SITE CERTIFICATION APPLICATION
SEMINOLE GENERATING STATION UNIT 3
PALATKA, FLORIDA

VOLUME III OF III

SUBMITTED BY:

SEMINOLE ELECTRIC COOPERATIVE INC.
16313 NORTH DALE MABRY HIGHWAY
TAMPA, FLORIDA 33688

Golder Associates Inc.
5100 West Lemon Street, Suite 114
Tampa, Florida 33609

March 2006

VOLUME III OF III

10.3 Land Use Plan Descriptions

The following section provides a copy of the Compilation of Information for the Land Use Hearing.

COMPILATION OF INFORMATION
FOR LAND USE HEARING
(Rule 62-17.121, F.A.C.)

Applicant, SEMINOLE ELECTRIC COOPERATIVE, INC. (SECI), files the following Compilation of Information, as required under Rule 62-17.121, F.A.C., specifying the procedures taken by SECI to assure that the proposed site, and associated facilities, are in compliance with existing land use plans and zoning ordinances as required by Section 403.508(2), Fla. Stat.

Information Provided In Compilation

This compilation includes the following documents as they existed at the time of filing of the application for certification:

Exhibit I: Ordinance No.: 2006-02 (approving the requested PUD amendment and which incorporates, as an attachment, the required Development Agreement between Putnam County and Seminole Electric Cooperative, Inc., as presented to the Board of County Commissioners)

Exhibit II: Development Agreement (as approved by the Board of County Commissioners and executed by all parties)

Exhibit III: Future Land Use Map and Enlarged Insert Showing Future Land Use Categories Applicable To Site

Exhibit IV: Zoning Map and Enlarged Insert Showing Zoning of Site

Exhibit V: Putnam County Land Development Code (applicable articles)

Exhibit VI: Putnam County Comprehensive Plan

Availability of Compilation for Public Inspection

As required by Rule 62-17.121(1), F.A.C., four copies of this compilation, and attached exhibits, have been filed with the Department of Environmental Protection

Siting Coordination Office (SCO). The Department SCO shall file one copy with the Division of Administrative Hearings accompanying the certification application filed pursuant to Section 403.5065, Fla. Stat.

Additionally, as required by Rule 62-17.121(2), F.A.C., copies of this compilation have been made available for public inspection at: 1) Applicant's principal business office at 16313 North Dale Mabry Highway, Tampa, Florida; and, 2) the Florida Department Environmental SCO at 2600 Blair Stone Road, Tallahassee, Florida. The Applicant has no local business offices in Putnam County other than the plant itself which is not open to the general public due to safety and security considerations. To assure local availability, a copy of this compilation was attached as an appendix to the application for certification which has been provided to the Putnam County Library, 601 College Road, Palatka, Florida, as required by Rule 62-17.051(5)(b), F.A.C.

Summary: Basis of Compliance, Consistency of Site

This compilation confirms that the site is in compliance and consistent with applicable land use plans and zoning ordinances. The site was originally zoned PUD in 1978 to accommodate the certification and construction of the existing SGS Units 1 and 2. In anticipation of seeking the certification of Unit 3, an application was filed with Putnam County requesting the amendment of the existing PUD to allow a third coal-fired generating unit to be constructed adjacent to, and integrated with, the existing Units 1 and 2. On January 10, 2006, the Putnam County Board of County Commissioners unanimously approved the PUD amendment, and accompanying development agreement, by adopting Ordinance 2006-02. The Development Agreement, as approved, states that, "[a]doption of an ordinance by the Board of County Commissioners, approving the

proposed amendment to the Seminole Generating Station PUD, shall serve as confirmation by the County that the proposed site, for the purpose of adding Unit 3 and its accessory and associated facilities, is consistent and in compliance with existing land use plans and zoning ordinances of Putnam County."

The ordinance, as adopted on January 10, 2006, specifically finds that the PUD amendment to accommodate SGS Unit 3 is consistent with the County Comprehensive Plan and meets the requirement of the County Land Development Code.

SECI submits that the attached materials fully comply with Rule 62-17.121, F.A.C., and confirm that the site is in compliance as required by Section 403.508(2), Fla. Stat.

EXHIBIT I

ORDINANCE NO. 2006-02

ORDINANCE NO. 2006- 02
AMENDING ORDINANCE NO. 2005-18

AN ORDINANCE OF THE COUNTY OF PUTNAM, STATE OF FLORIDA, AMENDING PUD-78-002, AS ADOPTED AND INCORPORATED ON THE OFFICIAL ZONING MAP BY PUTNAM COUNTY ORDINANCE 2005-18, TO PROVIDE A FOR A THIRD ELECTRIC POWER GENERATION UNIT; PROVIDING A DEVELOPMENT AGREEMENT WHICH SHALL GOVERN FUTURE DEVELOPMENT OF THE LAND ZONED TO PUD; PROVIDING FOR THE BOARD OF COUNTY COMMISSIONERS HEARINGS TO SERVE AS THE PUBLIC HEARING AND THE STATE POWER PLANT SITE CERTIFICATION PROCESS TO SERVE AS AND SUPPLANT THE DEVELOPMENT REVIEW REQUIRED UNDER SECTION 12.04.05.a OF THE LAND DEVELOPMENT CODE, PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE:

WHEREAS, the Board of County Commissioners of Putnam County, Florida, is authorized under Chapters 125 and 163, Florida Statutes, to enact zoning regulations and a zoning map to protect the health, safety and welfare of the citizens of Putnam County; and

WHEREAS, the Board of County Commissioners of Putnam County previously adopted the Zoning District Map as part of the Putnam County Land Development Code (Ordinance 2005-18), which included the PUD zoning district established pursuant to PUD-78-002, and

WHEREAS, the County has determined that it is in the best interest of the citizens of Putnam County to allow PUD-78-002 to be amended to allow for a third electric power generation unit, subject to the conditions outlined in the Development Agreement referenced below; and

WHEREAS, the Planning Commission, the designated Local Planning Agency for Putnam County, held a duly noticed public hearing regarding this proposed PUD zoning amendment on December 14, 2005, and recommended approval of same; and

WHEREAS, the Board of County Commissioners of Putnam County held a duly noticed public hearing on January 10, 2006, to consider this same proposed amendment; and

WHEREAS, the Board of County Commissioners determined that the proposed amendment of the PUD Zoning established under PUD-78-002 is consistent and compatible with the Future Land Use Element of the Putnam County Comprehensive Plan and is in the best interest of the public health, safety and welfare of the general public and the orderly development of the district and the neighboring property; and

WHEREAS, Chapter 403, Part II, Florida Statutes, sets forth the Florida Electrical Power Plant Siting Act, which establishes a detailed public review process that will follow this zoning hearing and will necessarily include comments and input from

Putnam County as a participant in that process; and

WHEREAS, the Board of County Commissioners has determined that the review and approval of the PUD at public hearings held by both the Planning Commission and Board of County Commissioners, in addition to the Power Plant Site Certification process required by the State of Florida, meets the intent and purpose of the public review and notice requirements for Class III developments under section 12.04.05.a., subparagraphs 4 through 6;

NOW THEREFORE, BE IT ORDAINED by the Putnam County Board of County Commissioners, Putnam County, Florida, in a meeting assembled on the 10th day of January 2006:

SECTION 1. FINDINGS AND AMENDMENT OF ZONING MAP

a. Pursuant to the application submittals by Seminole Electric, the recommendations and the findings of the Planning Commission, and the evidence presented to this Board, the Board of County Commissioners finds that, subject to the terms and conditions set forth in this Ordinance, including but not limited to the development agreement attached hereto as Exhibit 1:

    (1) The proposed amendments to the Seminole Electric Planned Unit Development (PUD) zoning is consistent with the Comprehensive Plan;
    (2) The amendment to the Planned Unit Development (PUD), as proposed by the applicant, will not adversely affect the orderly development of the zoning district or the adjacent and surrounding properties;
    (3) The amendment to the Planned Unit Development (PUD), as proposed by the applicant, will not adversely affect the health and safety of the residents in the area or be detrimental to the natural environment;
    (4) The amendment to the Planned Unit Development (PUD), as proposed by the applicant, meets the requirements of the Land Development Code;
    (5) The proposed amendments will not be placed in agricultural lands;

b. The PUD zoning for the property described in the attached Development Agreement is hereby amended as provided in the terms and conditions of the Development Agreement attached hereto and incorporated herein by reference as "Exhibit 1 – Seminole Electric PUD Development Agreement" The requirements of Section 12.11.03.b.1-6, Land Development Code are contained in the body of this Ordinance and Exhibit 1 hereto.

SECTION 2. DEVELOPMENT REVIEW

The review and approval of the PUD zoning and this Development Agreement by the Planning Commission and the Board of County Commissioners, along with the County's participation in the process outlined in Florida Electrical Power Plant Siting Act ("PPSA") shall be deemed sufficient to meet the requirements under section 12.04.05.a., subparagraphs 4 through 6. Zoning Board of Adjustment review shall not be required.

The Development Review Committee will conduct a formal review of the submittals provided during the PPSA site certification process and submit comments, if any, prior to the issuance of an order by the Governor granting final site certification, to insure compliance with the requirements of the Development Agreement.

SECTION 3. SEVERABILITY

If any portion of this ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed separate and such holdings shall not affect the validity of the remaining portions.

SECTION 4. INCLUSION IN THE ORDINANCE

The provisions of this ordinance shall become and be made part of Putnam County Land Development Code, as amended.

SECTION 5. EFFECTIVE DATE

The Ordinance shall take effect upon the date of receipt by the Florida Department of State.

DONE, ORDERED AND ADOPTED this 10th day of January 2006.

BOARD OF COUNTY
COMMISSIONERS
PUTNAM COUNTY FLORIDA

By: _____
Linda Myers, Chair

ATTEST:

_____
Tim Smith, Clerk of Court

EXHIBIT II

DEVELOPMENT AGREEMENT

DEVELOPMENT AGREEMENT

SEMINOLE ELECTRIC COOPERATIVE, INC.

AMENDMENT OF
SEMINOLE GENERATING STATION PUD

This agreement is entered this _____ day of _____, 2006, by and between SEMINOLE ELECTRIC COOPERATIVE, INC., a Florida corporation, hereinafter referred to as "SECI" and the BOARD OF COUNTY COMMISSIONERS in and for PUTNAM COUNTY, a political subdivision of the State of Florida, hereinafter referred to as "COUNTY."

PREAMBLE

WHEREAS, on May 23, 1978, the Putnam County Board of County Commissioners adopted Ordinance PUD-78-002 approving the rezoning of certain parcels within Putnam County to Planned Unit Development (PUD) in anticipation of SECI seeking certification, under the Florida Electrical Power Plant Siting Act (PPSA), Chapter 403, Part II, Florida Statutes, for its now existing coal-fired electrical power generating station (Units 1 and 2); and,

WHEREAS, on September 18, 1979, the Governor and Cabinet, sitting as the Siting Certification Board, entered an order approving the construction of the existing coal-fired Units 1 and 2 pursuant to the PPSA; and,

WHEREAS, SECI commenced operation of Unit 1 in 1984 and Unit 2 in 1985, and those units continue to be in operation; and,

WHEREAS, in anticipation of SECI applying for certification of a third coal-fired unit (Unit 3) at its Putnam County generating facility, in early 2006, SECI has submitted an application to the COUNTY to amend its existing PUD zoning approval to accommodate plant modifications and additions necessary to construct, operate, and otherwise integrate Unit 3 into the existing site and to assure, as required under the

PPSA, that the proposed site is "consistent and in compliance with existing land use plans and zoning ordinances;" and,

WHEREAS, the site and existing Units 1 and 2 are located exclusively in the unincorporated area of Putnam County, and,

WHEREAS, the existing Units 1 and 2 are located in an Industrial future land use designation under the Putnam County Comprehensive Plan which allows electrical power plants on lands with such a designation; and,

WHEREAS, any modifications to the existing generating station, necessary to accommodate Unit 3, shall be fully evaluated under the PPSA during which the COUNTY may participate as a party; and,

WHEREAS, the COUNTY and SECI wish to set forth, in this Development Agreement, any and all information required by the COUNTY under Section 12.11.3.b.6.(a) – (c), of the Putnam County Land Development Code (LDC) and further wish to articulate a mutual understanding as to how the PUD amendment process and the statutory siting process may work together, to assure that the site is consistent with existing county land use plans and zoning ordinances, and fully address the environmental impact resulting from construction and operation of the facility, including air and water quality, fish and wildlife, and the water resources and other natural resources of the State and COUNTY.

NOW, THEREFORE, the parties hereto do agree as follows:

ARTICLE 1: PROPERTY OWNERSHIP AND DESCRIPTION

1.1 PURPOSE:

The purpose of this article is to set forth the location and ownership interests in the property subject to the PUD amendment and to provide a general description of the

existing Seminole Generating Station PUD and the nature of the PUD zoning amendment requested.

1.2 LEGAL DESCRIPTION

The legal description of the property is attached hereto and incorporated herein as Exhibit A to this Development Agreement.

1.3 PROPERTY OWNERSHIP

The property is owned by Seminole Electric Cooperative, Inc., a Florida Corporation.

1.4. GENERAL DESCRIPTION

The existing PUD is comprised of two separate parcels both of which were part of the originally approved rezoning and site certification. The plant itself is located on a parcel[1] consisting of approximately 1,917 acres (Parcel 1) situated east of U. S. Highway 17 and north of County Road 209 and lying in Section 31, Township 8 South, Range 27 East and Sections 5, 6, 7, 8, 17 and 18, Township 9 South, Range 27 East, and Sections 1 and 12, Township 9 South, Range 26 East, Putnam County, Florida. The property is accessed from US 17 and CR 209. A smaller waterfront parcel (Parcel 2) lies south of CR 209 within Section 18, Township 9 South, and Range 27 East. Parcel 2 consists of approximately 4.5 acres.

1.4.1. Main Power Plant Operations (Parcel 1)

Existing structures at the plant are typical of coal-fired steam generating power facilities throughout Florida the most prominent of which are the two 450 feet tall hyperbolic cooling towers and the existing stack which is 675 feet tall. The existing generating units are located in the central portion of the site. The site is undeveloped

[1] In 1980 a 40 acre out-parcel was purchased by SECI and added to the PUD by Ordinance PUD-80-001. In 1990 SECI acquired the remainder of Section 7, T 9 S, R 27 E which added approximately sixty (60) acres (Miller Parcel) bringing the total contiguous acreage north of CR 209 to approximately 2,066 acres. The sale of the Lafarge Parcel reduced the total contiguous holdings north of CR 209 to 1,977 acres of which 1,917 (omitting the Miller Parcel) are subject to the requested PUD amendment.

except for the existing units and ancillary facilities. Adjacent lands are largely undeveloped but for the Lafarge Gypsum plant located north of the existing generating facilities. The undeveloped portions of the site are primarily forested wetlands and uplands. The existing plant is a 1300 megawatt facility comprised of two 650 megawatt generating units. Output from the plant is distributed across associated transmission lines through various distribution systems (owned by ten electric cooperative members) that in turn deliver electricity to individuals and businesses in 46 of Florida's 67 counties. Over 1.6 million people are served by the Seminole Generating Station from the Florida panhandle to the southwest portion of the state.

1.4.2. Underground Cooling System Pipes and Pump House (Parcel 2)

A small second parcel (Parcel 2) lies south of CR 209 and accommodates a pump house and underground pipes necessary to operate the power plant cooling system. Parcel 2 is approximately 4.5 acres and includes approximately 212 feet of frontage on the St. Johns River which also serves as the northernmost boundary of a sovereign submerged land lease, from the State of Florida to SECI, which accommodates the power plant cooling water intake pipe. The underground pipes needed for the power plant cooling system run from Parcel 2, through a 100 foot wide privately granted easement, to the main power plant facility on Parcel 1. Parcel 2 and the easement are otherwise undeveloped. A boundary survey depicting Parcel 1, Parcel 2 and the pipeline easement is attached as Exhibit B.

1.5 LAND USE, PRINCIPAL USES AND STRUCTURES

On May 23, 1978, Parcels 1 and 2 were rezoned from Agricultural to PUD by Ordinance PUD-78-002 in anticipation of the construction of the existing power plant[2].

[2] As noted, on July 22, 1980, the PUD was amended (Ordinance PUD-80-001) to add an additional forty (40) acre out-parcel, at the north end of the SECI property, to Parcel 1. On December 14, 1999, Ordinance 99-29 amended the PUD to allow construction of a gypsum plant on a subparcel north of the existing plant.

At the time of the initial rezoning, the County Comprehensive Plan was still in a draft stage. Since 1978, and completion of the existing power plant, the County has adopted its Comprehensive Plan as well as a detailed Land Development Code.

Parcels 1 and 2 remain zoned PUD. The majority of Parcel 1, and the entirety of the existing and proposed power plant facilities, fall within the Industrial future land use category under the existing County Comprehensive Plan. Small portions of Parcel 1, not encumbered by plant facilities, fall within the Agricultural II future land use category. Approximately two-thirds of Parcel 2 falls within the Agricultural II future land use category with the southerly one-third waterfront portion falling within the Rural Residential future land use category. The existing pipeline easement, which is not a part of the PUD, runs across property zoned for agricultural uses and falling within the Agricultural II future land use category. Neither the County Comprehensive Plan nor the Land Development Code precludes the repair, replacement or addition of underground water pipes necessary to plant operations. The underground pipes, and the pipeline easement, were part of the original certification and any modifications required to accommodate Unit 3 will be reviewed as part of the site certification process.

Subject to site certification under the PPSA, Unit 3 will be constructed primarily east of, but integrated with, existing Units 1 and 2 such that any new development activity will fall within that portion of Parcel 1 designated under the Industrial future land use category. But for the existing pump house, Parcel 2, which is part of the PUD, will remain undeveloped. Pumps within the existing pump house will be replaced or upgraded and existing underground water pipes may be replaced or upgraded, and new underground pipes may be added, but no new uses or structures are intended for Parcel 2. The pipeline easement—which is not part of the PUD—will remain undeveloped

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By deed dated February 18, 2000, SECI conveyed the subparcel to Lafarge Corporation. The Lafarge parcel is shown in Exhibit B.

although pipes may be repaired, replaced (or additional pipes installed) underground between Parcels 1 and 2.

Although no new uses or above-ground structures are anticipated on Parcel 2 or the pipeline easement, both are considered to be part of the electrical power plant to be certified under the PPSA and will be reviewed along with Parcel 1 throughout the State site certification process to which the COUNTY shall be a party.

ARTICLE 2: PROJECT DEVELOPMENT AND CONDITIONS

2.1 PURPOSE

The purpose of this section is to describe the project plan of development, the proposed land uses and structures included in the project, any applicable standards and conditions of use of the Seminole Generating Station PUD, and the integration of those standards and conditions with the Florida Electrical Power Plant Siting Act review process. Subject to the PPSA review process, and ultimate approval by the Governor and Cabinet sitting as the siting board, the project will be completed substantially in accord with the PUD Master Plan , entitled "Conceptual Site Plan" attached as Exhibit C hereto, any applicable conditions of certification arising from the PPSA review process, and the following provisions of this Development Agreement. The final site plan for purposes of constructing and operating Unit 3 shall be the final site plan as certified under the PPSA[3], based upon the detailed review process under the PPSA, and as approved by order of the Governor and Cabinet sitting as the power plant siting board.

2.2 GENERAL

Adoption of an ordinance by the Board of County Commissioners, approving the proposed amendment to the Seminole Generating Station PUD, shall serve as

[3] Exhibit C contains two alternative plans that vary only slightly as to orientation of Unit structures and accessory uses in relation to one another. The differences between the Figures 1 and 2 do not substantively alter the location and configuration of Unit 3 as to be integrated with Units 1 and 2. The final orientation of structures and accessory uses will be determined by the site certification process.

confirmation by the COUNTY that the proposed site, for the purpose of adding Unit 3 and its accessory and associated facilities, is consistent and in compliance with existing land use plans and zoning ordinances of Putnam County as required under the PPSA. Upon filing a notice of intent to be a party, pursuant to Section 403.508(4) of the PPSA, the COUNTY shall subsequently participate as a party to the site certification proceedings which include additional opportunities for the COUNTY to review and comment upon issues related to the site as summarized in Exhibit D.

2.3 Relationship of Site Certification—County Development Plan Review

Because the addition of Unit 3 is subject to the State Electrical Power Plant Siting Act certification process, upon approval of the requested PUD amendment, and this Development Agreement, by the Board of County Commissioners, the Class III Preliminary and Final Development Plan Review process will be addressed by the COUNTY'S participation in the site certification proceedings, and in any agency report the COUNTY may submit under Section 403.507(2) of the PPSA, such that the issuance of an order granting final site certification, signed by the Governor, shall constitute approval for SECI to construct and operate Unit 3 consistent with this Development Agreement, the site certification, and any applicable conditions of certification.

2.4 PROJECT PLAN AND USE

Subject to certification under the PPSA, the PUD Amendment shall allow construction of Unit 3 substantially as set forth in the Conceptual Site Plan, attached as Exhibit C. Unit 3 shall lie primarily east of, and shall be integrated with, existing Units 1 and 2 on Parcel 1 of the PUD. Unit 3 is designed for a capacity of 750 megawatts (nominal). Subject to PPSA certification, Unit 3 and associated facilities may include the construction or installation of a turbine building, boiler, electrostatic precipitators, stack, wet FGD (flue gas desulfurization for SO2 removal), wastewater treatment facilities, wet

ESP (electrostatic precipitators for SO3 removal), FGD effluent processing area, a coal handling area, limestone preparation area, ammonia storage, wastewater surge pond, temporary construction warehouse, a zero liquid discharge system, a fuel oil tank and cooling tower. The new mechanical draft cooling tower, as proposed, will be approximately 1,300 feet in length but less than sixty (60) feet in height and, unlike the existing 450 foot hyperbolic cooling towers for Units 1 and 2, should not be visible from offsite. Temporary staging areas (laydown) will vary in location, within or in close proximity to the existing plant, as needed to facilitate construction.

During the construction of Unit 3, all construction traffic shall access the plant from US 17. No construction traffic, for either construction employees or construction deliveries, shall enter from CR 209 (a.k.a. "West River Road") but for an emergency situation in the event the US 17 entrance is not open. As part of its application for site certification under the PPSA, SECI shall seek approval from the Florida Department of Transportation (FDOT) for the installation of a traffic light, or lights, in addition to extended turn lanes and deceleration lanes at the SECI plant entrance, on US 17, to offset potential-traffic related impacts associated with Unit 3. SECI or economic development entities shall provide any needed funds for the installation and operation of the traffic improvements. Traffic improvements or controls shall be implemented at locations as may be required or approved by FDOT during the site certification process.

Where feasible, the existing Unit 1 and 2 common plant facilities and infrastructure will be utilized, including: the administration building, rail system, access roads and entrances, coal handling systems, lined storage area, sanitary wastewater treatment system, industrial and domestic wastewater treatment systems, water supply wells, intake and discharge facilities on the St. Johns River, and previously certified FGD landfill facilities.

A natural vegetative buffer will be maintained on Parcel 1 the width of which shall be that required under Section 7.03.03 of the Land Development Code. Along the south boundary of Parcel 1, the buffer shall be twice the maximum required under the Land Development Code or sixty (60) feet. Existing vegetation within the buffer shall be maintained but for wildfire management or selected tree thinning in accordance with established silviculture practice. Clear cutting of the natural vegetative buffer will not be allowed.

2.5 DEVELOPMENT STANDARDS

The project shall be constructed consistent and in compliance with the Putnam County Comprehensive Plan and Land Development Code, this PUD agreement, as may be approved by the Putnam County Board of County Commissioners, the order granting final site certification and any applicable conditions of certification. The certification shall authorize SECI to construct and operate the proposed electrical power plant, subject ~~only~~ to the conditions of certification set forth in such certification and the issuance of department (FDEP) licenses or permits required under any federally delegated or approved permit program.

ARTICLE 3. SUPPLEMENTAL REQUIREMENTS

3.1 PURPOSE

The purpose of this section is to articulate a mutual understanding as to the manner by which certain aspects of the proposed power plant modifications and additions, for the construction and operation of Unit 3, will be addressed by SECI and the COUNTY and integrated into the site certification process in which the COUNTY shall participate as a party.

3.2 RESOURCE PROTECTION STANDARDS

The Florida Department of Environmental Protection (DEP) acts as the coordinating agency throughout the site certification process. DEP's Siting Coordination Office (SCO) is responsible for collecting, reviewing and distributing all information necessary for state and local agencies to fully participate as parties and ultimately for the Governor and Cabinet, sitting as the siting board, to make an informed decision as to the appropriateness of the site for construction of an electrical power plant. To assure that the application process is orderly and thorough, the DEP SCO has published its "Instruction Guide: Power Plants," available online, which sets forth a detailed and comprehensive list of issues that each applicant must address when seeking site certification. Major categories of topics include: Need for Power and the Proposed Facilities; Site and Vicinity Characterization; The Plant and Directly Associated Facilities; Effects of Site Preparation and Plant and Associated Facilities Construction; Effects of Plant Operation; Transmission Lines and Other Linear Facilities; Economic and Social Effects of Plant Construction and Operation; Site and Design Alternatives; Coordination (a list of individuals within federal, state, regional, and local government agencies who were contacted to provide input to this project); and Appendices with federal permit applications and approvals, zoning descriptions, land use plan descriptions, existing state permits, and monitoring programs.

Based upon the breadth of the application process, and the scope of the information that must be distributed to each party, including the COUNTY, and because the COUNTY intends to participate in the site certification process, any provisions of Article 6 of the Putnam County Land Development Code, entitled "Resource Protection Standards," not already addressed in this Development Agreement and incorporated

documents, may be addressed by the COUNTY through its participation in the statutory site certification process.

3.3 DEVELOPMENT DESIGN AND IMPROVEMENT STANDARDS

Consistent with Section 3.2 hereinabove, any provisions of Article 7 of the Putnam County Land Development Code, entitled "Development Design and Improvement Standards" not already addressed in this Development Agreement and incorporated documents, may be addressed by the COUNTY through its participation in the site certification process.

3.4 TIME LIMIT FOR PROJECT COMPLETION

SECI and the COUNTY recognize that construction of a power generating unit is a multi-year process and so long as SECI is acting pursuant to the authority of the site certification, any approved modification thereof, and any applicable conditions of certification, there shall be no pre-determined time limit as to the completion of the project. The parties acknowledge that it is the intent of SECI to complete Unit 3 and place the unit into commercial operation by 2012.

3.5 MODIFICATION OF CERTIFICATION

To the extent SECI may seek to modify its certification as allowed under the PPSA, no further amendment of the Seminole Generating Station PUD shall be required if the PPSA would not otherwise require a determination that the modification is in compliance and consistent with existing land use plans and zoning ordinances. Additionally, SECI asserts, and the COUNTY acknowledges, that coal-fired generating units are engineered and constructed in such a manner that adjustments in building dimensions, the location of buildings in relation to one another, and the location of supporting uses in relation to the required buildings and structures, may have to be adjusted, e.g., to maximize efficiency or to accommodate design improvements deemed

necessary during construction. To the extent that any such modifications do not change the intensity or nature of the use, modify setbacks, or render the construction substantively inconsistent with the Conceptual Site Plan attached hereto, the COUNTY will not require that SECI seek further amendment of the Seminole Generating Station PUD.

3.6 HEIRS, SUCCESSORS AND ASSIGNS

This agreement shall be binding upon the parties hereto, their successors in interest, heirs, assigns and personal representatives.

ARTICLE 4. AGREEMENT

4.1 ENTIRE AGREEMENT

This document and any exhibits attached hereto and incorporated herein shall constitute the entire agreement between SECI and the COUNTY for purposes of satisfying Section 12.11.03.b.6., of the Putnam County Land Development Code.

4.2 AMENDMENTS

No modification, amendment or alteration in the terms or conditions herein shall be effective unless contained in a written document executed with the same formality.

4.3 JURISDICTION

Jurisdiction as to any dispute arising from this agreement lies in Putnam County, Florida.

4.4 NOTICES

All notices given pursuant to the terms of this agreement, or which either party may desire to provide hereunder, shall be in writing and delivered personally, by overnight carrier, or by U.S. Mail, return receipt requested, to:

Seminole Electric Cooperative, Inc.
C/o James R. Frauen
Post Office Box 272000
Tampa, Florida 33688-2000

Russell D. Castleberry, County Attorney
Post Office Box 758
Palatka, Florida 32178-0758

4.5 EFFECTIVE DATE

This Development Agreement shall become effective upon approval by the Putnam County Board of County Commissioners.

APPROVED BY ACTION OF THE PUTNAM COUNTY BOARD OF COUNTY COMMISSIONERS, this_____day of_____, 2006.

PUTNAM COUNTY, BOARD OF COUNTY COMMISSIONERS

BY:_____
LINDA MYERS, CHAIR

STATE OF FLORIDA
COUNTY OF PUTNAM

The foregoing instrument was acknowledged before me, this _____ day of _____, 2006, by _____ who __ is personally known to me or who __ produced _____ as identification.

_____ Notary Commission No.:
Notary, Signature

_____ My Commission Expires:
Notary, Print/Type

SEMINOLE ELECTRIC COOPERATIVE, INC.

BY:_____

ITS:_____

STATE OF FLORIDA
COUNTY OF HILLSBOROUGH

The foregoing instrument was acknowledged before me, this _____ day of _____, 2006, by _____ who __ is personally known to me or who __ produced _____ as identification.

_____ Notary Commission No.:
Notary, Signature

_____ My Commission Expires:
Notary, Print/Type

Exhibit A
(Legal Description for Seminole Electric PUD)

EXHIBIT A

LEGAL DESCRIPTION

PROPOSED AMENDMENT—SEMINOLE GENERATING STATION PUD

Parcel One:

Section 31, T 8 S, R 27 E

The South East quarter (SE ¼) of the South West quarter (SW ¼) and the Southeast quarter (SE 1/4) less and except the North one-half (N 1/2) of the Northeast quarter (NE 1/4) of the Southeast quarter (SE 1/4) of Section 31, Township 8 South, Range 27 East, Putnam County, Florida.

Section 5, T 9 S, R 27 E

The West one-half (W ½) of the West one-half (W ½) of Section 5, Township 9 South, Range 27 East, Putnam County, Florida.

Section 6, T 9 S, R 27 E

All of Section 6, lying East of the Seaboard Coast Line Railroad, in Township 9 South, Range 27 East, Putnam County, Florida, less and except that part conveyed by deed in O.R. Book 818, Page 221, Public Records of Putnam County, Florida.

Section 7, T 9 S, R 27 E

All of Section 7, Township 9 South, Range 27 East, less and except the following described tract of land containing 60 acres of land, more or less, to wit: The South one-half (S 1/2) of the South West Quarter (SW 1/4) of the South West quarter (SW 1/4) and the South East quarter (SE 1/4) of the South West quarter (SW 1/4), Putnam County, Florida.

Section 8, T 9 S, R 27 E

The West one-half (W ½) of the West one-half (W ½) and the South three-quarters (S ¾) of the East one-half (E ½) of the West one-half (W ½) and the South three-quarters (S ¾) of the West one-half (W ½) of the East one-half (E ½) of Section 8, Township 9 South, Range 27 East, Putnam County, Florida.

Section 17, T 9 S, R 27 E

Government Lot 4, of the Northwest quarter (NW ¼) of the Northwest quarter (NW ¼), and the West 66 feet of Government lot 5, or the West 66 feet of the Southwest quarter

(SW ¼) of the Northwest quarter (NW ¼) of Section 17, Township 9 South, Range 27 East, Putnam County, Florida.

Section 18, T 9 S, R 27 E

Government lots 1 and 2, or the North one-half (N ½) of the Northeast quarter (NE ¼), of Section 18, Township 9 South, Range 27 East, Putnam County, Florida, containing 80 acres of land, more or less.

Section 1, T 9 S, R 26 E

The Southeast quarter (SE ¼) of the Southeast quarter (SE ¼) lying East of the East line of the Seaboard Coast Line Railroad, Section 1, Township 9 South, Range 26 East, Putnam County, Florida.

Section 12, T 9 S, R 26 E

The Northeast quarter (NE ¼) or the Northeast quarter (NE ¼), lying East of the East line of the Seaboard Coast Line Railroad, Section 12, Township 9 South, Range 26 East, Putnam County, Florida.

Containing 1,917 acres of land more or less.

Parcel Two:

Section 18, T 9 S, R 27 E

A parcel of land situate lying and being in the South West quarter (SW ¼) of Section 18, Township 9 South, Range 27 East, more particularly described as follows:

Begin at the point of intersection of the South right-of-way line of State Road 209 and the East line of the South West quarter (SW ¼) of Section 18, Township 9 South, Range 27 East, thence run West along the South right-of-way line of said State Road 209 a distance of 200 feet to the point of beginning of the land herein described; from said point of beginning, run South to the St. John's River and Point A, thence begin again at the point of beginning and run West along the said South right-of-way line of State Road 209 a distance of 200 feet, thence run South to the St. John's River, thence run North and Easterly along said river to Point A, thence run North from Point A to the point of beginning of the land herein described.

Containing 4.525 acres of land more or less.

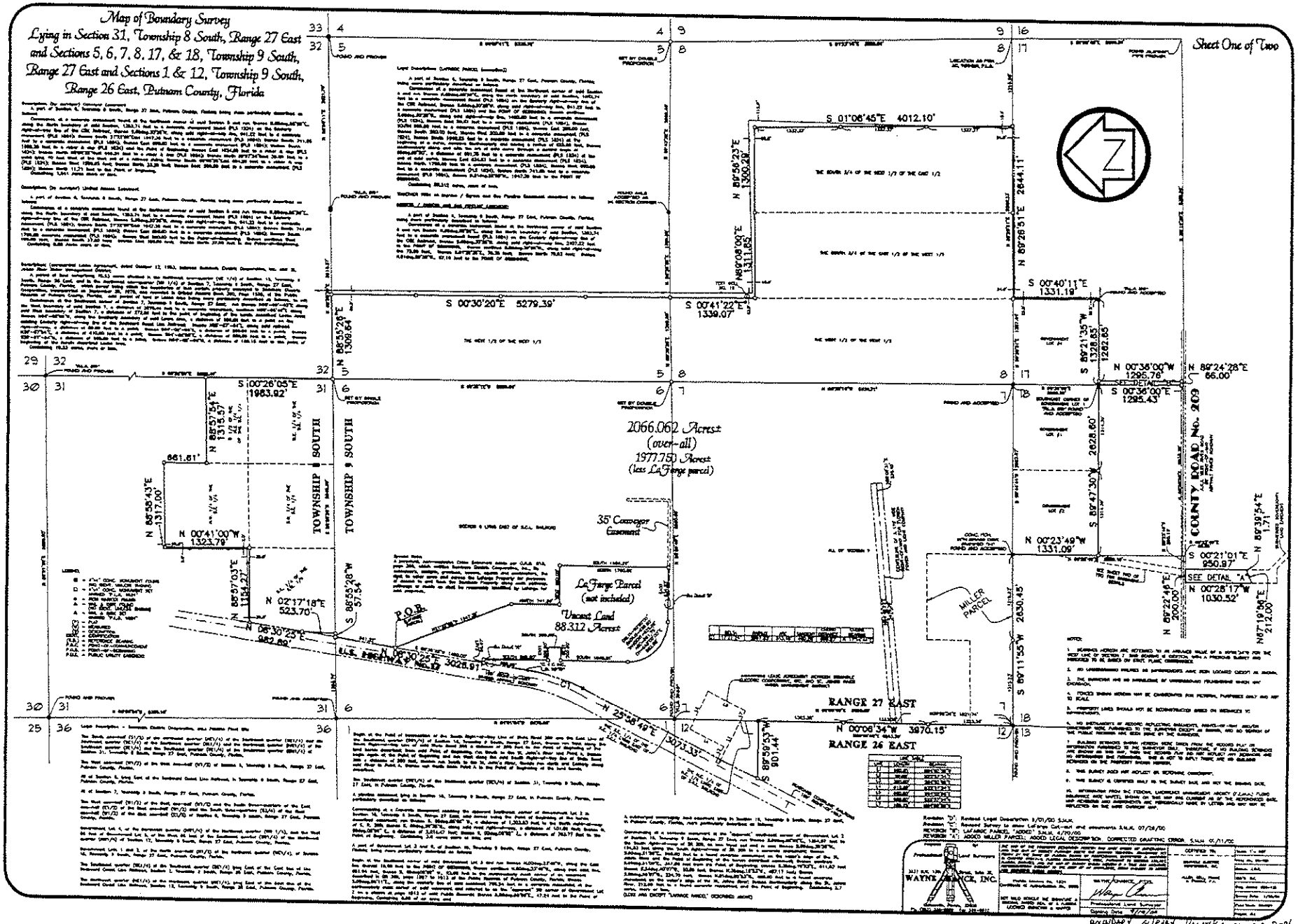
Exhibit B

(Boundary Survey and Pipeline Easement
for Seminole Electric PUD)

Map of Boundary Survey

Lying in Section 31, Township 8 South, Range 27 East and Sections 5, 6, 7, 8, 17, & 18, Township 9 South, Range 27 East and Sections 1 & 12, Township 9 South, Range 26 East, Putnam County, Florida

Sheet One of Two



BOUNDARY SURVEY PALATKA M-0513-D-01
(LAFARGE) Sh. 1 of 2 ACAD: W10-129BD

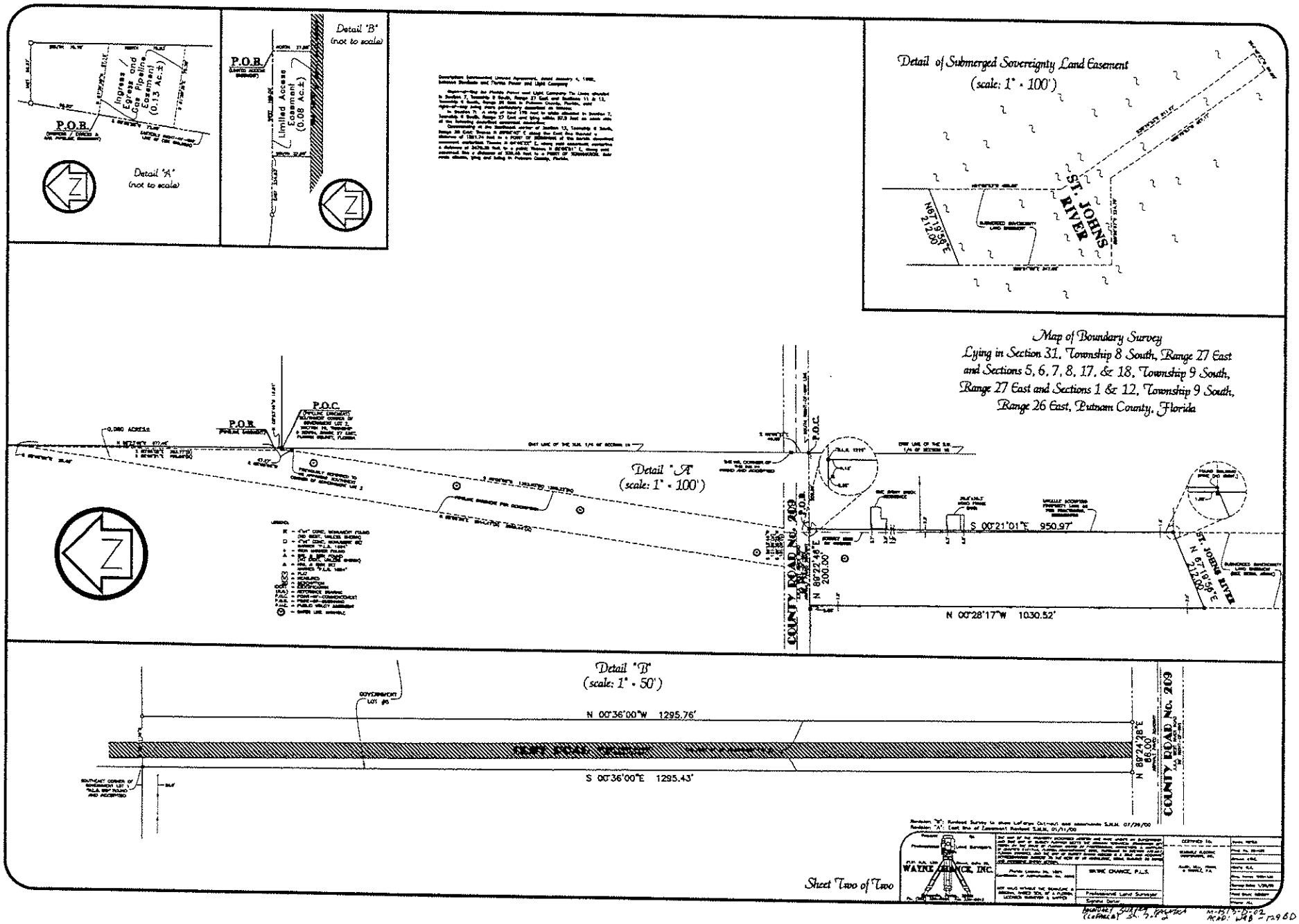
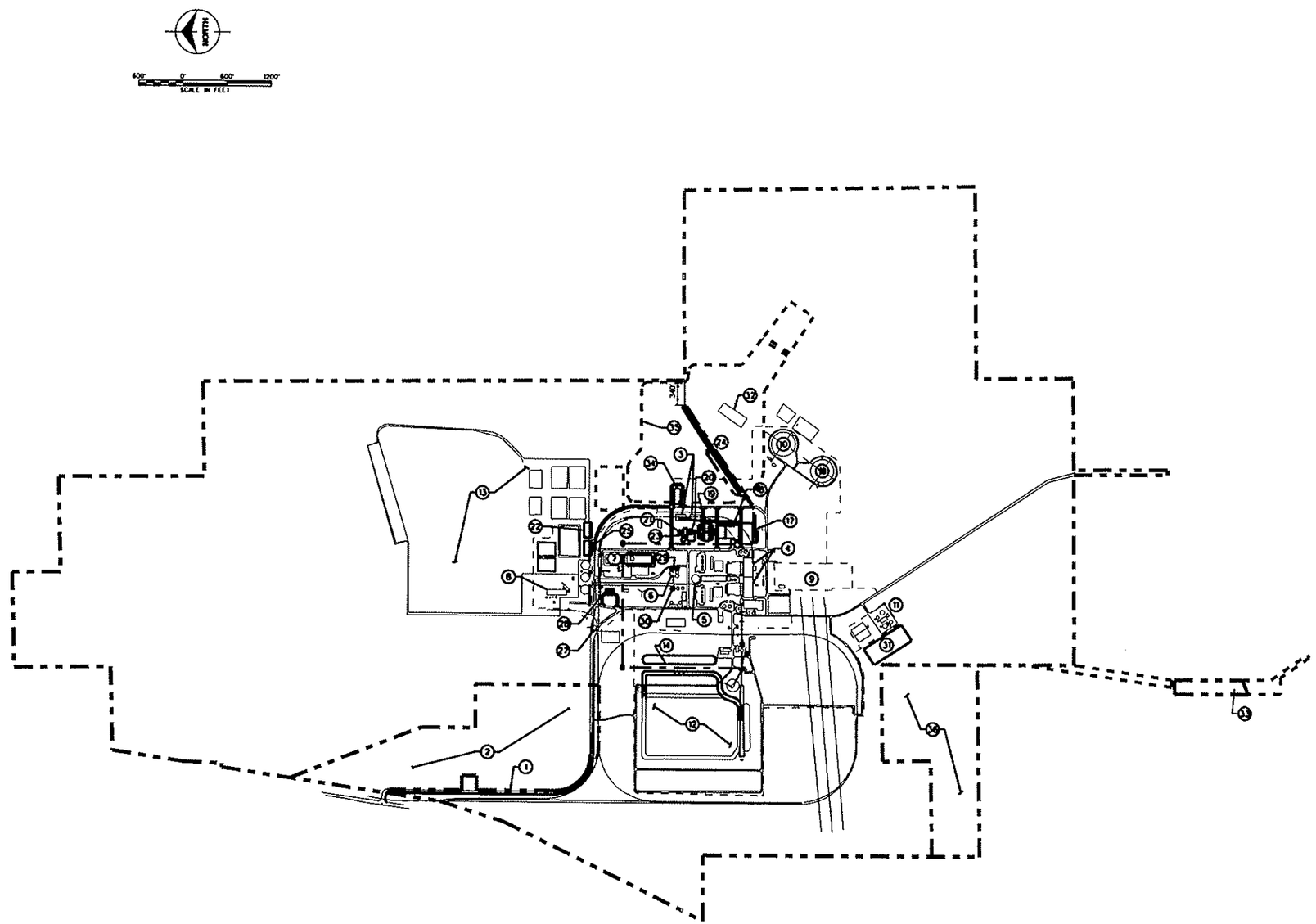

Detail "A"
(not to scale)
Ingress / Egress and Gas Pipeline Easement (0.13 Ac.±)
P.O.B.
Detail "B"
(not to scale)
Limited Access Easement (0.08 Ac.±)
Detail of Submerged Sovereignty Land Easement
(scale: 1" = 100')
ST. JOHNS RIVER
N67°19'58"E 212.00'
Map of Boundary Survey
Lying in Section 31, Township 8 South, Range 27 East
and Sections 5, 6, 7, 8, 17, & 18, Township 9 South,
Range 27 East and Sections 1 & 12, Township 9 South,
Range 26 East, Putnam County, Florida
Detail "A"
(scale: 1" = 100')
P.O.C.
P.O.B.
COUNTY ROAD No. 209
S 00°21'01"E 950.97'
N 00°28'17"W 1030.52'
N 89°22'49"E 200.00'
N 67°19'58"E 212.00'
Detail "B"
(scale: 1" = 50')
N 00°36'00"W 1295.76'
S 00°36'00"E 1295.43'
N 89°24'28"E 88.00'
COUNTY ROAD No. 209
Sheet Two of Two
WAYNE CHANCE, INC.

