or other purposes, and may remove any building or other obstruction necessary for the construction, maintenance, and operation of the works; and to hold and have full control over the works and rights-of-way of the district.*

The term *works of the district* is defined by Section 373.019 to be

> *...those projects and works, including, but not limited to, structures, impoundments, wells, and other water courses, together with the appurtenant facilities and accompanying lands, which have been officially adopted by the governing board of the district as works of the district.*

Section 373.139 specifically empowers the South Florida Water Management District

...to acquire fee title to real property and easements therein by purchase, gift, devise, lease, eminent domain, or otherwise for flood control, water storage, water management, and preservation of wetlands, streams and lakes, except that eminent domain powers which may be used only for acquiring real property for flood control and water storage.

13. REAL ESTATE MILESTONES

All lands required for construction, operation and maintenance of the project are schedule to be purchased by August 2006 to meet the current construction schedule. Contract advertisement is currently scheduled for September 2006.

14. RELOCATIONS OF ROADS, BRIDGES, UTILITIES, TOWNS AND CEMETERIES

A. ROADS

U.S. Highway 41 (Tamiami Trail) will be raised for approximately 10 miles and two bridges constructed between Structures S-334 on the east and S-333 on the west. The purpose is to provide increased conveyance of water from WCA 3B and the L-29 Canal to Northeast Shark River Slough. An Attorneys Opinion of Compensability was prepared and a determination was made that FDOT has compensable interest in the road. Based on evidence submitted by the Florida Department of Transportation and independent investigation, the Florida Department of Transportation owns fee title to portions of this area, road easements to portions of the area and prescriptive rights to other portions of the area. The National Park Service is acquiring sufficient interests or owns the underlying fee to those portions not owned in fee by the Florida Department of Transportation. As the Modified Water Deliveries to Everglades National Park Project is a federal acquisition and construction program, the responsibility for securing the Relocation Contract will be on the Federal government.

B. BRIDGES

No bridges to be relocated.

C. UTILITIES

There are a number of utility companies that have their facilities located in the State owned right of way for U.S. Highway 41 (SR90, Tamiami Trail). These consist of electric, telephone and fiber optic cables.

The work on the Tamiami Trail will involve raising the roadbed and the construction of bridges. The work will impact all the utility facilities in the highway right of way necessitating their relocation.

The Florida Department of Transportation has issued permits to the various utilities to allow placement of their facilities within the right-of-way. The issue becomes whether under local law this gives the utilities a property right.

Special Use Permits state, “It is expressly stipulated that this permit is a license for permissive use only and that the placing of facilities upon public property pursuant to this permit shall not operate to create a property right.” The permit also provides: “Whenever it is necessary for the construction, repair, improvement, maintenance, safe and efficient operation, alteration or relocation of all, or any portion of said highway as determined by the Director, Division of Maintenance, any or all of said poles, wires, pipes, cables or other facilities and appurtenances authorized hereunder, shall be immediately removed from said highway or reset or

relocated thereon as required by the Director, Division of Maintenance, and at the expense of the permittee unless reimbursement is authorized."

The District will enter into a relocation agreement with the Florida Department of Transportation. This relocation agreement between the District and Florida Department of Transportation will contain a provision that calls for the revocation of all utility permits by Florida Department of Transportation in place at the time of the project with various utility companies where such utility lines/pipelines/facilities, et al. interfere with the Corps' project. The permits themselves specifically state that the utility companies do not possess any interest in real estate and that the lines/pipelines/facilities must be removed by the utility companies, at their own cost, upon the revocation by Florida Department of Transportation. Florida law is consistent with the above statement; furthermore, Florida law provides Florida Department of Transportation with the authority to remove said utility lines/pipelines/facilities. The facts of this case, along with Florida law, would require the utility companies to remove the lines/pipelines/facilities at their own cost.

D. TOWNS OR CEMETERIES

No towns or cemeteries will be relocated as a result of this project.

15. PRESENCE OF CONTAMINANTS (HAZARDOUS, TOXIC AND RADIOACTIVE WASTES)

A preliminary assessment for hazardous, toxic and radioactive waste (HTRW) was performed by the Jacksonville District. Preliminary assessment indicated that in general, no evidence of HTRW exists within the project area.

16. ATTITUDE OF LANDOWNERS

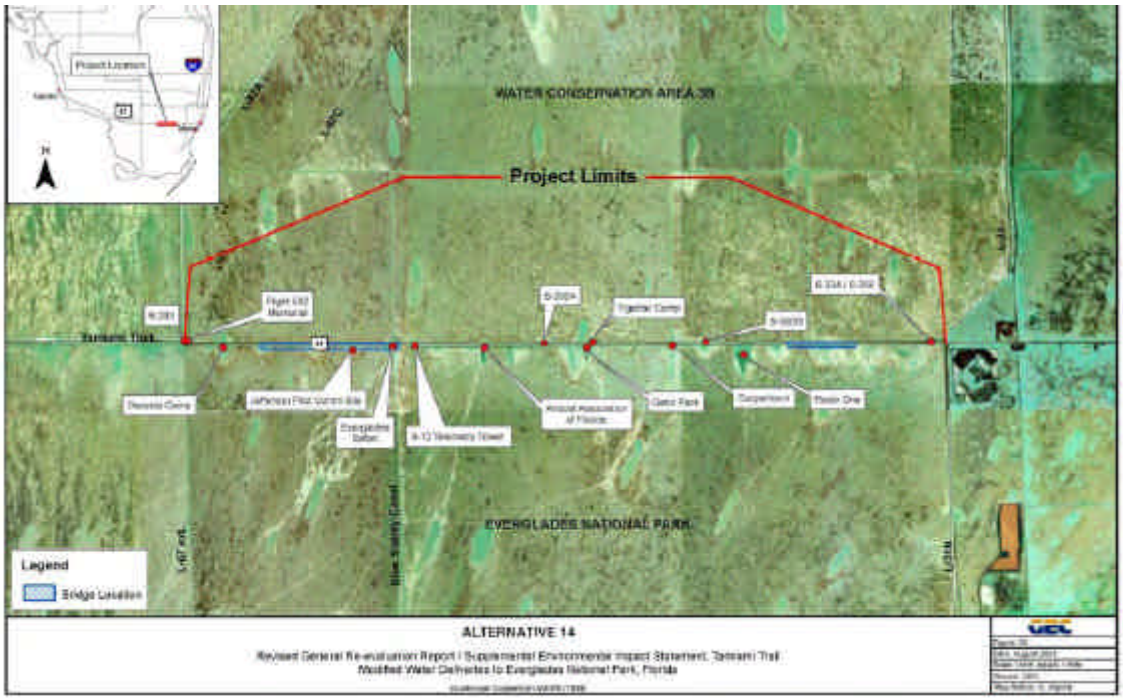
The lands impacted by this project are owned by the South Florida Water Management District, Florida Department of Transportation and Everglades National Park who strongly support the project. Other landowners in the area support the project but are concerned about the impacts to their property. There are also some landowners in the area who oppose the project.

17. M-CACES

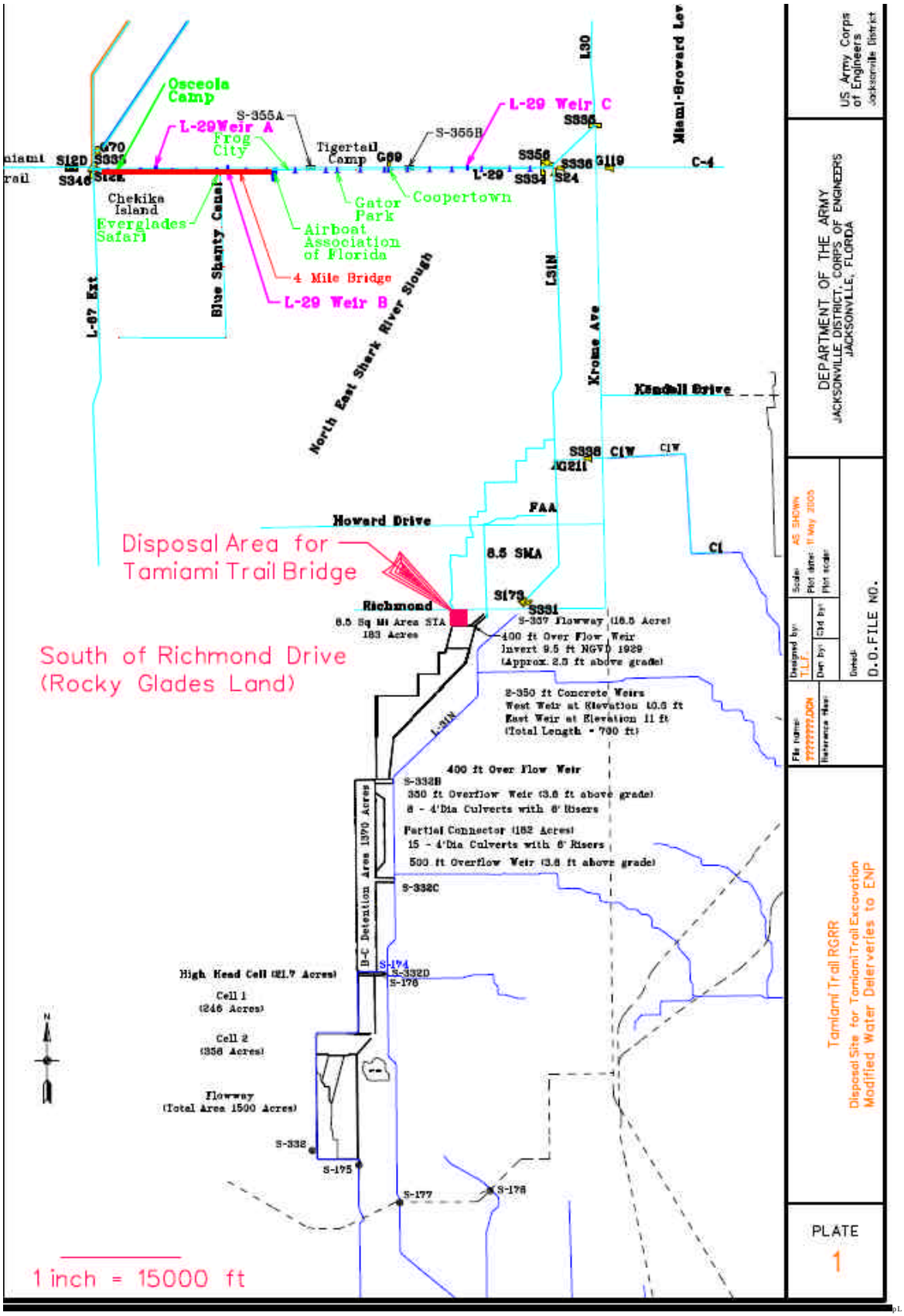
REAL ESTATE CHART OF ACCOUNTS

ESTIMATED PROJECT REAL ESTATE COSTS
PROJECT: MWD Tamiami Trail
DATE: 11/23/05

01	LANDS AND DAMAGES		
01AA	PROJECT PLANNING	$50,000	
01B--	ACQUISITIONS		
01B20	BY LOCAL SPONSOR (LS)	$0	
01B40	BY GOVT	$42,000	
	RELO CONTRACTS	$90,000	
01C--	CONDEMNATIONS		
01C20	BY LS	$0	
01C40	BY GOVT	$100,000	
01E--	APPRAISALS		
01E30	BY LS	$0	
01E50	BY GOVT	$60,000	
01F--	PL 91-646 ASSISTANCE		
01F20	BY LS	$0	
01F40	GY GOVT	$66,000	
01G--	TEMPORARY PERMITS/LICENCES/RIGHTS-OF-ENTRY		
01G20	BY LS	$6,000	
01G40	BY GOVT	$15,000	
01G60	DAMAGE CLAIMS	$0	
01M00	PROJECTED RELATED ADMINISTRATION		
	REAL ESTATE REVIEW OF PCA	$2,000	
01R--	REAL ESTATE PAYMENTS		
01R1	LAND PAYMENTS		
01R1B	BY GOVT	$11,503,500	
01R2	PL 91-646 ASSISTANCE PAYMENTS		
01R2B	BY GOVT	$365,000	
TOTAL REAL ESTATE COST EXCLUDING CONTINGENCY (RD)			**$12,299,500**
REAL ESTATE CONTINGENCY (25%) COST (RD)		**$3,074,875**	
TOTAL PROJECT REAL ESTATE COST (RD)			**$15,375,000**



PROJECT LOCATION
Plate 1



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Appendix I

SECTION 404(b)(1) EVALUATION REPORT

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SECTION 404 (b)(1) EVALUATION REPORT

CENTRAL AND SOUTHERN FLORIDA STUDY MODIFIED WATERS DELIVERY TO THE EVERGLADES NATIONAL PARK

PROPOSED IMPROVEMENTS TO THE TAMIAMI TRAIL DADE COUNTY, FLORIDA

1.0 PROJECT DESCRIPTION

1.1 LOCATION

The proposed work will be performed in the western-central portion of Miami-Dade County, Florida (Figure 1). The potentially impacted local areas flank the south side of the existing U.S. Highway 41 commonly called the Tamiami (Tampa to Miami) Trail. The Tamiami Trail, the L-29 Canal, and particularly the L-29 levee on the north side of the canal, form the southern boundary of the South Florida Water Management District's (SFWMD) Water Conservation Area 3B (WCA-3B). The south side of the project area is bounded by the Everglades National Park (ENP).

The limits of the proposed project begin slightly more than one mile west of the intersection of Krome Avenue and Tamiami Trail and extend approximately 10.7 miles to the west. The L-29 Canal, also known as the Tamiami Canal, runs along the north side of the Tamiami Trail through this area. The project limits are more definitively marked at each end by two water-control structures across the canal, S-334 on the east and S-333 on the west.

1.2 GENERAL DESCRIPTION

1.2.1 Existing Conditions

Under the current authorized and approved plan Modified Waters Delivery (MWD) Plan, water would be transferred from WCA-3A to WCA-3B by constructing three new water control structures at Levee L-67A and three new water control structures at L-67C. Water would be passed from WCA-3B through S-355A and S-355B to the L-29 Canal and through the existing culvert system under the Tamiami Trail into Northeast Shark River Slough (NESS) of ENP. When the General Design Memorandum (GDM) was completed in 1992, it was believed that existing culverts under the roadway would be adequate to convey the flow of water. Subsequent hydrological analyses, however, revealed that the head height in the L-29 Canal required for the culverts to convey the increased water could adversely affect the structure of Tamiami Trail and overtop the highway under certain conditions.