Exhibit C

(Concept Plans for Seminole Electric PUD)



KEY NOTES:

1. PLANT ENTRANCE ROAD
2. LAFARGE PROPERTY
3. EXISTING RAILCAR MAINTENANCE FACILITIES
4. EXISTING TURBINE BLDG.
5. EXISTING STACK
6. EXISTING LIMESTONE PREP.
7. EXISTING LIMESTONE STORAGE PILE
8. EXISTING FGD EFFLUENT PROCESSING AREA
9. EXISTING SWITCHYARD
10. EXISTING COOLING TOWER
11. EXISTING WASTE TREATMENT AREA
12. EXISTING COAL YARD
13. EXISTING LANDFILL AREA
14. UNIT 3 COAL HANDLING
15. NOT USED
16. NOT USED
17. UNIT 3 TURBINE BLDG.
18. UNIT 3 BOILER
19. UNIT 3 PRECIPITATOR
20. UNIT 3 WET FGD
21. UNIT 3 STACK
22. PROPOSED ZERO LIQUID DISCHARGE SYSTEM
23. UNIT 3 WET ESP
24. UNIT 3 COOLING TOWER
25. UNIT 3 FGD EFFLUENT PROCESSING AREA
26. NOT USED
27. EXISTING GUARD HOUSE
28. AMMONIA STORAGE
29. UNIT 3 LIMESTONE PREPARATION
30. UNIT 3 FUEL OIL TANK
31. WASTE WATER SURGE POND
32. PERCOLATION POND
33. RIVER WATER PUMP SYSTEM UPGRADES
34. TEMPORARY CONSTRUCTION WAREHOUSE
35. INCREMENTAL LANDFILL AREA
36. MILLER PARCEL

ADDITIONAL PROJECT FACILITIES:

1. NEW PIPELINE FROM RIVER INTAKE STRUCTURE TO RIVER WATER PUMP STRUCTURE.
2. NEW RIVER WATER SUPPLY PIPELINE TO PLANT. (WITHIN EXISTING EASEMENT)
3. MODIFICATION OF SUBSTATION.
4. PLANT ENTRANCE ROAD MODIFICATIONS.
5. UNIT 3 CONSTRUCTION PARKING, CONSTRUCTION OFFICE TRAILER AREA, AND CONSTRUCTION LAYDOWN AREA- TO BE DETERMINED.

Burns & McDonnell
SINCE 1898

date SEPTEMBER 5, 2005	detailed
designed SEDLACEK	checked

Seminole Electric
COOPERATIVE, INC.
IN PARTNERSHIP WITH THOSE WE SERVE

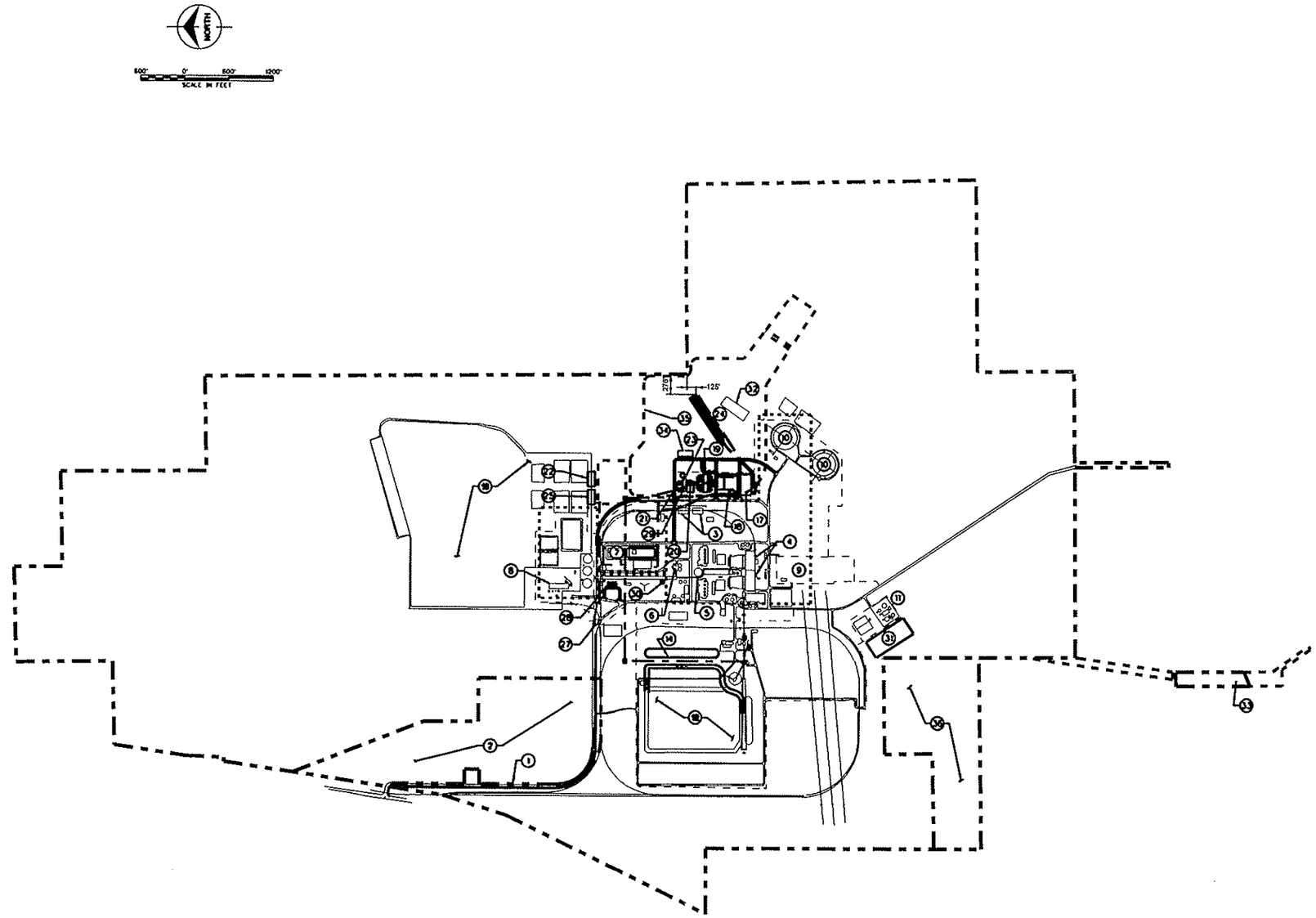
Seminole Generating Station
Unit 3

CONCEPTUAL SITE PLAN

project 39736	contract
drawing **FIGURE 1**	rev.
sheet of	sheets

File: U:\Seminole\39736\CADD\CIVIL\Figure1.dgn

10/18/2005



KEY NOTES:

1. PLANT ENTRANCE ROAD
2. LAFARGE PROPERTY
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12. EXISTING COAL YARD
13. EXISTING LANDFILL AREA
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15. NOT USED
16. NOT USED
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18. UNIT 3 BOILER
19. UNIT 3 PRECIPITATOR
20. UNIT 3 WET FGD
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Burns & McDonnell
SINCE 1898

date SEPTEMBER 5, 2005	detailed
designed SEDLACEK	checked

Seminole Electric COOPERATIVE, INC.
IN PARTNERSHIP WITH THOSE WE SERVE

Seminole Generating Station
Unit 3

CONCEPTUAL SITE PLAN

project 39736	contract
drawing **FIGURE 2**	rev.
sheet of	sheets

file U:\Seminole\39736\CADD\CIVIL\figure2.dgn

10/18/2005

Exhibit D

(PPSA Issues for Seminole Electric PUD)

EXHIBIT D

SUMMARY OF POWER PLANT SITING ACT REVIEW PROCESS

1. Preliminary Statement of Issues (Section 403.507(1), F.S.)

As a party to the site certification process under the PPSA, the COUNTY may file a preliminary statement of issues within sixty (60) days of distribution of SECI's completed application for site certification to the parties (by DEP). This statement may be used as a vehicle to identify particular matters the COUNTY requests to be taken in consideration during the site certification process.

2. Land Use Hearing (Section 403.508, F.S.)

Under the PPSA, a designated administrative law judge (ALJ), from the Florida Division of Administrative Hearings, shall conduct a land use hearing in the county of the proposed site within 90 days (or alternative date set by the ALJ) after receipt of a complete application for electrical power plant site certification by the Florida Department of Environmental Protection Siting Coordination Office. The sole issue for determination at the land use hearing shall be whether or not the proposed site for Unit 3 is consistent and in compliance with existing land use plans and zoning ordinances for site certification purposes. The ALJ will submit a recommended order, specifically on the issue of land use, to the siting board. The siting board will enter a final order as to the Unit 3 site's consistency with Putnam County's land use plans and zoning ordinances.

3. Report From County (Section 403.507(2)(a)4., F.S.)

Within one hundred fifty (150) days of distribution of SECI's application by DEP, the COUNTYmay, as the local government agency within whose jurisdiction the site lies, prepare a report as to the consistency of the proposed electrical power plant with all

applicable local ordinances, regulations, standards, or criteria that apply to the proposed electrical power plant, including adopted local comprehensive plans, land development regulations, and any applicable local environmental regulations. Except for issues related to consistency with land use plans and zoning ordinances, addressed in a separate proceeding as described hereinabove, the COUNTY may propose any conditions of certification it deems necessary for the final certification of the project to assure compliance with the County's adopted ordinances and standards.

4. Certification Hearing (Section 403.508(3), F.S.)

A certification hearing will be held by the Administrative Law Judge within three hundred (300) days of SECI's application having been determined to be complete by DEP's Siting Coordination Office. The hearing will be held at a location in proximity to the site. All agencies, including the COUNTY, may participate in the hearing as parties to the site certification proceedings. Additional parties may be allowed to participate in the proceedings or provide oral or written comment to the Administrative Law Judge where allowed by the PPSA. After completion of the certification hearing, the administrative law judge must file a recommended order with the board within sixty (60) days after the filing of the hearing transcript. Each party may file a proposed recommended order for the ALJ's consideration prior to the ALJ issuing the recommended order to the board.

5. Certification (Sections 403.509 through 403.511, F.S.)

Within sixty (60) days after receipt of the designated administrative law judge's recommended order, the siting board will act upon the application by written order, approving certification of the existing site for Unit 3 or denying the issuance of a

certificate, in accordance with the terms of the PPSA, and stating the reasons for issuance or denial.

A certification of the site signed by the Governor constitutes the sole license of the state and any agency, including the COUNTY, as to the approval of the site and the construction and operation of the proposed electrical power plant, subject to any conditions of certification contained in the order and subject to any separate federally-required permits.

The Florida Electrical Power Plant Siting Act is set out in full at Chapter 403, Part II, Florida Statutes.

STATE OF FLORIDA
DEPARTMENT OF STATE

Division of Library and Information Services

I, Sue M. Cobb, Secretary of State of the State of Florida, do hereby certify that the above and foregoing is a true and correct copy of Putnam County Ordinance No. 2006-02, which was filed in this office on January 23, 2006, pursuant to the provisions of Section 125.66, Florida Statutes, as shown by the records of this office.

Given under my hand and the Great Seal of the State of Florida at Tallahassee, the Capitol, this the 8th., day of February, A.D., 2006.

Sue M. Cobb

Sue M. Cobb
Secretary of State

DEVELOPMENT AGREEMENT

SEMINOLE ELECTRIC COOPERATIVE, INC.

AMENDMENT OF
SEMINOLE GENERATING STATION PUD

This agreement is entered this 10th day of January, 2006, by and between SEMINOLE ELECTRIC COOPERATIVE, INC., a Florida corporation, hereinafter referred to as "SECI" and the BOARD OF COUNTY COMMISSIONERS in and for PUTNAM COUNTY, a political subdivision of the State of Florida, hereinafter referred to as "COUNTY."

PREAMBLE

WHEREAS, on May 23, 1978, the Putnam County Board of County Commissioners adopted Ordinance PUD-78-002 approving the rezoning of certain parcels within Putnam County to Planned Unit Development (PUD) in anticipation of SECI seeking certification, under the Florida Electrical Power Plant Siting Act (PPSA), Chapter 403, Part II, Florida Statutes, for its now existing coal-fired electrical power generating station (Units 1 and 2); and,

WHEREAS, on September 18, 1979, the Governor and Cabinet, sitting as the Siting Certification Board, entered an order approving the construction of the existing coal-fired Units 1 and 2 pursuant to the PPSA; and,

WHEREAS, SECI commenced operation of Unit 1 in 1984 and Unit 2 in 1985, and those units continue to be in operation; and,

WHEREAS, in anticipation of SECI applying for certification of a third coal-fired unit (Unit 3) at its Putnam County generating facility, in early 2006, SECI has submitted an application to the COUNTY to amend its existing PUD zoning approval to accommodate plant modifications and additions necessary to construct, operate, and otherwise integrate Unit 3 into the existing site and to assure, as required under the

PPSA, that the proposed site is "consistent and in compliance with existing land use plans and zoning ordinances;" and,

WHEREAS, the site and existing Units 1 and 2 are located exclusively in the unincorporated area of Putnam County, and,

WHEREAS, the existing Units 1 and 2 are located in an Industrial future land use designation under the Putnam County Comprehensive Plan which allows electrical power plants on lands with such a designation; and,

WHEREAS, any modifications to the existing generating station, necessary to accommodate Unit 3, shall be fully evaluated under the PPSA during which the COUNTY may participate as a party; and,

WHEREAS, the COUNTY and SECI wish to set forth, in this Development Agreement, any and all information required by the COUNTY under Section 12.11.3.b.6.(a) – (c), of the Putnam County Land Development Code (LDC) and further wish to articulate a mutual understanding as to how the PUD amendment process and the statutory siting process may work together, to assure that the site is consistent with existing county land use plans and zoning ordinances, and fully address the environmental impact resulting from construction and operation of the facility, including air and water quality, fish and wildlife, and the water resources and other natural resources of the State and COUNTY.

NOW, THEREFORE, the parties hereto do agree as follows:

ARTICLE 1: PROPERTY OWNERSHIP AND DESCRIPTION

1.1 PURPOSE:

The purpose of this article is to set forth the location and ownership interests in the property subject to the PUD amendment and to provide a general description of the

existing Seminole Generating Station PUD and the nature of the PUD zoning amendment requested.

1.2 LEGAL DESCRIPTION

The legal description of the property is attached hereto and incorporated herein as Exhibit A to this Development Agreement.

1.3 PROPERTY OWNERSHIP

The property is owned by Seminole Electric Cooperative, Inc., a Florida Corporation.

1.4. GENERAL DESCRIPTION

The existing PUD is comprised of two separate parcels both of which were part of the originally approved rezoning and site certification. The plant itself is located on a parcel[1] consisting of approximately 1,917 acres (Parcel 1) situated east of U. S. Highway 17 and north of County Road 209 and lying in Section 31, Township 8 South, Range 27 East and Sections 5, 6, 7, 8, 17 and 18, Township 9 South, Range 27 East, and Sections 1 and 12, Township 9 South, Range 26 East, Putnam County, Florida. The property is accessed from US 17 and CR 209. A smaller waterfront parcel (Parcel 2) lies south of CR 209 within Section 18, Township 9 South, and Range 27 East. Parcel 2 consists of approximately 4.5 acres.

1.4.1. Main Power Plant Operations (Parcel 1)

Existing structures at the plant are typical of coal-fired steam generating power facilities throughout Florida the most prominent of which are the two 450 feet tall hyperbolic cooling towers and the existing stack which is 675 feet tall. The existing generating units are located in the central portion of the site. The site is undeveloped

[1] In 1980 a 40 acre out-parcel was purchased by SECI and added to the PUD by Ordinance PUD-80-001. In 1990 SECI acquired the remainder of Section 7, T 9 S, R 27 E which added approximately sixty (60) acres (Miller Parcel) bringing the total contiguous acreage north of CR 209 to approximately 2,066 acres. The sale of the Lafarge Parcel reduced the total contiguous holdings north of CR 209 to 1,977 acres of which 1,917 (omitting the Miller Parcel) are subject to the requested PUD amendment.

except for the existing units and ancillary facilities. Adjacent lands are largely undeveloped but for the Lafarge Gypsum plant located north of the existing generating facilities. The undeveloped portions of the site are primarily forested wetlands and uplands. The existing plant is a 1300 megawatt facility comprised of two 650 megawatt generating units. Output from the plant is distributed across associated transmission lines through various distribution systems (owned by ten electric cooperative members) that in turn deliver electricity to individuals and businesses in 46 of Florida's 67 counties. Over 1.6 million people are served by the Seminole Generating Station from the Florida panhandle to the southwest portion of the state.

1.4.2. Underground Cooling System Pipes and Pump House (Parcel 2)

A small second parcel (Parcel 2) lies south of CR 209 and accommodates a pump house and underground pipes necessary to operate the power plant cooling system. Parcel 2 is approximately 4.5 acres and includes approximately 212 feet of frontage on the St. Johns River which also serves as the northernmost boundary of a sovereign submerged land lease, from the State of Florida to SECI, which accommodates the power plant cooling water intake pipe. The underground pipes needed for the power plant cooling system run from Parcel 2, through a 100 foot wide privately granted easement, to the main power plant facility on Parcel 1. Parcel 2 and the easement are otherwise undeveloped. A boundary survey depicting Parcel 1, Parcel 2 and the pipeline easement is attached as Exhibit B.

1.5 LAND USE, PRINCIPAL USES AND STRUCTURES

On May 23, 1978, Parcels 1 and 2 were rezoned from Agricultural to PUD by Ordinance PUD-78-002 in anticipation of the construction of the existing power plant[2].

[2] As noted, on July 22, 1980, the PUD was amended (Ordinance PUD-80-001) to add an additional forty (40) acre out-parcel, at the north end of the SECI property, to Parcel 1. On December 14, 1999, Ordinance 99-29 amended the PUD to allow construction of a gypsum plant on a subparcel north of the existing plant.

At the time of the initial rezoning, the County Comprehensive Plan was still in a draft stage. Since 1978, and completion of the existing power plant, the County has adopted its Comprehensive Plan as well as a detailed Land Development Code.

Parcels 1 and 2 remain zoned PUD. The majority of Parcel 1, and the entirety of the existing and proposed power plant facilities, fall within the Industrial future land use category under the existing County Comprehensive Plan. Small portions of Parcel 1, not encumbered by plant facilities, fall within the Agricultural II future land use category. Approximately two-thirds of Parcel 2 falls within the Agricultural II future land use category with the southerly one-third waterfront portion falling within the Rural Residential future land use category. The existing pipeline easement, which is not a part of the PUD, runs across property zoned for agricultural uses and falling within the Agricultural II future land use category. Neither the County Comprehensive Plan nor the Land Development Code precludes the repair, replacement or addition of underground water pipes necessary to plant operations. The underground pipes, and the pipeline easement, were part of the original certification and any modifications required to accommodate Unit 3 will be reviewed as part of the site certification process.

Subject to site certification under the PPSA, Unit 3 will be constructed primarily east of, but integrated with, existing Units 1 and 2 such that any new development activity will fall within that portion of Parcel 1 designated under the Industrial future land use category. But for the existing pump house, Parcel 2, which is part of the PUD, will remain undeveloped. Pumps within the existing pump house will be replaced or upgraded and existing underground water pipes may be replaced or upgraded, and new underground pipes may be added, but no new uses or structures are intended for Parcel 2. The pipeline easement—which is not part of the PUD—will remain undeveloped

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By deed dated February 18, 2000, SECI conveyed the subparcel to Lafarge Corporation. The Lafarge parcel is shown in Exhibit B.

although pipes may be repaired, replaced (or additional pipes installed) underground between Parcels 1 and 2.

Although no new uses or above-ground structures are anticipated on Parcel 2 or the pipeline easement, both are considered to be part of the electrical power plant to be certified under the PPSA and will be reviewed along with Parcel 1 throughout the State site certification process to which the COUNTY shall be a party.

ARTICLE 2: PROJECT DEVELOPMENT AND CONDITIONS

2.1 PURPOSE

The purpose of this section is to describe the project plan of development, the proposed land uses and structures included in the project, any applicable standards and conditions of use of the Seminole Generating Station PUD, and the integration of those standards and conditions with the Florida Electrical Power Plant Siting Act review process. Subject to the PPSA review process, and ultimate approval by the Governor and Cabinet sitting as the siting board, the project will be completed substantially in accord with the PUD Master Plan , entitled "Conceptual Site Plan" attached as Exhibit C hereto, any applicable conditions of certification arising from the PPSA review process, and the following provisions of this Development Agreement. The final site plan for purposes of constructing and operating Unit 3 shall be the final site plan as certified under the PPSA[3], based upon the detailed review process under the PPSA, and as approved by order of the Governor and Cabinet sitting as the power plant siting board.

2.2 GENERAL

Adoption of an ordinance by the Board of County Commissioners, approving the proposed amendment to the Seminole Generating Station PUD, shall serve as

[3] Exhibit C contains two alternative plans that vary only slightly as to orientation of Unit structures and accessory uses in relation to one another. The differences between the Figures 1 and 2 do not substantively alter the location and configuration of Unit 3 as to be integrated with Units 1 and 2. The final orientation of structures and accessory uses will be determined by the site certification process.

confirmation by the COUNTY that the proposed site, for the purpose of adding Unit 3 and its accessory and associated facilities, is consistent and in compliance with existing land use plans and zoning ordinances of Putnam County as required under the PPSA. Upon filing a notice of intent to be a party, pursuant to Section 403.508(4) of the PPSA, the COUNTY shall subsequently participate as a party to the site certification proceedings which include additional opportunities for the COUNTY to review and comment upon issues related to the site as summarized in Exhibit D.

2.3 Relationship of Site Certification—County Development Plan Review

Because the addition of Unit 3 is subject to the State Electrical Power Plant Siting Act certification process, upon approval of the requested PUD amendment, and this Development Agreement, by the Board of County Commissioners, the Class III Preliminary and Final Development Plan Review process will be addressed by the COUNTY'S participation in the site certification proceedings, and in any agency report the COUNTY may submit under Section 403.507(2) of the PPSA, such that the issuance of an order granting final site certification, signed by the Governor, shall constitute approval for SECI to construct and operate Unit 3 consistent with this Development Agreement, the site certification, and any applicable conditions of certification.

2.4 PROJECT PLAN AND USE

Subject to certification under the PPSA, the PUD Amendment shall allow construction of Unit 3 substantially as set forth in the Conceptual Site Plan, attached as Exhibit C. Unit 3 shall lie primarily east of, and shall be integrated with, existing Units 1 and 2 on Parcel 1 of the PUD. Unit 3 is designed for a capacity of 750 megawatts (nominal). Subject to PPSA certification, Unit 3 and associated facilities may include the construction or installation of a turbine building, boiler, electrostatic precipitators, stack, wet FGD (flue gas desulfurization for SO2 removal), wastewater treatment facilities, wet

ESP (electrostatic precipitators for SO3 removal), FGD effluent processing area, a coal handling area, limestone preparation area, ammonia storage, wastewater surge pond, temporary construction warehouse, a zero liquid discharge system, a fuel oil tank and cooling tower. The new mechanical draft cooling tower, as proposed, will be approximately 1,300 feet in length but less than sixty (60) feet in height and, unlike the existing 450 foot hyperbolic cooling towers for Units 1 and 2, should not be visible from offsite. Temporary staging areas (laydown) will vary in location, within or in close proximity to the existing plant, as needed to facilitate construction.

During the construction of Unit 3, all construction traffic shall access the plant from US 17. No construction traffic, for either construction employees or construction deliveries, shall enter from CR 209 (a.k.a. "West River Road") but for an emergency situation in the event the US 17 entrance is not open. As part of its application for site certification under the PPSA, SECI shall seek approval from the Florida Department of Transportation (FDOT) for the installation of a traffic light, or lights, in addition to extended turn lanes and deceleration lanes at the SECI plant entrance, on US 17, to offset potential-traffic related impacts associated with Unit 3. SECI or economic development entities shall provide any needed funds for the installation and operation of the traffic improvements. Traffic improvements or controls shall be implemented at locations as may be required or approved by FDOT during the site certification process.

Where feasible, the existing Unit 1 and 2 common plant facilities and infrastructure will be utilized, including: the administration building, rail system, access roads and entrances, coal handling systems, lined storage area, sanitary wastewater treatment system, industrial and domestic wastewater treatment systems, water supply wells, intake and discharge facilities on the St. Johns River, and previously certified FGD landfill facilities.

A natural vegetative buffer will be maintained on Parcel 1 the width of which shall be that required under Section 7.03.03 of the Land Development Code. Along the south boundary of Parcel 1, the buffer shall be twice the maximum required under the Land Development Code or sixty (60) feet. Existing vegetation within the buffer shall be maintained but for wildfire management or selected tree thinning in accordance with established silviculture practice. Clear cutting of the natural vegetative buffer will not be allowed.

2.5 DEVELOPMENT STANDARDS

The project shall be constructed consistent and in compliance with the Putnam County Comprehensive Plan and Land Development Code, this PUD agreement, as may be approved by the Putnam County Board of County Commissioners, the order granting final site certification and any applicable conditions of certification. The certification shall authorize SECI to construct and operate the proposed electrical power plant, subject ~~only~~ to the conditions of certification set forth in such certification and the issuance of department (FDEP) licenses or permits required under any federally delegated or approved permit program.

ARTICLE 3. SUPPLEMENTAL REQUIREMENTS

3.1 PURPOSE

The purpose of this section is to articulate a mutual understanding as to the manner by which certain aspects of the proposed power plant modifications and additions, for the construction and operation of Unit 3, will be addressed by SECI and the COUNTY and integrated into the site certification process in which the COUNTY shall participate as a party.

3.2 RESOURCE PROTECTION STANDARDS

The Florida Department of Environmental Protection (DEP) acts as the coordinating agency throughout the site certification process. DEP's Siting Coordination Office (SCO) is responsible for collecting, reviewing and distributing all information necessary for state and local agencies to fully participate as parties and ultimately for the Governor and Cabinet, sitting as the siting board, to make an informed decision as to the appropriateness of the site for construction of an electrical power plant. To assure that the application process is orderly and thorough, the DEP SCO has published its "Instruction Guide: Power Plants," available online, which sets forth a detailed and comprehensive list of issues that each applicant must address when seeking site certification. Major categories of topics include: Need for Power and the Proposed Facilities; Site and Vicinity Characterization; The Plant and Directly Associated Facilities; Effects of Site Preparation and Plant and Associated Facilities Construction; Effects of Plant Operation; Transmission Lines and Other Linear Facilities; Economic and Social Effects of Plant Construction and Operation; Site and Design Alternatives; Coordination (a list of individuals within federal, state, regional, and local government agencies who were contacted to provide input to this project); and Appendices with federal permit applications and approvals, zoning descriptions, land use plan descriptions, existing state permits, and monitoring programs.

Based upon the breadth of the application process, and the scope of the information that must be distributed to each party, including the COUNTY, and because the COUNTY intends to participate in the site certification process, any provisions of Article 6 of the Putnam County Land Development Code, entitled "Resource Protection Standards," not already addressed in this Development Agreement and incorporated

documents, may be addressed by the COUNTY through its participation in the statutory site certification process.

3.3 DEVELOPMENT DESIGN AND IMPROVEMENT STANDARDS

Consistent with Section 3.2 hereinabove, any provisions of Article 7 of the Putnam County Land Development Code, entitled "Development Design and Improvement Standards" not already addressed in this Development Agreement and incorporated documents, may be addressed by the COUNTY through its participation in the site certification process.

3.4 TIME LIMIT FOR PROJECT COMPLETION

SECI and the COUNTY recognize that construction of a power generating unit is a multi-year process and so long as SECI is acting pursuant to the authority of the site certification, any approved modification thereof, and any applicable conditions of certification, there shall be no pre-determined time limit as to the completion of the project. The parties acknowledge that it is the intent of SECI to complete Unit 3 and place the unit into commercial operation by 2012.

3.5 MODIFICATION OF CERTIFICATION

To the extent SECI may seek to modify its certification as allowed under the PPSA, no further amendment of the Seminole Generating Station PUD shall be required if the PPSA would not otherwise require a determination that the modification is in compliance and consistent with existing land use plans and zoning ordinances. Additionally, SECI asserts, and the COUNTY acknowledges, that coal-fired generating units are engineered and constructed in such a manner that adjustments in building dimensions, the location of buildings in relation to one another, and the location of supporting uses in relation to the required buildings and structures, may have to be adjusted, e.g., to maximize efficiency or to accommodate design improvements deemed

necessary during construction. To the extent that any such modifications do not change the intensity or nature of the use, modify setbacks, or render the construction substantively inconsistent with the Conceptual Site Plan attached hereto, the COUNTY will not require that SECI seek further amendment of the Seminole Generating Station PUD.

3.6 HEIRS, SUCCESSORS AND ASSIGNS

This agreement shall be binding upon the parties hereto, their successors in interest, heirs, assigns and personal representatives.

ARTICLE 4. AGREEMENT

4.1 ENTIRE AGREEMENT

This document and any exhibits attached hereto and incorporated herein shall constitute the entire agreement between SECI and the COUNTY for purposes of satisfying Section 12.11.03.b.6., of the Putnam County Land Development Code.

4.2 AMENDMENTS

No modification, amendment or alteration in the terms or conditions herein shall be effective unless contained in a written document executed with the same formality.

4.3 JURISDICTION

Jurisdiction as to any dispute arising from this agreement lies in Putnam County, Florida.

4.4 NOTICES

All notices given pursuant to the terms of this agreement, or which either party may desire to provide hereunder, shall be in writing and delivered personally, by overnight carrier, or by U.S. Mail, return receipt requested, to:

Seminole Electric Cooperative, Inc.
C/o James R. Frauen
Post Office Box 272000
Tampa, Florida 33688-2000

Russell D. Castleberry, County Attorney
Post Office Box 758
Palatka, Florida 32178-0758

4.5 EFFECTIVE DATE

This Development Agreement shall become effective upon approval by the Putnam County Board of County Commissioners.

APPROVED BY ACTION OF THE PUTNAM COUNTY BOARD OF COUNTY COMMISSIONERS, this 10th day of January, 2006.

PUTNAM COUNTY, BOARD OF COUNTY COMMISSIONERS

BY: _____
LINDA MYERS, CHAIR

STATE OF FLORIDA
COUNTY OF PUTNAM

The foregoing instrument was acknowledged before me, this 10th day of January, 2006, by Linda Myers who ✓ is personally known to me or who __ produced _____ as identification.

Tabitha B. Lassiter
Notary, Signature

Notary Commission No.:

_____
Notary, Print/Type

My Commission Expires:

TABITHA B. LASSITER
Notary Public - State of Florida
My Commission Expires Feb 28, 2010
Commission # DD 486698
Bonded By National Notary Assn

SEMINOLE ELECTRIC COOPERATIVE, INC.

BY: James R. Frauen

ITS: Manager of Environmental Affairs

STATE OF FLORIDA
COUNTY OF HILLSBOROUGH

The foregoing instrument was acknowledged before me, this 24th day of January, 2006, by James R. Frauen who ✓ is personally known to me or who __ produced _____ as identification.

Vickie J Richard
Notary, Signature

Notary Commission No.:

Vickie J Richard
My Commission DD362777
Expires September 26, 2008

_____
Notary, Print/Type

My Commission Expires:

Exhibit A
(Legal Description for Seminole Electric PUD)

EXHIBIT A

LEGAL DESCRIPTION

PROPOSED AMENDMENT—SEMINOLE GENERATING STATION PUD

Parcel One:

Section 31, T 8 S, R 27 E

The South East quarter (SE ¼) of the South West quarter (SW ¼) and the Southeast quarter (SE 1/4) less and except the North one-half (N 1/2) of the Northeast quarter (NE 1/4) of the Southeast quarter (SE 1/4) of Section 31, Township 8 South, Range 27 East, Putnam County, Florida.

Section 5, T 9 S, R 27 E

The West one-half (W ½) of the West one-half (W ½) of Section 5, Township 9 South, Range 27 East, Putnam County, Florida.

Section 6, T 9 S, R 27 E

All of Section 6, lying East of the Seaboard Coast Line Railroad, in Township 9 South, Range 27 East, Putnam County, Florida, less and except that part conveyed by deed in O.R. Book 818, Page 221, Public Records of Putnam County, Florida.

Section 7, T 9 S, R 27 E

All of Section 7, Township 9 South, Range 27 East, less and except the following described tract of land containing 60 acres of land, more or less, to wit: The South one-half (S 1/2) of the South West Quarter (SW 1/4) of the South West quarter (SW 1/4) and the South East quarter (SE 1/4) of the South West quarter (SW 1/4), Putnam County, Florida.

Section 8, T 9 S, R 27 E

The West one-half (W ½) of the West one-half (W ½) and the South three-quarters (S ¾) of the East one-half (E ½) of the West one-half (W ½) and the South three-quarters (S ¾) of the West one-half (W ½) of the East one-half (E ½) of Section 8, Township 9 South, Range 27 East, Putnam County, Florida.

Section 17, T 9 S, R 27 E

Government Lot 4, of the Northwest quarter (NW ¼) of the Northwest quarter (NW ¼), and the West 66 feet of Government lot 5, or the West 66 feet of the Southwest quarter

(SW ¼) of the Northwest quarter (NW ¼) of Section 17, Township 9 South, Range 27 East, Putnam County, Florida.

Section 18, T 9 S, R 27 E

Government lots 1 and 2, or the North one-half (N ½) of the Northeast quarter (NE ¼), of Section 18, Township 9 South, Range 27 East, Putnam County, Florida, containing 80 acres of land, more or less.

Section 1, T 9 S, R 26 E

The Southeast quarter (SE ¼) of the Southeast quarter (SE ¼) lying East of the East line of the Seaboard Coast Line Railroad, Section 1, Township 9 South, Range 26 East, Putnam County, Florida.

Section 12, T 9 S, R 26 E

The Northeast quarter (NE ¼) or the Northeast quarter (NE ¼), lying East of the East line of the Seaboard Coast Line Railroad, Section 12, Township 9 South, Range 26 East, Putnam County, Florida.

Containing 1,917 acres of land more or less.

Parcel Two:

Section 18, T 9 S, R 27 E

A parcel of land situate lying and being in the South West quarter (SW ¼) of Section 18, Township 9 South, Range 27 East, more particularly described as follows:

Begin at the point of intersection of the South right-of-way line of State Road 209 and the East line of the South West quarter (SW ¼) of Section 18, Township 9 South, Range 27 East, thence run West along the South right-of-way line of said State Road 209 a distance of 200 feet to the point of beginning of the land herein described; from said point of beginning, run South to the St. John's River and Point A, thence begin again at the point of beginning and run West along the said South right-of-way line of State Road 209 a distance of 200 feet, thence run South to the St. John's River, thence run North and Easterly along said river to Point A, thence run North from Point A to the point of beginning of the land herein described.

Containing 4.525 acres of land more or less.

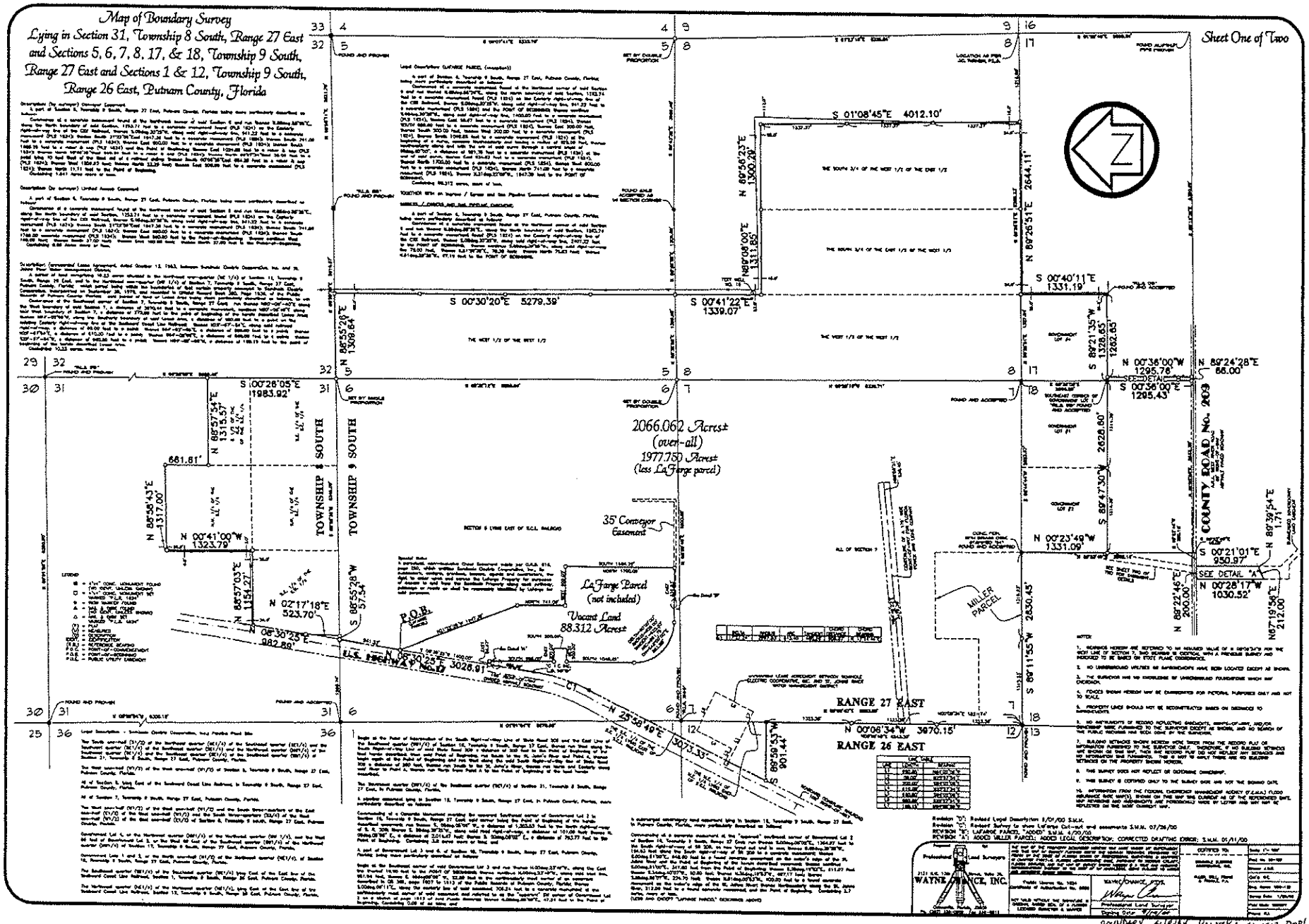
Exhibit B

(Boundary Survey and Pipeline Easement
for Seminole Electric PUD)

Map of Boundary Survey

Lying in Section 31, Township 8 South, Range 27 East and Sections 5, 6, 7, 8, 17, & 18, Township 9 South, Range 27 East and Sections 1 & 12, Township 9 South, Range 26 East, Putnam County, Florida

Sheet One of Two



BOUNDARY SURVEY VALATKA M-0513-D-01
(LAFARGE) Sh. 1 of 2 ACAD:WPB-12PBD

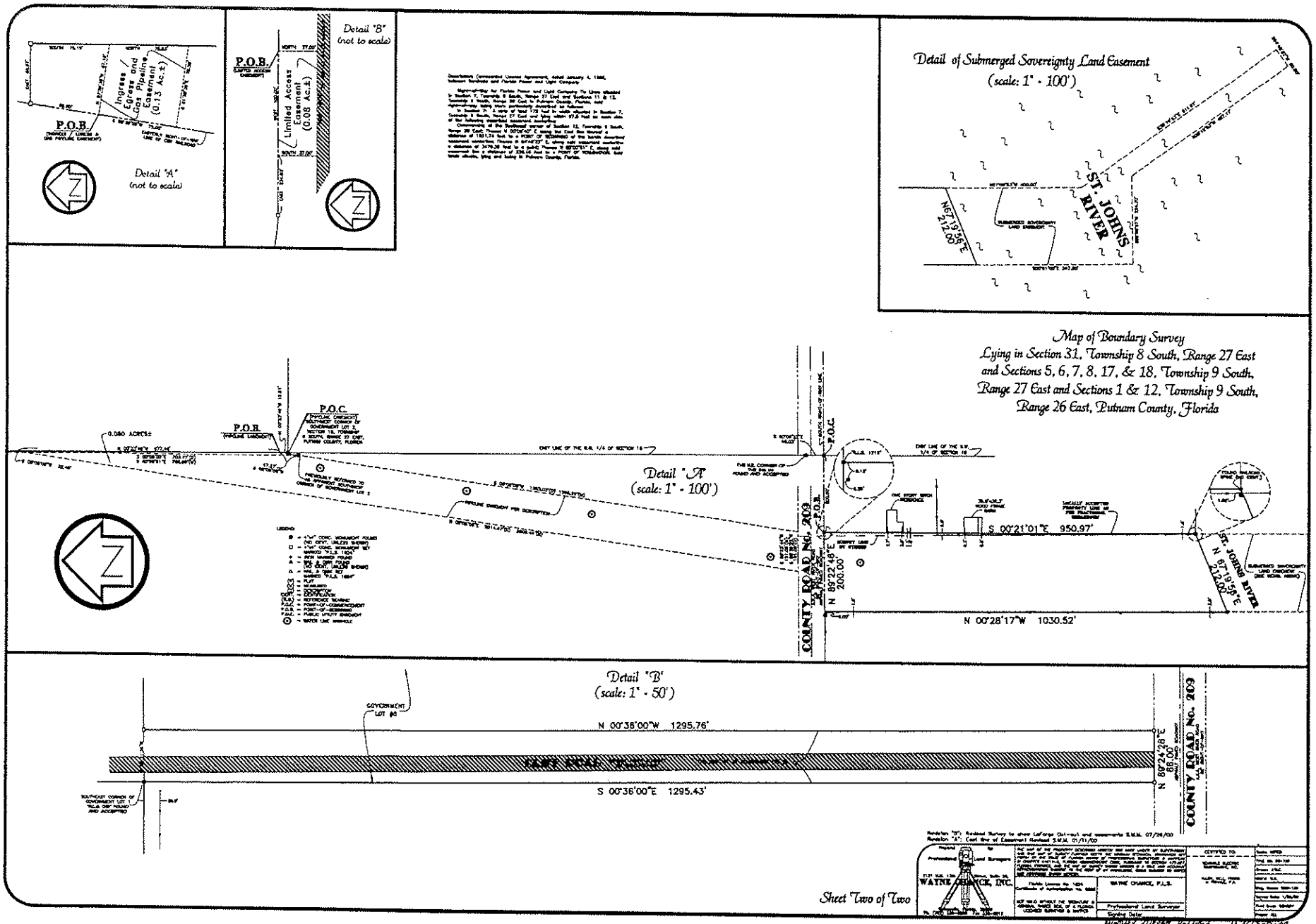
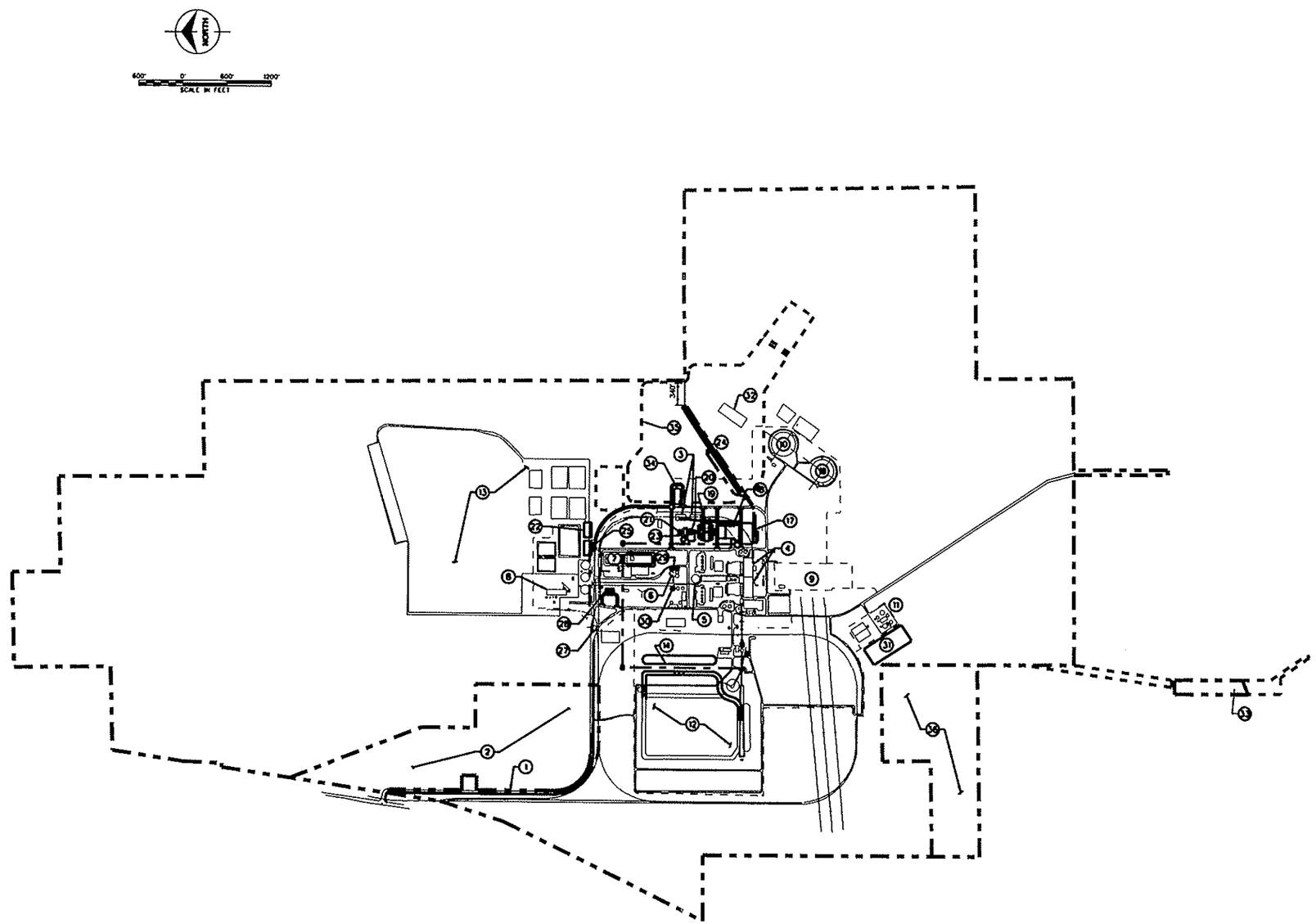

Detail "A"
(not to scale)
P.O.B.
Ingress / Egress and Gas Pipeline Easement (0.13 Ac.±)
Detail "B"
(not to scale)
Limited Access Easement (0.08 Ac.±)
Detail of Submerged Sovereignty Land Easement
(scale: 1" = 100')
ST. JOHNS RIVER
N67°19'58"E 212.00'
Map of Boundary Survey
Lying in Section 31, Township 8 South, Range 27 East
and Sections 5, 6, 7, 8, 17, & 18, Township 9 South,
Range 27 East and Sections 1 & 12, Township 9 South,
Range 26 East, Putnam County, Florida
P.O.C.
P.O.B.
0.080 ACRES±
Detail "A"
(scale: 1" = 100')
COUNTY ROAD No. 209
N 89°22'46"E 200.00'
S 00°21'01"E 950.97'
N 00°28'17"W 1030.52'
Detail "B"
(scale: 1" = 50')
GOVERNMENT LOT #8
N 00°36'00"W 1295.76'
S 00°36'00"E 1295.43'
N 89°24'28"E 40.00'
COUNTY ROAD No. 209
WAYNE CHANCE, INC.
Professional Land Surveyor
Sheet Two of Two

Exhibit C

(Concept Plans for Seminole Electric PUD)



KEY NOTES:

1. PLANT ENTRANCE ROAD
2. LAFARGE PROPERTY
3. EXISTING RAILCAR MAINTENANCE FACILITIES
4. EXISTING TURBINE BLDG.
5. EXISTING STACK
6. EXISTING LIMESTONE PREP.
7. EXISTING LIMESTONE STORAGE PILE
8. EXISTING FGD EFFLUENT PROCESSING AREA
9. EXISTING SWITCHYARD
10. EXISTING COOLING TOWER
11. EXISTING WASTE TREATMENT AREA
12. EXISTING COAL YARD
13. EXISTING LANDFILL AREA
14. UNIT 3 COAL HANDLING
15. NOT USED
16. NOT USED
17. UNIT 3 TURBINE BLDG.
18. UNIT 3 BOILER
19. UNIT 3 PRECIPITATOR
20. UNIT 3 WET FGD
21. UNIT 3 STACK
22. PROPOSED ZERO LIQUID DISCHARGE SYSTEM
23. UNIT 3 WET ESP
24. UNIT 3 COOLING TOWER
25. UNIT 3 FGD EFFLUENT PROCESSING AREA
26. NOT USED
27. EXISTING GUARD HOUSE
28. AMMONIA STORAGE
29. UNIT 3 LIMESTONE PREPARATION
30. UNIT 3 FUEL OIL TANK
31. WASTE WATER SURGE POND
32. PERCOLATION POND
33. RIVER WATER PUMP SYSTEM UPGRADES
34. TEMPORARY CONSTRUCTION WAREHOUSE
35. INCREMENTAL LANDFILL AREA
36. MILLER PARCEL

ADDITIONAL PROJECT FACILITIES:

1. NEW PIPELINE FROM RIVER INTAKE STRUCTURE TO RIVER WATER PUMP STRUCTURE.
2. NEW RIVER WATER SUPPLY PIPELINE TO PLANT. (WITHIN EXISTING EASEMENT)
3. MODIFICATION OF SUBSTATION.
4. PLANT ENTRANCE ROAD MODIFICATIONS.
5. UNIT 3 CONSTRUCTION PARKING, CONSTRUCTION OFFICE TRAILER AREA, AND CONSTRUCTION LAYDOWN AREA- TO BE DETERMINED.

Burns & McDonnell
SINCE 1898

date SEPTEMBER 5, 2005	detailed
designed SEDLACEK	checked

Seminole Electric
COOPERATIVE, INC.
IN PARTNERSHIP WITH THOSE WE SERVE

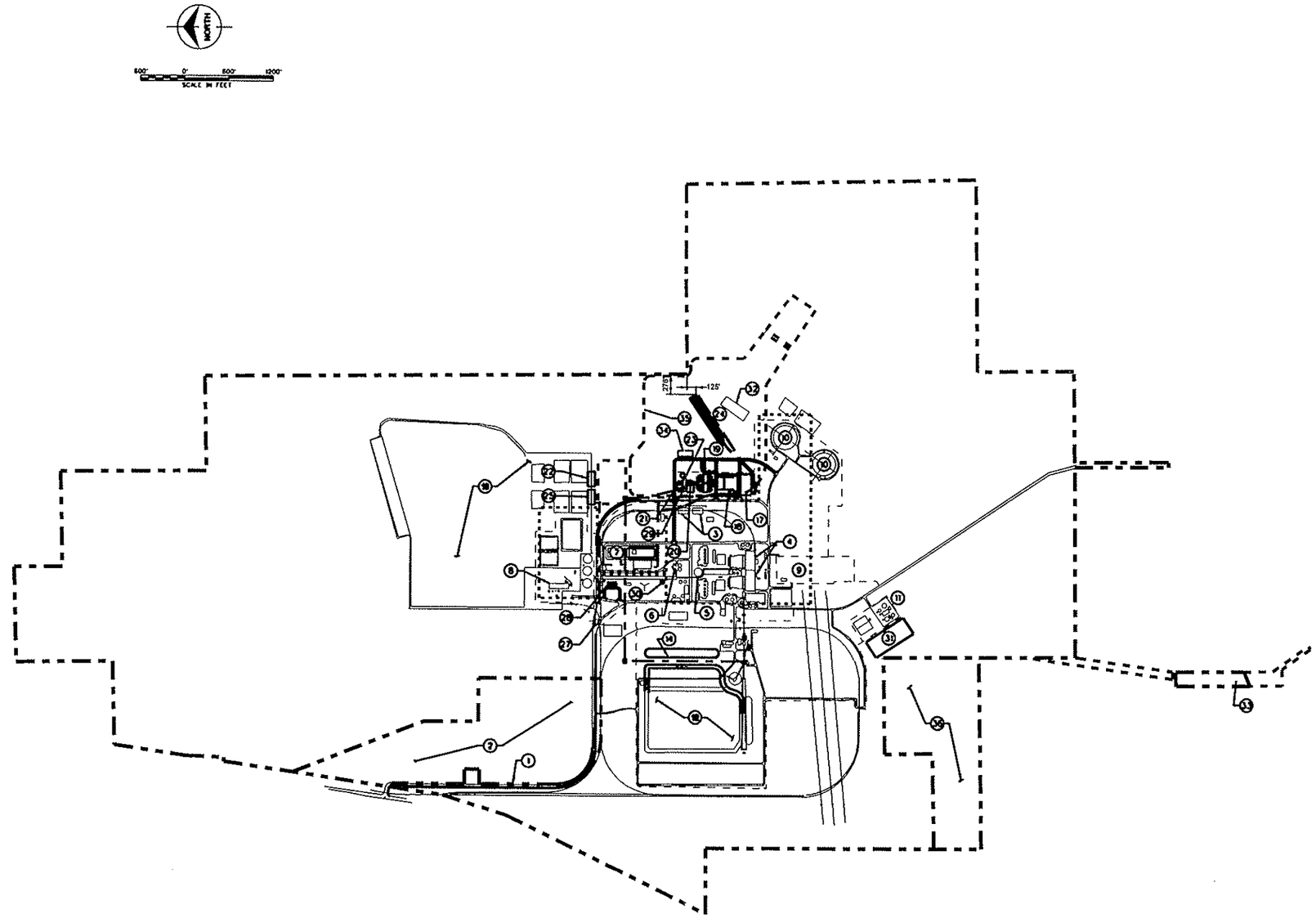
Seminole Generating Station
Unit 3

CONCEPTUAL SITE PLAN

project 39736	contract
drawing **FIGURE 1**	rev.
sheet of	sheets

File: U:\Seminole\39736\CADD\CIVIL\Figure1.dgn

10/18/2005



KEY NOTES:

1. PLANT ENTRANCE ROAD
2. LAFARGE PROPERTY
3. EXISTING RAILCAR MAINTENANCE FACILITIES
4. EXISTING TURBINE BLDG.
5. EXISTING STACK
6. EXISTING LIMESTONE PREP.
7. EXISTING LIMESTONE STORAGE PILE
8. EXISTING FGD EFFLUENT PROCESSING AREA
9. EXISTING SWITCHYARD
10. EXISTING COOLING TOWER
11. EXISTING WASTE TREATMENT AREA
12. EXISTING COAL YARD
13. EXISTING LANDFILL AREA
14. UNIT 3 COAL HANDLING
15. NOT USED
16. NOT USED
17. UNIT 3 TURBINE BLDG.
18. UNIT 3 BOILER
19. UNIT 3 PRECIPITATOR
20. UNIT 3 WET FGD
21. UNIT 3 STACK
22. PROPOSED ZERO LIQUID DISCHARGE SYSTEM
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Burns & McDonnell
SINCE 1898

date SEPTEMBER 5, 2005	detailed
designed SEDLACEK	checked

Seminole Electric COOPERATIVE, INC.
IN PARTNERSHIP WITH THOSE WE SERVE

Seminole Generating Station
Unit 3

CONCEPTUAL SITE PLAN

project 39736	contract
drawing **FIGURE 2**	rev.
sheet of	sheets

file U:\Seminole\39736\CADD\CIVIL\figure2.dgn

10/18/2005

Exhibit D

(PPSA Issues for Seminole Electric PUD)

applicable local ordinances, regulations, standards, or criteria that apply to the proposed electrical power plant, including adopted local comprehensive plans, land development regulations, and any applicable local environmental regulations. Except for issues related to consistency with land use plans and zoning ordinances, addressed in a separate proceeding as described hereinabove, the COUNTY may propose any conditions of certification it deems necessary for the final certification of the project to assure compliance with the County's adopted ordinances and standards.

4. Certification Hearing (Section 403.508(3), F.S.)

A certification hearing will be held by the Administrative Law Judge within three hundred (300) days of SECI's application having been determined to be complete by DEP's Siting Coordination Office. The hearing will be held at a location in proximity to the site. All agencies, including the COUNTY, may participate in the hearing as parties to the site certification proceedings. Additional parties may be allowed to participate in the proceedings or provide oral or written comment to the Administrative Law Judge where allowed by the PPSA. After completion of the certification hearing, the administrative law judge must file a recommended order with the board within sixty (60) days after the filing of the hearing transcript. Each party may file a proposed recommended order for the ALJ's consideration prior to the ALJ issuing the recommended order to the board.

5. Certification (Sections 403.509 through 403.511, F.S.)

Within sixty (60) days after receipt of the designated administrative law judge's recommended order, the siting board will act upon the application by written order, approving certification of the existing site for Unit 3 or denying the issuance of a

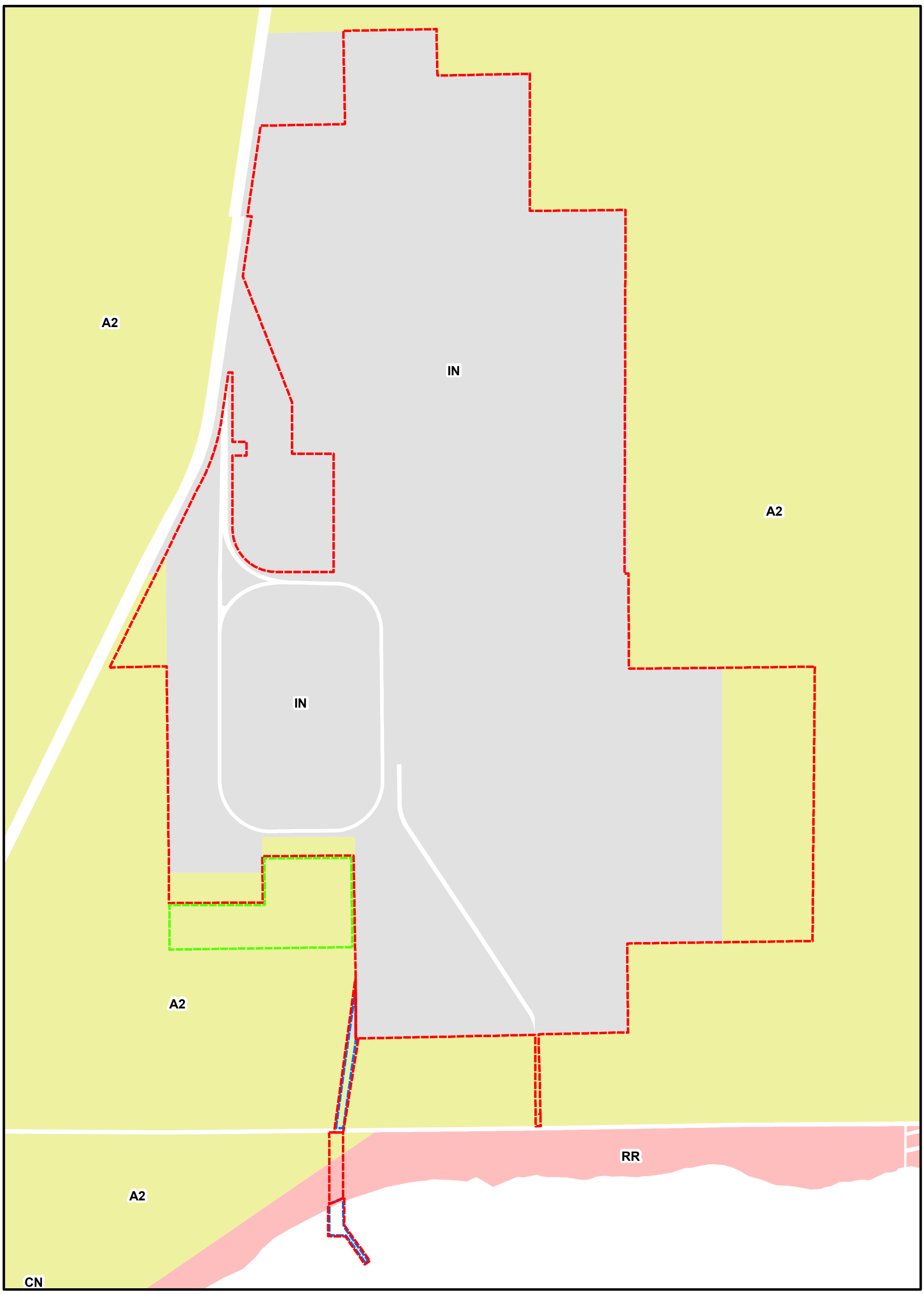
certificate, in accordance with the terms of the PPSA, and stating the reasons for issuance or denial.

A certification of the site signed by the Governor constitutes the sole license of the state and any agency, including the COUNTY, as to the approval of the site and the construction and operation of the proposed electrical power plant, subject to any conditions of certification contained in the order and subject to any separate federally-required permits.

The Florida Electrical Power Plant Siting Act is set out in full at Chapter 403, Part II, Florida Statutes.

EXHIBIT III

FUTURE LAND USE MAP



LEGEND

- Certified site boundary
- Easement
- Portion of SECI site, not part of certified site
- A2 - Agricultural II
- IN - Industrial
- RR - Rural Residential

N

REFERENCE

1.) Property parcel, Putnam County parcel data set and property legal description
2.) Future Land Use, Putnum County 2005

PROJECT SEMINOLE ELECTRIC COOPERATIVE INC.
SGS UNIT 3
PUTNUM COUNTY, FL

TITLE

FUTURE LAND USE

Golder Associates
Tampa, Florida

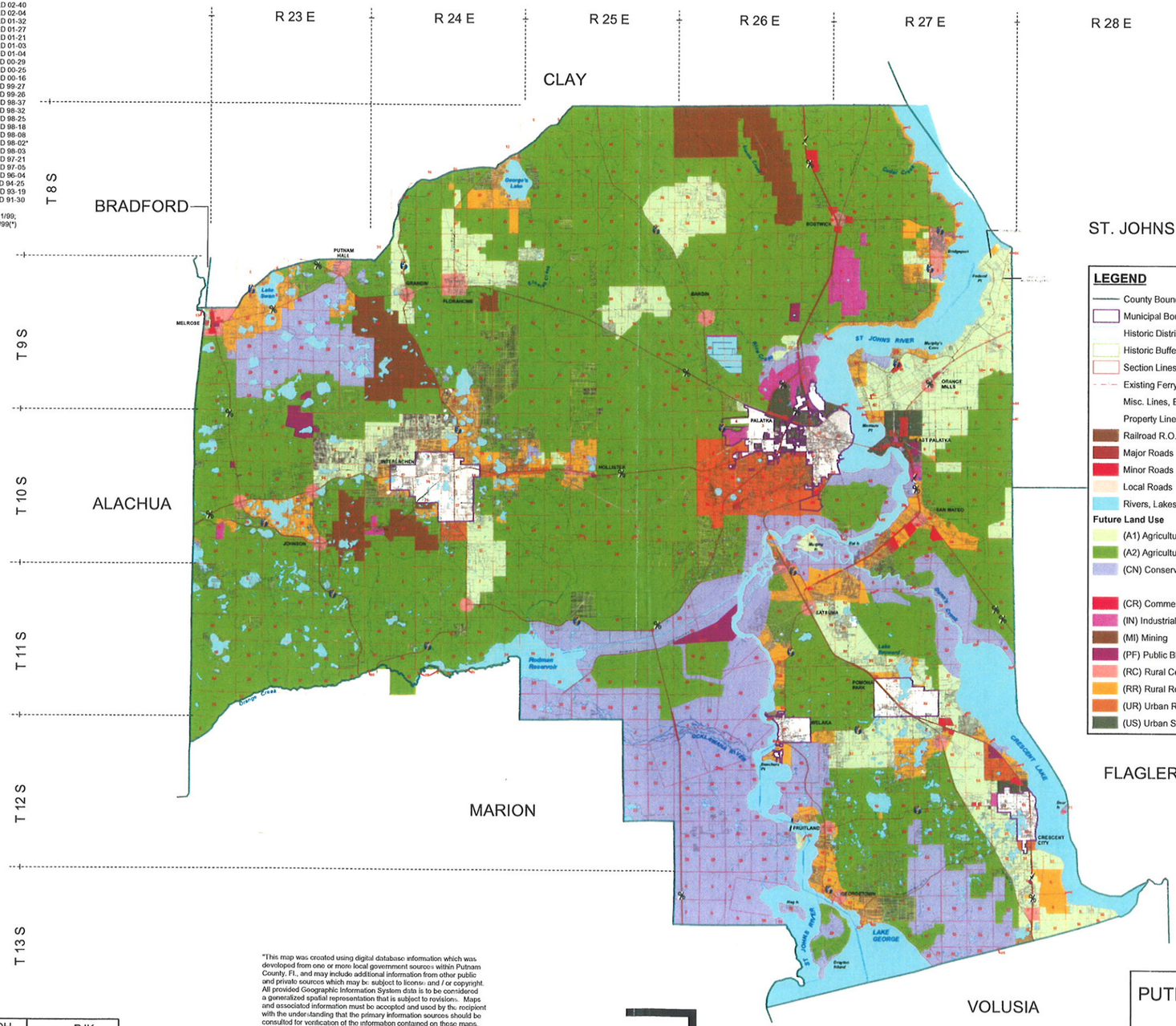
PROJECT No. 053-9540			SCALE AS SHOWN	REV. 0
DESIGN	JWT	11/28/2005	2.2.2-1	
GIS	JWT	3/8/2006		
CHECK	MM	2/20/2006		
REVIEW	RAZ	2/20/2006		

N:\FILE\2005\053-9540 SECI\A - GIS\MapDocuments\0539540A205.mxd

Revision Date: 01/06/05; Amended; ORD 04-35
Revision Date: 10/15/04; Amended; ORD 04-29
Revision Date: 09/09/04; Amended; ORD 04-22
Revision Date: 04/22/04; Amended; ORD 04-08
Revision Date: 05/23/03; Amended; ORD 03-14
Revision Date: 05/23/03; Amended; ORD 03-13
Revision Date: 02/25/03; Amended; ORD 03-20
Revision Date: 01/05/03; Amended; ORD 02-40
Revision Date: 02/22/02; Amended; ORD 02-04
Revision Date: 02/12/02; Amended; ORD 01-32
Revision Date: 12/28/01; Amended; ORD 01-27
Revision Date: 10/26/01; Amended; ORD 01-21
Revision Date: 02/23/01; Amended; ORD 01-03
Revision Date: 01/23/01; Amended; ORD 01-04
Revision Date: 11/28/00; Amended; ORD 00-29
Revision Date: 09/26/00; Amended; ORD 00-25
Revision Date: 04/25/00; Amended; ORD 00-16
Revision Date: 11/23/99; Amended; ORD 99-27
Revision Date: 11/23/99; Amended; ORD 99-26
Revision Date: 12/22/98; Amended; ORD 98-37
Revision Date: 11/24/98; Amended; ORD 98-32
Revision Date: 10/23/98; Amended; ORD 98-25
Revision Date: 08/28/98; Amended; ORD 98-18
Revision Date: 05/29/98; Amended; ORD 98-08
Revision Date: 03/06/98; Amended; ORD 98-02*
Revision Date: 02/27/98; Amended; ORD 98-03
Revision Date: 08/22/97; Amended; ORD 97-21
Revision Date: 06/03/97; Amended; ORD 97-05
Revision Date: 05/17/96; Amended; ORD 96-04
Revision Date: 11/11/94; Amended; ORD 94-25
Revision Date: 10/19/93; Amended; ORD 93-19
First Print Date: 12/19/91; Adopted; ORD 91-30

(*) Revised date for industrial park: 03/11/99;
Beechers Point status rescinded: 01/26/99(*)

FUTURE LAND USE



LEGEND

- County Boundaries
- Municipal Boundaries
- Historic District
- Historic Buffer District
- Section Lines
- Existing Ferry Transport
- Misc. Lines, Easements
- Property Lines, R.O.W's.
- Railroad R.O.W's.
- Major Roads
- Minor Roads
- Local Roads
- Rivers, Lakes, Streams

Future Land Use

- (A1) Agriculture I - 1 unit/10 acres to 1 unit/5 acres
- (A2) Agriculture II - 1 unit/20 acres to 1 unit/10 acres
- (CN) Conservation - Public/Semi-Public Ownership: 0 units/acre
  Private Ownership: 1 unit/30 acres
- (CR) Commercial
- (IN) Industrial
- (MI) Mining
- (PF) Public Bldgs, Grounds, Facilities
- (RC) Rural Center
- (RR) Rural Residential - 1 unit/5 acres to 1 unit/acre
- (UR) Urban Reserve - 1 unit/acre to 4 units/acre
- (US) Urban Service - 1 unit/acre to 9 units/acre

"This map was created using digital database information which was developed from one or more local government sources within Putnam County, FL, and may include additional information from other public and private sources which may be subject to license and / or copyright. All provided Geographic Information System data is to be considered a generalized spatial representation that is subject to revisions. Maps and associated information must be accepted and used by the recipient with the understanding that the primary information sources should be consulted for verification of the information contained on those maps. As such, no warranties, expressed or implied, are given concerning the accuracy, completeness, reliability or suitability of this data for any particular use. Furthermore, this information is provided as a visual representation only and is not intended to be used as a legal or official representation of legal boundaries."

The Putnam County Board of County Commissioners joined by the county departments, together with the constitutional offices of: Clerk of the Circuit Court; Property Appraiser; Sheriff; Supervisor of Elections; and Tax Collector; assumes no liability whatsoever associated with the use or misuse of this data.

(NOT TO SCALE)

Prepared by: JGJ	Checked by: LDH	Approved by: PJK
Date: 05/06/05	Date: 05/06/05	Date:

Sources: Putnam Co. Property Appraiser, Planning & Development, SJRWMD (2001)

Revisions:

Revisions:

Revisions:

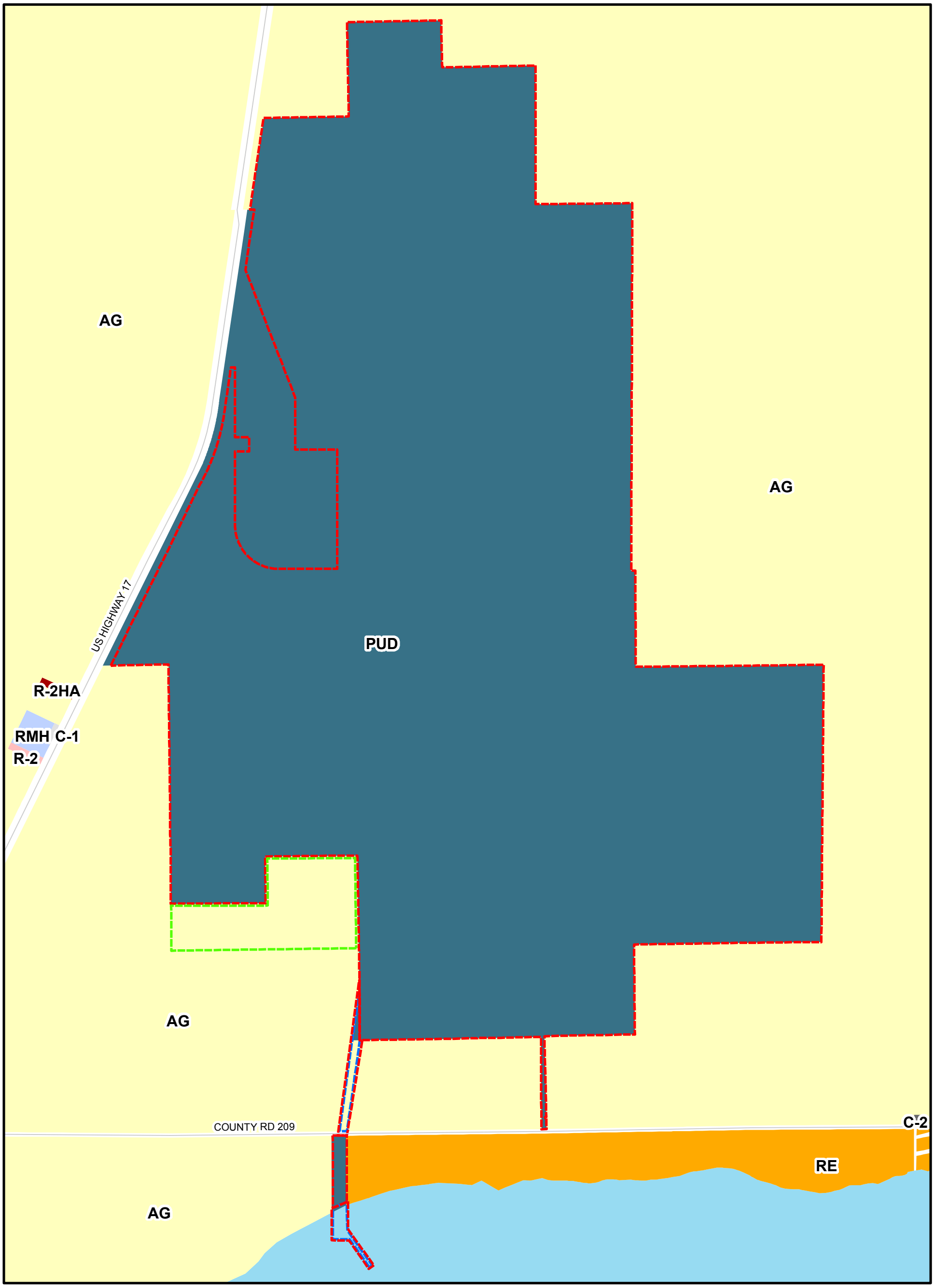
PUTNAM COUNTY, FLORIDA

(Future Land Use Map)

Prepared By:
PLANNING & DEVELOPMENT SERVICES
PUTNAM COUNTY, FLORIDA
2005

EXHIBIT IV

ZONING MAP



LEGEND

- Certified site boundary
- Easement
- Portion of SECI site, not part of certified site
- Water
- AG - Agriculture
- C-1 - Commercial
- C-2 - Commercial
- PUD - Planned Unit Developments
- R-2 - Residential, Mixed
- R-2HA - Residential, Mixed
- RE - Residential, Single Family Estate
- RMH - Residential, Mobile Home

N

0 0.25 0.5 Miles

REFERENCE

1.) Property parcel, Putnam County parcel data set and property legal description
2.) Zoning, Putnum County 2005

PROJECT SEMINOLE ELECTRIC COOPERATIVE INC.
SGS UNIT 3
PUTNUM COUNTY, FL

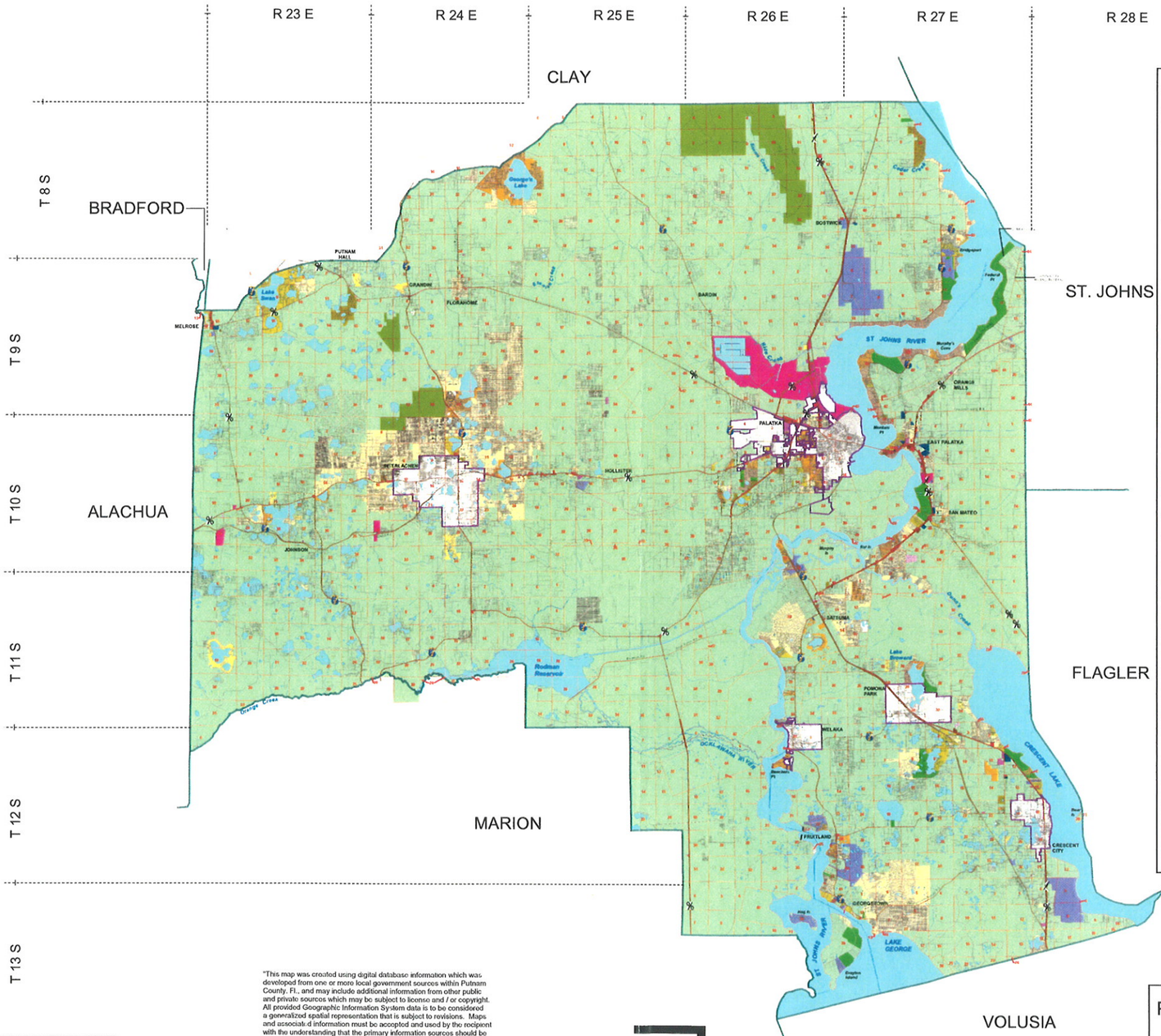
TITLE **ZONING**

Golder Associates
Tampa, Florida

PROJECT No. 053-9540			SCALE AS SHOWN	REV. 0
DESIGN	JWT	11/28/2005	2.2.2-2	
GIS	JWT	3/8/2006		
CHECK	MM	2/20/2006		
REVIEW	RAZ	2/20/2006		

N:\FILE\2005\053-9540 SECIA - GIS\MapDocuments\0539540A206.mxd

ZONING



LEGEND

- County Boundaries
- Municipal Boundaries
- Historic District
- Historic Buffer District
- Section Lines
- Existing Ferry Transport
- Misc. Lines, Easements
- Property Lines, R.O.W's.
- Railroad R.O.W's.
- Major Roads
- Minor Roads
- Local Roads
- Rivers, Lakes, Streams

Zoning

- (AE) Agriculture Estate
- (AG) Agriculture
- (C-1) Commercial, Neighborhood
- (C-2) Commercial, General, Light
- (C-3) Commercial, General
- (C-4) Commercial, Intensive
- (CPO) Commercial, Professional Office
- (GU) Government Use
- (IH) Industrial, Heavy
- (IL) Industrial, Light
- (MI) Mining
- (PUD) Planned Unit Development
- (R-1) Residential 1, Single Family
- (R-1A) Residential 1A, Single Family
- (R-1HA) Residential 1HA, Single Family
- (R-2) Residential 2, Mixed
- (R-2HA) Residential 2HA, Mixed
- (R-3) Residential 3, Multiple Family
- (R-4) Residential 4, Multiple Family
- (RE) Residential, Single Family Estate
- (RMH) Residential Mobile Homes

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The Putnam County Board of County Commissioners joined by the county departments, together with the constitutional offices of; Clerk of the Cicuit Court; Property Appraiser; Sheriff; Supervisor of Elections; and Tax Collector; assumes no liability whatsoever associated with the use or misuse of this data.

(NOT TO SCALE)

Prepared by: JGJ	Checked by: PJK	Approved by: BOCC
Date: 04/26/05	Date: 04/26/05	Date: 04/26/05

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PUTNAM COUNTY, FLORIDA

(Zoning Map)

Prepared By:
PLANNING & DEVELOPMENT SERVICES
PUTNAM COUNTY, FLORIDA
2005

EXHIBIT V

PUTNAM COUNTY LAND DEVELOPMENT CODE

PUTNAM COUNTY LAND DEVELOPMENT CODE

(APPLICABLE PROVISIONS)

Article 1

General Provisions

ARTICLE 1
GENERAL PROVISIONS

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ARTICLE 1: GENERAL PROVISIONS

SECTION 1.01 TITLE - This Code shall be entitled the "Putnam County Land Development Code" and may be referred to herein as the "Code."

SECTION 1.02 AUTHORITY - This Land Development Code is enacted pursuant to the requirements and authority of Section 163.3202, Florida Statutes, (the Local Government Comprehensive Planning and Land Development Regulation Act) and the general powers in Chapter 125, Florida Statutes.

SECTION 1.03 INTENT - It is the intent of this Code to provide for orderly growth, to decrease traffic congestion on public streets and highways, to provide adequate light and air, to promote civic amenities of historic, beauty and visual interest, to regulate density of population, and to facilitate the provision of adequate community facilities and services such as water, sewage, solid waste, roads, schools and parks, and to implement the Putnam County Comprehensive Plan. Chapter 163, Florida Statutes, requires each local government to enact a single land development code which implements and is consistent with the local comprehensive plan, and which contains all land development regulations for the County. This Code is consistent with the Putnam County Comprehensive Plan and implements the Plan.

SECTION 1.04 APPLICABILITY - Except as specifically provided below, the provisions of this Code shall apply to all land, buildings, and structures and to the use thereof within the unincorporated areas of the County. No person shall conduct any land development activity in the unincorporated areas of the County unless the activity is in compliance with the provisions of this Code and the applicable building code provisions that address mobile home standards, construction standards, life/safety standards and housing standards.
[Cross reference County Ordinance 95-56 and County Ordinance 97-25]

SECTION 1.05 GENERAL RULES OF CONSTRUCTION - For the purposes of administration and enforcement of this Code, unless otherwise stated in this Code, the following rules of construction shall apply:

a. The headings for the sections, State law references and cross references in footnotes in this Code are not part of this Code.

b. The masculine gender includes the feminine gender and the neuter gender.

c. The word "may" is permissive, not mandatory.

d. The word "must" is mandatory, not permissive.

e. The word "shall" is mandatory, not permissive.

f. Except where the context clearly indicates otherwise, words used in the singular include the plural. Words in the plural include the singular.

g. Words in the present tense include the future tense.

h. The phrase "used for" includes "arranged for," "designed for," "maintained for," or "occupied for."

i. Unless the context clearly indicates the contrary, where a regulation involves two (2) or more items, conditions, provisions, or events connected by the conjunction "and," "or," or "either...or," the conjunction shall be interpreted as follows:

1. "And" indicates that all the connected terms, conditions, provisions, or events shall apply.

2. "Or" indicates that all the connected items, conditions, provisions, or events may apply singly or in any combination.

3. "Either...or" indicates that the connected items, conditions, provisions, or events shall apply singly but not in combination.

j. The word "includes" shall not limit a term to the specific example but is intended to extend its meaning to all other instances or circumstances of like kind or character.

SECTION 1.06 GENERAL RULES OF INTERPRETATION

a. In interpreting and applying the provisions of this Code, this Code shall be held to be the minimum requirements for the promotion of the health, safety, morals and general welfare.

b. In case of any difference of meaning or implication between the text of this ordinance and any caption, illustration, summary table, or illustrative table, the text shall control.

c. More specific provisions of this Code shall be followed in lieu of more general provisions that may be more lenient than or in conflict with the more specific provision.

d. Whenever a provision appears to require the head of a department or other County officer or employee to do some act or perform some duty, it is to be construed to authorize delegation to subordinates to perform the required act or duty, unless the terms of the provision or section specify otherwise.

e. Any time period for taking any action required by this Code shall be computed by excluding the first and including the last day; except that for purposes of providing notice, the day that the subject of the notice is expected to occur shall not be counted. If the last day is a Saturday, Sunday or legal holiday, the time period shall be extended to the first business day following that Saturday, Sunday or legal holiday. If the required time period is seven (7) days or less, Saturdays, Sundays and legal holidays shall not be counted in determining the expiration of the time period.

f. In the event that any question arises concerning the application of regulations, performance standards, definitions, development criteria, or any other provision of this Code, the Director of the Planning, Zoning and Building Department shall be responsible for interpretation, unless otherwise provided in this Code. Responsibility for interpretation by the Director shall be limited to standards, regulations and requirements of this Code, but shall not be construed to include interpretation of any technical codes or statutes adopted by reference in this Code,

nor be construed as overriding the responsibilities given to any commission, board or official named in other Sections or Articles of this Code.

g. It is not intended for this Code to interfere with or abrogate or annul any easements, covenants, restrictions, or other agreements between parties. Where any provision of this Code imposes restrictions different from those imposed by any other provision of this Code or any other ordinance, rule or regulation, or other provision of law, the provisions that are more restrictive or impose higher standards shall control.

SECTION 1.07 REPEAL OF PRIOR PROVISIONS - This Code is intended to supersede and replace the ordinances or ordinance sections listed below, as well as any other prior County codes in conflict with or repetitive of these provision. Thus, the provisions of all County ordinances that are in conflict with or repetitive of the provisions of this Code shall be repealed upon adoption of the Land Development Code in its entirety (i.e. Articles 1 through 12 and the Glosssary), including the following:

Zoning Ordinance 88-1, and amendments adopted by Ord. 91-31, 95-60, 96-19 and 99-02.