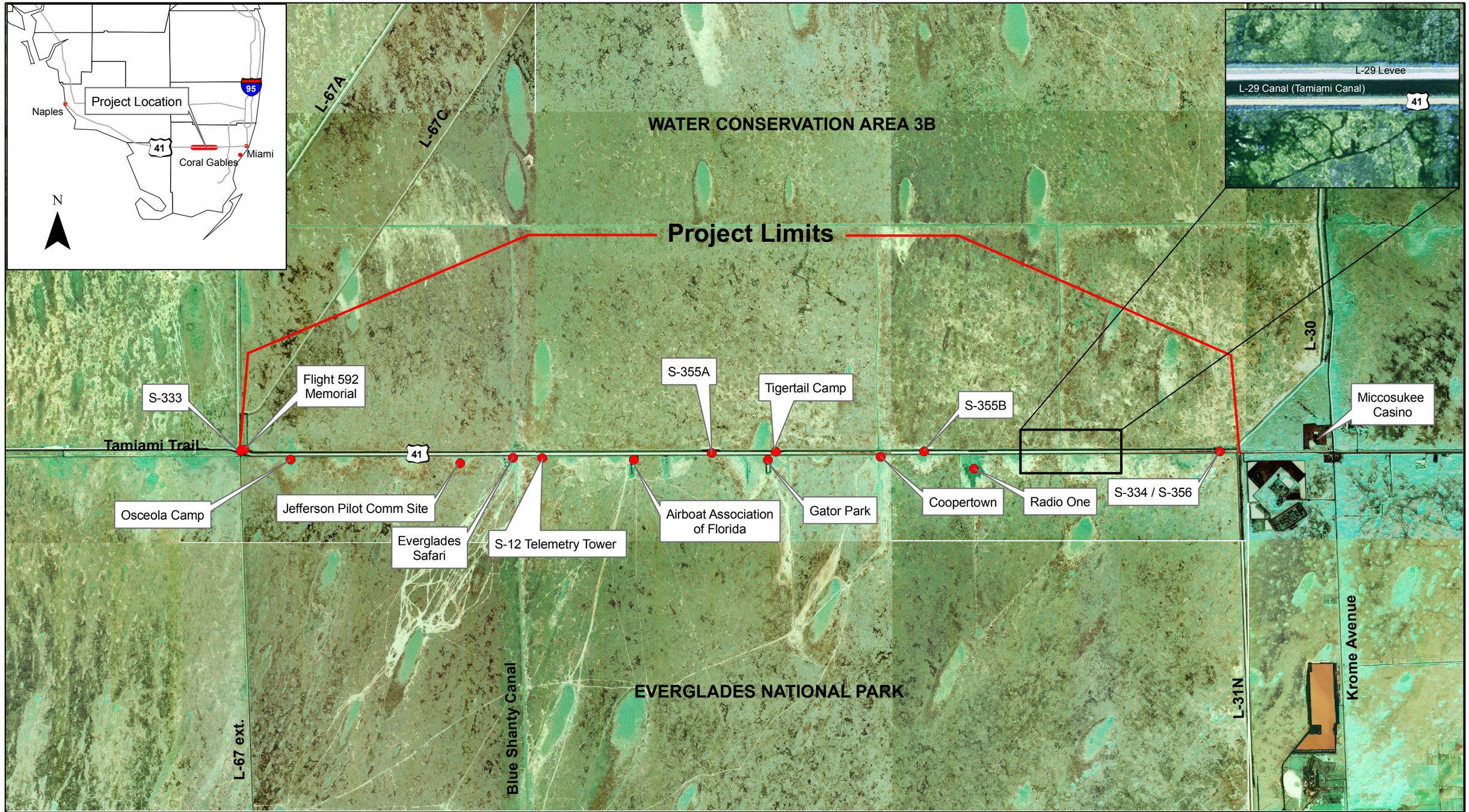
1.3 AUTHORITY/PURPOSE

The Everglades National Park Protection and Expansion Act (Public Law [PL] 101-229, Section 104, 16 U.S.C. Part 410r-5 *et seq*.), December 1989, authorized the Secretary of the Army to undertake certain actions to improve water deliveries to the ENP and to take steps to restore natural hydrologic conditions. This Act provides the underlying authority for this project. Section 104 of the Act stated:

> *The Everglades National Park is a nationally and internationally significant resource and the park has been adversely affected and continues to be adversely affected by external factors which have altered the ecosystem including the natural hydrologic conditions within the park. Wildlife resources and their associated habitats have been adversely impacted by the alteration of natural hydrologic conditions within the park, which has contributed to an overall decline in fishery resources and a 90 percent population loss of wading birds.*

The Act also provided direction for the U.S. Army Corps of Engineers (USACE) to initiate corrective actions to alleviate deterioration in natural resources of ENP attributed to changes in water conditions associated with construction of the Central and Southern Florida (C&SF) water management system. The Act stated:

> *Upon completion of a final report by the Chief of the Army Corps of Engineers, the Secretary of the Army, in consultation with the Secretary, is authorized and directed to construct modifications to the Central and Southern Florida Project to improve water deliveries into the park and shall, to the extent practicable, take steps to restore the natural hydrological conditions within the park.*
>
> *Such modifications shall be based upon the findings of the Secretary's experimental program authorized in Section 1302 of the 1984 Supplemental Appropriations Act (97 Stat. 1292) and generally as set forth in a General Design Memorandum to be prepared by the Jacksonville District entitled* Modified Water Deliveries to Everglades National Park*. The Draft of such Memorandum and the Final Memorandum, as prepared by the Jacksonville District, shall be submitted as promptly as practicable to the Committee on Energy and Natural Resources and the Committee on Environment and Public Works of the United States Senate and the Committee on Natural Resources and the Committee on Public Works and Transportation of the United States House of Representatives.*



PROJECT LOCATION

Revised General Re-evaluation Report / Supplemental Environmental Impact Statement, Tamiami Trail
Modified Water Deliveries to Everglades National Park, Florida

Quadrangle Coopertown NW/NE (1999)

GEC

Figure: 01
Date: August 2005
Scale: 1 inch equals 1.000000 mile
Source: GEC
Map Author: G. Sigrest

Back of Figure 1

The GDM called for in the Act was completed in June 1992. This GDM and its associated Environmental Impact Statement (EIS) for Modified Water Deliveries to ENP is the authorizing document for structural modifications and additions to the existing C&SF Project required for the modification of water deliveries for ecosystem restoration in the ENP. The 1992 GDM stated,

> *The future without project condition will lead to the further deterioration of unique and outstanding ecological resources of the Everglades that are recognized and valued throughout the world. Therefore, based on the direction provided in the Everglades National Park Protection and Expansion Act of 1989, the goal is to restore natural hydrologic conditions in the Park to the extent practicable. Meeting this goal will lead to improvements in the abundance, diversity and ecological integrity of native plants and animals in the Park.*

Section 528 of the Water Resources Development Act enacted October 1996 (Public Law [PL] 102-580) was entitled "Everglades and South Florida Ecosystem Restoration." This authorized a number of ecosystem restoration studies, now collectively known as the Comprehensive Everglades Restoration Plan (CERP). As a result of this Act, the USACE submitted a report to Congress on July 1, 1999, containing a comprehensive blueprint for Everglades restoration. Implementation of CERP will further increase the flow of water entering NESS. The plan has subsequently been approved as the Water Resources and Development Act of 2000.

1.3.1 Alternatives

The proposed plan calls for identifying a technical solution to provide modifications to the Tamiami Trail culvert system that would allow for the unimpeded conveyance of water from WCA-3B and the L-29 Canal north of the Tamiami Trail to NESS and the ENP south of the Tamiami Trail, as provided by the 1992 GDM.

A preliminary array of 13 alternatives was developed and evaluated by a multidisciplinary team with expertise in hydraulics/hydrology, geotechnical engineering, planning procedures, and project management/project implementation. In 2003 a General Reevaluation Report/Supplemental EIS (GRR/SEIS) was prepared in order to supplement the 1992 GDM/Final EIS. The 2003 report retained six of the 13 preliminary alternatives for further evaluation, and two additional alternatives were identified through public and interagency input.

The 2005 Revised GRR/SEIS (RGRR/SEIS) selected ten alternatives, including the no-action alternative, for detailed engineering evaluation and comparative analysis. The nine action alternatives all include bridge construction and reconstruction of the remaining highway, with differences being in the lengths and locations of the bridges.

Each action-alternative consists of removing a portion of the highway and embankment, at varied lengths and locations, and of constructing a bridge to replace the removed section of road and maintain motor vehicle traffic. The remaining sections of Tamiami Trail would be reconstructed to raise the elevation to the minimum required based on the design high water elevation and on the roadway cross section geometry dictated by Florida Department of Transportation (FDOT) standards. The proposed bridge(s) would be constructed to the south of the existing Tamiami Trail.

Alternative 9, 3,000-Foot Bridge. Alternative 9 would involve creating an approximately 3,000-foot-wide conveyance channel through Tamiami Trail by removing a 3,000-foot length of the highway and embankment between the Blue Shanty Canal and the Airboat Association of Florida site.

Alternative 10, Four-Mile Bridge (Central). Alternative 10 involves creating an approximately four-mile wide conveyance channel through Tamiami Trail by removing a four-mile length of the highway and embankment from a point approximately one-mile east of the Osceola Camp to a point just west of the Tigertail Camp.

Alternative 11, Four-Mile Bridge (East). Alternative 11 involves creating an approximately four-mile wide conveyance channel through Tamiami Trail by removing a four-mile length of the highway and embankment from just east of Coopertown to a point approximately 200-300 feet west of the water control structure S-334.

Alternative 12, Three-Mile Bridge. Alternative 12 would involve creating a conveyance channel of up to three miles in length by removing a three-mile long portion of the highway and embankment from a point one-half mile east of the Osceola Camp to a point 1,500 feet west of the Airboat Association of Florida.

Alternative 13, Two-Mile Bridge. Alternative 13 would involve creating an approximately two mile-wide conveyance channel by removing a two-mile length of the highway and embankment from a point one-half mile east of the Osceola Camp to a point 1,300 feet west of the S-12 Telemetry Tower.

Alternative 14, Two-Mile Bridge West and One-Mile Bridge East. Alternative 14 would involve creating two conveyance channels of up to three miles in length by removing a two-mile long portion of the highway and embankment from a point one-half mile east of the Osceola Camp to a point 1,200 feet west of the S-12 Telemetry Tower as well as a one-mile length of highway and embankment from a point 3,000 feet east of the Radio One site to a point one mile west of S-334.

Alternative 15, 1.3-Mile Bridge West and 0.7-Mile Bridge East. Alternative 15 involves creating two conveyance channels of up to two miles in length by removing a 1.3-mile length of the highway and embankment from a point 4,500 feet east of Osceola Camp to a point 1,300 feet west of Everglades Safari as well as a 0.7-mile length of highway and embankment from a point 4,500 feet east of the Radio One site to a point one mile west of S-334.

Alternative 16, Three 3,000-Foot Bridges. Alternative 16 would involve creating three conveyance channels of up to 9,000 feet in length by removing three 3,000-foot sections of the highway and embankment. The western bridge would extend from a point 4,500 feet east of the Osceola Camp to a point 2,000 feet west of the Jefferson Pilot Communication Site. The central bridge would extend from a point just east of the Airboat Association to a point 1,300 feet west of S-355A. The eastern bridge would extend from a point 6,000 feet east of the Radio One site to a point one mile west of S-334.

Alternative 17, Ten-Mile Bridge. Alternative 17 would involve creating an approximately 10-mile-wide conveyance channel through Tamiami Trail by removing a 10-mile length of the highway and embankment between the S-333 water control structure at the western terminus of the project and the S-334 water control structure at the eastern terminus of the project.

1.3.2 Recommended Plan

The recommended plan is Alternative 14 which would construct two bridges along the Tamiami Trail, a two-mile bridge in the western portion of the project and a one-mile bridge in the eastern portion of the project (Figure 2). The bridges would satisfy current FDOT standards and be uniform throughout its entire length. The section is expected to include two 12-foot-wide travel lanes, two eight-foot-wide shoulders, and safety barriers. The lower limit of the bridge superstructure would be based on vertical clearance requirements for exposure and maintenance considerations. This elevation is expected to be 14.75 feet NGVD 1929, based on 8.75-foot water control elevation plus six (6) feet. The bridges would be offset the existing centerline by approximately 50 feet to the south. This offset is necessitated by construction requirements.

The approximately eight (8) miles of remaining highway embankment would be reconstructed to raise the Profile Grade Line (PGL) (crown elevation) to the minimum required based on the design high water (DHW) elevation of 9.7 feet and on the roadway cross section geometry dictated by FDOT standards. The PGL elevation is expected to be EL 12.3 feet. The existing roadway, both asphalt and base material, would be reused to the extent practical in accordance with roadway construction practice. In order to meet FDOT criteria for stable slopes, the roadway width would increase, and additional right-of-way would be required. The width of the encroachment, south into ENP, would vary.

The maintenance of traffic and construction sequence for the bridge and roadway would be the best balance of traffic safety, environmental impacts, and construction cost and duration.

Access facilities, such as ramps to the bridge or elevated roadway, would be provided for Everglades Safari and the Jefferson Pilot Communications site.

1.3.3 Summary of Mitigation Features Incorporated into the Recommended Plan

A “mitigation feature” is a management procedure, activity, or technique to reduce the severity of environmental impacts and/or offset impacts associated with a project.

In the development of alternative plans, including the recommended plan, features that were incorporated to avoid, minimize, and compensate for potential adverse environmental effects include the removal of embankment where the bridges would be constructed. This allows for the restoration of wetland habitat in that section of the roadway to be degraded. Additionally, the removal of embankment would facilitate the restoration of sheet flow from the L-29 Canal southward into ENP. Therefore, the project offers far greater benefits to wetland habitat than it will adversely impact.

This project is part of a larger effort intended to provide ecological enhancement to many thousands of wetland acres through the hydrologic restoration of ENP, to the extent practicable. Therefore, this project can be considered self-mitigating. The loss of wetland habitat associated with project construction would be fully compensated by the project benefits.

Best Management Practices (BMPs) would be employed during construction activities in order to minimize erosion and control sediment transport off-site.

Two wood stork (*Mycteria americana*) rookeries exist near the project area, and restrictions would be emplaced during construction to minimize impacts.

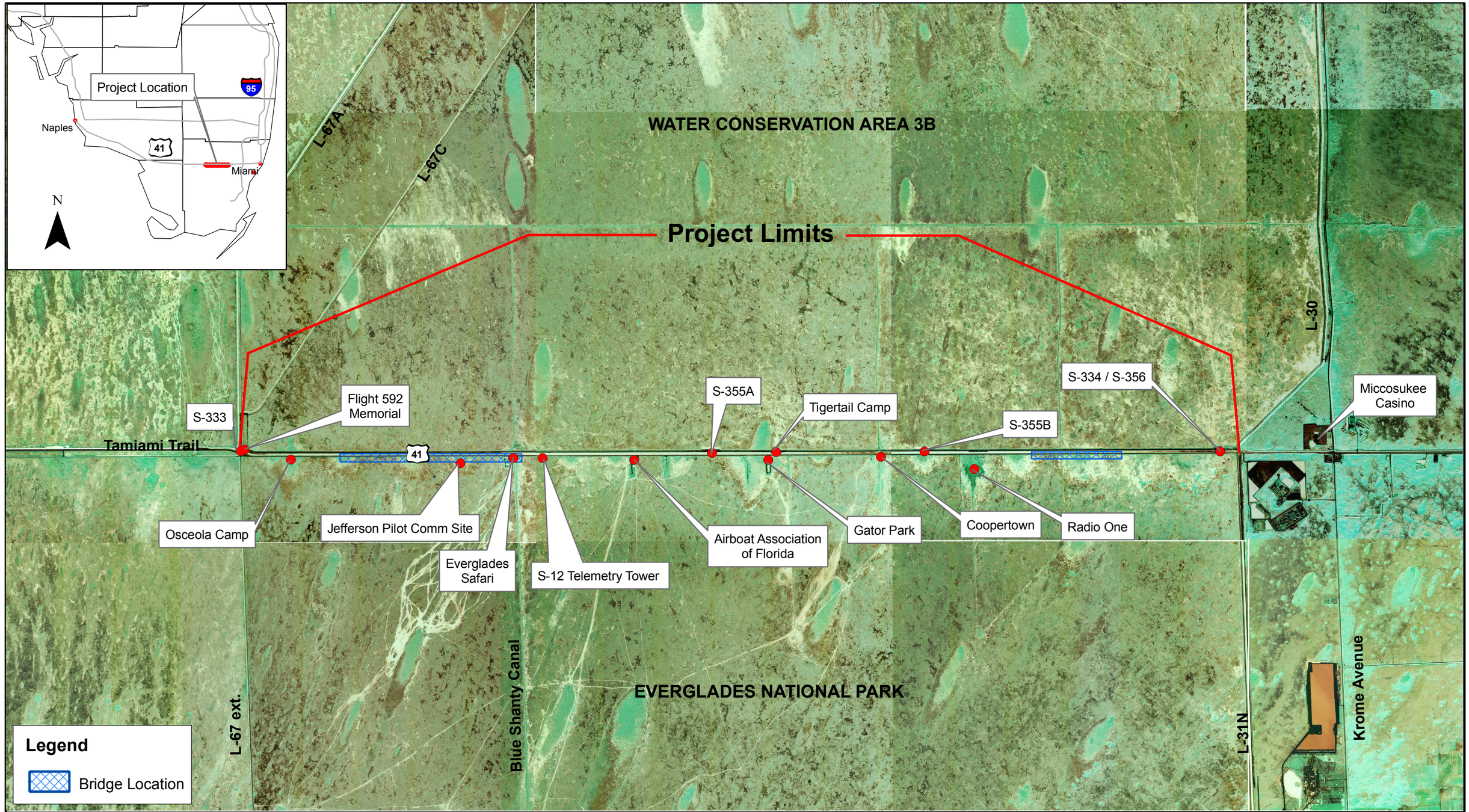
Although not part of the project purpose, features such as wildlife crossings and airboat crossings may be funded and incorporated as enhancements or betterments to the project or be included in a later project.

Lastly, the project has incorporated features to minimize impacts to local area businesses and existing facilities along Tamiami Trail. Access from the western bridge will be provided to existing facilities such as Jefferson Pilot and Everglades Safari; no access is necessary to or from the eastern bridge.