Subdivision Regulations 83-9, 83-10, 86-2, 88-2 and 89-16. (Art. 7 and 12)

Sign Ordinance 89-26, as amended by 90-24 and 98-15 (Art 8)

Flood Control Ordinance 87-1 (Art. 6)

Drainage Ordinance 72-6, as amended by 83-1, 83-8 (Art 7)

Putnam County Planning Commission 76-2 (Art. 11)

Establishment of Code Enforcement Board 90-26, as amended by 91-06 (Art. 11)

Alcoholic Beverage Ordinance 88-21 (some sections in Art. 2)

Musical or Entertainment Festivals Ordinance 72-1 (some sections in Art. 2)

Greenspace Ordinance 86-2 (possibly Art. 5 and Art. 7)

Water well Construction Ordinance 87-2 (Art. 7)

Construction and Location of Sewage Disposal Plants Ordinance 80-1, as amended by 87-8 and 91-03 (Art. 6 and 7)

Septic Tank Ordinance 87-5 (Art. 6 and 7)

Septic Tank Permit Ordinances 72-15 and 90-28 (Art 6 and 12)

Mobile Home Ordinance 73-4, 86-5, 92-13, 94-03 and 97-25

Uniform Property Numbering System Ordinance 87-11

Citation Ordinance 92-06

SECTION 1.08 SEVERABILITY - This Code and the various parts, sections, subsections, and clauses thereof are hereby declared to be severable. If any article, section, subsection, paragraph, sentence, clause, or phrase of this Code is adjudged unconstitutional or invalid as applied to a particular use, person, property, building, or other structure, it is hereby provided that the application of such portion of this Code to other uses, persons, property, buildings, or structures shall not be affected thereby. Whenever any condition or limitation is included in an order authorizing a planned unit development or any variance, special exception, zoning compliance permit, certificate of occupancy, site plan approval, or other action, it shall be conclusively presumed that the authorizing officer or body considered such condition or limitation necessary to carry out the spirit and purpose of this Code or the requirement of some provision hereof, and to protect the public, health, safety, morals and general welfare, and that the officer or board would not have granted the authorization to which the condition or limitation pertains except in the belief that the condition or limitation was lawful.

SECTION 1.09 EFFECTIVE DATE - The regulations contained in this Code shall be effective on the date the County receives acknowledgment of filing each Article from the Florida Department of State, as each Article is reviewed and adopted by the Board of County Commissioners.

Article 2

Permitted Uses

ARTICLE 2
PERMITTED USES

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ARTICLE 2: PERMITTED USES

SECTION 2.01 GENERALLY

2.01.01 -- Purpose: This Article establishes zoning districts; establishes the relationship between the County's Future Land Use Map and Zoning Map; establishes the relationship between the residential densities set forth in the Future Land Use Element of Putnam County's Comprehensive Plan and the zoning districts that permit residential uses; provides a list of Use Categories; and establishes the Use Categories, as well as certain uses and structures that may be allowed within each zoning district. It also provides regulations for accessory and temporary structures and uses. The zoning districts and list of allowed uses and structures are intended to provide for coordinated and orderly growth by implementing the Future Land Use Map and related Comprehensive Plan goals, objectives and policies regarding land use, including the intensity and density of the allowed uses. The location, timing, density and intensity of any proposed development in a given zoning district may be further defined in other provisions of this Code, including Article 3 (Supplemental Use Regulations); Article 4 (Overlay and Floating Zones; Article 6 (Resource Protection Standards); Article 7 (Development Design and Improvement Standards) and Article 12 (Administration and Enforcement).

2.01.02 -- Zoning Districts Established; Zoning Maps Adopted: The County is divided into zoning districts on a set of zoning maps kept and maintained by the Planning & Development Services Department. The zoning districts listed below are delineated on the County's Zoning District Map dated April 26, 2005. The County's Zoning District Map is declared a part of this Code, and may be amended from time to time as provided for under Section 12.11 of this Code.

ZONING DISTRICT	ABBREVIATION
Agriculture	A
Agriculture Estate	AE
Residential Estate	RE
Residential-1	R-1
Residential-2	R-2
Residential-3	R-3
Residential-4	R-4
Residential-Mobile Home Park	RMH
Commercial Professional Office	CPO
Commercial, Neighborhood	C-1
Commercial, Light	C-2
Commercial, General	C-3
Commercial, Intensive	C-4
Industrial, Light	IL
Industrial, Heavy	IH
Mining	M
Public Use, Light	P-1
Public Use, Heavy	P-2
Conservation	CON
Planned Unit Development	PUD

2.01.03 -- Interpretation Of Zoning District Boundaries: The following rules apply in interpreting the zoning maps:

a. Boundaries indicated as approximately following the centerline of a street, highway or alley shall be construed to follow such centerline.

b. Boundaries indicated as approximately following platted lot lines shall be construed as following such lot lines.

c. Boundaries indicated as approximately following city limits shall be construed as following such city limits.

d. Boundaries indicated as approximately following railroad lines shall be construed to be midway between the main tracks.

e. Boundaries indicated as following shorelines shall be construed to follow such shorelines. In the event of a change in shorelines, the boundaries shall be construed as moving with the change except where such moving would change the zoning status of a lot or parcel and in such case, the boundary shall be interpreted in such a manner as to avoid changing the zoning status of any parcel or lot.

f. Boundaries indicated as parallel to the extension of features indicated in paragraphs a. through e. above shall be construed as indicated. Distances not specifically indicated on the zoning maps shall be determined by the scale of the map.

g. Where a district boundary divides a lot of record that was in single ownership at the time this Code was adopted, the Department may permit an allowed use to extend up to a distance of fifty (50) feet beyond the district line into the remaining portion of the lot.

2.01.04 -- Reference To Zoning District Names

a. Where the term "residentially zoned" is used, or the context indicates a provision applies to all residentially zoned property, the term refers to the R, RE, and RMH zoning districts.

b. Where the term "commercially zoned" is used, or the context indicates a provision applies to all commercially zoned property, the term refers to the CPO and C zoning districts.

c. When the term "industrially zoned" districts" is used, or the context indicates a provision applies to all industrially zoned property, the term refers to the IL and IH zoning districts.

d. Where the term "agriculturally zoned" is used, or the context indicates a provision applies to all agriculturally zoned property, the term refers to the A and AE zoning districts.

2.01.05 -- Enclosed Building Requirement

Unless otherwise specifically provided, all uses shall be housed in a fully enclosed building.

2.01.06 -- Relationship of Zoning Districts To Future Land Use Categories In The Comprehensive Plan

Table 2.01A below shows which zoning districts are consistent with and implement the future land use categories described in the Putnam County Comprehensive Plan and depicted on the Future Land Use Map in the Future Land Use Element of the County's Comprehensive Plan.

TABLE 2.01A: ZONING DISTRICTS THAT MAY BE ALLOWED IN THE FUTURE LAND USE CATEGORIES (Nov. 4, 2002)

	ZONING DISTRICTS																		
FUTURE LAND USE CATEGORIES	RE	R-1,R-1A, R-1HA	R-2, R-2HA	R-3	R-4	RMH	AE	AG	CON	CPO C-1	C-2	C-3	C-4	IL	IH	P1	P2	M	PUD
Urban Service (US)	X	X	X	X	X	X	1	1		X	X	X	X	X	X	X	X		X
Urban Reserve (UR)	X	X	X	X	X	X	1	1		X	X	X	X	X	X	X	X		X
Rural Center (RC)	X	X	X	X	X	X	1	1		X	X	X	X	X	X	X	X		X
Rural Residential (RR)	X	X	X			2	X	1		X						X			X
Commercial (CR)							1	1		X	X	X	X			X	X		X
Industrial (IN)							1	1						X	X	X	X		X
Mining (MI)							X	X								X	X	X	X
Public Facilities (PF)																X	X		X
Agricultural I (A1)	2	2	2				X	X								X	X		X
Agricultural II (A2)	2	2	2				X	X								X	X		X
Conservation (CN)									X							X			X

Generally: The table is for illustrative purposes only. Each specific land use in the County, including the over-all development scheme for each use, should be analyzed for consistency with the entire Comprehensive Plan, regardless of the zoning district. Compliance with the requirements of the zoning district is only one step in that consistency analysis. Density and intensity of uses within zoning categories are subject to development standards in Article 7, supplemental regulations in Article 3, additional restrictions for overlay zones in Article 4, and resource protection standards in Article 6.

1- Property located in this future land use category may continue to be used as allowed by indicated zoning district, but property located in this future land use category may not be changed or rezoned to the indicated zoning district.

2- Lots in vested subdivisions or existing lots of record may be assigned a zoning in which the use of lots, the lot dimensions, and lot area generally comply with the standards of the assigned zoning district, notwithstanding the density requirements of the future land use category.

SECTION 2.02 USE CATEGORIES

2.02.01 – Generally.

a. This section establishes Use Categories that will be allowed in each zoning district. A Use Category defines the types of uses that fit within a given category and then lists examples of the uses that fit the definition

b. Where a proposed use could be said to fall within more than one category, the Director shall determine in which category the use most closely fits based on the description of the use category and the examples of uses in the category. A proposed use shall be placed in the most specific category in which it fits. For example, a delicatessen would fall under "Retail Sales–Food" rather than "Retail Sales–General."

2.02.02 – Residential – Single Family.

a. Residential – Single Family: A use that provides dwellings or structures intended for housekeeping for a single family unit as defined by the Florida Building Code, and may, depending on the particular zoning district, include any one of the dwelling units listed as examples in paragraph b, below.

b. Examples:

Conventional, Site Built Single-Family (attached or detached)
Accessory apartment
Modular home
Mobile home, unless expressly prohibited in the zoning district.

2.02.03 -- Residential – Multi-Family

a. Residential – Multi-Family: A use that provides dwellings or structures intended for housekeeping for two or more family units as defined by the Florida Building Code, and may, depending on the particular zoning district, include any one of the dwelling units listed as examples in paragraph b, below.

b. Multi-family, may include but not be limited to duplex, triplex, quadplex, garden apartments, villas and townhouses, mid-rise and high-rise apartment buildings, and garage apartments.

c. Any ownership arrangement is allowed, such as condominium or cooperative, unless specifically prohibited in a zoning district.

2.02.04 -- Retail Sales–General

a. This category includes all uses where the primary activity is the sale of goods to the public. This use category includes the sale of packaged food, sale of non-alcoholic beverages, and sale of alcoholic beverages with 14% or less alcohol content for off-site consumption.

b. Examples:

Antique Shop
Art Gallery

Auto Parts Store
Bait and Tackle Shop
Camera Supplies
Convenience Store
Craft Supplies
Drug Store
Florist
Fruit Market
Grocery Store
Hardware Store
Hobby Supplies
Jewelry Store
Office Supplies
Pet Shop
Souvenir Shop
Toy Store
Vegetable Market

2.02.05 -- Retail Sales–Food

a. This use category includes all uses where the primary activity is the preparation of food to be served to the public for onsite consumption, for take-out by the public, or for delivery to the public.

b. Examples:

Restaurant
Delicatessen
Ice Cream Parlor
Candy Store
Bakery

2.02.06 -- Services

a. This use category includes all uses where the primary activity is the provision of services to the public.

b. Examples:

Banking
Hair Stylist and Barbers
Advertising
Repair of Appliances, Shoes, Furniture, Clothing and other non-automotive consumer goods
Veterinary Facilities: Small Animal
Laundry, Retail
Employment Agency
Funeral Home
Fitness Centers
Palmist and Psychic
Photography Studio

Copy Centers
Printing of Stationary, Cards, Envelopes, Posters, etc.
Publishing
Clinics
Dance/Music Studios

2.02.07 -- Office

a. This use category includes all uses where the primary activity is the provision of office space for professional, administrative, or clerical activities. It does not include retail sales of merchandise related to the office use (i.e. pharmaceutical sales or frames for glasses).

b. Examples of offices:

Physician (but not a clinic)
Attorney
Accountant
Chiropractor
Opticians
Architect/Engineer
Graphic artist
Insurance agent
Real Estate agent
Model Home
Construction Office (no outdoor storage)

2.02.08 -- Educational

a. This use category includes all uses where the primary activity is the provision of teaching and classroom facilities.

b. Examples:

Public and Private Schools
Colleges
Technical and Vocational Schools
Business Schools

2.02.09 -- Clubs

a. This use category includes all uses where the primary activity is the provision of meeting places or other facilities for private organizations. It does not include casinos, nightclubs, bottle clubs or other establishments operated or maintained for profit. It does not include boarding houses that may be associated with the allowed clubs.

b. Examples:

Fraternal Organizations
Masonic Orders

2.02.10 -- Commercial Recreation and Entertainment--Outdoor

a. This use category includes all uses where the primary activity is the provision of recreation or entertainment in an outdoor setting.

b. Examples:

Mini-Golf
Go-Kart
Drive-In Theater
Amphitheater
Outdoor Skating Rinks
Skateboard Parks
Paintball
Golf Course
Archery Range
Waterpark
Marina

2.02.11 -- Commercial Recreation and Entertainment–Indoor

a. This use category includes all uses where the primary activity is the provision of recreation or entertainment in an indoor setting.

b. Examples:

Bowling Alley
Amusement Arcade
Theater
Auditorium
Indoor Skating Rinks

2.02.12 -- Lodging

a. This use category includes all uses where the primary activity is the provision of short-term lodging.

b. Examples:

Hotel
Motel
Bed & Breakfast
Boarding House/Tourist Home

2.02.13 -- Cultural

a. This use category includes uses where the primary activity is providing a personal service in the form of culture, fine arts displays, exhibits, and similar activities. Specifically not included in this category are theaters and auditoriums or other similar places of assembly.

b. Examples:

Libraries
Galleries
Museums

2.02.14 -- Civic

a. This category includes all uses where the primary activity is the provision of governmental services to the public.

b. Examples:

Courthouse
Police Station
City Hall
County Administration Building

2.02.15 -- Highway Oriented

a. This use category includes all uses where the primary activity is the provision of goods or services requiring large indoor displays or large outdoor storage and/or circulation areas with immediate access to major collector roadways.

b. Examples:

Vehicle Sales, Rental, and Parking
Boat Sales, Repair, Storage, and Service
Heavy Vehicles Sales, Service and Storage
Manufactured Home Sales
Vehicular Repair
Vehicular Service
Tattoo Parlor
Truck Stop
Truck Terminal
Bus Terminal
Carwash
Mini-Warehouse
Portable Building Sales
Superstores
Malls and Shopping Centers

c. Parking and storage of vehicles of any kind, including boats, under this Use Category means licensed and operable vehicles or vehicles that were brought to the premises by the actual owner of the vehicle for repairs or service. It does not include salvage yards.

2.02.16 -- Light Industrial

a. This use category includes industrial, manufacturing, processing, warehouse, distribution, and assembly uses that are not objectionable to surrounding land uses with regard to danger, smoke, odor, fumes, noise, and truck traffic.

b. An industrial, manufacturing, processing, warehouse, distribution, or assembly use may be categorized as Light Industrial if the County receives reasonable assurance that:

1. The use will not be a danger to surrounding uses or activities;

2. The use will not create odors, fumes, dust, or other emissions that will cross the property lines of the site; and

3. Tractor trailer and other heavy vehicle traffic to and from the use will not exceed an average of 40 trips per day (20 in and 20 out) or the use shall have frontage access to a paved, public roadway with a classification of collector road or higher and shall be within ½ mile of an arterial roadway for all truck traffic, subject to the concurrency and capacity requirements of this Code and the Comprehensive Plan.

2.02.17 -- Heavy Industrial

This use category includes all industrial, manufacturing, processing, warehouse, outdoor storage, bulk storage, distribution, and assembly uses that do not fall within the Light Industrial use category.

2.02.18 -- Agriculture: General

Agricultural uses are those related to the production, keeping, or maintenance, whether for sale or personal use, of plants and animals for food, forage, fiber, or ornamental purposes. Agricultural uses are characterized as predominantly outdoor activities, with structures covering a very small portion of the land, and include aquaculture activities. However, some specific production activities may require relatively large amounts of land coverage, such as greenhouses. Trip generation is very low; the number of employees per acre is very small.

2.02.19 -- Agriculture: Intensive

a. This category includes all agricultural uses requiring a waste disposal permit from the Florida Department of Environmental Protection.

b. Examples:

Feedlots
High intensity dairies, hog farms, and poultry farms

2.02.20 -- Commercial: Agriculture-Related

a. This category includes commercial uses directly related to agricultural production.

b. Examples:

Stabling or Boarding of Farm Animals
Roadside Stand
Livestock Auction
Feed Store
Saw Mill (where wood is from trees grown on the site of the saw mill)
Slaughterhouse (where animals to be slaughtered are pastured on the site of the slaughterhouse)
Veterinary Facilities: Large Animal
Riding Academy
Airstrip for Crop Dusting

2.02.21 -- Recreation: Resource-Based

a. This category includes public recreational uses that primarily rely on natural resources as the attraction.

b. Examples:

Public and Private Parks
Public and Semi-Private Beaches

2.02.22 -- Recreation: Activity-Based

a. This category includes public recreational uses that primarily rely on facilities sports and other active recreational activities as the attraction.

b. Examples:

Ballparks and fields
Playgrounds
Boat Ramps
Public Docks/Boat Moorings

2.02.23 -- Essential Public Services

a. This category includes small-scale public facilities and services that are typically and necessarily spread throughout the community. This category does not include structures or uses for commercial activities such as sales of related merchandise or collection of bills in districts in which such activities would otherwise be prohibited.

b. Examples:

Fire/Rescue Units
Water Treatment Plants (with a capacity less than 500,000 gallons per day)

Wastewater Treatment Plants (with a capacity of less than 500,000 gallons per day)
Natural Gas Pumping Stations
Telephone Equipment Installations
Electrical Substations
Microwave Relay Stations or Other Towers (not exceeding 25 feet in height)

SECTION 2.03 USES ALLOWED WITHIN ZONING DISTRICTS

2.03.01 Generally

a. This section establishes the Use Categories allowed in each zoning district, either by right or by special use permit. Certain uses have unique characteristics that require the use to be identified separate from any Use Category. Where a certain use is listed, the regulations as they relate to that certain use shall apply.

b. Article 7 of this Code establishes the site design requirements for each zoning district, including setbacks, minimum lot sizes, lot widths, maximum lot coverage, maximum building heights, minimum road frontages etc.

c. Article 3 of this Code establishes supplemental use regulations that may further define conditions that are particular to certain uses allowed in each zoning district listed below, including but not limited to the sale of alcoholic beverages, RV Parks, campgrounds, airports, kennels, landfills, borrow areas, mini-storage facilities, race track facilities, religious facilities, mobile homes, and salvage yards.

d. Any Development proposed to establish an allowed use in a given zoning district, whether by right or by special use permit, is subject to development review as provided in Article 12 of this Code.

2.03.02 Agriculture

a. Purpose

The primary purpose of the Agriculture zoning (AG) district is to implement the Agriculture I and Agriculture II land use classifications shown on the Putnam County Future Land Use Map. It also serves as a holding zone in certain other future land use categories, such as Urban Service, Urban Reserve, Rural Center and Rural Residential, which will allow the AG districts and certain agriculture uses to remain in place until development more consistent with future land use category are ready to locate.

b. Use Categories allowed in the AG district:

1. Residential – Single Family

2. Agriculture: General.

c. Certain uses allowed in the AG district

1. Artificial Ponds that are five (5) acres or less in size.

2. Livestock, Residential

3. Mobile Home

4. Religious Facility (less than 10,000 square feet of gross floor area).

d. Use Categories that require a Special Use Permit to locate in an AG district:

1. Agriculture: Intensive

2. Commercial: Agriculture-Related

3. Recreation: Resource-Based

4. Recreation: Activity Based

5. Essential Public Services

e. Certain uses that require a Special Use Permit to locate in an AG district:

1. Bed and Breakfast

2. Day Care Center

3. Group Residential Home

4. Religious Facility (equal to or greater than 10,000 square feet of gross floor area).

5. Migrant Farm Labor Camp, which shall be defined herein as provided in Section 381.008, Florida Statues.

6. Borrow Areas greater than 1/8 of an acre.

7. Kennel

8. Raising, breeding and/or grooming of household pets or exotic animals other than livestock or poultry.

9. Overnight Recreational Park

10. Communication Tower and Personal Wire Service Facilities

11. Cemeteries

12. Aircraft Landing Facility, Private

13. Outdoor shooting range, paintball, or archery range.

14. Land application of treated septage and residuals from waste water treatment plants.

15. Construction Trades

16. Golf Course

17. Primitive Campground

2.03.03 Agriculture Estate (AE)

a. Purpose

The purpose of the Agriculture Estate zoning district is to implement the Agriculture I, Agriculture II and Rural Residential land use classifications shown on the Putnam County Future Land Use Map.

b. Use Categories allowed in the AE district:

1. Residential – Single Family: Except that allowed housing types shall be limited to site-built and modular detached single-family housing. Mobile homes are prohibited.

2. Agriculture – General

c. Certain uses allowed in the AE district:

1. Artificial Ponds, 1 acres or less in size.

2. Livestock, Residential

d. Use Categories that require a Special Use permit to locate in the AE district:

1. Recreation: Resource-Based

2. Recreation: Activity Based

3. Essential Public Services

e. Certain uses that require a Special Use Permit to locate in the AE district:

1. Bed & Breakfast

2. Religious Facility

3. Artificial Ponds, more than 1 acre in size.

4. Communication Tower and Personal Wire Service Facilities

2.03.04 Residential Estate (RE)

a. Purpose

The purpose of the Residential Estate zoning district is to establish a larger lot residential use district to implement the residential use policies of the Agriculture I, Agriculture II and Rural Residential land use classification shown on the Putnam County Future Land Use Map.

b. Use Category allowed in the RE district:

1. Residential – Single Family. Except that allowed housing types shall be limited to conventional, site-built and modular detached single-family housing. Mobile homes are prohibited.

c. Uses Categories that require a Special Use Permit to locate in the RE district

1. Recreation: Resource-Based
2. Recreation: Activity Based
3. Essential Public Services

d. Certain uses that require a special use permit to locate in the RE district

1. Artificial Ponds greater than 1/8 acre in size.
2. Golf Course
3. Bed and Breakfast

2.03.05 Residential-1 (R-1, R-1A, R-1HA)

a. Purpose

The purpose of the Residential-1 (R-1, R-1A and R-1HA) zoning districts is to provide a residential zoning district for use primarily in the Rural Residential, Rural Center, Urban Service and Urban Reserve land use classifications shown on the Putnam County Future Land Use Map. It may also be used to implement the residential use policies of the Agriculture I and Agriculture II future land use categories.

b. Use Category allowed in the Residential-1 districts.

1. Residential – Single Family. Except that allowed housing types shall be limited to site-built and modular detached single-family housing. Mobile homes are prohibited.

c. Use Categories that require a Special Use Permit to locate in the Residential-1 districts:

1. Education
2. Cultural

3. Recreation: Resource-Based

4. Recreation: Activity Based

5. Essential Public Services

d. Certain uses that require a Special Use Permit to locate in the Residential-1 districts:

1. Golf Course

2. Bed and Breakfast

3. Day Care Center

4. Group Residential Home

5. Religious Facility (less than 10,000 square feet of gross floor area).

2.03.06 Residential-2 (R-2, R-2HA)

a. Purpose

The purpose of the Residential-2 (R-2 and R-2HA) zoning districts is to provide a residential zoning district that is inclusive of mobile homes for use in the Rural Residential, Rural Center, Urban Service and Urban Reserve land use classifications shown on the Putnam County Future Land Use Map. It may also be use to implement the residential use policies of the Agriculture I and Agriculture II future land use categories.

b. Use Category allowed in Residential-2 districts

1. Residential – Single Family

2. Mobile Home

c. Use Categories that require a Special Use Permit to locate in the Residential-2 zoning districts

1. Education

2. Cultural

4. Recreation: Resource-Based

5. Recreation: Activity Based

6. Essential Public Services

d. Certain uses that require a Special Use Permit to locate in the Residential-2 district:

1. Golf Course

2. Bed and Breakfast

3. Day Care Center

4. Religious Facility (less than 10,000 square feet of gross floor area).

5. Group Residential Home

2.03.07 Residential-3, (R-3)

a. Purpose

The purpose of the R-3 zoning district is to provide a residential zoning district for use in the Rural Center, Urban Service and Urban Reserve land use classifications shown on the Putnam County Future Land Use Map.

b. Use Categories and certain uses allowed in the R-3 district:

1. Residential – Multi-Family. Except that the density shall not exceed six (6) dwelling units per acre.

2. Religious Facility (less than 10,000 square feet of gross floor area).

c. Uses Categories that require a Special Use Permit to locate in the R-3 district.

1. Residential – Single Family

2. Education

3. Club

3. Cultural

4. Essential Public Services

d. Certain uses that require a Special Use Permit to locate in the R-3 district:

1. Golf Course

2. Bed and Breakfast

3. Day Care Center

4. Group Residential Home

5. Group Residential Center

6. Group Treatment Home

7. Religious Facility (equal to or greater than 10,000 square feet of gross floor area).

8. Hospital

9. Boarding House/Tourist Home

2.03.08 Residential-4 (R-4)

a. Purpose

The purpose of the R-4 zoning district is to provide a residential zoning district for use in the Rural Center, Urban Reserve and Urban Service future land use classifications shown on the Putnam County Future Land Use Map.

b. Use Categories and certain uses allowed in the R-4 district

1. Residential – Multi-Family.

2. Religious Facility (less than 10,000 square feet of gross floor area).

c. Uses Categories that require a Special Use Permit to locate in the R-4 district:

1. Residential – Single Family

2. Education

3. Club

4. Cultural

5. Essential Public Services

d. Certain uses that require a Special Use Permit to locate in the R-4 district:

1. Golf Course

2. Bed and Breakfast

3. Day Care Center

4. Hospital

5. Boarding House/Tourist Home

6. Group Residential Home

7. Group Residential Center

8. Group Treatment Home

9. Religious Facility (equal to or greater than 10,000 square feet of gross floor area).

2.03.09 Residential–Manufactured Home Park (RMH)

a. Purpose

The purpose of the RMH zoning district is to provide a residential zoning district for the manufactured home park land use in the Rural Center, Urban Reserve and Urban Service future land use classifications shown on the Putnam County Future Land Use Map.

b. Use Categories and certain uses allowed in the RMH district:

1. Manufactured Home Park

2. Religious Facility (less than 10,000 square feet of gross floor area). Except that a mobile home shall not serve as a structure for such religious facility

3. Lodging

4. Mobile Home

5. Recreational Vehicle Site (up to a maximum of four within the Manufactured Home Park and subject to the temporary occupancy requirements for Overnight Recreational Parks set forth in section 3.02.36)

c. Use Categories that require a Special Use Permit to locate in the RMH district:

1. Residential – Multi-Family, provided the use will not exceed the density of the applicable future land use designation.

2. Education

3. Club

4. Cultural

5. Essential Public Services

d. Certain uses that require a Special Use Permit to locate in the RMH district:

1. Site-Built Home

2. Recreational Vehicle Site (greater than four within a Manufactured Home Park and subject to the temporary occupancy requirements for Overnight Recreational Parks set forth in section 3.02.36)

3. Golf Course

4. Bed and Breakfast

5. Day Care Center

6. Group Residential Home

7. Hospital

8. Boarding House/Tourist Home

9. Religious Facility (equal to or greater than 10,000 square feet of gross floor area).

2.03.10 Commercial Professional Office (CPO)

a. Purpose

The purpose of the Commercial Professional Office zoning district is provide a commercial zoning district for the professional office land use in the Rural Center, Urban Reserve, Urban Service and Commercial future land use classifications shown on the Putnam County Future Land Use Map.

b. Uses Categories and certain uses allowed in the CPO district

1. Office

2. Religious Facility

3. Cultural

c. Uses Categories that require a Special Use Permit to locate in the CPO district

1. Retail Sales -- General

2. Retail Sales -- Food

3. Services

4. Essential Public Service

d. Special Limitations

1. Except as provided in paragraph 2 below, structures housing the uses allowed in this district, whether by right or special use permit, shall not exceed 5000 square feet in size and shall not contain drive-through facilities.

2. The foregoing size limitation shall not apply to an Essential Public Service where a larger size is specifically authorized by the Special Use Permit.

2.03.11 Commercial, Neighborhood (C-1)

Purpose

a. The purpose of the C-1 zoning district is to provide a commercial zoning district for neighborhood commercial land use in the Rural Center, Urban Reserve, Urban Service, Commercial future land use classifications, and in some limited cases the Rural Residential future land use classification shown on the Putnam County Future Land Use Map.

b. Use Categories allowed in the C-1 district:

   1. Retail Sales–General

   2. Retail Sales–Food

   3. Services

   4. Office

   5. Cultural

c. Use Categories that require a Special Use Permit to locate in the C-1 district:

   1. Clubs

   2. Essential Public Services

d. Certain uses that require a Special Use Permit to locate in the C-1 district:

   1. Sale of Alcoholic Beverages for On-site Consumption

   2. Day Care Center

   3. Religious Facility

   4. Construction Trades with outside storage

e. Special Limitation

   Structures housing the uses allowed in this district shall not exceed 5000 square feet in size, unless authorized by a Special Use Permit, and shall not contain drive-through facilities.

2.03.12 Commercial, Light (C-2)

a. Purpose

The purpose of the C-2 zoning district is to provide a commercial zoning district for light commercial land use in the Rural Center, Urban Service, Urban Reserve and Commercial future land use classifications shown on the Putnam County Future Land Use Map.

b. Use Categories and certain uses allowed in the C-2 district

1. Retail Sales--General
2. Retail Sales--Food
3. Services
4. Office
5. Commercial Recreation and Entertainment--Indoor, provided the structure(s) used to operate the use do not exceed 5,000 square feet.
6. Cultural
7. Civic
8. Religious Facility (less than 10,000 square feet of gross floor area).

c. Use Categories that require a Special Use Permit to locate in the C-2 district:

1. Education
2. Club
3. Lodging
4. Essential Public Services

d. Certain uses that require a Special Use Permit to locate in the C-2 district:

1. Sale of Alcoholic Beverages for Off-site Consumption
2. Sale of Alcoholic Beverages for On-site Consumption
3. Day Care Center
4. Group Residential Home
5. Group Residential Center

6. Group Treatment Home

7. Group Treatment Center

8. Religious Facility (equal to or greater than 10,000 square feet of gross floor area).

9. Hospital

10. Nightclub

11. Portable Building Sales

12. Mini-Warehouse

13. Vehicular Service

14. Heavy Vehicle Storage

15. Construction Trades with outside storage

2.03.13 Commercial, General (C-3)

a. Purpose

The purpose of the C-3 zoning district is to provide a general commercial zoning district for commercial uses that require immediate access to Major and Minor arterial roadways in the Rural Center, Urban Reserve, Urban Service and Commercial future land use categories shown on the Putnam County Future Land Use Map.

b. Use Categories and certain uses allowed in the C-3 district:

1. Retail Sales–General

2. Retail Sales–Food

3. Services

4. Office

5. Club

6. Commercial Recreation and Entertainment--Outdoor

7. Commercial Recreation and Entertainment–Indoor

8. Lodging

9. Cultural

10. Civic

11. Religious Facility

12. Highway Oriented

c. Use Categories that require a Special Use Permit to locate in the C-3 district:

1. Educational

2. Essential Public Services

d. Certain uses that require a Special Use Permit to locate in the C-3 district:

1. Sale of Alcoholic Beverages (greater than 14% alcohol content) for Off-site Consumption

2. Sale of Alcoholic Beverages for On-site Consumption

3. Outdoor Auction

4. Bulk Storage

5. Day Care Center

6. Group Residential Home

7. Group Residential Center

8. Group Treatment Home

9. Group Treatment Center

10. Flea Market

11. Hospital

12. Nightclub

13. Kennel

14. Communication Towers

15. Overnight Recreational Park

16. Heavy Equipment Sales, Service and Storage

17. Construction Trades with outside storage

2.03.14 Commercial, Intensive (C-4)

a. The purpose of the C-4 zoning district is to provide a general commercial zoning district for commercial uses that require immediate access to Major and Minor arterial roads.

b. Use Categories and certain uses allowed in the C-4 district.

1. Office
2. Retail Sales – General
3. Retail Sales – Food
4. Services
5. Recreation and Entertainment—Outdoor
6. Recreation and Entertainment–Indoor
7. Lodging
8. Cultural
9. Civic
10. Highway Oriented
11. Essential Public Services
12. Religious Facilities
13. Construction Trades with outside storage

c. Use Categories that require a Special Use Permit to locate in the C-4 district

1. Educational
2. Light Industrial

d. Certain uses that require a special use permit to locate in the C-4 district

1. Sale of Alcoholic Beverages (greater than 14% alcohol content) for Off-site Consumption
2. Sale of Alcoholic Beverages for On-site Consumption
3. Outdoor Auction

4. Bulk Storage

5. Dry Dock

6. Flea Market

7. Hospital

8. Nightclub

9. Communications Towers

10. Group Residential Home

11. Group Residential Center

12. Group Treatment Home

13. Group Treatment Center

2.03.15 Industrial, Light (IL)

a. Purpose

The purpose of the IL zoning district is to provide an industrial zoning district for use in the industrial and mixed use land use classifications shown on the Putnam County Future Land Use Map.

b. Use Categories allowed in the IL district

1. Highway Oriented

2. Light Industrial

c. Use Categories that require a Special Use Permit to locate in the IL district:

1. Education

2. Essential Public Services

3. Retail Sales--General

4. Retail Sales--Food

d. Certain uses that require a Special Use Permit to locate in the IL district:

1. Outdoor Auction

2. Hospital

3. Communication Towers

2.03.16 Industrial, Heavy (IH)

a. Purpose

The purpose of the IH zoning district is to provide an industrial zoning district for use in the industrial and mixed use land use classifications shown on the Putnam County Future Land Use Map.

b. Use Categories allowed in the IH district

1. Highway Oriented

2. Light Industrial

3. Heavy Industrial

c. Use Categories that require a Special Use Permit to locate in the IH district:

1. Retail Sales – General

2. Retail Sales – Food

3. Agriculture – Intensive

4. Commercial – Agriculture Related

5. Essential Public Services

d. Certain uses that require a Special Use Permit to locate in the IH district:

1. Outdoor Auction

2. Bulk Storage: Acid, Flammable Liquids, Explosives, and other hazardous materials

3. Communications Tower or personal wire service facility

4. Dry Dock

5. Manufacturing of Explosives

6. Petroleum Refinery

7. Large Equipment Sales

8. Airport

2.03.17 Mining

a. Purpose

The purpose of Mining zoning district is to implement the Mining land use classification shown on the Putnam County Future Land Use Map.

b. Use Categories and certain uses allowed in the Mining district

1. Agriculture: General
2. Mining
3. Borrow Areas

c. Certain uses that require a special use permit to locate in the Mining district:

1. Communication Towers

2.03.18 Public Use, Light (P-1)

a. Purpose

The purpose of the P-1 zoning district is provide a zoning district to implement the Public Buildings, Grounds future land use classification and other future land use classifications shown on the Putnam County Future Land Use Map that allow for certain lighter Public Facilities.

b. Use Categories and certain uses allowed in the P-1 district:

1. Educational
2. Cultural
3. Civic
4. Recreation: Activity-Based
5. Recreation: Resource-Based
6. Essential Public Services
7. Cemeteries

c. Uses that require a special use permit to locate in the P-1 District

1. Class III Landfills, construction debris landfills and compost/yard trash facilities.

2. Communication Towers

3. Land application of treated septage and residuals from a wastewater treatment plant

2.03.19 Public Use, Heavy (P-2)

a. Purpose

The purpose of the P-2 zoning district is provide a zoning district to implement the Public Buildings, Grounds future land use classification and other future land use classifications that are shown on the Putnam County Future Land Use Map that allow for certain heavy Public Facilities.

b. Use Categories and uses allowed in the P-2 district

1. Educational

2. Cultural

3. Civic

4. Recreation: Activity-Based

5. Recreation: Resource-Based

6. Essential Public Services

7. Solid Waste Facilities

8. Land application of treated septage and residuals from a wastewater treatment plant

9. Communication Towers

10. Intense infrastructure facilities such as power plants, heavy equipment maintenance and storage yards, wastewater and water treatment plants with a capacity greater than 500,000 gallons per day, correctional facilities and other similar or related uses.

2.03.20 Conservation (CON)

a. Purpose

The purpose of the Conservation (CON) zoning district is to implement the Conservation future land use classification shown on the Putnam County Future Land Use Map.

b. Use Categories and certain uses allowed in the CON district

1. Residential – Single Family, which shall be limited as follows:

   (a) On Public and Semi-Public Lands the residential use shall be limited to Caretaker/Security Residence only. All other residential uses prohibited.

   (b) Privately-Owned Lands shall not be designated CON except by application of the landowner and in such case shall be limited to a maximum density of 1 dwelling unit per 30 acres.

2. Recreation: Resource Based, subject to paragraph c below.

3. Primitive Campgrounds

c. Non-residential uses limited to public or private facilities providing for resource-based recreation and education shall be allowed in the CON district. Development shall limited to 5 percent impervious surface area on the site. All new non-residential uses in the CON district shall be approved by a Special Use Permit, which shall not be issued unless the location, intensity, and all other aspects of the proposed use are found to be consistent with the Objectives and Policies for the Conservation land use classification in the Putnam County Comprehensive Plan.

SECTION 2.04 ACCESSORY USES AND STRUCTURES

2.04.01 Purpose

It is the purpose of this Section to regulate the installation, configuration, and use of accessory structures, and the conduct of accessory uses, in order to protect the health, safety and general welfare and to ensure that such structures and uses do not have a harmful physical or visual impact on residents and surrounding areas.

2.04.02 Relationship To Other Requirements Of This Code

a. Unless otherwise provided for in this Code, the general regulations in this section apply to accessory uses and structures.

b. The standards provided in other parts of this Code apply for height, location, set backs, lot coverage and floor area unless specifically addressed otherwise in this Article.

2.04.03 Consistency With Zoning Requirements

a. Accessory uses and structures are permitted in the various zoning districts provided such uses and structures are of a nature customarily incidental and clearly subordinate to a permitted principal use or structure. They are used to serve the principle use rather than support a separate and distinct land use.

b. Accessory uses shall not involve or be used for operations or structures not in keeping with the character of the district.

2.04.04 Location of Uses and Structures

a. Accessory uses and structures must be located on the same lot or parcel as the principal use, or a contiguous lot or parcel in the same ownership. Accessory uses or structures cannot be located on any parcel adjoining the parcel developed with the principal use unless the zoning of the adjoining parcel also allows the principal use.

b. In order to place an accessory structure on a lot or parcel separated by a public or private street from the principal use or structure, the property owner must obtain a Variance from the Zoning Board of Adjustment following the requirements provided in section 9.04 of this Code.

2.04.05 Set Backs

a. Set back distances for accessory structures will be measured from the exterior wall of the structure in accordance with section 7.02.03 of this Code.

b. Where the Building Code specifies a specific setback requirement, the more restrictive of the Building Code or this Code shall apply.

c. Accessory structures or uses located on waterfront are subject to the setback requirements for waterfront development in Section 6.03 of this Code.

d. In residential, AG and AE zoning districts, accessory structures greater than 150 square feet that are not used for habitation shall meet the set back requirements for the zoning district in which the structure is located, as provided in Article 7 of this Code, and shall be set back 3 feet from any other structure.

e. In residential, AG and AE zoning districts, accessory structures not used for habitation that are 150 square feet or less in size shall meet the front set back, waterfront set back and wetland setback requirements for the zoning district in which the structure is located as provided in Articles 6 and 7 of this Code; however, such a structure may be set 3 feet from any side or rear (non-waterfront) lot line, as measured from the furthest projection of the structure. It shall also be set back 3 feet from any other structure, with the following exceptions:

    1. Carports may be located directly adjacent to a principal structure, subject to any requirements of the Florida Building Code. However, a carport located less than 3 feet from a principal structure shall be required to meet standard setback requirements from the property line as provided in Article 7.

    2. Docks and unenclosed boathouses may be located in any required waterfront set back subject to the supplemental provisions provided in section 2.04.10 below

3. A single, unenclosed gazebo may be located within the required waterfront setback provided that the gazebo is less than 150 square feet in area.

f. In zoning districts other than residential, AG and AE, accessory structures which are not for habitation must meet the set back requirements from the front and side property lines for the zoning district in which the structure is located. In addition, a minimum set back of 5 feet must be maintained from the rear property line and from all other structures, and the waterfront and wetland setbacks set forth in section 6.03 shall apply. Exceptions are as provided in paragraph e.1 and 2 above.

g. In all zoning districts accessory structures for habitation must meet the set back requirements of the zoning district in which the structure is located, and must be set back 10 feet from any other structure for habitation, and meet the requirements in paragraphs e. and f. above for setbacks from any structure which is not for habitation.

h. Accessory structures are not allowed in a street right-of-way, unless expressly authorized by the owner of the right-of-way, and in any event, such structures shall be limited to structures that support authorized utilities or mail pick up and delivery.

2.04.06 Use of Structures

a. A structure that is attached to a principal structure shall be considered part of the principal structure and shall not be considered an accessory structure.

b. In residential zoning districts, an accessory structure may not be placed on the property and used prior to establishment of a principal use or structure unless the property owner has submitted a development permit application that includes plans for the principal structure and a site plan showing the location of the proposed principle structure in relation to all property lines and other structures. This restriction does not apply to the following:

1. Docks

2. Boat houses

3. Placement of a single storage structure 150 square feet or less in size

c. In commercial, industrial and agriculture zoning districts an accessory structure may be placed on the property and used prior to establishment of a principal structure on the lot.

2.04.07 Size of Structures

a. **Generally:** In all zoning districts the size of structures is limited by the floor area ratio, impervious surface area ratio, lot coverage and height standards in Article 7.

b. **Residential Zoning Districts:** Subject to paragraph a above, non-habitable accessory structures in residential zoning districts, and property in the agriculture zoning district on lots or parcels of less than 5-acres where the primary use is residential, may have a maximum floor area of 1,200 square feet without regard to the size of any principal structure. Non-habitable accessory structures may be larger than 1,200 square feet in area,

provided the size of the structure does not exceed 75% of the size of the largest principal structure on the parcel or lot and does not violate the requirements of paragraph a, above.

c. **Commercial and Industrial Zoning Districts:** Subject to paragraph "a." above, accessory structures in commercial and industrial zoning districts may be larger than the principal structure.

d. **Agriculture Zoning Districts:** Subject to paragraph a above, accessory structures in the agriculture zoning districts may be larger than the principal use structure; except that lots or parcels that are less than 5-acres in size, which are not being used for a bona fide farm operation or the storage of an airplane in an lawful fly-in development, shall be subject to the size requirements in paragraph b above.

2.04.08 Permits Required - Building permits are required for accessory structures in accordance with the applicable Building Codes as adopted and implemented by the County.

2.04.09 Accessory Uses and Structures allowed in each Zoning District– Table 2.04A, below, provides a list of typical accessory uses and structures, and the zoning districts in which they are allowed. Accessory uses and structures allowed in the zoning districts are indicated by an X. Accessory uses and structures that may require a special use permit are indicated by an "SE". Section 2.04.10, below defines each of the listed accessory uses and provides for supplemental regulations. Table 2.04A is not intended to be a complete list of all accessory uses and structures allowed. For accessory structures that are not listed, the Director will make a determination whether or not an accessory use or structure meets the requirements of section 2.04.03 and is consistent with the requirements of the applicable zoning district.

Table 2.04A – Table of Accessory Uses and Structures

	AE, AG, RE, Residential-1 Residential-2	R3, R4, RMH	CPO, C1, C2, C3	IL, M	IH
A/C COMPRESSOR	X	X	X	X	X
ACCESSORY APARTMENT	SE				
BOATHOUSES/BOAT SHELTERS/ DOCKS	X	X	X	X	X
CARPORT	X	X	X	X	X
FENCES	X	X	X	X	X
GARAGE, PRIVATE	X	X	X	X	X
GARDEN AND GROVE, NON-COMM.	X	X	X	X	X
GAZEBO	X	X	X	X	X
GREENHOUSE, NON-COMMERCIAL	X	X			
GUEST HOUSE	X				
HOME OCCUPATION	SE	SE	X	X	X
PLANT NURSERY, NON-COMMERCIAL	X	X			
RESIDENTIAL DWELLING				X	X
SATELLITE DISH ANTENNA	X	X	X	X	X
SIGNS	See Article 8 of this Code				

STORAGE BUILDING	X	X	X	X	X
SWIMMING POOL (PRIVATE)	X	X	X	X	X
WELL OR PUMP HOUSE	X	X	X	X	X

2.04.10 Supplemental Regulations For Accessory Uses and Structures -- This section provides definitions and supplemental regulations for the accessory uses listed in the Table of Accessory Uses and Structures in section 2.04.09 above. These supplemental regulations should be read in conjunction with the site development standards found in Articles 2, 4, 6, 7, 8, and 9.

a. AIR CONDITIONING COMPRESSOR - In all zoning districts, air conditioning compressors or other equipment designed to serve the main structure may be located in any required side or rear set back, but no closer than 5 feet to any lot line. In the Commercial and Industrial zoning districts, additional screening and buffering may be required as per Section 7.03 of this Code.

b. ACCESSORY APARTMENT – an accessory apartment, also known as a "mother-in-law suite", may be allowed by special use permit in the Agricultural and Residential zoning districts, provided the Zoning Board of Adjustment makes the specific findings required under section 12.12.03 of this Code, subject to the following mandatory conditions:

1. No more than one (1) accessory apartment is allowed to serve the primary residence or use.

2. The primary residence must be constructed as a conventional, site built or modular structure.

3. The accessory apartment must be a constructed as conventional, site built or modular housing. A mobile home or park model shall not be permitted to serve as an accessory apartment in any zoning district.