1.4 GENERAL DESCRIPTION OF DREDGED AND FILL MATERIAL

1.4.1 General Characteristics

Fill material will be composed of A-1 and A-3 select material, in accordance with FDOT Standard Indices 500 and 505. A four-inch drainage layer of No. 8 sieve material would be provided.



ALTERNATIVE 14

Two-Mile Bridge West and One Mile Bridge East (Recommended Plan)
Revised General Re-evaluation Report / Supplemental Environmental Impact Statement, Tamiami Trail
Modified Water Deliveries to Everglades National Park, Florida

Quadrangle Coopertown NW/NE (1999)

GEC

Figure: 02
Date: August 2005
Scale: 1 inch equals 1 mile
Source: GEC
Map Author: G. Sigrest

Back of Figure 2

1.4.2 Quantity of Material

The placement of additional fill is necessitated by the increase in grade of the roadway. The increased grade dictates the enlarged footprint in order to meet current FDOT standards for roadway typical section and stable side slopes. The encroachment southward into ENP will range from three to 22 feet where the roadway will be elevated. In addition, the bridge centerline will be shifted 50 feet to the south of the existing centerline in order to allow for the necessary space requirements during construction. The increased footprint from the roadway amounts to approximately 12.1 acres impacted while the construction of the bridge approaches would impact approximately 9.8 acres.

1.5 DESCRIPTION OF PROPOSED DISCHARGE SITES

1.5.1 Location and Size

The location of the proposed activity is a 10.7 mile extent of the Tamiami Trail west of Krome Avenue in central Miami-Dade County. The recommended plan involves creating an approximately three-mile-wide cumulative conveyance channel through Tamiami Trail by removing a two-mile western portion and one-mile eastern portion of highway and embankment. Two bridges would be constructed over the opening to replace the removed section of road and maintain motor vehicle traffic across the opening. In order to provide the required space clearance for construction of the bridge, the bridge would be constructed approximately 50 feet to the south of the existing alignment. The approximately eight miles of remaining highway would be reconstructed to raise the Profile Grade Line (crown elevation) to the minimum required based on the Design High Water and the roadway cross section geometry. In order to meet FDOT criteria for stable side slopes, the roadway width would increase, and additional right-of-way will be required to the south of the existing highway. The placement of additional fill on the south side of Tamiami Trail and for bridge approach structures is estimated to impact approximately 21.9 acres.

1.5.2 Type of Site/Habitat

The site is located on the Tamiami Trail, a paved asphaltic roadway with a typical section of two 12-foot travel lanes, an 8-foot-wide shoulder on each side of the roadway, and a guardrail at each edge of the shoulder.

The type of habitat adjacent to the existing Tamiami Trail includes long and short hydroperiod wetlands as well as an abundance of interspersed willowheads, bayheads, and hardwood hammocks. Sawgrass (*Cladium jamaicense*) communities dominate the long hydroperiod wetlands while muhly grass (*Muhlenbergia capillaris*) and black sedge (*Schoenus nigricans*) dominate the short period wetlands mostly influenced by NESS and local rainfall.

There are four herbaceous wetland cover types present in the Everglades: (1) sloughs with deep, permanent water levels, (2) sawgrass marshes with semi-permanent water levels and long hydroperiods, (3) wet peat prairies, and (4) wet marl prairies with shorter hydroperiods. The wetland cover types are differentiated by the average flooding depth and duration and by their predominant plant cover.

The dominant species of vegetation along the south side of Tamiami Trail is the invasive exotic species, the Brazilian pepper (*Schinus terebenthifolius*). The Brazilian pepper forms a corridor of 10-30 feet wide.

1.5.3 Timing and Duration of Discharge

Construction of the project is anticipated to begin at the beginning of 2007 and is expected to require 33 months to complete.

1.6 DESCRIPTION OF DISPOSAL METHODS

The recommended plan, Alternative 14, involves the placement of fill on the south side of the Tamiami Trail. The encroachment into ENP on the south side of the roadway varies from three (3) feet along the portions of the highway to remain in place to 50 feet where transitions from the roadway to the bridge will be constructed.

Alternative 14 also involves the removal of approximately three miles of existing highway and embankment where traffic would be served by the bridges. The fill material would be disposed approximately 10 miles south of the project area in the C-111 Basin (Rocky Glades), which is owned by SFWMD. The material would be stockpiled north of the 8.5 Square Mile Area (8.5 SMA) and west of the Flow Way (Figure 3). Selected quantities of soils and organic peat may be evaluated for placement in the nearby Broward Water Preserve Area. Excavated fill may also be evaluated for backfilling the levee for the L-67 Extension project, where up to 50,000 cubic yards of material could be needed.

2.0 FACTUAL DETERMINATIONS

2.1 PHYSICAL SUBSTRATE DETERMINATIONS

2.1.1 Substrate Elevation and Slope

The elevation ranges from 9.8 feet, National Geodetic Vertical Datum (NGVD) 1929 to 10.1 feet NGVD, with very little slope.

2.1.2 Sediment Type

Sediment is nearly level and poorly drained, consisting of organic material eight to more than 51 inches deep. The black to dark brown muck is underlain by soft, porous limestone.

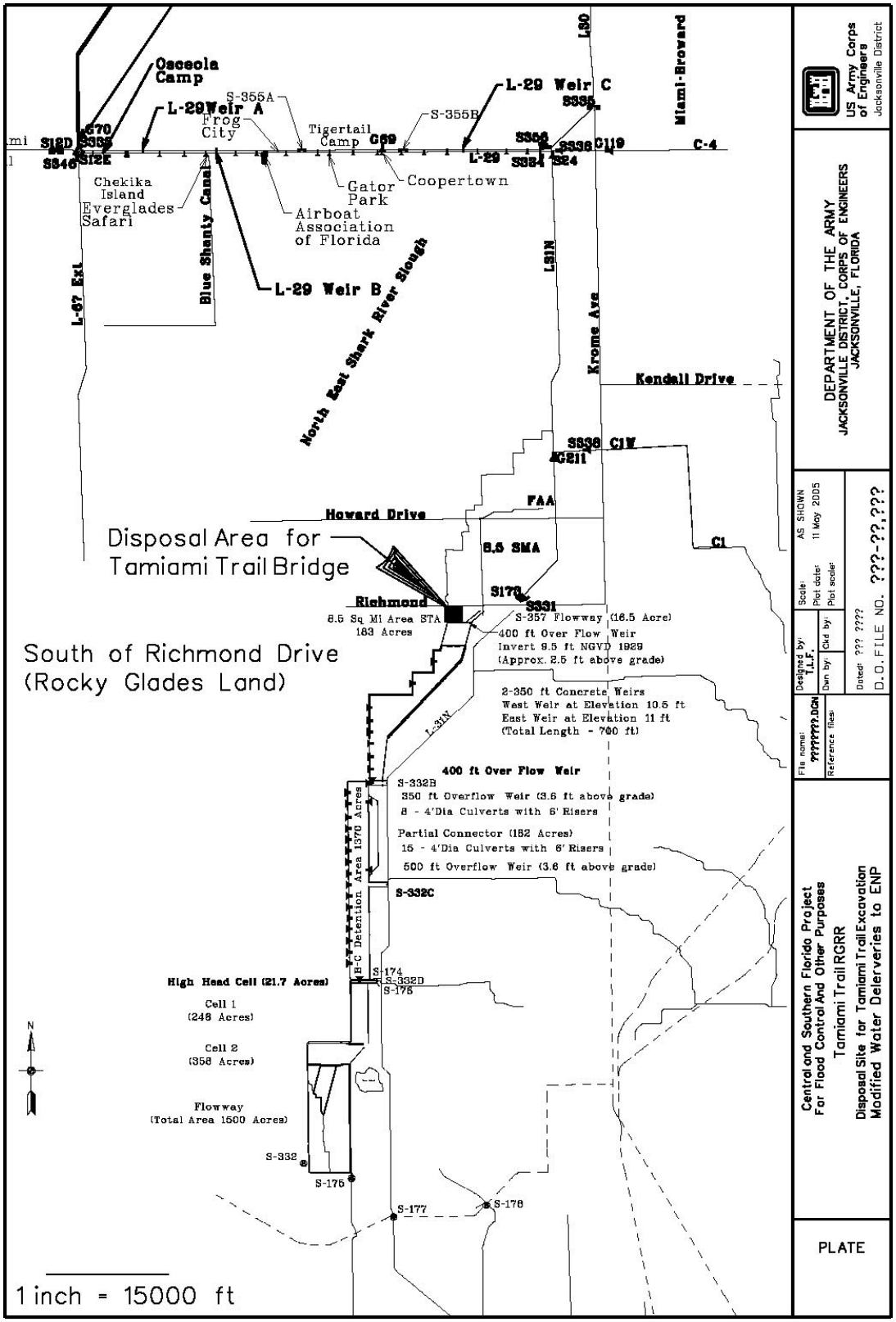


Figure 3. Embankment Disposal Site Location

2.1.3 Dredged and Fill Material Movement

The proposed action does not involve the movement of dredged material. However, fill material will both be added and removed. Where the existing highway will remain, additional fill will be emplaced in order to raise the road to a crown elevation of 12.3 feet NGVD from the average 10.0 feet NGVD. The increase in crown elevation necessitates an increase in the base of the highway in order to meet FDOT standards. Therefore, the footprint of Tamiami Trail will increase to the south into ENP.

Where the transition to the new bridge would be constructed, the existing embankment and muck would be removed to bedrock, and a new embankment of A-1 and A-3 material will be built. Fill material will consist of A-1 and A-3 select material in accordance with FDOT Standard Indices 500 and 505. The new bridge would be constructed approximately 50 feet to the south of the existing highway, using Florida Bulb Tee (FBT) 72 Beams with a composite cast-in-place concrete deck. This superstructure will be supported on pile bents using 24 inch square pre-cast, pre-stressed concrete piles.

The encroachment into ENP will impact approximately 21.9 acres; the area under the new bridges consists of approximately 17.1 acres. The existing highway to be replaced by the new bridge would be removed. The removed embankment, constituting approximately 27.3 acres, will be deposited off-site.

2.1.4 Physical Effects on Substrate

With the addition of 21.9 acres of fill material on the south side of Tamiami Trail, the wetland habitat adjacent to the south side of the highway will cease to function as such. On the transitions to the bridge, the existing embankment and muck will be removed to bedrock for the emplacement of A-1 and A-3 select material.

The portion of roadway to be bridged will have the existing fill, approximately 27.3 acres, removed. The exotic vegetation that exists in a corridor approximately 10 to 30 feet wide along the south side of Tamiami Trail would be removed.

Through project implementation, the distribution of flows would occur more evenly through the three-mile conveyance channel created by the bridges and through the remaining culverts under the improved roadway. The restoration of water deliveries would enable the restoration in ENP of vegetative communities by enabling the shift to open water, spikerush marsh and slough communities, by reducing the risk of ridge and tree island peat burning and by minimizing the invasion of exotic woody plant species.

2.1.5 Other Effects

No change in the general type of substrate is expected because the adjacent area is in public lands with WCA-3B to the north and ENP to the south side of Tamiami Trail. The quality of the substrate will be improved through project implementation.

2.1.6 Actions Taken to Minimize Impacts

The recommended plan incorporates actions to avoid and minimize impacts to aquatic communities. See Section 1.3.3, *Summary of Mitigation Features Incorporated into the Recommended Plan.*

2.2 WATER CIRCULATION, FLUCTUATION, AND SALINITY DETERMINATION

2.2.1 Water Quality

Existing water quality in the Everglades is greatly influenced by both urban and agricultural development-related activities of south Florida. The primary constituents of concern in ENP include nutrients, dissolved oxygen (DO), mercury, biochemical oxygen demand (BOD), and coliforms. In WCA-3B the constituents of concern are total phosphorus, DO, conductivity, mercury, and nitrite/nitrate nitrogen. Canals bordering the WCAs generally have very low DO levels typical of marsh waters.

Highway runoff potentially introduces contaminants such as metals, fuels, lubricants, combustion products, and toxic chemicals. Based on the low traffic volume along Tamiami Trail (5,200 vehicles per day), it can be inferred that the introduction of pollutants due to highway runoff is minimal.

The bridge will be constructed with a pollution abatement system that will collect stormwater runoff from the bridge only.

2.2.1.1 Salinity

Not applicable.

2.2.1.2 Water Chemistry

The potential increase in sediment transport during construction would be minimized through the implementation of BMPs. Nutrient levels in the project area may increase slightly from sediment disturbing activities. No significant long-term increases in these conditions are expected as a result of the project.

The long-term water quality in ENP would not be affected by the proposed project.

2.2.1.3 Clarity

Turbidity may increase during construction, but would revert to pre-construction conditions once implementation of the project is complete.

2.2.1.4 Color

No expected change.

2.2.1.5 Odor

The soils in the project area contain thick layers of organic material from eight to 51 inches thick. The exposure of the muck may release odors; however, these fumes are not noxious.

An investigation of hazardous, toxic, and radioactive waste (HTRW) was performed for the project area in accordance with the provisions of ASTM Standard E 1527-00, Standard Procedure for Environmental Site Assessments: Phase I Environmental Site Assessment Process. While no evidence of HTRW exists, the potential always exists that contaminants previously unknown to be present could be disturbed or released by removing unnatural structures from the landscape. If contaminants are found during construction through visual or olfactory means, the site would be remediated before construction recommences.

2.2.1.6 Taste

Not applicable.

2.2.1.7 Dissolved Gas Levels

The release of organic materials from sediments may slightly increase BOD, and the release of reduced materials may slightly increase chemical oxygen demand (COD), both of which would have the effect of lowering dissolved oxygen concentrations in the ecosystem. These impacts would be temporary, limited only to the time of construction and soil-disturbing activities.

2.2.1.8 Nutrients

Nutrient levels in the project area may increase slightly from sediment disturbing activities. This impact would be temporary, during construction activities only. No long-term change in nutrient concentrations would occur from implementation of the project.

2.2.1.9 Eutrophication

Not applicable.

2.2.2 Current Patterns and Circulation

2.2.2.1 Current Patterns and Flow

Implementation of the recommended plan would have beneficial effects on the current pattern and flow of waters in the project area. Modifications to Tamiami Trail will provide the capacity for the design high water (DHW) of 9.7 feet in the L-29 Canal. The

distribution of flows would occur through two conveyance channels totaling three miles wide and through the remaining existing culverts.

2.2.2.2 Velocity

The existing culvert system concentrates flows from L-29 Canal under Tamiami Trail through localized points. Flow velocity has been a concern.

The project would reduce high flow velocity discharges beyond that of the no-action alternative. Rather than concentrating flows under Tamiami Trail at the existing 55 culverts, flows would be more evenly distributed through the conveyance channels. Additionally, Alternative 14 would minimize the difference between the average velocity of flows at the road and those in the ENP marsh.

2.2.2.3 Stratification

The project would have a beneficial impact on stratification in the project vicinity. Instead of concentrating sediment flows through the system of existing culverts, the three-mile-wide conveyance channel would enable that flow to be more evenly distributed over a two-mile wide corridor in the west and a one-mile corridor in the east.

2.2.2.4 Hydrologic Regime

The hydrologic regime in south Florida has been drastically altered in the last hundred years through development of urban areas, agricultural practices, and the construction of systems of canals and levees. Rather than conveying sheet flow over a vast expanse of Everglades, south Florida has become decompartmentalized, and flow has been concentrated through canals.

The implementation of the project would assist in the restoration of water deliveries to ENP. In turn, the natural ridge and slough processes would be restored.

2.2.3 Normal Water Level Fluctuations

Water levels fluctuate during the year. The wet season in south Florida extends from May to September when there exists a higher than average incident of rainfall. The dry season lasts from October through April.

Currently, WCA-3B helps to maintain water levels in ENP, serving as storage for runoff during the wet season for use during the dry season. Water releases into ENP are only allowed when the minimum water level is achieved.

The proposed project will provide for the DHW of 9.7 feet in the L-29 Canal which is required by MWD. By allowing for a higher design stage, the deep sloughs of ENP are capable of maintaining water storage potentially year-round, except during extremely dry years.

2.2.4 Salinity Gradients

Not applicable.

2.2.5 Actions That Will be Taken to Minimize Impacts

The recommended plan incorporates actions to restore water circulation and fluctuations in NESS. See Section 1.3.3, *Summary of Mitigation Features Incorporated into the Recommended Pla*n.

2.3 SUSPENDED PARTICULATE/TURBIDITY DETERMINATIONS

2.3.1 Expected Changes in Suspended Particulates and Turbidity Levels in Vicinity of Disposal Sites

No changes in suspended particulates and turbidity levels are expected in the vicinity of the disposal site.