4. The accessory apartment shall be no smaller than 400 square feet and no greater than 1000 square feet, and in all cases shall be smaller in size and clearly subordinate to the primary residence.

5. Accessory apartments shall be limited to one bedroom.

c. BOATHOUSES AND DOCKS

1. The term boathouse means a structure where a personal, recreational watercraft is stored, and includes the term boat shelter. A dock is a boardwalk type structure that extends over water to allow direct access to the water for fishing, swimming or boating, and may include a boathouse.

2. A boathouse or dock cannot be enclosed or used as a habitable structure. The dock or boathouse must remain open on all sides.

3. The boathouse or dock structure, including any electrical or plumbing services, must be in compliance with all other regulatory agencies' requirements, including but not limited to Florida Department of Environmental Protection and Army Corps of Engineers permitting requirements.

4. The dock and/or boathouse cannot be used as a revenue generating or income related activity unless such activity is permitted in the zoning district in which the property is located.

5. The boathouse shall not exceed 600 square feet in area unless a special use permit is obtained.

6. The boathouse must be at least 10 feet from any principal structure.

7. There shall be only one boat house per lot or parcel unless a special use permit or development agreement approved by the Board of County Commissioners allows for more than one boat house.

d. FENCES are allowed to be located inside any required set back area subject to the requirements in section 7.04 of this Code. Privacy, buffer and decorative walls are considered fences for purposes of this section and section 7.04 of this Code. Section 7.04 of this Code establishes standards for the height and appropriate materials for fences and privacy/buffer walls

e. GARAGE, PRIVATE a private garage is an accessory structure designed or used for inside parking of private passenger vehicles by the occupants of the principal structure. A private garage attached to or a part of a principal structure is considered part of the principal structure. For purposes of this Code, attached shall include any structure within 3 feet of the principal structure. An unattached private garage is to be considered as an accessory structure.

f. GAZEBO means a free-standing, roofed, open-sided structure, sometimes known as a pavilion, which provides a shady resting place and is usually situated so as to command a view.

g. GUEST HOUSE

1. Definition: A guest house is a single-family dwelling located on the same lot as the principal residential structure which is separate from the principal residential structure and is intended and used only for intermittent or transient occupancy by guests on a non-fee basis.

2. A guest house shall not have kitchen facilities.

3. No more than one (1) guest house is allowed to serve the primary residence.

4. The primary residence must be constructed as a conventional, site built or modular residence.

5. The guest house must be a constructed as conventional, site built or modular housing. A mobile home or park model shall not be permitted to serve as a guest house in any zoning district.

6. The guest house shall be no smaller than 400 square feet and no greater than 800 square feet, and in all cases shall be smaller in size and clearly subordinate to the primary residence.

7. The guest house shall be limited to one bedroom. An additional bedroom for a guest house may be allowed if approved by a Special Use Permit from the Zoning Board of Adjustment. This does not apply to the Accessory Apartment, which in all cases shall be limited to one bedroom.

h. HOME OCCUPATION

1. Defined. A Home Occupation, also known as a home based business, is any activity carried out for financial gain by a resident conducted as an accessory use in the resident's dwelling unit.

2. Authorization Required

(a) Occupational License and Zoning Approval: All home occupations or home-based business, shall, at a minimum, be required to obtain and maintain an occupational license as long as the business operates. Prior to obtaining such an occupational license the applicant shall obtain a zoning compliance letter from the Department. The Department may take enforcement action as provided in Articles 11 and 12 of this Code for failure to abide by these regulations or any conditions of a home occupation approved as provided for in this section. Penalties may include a revocation of the occupational license and injunctive relief to prevent the continued operation of the business.

(b) Special Use Permit: With the exception of bone fide agricultural uses in Agriculture zoning districts, a special use permit shall be required for any home occupation that includes any one of the following conditions:

(1) The business employs any person or persons, other than a member of the family residing on the premises, to engage in the occupation on the premises.

(2) The business requires more than one commercial vehicle to be used, parked or stored outside at the premises.

(3) The business requires heavy equipment to be used, parked or stored outside at the premises.

(4) The business requires customers to come to the premises for goods or services.

3. Standard Conditions.

(a) Each Home Occupation, including those approved by Special Use Permit, shall include the following conditions:

(1) The use of the premises shall be clearly incidental and subordinate to its use for residential purposes and shall, under no circumstance, change the residential character thereof.

(2) There shall be no change in outside appearance of building or premises, or other visible evidence of the conduct of such home occupation, except that one non-illuminated sign, not exceeding two square feet in area, may be mounted flat against the wall of the building, at a position not more than two feet from the main entrance to the building.

(3) No traffic shall be generated by such home occupation in greater volumes than would normally be expected in a residential neighborhood and any need for parking, generated by the conduct of such home occupation, shall be met off the street, in the front or at the side of the residence, and shall be setback in accord with the required front or side yard setbacks.

(4) No equipment or process shall be used in such home occupation which creates noise, vibration, glare, fumes, odors or electrical interference detectable to the normal senses on or off the lot. In the case of electrical interference, no equipment or process shall be used which creates visual or audible interference in any radio or television receivers off the premises, or causes fluctuations in line voltage off the premises.

(5) Permitted home occupation use shall not exceed twenty (20) percent of the total floor area of the principal dwelling.

(6) A home occupation shall be subject to all applicable County occupational licenses and other business taxes.

(b) Additional conditions may be placed on a Home Occupation addressing the following:

(1) Activities allowed outside the residence.

(2) Parking.

(3) Hours of operation.

(4) Number of employees.

(5) Storage of materials.

(6) Conduct of retail sales.

4. Prohibited Uses. The following uses shall, in all circumstances, be prohibited as home occupations:

(a) Mechanical, paint and body repair, and/or detailing services upon any motor vehicles, and trailers, including, but not limited to, automobiles, trucks, boats, motor homes, buses, tractors, heavy equipment, mobile homes, and travel trailers

(b) Health salons, gyms, dance studios, aerobic exercise studios, massage and tattoo parlors.

(c) Limousine service or taxi service where more than one limousine or taxi vehicle in kept on the premises.

(d) Medical or dental office or laboratory, or nursing home facility

(e) Private clubs

(f) Tow truck services or other trucking services.

(g) Veterinary Facility

(h) Gift shop or thrift store

5. Previously Approved Home Occupations. Home occupations, previously granted, shall be permitted to continue at that location, provided a valid occupational license is continually issued without interruption.

j. PLANT NURSERY means a place where such items as trees, shrubs, vines, flowers, or ferns are propagated for transplanting or for use as stock or grafting.

k. SATELLITE DISH ANTENNA

1. Definition: A satellite dish antenna is a device in the shape of a shallow dish, cone, horn, or cornucopia used to transmit and/or receive radio or electromagnetic waves.

2. Allowed in CPO and C-1 zoning districts subject to meeting the following set backs:

(a) The standard front set back for the zoning district.

(b) 5 feet from rear or side property line.

3. Allowed in C-2, C-3, IL and IH zoning districts subject to meeting the following set backs:

(a) 10 feet from front property line

(b) 3 feet from rear or side property line.

4. Allowed in Residential, AG, AE, and Public Use zoning districts subject to meeting the following:

(a) Only one 1 freestanding unit per lot or parcel.

(b) Units over 36 inches in diameter must be installed as a freestanding unit.

(c) Any number of units with diameters of 36 inches or less and which are mounted on a building may be allowed.

(d) No unit shall be located so as to impair the vision of traffic.

(e) Units may not be located in the standard front or side set back area unless it can be demonstrated that it is necessary to locate the unit in that area.

(f) No portion of a unit shall be located closer than 3 feet from a side or rear property line.

(g) No unit shall exceed a height of 14 feet.

l. STORAGE BUILDING - A motor home, mobile home, truck body, shipping container, camper, or other similar unit, with or without wheels, may not be used as a permanent storage building.

m. SWIMMING POOL (PRIVATE)

1. Definition: In this article, "private swimming pool", means any body of water in an artificial or semi-artificial receptacle or other container located outdoors which is constructed in such a manner as to permit a water depth of 24 inches or more and is used or intended to be used for swimming or wading.

2. A private swimming pool shall be allowed as an accessory use only if it fully complies with the following conditions:

   (a) The pool is intended and is to be used solely for the enjoyment of the occupants of the dwelling to which the pool is accessory, or to the bona fide guests thereof.

   (b) The pool shall meet the required setbacks of the applicable zoning district as provided in section 7.02.03.c.7.

   (c) The pool shall be constructed and enclosed in compliance with the requirements set forth in the applicable building code as adopted and amended by Putnam County.

SECTION 2.05 TEMPORARY USES

2.05.01 -- Generally. Certain temporary uses are allowed in zoning districts as set forth in Table 2.05A below, and are subject to the permitting requirements and supplemental regulations beginning with 2.05.03 below. Temporary uses, including temporary signs, are prohibited in established public or private rights-of-way. Where a temporary use is not specifically listed in Table 2.05A, below, the Director shall determine which temporary use category the use most closely fits based on the description of the use. The proposed temporary use shall be placed in the most specific category in which it fits and subject to the same permitting requirements and regulations. All temporary uses shall, at a minimum, be consistent with applicable Future Land Use Category for the property on which the use is to take place.

2.05.02 -- Temporary Use Table. The following table identifies certain temporary uses permitted within the various zoning districts. The table also provides a cross reference to applicable supplemental regulations for each such temporary use.

TABLE 2.05A – TEMPORARY USE TABLE

Temporary Uses	Zoning District	Supplemental Regulations
Carnivals, Fairs, Circuses, Midways	AG, C-2, C-3, C-4, P-1, P-2	2.05.06
Fund Raising	Property used for community services and all commercially zoned property.	2.05.07
Non-Residential Building	All Districts	2.05.08
Outdoor Music Festivals	AG, C-2, C-3, C-4, P-1, P-2	2.05.09
Outdoor Promotional Sales	C-2, C-3, C-4	2.05.10
Recreational Vehicle As Temporary Shelter	AG, AE, and all Residentially zoned property.	2.05.11
Sale of Produce and Seasonal Goods	AG (if produce is grown on same property), C-2, C-3, C-4	2.05.13
Secondary Living Unit	AG, AE, and all Residentially zoned property	2.05.14
Special Event Sales	C-2, C-3, C-4, Public Property	2.05.15
Mobile/Itinerant Vendors	**[To be added.]**	2.05.16
Tent Revival	AG, C-2, C-3	2.05.17
Yard Sale	Residential Properties in All Districts	2.05.18

2.05.03 Temporary Use Permits.

a. Unless expressly exempt by this section, a Temporary Use Permit must be obtained from the Director of Planning & Development Services, or designee, prior to establishment of a temporary use.

b. The Director may issue a Temporary Use Permit for a temporary use within the zoning districts as indicated in Table 2.05A above, provided the following conditions and requirements are met:

1. The application shall be accompanied by (a) a site plan showing location and dimensions of the use, the access to the use, the parking that will serve the use, the number, type, location and dimensions of any proposed signage, and other necessary facilities, (b) an affidavit of written permission by the property owner or property manager of record when the applicant is not the owner, (c) copy of the recorded deed, and (d) the applicable fee, if any.

2. Prior to granting the Temporary Use Permit, the Director may require that other appropriate County or State agencies review the application to ensure the protection of the public health, safety, and general welfare. In addition, particular attention shall be given to traffic flow and control, automobile and pedestrian safety, and the effect that such use and activity will have on surrounding uses, particularly where the adjoining use is residential. The temporary sale shall not create a traffic hazard, or other hazard to the public. The Director may place appropriate conditions upon the permit to ensure the protection of the public health, safety, and general welfare. If there is clear and convincing evidence that no conditions can be attached to the permit that will ensure the public safety, the Director may deny the Temporary Use Permit.

3. The applicant shall provide all required information on an application and provide the information as required by this part in order to be considered for a Temporary Use Permit.

4. A temporary use shall not continue beyond the time limits established for the use in the sections below. Provided, however, that the Director may allow reasonable additional time for setting up and/or break down the temporary use. Such additional set up or break down time shall be set forth in writing as a condition of the permit and may extend up to 72 hours prior to and after the event. If the applicant desires to exceed the time constraints of this Section for any proposed temporary use or event, he must apply for an extension of time with the Director of Planning & Development Services. Such a request will be subject to the notice requirements of Section 12.06 of this Code.

5. Any party granted a permit under this subsection shall also comply with all other applicable federal, state, or local regulatory or statutory requirements.

6. The applicant must provide proof of occupational license or demonstrate that such a license is not required.

7. The applicant must provide proof that Health Department and handicapped requirements for bathrooms are met.

8. The applicant must provide a Florida sales tax identification number or exemption certificate.

9. When in the opinion of the Director it is deemed necessary, the applicant may be required to post a bond or otherwise provide adequate assurance that the site of the temporary activity will be returned to its original or an improved state when the selling activity has ceased.

c. The conditions of the permit shall be stated in the permit documents, and shall include, at minimum, the type of use allowed under the permit, the hours of operation, the duration of the use and a site plan on 8.5" by 11" paper depicting the location of the use, access, parking, signage, and other necessary facilities.

d. The permit documents shall be kept at the site of the temporary use and immediately made available upon request by a Putnam County Code Enforcement Officer or Officer of the Putnam County Sheriff's Office. Failure to produce the permit documents upon request shall be deemed a violation subject to enforcement action under Section 2.05.05 below.

e. Any final decision of the Director or other administrative official with reference to the provisions of this subsection may be appealed to the Zoning Board of Adjustment in the manner prescribed in Article 12 of the Land Development Code.

2.05.04 Signs. Signs for any temporary uses authorized by this section shall be limited to two (2) signs located within the property for which the permit is issued, and shall not exceed twenty-four (24) square feet in surface area for each sign. All temporary use signs shall otherwise meet all applicable standards of the County's sign regulations. Signs shall not be placed in any road right-of-way and shall not be placed so as to create a traffic hazard of any kind. Signs shall be removed when the permit expires. Failure to adhere to the requirements of this Section, including the timely removal of the signs, shall be deemed a violation subject to enforcement action under Section 2.05.05, below.

2.05.05 Violations and Enforcement.

a. A Code Enforcement Officer or an Officer of the Putnam County Sheriff's Office, finding probable cause that a person has committed an act in violation of this temporary use section, may issue that person a citation as provided in Article 12 of this Code.

b. A property owner that allows a temporary use to operate on his or her property shall be deemed to have violated this ordinance when the temporary user operates in violation of this ordinance and may be issued a written notice of violation from the Codes Enforcement Officer.

c. A violation by the property owner shall be subject to the code enforcement procedures provided in Article 11 and 12 of this Code.

2.05.06 Carnivals, Fairs, Circuses, Midways.

a. Carnivals, fairs, circuses, and midways may be allowed without need of a temporary use permit in P-1 and P-2 districts. Nothing herein shall be read to obviate the authority of the Board of County Commissioners or the Fair Board to establish such policies, rules or contracts as they deem appropriate to further restrict the temporary use of lands in the P-1 and P-2 districts

b. Carnivals, fairs, circuses, and midways may be allowed by temporary use permit in AG, C-2, C-3 and C-4 districts subject to the following: the duration of the permit shall not exceed fourteen days.

2.05.07 Fund Raising. If the temporary use is for the sole purpose of raising funds to support a community service organization or public charity supported by such an organization, the use may take place on the property normally used for community services without need of a permit. Such a temporary use for fund raising may also take place on any commercially zoned property without need of a permit, subject to the following conditions:

a. The temporary use must take place in an area that will not impede the normal flow of vehicular and customer traffic for the existing stationary use so as to create a traffic hazard, or other hazard to the public.

b. The organization has the permission of the landowner or the owner/operator of the existing stationary use.

c. The duration of a sale shall not exceed 72 hours. Except that (1) a fund raiser that is associated with holiday seasonal sales (i.e. Christmas trees at Christmas, fireworks at the 4th of July or pumpkins at Halloween) shall be allowed for duration of forty-five (45) days ending the day following the applicable holiday; or (2) a fund raiser that takes place inside the building envelope of the stationary commercial use shall not be subject to a specified duration.

Community service organizations, as used herein, shall be read to mean not-for-profit clubs or organizations that are registered and approved as 501(c)(3) corporations by the Internal Revenue Service and organizations affiliated with a local school.

2.05.08 Non-Residential Building. Temporary placement of a manufactured home or other manufactured building, or trailer, for non-residential use may be allowed by temporary use permit as provided below:

a. It is allowed by the zoning district under Table 2C above.

b. As a temporary sales office or construction office incidental to construction or development of the premises upon which the temporary structure is located. The temporary use permit for such a temporary structure shall provide that the structure may remain on the site so long as appropriate permits for the associated construction have been issued and the construction is being diligently pursued. If, however, the temporary structure will remain on the site for more than three years, a Special Use Permit shall be required for the structure. The temporary structure shall be removed within one month of the completion of construction on the site.

c. For a temporary office for a public purpose by any agency of local, municipal, State or federal government.

2.05.09 Outdoor Music Festivals. Outdoor music festivals may be allowed subject to the following:

a. Outdoor music festivals may be allowed without need of a temporary use permit in P-1 and P-2 districts. Nothing herein shall be read to obviate the authority of the Board of County Commissioners or the Fair Board to establish such policies, rules or contracts as they deem appropriate to further restrict the temporary use of lands in the P-1 and P-2 districts.

b. Outdoor music festivals require a temporary use permit to locate in AG, C-2, C-3 and C-4 districts, subject to the following: the duration of the musical entertainment shall not exceed 72 hours (i.e. 3 days), and the total time frame for the festival, including set-up and break down of the festival, shall not exceed 14 days.

c. In all cases, a waiver of the noise ordinance for the duration of the festival must be obtained from the Board of County Commissioners.

2.05.10 Outdoor Promotional Sales. Outdoor promotional sales shall be read to include all types of temporary sales of goods or services that are not considered sales of produce, special event sales, yard sales, fund raisers, mobile food and beverage vendors or on-site temporary promotional sales by a lawful, permanent business. In addition to the general criteria and conditions of this section, a temporary use permit for outdoor promotional sales shall be subject to the following:

a. The duration of the permit shall be limited to seventy-two hours.

b. No more than four (4) temporary use permits per location shall be issued in any given calendar year.

c. With regard to temporary uses in C-2, the proposed temporary use must otherwise be permitted by right or special exception as a permanent use in the C-2 zoning category.

d. On-site temporary promotional sales by a lawful, permanent business are exempt from permitting requirements; however, such on-site sales shall not exceed a duration of 72 hours; shall not take place in the public right-of-way; shall not impede the normal flow of vehicular and customer traffic for the existing stationary use so as to create a traffic hazard, or other hazard to the public; and shall comply with the County's sign regulations.

2.05.11 Recreational Vehicle as Temporary Shelter – This section describes when a recreational vehicle may be allowed as a temporary shelter on property other than a lawfully established RV Park. Article 3 of this Code regulates the use of RVs in an RV Park.

a. **Permit Required.** In the AG, AE and residential zoning districts (RE, R-1, R-1A, R-1HA, R-2, R-2HA and RMH), the temporary use of RVs for shelter may be allowed by temporary use permit as follows:

1. Pursuant to a temporary use permit during land clearing of the site where the recreational vehicle is to be located. The maximum duration of the temporary use permit for this purpose shall be sixty days. The recreational vehicle shall be self-contained and shall not be connected to an outside source of electrical power, potable water, or sewage disposal. All waste water and solid waste shall be disposed of properly at a licensed facility.

2. Pursuant to temporary use permit for use during construction of a home subject to the following:

(a) All building and construction related permits for the principal dwelling have been secured, and construction will commence within ninety (90) days.

(b) Payment of the permit fee for the electrical and plumbing inspections, in addition to the application fee is required.

(c) All units must be hooked up to sanitary facilities (septic tank).

(d) The temporary use permit shall have a duration limited to 6 months from time approval of the set up of the RV is received, subject to an extension of time of up to 6 months if the County Planner finds that construction of the principle residence is diligently proceeding. Maximum

time allowed for set-up is 12 months. Use of the RV as shelter shall discontinue within 30 days of final inspection of the principal dwelling.

3. For use during demonstrated extreme hardship situations such as a medical emergency, the destruction of a principle home by fire, flood, or other calamity, subject to the following:

   (a) The permit shall have a maximum duration of six months.

   (b) The recreational vehicle shall be self-contained or shall be lawfully connected to an outside source of electrical power, potable water, and sewage disposal.

b. **Permit Not Required – Residential Zoning Districts.** RVs may be used for temporary shelter in the residential zoning districts without need of a temporary use permit under the following conditions:

   1. The use is for temporary visits on a non-fee basis by the property owner or by friends and family members of the owner or occupant of the property, with permission of the property owner.

   2. The RV is self-contained.

   3. The extent of the stay in the RV does not exceed 14 consecutive days or 120 non-consecutive days in a given calendar year.

   4. The RV is not parked inside any of the required setbacks for the zoning district.

   5. There is no more than one RV on the premises at any one time.

c. **Permits Not Required – Agriculture Zoning Districts.** RVs may be used for temporary shelter in the AG and AE zoning districts without need of a temporary use permit under the following conditions:

   1. For lots or parcels that are 1-acre or less in size or for lots less than 5-acres in size that are part of a vested subdivision plan, use of an RV as a temporary shelter shall be as provided in paragraph b above.

   2. For all other lots or parcels in the AG or AE districts, RVs may be use for temporary shelter subject to the following conditions:

      a. The use is for temporary visits on a non-fee basis from the property owner or from friends and family members with the express permission of the property owner.

      b. The RVs are self-contained or they are hooked up to appropriate electrical service, a potable well and sewer or septic facilities that have been installed pursuant to permits issued by the Health Department and the Planning & Development Services Department, where required.

      c. The extent of the stay in the RV does not exceed ninety (90) consecutive days or 180 non-consecutive days in a given calendar year.

      d. The RV is not parked inside any of the required setbacks for the zoning district.

e. There is no more than one RV per acre of land on the premises at any one time, with a maximum of ten (10) RVs regardless of the acreage.

d. **Permit Not Required – Religious Facilities.** It is hereby recognized that the temporary use of RVs for visiting pastors, speakers or choral groups, as well as for temporary evangelical gatherings where allowed, is common practice for Religious Facilities. As a result, RVs may be used for temporary shelter without need of a temporary use permit when used in connection with a lawfully established Religious Facility, subject to the following conditions:

1. The use is for temporary visits on a non-fee basis for matters directly related to the Religious Facility.

2. The Religious Facility is allowed in the applicable zoning district by right or by an approved special use permit.

3. The RVs are self-contained or they are hooked up to appropriate electrical, well and sewer/septic facilities that have been installed pursuant to permits issued by the Health Department and the Planning & Development Services Department, where required.

4. The extent of the stay in the RV does not exceed 14 consecutive days or 120 non-consecutive days in a given calendar year.

5. The RV is not parked inside any of the required setbacks for the zoning district.

6. The lot or parcel is at least one (1) acre in size and there is no more than one RV per acre of land on the premises at any one time, with a maximum of ten (10) RVs regardless of the acreage.

7. Nothing contained in this section shall limit property used for Religious Facilities from using RVs for temporary shelter as provided in paragraphs a. through c. above.

e. Under no circumstances will an RV be permitted to serve as a permanent shelter or housing solution.

2.05.12 Reserved.

2.05.13 Sale of Produce and Seasonal Goods. Temporary sale of produce and seasonal goods may be allowed by temporary use permit subject to the following:

a. The produce may only be sold during the harvest season for such produce and the duration of the temporary use permit shall for up to but not more than forty-five (45) days.

b. The sale may be located on AG, C-2, C-3 or C-4 zoned property. In all cases, the applicant must have lawful access (i.e. a permitted driveway) and adequate off street parking areas so as to not create a traffic hazard, or other hazard to the public.

c. No more than two (2) temporary use permits per applicant per location shall be issued in any given twelve (12) month period, with a minimum two week hiatus between issuance of such permits.

d. The provision of shade or shelter that exceeds 150 square feet in size, in the aggregate, must be a permitted structure.

e. The seller of the produce must be the owner of the property or have express written permission to be on the property for the purpose of selling produce.

f. Customers must have access to handicap accessible bathroom facilities within 500 feet of the temporary use. This requirement may be waived if the Director of Planning & Development Services or his designee determines that: (1) the operator does not have any employees working at the produce stand, and (2) the nature of the use is such that it will result brief stops (i.e. the operator is selling one or two types of produce), and (3) the operator will bring the goods to the customer's vehicle if a disability prevents them from accessing the goods directly. Such a waiver shall only apply to the temporary sale event.

g. Sale of produce that exceeds a forty-five day (45) time period shall be treated as a permanent land use and should only take place in appropriate zoning district that allows for Retail Sales -- General and shall be subject to the same development and building code standards as any other land use classified as Retail Sales -- General, including but not limited to square footage limitations of the zoning district, enclosure and facility requirements, parking, landscaping, buffering, accessibility, fire safety, building code etc.

2.05.14 Secondary Living Unit. A secondary living unit may be allowed by temporary use permit in cases of medical hardship subject to the following:

a. The applicant shall provide proof that the secondary living unit is necessary to house one or more immediate family members of the property owner who are receiving care by the property owner. An immediate family member includes only the following: Grandfather, grandmother, father, father-in-law, mother, mother-in-law, son, son-in-law, daughter, daughter-in-law, brother, brother-in-law, sister and sister-in-law.

b. The applicant shall provide a written certification from a licensed physician that a medical hardship requires constant or recurring physical care and assistance.

c. A secondary living unit must be constructed or erected in manner that is consistent with the zoning district.

d. A site plan shall be submitted showing the location of the secondary living unit and the manner in which all setbacks and building separation requirements are met.

e. The property on which a secondary living unit is placed shall not be subdivided so as to create two lots unless all requirements in this Code for the subdivision of land, including minimum lot size, and the density limitations of the applicable future land use designation are met.

f. Once the medical hardship ends, one of the living units must be removed within 90 days.

g. A temporary use permit for a secondary living unit shall be limited in duration to one year. The permit may be renewed based on a showing by the applicant that all requirements of this section have been and will be complied with, and the provision by the applicant of an updated certification from a licensed physician as required in b above.

2.05.15 Special Events Sales. A special event sale is a temporary sale held in conjunction with a sporting event, parade, festival or other such event. Special events sales may be allowed by temporary use permit. The duration of the permit shall not exceed the period approved for the associated special event.

2.05.16 Mobile/Itinerant Vendors

Reserved.

2.05.17 Tent Revival . A tent revival may be allowed by temporary use permit subject to the following:

a. The duration of the permit shall not exceed 14 days.

b. No permit is required when the revival is held on a site where a Religious Facility has been lawfully constructed or a site previously approved by the County for outdoor revival meetings by ordinance or Special Use Permit.

2.05.18 Yard Sale. A yard sale, also known as a "garage sale" or "estate sale", is a sale of household merchandise that is used or stored as part of that residential use by the property owner where the sale is to take place. Any other sale of household merchandise that does not meet the definition of a "yard sale" under this subsection, or that does not meet the definition of "fund raiser" under subsection 2.05.07 above, shall be considered an established retail use and subject to requirements of this Code for established retail uses, including but not limited to the zoning, location, dimensional, parking, landscaping, ingress/egress, facility and accessibility requirements, as well as the requirement that such established retail uses take place inside an enclosed building. A yard sale may be allowed without a temporary use permit subject to the following:

a. The sale must take place on the residential property where the items to be sold were used or stored as part of that residential use or a neighboring residential use.

b. No more than two sales are allowed on the same property within any twelve-month period.

c. The duration of a sale shall not exceed 72 hours.

Article 3

Supplemental Use Regulations (omitted)

Article 4

Overlay and Floating Zones (pages 1, 2)

ARTICLE 4
OVERLAY AND FLOATING ZONES

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ARTICLE 4
OVERLAY AND FLOATING ZONES

SECTION 4.01 PURPOSE -- The purpose of this Section is to describe overlay and floating zones used to impose special development standards in certain areas. The location of overlay zones is established by the County based on the need for special development standards in specified areas. The overlay zone imposes additional or different development standards than those that would otherwise apply in the zoning district.

The location of a floating zone, by contrast, is determined by the developer subject to approval of the Board of County Commissioners. The purpose of a floating zone is to allow the developer to choose and follow a set of development standards different from the general standards in the Code.

SECTION 4.02 PLANNED UNIT DEVELOPMENT (PUD) FLOATING ZONE

[Reserved for future use]

SECTION 4.03 AIRPORT AND HELIPORT OVERLAY REGULATIONS

4.03.01 -- Purpose: The purpose of this section is to establish height limitations and land use limitations in Putnam County around Kay Larkin Municipal Airport, or any other public airport, STOLport or heliport (hereinafter referred to as "airport"), in order to prevent the creation of obstructions or other land uses that may be hazardous to airport and aircraft operations. It is recognized that airports present an increased risk to the public's health, safety and well-being due to aviation noise and the potential for an aviation accident. As a result, this section creates three overlay zones that provide height restrictions based on various obstruction standards established by Federal Aviation Administration (FAA) and Florida Department of Transportation (FDOT); as well as land use limitations based on sensitivity to aviation generated noise and the increased risk of injury to persons or property in the event of an aircraft accident:

- Airport Height Notification Zone (See Map 4.1 in Appendix IV)
- Airport Noise Impact Zone (See Map 4.2 in Appendix IV)
- Airport Overflight and Accident Potential Zone (See Map 4.3 in Appendix IV)

These overlay zones and the requirements for each apply only to that portion of a given parcel that falls within the zone, and only to proposed or existing structures or other objects within the zone. They do not apply to accessory open space, landscape and buffering, storm water management, or driveway and parking uses.

Article 5

Facilities and Services (omitted)

Article 6

Resource Protection Standards
(maps omitted)

ARTICLE 6
RESOURCE PROTECTION STANDARDS

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ARTICLE 6
RESOURCE PROTECTION STANDARDS

SECTION 6.01 PURPOSE: The purpose of this Article is to implement the resource protection requirements of the Putnam County Comprehensive Plan. Additional resource protection standards shall be provided in Article 7 of this Code in the sections governing storm water management and sewage disposal. This Article is intended to protect resources identified as important to the public health, safety and welfare by establishing areas of a development site that must be protected from harmful affects of development. A developer should apply the provisions of this Article to a proposed development site before any other development design work is done. Application of the provisions of this Article will divide a proposed development site into areas that may be developed and areas that must generally be left free of development activity. The proposed development should then be designed to fit within the areas that may be developed. The setbacks and buffers required by this Article are meant to work in concert with standard zoning district setback and buffering requirements, and where the resource protection standards differ from the zoning district requirements with regard to setbacks and buffers, the more restrictive standards (i.e. larger setback) shall apply.

SECTION 6.02 WETLANDS

6.02.01 -- Purpose and Intent: It is the purpose and intent of this Section to provide for the protection, maintenance, enhancement and utilization of wetlands within Putnam County in accordance with the adopted Putnam County Comprehensive Plan, while recognizing the rights of individual property owners to use their lands in a reasonable manner, as well as the importance of wetland ecosystems to flood control, waste assimilation, water purification and recharge, and wildlife habitat and the rights of all citizens to protect Putnam County's wetland ecosystems to insure that they serve these needed functions. Nothing within Section 6.02 replaces or supercedes the jurisdiction and regulations of the Florida Department of Environmental Protection ("DEP"), the St. John's River Water Management District ("SJRWMD") or the Suwannee River Water Management District ("SRWMD"). Property owners are responsible for obtaining appropriate permits from these agencies, where required.

6.02.02 -- Applicability and Requirements: Development of any property in a wetland or within twenty (20) feet of a wetland shall be subject to the following:

a. Wetland impacts shall first be avoided. The location and size of what the County will treat as wetlands for purposes of this Code are set forth in Map 6.1 in Appendix VI to this Code. Structures and other site improvements, including accessory uses, shall be setback at least 20 feet from these wetlands, except for those uses described in section 6.02.03 of this Code.

b. Proposed developments shall establish a 20-foot buffer of native vegetation adjacent to wetlands to provide filtration of storm water pollutants. In addition, if the development is

or will be serviced by an onsite septic system, it must comply with the usable land requirements and wetland and water body setbacks of Chapter 64E-6, Florida Administrative Code and County Ordinance 87-5.

c. Where a wetland is adjacent to or an integral part of a water body as described section 6.03 of this code, then the more restrictive provisions of either 6.02 or 6.03, including setback and buffering requirements, shall apply. For example, development of a property with wetlands adjacent to a water body will be required to meet the 50-foot setback requirements in Section 6.03; however, if the adjacent wetlands extend 50 or more feet from the water body, the minimum 20-foot wetland buffering requirements in paragraphs a and b of this subsection shall still apply, and the development will be set back 70 or more feet from the water body.

d. All applicable state and federal regulations for permitting and mitigation must be met prior to the County issuing any construction permits for development in or adjacent to wetlands. Disturbance of wetlands, including the exemptions provided in subsection 6.02.03 below, shall not be permitted unless first authorized by the DEP, the U.S. Army Corps of Engineers ("COE") and the St. Johns or Suwannee River Water Management Districts ("WMDs"). This will be enforced through the site plan review process conducted by Planning and Zoning Staff when a building permit application is submitted.

e. Transfer of density from wetlands to the upland portion of a site shall be permitted through approval of an appropriate Planned Unit Development (PUD) application or an appropriate Article10 development agreement and by establishing flexibility in the lot area requirements in the various zoning districts established in this Code in order to insure that development occurs outside of the wetlands and the 20-foot buffer. The wetland area will be included in calculating the gross density applicable to a property.

f. Wetland protection shall be considered when the County evaluates a variance request for a setback modification that would move development away from wetlands.

g. When creating a new parcel or subdividing or cutting out a portion of an existing parcel, each newly created lot or parcel shall contain sufficient uplands to allow the property to be developed under the existing zoning without encroachment on the wetlands or the 20 foot buffer and without need of a variance. Transfer of density from the wetlands to uplands, in accordance with paragraph e above, may be allowed in order to permit the creation of new parcels or lots that, except for the presence of wetlands, are permissible under this Code.

6.02.03 -- Exemptions

a. Activities that may be exempted from this Section are as follows:

1. Residential lots of record existing on or before the adoption of the comprehensive plan on December 19, 1991 at 5:00 p.m. which do not contain sufficient uplands to permit development of a residence without encroaching into wetlands, may be developed with one residential dwelling.

2. Resource-based recreational facilities such as trails, boardwalks, piers, and boat ramps.

3. Water dependent components of commercial development such as port facilities, marinas, fish camps, and commercial fishing and shell fishing operations.

4. General Agriculture, which shall maintain the natural hydrology and function of wetland areas in accord with the most recent version of USDA SCS guidelines established pursuant to the 1985 Food Securities Act, as amended; and by following best management practices and regulations set forth in pages 7-6 through 7-14 of the "Florida Non-Point Source Management Plan, Volume Two," (May 1989, Department of Environmental Regulation); and "Silviculture Best Management Practices Manual," (1993 Revision, Department of Agriculture and Consumer Services). The County may elect to apply a more current edition of a best management practices and management guideline manuals from the DEP or the Florida Department of Agriculture and Consumer Services, if available.

5. Silviculture, which shall follow the "Silviculture Best Management Practices Manual," (1993 Revision, Department of Agriculture and Consumer Services). The County may elect to apply a more current edition of a best management practices and management guideline manual from the Florida Department of Agriculture and Consumer Services, Division of Forestry, if available.

6. Essential public services, as those are defined in section 6.03.03 below.

7. Any emergency activity that is immediately necessary for the protection and preservation of life or property or for the protection or preservation of a natural resource. Such emergency activities may include, for example, search and rescue operations related to floods, hurricanes or other storms; or preventive and remedial activities related to large-scale contamination of streams or other bodies of water.

   (a) Within three (3) days after the commencement of an emergency activity which otherwise would be treated as a regulated activity under this Section, the person chiefly responsible for undertaking such emergency activity shall send a written statement to the Department of Public Works generally describing the actions taken and setting forth the pertinent facts regarding the nature of the emergency, including an explanation of the

life, property or resource such activity was designed to protect or preserve.

(b) Within three (3) days of receiving notice of the emergency activity, the County Engineer shall make a written determination regarding whether the activity was the result of an emergency or, where it is determined that the impacted wetlands fall within the jurisdiction of the DEP or SJRWMD, advise the appropriate State agency of the action in writing.

(c) Should the County Engineer determine that the activity taken on wetlands under the County jurisdiction and such actions were not the result of an emergency situation, the person undertaking the activity may be subject to an enforcement action under this Code, and the County Engineer shall report the activity to the appropriate state and federal agencies. Where the County Engineer determines that there was an emergency situation, he may require the property owner to mitigate some or all of the wetland impacts.

b. Additional activities that may be exempted from this Section are set forth in paragraphs 1 through 4 below. However, where the exemptions identified in paragraphs 1 through 4 are based on acreage or size thresholds, they shall not apply and are expressly omitted as exceptions to this Code:

1. All activity exempt from regulation by the DEP under Chapter 403, Florida Statutes, including any applicable agency rules.

2. All activity exempt from regulation by the COE as authorized by section 404, Clean Water Act or Section 10, River and Harbor Act.

3. All activity exempt from regulation by the St. Johns River Water Management District pursuant to Rule 40C-4, Florida Administrative Code.

4. All activity exempt from regulation by the Suwannee River Water Management District pursuant to Rule 40B-4, Florida Administrative Code.

c. All exceptions in this Section are allowed only when the proposed use is otherwise permissible under *all other applicable laws and ordinances of this County*; site characteristics are such that wetland impacts cannot be avoided; the impacts are limited to the minimum necessary to allow the permitted use of the property; and the site development or use complies with DEP, COE, Department of Health and the WMDs' regulations for permitting and mitigation.

SECTION 6.03 WATERFRONT DEVELOPMENT

6.03.01 -- Purpose and Intent: In order to maintain surface water quality and reduce nutrient loading in lakes, rivers, creeks, streams and estuaries (hereinafter referred to collectively as "water body"), this Section is enacted as a measure to protect the public health and welfare by by requiring that new structures be setback a reasonable distance from surface waters, and by requiring retention of vegetated shorelines. Additional standards for wastewater discharge into the St. John's River and on-site sewage disposal systems for waterfront property *can be found in Putnam County Ordinance 87-5*

6.03.02 -- Applicability and Definitions: The regulations set forth in this Section, shall apply to all water bodies within the unincorporated areas of Putnam County, Florida. For purposes of this Section:

a. Shoreline means the land or water along the edge of a body of water that is 50 feet upland from the ordinary high-water line.

b. Shoreline Vegetation means vegetation that grows within the shoreline area; included are terrestrial and aquatic plants associated with wetlands and both emergent (plants growing above the water surface) and non-emergent (vegetation below the water surface).

c. Water body is defined to include rivers, lakes, creeks or pond beds and any other permanently or historically water-covered land that occurs naturally at the intended site, up to the mean high water level. Maintained drainage ditches and retention ponds are not considered water bodies.

6.03.03 -- Surface Water Protection Requirements: All development within 500 feet of the Ordinary High Water Line (OHWL) of a water body shall comply with the following requirements:

a. Lots that are created after December 19, 1991 that are adjacent to a water body must have at a minimum 100 feet of frontage along the water body in order to be eligible for permits. Lots created before December 19, 1991, shall meet the requirements of the applicable laws and ordinances at the time of creation.

b. New waterfront development shall be reviewed to insure that they do not degrade ambient water quality of adjacent waters. The developer or property owner shall submit his proposed development to Putnam County Public Works for review and approval of the storm water management plans prior to issuance of any building permits.

c. Where the development includes an on-site sewage system, such as a septic tank, the system must meet the design standards set forth in Ordinance 87-5, as amended, and regarding on-site sewage systems, which shall be read to include the following criteria:

1. The system shall be set back a minimum of 100 feet from the mean or ordinary high water line.

2. The wall of a retaining dam of any effluent ponds must be at least three (3) feet in elevation above the mean high water mark. Subject to approval by the Florida Department of Environmental Protection ("DEP"), exceptions may be made upon the recommendation of the Putnam County Public Works Department and approval of the Board of County Commissioners. Effluent ponds shall be prohibited in an area of special flood hazard except as provided in Section 6.05 below.

3. It shall be unlawful for any person, firm, corporation or utility to allow raw or treated sewage to be discharged directly into a water body or a tributary connected to such water body. No permits shall be issued that will allow such discharge to occur, except as provided in *Putnam County Ordinance 91-03.*

d. Structures, including accessory structures, shall be set back a minimum of fifty (50) feet from the water body, and a vegetated upland buffer or filter using native plants shall be preserved, restored or installed for any waterfront development. The buffer strip shall provide for sheet flow of the surface runoff, and shall be a minimum of 50 feet in width, except as follows:

It is certified that either an existing condition or a buffer has been established which meets the USDA SCS specifications in the Code 393 Field Office Technical Guide, Florida Supplement dated January 1988, for a minimum design width of:

1. 15 feet in areas of less than four and one-half percent slope where the vegetation is ground cover species or mixed woody (trees and shrubs) and ground cover species.

2. 25 feet in areas of four and one-half percent or greater slope where the vegetation is ground cover species or mixed woody (trees and shrubs) and ground cover species.

3. 30 feet in areas of less than four and one-half percent slope where the vegetation is only woody species (trees and shrubs).

4. 50 feet in areas of four and one-half percent or greater slope where the vegetation is only woody species (trees and shrubs).

Where there are associated wetlands, the 20-foot vegetative buffer requirements

of section 6.02.02.b shall apply.

e. Underground storage tanks are prohibited within 100 feet of the mean or ordinary water line and the installation of aboveground or belowground storage tanks within 500 feet of a water body shall first be approved by the Department of Health.

f. Except for those uses described in paragraphs 1 through 5 below, no development activity shall be undertaken within buffers required by this Section 6.03. The uses described in paragraphs 1 through 5 below will be allowed only when the proposed use is otherwise permitted under *all other applicable laws and ordinances of this County*; when the site characteristics are such that impacts cannot be avoided; when the impacts are limited to the minimum necessary to allow the permitted use of the property; and when the WMDs, the Health Department, the DEP and the COE provide written authorization indicating that the site development or use is in compliance with their respective regulations for permitting and mitigation.

1. Resource-based recreational facilities such as trails, boardwalks, piers and boat ramps.

2. Water dependent components of commercial development such as port facilities, marinas, fish camps, and commercial fishing and shell fishing operations.

3. General Agriculture, which shall meet the State water quality standards to maintain ambient water quality in accordance with the requirements of Chapter 62-302, Florida Administrative Code, as well as the best management practices and regulations set forth in pages 7-6 through 7-14 of the "Florida Non-Point Source Management Plan, Volume Two," (May 1989, Department of Environmental Regulation); and where applicable, "Silviculture Best Management Practices Manual," (1993 Revision, Department of Agriculture and Consumer Services). The County may elect to apply a more current edition of a best management practices and management guideline manuals from the DEP or the Florida Department of Agriculture and Consumer Services, if available.

4. Silviculture, which shall follow the "Silviculture Best Management Practices Manual," (1993 Revision, Department of Agriculture and Consumer Services). The County may elect to apply a more current edition of a best management practices and management guideline manual from the Florida Department of Agriculture and Consumer Services, Division of Forestry, if available.

5. Essential public services, which includes the following:

   (a) Emergency repairs on public or private projects necessary for the preservation of life, health, or property where taken to implement and

accomplish the beneficial purposes of this Section.

(b) Maintenance of public or privately owned portions of a structural storm water or drainage control system that does not constitute major construction or rebuilding.

(c) Activities undertaken by Federal, State, Regional and Local agencies of government.

(d) Utility crossings.

(e) Mosquito control activities performed by the State or the County.

(f) Scenic, historic, wildlife, or scientific preserves.

(g) Developing a "Wetlands Storm Water Discharge Facility" or "Treatment Wetland" in accordance with state permits received under Chapter 62-25, Florida Administrative Code.

g. Minimization Of Impacts: Activities that are allowed in the shoreline buffers required by this Section shall be designed, constructed, maintained and undertaken in a way that minimizes the adverse effects on the beneficial functions of the affected shoreline protection zone.

h. Design Standards For Water Dependent Uses. In addition to any other applicable design standards, uses that can be carried out only on, in or adjacent to water bodies shall be subject to the following:

1. Marinas, fish camps, ports, commercial docks or moorings and other appropriate water dependent uses (hereinafter collectively referred to as "marinas") shall post the following signs where they are readily visible to all users of the development:

(a) Regulations pertaining to handling and disposal of waste, sewage, or toxic materials.

(b) Regulations prohibiting the use of vessel toilets while moored unless these toilets are self-contained or have an approved treatment device.

(c) Regulations prohibiting the disposal of fish or shellfish cleaning wastes, scrap-fish, viscera, or unused bait in or near the development.

(d) Appropriate messages relating to local ecological concerns, e.g., manatee protection.

2. A marina shall include public boat launch facilities unless the applicant can demonstrate that providing such facilities is not feasible or it is determined by the County that the ramp would be excessively damaging to the aquatic environment. The intent of this requirement is to combine destructive activities to a minimal number of sites along the shoreline. Providing a boat ramp at the already-disturbed marina site may be preferable to disturbing another site along the shoreline to provide the ramp.

3. Marinas shall have adequate rest-room facilities in compliance with Department of Health regulations.

4. Adequate garbage receptacles shall be provided and maintained by the marina operator at several locations convenient to users.

5. Any dredging shall be conducted at times of minimum biological activity to avoid fish migration and spawning, and other cycles and activities of wildlife.

6. If dredging changes the littoral drift processes and causes adjacent shores to erode, the developer shall periodically replenish these shores with the appropriate quantity and quality of aggregate in accordance with appropriate permits obtained from federal, state or regional levels of government.

7. Where wet moorage is offered for boats that have on-board sewage holding facilities or where other recreational vehicles (RVs) are allowed to stay overnight, then the developer or owner of the moorage or RV sites shall provide pump-out, holding, or treatment facilities for sewage and other wastes, including bilge, contained on vessels and vehicles. The facilities shall be conveniently available to all vessels and vehicles.

i. Limitations On Clearing:

1. When applying for a building permit, a property owner who desires to clear more than twenty-five (25) feet or twenty five percent (25%) of shoreline must provide proof of receipt of a DEP or WMD permit authorizing such vegetation removal or a letter indicating that no permit is required for the clearing activity proposed; and demonstrate compliance with all other setback and buffering requirements of this section.

2. A property owner whose shoreline was cleared prior to the adoption of this code in accordance with federal, state and local regulations existing prior to the adoption of this code may not need to obtain a permit as required by this subsection, if the clearing is continuously maintained. However, if shoreline

vegetation is reestablished, a permit or letter of compliance may be required to clear it in accordance with this subsection.

j. Mining activities are prohibited within 500 feet from a water body meandered by State. A list of the water bodies in Putnam County meandered by the State is found in Table 6.1 of Appendix VI.

SECTION 6.04 HABITAT OF ENDANGERED OR THREATENED SPECIES

6.04.01 -- Habitat Protection and Density Bonuses: Impacts to habitat of endangered or threatened species shall first be avoided and disturbance of such habitats shall not be allowed where an otherwise permissible development can occur without impacting such habitat.

a. The County may require transfer of densities in order to prevent or minimize a development's impacts to habitat of endangered or threatened species.

b. Developments that result in the protection of significant wildlife habitat and vegetative communities that warrant protection shall be eligible for density bonuses in accordance with the requirements contained in Article 7 of this Code.

c. Protection of habitat for endangered and threatened species shall be considered when the County evaluates a variance request for a setback modification that would move development away from the habitat.

6.04.02 – Endangered Species, Threatened Species, or Species of Special Concern: Future development of property in Putnam County known to serve as a habitat for plant or animal species listed by the U.S. Fish and Wildlife Service (USFWS), Florida Fish and Wildlife Conservation Commission (FFWCC), Florida Department of Environmental Protection, or the Florida Department of Agriculture as endangered, threatened or as species of special concern, shall comply with the management criteria of the USFWS and the FFWCC.

6.04.03 -- Manatee Protection Plan:
The County shall post informational signage regarding manatees at all county owned and maintained public boat ramps.

6.04.04 -- Development adjacent to Ocala National Forest, Greenways and other wildlife or resource conservation and preservation areas: In the process of reviewing site plans, the County shall assess the compatibility of land use activities and development on parcels adjacent to the Ocala National Forest, established greenways, as well as other wildlife management areas, state or private preserves or other Federal, State or local natural resource protection, conservation and environmentally sensitive areas and conservation easements. The County may require additional buffering and setbacks between the proposed use and the protected area. In establishing such buffering, the reviewing board or Staff member will look at the nature and quality of the protected area; the type of use (i.e. residential, agricultural, commercial, industrial, or mining); the proximity of the use to the protected area; the intensity, size and duration of the use; other adjacent land uses; and the use's potential for impacting the protected area. A map indicating the recognized conservation, preservation and environmentally sensitive areas is provided in Map 6.2 of Appendix VI to this Code.

SECTION 6.05 FLOOD HAZARD MANAGEMENT AND FLOODPLAIN PROTECTION

6.05.01 -- Purpose: The purpose is as follows:

a. To protect human life and health;

b. To minimize expenditure of public money for costly flood-control projects;

c. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

d. To minimize prolonged business interruptions;

e. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodplains;

f. To help maintain a stable tax base by providing for the sound use and development of flood-prone areas in such a manner as to minimize flood blight areas;

g. To ensure that potential home buyers are notified that property is in a flood area; and

h. To comply with the requirements of the National Flood Insurance Program so as to ensure the availability of flood insurance for residents and property owners.

6.05.02 -- Intent and Scope of Regulations: It is the intent of this Section to require any new development or expansion of an existing development to occur outside of the 100-year flood plain. This Section shall apply to all areas of special flood hazard within the jurisdiction of the County.

6.05.03 -- Compliance

a. No structure or land shall hereafter be constructed, located, extended, converted or structurally expanded inside the 100-year floodplain, unless otherwise allowed under the terms of this Section and all other applicable Federal, State and local regulations.

b. Violation of the provisions of this Section or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with grants of variance or special exceptions, shall constitute a violation of this Code, which shall be punishable in accordance with the Code Enforcement procedures of Ordinance 90-26. In addition, the County may assess a civil penalty of not more than $500 through a citation or seek injunctive relief from the Courts to, among other things, compel the correction of any such Code violation, or both. Each day that the violation

continues shall constitute a separate offense. Nothing contained herein shall prevent the County from taking such other lawful actions as are necessary to prevent or remedy any violation, including but not limited to such criminal enforcement actions as are allowed under Chapter 162, Florida Statutes.

6.05.04 -- Basis and Procedures For Establishing Areas Of Special Flood Hazard

a. The areas of special flood hazard are those areas identified as category A, AO, AH, A1 through A30, AE and A-99 on the latest available Flood Insurance Rate Map ("FIRM") for a given area of Putnam County. These FIRMs are developed by Federal Emergency Management Agency ("FEMA") and adopted by reference and hereby made part of this Code **[Policy A.1.1.1]**. FIRMs are panel maps that indicate potential flood hazards within a given sector of Putnam County. Copies of these FIRMs are available to be reviewed at the Planning, Zoning and Building Department. The County also provides a composite flood zone map, which is set forth in Appendix VI as Map 6.3; however, the composite map is for illustrative purposes only and the FIRMs shall govern any formal flood hazard determination.

b. Planning and Zoning Staff shall use the FIRMs (either hard copy or computer generated) to determine whether a given parcel or development activity is in an area of special flood hazard. Where an area of special flood hazard does not have an established base flood elevation on the FIRMs, Staff shall extrapolate the base flood elevation using the Corp of Engineers United States Geographical Survey (USGS) quadrangle maps with a maximum interval of 10 feet between contour lines. Should a person dispute a Staff determination of a base flood elevation or dispute that a parcel or development activity is inside an area of special flood hazard, the burden shall be on that person to demonstrate that the parcel or development activity is not in an area of special flood hazard by providing one of the following:

1. A complete and fully executed letter of map amendment (LOMA) from FEMA; or

2. An elevation certificate and elevation survey signed and sealed by a licensed surveyor in good standing; or

3. When there is a discrepancy between the elevation provided through interpretation of the quadrangle map and the elevations measured in the field by the licensed surveyor, as shown on a signed and sealed elevation survey, the County Planner or the County Planner's designee may, after conducting observations in the field at the site in question, require that the lowest floor, as well as all mechanical and electrical equipment, be elevated in accordance with whichever one of the following will result in the highest elevated level:

(a) One foot above any observable high-water marks; or

(b) Two feet above the highest adjacent grade.

4. A boundary survey or a map-based determination shall not be sufficient to carry this burden and shall not be accepted as proof that a parcel or development activity is out of the area of special flood hazard.

c. The degree of flood protection required by this Section is considered reasonable for regulatory purposes and is based on scientific and engineering consideration. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This Section does not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damages. This Section shall not create liability on the part of the County or by any officer or employee thereof for any flood damages that result from reliance on this Section or any administrative decision lawfully made hereunder.

6.05.05 -- General Construction Standards for Flood Hazard. In all areas of special flood hazard where development is allowed or proposed, the following provisions are required:

a. Development within areas of special flood hazard shall first be avoided. If residential development is allowed to occur in the area of special flood hazard, it must be subject to the lowest density of the applicable future land use designation.

b. New and existing structures that are allowed or existing in the 100-year floodplain shall be anchored to prevent flotation, collapse or lateral movement of the structure.

c. Manufactured homes shall also be anchored to prevent flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top of frame ties attached to ground anchors. This standard shall be in addition to and consistent with applicable state requirements for resisting wind forces.

d. New construction and substantial improvements to structures shall be constructed with materials and utility equipment resistant to flood damage and by methods and practices that minimize flood damage. New construction or substantial improvements means structures for which the "start of construction" occurred on or after the effective date of this Code, and any alteration, repair, reconstruction or improvements to a structure which is in compliance with these flood damage prevention regulations.

e. Electrical, heating, ventilation, plumbing, air conditioning equipment, duct work and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

f. New and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwater into the system.

g. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwater into the systems and discharges from the systems into floodwater.

h. On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.

i. Where an existing structure is in compliance with the provisions of this Section, regardless of when the structure was constructed, erected or installed, any proposed alteration, repair, reconstruction or improvement to the structure shall meet the requirements of "new construction" as contained in this Section.

j. Where an existing structure is not in compliance with this Section, any alteration, repair, reconstruction or improvement that is not a "substantial improvement", as that term is defined herein, may be undertaken only if the provisions in *Article II, Division 7, Zoning Ordinance 88-1, as amended,* regarding non-conforming uses are met, and only if, where possible, such alteration, repair, reconstruction or improvement includes additional flood hazard mitigation measures.

k. The flood carrying capacity of a watercourse shall not be diminished by any relocation or alteration or bridge construction.

l. Adequate drainage paths shall be provided around structures to guide storm water runoff away from them.

m. The cumulative effect of proposed development, when combined with all other existing and anticipated development, must not increase the flood elevation more than 0.0000 inches at any point in the community.

n. The storage, disposal or production of hazardous materials is prohibited within the 100-year floodplain.

o. Clearing of native vegetation will be minimized in flood prone areas by following the special buffer requirements of this Article and the lot coverage and floor area ratio requirements of the applicable zoning district and future land use category.

p. Development that is allowed to occur within the 100-year floodplain shall be required to connect to a municipal, county or investor-owned sewer system, if such a system is located within a half mile from the development and the owner/operator of the system

can and will allow the connection. Where such a connection is not possible, development shall be limited to low density residential and septic systems shall be located and designed as specified by the County Department of Health and the Department of Planning, Zoning and Building.

6.05.06 -- Particular Design and Construction Standards for Special Flood Hazard Areas. In all areas indicated to be within a special flood hazard, identified as zone A, AH, A1 through A30, AE and A99 on the FIRMs, the following provisions are required:

a. Residential construction. New construction or substantial improvement of any existing residential structure, including manufactured homes, shall first be prohibited. If the construction or substantial improvement of the residential structure is or will be in compliance with all other federal, state and local laws, but cannot otherwise be constructed outside the area of special flood hazard, the lowest floor, together with all mechanical and electrical equipment, including laundry facilities and food freezers and the basement, must be elevated no lower than one (1) foot above the base flood elevation. Lowest floor, as used throughout this Section, means the lowest enclosed area (including a basement or the ground itself where the structure is fully enclosed).

b. Nonresidential construction. New construction or substantial improvement of any existing commercial, industrial, or other nonresidential structure shall first be prohibited. If the construction or substantial improvement of the residential structure is or will be in compliance with all other federal, state and local laws, but cannot otherwise be constructed outside the area of special flood hazard,, the lowest floor, together with all mechanical and electrical equipment, including the basement, must be elevated no lower than one (1) foot above the level of the base flood elevation. Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate the unimpeded movements of floodwater shall be provided in accordance with standards of paragraph c of this section.

c. Elevated buildings. New construction or substantial improvements of existing elevated buildings that include fully enclosed areas formed by foundation and other exterior walls below the base flood elevation shall be designed to preclude finished living space and designed to allow for the entry and exit of floodwater to automatically equalize hydrostatic flood forces on exterior walls. In addition:

1. Designs for complying with this requirement must either be certified by a professional engineer or architect or meet the following minimum criteria:

(a) Provide a minimum of two (2) openings in walls or doors having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding;

(b) The bottom of all openings shall be no higher than one (1) foot above grade; and

(c) Openings may be equipped with screens, louvers, valves or other coverings or devices provided they permit the automatic flow of floodwater in both directions.

2. Electrical, plumbing, and other utility connections are prohibited below the base flood elevation.

3. Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or entry to the living area (stairway or elevator).

4. The interior portion of such enclosed area shall not be partitioned or finished into separate rooms.

5. Use of such enclosed areas shall be limited to parking, storage, and building access.

d. Manufactured Homes and Recreational Vehicles.

1. All manufactured homes placed or substantially improved, together with all mechanical and electrical equipment, on individual lots or parcels, in expansions to existing manufactured home parks or subdivisions, or in substantially improved manufactured home parks or subdivisions, must meet all the requirements for new residential construction contained in subsection 6.05.05 and 6.05.06.a and c, including installation on permanent foundation systems, elevation, and anchoring. At minimum, a "permanent foundation system" shall constitute reinforced piers placed on poured footings, or other foundation elements of equivalent strength. Any additions to manufactured homes subject to provisions of this subsection shall also be considered "new construction" since they must be supported by an independent foundation system. "Additions" must therefore comply with the provisions contained in subsection 6.05.05 and 6.05.06.a and c, including elevation. This may necessitate elevating of an existing manufactured home to match the required elevation of the "addition".

2. All manufactured homes placed or substantially improved in an existing manufactured home park or subdivision must be elevated so that:

(a) The lowest floor of the manufactured home is elevated on a permanent foundation no lower than 1 foot above the level of the base flood

elevation.

(b) As an alternative to the requirements of paragraph a, the manufactured home chassis may be supported by reinforced piers, or other foundation elements of at least an equivalent strength, of no less than 36 inches in height above grade.

(c) The manufactured home must be securely anchored to the adequately anchored foundation system to resist flotation, collapse and lateral movement.

(d) In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as result of a flood, the manufactured home shall be replaced or improved pursuant to the standards of subsection 6.05.05 and 6.05.06.a and c, above. **"Substantial damage"** means damage to any part of the manufactured home resulting in a need for any combination of repairs, reconstruction, alteration, or improvements to a building (including electrical, plumbing and heating/air conditioning) in which the cumulative cost equals or exceeds fifty percent (50%) of the assessed value of the home prior to such damage occurring.

(e) Any additions to manufactured homes subject to provisions of this subsection shall be considered "new construction" subject to the provisions contained in subsection 6.05.06.a and c, including installation on permanent foundation systems, elevation, and anchoring.

3. All recreational vehicles placed on sites must be fully licensed and ready for highway use. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, it is attached to the site only by quick disconnect type utilities and security devices, and it has no permanently attached structures.

e. Accessory Structures. Structures that represent a minimal investment and that are subordinate to and accessory to the primary structure or use on the property (e.g. storage sheds, detached garages, gazebos, and barns) may be exempted from the elevation requirements of paragraph b, provided the following criteria are met:

1. The structure is not used for human habitation, including occupancy as a workplace for extended periods of time, and are not attached to structures used for human habitation;

2. The structure is designed and constructed so as to have a low potential for damage during a flood (e.g. using flood resistant materials as provided in FEMA Technical Bulletin #88-2, and any subsequent revisions thereto);

3. The structure shall be located on the building site so as to offer the minimum resistance to the flow of floodwater (e.g. parallel to a stream, perpendicular to the ocean);

4. The structure is firmly anchored to prevent flotation, per section 6.05.05.a; and

5. All electrical service, heating/cooling equipment, and other mechanical or electrical equipment is either elevated above the elevation required by section 6.05.06.a, or is flood-proofed. One electrical switch and outlet connected to a ground-fault interrupt breaker is allowed below Base Flood Elevation.

f. Temporary Structures. Certain types of structures (e.g.. fruit stands, construction site offices) may be sited temporarily on property without having to comply with the General Standards of section 6.05.05, or the elevation standard of section 6.05.06.b, provided the following criteria are met:

1. The structure is mobile, or can be made so, and is capable of being removed from the site with a minimum of four (4) hours warning.

2. The structure does not remain on the property for 180 days or more within a 12-month period commencing from the first day the structure is on the site.

3. The applicant submits a plan for the removal of the structure, containing the following documentation:

(a) The name, address, phone number and emergency contact point of the individual responsible for the removal of the temporary structure.

(b) The time at which the structure will be removed (i.e. a minimum of 72 hours in advance of the projected landfall of a hurricane).

(c) A copy of a contract or other suitable instrument with a trucking company to ensure the availability of removal of the structure when needed, together with the name, address, and emergency phone number of the responsible trucking company agent.

(d) Designation, accompanied by documentation (e.g.. signed consent of the property owner), of a site outside the special flood hazard area to which the temporary structure will be moved.

(e) Signatures of the applicant, the property owner on which the temporary structure will be placed and the owner of the temporary structure (if

different from applicant or property owner), agreeing to abide by the terms of the removal plan.

4. A "temporary development permit" shall be issued when a temporary structure is approved, and the expiration date shall be clearly marked on the face of the permit. The original copy of the removal plan shall be attached to the permit, and the documentation shall be kept on file in the Administrators office for a period of at least 5 years. A copy of the permit, together with the removal plan, shall be provided to the local emergency management coordinator.

g. Substantially Improved Buildings. **"Substantial improvement"** means any combination of repairs, reconstruction, alteration, or improvements to a building (including electrical, plumbing and heating/air conditioning), in which the cumulative cost equals or exceeds fifty percent (50%) of the assessed value of the building. Substantially improved buildings must be elevated and otherwise brought into conformance with the requirements for new construction contained in this Section. In determining "substantial improvement", the County shall utilize data for the assessed value of the structure and the value of the improvements that are justifiably comparable. Substantial improvement calculations shall include the cost of labor and mechanical, electrical and plumbing systems, cabinetry, finishes, and any other improvements that will be permanently affixed to the structure, except for exterior decks and porches. If the improvement project is conducted in phases, the total of all costs associated with each phase, beginning with issuance of the first permit, shall be utilized to determine whether "substantial improvement" has occurred. Interpretation and determination of substantial improvements shall rely on applicable FEMA publications and policy guidance.

1. Rehabilitations, reconstructions, and renovations: When an existing building is rehabilitated, reconstructed, or renovated, with no or only minimal additions, and the total improvement costs meet the definition of "substantial" (equal or exceed 50% of the value of the structure), the existing structure must be elevated and otherwise brought into conformance with this Section.

2. Lateral additions: When the substantial improvement is a lateral addition to an existing structure, only the addition is required to be elevated and conform with the standards of sections 6.05.05 and 6.05.06, unless the common wall between the existing building and the addition is substantially removed or improvements are being made to the existing structure which, independently from the addition, equal or exceed 50% of the assessed value of the structure. In such cases, the lateral addition is deemed to constitute only one part of a reconstruction or renovation, and both the existing structure and the addition must conform to the Section.

3. Vertical additions: When the substantial improvement is a vertical addition to an

existing structure, the improvement is classified as a "renovation" or "reconstruction", and the existing structure must be elevated and brought into conformance with this Section.

h. Improvements to "post-FIRM" structures. Any improvements made to buildings for which permits were issued on or after the effective date of the Flood Insurance Rate Map ("post-FIRM buildings"), shall conform to the standards of this Section.

i. Historic buildings. Any improvements to historic structures listed in the Local Register of Historic Places or identified as contributing to a district listed in the Local Register of Historic Places per Section 4.04 of this Code, or otherwise identified by the appropriate state of federal agency as a historic structure, may be exempted from one or all of the standards contained in this Section, provided the request for an exemption is approved as a variance under Article 12 of this Code, and the proposed improvements are certified by a certified local government or the State Historic Preservation Officer as maintaining the historical integrity and classification of the building.

j. At a minimum, in all situations, no encroachments, including fill material or structures shall be located within a distance of the stream bank equal to five times the width of the stream at the top of bank or twenty feet each side from top of bank, whichever is greater.

6.05.07 -- Floodways. Located within areas of special flood hazard there may be areas that function as floodways. Floodways lie inside the 100-year Floodplain and include the channel of a natural stream or river and portions of the floodplain adjoining the channel that must be free from development in order to carry and discharge the floodwater or flood flow of any natural stream or river during a 100-year flood without an increase in the flood heights. The known floodways for unincorporated Putnam County are set forth in an August 1994 Flood Insurance Study published by FEMA and indicated on most current FIRMs. Table 3 of that Study is provided as Table 6.2 in Appendix VI of this Code. Since the floodway is an extremely hazardous area due to the velocity of floodwater that carries debris, potential projectiles and has erosion potential, the following provisions shall apply to activity in a floodway:

a. New construction, including enclosed accessory structures, substantial improvements, fill and other developments or encroachments are prohibited. Upon an application for a variance from this requirement, Planning and Zoning staff and the County Building official may consider a certification (with supporting technical data) by a registered professional engineer that demonstrates that such encroachments shall not result in any increase in flood levels during occurrence of the base flood discharge. This certification shall be based on an evaluation utilizing methodologies specified by the FEMA Region IV office. Such certification does not, by itself, create a right to develop in a floodway. In any event, no development will be allowed that causes more than a 0.0000 ft. rise in the Base Flood Elevation.

b. If paragraph "a" is satisfied, all new construction and substantial improvements shall comply with all other applicable portions of this Section.

c. The placement of manufactured homes (mobile homes) is prohibited, except in an existing and vested manufactured home (mobile homes) park or subdivision. A replacement manufactured home may be placed on a lot in an existing and vested manufactured home park or subdivision provided the anchoring standards of section 6.05.06.a, and the elevation standards of section 6.05.06.c and paragraph a.1 of this section are met. No other exceptions shall be allowed to this prohibition.

d. Standards along streams with no identified floodways. Where no "floodway" has been designated along a stream in a regulated flood zone for which Base Flood Elevations have been provided on the FIRM, no encroachments, including fill material or structures shall be located within areas of special flood hazard, unless certification by a registered professional engineer is provided demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated development will not increase the water surface elevation of the base flood at any point within the community. The engineering certification should be supported by technical data that conforms to standard hydraulic engineering principles. Streams with no flood zone designation shall meet the requirements of section 6.05.08 below. If a certification is provided, all proposed new construction and substantial improvements shall comply with all other applicable portions of this Section.

6.05.08 -- Streams Without Established Base Flood Elevations or Floodways. Development proposed to be located or existing within the areas of special flood hazard that include small streams but where no base flood data have been provided or where no floodways have been provided, the following provisions apply:

a. No encroachments, including fill material or structures shall be located within a distance of the stream bank equal to five (5) times the width of the stream at the top of bank or twenty (20) feet each side from top of bank, whichever is greater, unless certification by a registered professional engineer is provided demonstrating that such encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

b. New construction or substantial improvements of structures or manufactured homes shall be elevated in accordance with this Section.

6.05.09 -- Areas Of Shallow Flooding (AO Zones). Located within the areas of special flood hazard are areas designated as shallow flooding areas. These areas have special flood hazards associated with base flood depths of one (1) to three (3) feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate; therefore, the following provisions apply:

a. All new construction and substantial improvements of residential and non-residential structures shall conform to the design standards of subsection 6.05.05 and 6.05.06 of this Section, and shall have the lowest floor, including basement, elevated above the highest adjacent grade at a height that is equal to or above the depth number specified on the applicable FIRM (i.e. if the FIRM indicates a depth number of 2 feet, the elevation of the lowest floor must be at least 2 feet above the highest adjacent grade). If no depth number is specified, the lowest floor, including basement, shall be elevated, at least two (2) feet above the highest adjacent grade.

b. Accessory or temporary structures shall be exempt from these requirements, provided they conform to the standards of section 6.05.06.f.

c. No encroachments, including fill material or structures shall be located within a distance of the stream bank equal to five (5) times the width of the stream at the top of bank or twenty (20) feet each side from top of bank, whichever is greater.

6.05.10 -- Subdivision Proposals. All subdivision proposals, including industrial and commercial subdivisions, shall be consistent with the need to minimize flood damage. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards. Base flood elevation data shall be provided for subdivision proposals and other proposed development (including shopping centers and manufactured or mobile home parks) which are greater than the lesser of fifty (50) lots or five (5) acres. The base flood boundary, floodway and the base flood elevation for the building site on each lot shall be clearly marked on all recorded subdivision plats for all residential, commercial, or industrial use.

6.05.11 -- Criteria for Variances To Flood Hazard Management Regulations

a. Additional Finding: In addition to the criteria described in *Article II, Division 5 of Zoning Ordinance 88-1*, and in order to approve any requested variance, the Zoning Board of Adjustment must find that the requested variance will not result in an increase in the base flood elevation ("BFE"), or result in additional threats to public safety, additional public expense, the creation of nuisances, fraud or victimization of the public, or conflicts with other local ordinances.

b. Variances may be issued for the repair or rehabilitation of historic structures located in the flood hazard area upon a determination that the proposed repair or rehabilitation would not preclude the structure's continuing designation as a historic structure and the variance is the minimum to preserve the historic character and design of the structure.

c. Considerations: No variance shall be permitted that will result in an increase of the BFE. If it is determined that the proposed variance will not result in an increase to the BFE, the Zoning Board of Adjustment shall consider the following before granting a variance:

1. The danger that materials may be swept from the site onto other lands.

2. The danger to life and property from flooding or erosion.

3. The potential of the proposed facility and its contents to cause flood damage and the effect of that damage on the owner and the public.

4. The importance of the services provided by the proposed facility to the community.

5. The availability of alternative locations, not subject to flooding or erosion, for the proposed use.

6. The compatibility of the proposed use with existing and anticipated neighboring development.

7. The relationship of the proposed use to the comprehensive plan and floodplain management program for the area.

8. Safe vehicular access to the property in times of flood.

9. The expected heights, velocity, duration, rate of rise and sediment transport of the floodwaters and effects of wave action, if applicable, at the site.

10. The costs of providing governmental services during and after floods including maintenance and repair of public utilities and facilities.

d. Special Restriction For Regulatory Floodways: Variances that would increase flood levels during the base flood shall not be issued within any Floodway.

e. Flowage Easements: No variance that would increase flood damage on other property shall be granted unless flowage easements have been obtained from the owners of all affected properties. However, in no event shall a variance be granted that would increase the elevation of the BFE.

f. Notification: All variances to the flood damage prevention regulations shall:

1. Specify the difference between the flood protection elevation and the elevation to which the structure is to be built.

2. State that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

3. State that construction below the Flood Protection Level increases risks to life and property.

g. Notification Record Of Variances To Be Maintained: The Planning, Zoning and Building Department shall maintain a record of all variances, including the justification for their issuance and a copy of the notice of the variance.

SECTION 6.06 POTABLE WATER WELL FIELD PROTECTION

6.06.01 -- Purpose and Intent: The purpose and intent of this Section is to safeguard potable water supplies by regulating the storage, handling, use or production of hazardous substances around public potable water supply wells. It is also the intent and purpose of this Section to control development in and adjacent to designated wellheads to protect water supplies from potential contamination by regulating or, where appropriate, prohibiting polluting uses. The availability of adequate and dependable supplies of quality potable water for domestic, agricultural, and industrial use is of primary importance to the health, safety and welfare of the citizens of Putnam County. Thus, this Section sets forth standards protecting both the quantity and quality of the groundwater supply from public wellheads as defined herein. Specific setback and protection requirements for individual, private water wells shall be in accordance with Department of Health regulations .

6.06.02 -- Establishment of Well Field Protection Zone

a. A Well Field Protection Zone is hereby established, consisting of a 500-foot fixed radius around all public water wellheads in Putnam County in order to protect such well heads from adverse effects of development. A public water wellhead includes any publicly or privately owned potable water wellhead that requires a consumptive use permit or other permit from the DEP, SJRWMD or SRWMD. The locations of all known public wellheads are delineated on Map 6.4 of Appendix VI to this Code.

b. For the purposes of this section, non-polluting land uses shall include recreational and conservation land uses and low-density residential land uses of no more than 1 dwelling unit per 5 acres. Non-polluting land uses shall be exempt from the development restrictions of Well Field Protection Zone. All other uses are presumed to be polluting land uses and therefore subject to the development restrictions in subsection 6.06.03.

c. The County is hereby authorized to purchase property, through condemnation proceedings if necessary, within a Well Field Protection Zone and set it aside for such non-polluting land uses. In order to protect the health and safety of the potable water well field within a Well Field Protection Zone, the County may require the relocation of existing polluting land uses to an area outside of the Well Field Protection Zone. Where possible, such relocation shall occur through a transfer of density or a set back variance for a portion of the property outside of the Well Field Protection Zone.

d. The underlying zoning in a Well Field Protection Zone shall not be up zoned to a land use designation that is more intense or dense than low-density residential, either through the rezoning process or a Comprehensive Plan Amendment process.

6.06.03 -- Development Restrictions Within The Well Field Protection Zone

a. Where prohibition or relocation of a use, or the outright purchase of the property are not possible within a Well Field Protection Zone, any proposed or existing polluting land use shall be subject to the additional development restrictions and design standards set forth below. **[Policy D.1.7.1]**

b. New Development. In addition to any other applicable design and regulatory standards set forth in this Code, the following standards shall be applied to new development wholly or partially located within a Well Field Protection Zone

1. On-site sewage treatment.

(a) Any allowed or existing development within the well field protection zone must be connected to a municipal, county or investor-owned sewage system, if such a system is located or is planned to be located within one-half mile of the protection zone and the owner/operator can and does permit such connection.

(b) Subject to subparagraph (c) below, where connection to a municipal, county or investor-owned sewage system is not possible and the lot or parcel is of a sufficient size, the development shall install an individual sewage system in accordance with *County Ordinance 87-5*

(c) Individual sewage systems (i.e. septic systems) are not permitted on lots or parcels less than one acre in size within a well head protection zone, unless there is a sufficient portion of the lot or parcel located outside of the well head protection zone to allow for installation of an on-site sewage disposal system outside the zone in accordance with the other requirements of this Code regarding on-site sewage disposal.

2. Residential land uses shall not be permitted in any wellhead protection zone unless they have a density of 1 dwelling unit per 5 acres or lower, or they are capable of connecting to a municipal, county or investor-owned sewage treatment system.

3. Storage Tanks. Subject to the limitations and prohibitions set forth in subparagraph c below, storage tanks storing hazardous waste or hazardous substances shall be permitted, designed and maintained in accordance with Chapter 376, Florida Statutes and the permitting requirements and prohibitions of the DEP.

(a) Tanks with storage capacity of less than 110 gallons shall be above ground and have appropriate secondary containment systems sufficient to contain 110% of the materials capable of being stored in the tanks.

(b) In the event that any storage tank within a wellhead protection zone is found to be leaking, the owner and/or operator shall immediately empty the remaining contents of the tank and the emptied product shall be transferred to approved product-tight holding tanks. The leak shall also be reported to Planning and Zoning Department and the DEP.

4. Storm water runoff. All development inside a Well Field Protection Zone, including parking facilities, shall construct or make use of an existing storm water management system, which moves water runoff to retention or storage facilities outside of the Well Field Protection Zone. Storm water retention or storage is prohibited inside the Well Field Protection Zone. The costs of any improvements to an existing system made necessary by new uses or expansion of existing uses shall be borne by the applicant. In areas of greater sensitivity to development pressures, the Planning and Zoning Department may require more stringent design and construction standards for the storm water management system.

5. Injection and drainage wells of any kind are strictly prohibited with the Well Field Protection Zone.

6. Solid waste land fills and hazardous waste storage facilities (except as provided in subparagraph c) are strictly prohibited in the Well Field Protection Zone.

7. Non-residential uses within a Well Field Protection Zone shall first be prohibited. Non-residential uses that are allowed shall be limited to uses allowed under CPO and C-1 zoning. All other non-residential uses shall not be permitted within the Well Field Protection Zone, and any non-residential uses otherwise lawfully located inside the protection zone prior to the effective date of this Code shall be a non-conforming use.

c. Hazardous Substances in a Well Field Protection Zone.

1. Storage of hazardous waste or substances that are not necessary and incidental to the on-going operations and maintenance of an existing and otherwise permissible use are prohibited.

2. Hazardous substances necessary or incidental to the on-going operations and maintenance of an otherwise permissible use, including residential uses, must be distributed, sold and/or stored in self-contained packaging or storage vessels in accordance with the manufacturer's requirements, federal regulations or state regulations, whichever is more stringent. Leaking or broken packages or vessels containing hazardous materials shall be removed from the premises and stored in product-tight container outside of the Well Field Protection Zone.

3. Where storage of hazardous waste or other substances is necessary and incidental to the on-going operations of a permitted use, the owner or operator shall store such wastes or substances on or over an impervious surface with sufficient containment to prevent such substances from entering the groundwater in the event of a spill or leak. Hazardous substances that are no longer in use or cease to be a necessary part of an allowed use shall be removed and disposed of in a lawful manner within 30 days of discontinued use. Hazardous waste generated by an allowed use shall be removed from the zone within thirty (30) days of being generated.

4. Hazardous waste or substances that are not necessary and incidental to the on-going operations or maintenance of an existing use are prohibited.

5. Violation of the provisions of this Section or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with grants of variance or special exceptions, shall constitute a violation of this Code, which shall be punishable in accordance with the Code Enforcement procedures of Ordinance 90-26. In addition, the County may assess a civil penalty of not more than $500 through a citation or seek injunctive relief from the Courts to, among other things, compel the correction of any such Code violation, or both. . Each day that the violation continues shall constitute a separate offense. Nothing contained herein shall prevent the County from taking such other lawful actions as are necessary to prevent or remedy any violation.

d. Existing Activity

1. Any land use, other than a non-polluting use, located within five hundred (500) feet of a well serving the public will not be permitted to expand or to be substantially improved.

2. Any new public water wellhead will be located at least five (500) feet from existing polluting land uses so that it does not cause an existing facility, activity or land use to become a nonconforming use under this Section.

e. Exemptions. The following activities or uses are exempt from the provisions of this Section:

1. The continuous transportation of any hazardous waste through Well Field Protection Zone is exempt from the restrictions and prohibitions of this subsection, only when no other alternative route is reasonably available. Continuous transportation means the non-stop movement of hazardous substances by a mobile vehicle. It shall not be interpreted to mean the use of pipes, a waste

transfer station or any other permanent or semi-permanent facility for transport or storage of hazardous waste within the protection zone; nor shall it be interpreted to allow the parking or temporary storage of hazardous waste within the protection zone.

2. Agricultural and silvicultural uses, except that said uses shall comply with Chapter 487.011 et seq, the Florida Pesticide Law and the Florida Pesticide Application Act of 1974, as amended, and any rules adopted pursuant thereto or otherwise applicable to agricultural and silvicultural uses. This exemption does not include the storage and treatment facilities of dairy farms or concentrated livestock feeding operations, which in all cases shall be located at least 300 feet from the public wellhead.

3. The use of any hazardous substance solely as fuel in a vehicle fuel tank or as lubricant in a vehicle. This is not meant to expressly allow for refueling or lubricating operations within zone. It is only meant to permit the parking of such vehicles, where parking is otherwise allowed under this Code.

4. Fire, police, emergency medical services, governmental emergency management center facilities, and public utilities.

5. Geotechnical boring.

6. Exceptions provided for under Rule 62-521.400, Florida Administrative Code. The applicant or property owner shall be responsible for determining whether the proposed use fits within an exception under this state rule and obtain a permit, or other written documentation from the state approving the proposed development within the Well Field Protection Zone.

SECTION 6.07 GROUNDWATER RECHARGE AREAS

6.07.01 -- Purpose and Intent: The availability of adequate and dependable supplies of potable quality water is of primary importance to the health, safety and welfare of the citizens of Putnam County. Therefore, standards are described and adopted in this Section with the intent of protecting both the quantity and quality of the groundwater supply. This is accomplished by prohibiting certain uses that threaten to pollute the Floridan aquifer and establishing limitations upon impervious surface coverage created by development. The term aquifer means an underground formation, or group of formations, or part of a formation, that is permeable enough to transmit and store usable quantities of water. It is the purpose of this Section to provide standards necessary to protect the recharge capabilities of areas of high aquifer recharge to the Floridan Aquifer and to minimize the risk of aquifer contamination from pollution. In Putnam County the top of the Floridian Aquifer is considered to be the top of the continuous limestone unit of the Hawthorn Formation where present or the top of the Ocala Limestone where the limestone unit of the Hawthorn Formation is absent.

6.07.02 -- Applicability: The requirements of this Section shall apply to all areas of high aquifer recharge to the Floridan Aquifer (a.k.a. "primary aquifer recharge areas"). Areas of high aquifer recharge include areas where recharge is more than 8 inches per year, as shown on the St. Johns River Water Management District Map entitled Floridian Aquifer Recharge Areas of Putnam County (December 1996); as well as that portion of the County that falls within the Suwannee River Water Management District. Areas of high aquifer recharge shall be protected through prohibition of landfills, underground storage of toxic materials and locating of hazardous substances within such areas, as well as by additional regulations for permissible development.

6.07.03 -- Establishment of Aquifer Protection Zone: There is hereby established an Aquifer Protection Zone consisting of all property located in areas of high aquifer recharge to the Floridan Aquifer. All such primary aquifer recharge areas known to the County are identified on Map 6.5 found in Appendix VI to this Code. Site specific information provided in writing from a professional in an appropriate field of expertise for determination of recharge areas may be substituted for Map 6.5 in determining whether a given development lies within an area of high recharge.

6.07.04 -- Development Restrictions within the Zone of Protection:

a. The following uses shall be strictly prohibited within areas of high recharge (see Map 6.5): auto salvage and junkyards, landfills, underground storage of toxic materials and hazardous waste sites.

b. Development Standards: All development within the protection zones shall first be prohibited. Development allowed inside the recharge zone shall be designed, constructed

and maintained using a method of capturing storm water run-off on site in a facility designed to retain the runoff and recharge the aquifer. A development will not be required to follow these additional standards if it has an impervious surface that is less than 35% of the total area of the development site.

c. Hazardous Substances in an Aquifer Protection Zone.

1. Storage of hazardous waste or substances that are not necessary and incidental to the on-going operations and maintenance of an existing and otherwise permissible use is prohibited.

2. Hazardous substances necessary or incidental to the on-going operations and maintenance of an otherwise permissible use, including residential uses, must be distributed, sold and/or stored in self-contained packaging or storage vessels in accordance with the manufacturer's requirements, federal regulations or state regulations, whichever is more stringent. Leaking or broken packages or vessels containing hazardous materials shall be removed from the premises and stored in product-tight container outside of the Aquifer Protection Zone.

3. Where storage of hazardous waste or other substances is necessary and incidental to the on-going operations of a permitted use, the owner or operator shall store such wastes or substances on or over an impervious surface with sufficient containment to prevent such substances from entering the groundwater in the event of a spill or leak. Hazardous substances that are no longer in use or cease to be a necessary part of an allowed use shall be removed and disposed of in a lawful manner within 30 days of discontinued use. Hazardous waste generated by an allowed use shall be removed from the zone within thirty (30) days of being generated.

4. Hazardous waste or substances that are not necessary and incidental to the on-going operations or maintenance of an existing use are prohibited.

5. Violation of the provisions of this Section or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with grants of variance or special exceptions, shall constitute a violation of this Code, which shall be punishable in accordance with the Code Enforcement procedures of Ordinance 90-26. In addition, the County may assess a civil penalty of not more than $500 through a citation or seek injunctive relief from the Courts to, among other things, compel the correction of any such Code violation, or both. Each day that the violation continues shall constitute a separate offense. Nothing contained herein shall prevent the County from taking such other lawful actions as are necessary to prevent or remedy any violation.

d. Transfer of density from the recharge area to the upland portion of a site shall be permitted through approval of an appropriate Planned Unit Development (PUD) application and by establishing flexibility in the lot area requirements in the various zoning districts established in this Code in order to insure that development occurs outside of the recharge area. The recharge area will be included in calculating the gross density applicable to a property.

e. Recharge protection shall be considered when the County evaluates a variance request for a setback modification that would move development away from an area of high recharge.

6.07.05 -- Development Approval. No permit shall be approved or certificate of occupancy issued until the Director of the Department of Public Works approves the storm water management facility required by this Section.

6.07.06 -- Exemptions. The following activities or uses are exempt from the provisions of this Section:

a. The continuous transportation of any hazardous substance through an Aquifer Protection Zone. This exemption shall not be interpreted to exempt the use of pipes, a waste transfer station or any other permanent or semi-permanent facility used to transport hazardous substances within the protection zone, nor does it exempt temporary storage of hazardous substances within the protection zone.

b. Agricultural and silvicultural uses, other than pig, poultry, cattle and dairy feedlots or farming operations that require a waste disposal permit from the DEP, are exempt. Except that such agriculture and silviculture uses shall comply with Chapter 487.011 et seq, the Florida Pesticide Law and the Florida Pesticide Application Act of 1974, as amended, and any rules adopted pursuant thereto.

c. The use of any hazardous substance solely as fuel in a vehicle fuel tank or as lubricant in a vehicle. This is meant only to allow a vehicle to park within an Aquifer Protection Zone. It does not allow for refueling or lubricating operations within the zone, unless otherwise allowed for in this Section.

d. Fire, police, emergency medical services, governmental emergency management center facilities, and public utilities.

e. Geotechnical boring.

APPENDIX VI

Tables

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Article 7

Development Design and Improvement Standards (figures omitted)

ARTICLE 7
DEVELOPMENT DESIGN AND IMPROVEMENT STANDARDS

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ARTICLE 7
DEVELOPMENT DESIGN AND IMPROVEMENT STANDARDS

SECTION -- 7.01 GENERAL PROVISIONS

7.01.01 -- Purpose.

The purpose of this Article is to provide development design and improvement standards applicable to all development activity within the County.

7.01.02 -- Responsibility For Improvements.

All improvements or design standards required by this Article shall be designed, installed, maintained and paid for by the developer, unless otherwise specifically provided herein.

7.01.03 -- Principles Of Development Design.

The provisions of this Article are intended to ensure healthy, functional, safe and attractive development. Development design shall first take into account the protection of natural resources as prescribed in **Article 6 of this Code**, including but not limited to the development limitations and dimensional requirements contained therein with regard to waterfront, aquifer recharge, wetlands, flood hazard areas and habitat for endangered or threatened species. In the case where design standards in other areas of the Code conflict with **Article 7**, the more restrictive standards shall apply. All development shall be designed to avoid unnecessary impervious surface cover; to provide adequate access to lots and sites; and to avoid adverse effects of shadow, glare, noise, odor, traffic, drainage, and utilities on surrounding properties.