2.3.2 Effects on Chemical and Physical Properties of the Water Column

2.3.2.1 Light Penetration

Sediments released during construction operations may periodically reduce light penetration. Photosynthesis and primary productivity in portions of the affected areas is not expected to decrease because light attenuation from very briefly suspended particulates would be negligible.

2.3.2.2 Dissolved Oxygen

Effects on BOD and COD levels are expected to be minimal.

2.3.2.3 Toxic Metals and Organics

No anticipated increase in toxic metals and organics exists.

2.3.2.4 Pathogens

This project would have no effect on pathogens.

2.3.2.5 Aesthetics

Implementation of the project would beneficially impact the aesthetics of the area, as exotic vegetation would be removed along the highway and the bridges would offer an expansive view of the Everglades.

2.3.3 Effects on Biota

2.3.3.1 Primary Production

Photosynthesis and primary productivity in portions of the affected areas is not expected to decrease because light attenuation from very briefly suspended particulates would be negligible. As these particulates settle, primary production would return to pre-project levels.

2.3.3.2 Suspension/Filter Feeders

No impact to suspension/filter feeders is anticipated.

2.3.3.3 Sight Feeders

No impact to sight feeders is anticipated.

2.3.4 Actions Taken to Minimize Impacts

The recommended plan incorporates actions to avoid and minimize impacts to aquatic communities. See Section 1.3.3, *Summary of Mitigation Features Incorporated into the Recommended Plan.* Aquatic communities are expected to benefit from the project.

2.4 CONTAMINANT DETERMINATIONS

An investigation of HTRW was performed for the project area in accordance with the provisions of ASTM Standard E 1527-00, Standard Procedure for Environmental Site Assessments: Phase I Environmental Site Assessment Process. While no evidence of HTRW exists, the potential always exists that contaminants previously unknown to be present could be disturbed or released by removing unnatural structures from the landscape. If contaminants are found during construction through visual or olfactory means, the site would be remediated before construction re-commenced.

2.5 AQUATIC ECOSYSTEM AND ORGANISM DETERMINATION

2.5.1 Plankton

No major changes in the plankton communities are anticipated as a direct result of the project.

2.5.2 Benthos

No impacts to the benthic community are anticipated.

2.5.3 Nekton

Impacts to nekton from implementation of the project are anticipated to be beneficial. During construction, elevated sediment levels during fill removal may occur; however, these impacts would be constructed related. Once construction is complete, improved water flow and distribution from WCA-3B and the L-29 Canal through Tamiami Trail to ENP would improve conditions and increase the total abundance of fishes in ENP.

2.5.4 Aquatic Food Web

The aquatic food web would not be adversely impacted from the project.

2.5.5 Special Aquatic Sites Effects

2.5.5.1 Sanctuaries and Refuges

WCA-3B managed by the Florida Fish and Wildlife Conservation Commission (FWC) as the Francis S. Taylor Wildlife Management Area is located north of the project area, and ENP and NESS are located south of the project area. No excavated material would be placed within WCA-3B; however, encroachment of the highway to the south will be necessitated in order to meet current FDOT highway construction standards.

ENP is designated in F.A.C. 62-302.700(9)(a) as an Outstanding Florida Water (OFW), which Florida Department of Environmental Protection (FDEP) defines as a water worthy of special protection because of its natural attributes. The OFW designation requires that existing ambient water quality be maintained. Therefore, turbidity and other water quality impacts would be restricted to a mixing zone approved by FDEP and would occur temporarily during construction activities only.

2.5.5.2 Wetlands

Effects of the project were examined, and impacts associated with the recommended plan are presented in Table 1. In meeting current FDOT standards for roadway geometry, the higher profile of the roadway would result in a wider roadbed than currently exists, and the action alternatives would require expansion of the highway footprint southward due to necessary avoidance of the L-29 Canal. The width of the expansion is estimated to vary from 0 to 48 feet, depending on the height of the road and the amount of elevation a particular portion of the road needs.

Wetland losses would also result from constructing the bridge approaches, which would transition from the roadway approximately 47 feet to the south over a distance of approximately 1700 feet. In addition, shading by the bridge is anticipated to convert wetland habitat to open-water habitat.

Removal of the existing embankment under the bridges associated with each alternative offers the opportunity to restore wetland habitat that had previously been impacted by fill.

Table 1. Approximate Impacts to Wetlands

Recommended Plan	Wetland Gain / (Loss) (acres)		Wetland (Loss) from Raising Road Elevation (acres)	Wetland (Loss) from Constructing Approaches (acres)	Net Wetland Gain / (Loss) from Project (acres)
	Area Under Bridge	Area of Roadway Removed			
Alt 14. 2-Mile Bridge & 1-Mile Bridge	(17.1)	27.3	(12.1)	(9.8)	(11.8)

Source: PBS&J and G.E.C., Inc. (2005).

Exotic vegetation present along the south side of Tamiami Trail has diminished the quality of wetland habitat in the project area. The dominant exotic species of vegetation, Brazilian pepper (*Schinus terebenthifolius*), which exists in a 10-30-foot-wide corridor along the highway. The construction of modifications to Tamiami Trail presents the opportunity to remove existing exotic vegetation, thereby improving the quality of wetlands in the project area.

Additional wetland benefits would be realized through restoration of water deliveries to ENP, ridge and slough processes and vegetative communities. Alternative 14 was calculated to provide 28,371 average annual habitat units. If one assumes a worst case condition that the 11.8 acres of wetlands estimated to be lost were pristine and had an index value of 1.0 in the Future Without Project condition and an index value of 0.0 with implementation of Alternative 14, this would represent a negative change of 11.8 habitat units. This change would be only approximately 0.04 percent of the 28,371 average annual habitat units currently estimated for Alternative 14. As the wetlands are not pristine due to the presence of exotic vegetation, it is estimated that the decrease in habitat units would be even less severe than that presented in this scenario.

2.5.5.4 Vegetated Shallows

Historically, the area was predominantly ridge and slough habitat, a complex mosaic of marsh assemblages with distinct tree islands. Currently, WCA-3B and ENP are dominated by long and short hydroperiod wetlands with an abundance of interspersed willowheads, bayheads, and hardwood hammocks. Sawgrass (*Cladium jamaicense*) communities dominate the long hydroperiod wetlands while muhly grass (*Muhlenbergia capillaris*) and black sedge (*Schoenus nigricans*) dominate the short hydroperiod wetlands. Four herbaceous wetland cover types are found in the project area: (1)

sloughs with deep, permanent water levels, (2) sawgrass marshes with semi-permanent water levels and long hydroperiods, (3) wet peat prairies, and (4) wet marl prairies with shorter hydroperiods.

The project would help restore water deliveries to ENP and thus restore the quality of vegetative communities south of Tamiami Trail.

2.5.5.5 Coral Reefs

Not applicable.

2.5.5.6 Riffle Pool Complexes

Not applicable.

2.5.6 Threatened and Endangered Species

Six Federally-protected species are known or are potentially encountered in the project area in the 2003 and 2005 Fish and Wildlife Cooridnation Act Report (FWCAR). These include the Cape Sable seaside sparrow (CSSS) (*Ammodramus maritimus mirabilis*), eastern indigo snake (*Drymarchon corais couperi*), Florida panther (*Puma [=Felis] concolor coryi*), snail kite (*Rostrhamus sociabilis*), West Indian manatee (*Trichechus manatus*), and wood stork (*Mycteria americana*). FWC also identified a wading bird rookery just north of the project area across L-29 Canal.

USFWS and FWC did not recommend protective measures or restrictions during construction for the Florida panther, snail kite, West Indian manatee, or the Frog City wading bird rookery. The project was also determined to not preclude compliance with the reasonable and prudent alternatives (RPA) established for conservation of the CSSS through the 1999 USFWS Biological Opinion. Protective measures will be put in place during construction to avoid and minimize impacts to the eastern indigo snake and the wood stork.

After implementation of the project, wildlife mortality in the area is expected to decrease as a result of the three-mile elevated section.

2.5.7 Other Wildlife

The American alligator (*Alligator mississippiensis*) and the Everglades mink (*Mustela vison evergladensis*) were reported in the FWCAR to be present in the area. These species are protected by the State of Florida. After implementation of the project, wildlife mortality in the area is expected to decrease as a result of the four-mile elevated section.