7.01.04 One Principal Use Per Parcel

For any district in which single-family residential uses or mobile homes are allowed, only one (1) dwelling unit shall be permitted per platted lot or legal parcel, unless otherwise permitted by the zoning district.

7.01.05 Right-of-Way Protection

a. Development Within Right-of-Way. No subdivision or non-residential development shall be permitted within proposed future County or State road right-of-way corridors, as established in the Traffic Circulation Plan and the Goals, Objectives & Policies of the Putnam County Comprehensive Plan, unless approved by the Board of County Commissioners.

b. Development Contiguous to Right-of-Way. Prior to the development of subdivisions or non-residential development contiguous to an existing County Collector Roadway, the right-of-way shall be reserved or dedicated to Putnam County in accordance with the Transportation Element of the Putnam County Comprehensive Plan or other requirements specified within County approved plans, unless otherwise approved by the Board of County Commissioners.

SECTION -- 7.02 DIMENSIONAL REQUIREMENTS

7.02.01 -- Generally.

Table 7.02A contains the basic dimensional requirements for all development subject to the requirements of this Code. Supplemental requirements that further clarify or limit the dimensional requirements in **Table 7.02A** are contained in **Subsection 7.02.03** below, and should be consulted before making development decisions under the requirements of **Table 7.02A.** Note that minimum lot area for each zoning category may be further limited upon application of **Paragrah 7.02.03.e** below, as well as the density limitations and point score allocations under the Future Land Use Element of the Comprehensive Plan and Article 2 of this Code.

Table 7.02A -- Dimensional Requirements

ZONING DISTRICT	DIMENSIONAL REQUIREMENTS
RE	**Minimum setback requirements:** **Front:** 40 feet **Rear:** 20 feet **Side:** 20 feet **Corner Side:** 30 feet **Minimum lot requirements:** **Lot Width:** 150 feet **Lot Area:** 43,560 square feet (1 acre) **Maximum Impervious Surface area:** 35% **Maximum building height:** 35 feet
R-1	**Minimum setback requirements:** **Front:** 35 feet **Rear:** 20 feet **Side:** 10 feet **Corner side:** 20 feet **Minimum lot requirements:** **Lot Width:** 100 feet **Lot Area:** 15,000 square feet **Maximum Impervious Surface area:** 35% **Maximum building height:** 35 feet

R-1A	**Minimum setback requirements:** **Front:** 35 feet **Rear:** 20 feet **Side:** 10 feet **Corner side:** 20 feet **Minimum lot requirements:** **Lot Width:** 75 feet **Lot Area:** 7,500 square feet **Maximum Impervious Surface area:** 35% **Maximum building height:** 35 feet
R-1HA	**Minimum setback requirements:** **Front:** 35 feet **Rear:** 20 feet **Side:** 10 feet **Corner side:** 20 feet **Minimum lot requirements:** **Lot Width:** 100 feet **Lot Area:** 21,780 square feet (1/2 acre) **Maximum Impervious Surface area:** 35% **Maximum building height:** 35 feet
R-2	**Minimum setback requirements:** **Front:** 25 feet **Rear:** 10 feet **Side:** 10 feet **Corner side:** 20 feet **Minimum lot requirements:** **Lot Width:** 75 feet **Lot Area:** 7,500 square feet **Maximum Impervious Surface area:** 35% **Maximum building height:** 35 feet
R-2HA	**Minimum setback requirements:** **Front:** 25 feet **Rear:** 10 feet **Side:** 10 feet **Corner side:** 20 feet **Minimum lot requirements:** **Width:** 100 feet **Area:** 21,780 square feet **Maximum Impervious Surface area:** 35% **Maximum building height:** 35 feet

R-3	**Minimum setback requirements:** **Front:** 25 feet **Rear:** 10 feet **Side:** 10 feet **Corner side:** 20 feet **Minimum lot requirements:** **Lot Width:** 75 feet **Lot Area:** 7,500 square feet for the first dwelling unit plus 4,325 square feet for each additional dwelling unit (gross density of not more than 9 units per acre) **Maximum Impervious Surface area:** 45% **Maximum building height:** 35 feet
R-4	**Minimum setback requirements:** **Front:** 35 feet (add 1' for every 2' of building height over 45') **Rear:** 10 feet (add 1' for every 2' of building height over 45') **Side:** 10 feet (add 1' for every 2' of building height over 45') **Corner side:** 20 feet (add 5' for every 5' of building height over 45') **Minimum lot requirements:** **Lot Width:** 75 feet **Lot Area:** 7,500 square feet for the first dwelling unit plus 2,850 square feet for each additional dwelling unit (gross density of not more than 9 units per acre) **Maximum impervious surface area:** Depends on future land use category as outlined in Table 7.02B below **Maximum building height:** 45 feet. Structure may extend as high as 105, subject to increased setbacks, provided the occupied areas of the structure are protected with an automatic sprinkler system designed and installed in accordance with the latest edition adopted by the Florida Fire Prevention Code and NFPA 13.
RMH* **See Article 2 and Article 3 for RMH zoning and special mobile home park development requirements*	**Minimum setback requirements:** **Property Line setbacks:** / **Internal setbacks:** **Front:** 25 feet / **Front:** 15 feet **Rear:** 10 feet / **Rear:** 10 feet **Side:** 10 feet / **Side:** 10 feet **Corner side:** 20 feet **Minimum lot requirements:** **Mobile Home Park Width:** 1. 100 feet at ingress and egress points. 2. 200 feet at the portion of the site used for mobile home lots. **Individual Mobile Home Lot Width:** 50 feet **Lot Area for Mobile Home Park:** 5 acres **Maximum Gross Density:** 8 dwelling units per acre. **Maximum Impervious Surface area:** 35% **Maximum building height:** 35 feet

CPO	**Minimum setback requirements:** **Front:** 25 feet **Rear:** 15 feet **Side:** 10 feet **Corner Side:** 20 feet **Minimum lot requirements:** The minimum lot size needed by the various uses in the CPO district will be determined by the space requirements dictated by the proposed use, the required setbacks and parking, and any other applicable provisions of this ordinance. **Maximum Impervious Surface area:** 45% **Maximum building height:** 35 feet
C-1	**Minimum setback requirements:** **Front:** 35 feet **Rear:** 15 feet **Side:** 10 feet; provided, that no side setback is required if the developer is constructing two (2) or more buildings on contiguous lots; however, a ten-foot access way from the front of the buildings to their rear setbacks must be provided. **Corner side:** 20 feet **Minimum lot requirements:** The minimum lot size needed by the various uses in the C-1 district will be determined by the space requirements dictated by the proposed use, the required setbacks and parking, and any other applicable provisions of this ordinance. **Maximum Impervious Surface area:** 45% **Maximum building height:** 35 feet
C-2	**Minimum setback requirements:** **Front:** 35 feet **Rear:** 15 feet **Side:** 10 feet **Corner side:** 20 feet **Minimum lot requirements:** The minimum lot size needed by the various uses in the C-2 district will be determined by the space requirements dictated by the proposed use, the required setbacks and the number of parking spaces required by this ordinance. **Maximum Impervious Surface area:** Depends on future land use category as outlined in **Table 7.02B** below **Maximum building height:** 35 feet

C-3	**Minimum setback requirements:** **Front:** 35 feet (add 1' for every 2' of building height over 45') **Rear:** 10 feet (add 1' for every 2' of building height over 45') **Side:** 10 feet; provided that no side setback is required if the developer is constructing two (2) or more buildings on contiguous lots; however, a ten-foot access way from the front of the buildings to their rear setbacks must be provided. (add 1' for every 2' of building height over 45') **Corner side:** 20 feet **Minimum lot requirements:** The minimum lot size needed by the various uses in the C-3 district will be determined by the space requirements dictated by the proposed use, the required setbacks and parking, and any other applicable provisions of this ordinance. **Maximum impervious surface area:** Depends on future land use category as outlined in **Table 7.02B** below **Maximum building height:** 45 feet. Structure may extend as high as 105, subject to increased setbacks, provided the occupied areas of the structure above 45 feet are protected with an automatic sprinkler system designed and installed in accordance with the latest edition adopted by the Florida Fire Prevention Code and NFPA 13.
C-4	**Minimum setback requirements:** **Front:** 35 feet (add 1' for every 2' of building height over 45') **Rear:** 10 feet (add 1' for every 2' of building height over 45') **Side:** 10 feet; provided that no side setback is required if the developer is constructing two (2) or more buildings on contiguous lots; however, a ten-foot access way from the front of the buildings to their rear setbacks must be provided. (add 1' for every 2' of building height over 45') **Corner side:** 20 feet **Minimum lot requirements:** The minimum lot size needed by the various uses in the C-4 district will be determined by the space requirements dictated by the proposed use, the required setbacks and parking, and any other applicable provisions of this ordinance. **Maximum Impervious Surface area:** Depends on future land use category as outlined in **Table 7.02B** below **Maximum building height:** 45 feet. Structure may extend as high as 105, subject to increased setbacks, provided the occupied areas of the structure above 45 feet are protected with an automatic sprinkler system designed and installed in accordance with the latest edition adopted by the Florida Fire Prevention Code and NFPA 13.

IL	**Minimum setback requirements:** **Front:** 35 feet (add 1' for every 2' of building height over 45') **Rear:** 15 feet (add 1' for every 2' of building height over 45') **Side:** 15 feet (add 1' for every 2' of building height over 45') **Corner side:** 25 feet (add 1' for every 2' of building height over 45') **Minimum lot requirements:** The minimum lot size needed by the various uses in the IL district will be determined by the space requirements dictated by the proposed use, the required setbacks and parking, and any other applicable provisions of this ordinance. **Maximum Impervious Surface area:** Depends on future land use category as outlined in **Table 7.02B** below **Maximum building height:** 45 feet. Structure may extend as high as 105, subject to increased setbacks, provided the occupied areas of the structure above 45 feet are protected with an automatic sprinkler system designed and installed in accordance with the latest edition adopted by the Florida Fire Prevention Code and NFPA 13.
IH	**Minimum setback requirements:** **Front:** 50 feet (add 1' for every 2' of building height over 45') **Rear:** 25 feet (add 1' for every 2' of building height over 45') **Side:** 20 feet (add 1' for every 2' of building height over 45') **Corner side:** 30 feet (add 1' for every 2' of building height over 45') **Minimum lot requirements:** The minimum lot size needed by the various uses in the IH district will be determined by the space requirements dictated by the proposed use, the required setbacks and parking, and any other applicable provisions of this ordinance. **Maximum Impervious Surface area:** Depends on future land use category as outlined in **Table 7.02B** below **Maximum building height:** 45 feet. Structure may extend as high as 105, subject to increased setbacks, provided the occupied areas of the structure above 45 feet are protected with an automatic sprinkler system designed and installed in accordance with the latest edition adopted by the Florida Fire Prevention Code and NFPA 13.
MINING	**Minimum lot requirements:** **Area:** 5 acres **Distance from water body:** 500 feet

AE	**Minimum setback requirements:** **Front:** 40 feet **Rear:** 20 feet **Side:** 20 feet **Corner side:** 30 feet **Minimum lot requirements:** **Single-family dwellings or Churches:** **Lot Width:** 150 feet **Lot Area:** 43,560 square feet (1 acre) **Golf course:** **Minimum Area:** 60 acres **Other:** For other uses not specifically listed here, the lot area will be determined by the space requirements dictated by the proposed use, the required setbacks, and any other applicable provisions of this ordinance. **Maximum Impervious Surface area:** 35% **Maximum building height:** 35 feet
A	**Minimum setback requirements:** **Front:** 25 feet **Rear:** 10 feet **Side:** 10 feet **Corner side:** 20 feet **Minimum lot requirements:** **Single-family dwellings and mobile homes on individual lots:** **Lot Width:** 150 feet; maximum reduction by variance to 100 feet **Lot Area:** 43,560 square feet (1 acre) **Churches including temporary revival establishments (where allowed):** **Lot Width:** 150 feet **Lot Area:** 43,560 square feet (1 acre) **Golf courses (other than par 3):** **Minimum Area:** 60 acres **Other:** For other uses not specifically listed here, the lot area will be determined by the space requirements dictated by the proposed use, the required setbacks, and any other applicable provisions of this ordinance. **Maximum Impervious Surface area:** 35% **Maximum building height:** 35 feet
GU	**None**
PUD	**Minimum lot area requirements:** 5 acres All other dimensional requirements dependent on terms of the development agreement and the limitations of Land Development Code and the Comprehensive Plan

7.02.02 – Floor Area and Lot Coverage

a. Definitions:

1. Floor Area means the sum of the gross horizontal areas of all floors in a building, measured from exterior faces of exterior walls or from the centerline of walls separating two (2) attached buildings.

2. Gross Floor Area means the sum of the gross horizontal areas of the several floors of a building measured from the exterior face of exterior walls, or from the centerline of a wall separating two (2) buildings, but not including interior parking spaces, loading space for motor vehicles, or any space where the floor-to-ceiling height is less than six (6) feet.

3. Floor Area Ratio means the ratio of gross floor area of all buildings on the lot or parcel to the area of the lot or parcel.

4. Impervious Surface means a surface that has been compacted or covered with a layer of material so that it is highly resistant to infiltration by water. It includes, but is not limited to, surfaces such as compacted clay or limestone, as well as most conventionally surfaced streets, roofs, sidewalks, parking lots and other similar structures.

b. Limitations. Subject to the more specific impervious surface requirements of the applicable zoning district in **Subsection 7.02.01** above, development shall be governed by the maximum floor area ratios and impervious surface coverage limitations contained in **Table 7.02B** below. Because the limitations in **Table 7.02B** derive from the Comprehensive Plan, any requested variance to the limitations for a zoning district shall not exceed the limitations of **Table 7.02B.**

c. Table 7.02B Notes:

1. NA = not applicable

2. The impervious surface percentages represent the upper limit and may be further limited by drainage requirements, the zoning district's requirements, the soil conditions of the property, recharge potential of the soils or other environmental factors, such as those governed by Article 6.

TABLE 7.02B -- FLOOR AREA RATIO AND IMPERVIOUS SURFACE COVERAGE				
FUTURE LAND USE CATEGORIES	*Floor Area Ratio Non-Residential*	*Impervious Surface Coverage Non-Residential*	*Floor Area Ratio Residential*	*Impervious Surface Coverage Residential*
Urban Service (US)	1:1	85%	0.7:1	50%
Urban Reserve (UR)	0.85:1	80%	0.5:1	50%
Rural Center (RC)	0.7:1	75%	0.5:1	50%
Rural Residential (RR)	0.4:1	70%	0.4:1	40%
Commercial (CR)	1:1	85%	NA	NA
Industrial (IN)	1:1	85%	NA	NA
Mining (MI)	NA	NA	NA	NA
Public Facilities (PF)	0.5:1	70%	NA	NA
Agricultural I (A1)	See Zoning District	85%	0.4:1	50%
Agricultural II (A2)	See Zoning District	85%	0.4:1	50%
Conservation (CN)	NA	10%	NA	10%

7.02.03 -- Supplemental Provisions

a. Lot Area. Lot Area or lot size is the minimum square footage required for an individual lot or parcel in the applicable zoning district. The Lot Area shall not include roadways, rights-of-way lands or property located waterward of the mean or ordinary high water line (i.e. submerged lands). For purposes of zoning districts or uses that require a Lot Area of 1 acre (43,560 square feet), a lot or parcel that is 0.95 acres in size or better shall be sufficient to meet the required Lot Area.

b. Lot Width.

1. Lot Width: Lot width is measured as the horizontal distance between side lot lines along the depth of the lot or parcel commencing at the boundary of the required front yard setback. For example, where the required front yard setback is 25 feet, the lot width will be measured starting 25 feet from the front property line.

2. Waterfront Lot Width: The lot width needed to meet the 100-foot water frontage requirement of **Section 6.03** of this Code shall be measured as the horizontal distance between the side lot lines within an area that begins at the ordinary high water line and extends to the front lot line or a distance of 500 feet, whichever comes first.

c. Setbacks.

1. Defined. Standard setbacks are measured by the horizontal distance between the front, rear or side lines of the lot or parcel and the front, rear or side lines of the outside edge of the of the structure footprint (i.e. the exterior wall), which shall include screened enclosures.

2. Double Frontage. In the case of a double frontage lot the applicable front setback requirement shall apply to both frontages regardless of which line the land owner elects as the front line, unless such lot has a permanent solid face perimeter buffer wall precluding access along one (l) frontage. As used herein, double frontage means a single lot or parcel that is contiguous to two parallel roadways.

3. Waterfront setbacks. New development on the waterfront shall meet the setback pursuant to the requirements of **Paragraph 6.03.03.d** of this Code. Except that, lots or parcels of vested subdivisions created prior to December 19, 1991 that are adjacent to a water body shall maintain a waterfront setback that is, at a minimum, the equivalent of the front yard setback for the applicable zoning district.

4. Accessory Structures. Unless otherwise stated in Articles 2 and 3 of this Code, accessory structures are not allowed inside the setbacks listed in this Article.

5. Corner Lots. On corner lots, the front yard shall be determined by the 911 address. The side corner yard shall have a minimum setback ten (10) feet greater than interior side yard requirement. The front and corner-side set backs shall be designated as a clear zone for purposes of accessory uses, structures, fencing and landscaping. The property owner may change the front yard designation for the property by changing the 911 address. "Corner Lot" as used herein means a single lot or parcel that is contiguous with two perpendicular or intersecting roadways.

6. Permitted Projections Into Required Yards

(a) Certain architectural features, such as eaves, bay windows and projecting fireplaces, which may occupy a portion of a building footprint, may project up to three (3) feet into required front, rear and side setbacks. No such intrusion is permitted into front or rear setbacks of less than ten (10) feet in width or side setbacks of less than five (5) feet in width.

(b) Mechanical equipment, such as air conditioning units, pumps, heating equipment, solar panels, and similar installations, and screening and housing for such equipment, may project into the required side setbacks or rear setbacks, but shall not be located

closer than five (5) feet to any lot or parcel line, and may not project into the required front setbacks.

7. Patios and Pools.

(a) Uncovered Patios, Pools, and similar Structures may intrude up to but no more than thirteen (13) feet into the required rear setback, but they may not intrude into the required side or front backs. In no case shall the permitted intrusion of the patio, pool or similar structure reduce the rear setback to less than ten (10) feet.

(b) Covered Patios, Covered Pools, and similar structures may not intrude into the required setbacks, except as provided under paragraph 6 above.

d. Measuring Height. Structure or building height shall be measured as the vertical distance from the average ground elevation adjoining the front wall of the building to the highest point of the roof surface of a flat roof, to the deck line of a mansard roof surface of a flat roof, to the deck line of a mansard roof, or to the average height between the eaves and ridge of a gable, hip or gambrel roof. Steeples, clock towers, smoke stacks or similar architectural features may be excluded in determining the height of a structure when the steeple or smoke stack meets the following additional criteria:

1. The architectural feature is typical for the use occupying the structure (i.e. a church steeple, smoke stack on a manufacturing plant, or clock tower on a public building or public grounds); and

2. The use is allowed in the applicable zoning district; and

3. The architectural feature does not extend to height greater than twice the height limitation for the main structure in the applicable zoning district; and

4. The architectural feature is setback a distance equal to the height of the architectural feature from all property lines; and

5. The architectural feature meets the requirements for section 4.03 of this Code (Airport Overlays).

e. Additional Utility-Based Requirements. In addition to the Lot Area requirements specified in **Table 7.02A** above, the following minimum lot area and lot width requirements shall apply to all new residential subdivisions, as well as residential and non-residential lots created after the effective date of this Article, regardless of applicable the zoning district:

1. Private Well and Private Septic Tank:
Lot Area: 43,560 square feet (1-acre) **Lot Width:** 100 feet

2. Central Water and Private Septic Tank:
Lot Area: 21,780 square feet (0.5-acre) **Lot Width:** 100 feet

3. Private Well and Central Wastewater:
   Lot Area: 10,890 square feet **Lot Width:** 75 feet

Where there is a conflict with **Table 7.02A** or any other dimensional requirements of this Code, the stricter standard shall apply. No multi-family use exceeding four (4) units shall use septic tanks.

f. Variances and Nonconformities. Unless a dimensional requirement is mandated by the goals, objectives and policies of the Comprehensive Plan (i.e. the 100-foot waterfront lot width requirements of **Paragraph 6.03.03.d** of this Code or the impervious surface limitations of the Future Land Use Element), a property owner may apply for a variance to any of these dimensional requirements. Variances shall be reviewed and decided under **9.04** of this Code. Nonconforming lots or structures may also be reviewed under the nonconformity provisions of **Section 9.03** of this Code.

SECTION -- 7.03 LANDSCAPING, BUFFERS AND SCREENING

7.03.01 – General Provisions

a. Intent – The purpose of the landscape regulations is to protect the general welfare of Putnam County citizens and visitors by establishing minimum standards for the protection of trees and native plant communities, to promote water conservation, to enhance the County's appearance, and to provide for the proper installation and maintenance of landscapes. The landscape standards are intended to eventually result in a developed environment that is in harmony with the surrounding natural environment. The landscape regulations are to achieve these objectives:

1. Conserving water by preserving existing native plants which are adapted to North Florida seasonal precipitation rates, encouraging the use of plant materials specifically suited to the growing conditions of a particular location, and establishing standards for installation and maintenance of landscape plants and irrigation systems.

2. Improving environmental quality through the retention and installation of vegetation, thereby promoting improved air and water quality through the removal of carbon dioxide and the generation of oxygen, facilitation of aquifer recharge, reduction of storm water runoff, reduction in air and noise pollution, prevention of soil erosion and sedimentation, and mitigating heat and glare through shade and evapotranspiration.

3. Increasing land values by providing landscaping as a capital asset.

4. Providing human psychological and physical benefits through the use and arrangement of landscape materials to break up and moderate the monotony and harshness of urban development.

5. Providing a haven for wildlife.

6. Assisting in the protection of endangered or threatened plant species and habitats, and of

rare or endangered ecosystems.

7. The landscape design standards of this section are intended to protect the public health, safety and welfare by promoting the preservation of existing trees and native plant communities, furnishing an approved list of plants specifically adapted to Northeast Florida, promoting site specific placement of plant species, and incorporating xeriscape principles into landscape and irrigation design to conserve the potable water supply.

8. Vehicle use area landscaping required by this section is intended to promote the public health, safety and general welfare by providing minimum requirements for installation and maintenance of landscaped areas in connection with business, institutional and industrial areas, and to preserve the value of land and buildings on surrounding properties and neighborhoods.

9. When planted along a street, trees have an aesthetic impact on the neighborhood in addition to providing valuable shade to sidewalks and streets. Also as a traffic calming tool, street trees have an effect on motorists to further increase the safety of pedestrians.

b. Applicability –The general standards set forth in this section shall apply to all planting or buffering when required by County regulations. Whenever plant materials are required for vehicle use area landscaping, perimeter buffers or any purpose required by this article, they shall be installed and maintained in accordance with the standards and requirements of this section. The buffering requirements in this section are in addition to the buffering requirements set forth in Article 6 of this Code (Resource Protection Standards). Where the buffering requirements of Article 6 and this section conflict, the stricter buffering standard shall apply.

c. Definitions – As used in this article, the following terms shall have the meanings indicated:

1. *Approved Plant Species* - The landscaping requirements of this section shall be achieved by using any of the plant species shown in **Table 7.4 found Appendix VII.**

2. *Caliper* - The trunk diameter of a tree. Caliper is measured six inches above the soil line for installed trees up to and including four inches in diameter and twelve inches above the soil line for installed trees greater than four inches in diameter. For existing trees, caliper is measured four and one-half feet above the soil line and is also referred to as diameter at breast height (DBH).

3. *Canopy Tree* - A species of tree that normally grows to a mature height of forty feet or more.

4. *Prohibited Plant Species* - Certain plant species are so obnoxious, invasive and detrimental to the environment so that they are considered contrary to the intent of this section and expressly prohibited. The list of prohibited plant species is provided in **Table 7.5, found Appendix VII.** The list found in **Table 7.5** is in addition to any plant species prohibited by State of Federal law.

5. *Street Tree* - A tree located in a planting strip between the sidewalk and the street. Street trees shall be canopy trees except where conflicts with overhead or underground utilities exist, in which case two understory trees shall be substituted for a canopy tree.

6. *Understory Tree* - A species of tree that normally grows to a mature height of fifteen to thirty-five feet.

7. *Undeveloped* - With respect to real property, a general lack of structures or impervious areas exceeding five percent of the total area or other improvements.

8. *Undisturbed Area* - That area surrounding a tree within a circle described by a radius of one foot for each inch of the tree's diameter at breast height.

9. *Vehicle Use Area* - An area for the display or parking of any and all type of vehicles and equipment, whether self-propelled or not, and all designated access or service drives upon which vehicles traverse the property. A vehicle use area does not include parking spaces or driveways associated with and immediately adjacent to detached or attached single-family residential dwellings.

7.03.02 – Landscaping Vehicle Use Areas

a. Intent. Vehicle use area landscaping required by this section is intended to promote the public health, safety and general welfare by providing minimum requirements for installation and maintenance of landscaped areas in connection with business, institutional and industrial areas, and to preserve the value of land and buildings on surrounding properties and neighborhoods.

b. Applicability. The requirements of this section shall apply to all new vehicular use areas, and existing vehicular use areas altered or improved subject to **Section 9.03** of this Code. Landscaping shall be provided in accordance with this section prior to issuance of a certificate of occupancy or certificate of completion.

c. Exemptions. The following shall be exempt from the provisions of this section:

1. Public Educational Facilities.

2. Development for which a valid concurrency reservation certificate has been issued or which is subject to a development agreement prior to the effective date of this Article.

3. Lands used in conjunction with a bona fide farm operation within the meaning of section 823.14(6), Florida Statutes, and classified as agricultural land pursuant to section 193.461, Florida Statutes.

4. Lands used as botanical gardens or state-approved or government nurseries or groves.

5. Single-family residential lots of record prior to the effective date of this Article.

6. Single-family residential lots that are not part of a subdivision created after the effective date of **Article 12** of this Land Development Code.

7. Cemeteries created prior to the effective date of this Article.

d. Perimeter landscaped area required.

1. Except as exempted by 2 below, all vehicular use areas shall be separated by a perimeter landscaped area, a minimum of **nine feet** in width, from any public right-of-way and from any boundary of the property on which the vehicular use area is located.

2. This landscape area is not required:

(a) When the paved ground surface area is completely screened from adjacent properties or public rights-of-way by intervening buildings or structures;

(b) When an agreement to operate abutting properties as essentially one contiguous parking facility is in force. The agreement shall be executed by the owners of the abutting properties, and shall bind their successors, heirs and assigns. Prior to the issuance of any building permit for any site having such a contiguous parking facility, the agreement shall be recorded in the public records of the county;

(c) When the paved area is at least 150 feet from the nearest property line; or

(d) When the required landscape strip would be in conflict with utility installations, and such conflicts cannot be resolved, such areas may be reduced to five feet and planted with shrubs and such understory trees as may be acceptable to the utility.

3. The landscape area shall commence within five feet of the paved surface area. Where the perimeter landscape area and a required buffer strip overlap, the more stringent requirements shall be applied. Perimeter buffering shall be required for all storage, accessory service and customer parking areas at any auto sales facility.

4. The development review committee through plan review, or staff, when only staff review is required, may alter these perimeter landscape requirements if it is determined that:

(a) Screening is better achieved by relocation of the landscape strip;

(b) There is an unresolvable conflict between other element(s) of the development plan and the location, width or height of the perimeter landscape area, and that the public interest is therefore best served by relocation of the landscape area, lowering the height of required material or the substitution of a solid fence or wall in conjunction with a reduction in width; or

(c) That the screening would only serve to emphasize a long driveway that would otherwise be unobtrusive.

5. The perimeter landscape area shall contain:

   (a) Shrubs, arranged to provide a visual screen of 75 percent opacity and achieve a height of at least three feet within three years; and

   (b) At least one shade tree planted for each 50 linear feet, or part thereof, of the boundary of the vehicular use area. The distance between such trees shall not exceed 55 feet.

   (c) The development review committee during development plan review, or staff during administrative review, may determine that natural vegetation is sufficient to screen adjacent properties and rights-of-way. In such instance the existing vegetation, including understory plants and bushes, is protected from pruning and removal except that diseased plant material and invasive nonnative species may be replaced in accordance with this section. Where encroachments are made for utility connections, replacement plants appropriate to the ecosystem shall be required.

e. Landscaping in Interior Areas. Landscaping areas shall be provided for interior vehicular use areas so as to provide visual and climatic relief from broad expanses of pavement and to define logical areas for pedestrian and vehicular circulation. In connection therewith, the following standards shall apply:

   1. Off-street parking areas of five (5) or more parking spaces or in excess of one thousand (1,000) square feet shall contain at least ten (10) square feet of interior landscaping for each parking space or at least ten percent of the gross area of the interior vehicular use area shall be landscaped, whichever is greater. Other vehicular use areas in excess of one thousand (1,000) square feet shall have twenty-five (25) square feet of landscaped area for each five hundred (500) square feet or fraction thereof of paved area.

   2. Each separate interior landscaped area shall contain a minimum of three hundred (300) square feet and shall be at least five (5) feet wide. A minimum of one (1) tree shall be planted for every one hundred-twenty (120) square feet of interior landscaping with the remaining area adequately planted with shrubs, ground cover or other approved landscaping materials.

   3. All interior landscaping shall be protected from vehicle encroachment by curbing or wheel stops.

   4. A driveway into a Parking Area shall be bordered by a landscaped buffer a minimum of eight (8) feet in width and three (3) feet in height. See **Figure 7.2 in Appendix VII.**

   5. Interior landscaped areas shall be dispersed so as to define aisles and limit unbroken rows of parking to a maximum of one hundred linear feet. Interior landscaped areas shall not be less than three hundred square feet in area.

   6. In other vehicular use areas where the strict application of this section will seriously limit the function of the area such as off-street loading areas, the required landscaping may be located near the perimeter of the paved area. Such required interior landscaping which is

relocated shall be in addition to the perimeter landscaping requirements.

7. Seventy percent (70%) of the required Trees shall be Canopy Trees. This provision does not exclude the use of existing trees.

8. Minimum Planting Areas For Trees.

   (a) Understory Trees - The minimum planting area for understory trees shall be a two and one-half foot radius from the trunk perimeter. Retained trees used to meet the requirements of this section must be located within an undisturbed area.

   (b) Canopy Trees - The minimum planting area for canopy trees shall be a five-foot radius from the trunk perimeter. Retained trees used to meet the requirements of this section must be located within an undisturbed area.

9. Interior landscaping layout or design shall be reviewed and approved by the Director or, in the case of a Class III Development, by the Development Review Committee.

f. The use of existing native vegetation in buffer zones is preferred. If a developer proposes to landscape a buffer zone with existing native vegetation, a buffer with fewer plants than required by this Section may be approved if:

   1. Such is necessary to prevent harm to the existing native vegetation; and

   2. The buffering and/or aesthetic purposes of the buffer zone are substantially fulfilled despite the lesser amount of vegetation.

7.03.03 – Buffers and Screening

a. Generally. A buffer zone is a landscaped strip along parcel boundaries that serves as a buffer between incompatible uses and zoning districts in order to minimize noise, the glare of lights and to visually screen buildings or act as an attractive boundary of the parcel or use, or as both a buffer and attractive boundary. The width and degree of vegetation required depends on the nature of the adjoining thoroughfares and uses.

b. Requirements. The required screening and buffer distance between proposed land uses and the zoning or lot line is set forth in the tables below. If the land next to the proposed development is vacant, the buffer required shall be determined by the existing zoning on the adjacent vacant parcel. If the adjacent Parcel is vacant but is zoned for a more intensive zoning district, no buffer area shall be required of the less intensive Use. The relative degree of intensity shall be determined as follows:

Table 7.03A – Intensity for Buffers and Screening*	
Group	Land Use Classification
1	Residential – single family, including mobile homes (R-1, R-1A, R-1HA, RE, R-2, R-2HA, AE and AG)
2	Multi-Family less than or equal to six (6) dwelling units per acre (R-3 and R-

	4)
3	Multi-Family greater than six (6) dwelling units per acre (R-3 and R-4) Mobile Home Park (RMH) Cultural/Institutional
4	Neighborhood Business, Professional Office (CPO) and General Commercial (C-1, C-2)
5	High Intensity Commercial (C-3 and C-4) and Light Industrial (IL)
6	Heavy Industrial (IH) Mining and Extractive (A, Mining) Solid Waste & Correctional facilities Intensive Agriculture
7	Outdoor/Passive

*Example zoning districts are provided in parenthetical for informational purposes only.

Table 7.03B - Buffer and Screening Matrix*							
Proposed Use Intensity Group	Abutting Use Intensity						
	1	2	3	4	5	6	7
1	None	5/A	20/B	10/A	20/B	30/C	10/A
2	5/A	None	5/A	10/A	20/B	30/C	10/A
3	20/B	5/A	None	10/A	20/B	30/C	25/B
4	10/A	10/A	10/A	None	10/A	20/B	15/B
5	20/B	20/B	20/B	10/A	None	15/B	25/B
6	30/C	30/C	30/C	30/B	20/B	None	30/B
7	10/A	10/A	25/B	15/B	25/B	30/B	None

*Buffer and screening expressed as "Buffer width in feet/Applicable Screening Standard." For example, "5/B" requires a 5-foot wide buffer and screening standard B. The Screening Standards are described in subparagraph c below.

c. Screening Standards.

1. Screening shall be installed within the buffers required above. Screening shall meet specified height requirements set forth in this subsection, except in front and corner yard areas. In meeting the screening standards, it is recommended that staggered hedgerow plantings be installed on three (3) foot centers to achieve the opacity indicated.

2. Screening Standard "A" shall consist of the following:

   (a) Evergreen plants, at the time of planting, shall be six (6) feet in height and provide an overall screening opacity of seventy-five percent (75%); or

   (b) A masonry wall six (6) feet in height, located within the required buffer;

architecturally finished on all sides, and if a block wall, shall be painted on all sides; or

(c) A solid wooden fence six (6) feet in height (finished side out); or

(d) A berm not steeper than two to one (2:1) in combination with (a), (b) or (c) above, to achieve a minimum height of six (6) feet and seventy-five percent (75%) opacity at the time of installation; and

(e) Lawn, low growing evergreen plants, evergreen ground cover, or rock mulch covering the balance of the buffer.

3. Screening Standard "B" shall consist of the following:

(a) The requirements of Screening Standard "A"; and

(b) A row of evergreen Canopy Trees which are not less than eight (8) feet high at the time of planting, a minimum of 1.5 inch caliper, and are spaced not more than twenty (20) feet apart. The Trees are to be planted within ten (10) feet of the property line.

4. Screening Standard "C" shall consist of the following

(a) A row of evergreen canopy trees which are not less than eight (8) feet high at the time of planting, a minimum of 1.5 inch caliper, and are spaced not more than twenty (20) feet apart. The trees are to be planted within ten (10) feet of the property line; and

(b) A masonry wall, architecturally finished on all sides, located within the required buffer; such wall shall be a minimum height of six (6) feet and, if a block wall, shall be painted on all sides; and

(c) Lawn, low growing evergreen plants, evergreen ground cover, or rock mulch covering the balance of the buffer.

5. Variance. The requirements of the Screening Standards A, B and C may be modified by a variance from the Zoning Board of Adjustment under Section 9.04 of this Code; or they may be modified by an administrative variance under the procedures outlined under section 9.04.06, if, in addition to the conditions outlined in section 9.04.06, the following conditions exist:

(a) The buffer width is 50 feet or greater and there is existing natural vegetation of sufficient height and density to screen the use, as determined by the Director of Planning and Development Services; or

(b) There are conditions in place on the property at issue prior to the effective date of this Code the prevent compliance with the buffering and screening requirements; for example, utility easements that prevent the planting of any vegetation or placement of an artificial screen in order to protect equipment or access. The

property owner shall make every effort to achieve substantial compliance with the buffering and screening requirements.

6. Open Storage

(a) Open storage that constitutes the principal use of a site shall be buffered in accordance with screening standard "C".

(b) Open storage areas which are accessory to a principal use shall be screened from view of any street and from residentially zoned land as follows:

(1) Where an open storage area is in view from a street, the method of screening shall consist of solid masonry walls or solid wooden fences at least six (6) feet in height, or evergreen shrubs which at the time of installation shall be six (6) feet in height and seventy-five percent (75%) opaque and shall grow to form a continuous hedge, with access from the Street only through solid gates which shall be closed except when in use. Said screening shall extend interior to the site a minimum of one hundred (100) feet from the street property line or the entire depth of the open storage area, whichever is less, unless an existing permanent structure shields the storage area from public view.

(2) Where an open storage area is in view from a residentially zoned district within two hundred (200) feet, the method of screening shall consist of solid wooden fences or painted solid masonry walls at least six (6) feet in height, or evergreen shrubs which at the time of installation shall be six (6) feet in height and seventy-five percent (75%) opaque and shall grow to form a continuous hedge. Said screening shall be installed along all boundaries of the storage area including internal boundaries, that are in view from the residential districts.

6. Solid Waste Storage. All new buildings and uses, except for Single Family and Two-Family Dwellings, shall provide facilities for the central storage of solid waste within the lot. Where such facilities are provided outside of a building, they shall be screened from public rights-of-way and adjacent property by an enclosure constructed of materials compatible with the materials on the front building wall of the main building.

7. Mechanical Equipment. All non-residential and non-agricultural uses shall screen all mechanical equipment, including but not limited to ground mounted air conditioners and transformers and rooftop equipment such as air conditioners or pumps, from view from public places and neighboring properties through the use of features such as berms, fences, false facades, landscaping or by placement in the rear or side yard of an existing or proposed non-residential structure. Ground level mechanical equipment serving non-residential, non-agricultural or more than one residential use shall be screened through the use of features such as berms, fences, false facades, landscaping or by placement in the rear of an existing or proposed non-residential structure. Screening shall allow for access to such equipment for repairs or replacement. Rooftop equipment shall be screened through the use of a parapet wall or false facade that is an integral part of the structure.

d. Mixed-Use Developments. Buffering and screening around the exterior of a mixed-use development shall be based on the predominant use in the development. If the design of a mixed-use development protects adjacent uses without the full buffer or screen required by this subsection, a lesser buffer may be approved by the Development Review Committee, if the decision to allow the lesser buffer is supported by written findings.

e. Responsibility for Buffers and Screens.

1. The desired width of a buffer zone between two parcels is the sum of the required buffer zones of the parcels. Where a new use is proposed next to an existing use that has less than the required buffer zone for that use, an inadequate buffer zone will be tolerated, except as provided in 2 below, until the nonconforming parcel is redeveloped and brought into conformity with the buffer zone requirements of this subsection. The developer of the new adjoining use is encouraged, however, to take into account the inadequacy of the adjoining buffer zone in designing the site layout of the new development.

2. Where a residential use is proposed next to an existing non-residential use, or a non-residential use is proposed next to an existing residential use, and the existing use does not have a conforming buffer zone abutting the property proposed for development, the proposed use shall provide eighty (80) percent of the combined required buffer zones of the two uses. Where the existing use has a buffer zone, but such zone does not meet the requirements of this subsection, the proposed use may provide less than eighty (80%) of the combined required buffer zones if the provision of such lesser amount will create a buffer zone meeting one hundred (100%) of the combined required buffer zone of the two uses. The Development Review Committee shall determine which areas may be counted as a buffer zone of the existing use based on the buffering qualities of the areas.

7.03.04 – Tree Protection

a. Variances

1. The Department shall be authorized to approve the following administrative variances from certain development standards in order to protect trees with a caliper that is six inches or greater as follows:

(a) Setbacks for principal and accessory buildings and structures within residential zoning districts: Front or rear setbacks may be reduced up to twenty five percent. Side setbacks may be reduced up to fifty percent.

(b) Setbacks for principal and accessory buildings and structures within nonresidential land uses where adjacent to residential land uses: Setback may be reduced a maximum of fifteen feet provided that the reduced setback area shall contain a ten-foot landscaped area with a six-foot high opaque visual barrier (either fence or vegetation) and tree planting thirty feet on center.

(c) Parking space quantity standards: Reduction of up to ten percent or one space whichever is more.

(d) Parking space size standards: Up to 1.5 feet from the required depth.

2. No variance granted to the width of required vehicle use area landscaping or the width of required perimeter buffers specified by this Article shall constitute a variance to the quantity of plantings required by this section, unless specifically authorized by the Zoning Board of Adjustment.

b. Subdivision and Street Design Modifications.

1. The Director of Public Works shall be authorized to approve modifications to the location and spacing requirements set forth in the design standards pertaining to utilities, sidewalks, roads or drainage structures in order to protect trees and native plant communities. Intersection and radius requirements, detention/retention pond capacities and offset requirements may also be modified in order to protect trees and native plant communities.

2. Wherever a joint use driveway is required or installed at the option of the applicant, the Department shall be authorized to make adjustments in the location and design of landscaped areas required on the affected building site(s), but not in the number of plantings required.

7.03.05 Minimum Landscaping Installation Standards.

a. Generally.

1. Any landscaping installation required under this Code shall be subject to the minimum installation standards set forth in this subsection, unless more specific standards are otherwise stated.

2. The property owner shall be responsible for installing landscaping, according to accepted commercial planting procedures, using plant materials of species that are native or adapted to the County.

3. Upon receipt of a written request from the developer, the Director may adjust the application of standards contained in this section, in part or in whole, to allow credit for healthy plant material on a building site prior or subsequent to its development, if such an adjustment is consistent with the intent of this section. Existing plant material native to Northeast Florida should, in particular, be retained.

4. Landscaped areas, exclusive of those located on single-family residential lots, shall be protected from vehicular encroachment with effective wheel stops or curbs.

5. Wherever new medium or large trees are installed, they shall be provided with anchoring

only when necessary to maintain the tree in a vertical upright position.

b. Tree Health. Trees used to satisfy the requirements of this section shall be in good health as defined herein. A determination as to the health of trees need not be made in advance of their use; however, poor tree health may be established at any point during the development process in either one of the following ways:

1. The applicant may claim poor tree health as a reason to remove an existing tree that must otherwise be retained to satisfy the requirements of this section. To do so, the applicant shall submit an expert evaluation by a certified arborist or an urban forester as part of his or her tree removal permit application.

2. The Director may claim poor tree health as a reason for disallowing a new or existing tree for use in satisfying the requirements of this section. The applicant may rebut such a claim by submitting an expert evaluation by a certified arborist or an urban forester to the Director, who shall make a final determination. If the expert evaluation recommends recuperative measures to improve tree health, the Department may condition the retention of the tree upon these measures, and may reassess the health of the tree after a one-year recuperation period.

c. Quality. Plant materials used in conformance with provisions of this article shall equal or exceed the standards for Florida No. 1 as established by the Florida Department of Agriculture (FDOA) Grades and Standards. Turf grass sod shall be clean and reasonably free of weeds and noxious pests or disease. Turf grass seed used shall meet requirements of the FDOA quality control program. The preservation and use of native vegetation is highly encouraged. Plant materials selected shall be the best suited to withstand the soil and physical conditions of the site. Plant materials that are freeze and drought tolerant are preferred.

d. Irrigation. Unless the requirement is waived under paragraph 3 below, when landscaping or vegetative screening is required as provided in this Article, an irrigation plan shall be submitted and approved by the Director prior to permitting. The water use zones shall be shown on the Irrigation Plan. Turf grass areas shall be irrigated on separate irrigation zones from tree, shrub and groundcover beds. Reclaimed or non-potable water shall be used for irrigation if a source is determined to be available by the Putnam County Public Works. Moisture sensor and/or rain gauge equipment shall be required on automatic irrigation systems to avoid irrigation during periods of sufficient rainfall. The use of low volume, emitter, or target irrigation is preferred for trees, shrubs and groundcovers. No significant irrigation overthrow shall be allowed onto impervious surfaces. The use of low volume, emitter or target irrigation is preferred for trees, shrubs and ground covers. Irrigation systems shall be operated to conform to St. John's River Water Management District or Suwannee River Water Management District mandatory water use restrictions, when applicable.