2.5.8 Actions to Minimize Impacts

The recommended plan incorporates actions to avoid and minimize impacts to aquatic communities. See Section 1.3.3, *Summary of Mitigation Features Incorporated into the Recommended Plan*. Although not a part of the project purpose, wildlife crossings can be incorporated into the project as a betterment or enhancement if funded from another source, or the betterment can be included in another project.

2.6 PROPOSED DISPOSAL SITE DETERMINATIONS

2.6.1 Mixing Zone Determination

The sediments to be removed from the project area consist of highway embankment and organic material known to exist within the embankment and which will be removed down to bedrock during the construction of the bridge transition segments. The amount of material scheduled to be removed from the embankment covers approximately 27.3 acres. The fill material will be disposed of 15-20 miles south of the project area in the C-111 Basin (Rocky Glades). The material would be stockpiled north of the 8.5 Square Mile Area (8.5 SMA) and west of the Flow Way. Selected quantities of soils and organic peat may be evaluated for placement in the nearby Broward Water Preserve Area.

Additionally, ENP is designated in F.A.C. 62-302.700(9)(a) as an Outstanding Florida Water (OFW), which the Florida Department of Environmental Protection (FDEP) defines as a water worthy of special protection because of its natural attributes. The OFW designation requires that existing ambient water quality be maintained. Therefore, turbidity and other water quality impacts would be restricted to a mixing zone approved by FDEP and would occur temporarily during construction activities only.

2.6.2 Potential Effects on Human Use Characteristics

2.6.2.1 Municipal and Private Water Supply

No adverse effects would occur to municipal or private water supply.

2.6.2.2 Recreational and Commercial Fisheries

Indirect effects of the project on habitat of fishes are discussed in Section 2.5.3, *Nekton.* This project would have no adverse impacts on recreational and commercial fisheries.

2.6.2.3 Water Related Recreation

The project area is used for both consumptive (fishing, hunting, and frogging) and non-consumptive (wildlife viewing, camping, boating, airboating, etc.) recreational use. Access to businesses and other existing facilities would be maintained during and after

construction. Bank fishing from the highway would be eliminated in the vicinity of the bridge, but access to the L-29 Canal would be maintained using the L-29 Levee road.

2.6.2.4 Aesthetics

During construction, the aesthetics of the area would be impacted by heavy equipment and construction related activities. However, after construction is completed, a net long-term gain would be realized. Exotic vegetation would be removed from the edge of the highway, and the bridge would offer expansive views of ENP.

2.6.2.5 Parks, National Historic Monuments, National Seashores, Wilderness Areas, Research Sites, and Similar Preserves

The project is part of a larger effort to restore ecological values to the Everglades. The implementation of this project would benefit both WCA-3B and ENP.

2.7 DETERMINATION OF CUMULATIVE EFFECTS ON THE AQUATIC ECOSYSTEM

The project would restore hydrologic patterns and ecological connectivity in a portion of the Everglades ecosystem to the extent practicable. It is compatible with future actions to be taken throughout the area of south Florida and minimizes retrofit that would be necessary should future enhancements of Tamiami Trail be undertaken.

2.8 DETERMINATION OF SECONDARY EFFECTS ON THE AQUATIC ECOSYSTEM

All benefits to flora and fauna would be secondary in that the direct effects of the project would be hydrological, but the secondary effects of the project would benefit the ecological components of the region. Both the vegetation and the fish and wildlife resources would be improved upon implementation of Alternative 14.

2.9 ACTIONS TAKEN TO MINIMIZE IMPACTS

The recommended plan incorporates actions to avoid and minimize impacts to aquatic communities. See Section 1.3.3, *Summary of Mitigation Features Incorporated into the Recommended Plan*. The project is designed to benefit aquatic communities.

3.0 FINDINGS OF COMPLIANCE OR NON-COMPLIANCE WITH THE RESTRICTIONS ON DISCHARGE

3.1 ADAPTATION OF THE SECTION 404(b)(1) GUIDELINES TO THIS EVALUATION

No significant adaptations of the guidelines were made relative to this evaluation.

3.2 EVALUATION OF AVAILABILITY OF PRACTICABLE ALTERNATIVES TO THE PROPOSED DISCHARGE SITE THAT WOULD HAVE LESS ADVERSE IMPACT ON THE AQUATIC ECOSYSTEM

Section 5.0 of the RGRR/SEIS, *Formulation of Alternative Plans*, discusses in detail the methodology used to develop and evaluate a wide array of alternatives. No practicable alternative exists which meets the study objectives that does not involve discharge of fill into waters of the United States.

3.3 COMPLIANCE WITH APPLICABLE STATE WATER QUALITY STANDARDS

The project would not violate any applicable state water quality standards with the possible exception of temporary and negligible increases in turbidity, which might occur during construction. All other standards would be maintained during and following the placement of excavated and fill material.

3.4 COMPLIANCE WITH APPLICABLE TOXIC EFFLUENT STANDARD OR PROHIBITION UNDER SECTION 307 OF THE CLEAN WATER ACT

This project would be in full compliance of Section 307 of the Clean Water Act and would not violate the Toxic Effluent Standards.

3.5 COMPLIANCE WITH THE ENDANGERED SPECIES ACT OF 1973

The proposed project would not harm any threatened or endangered species or their critical habitats. Coordination with USFWS has been maintained throughout the planning process for this project. USFWS comments concerning protected species were addressed in the RGRR/SEIS.

3.6 COMPLIANCE WITH SPECIFIED PROTECTION MEASURES FOR MARINE SANCTUARIES DESIGNATED BY THE MARINE PROTECTION, RESEARCH, AND SANCTUARIES ACT OF 1972

Not Applicable.

3.7 EVALUATION OF EXTENT OF DEGRADATION OF THE WATERS OF THE UNITED STATES

3.7.1 Significant Adverse Effects on Human Health and Welfare

The proposed project would not result in adverse effects on human health and welfare.

3.7.1.1 Municipal and Private Water Supplies

This project would not be located near municipal water supply intakes or private water supplies.

3.7.1.2 Recreational and Commercial Fishing

Recreational bank fishing would be eliminated along the bridges where the highway embankment would be removed; however access to the L-29 Canal would remain from the L-29 Levee which can be accessed from the S-333 or S-334 water control structure.

3.7.1.3 Plankton

This project would not adversely affect plankton.

3.7.1.4 Fish

This project would not adversely affect fisheries resources. The project would on the contrary enhance the total abundance of fishes in ENP based upon the improvement of water distribution and flow through the three-mile-wide conveyance channel, two miles on the west side of the project and one mile on the east side.

3.7.1.5 Shellfish

This project would not adversely affect shellfish.

3.7.1.6 Wildlife

With the incorporation of protective measures for the wood stork and the eastern indigo snake, this project will not impact wildlife in the area. After construction of the bridge is complete, wildlife mortality in the project area is expected to decrease.

3.7.1.7 Special Aquatic Sites

WCA-3B and ENP would not be adversely impacted by the project.

3.7.2 Significant Adverse Effects on Life Stages of Aquatic Life and Other Wildlife Dependent on Aquatic Ecosystems

Significant adverse effects of life stages of aquatic life are not anticipated.

3.7.3 Significant Adverse Effects on Aquatic Ecosystem Diversity, Productivity, and Stability

Significant adverse effects on aquatic ecosystem diversity, productivity, and stability are not anticipated.

3.7.4 Significant Adverse Effects on Recreational, Aesthetic, and Economic Values

The proposed plan would have no adverse impacts on recreational, aesthetic, and economic values.

3.7.5 Appropriate and Practicable Steps Taken to Minimize Potential Adverse Impacts of the Discharge on the Aquatic Ecosystem

The recommended plan incorporates actions to avoid and minimize impacts to aquatic communities. The project is intended to benefit the aquatic ecosystem. See Section 1.3.3*, Summary of Mitigation Features Incorporated into the Recommended Plan.* Among features applicable to the substrate are the removal of highway embankment where the new bridges would be located, the incorporation of best management practices into construction activities, and the implementation of protective measures for the Tamiami East and West Wood Stork colonies.

3.8 COMPLIANCE

Based on the guidelines, the proposed project is specified as complying with the requirements of these guidelines with the inclusion of appropriate and practical conditions to minimize pollution or adverse effects to the affected aquatic ecosystem.

4.0 REFERENCES CITED

U.S. Army Corps of Engineers. 1992. General Design Memorandum and Environmental Impact Statement, Modified Water Deliveries to Everglades National Park. Jacksonville District, U.S. Army Corps of Engineers.

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