1. When landscaping or screening standards are met using high water use plantings, automatic irrigation systems shall be required and shall be installed according to manufacturer's specifications and the applicable Plumbing Code adopted by the County. All automatic irrigation systems shall be maintained in proper operating condition.

2, When landscaping standards are met using moderate and low water use plantings, the property owner shall be required to have a readily available water supply within 50 feet of plant materials. See **Table 7.4** for moderate and low water use plants.

3. Retained trees, shrubs and native plant communities that have demonstrated an historical ability to thrive with out need of an irrigation system need not be irrigated. When landscaping or screening standards are met by planting low water use vegetation that has demonstrated an historical ability to thrive with out need of an irrigation system, the Director may waive the requirement for permanent irrigation system, provided the developer provides a temporary irrigation plan (i.e. a water truck) that will help to insure the survival and establishment of the planted material.

e. Berms. When a berm is used to form a visual screen in lieu of, or in conjunction with, a hedge or wall, such berm shall not exceed a slope of three to one unless otherwise approved by the County Engineer, and shall be completely covered with shrubs, turf grass or other living ground cover.

f. Ground Covers. Ground covers shall be planted in a manner so as to present a finished appearance with reasonably complete coverage under normal growing conditions within twelve months after planting.

g. Hedges. Shrubs used to form hedges shall be of a non-deciduous species, shall be a minimum of twenty-four inches in height above grade at the time of planting and shall be spaced not more than thirty-six inches apart and maintained so as to form a continuous visual screen thirty inches in height above grade, under normal growing conditions, within one year after planting.

h. Turf Grass. Turf grass shall be of a species normally grown as permanent lawns in the County. Turf grass areas may be sod, plugged, sprigged or seeded except that solid sod shall be used in swales or other areas subject to erosion.

i. Trees.

1. Wherever the requirements of this section specify the use of canopy trees or understory trees, refer to **Table 7.4** to determine the approved tree species within each of these categories.

2. The terms "small," "medium" and "large" refer to the size of a tree at the time it is installed or retained, regardless of its species, and are quantified according to the table above.

3. The minimum planting area for all installed trees shall be as follows:

(a) Installed canopy trees: five-foot radius from trunk perimeter.

(b) Installed understory trees: 2.5' radius from trunk perimeter.

j. Permanent Architectural Planters. The use of permanent architectural planters may be permitted in fulfillment of the landscape requirements when approved by the Director.

k. Tree and Shrub Installation. Grow bags and containers including synthetic burlap shall be completely removed from the root ball prior to planting. All twine or wire shall be cut off from around the trunk at the top of the root ball. Trees and shrubs shall be mulched to a minimum depth of two inches with organic mulch at least to the perimeter of the root ball.

7.03.06 – Xeriscape.

a. Generally. Xeriscape is a set of landscape design and maintenance principles that promote good horticultural practice and the economic and efficient use of water. The term Xeriscape is the registered trademark of the National Xeriscape Council and means water conserving, drought tolerant landscaping or simply the use of appropriate plant materials that do not require special attention and which require little supplemental water to grow properly. Xeriscape designs do not resemble desert landscapes, but reflect the lush traditional appearance of Florida gardens. Because water restrictions have become a common occurrence in Northeast Florida, the County is incorporating water conserving landscape standards into this section. Use of xeriscape principles shall be required for all non-residential, multifamily, planned unit developments (common areas and rights-of-way only), planned commercial developments and planned industrial developments. One and two family residential building sites are exempt from xeriscape design requirements, although they are encouraged to comply. The xeriscape principles shall be implemented through the following standards.

b. Design. Installed trees and plant materials shall be grouped together with plants of the same water use needs into zones. The water use zones shall correlate to the water use zone designations of plants listed in **Table 7.4**, and as described below. Plant species may be grouped with other plants of the same water use zone or with plants of a higher water use zone. Plant species of a higher water use zone shall not be placed in a lower water use zone. The water use zones shall be shown on the landscape plan. *All newly installed plants require regular, moderately applied watering for the first year to become established.* Installed trees and vegetation shall be spaced and located to accommodate their mature size on the site. The water use zones are as follows:

1. High Water Use Zone – A high water use zone consists of plants that are associated with moist soils and require supplemental water in addition to natural rainfall to survive. This zone includes most turf grass areas.

2. Moderate Water Use Zone – Plants that survive on natural rainfall with supplemental water during seasonal dry periods. This zone includes St. Augustine, Bahia and other turf grass areas.

3. Low Water Use Zone — A low water use zone consists of plants that survive on natural rainfall without supplemental water.

c. Plant Selection. Plant material shall be selected that is best suited to withstand the physical

growing and soil conditions which are found in the microclimate of each particular location on a site. Plant species that are freeze and drought tolerant are preferred. Plants required to be installed by this section shall be selected from **Table 7.4.**

d. Turf Grass. Turf grass areas shall be consolidated and limited to those areas on the site that receive pedestrian traffic, provide for recreational uses, or require soil erosion control such as on slopes or in swales, or where turf grass is used as a design unifier, or other similar practical use. The Landscape Plan shall label the use of turf areas.

e. Mulch. A layer of organic mulch to a minimum depth of two inches shall be specified on the landscape plans in plant beds and around individual trees in turf grass areas. Mulch shall not be required in annual beds.

f. Irrigation. The irrigation system shall be designed as required under section 7.03.05.d and shall correlate to the organization of plants into zones as described in 1 above.

7.03.07 -- Maintenance of Existing or Installed Landscapes

a. Pruning and Trimming. Trees installed or retained as required under this section shall not be topped or severely pruned so as to appear stunted. Trees shall be pruned as needed to maintain health and form in such a way that retains or improves the natural form of the particular species; provided, topiary may be practiced upon suitable species if professionally and consistently maintained. The branches of a tree extending over any public sidewalk shall be trimmed to at least the height of eight feet above the sidewalk. The branches of a tree extending over the travel portion of any public street or alley used for vehicular traffic shall be trimmed to the height of at least fifteen feet above the street or alley. All landscaping installed or retained to meet the requirements of this section shall be maintained in a healthy and growing condition.

b. Non-residential Development. With respect to a non-residential development, the obligation to faithfully and continually provide the irrigation and maintenance necessary and proper to ensure continued vitality of landscaping and protected trees installed or retained within any such right-of-way located in and adjacent thereto, and for the replacement of any such tree that dies or becomes non-viable, shall remain that of the owner thereof and any voluntary or involuntary transferee of the owner. Prior to or simultaneously with the submission of any application for a right-of-way permit authorizing access to an existing public roadway from a non-residential development, the owner thereof must submit to the County a fully executed and recordable instrument setting forth a covenant by such owner in favor of the County that such owner will perform the obligation. Such covenant shall run with the land upon which the development is located, and shall be binding upon the owner and the owner's heirs, successors and assigns with respect to such lands in perpetuity.

c. Replacement. Installed or retained landscaping which dies after development has completed shall be replaced by the responsible party to meet the requirements of this article within thirty days.

7.03.08 -- Enforcement

Any failure to maintain landscaping in accordance with the requirements of this Article, shall be deemed to be a violation and subject to enforcement action under **Article 12** of this Code. The property owner shall be responsible in all enforcement matters pertaining to this section. As part of any enforcement action regarding a violation of the requirements of this article, the County shall be authorized to require, in addition to any fines or other enforcement measures, the replacement of any removed or damaged tree(s) with new tree(s) of at least four inches caliper each and having a total tree caliper equivalent to that of the removed or damaged tree(s) as space allows. Placing of the replacement trees shall be at the landscape reviewer's direction.

SECTION 7.04 FENCES

7.04.01 Generally.

a. Applicability. This Section applies to all fences and fence walls unless specifically exempted in this division, or unless specifically regulated elsewhere in this Code.

b. Definition. The term "fence" as used in this section shall include walls used for fencing, screening, or decorative purposes.

7.04.02 Construction Standards

a. Compliance with Building Permit Procedures. Except for fences used for bona fide agricultural uses, all fences that are over 36 inches in height must comply with established building permit procedures, if any.

b. Uniformity. All fences on each property must be of uniform materials, design and color. Any additions to existing fences that do not exceed the length of the existing fence or wall shall maintain a uniformity of materials, design and color with that of the existing fence or wall.

c. Appearance. All fences must be constructed and maintained in a manner that will not detract from the neighborhood or community. Fences must not contain missing materials or components of which it was built and must remain substantially vertical so that it serves the function or aesthetic purpose for which it was built and has not been compromised to the point that the fence would present a danger of flight or destruction during severe weather. Fences shall not be used for advertising or other non-advertising messages, except as provided in Article 8 (Sign Regulations) of this Code.

d. Materials. Fences must be constructed of conventional and traditional building materials including, but not limited to, concrete block, brick, wood, decorative aluminum, iron or steel, chain link or composite products manufactured specifically for fences and walls. Non-traditional materials, including but not limited to, tires, mufflers, hubcaps, auto or mobile homes body parts etc., are prohibited. Fabric or plastic sheets or nets shall not be used as part of the fence or attached to a fence for the purpose of effecting privacy or required screening.

e. Presentation. Fences must be constructed to present the finished side of the fence to the adjoining lot or any abutting right-of-way. Where, there is an existing fence, wall or continuous landscape hedge on the adjoining parcel, this provision may be administratively waived upon written request.

f. Sharp or Electrified. Except as provided below, no barbed wire, spire tips, sharp objects or electrically charged fences may be erected within 100 feet of any residential area or residential zoning district under separate ownership:

   1. Bona fide agricultural uses may use barbed wire or electrically charged fences to control livestock when located in districts permitting the raising, keeping or breeding of livestock.

2. The use of barbed wire for temporary security fences around construction materials or equipment in conjunction with an active construction project may be permitted when approved by the Director.

3. The use of chain-link fence with three strands of barbed wire on top of the fence with six-inch spacing between the strands of barbed wire may be required or approved by the Director around structures, site improvements or equipment that may present a potential hazard or attractive nuisance to residents or passersby not otherwise protected.

4. The prohibition of electrical fences should not be read to prohibit underground, wireless outdoor sonic (aka "invisible") fences used to keep domestic animals on the property.

g. Electrical fences. Electrical fences must comply with National Electrical Safety Code requirements.

h. Location. Except as may be specifically permitted or required by other sections of this Code, no fence may be erected, placed or maintained:

1. Within any street right-of-way or street easement.

2. Closer closer than five (5) feet to the mean high-water line along natural water bodies.

7.04.03 Height.

a. Generally. Except as may be specifically permitted or required by other sections of this Code, the height limitations set forth in this subsection shall apply.

b. Measurement. Fence height will be measured from the existing elevation of the natural adjacent grade at the location of the fence. In rear and side yards, the building official has the discretion to allow a deviation of up to four inches in height where required to compensate for variations in grade, drainage, or weed maintenance provided that the length of the structural materials for the fence do not exceed the permitted height.

c. Residential Use Districts .

1. A fence located between a street right-of-way or easement and the building line may not exceed three feet in height, except that fences may be a maximum height of four feet so long as the fence is of open screening and does not interfere with vehicle visibility requirements at traffic access points. For purposes of this paragraph only, open screening may include vertical picket-type fencing provided that the minimum space between vertical members must be a minimum of one and one-half times the width and thickness of the vertical members or bars. For example, if the vertical members are two and one-quarter inches wide and three-quarter inch thick (total three inches), then the minimum space between them must be four and one-half inches (1.5 X 3.0 = 4.5). In no case may the space between vertical members or bars be less than four inches.

2. A fence located between a side or rear lot line and the required setback line is limited to a maximum height of six feet.

3. A fence located within 25 feet of a body of water must be open mesh screening above a height of three and one-half feet.

4. Residential use districts includes all residential zoning districts, as well as residential uses in the Agriculture (AG) and Agriculture Estates ("AE"), except as where such residential uses in association with bonefide agriculture uses as provided in paragraph f below.

5. A property owner in a residential use area may request an administrative variance to extend the fence height up to an additional two (2) feet, subject to the application, notice and review criteria in section 9.04.06.

d. Commercial and industrial areas. A commercial or industrial fence may be a maximum height of eight feet around the perimeter of the project upon a finding by the Director that the fence does not interfere with vehicle visibility requirements at traffic access points.

e. Along limited access or controlled access streets. A fence may be placed or maintained along any property line abutting a limited access or controlled access street provided it complies with the same regulations as are set forth for residential project fences in **Section 7.04.04.**

f. Agricultural fences. An open screen or wire fence for bonafide agricultural uses may be a maximum height of eight feet along any property line in an agricultural district provided that the fence does not interfere with vehicle visibility requirements at traffic access points.

7.04.04 Residential Project Fences

a. Definition. For purposes of this subsection, a residential project fence means a wall or fence erected around a residential subdivision (but not individual lots) or development of ten or more dwelling units.

b. Design Requirements. A residential project fence:

1. May be a maximum height of eight feet around the perimeter of the project upon a finding by the development services director that the fence does not interfere with vehicle visibility requirements at traffic access points.

2. May include architectural features such as columns, cupolas, fountains, parapets, etc., at a height not to exceed twice the fence or wall height provided they are compatible with the project and abutting properties.

3. Must be landscaped and irrigated on the exterior side (between the fence and the abutting property or street right-of-way) with a minimum of five trees per 100 lineal feet and shrub hedges.

(a) Hedges must be planted and maintained so as to form a 36-inch high continuous visual screen within 1 year after time of planting.

(b) Trees adjacent to a right of way must be appropriately sized in mature form so that conflicts with overhead utilities, lighting and signs are avoided. The clustering of trees and use of palms adjacent to the right of way will add design flexibility and reduce conflicts.

4. Must be constructed to ensure that historic water flow patterns are accommodated and all stormwater from the site is directed to on-site detention/retention areas in accordance with stormwater requirements.

5. May not be permitted until proper documents have been recorded providing for the maintenance of the project fence and landscaping.

SECTION – 7.05 OPEN SPACE

7.05.01 – Generally

a. Purpose. The purpose of this Section is to provide methods for setting aside open space in order to earn density bonuses under the Land Use Element of the Comprehensive Plan and **Article 2** of the Code, and to promote the protection of natural resources and viable agriculture lands and to establish parks, outdoor recreational areas and green space within the County in order to protect the natural beauty of the County, reduce housing densities, promote recreation among the citizenry, promote agriculture and preserve for all the environmental benefits of clean air and open space.

b. Definitions. For purposes of this Subsection:

1. *Park, outdoor recreational, or green space uses*-- Includes boating, fishing, hunting, primitive camping, swimming, horseback riding, and historical, archaeological, scenic, or scientific sites.

2. *Viable agriculture* -- Means portions of the site that are determined to contain soils with the highest productivity rating or are in active agriculture. It does not mean intense agriculture related uses that may require a special use permit or a commercial or industrial zoning. Examples of these types of uses may include commercial feedlots, concentrated dairy farms, rendering plants, livestock auction facilities and saw mills.

3. *Open Space* – Means vegetated, pervious surface areas of land set aside for parks, outdoor recreation, green space or viable agriculture, as these terms are defined herein.

4. *Present use* -- Means the manner in which the land is utilized on January 1st of the year in which the assessment is made.

5. *Perpetual covenant* -- Means a permanent recorded covenant running with the land and acts as an encumbrance upon the title.

6. *Deferred tax liability* -- Means an amount equal to the difference between the total amount of taxes which would have been due in March in each of the previous years in which the covenant was in effect if the property had been assessed under the provisions of F.S. 193.011 and the total amount of taxes actually paid in those years when the property was assessed under the provisions of this Subsection, plus six (6) percent interest per year on the amount so established.

7. *Successor homeowners association* -- Means an entity established for the purpose of coordinating the collection and expenditure of funds for the maintenance of certain designated improvements or lands within a subdivision. For the purposes of this Subsection, a successor homeowners association may raise funds through the imposition of dues or other fund-raising, but may not charge a fee for the use of lands subject to a covenant.

7.05.02 – Creation of Open Space

a. Generally. Any developer or landowner may designate land to be set aside and perpetually utilized for open space through one of the methods set forth below. Establishing greenbelt status or the presence of an active farming operation alone is not sufficient to meet the requirements of this Code or the Comprehensive Plan for establishing open space and recreational opportunities.

b. Acceptable Methods.

1. Establish a covenant with the Board of County Commissioners that the lands set aside shall not be used by the developer or homeowners association for any purpose other than open space purposes and that the covenant shall run with the land and be perpetual.

2. Establish a conservation easement in accordance with section 570.71 or section 704.06, Florida Statutes.

3. Transfer of fee simple or lesser property rights to the Board of Trustees of the Internal Improvement Trust Fund or a similar Federal, State, Local or private conservation group in accord with the Florida Communities Trust program, the Florida Forever Act, the Florida Preservation 2000 Act, or similar land conservation programs.

c. Covenants.

1. A covenant for the purpose of restricting land use to park, outdoor recreational or green space purposes shall be established by a plat dedication as provided in Chapter 177, Florida Statutes, and shall conform to the requirements of that chapter. The dedication including the covenant shall clearly indicate which lands shall be subject to the covenant, the purposes for which the lands may be used, and that the covenant establishes a perpetual encumbrance upon the title to any lands subject to it.

2. No covenant shall be made a part of any plat dedication until the developer has provided for the establishment or future establishment of a subdivision homeowners association and has provided that the homeowners association will have responsibility for the collection and expenditure of funds among its membership for the maintenance of the lands subject to the covenant, and provided that the assessment procedure in Subsection (h) shall not be utilized except upon a recorded conveyance of the lands subject to covenant from the developer to the homeowners association.

3. After the platting of lands subject to a covenant pursuant to this Section, the developer and successor homeowners association shall not use the land in any manner not consistent with the restrictions voluntarily imposed and shall not change the use of the land from park, outdoor recreational, viable agriculture or green space purposes without first obtaining a written instrument from the Board of County Commissioners, which instrument releases said developer or successor homeowners association from the terms of the covenant and which instrument must be promptly recorded in the same manner as any other instrument affecting the title to real property. Upon obtaining approval of the Board of County Commissioners for release, the release shall be made to the developer or successor homeowners association upon payment of the deferred tax liability. Any payment of said deferred tax liability shall be payable to the County Tax Collector within ninety (90) days of the date of approval by the Board of County Commissioners of the release. The collector shall distribute the payment to each governmental unit in the proportion that its millage bears to the total millage levied on the parcel for the years such covenant was in effect.

d. Prohibited uses. The following land uses are specifically prohibited for lands set aside as open space under this Section.

1. All commercial activities.

2. The imposition of any fees or charges of any type for admission. This does not prohibit the use of donations to maintain or improve the lands protected by the covenant.

3. Intensive agriculture activities and agriculture related uses that may require a special use permit or a commercial or industrial zoning. Examples of these types of uses may include commercial feedlots, concentrated dairy farms, rendering plants, livestock auction facilities and saw mills.

4. The placement of any mobile homes, modular buildings or the erection of any buildings, except for a clubhouse or recreational buildings, in which case said the land coverage for such clubhouse or recreational buildings shall not exceed 10% of the total land area set aside for open spaces and shall be assessed under the provisions of Florida Statutes, section 193.011.

5. The use of the land in any manner which impairs the natural beauty of the land or which is determined by the Board of County Commissioners to be inconsistent with the purposes of this Subsection.

e. Assessment of open space. For all lands subject to a covenant under the provisions of this subsection, the Property Appraiser, in valuing such land for tax purposes, shall consider no factors other than those relative to its value for the present use as restricted by the covenant in this subsection.

SECTION -- 7.06 UTILITIES

7.06.01 -- Requirements for All Developments

a. Generally. The following basic utilities are required for all developments subject to the criteria listed herein.

b. Electricity. Every principal use and every lot within a subdivision shall have available to it a source of electric power adequate to accommodate the reasonable needs of such use and every lot within such subdivision.

c. Telephone. Every principal use and every lot within a subdivision shall have available to it a telephone service cable adequate to accommodate the reasonable needs of such use and every lot within such subdivision.

d. Water and Sewer. Every principal use and every lot within a subdivision shall have central potable water and wastewater hookup whenever required by the Putnam County Comprehensive Plan and where the topography permits the connection to a city or county water or sewer line by running a connecting line no more than 200 feet from the lot to such line.

e. Illumination. All streets, driveways, sidewalks, bikeways, parking lots and other common areas and facilities in developments shall provide illumination meeting the standards of this Code.

f. Fire Hydrants. All developments served by a central water system shall include a system of fire hydrants consistent with the applicable plumbing and fire safety codes. Where a central water supply is not available for fire protection, a proposed subdivision, multi-family residence, commercial or industrial development may be required to install adequate water mains and fire hydrants to meet the needs and demands for fire protection. Such system shall comply with the most current NFPA standards for Water Supply for Suburban and Rural Fire Fighting, which may include installation of a dry fire hydrant, as defined by the NFPA.

7.06.02 -- Design Standards

a. Florida Building Code. All utilities required by this Code shall be installed in a manner that meets or exceeds the minimum standards contained in the Florida Building Code.

b. Placement of Utilities Underground. Where utilities are placed underground, the following standards shall apply:

1. All electric, telephone, cable television, and other communication lines (exclusive of transformers or enclosures containing electrical equipment including but not limited to, switches, meters, or capacitors which may be pad mounted), and gas distribution lines shall be placed underground within easements or dedicated public rights-of-way, installed in accordance with the specifications of the Florida Building Code and the most current FDOT Utilities Accommodation Manual.

2. Lots abutting existing easements or public rights-of-way where overhead electric, telephone, or cable television distribution supply lines and service connections have previously been installed may be supplied with such services from the utilities' overhead facilities provided the service connection to the site or lot are placed underground.

3. Screening of any mechanical utility apparatus (i.e. electrical transformers) placed above ground shall be required in accordance with **Paragraph 7.03.03.c.7** above.

7.06.03 -- Utility Easements

When a developer installs or causes the installation of water, sewer, electrical power, telephone, or cable television facilities and intends that such facilities shall be owned, operated, or maintained by a public utility or any entity other than the developer, the developer shall transfer to such utility or entity the necessary ownership or easement rights to enable the utility or entity to operate and maintain such facilities. Such easements shall expressly state whether the encumbered property owner or any other property owner is allowed to use any part of the the easement for ingress and egress to properties abutting the easement or to develop any uses, other than the permitted utilities, within the easement. Such uses shall comply with the right-of-way, access and roadway standards of this Code. Any limitation on the use of the utility easement shall not prohibit crossing of the easement for purposes of ingress and egress to abutting property from a public road or lawfully established private road. It shall be presumed that uses not expressly provided for in the easement are not permitted within the easement.

SECTION -- 7.07 PARKING AND LOADING

7.07.01 -- Generally

a. Applicability. The requirements for off-street parking or loading facilities apply to any multi-family residential, commercial or industrial uses, or any other off-street parking or loading facilities that serve multiple vehicles or users. They do not apply to on-site parking and loading areas that serve a single-family residence or a two-family residence.

b. Definition. The term "off-street parking or loading facilities" includes parking spaces, loading spaces, loading docks, and internal aisles or access drives that extend from the driveway apron to a parking lot or loading facility.

7.07.02 -- Required Number Of Parking Spaces

a. General Requirements. A minimum of one hundred eighty (180) square feet for each off-street parking space shall be used in determining the required area to meet the requirements of this subsection, exclusive of access thereto. Off-street parking spaces shall be provided and maintained in all districts as indicated in **Table 7.07A** below. Where ever Table 7.07A refers to a "per employee" parking standard, it shall be based on a single, peak work shift.

Table 7.07A -- Number of Required Off-Street Parking Spaces Based on Use

LAND USE AND/OR BUILDING TYPE	Number of Spaces Required
Multifamily Dwellings with three (3) or more dwelling units	Two Spaces per dwelling unit; plus one space for owner or operator and one space for each employee not living in one of the dwelling units
Mobile home park, per lot	Two spaces per manufactured or mobile home
Institutional uses such as rest homes, hospitals, group homes, orphan homes and nursing homes	One space for every four beds, plus one space for each employee (including visiting doctors). In the case of hospitals, bassinets shall not count as beds.
Fraternity, sorority houses, dormitories and boarding houses	One parking space for each two beds
Hotels and motels	One space for each sleeping room; plus one space for each employee
Churches and funeral homes	One space for every four seats in the sanctuary or chapel area
Art gallery, library or museum	One space for each 600 square feet of gross floor area
Elementary and junior high schools	2 per class room, office, gymnasium, auditorium and kitchen
Senior high schools	6 per class room, office, gymnasium, auditorium and kitchen
Day nurseries and kindergartens	2 per employee plus adequate provision for loading and unloading of children
Colleges, junior colleges, universities; dance, art and music studios; and vocational, trade and business schools	One space for every 300 square feet of gross floor area, plus additional spaces required for places used for public assembly such as auditoriums, stadiums and theaters, which are considered separately.
Private clubs and lodges	One space every 300 square feet of gross floor area.
Restaurant, night club, bar or tavern	One space for every four (4) seats, plus one space for every two (2) employees.

LAND USE AND/OR BUILDING TYPE	Number of Spaces Required
Bowling alleys	Four (4) spaces for each bowling alley, plus any additional spaces required for accessory uses such as restaurants or game rooms.
Places for public assembly such as auditoriums, stadiums, arenas, ball fields and theaters	One space for every four seats.
Community center or indoor recreational facility	One space for every three seats or one space for every 200 square feet of gross floor area.
Public, private and commercial parks, campgrounds and outdoor recreational areas other than ball fields	One space per campsite, plus one space per picnic table located outside the campsite area.
Medical and dental office or clinic	One space per doctor, plus one space for every two employees and 1.5 spaces per consultation or examination room.
Research laboratory	One space per 500 square feet of gross floor area, plus one space for every two occupants or employee, plus one per company vehicle
Professional, personal service establishment and business office (other than medical or dental)	One space for every 300 square feet, plus one space for every two occupants or employees
Radio or television broadcasting office or studio	One space for every 500 square feet of gross floor area, plus one space for ever 2 employees.
Business or commercial establishment with outdoor sales or displays	One space for every 500 square feet of gross floor area, plus one space for every 1,000 square feet of lot or ground area outside buildings used for any type of sales or display.
Marinas	One space per boat berth, plus one space per employee of the marina operation. Where the marina is a mixed use operation (i.e. includes a restaurant, hotel or convenience store) the it shall provide sufficient number of parking spaces in accord with **Paragraph 7.07.02.d** below.
Bus, railroad or other transportation terminals	One space for every 500 square feet of gross floor area, plus one space for every 2 employees.
Wholesale, warehouse or storage use (not including mini-warehouses or mini-storage facilities)	One space for every two employees on peak shifts, plus one space per vehicle based at the facility
Commercial shopping centers	One space for every two hundred fifty (250) square feet of non-storage area.

LAND USE AND/OR BUILDING TYPE	Number of Spaces Required
Mini-warehouses	One space for every 2 employees.
All uses in Industrial districts not otherwise listed	One space for each employee on peak shifts, plus one space per company vehicle based at the facility, plus one space for every 5,000 square feet of gross floor area.

b. Handicap Spaces. Handicap parking spaces shall be provided and maintained in all districts as indicated in **Table 7.07B** below:

Table 7.07B – Handicap Space Requirements

HANDICAP SPACE REQUIREMENTS	
Handicap parking spaces shall be reserved and posted in all commercial and professional districts and in any other district that has a principal, accessory or conditional use of a building or structure open to the public. Handicapped parking spaces shall be located in the closest proximity to the main use building or structure in relation to the other parking spaces. All development covered by §§316.1955 and 316.1956, Florida Statutes, shall provide parking for the physically disabled pursuant to the requirements of those sections. In addition, all residential developments with greater than twenty-five (25) required parking spaces shall comply with the requirements of §316.1956, Florida Statutes.	The number of required handicapped spaces is decided based on the number of required standard parking spaces as follows: Zero to twenty (20) required standard spaces = one (1) handicap space. Twenty-one (21) to fifty (50) required spaces = two (2) handicap spaces. Required standard parking that exceeds fifty (50) spaces = 3 handicapped spaces plus the number of handicapped spaces that equals four (4) percent of the total standard spaces.

c. Determination for Uses Not Listed. For a use not listed in the **Table 7.07A**, the Department shall make a determination of the minimum required off-street parking spaces based on a similar listed use. In reaching the determination, the Department shall be guided by the requirements for similar uses, the number and kind of vehicles likely to be attracted to the proposed use and studies of the parking requirements of such uses in other jurisdictions.

d. Fractional Spaces. When units or measurements determining the number of required off-street parking or loading spaces result in a fractional space, such fraction shall be rounded to the nearest whole number (i.e. 1.5 spaces shall be rounded to 2 spaces).

e. Mixed Use Development. In the case of mixed uses, the total requirements for off-street parking shall be the sum of the requirements of the various uses computed separately and off-street parking space for one use shall not be considered as providing the required off-street parking for any other use.

f. Gross Floor Area. Where floor area is indicated as a basis for determining the required amount of off-street parking or loading, "gross floor area" means the floor area inside the exterior walls.

g. Determining the Number of Seats. In stadiums, sport arenas, churches and other places of public assembly in which occupants utilize benches, pews or other similar seating arrangements, each twenty-four (24) lineal inches of such seating facilities shall be counted as one (l) seat for the purpose of computing off-street parking requirements based on seating.

h. Minimum Requirement. Irrespective of any other requirement of this Code, each separate individual store, office or other business shall provide a minimum of at least two (2) off-street parking spaces.

i. Joint Use Off-Street Parking. Nothing in this Section shall be construed to prevent the joint use of off-street parking or off-street loading space for two or more structures or uses, if the total of such spaces, when used together, will not be less than the sum of the requirements of the various individual uses computed separately in accordance with the requirements of this section, and an agreement for such joint use, with County as one of the parties with a right of enforcement. The agreement shall be in the form of a reciprocal easement acceptable to the Putnam County Attorney and shall be filed with the Department and recorded with the Clerk of the Circuit Court for Putnam County, Florida.

j. Location of Off-Street Parking. All required off-street parking shall be located on the same parcel as the principal use(s) it serves, except as provided in this paragraph. In lieu of actual construction of required on-site parking facilities, all or any portion of the off-street parking required for a use may be located on another parcel, either by itself or combined as joint use or shared parking for other uses, subject to approval of a Special Use Permit. Such special use permit shall include the following requirements:

1. The use being served by the off-site parking is a permitted principal use within the zoning district for the parcel or lot where the parking is to be located.

2. A safe, direct, attractive, lighted and convenient pedestrian route shall exist or be provided between the off-site parking and the use being served.

3. The continued availability of off-site parking spaces, necessary to meet the requirements of this Section, shall be ensured by an appropriate reciprocal easement, satisfactory to the County Attorney and recorded with the Clerk of the Circuit Court.

4. For purposes of determining applicable minimum and maximum land use intensities (i.e. impervious surface coverage and floor area ratios), the land area devoted to off-site parking shall be added to the land area of the parcel containing the use being served by such parking and shall be subtracted from the area of the parcel containing the off-site parking.

5. The provision of off-site, off-street parking shall not occur in residentially zoned property or property used for residential development, unless expressly allowed by right or special use permit in applicable zoning category.

6. Off-site, off-street parking shall not be separated from the use it serves by an Arterial or Major Collector Roadway, or other similar physical barriers to convenient access between the parking and the use.

k. Bicycle Parking. In the Urban Reserve and Urban Service future land use categories, at least one (1) bicycle parking space shall be provided for every (20) automobile parking spaces, except as otherwise provided in **Table 7.07C below**.

Table 7.07C – Bicycle Parking Requirements		
TYPE OF USE		REQUIRED BICYCLE SPACES
Entertainment and Recreation	Arcades, games, skating, ball fields, racquet sport facilities & swimming pools	1 space per 4 auto spaces.
TYPE OF USE		REQUIRED BICYCLE SPACES
Entertainment and Recreation	Arcades, games, skating, ball fields, racquet sport facilities & swimming pools	1 space per 4 auto spaces.

7.07.03 -- Parking Deferral

a. Generally. To avoid requiring more parking spaces than actually needed to serve a development, the Department, or the Development Review Committee with Type II and Type III developments, may defer the provision of some portion of the off-street parking spaces required by this Section if the conditions and requirements of **paragraphs b - e** below are satisfied.

b. Required Showings. As a condition precedent to obtaining a partial deferral the developer must show any one or more of the following:

1. A parking study indicates that there is not a present need for the parking that is requested to be deferred.

2. Public transportation satisfies transportation demands for a portion of the users of the facility that corresponds to the amount of parking sought to be deferred.

3. The developer has established or will establish an alternative means of access to the use that will justify deferring the number of parking spaces sought to be deferred. Alternative programs that may be considered by the Department or the Development Review Committee include, but are not limited to:

   (a) Private and public car pools and van pools.
   (b) Charging for parking.
   (c) Subscription bus services.
   (d) Flexible work-hour scheduling.
   (e) Capital improvement for transit services.
   (f) Ride sharing.
   (g) Establishment of a transportation coordinator position to implement car pool, van pool, and transit programs.

4. The percentage of parking spaces sought to be deferred corresponds to the percentage of residents, employees, and customers who regularly walk, use bicycles and other non-motorized forms of transportation, or use mass transportation to come to the facility.

5. The percentage of parking spaces sought to be deferred corresponds to the percentage of vehicles that may be accommodated by on-street parking within two hundred (200) feet of the development.

c. Deferral Allowed. If the developer satisfies one or more of the criteria in paragraph b above, the Department or the Development Review Committee may approve a deferred parking plan submitted by the developer. The number of parking spaces deferred shall correspond to the estimated number of parking spaces that will not be needed because of the condition or conditions established.

d. Deferred Parking Plan. A deferred parking plan:

1. Shall be designed to contain sufficient space to meet the full parking requirements of this Section, shall illustrate the layout for the full number of parking spaces, and shall designate which are to be deferred.

2. Shall not assign deferred spaces to areas required for landscaping, buffer zones, setbacks, or areas that would otherwise be unsuitable for parking spaces because of the physical characteristics of the land or other requirements of this Code.

3. Shall include a landscaping plan for the deferred parking area.

4. Shall include a written agreement with Putnam Count that one (1) year from the date of issuance of the certificate of occupancy, the deferred spaces will be converted to parking spaces that conform to this Section at the developer's expense should the Development Review Committee determine from experience that the additional parking spaces are needed.

5. Shall include a written agreement that the developer will cover the expense of a traffic study to be undertaken by Putnam County to determine the advisability of providing the full parking requirement.

6. Shall include a completion bond for 110% of the cost to complete the deferred parking areas as part of the deferred parking agreement, unless expressly waived by the Board of County Commissioners upon a recommendation from the Development Review Committee. Cost to complete deferred parking area shall be determined by the Director of Public Works, which may include the cost of the traffic study in **paragraph 5** above. The Director of Public Works may rely on cost estimates provided by the developer's contractor or engineer responsible for the construction of the parking areas that are not subject to the deferral. Should the developer fail to install the deferred parking upon a determination that the deferred spaces must be converted to parking area, the County shall utilize the security to complete the deferred parking area.

e. Compliance With Full Parking Requirements.

1. When authorized by the Development Review Committee upon a preliminary finding that the parking is inadequate, but not sooner than one (1) year after the date of issuance of the certificate of occupancy for the development, the Department shall undertake a study to determine the need of providing the full parking requirement to satisfy the proven demand for parking.

2. Based upon the study and the recommendations of the Director, the Development Review Committee shall determine if the deferred spaces shall be converted to operable parking spaces by the developer or retained as deferred parking area.

3. The developer may at any time request that the Development Review Committee approve a revised development plan to allow converting the deferred spaces to operable parking spaces.

7.07.04 -- Reduction in Parking Requirements.

a. For Mixed Or Joint Use Of Parking Spaces. The Development Review Committee may authorize a reduction in the total number of required parking spaces for two or more uses jointly providing off-street parking when their respective hours of need for the maximum parking do not normally overlap. Reduction of parking requirements because of joint use may be approved if the following conditions are met:

1. The developer submits sufficient data to demonstrate that hours of maximum demand for parking at the respective uses do not normally overlap.

2. The developer submits a legal agreement approved by the County Attorney guaranteeing the joint use of the off-street parking spaces as long as the uses requiring parking are in existence or until the required parking is provided elsewhere in accordance with the provisions of this Section.

b. For Low Percentage Of Leasable Space. The parking requirements of in **Table 7.07A** assumes the average percentage of gross leasable building to be 85% of the total gross building area. If a use has a much lower percentage of leasable space because of cafeterias, athletic facilities, covered patios, multiple stairways and elevator shafts, atriums, conversion of historic residential structures to commercial use, or for other reasons, then the Development Review Committee may reduce the parking requirements if the following conditions are met:

1. The developer submits a detailed floor plan describing how all of the floor area in the building will be used.

2. The developer agrees in writing that the usage of the square footage identified as not leasable shall remain as identified, unless and until additional parking is provided to conform fully with this Section.

c. To Protect Historic Properties. The preservation of any property that has been placed on the local register of historic places, or that is located in a historic district and contributes to the historic character of the district, shall be grounds for a grant by the Development Review Committee of a reduction in, or complete exemption from, the parking requirements in this Section. The reduction or exemption needed to allow a viable use of the historic structure shall be granted unless a severe parking shortage or severe traffic congestion will result.

d. To Protect Trees or Environmentally Sensitive Areas. The required number of off-street parking spaces **or area of off-street loading facilities** may be reduced by up to ten (10) percent where necessary to protect existing trees or an environmentally sensitive area, subject to approval by the Development Review Committee. The required number of off-street spaces may be reduced by up to twenty (20) percent where necessary to protect existing trees or an environmentally sensitive area, if the developer can demonstrate that the reduction would not be detrimental to the public health, safety or welfare and that adequate stabilized area equal to the area in the reduction will be maintained to provide overflow parking capacity. **Any application for such a reduction in spaces that exceeds 10 percent shall be made to the Zoning Board of Adjustment in accordance with the hearing procedures in Article 9 for variances.**

7.07.05 -- Off-Street Loading

a. Standards. Off-street loading spaces shall be provided and maintained in accordance with the following standards:

1. Each retail store, storage warehouse, wholesale establishment, industrial plant, factory, freight terminal, merchant, restaurant, mortuary, laundry, dry cleaning establishment or similar use shall be required to provide off-street loading facilities in accordance with the requirements contained in **Table 7.07D** as follows:

Table 7.07D – Required Off-Street Loading Spaces

GROSS SQUARE FEET	FLOOR AREA	NUMBER OF SPACES
Over 5,000 but not over 24,900	25,000	1
25,000 but not over 59,999	60,000	2
60,000 but not over 119,999	120,000	3
120,000 but not over 199,999	200,000	4
200,000 but not over	290,000	5
More than 200,000	>290,000	1 space for each additional 90,000 square feet or major fraction thereof

2. For each auditorium, convention hall, exhibition hall, museum, hotel, motel or office building, sports arena, stadium, hospital, sanitarium, welfare institution or similar use which has an aggregate floor area of over ten thousand (10,000) but not over forty thousand (40,000) square feet, one (1) off-street loading space plus one (1) space for each additional sixty thousand (60,000) square feet or major fraction thereof.

3. When units or measurements determining the number of required off-street loading spaces result in a fractional space, such fraction shall be rounded to the nearest whole number (i.e. 1.5 spaces shall be rounded to 2 spaces).

4. For a use not specifically listed in this subsection, the Department shall make a determination of the minimum required off-street loading spaces based on a similar identified use.

b. Location.

1. Off-street loading for persons or goods delivered by a standard delivery van or car of sufficient size to fit in a 12' by 24' space shall be located within the off-street parking facility at the most proximate location to a point of entry to use.

2. Off-street loading for goods (i.e. loading docks) delivered by a vehicle larger than the 12' by 24' space shall be located in the rear or side yard in manner that avoids interference with or encroachment into off-street parking spaces and access aisles. They shall be sufficiently screened and buffered in accord with **Section 7.03** of this Article.

7.07.06 -- Alteration Of Conforming Development

a. Decreased Demand For Parking Or Loading. The number of off-street parking or loading spaces may be reduced if the Department or Development Review Committee finds that a diminution in floor area, seating capacity, or other factor controlling the number of parking or loading spaces would permit the site to remain in conformity with this Code after the reduction.

b. Increased Demand For Parking or Loading. The number of off-street parking or loading spaces must be increased to meet the requirements of this Code if the Department or Development Review Committee finds that an increase in floor area, seating capacity, or other factor controlling the number of parking or loading spaces required by this Code causes the site not to conform with this Code.

7.07.07 -- Design Standards For Off-Street Parking And Loading Spaces

a. Generally. All off-street parking and loading facilities:

1. Shall be identified on development plans as to purpose and location.

2. Shall be surfaced with asphalt or concrete pavement, or an acceptable equivalent improvement approved in writing by the Public Works Director, so as to provide a durable and dustless surface, properly drained, maintained, and landscaped in accordance with **Section 7.03** of this Article. An "acceptable equivalent improvement" shall be reviewed and approved in writing by the Putnam County Public Works Department. In addition to indicating the type of surface approved in making the acceptable equivalent determination, the Public Works Director or his designee shall make the following specific findings:

   (a) The proposed surface provides a safe surface, suitable for the quantity and quality of traffic expected to use it;

   (b) Provides a surface that will accept delineation of parking spaces, aisles, access ways and maneuvering areas;

   (c) Provides a surface that will be dust free and properly drained; and

   (d) Will not contribute to erosion or sedimentation, either on-site or off-site.

b. Lighting. If off-street parking or loading facilities are lighted, lighting shall be designed and installed so as to be shielded and aimed downward to prevent glare or excessive light on adjacent property and public roadways, in accord with lighting requirements of section 7.09 of this Article.

c. Encroachment. Where off-street parking or loading areas are located on the perimeter of a lot, barriers shall be provided and maintained to insure that no portion of a parked vehicle shall encroach over and onto any adjacent private property in separate ownership, unless such parking is part of a joint use off-street parking facility approved under this Section, or over and onto any public street or sidewalks. Such barriers shall further insure that no parked motor vehicle door, when open, will encroach over and onto any adjacent private property in separate ownership or

over and onto any public street or sidewalks. Barriers may consist of solid fences, walls, hedges, wheel stops, shrubs, ditches (when necessary to the drainage plan of a lot only) or other forms of barrier satisfactory to the enforcement officer.

d. Internal Connection of Off-Street Parking. The County may require use of internal access aisles to connect otherwise separate off-street parking facilities, after a determination by the Director of Public Works that such a connection is appropriate in order to meet the concurrency part of a Traffic Mitigation Plan under **Section 5.01** of this Code or to provide a needed safety improvement under **Section 5.02** of this Code.

e. Access. Each off-street parking or loading space shall be directly accessible from a street or alley without crossing or entering any required off-street parking or loading space. Each loading space shall be accessible from the interior of the building it serves and shall be arranged for convenient and safe ingress by motor truck and/or trailer combination.

f. Dimensions.

1. Minimum dimensions of off-street parking and loading spaces shall be as follows:

(a) Off-street parking spaces: nine (9) feet in width and twenty (20) feet in length, except for parallel parking spaces, which shall be twenty-four feet in length.

(b) Handicap parking spaces: twelve (12) feet in width and twenty (20) feet in length, plus a five-foot wide access aisle. The access aisle may be shared between two handicapped spaces.

(c) Off-street loading spaces: twelve (12) feet in width and twenty-five (25) feet in length.

2. Minimum width of interior drives shall be related to the angle of parking stalls and use of one-way or two-way traffic as follows:

PARKING ANGLE (in degrees)	WIDTH OF AISLE	TRAFFIC DIRECTION
0	12 feet	One-Way
0	24 feet	Two-Way
30	12 feet	One-Way
45	13 feet	One-Way
60	18 feet	One-Way
90	24 feet	Two-Way

NOTE: A 24-foot minimum aisle width is required in all two-way traffic circulation situations.

g. Bicycle Spaces. The bicycle parking rack or other facility shall:

1. Be designed to allow each bicycle to be supported by its frame.

2. Be designed to allow the frame and wheels of each bicycle to be secured against theft.

3. Be designed to avoid damage to the bicycles.

4. Be anchored to resist removal and solidly constructed to resist damage by rust, corrosion, and vandalism.

5. Accommodate a range of bicycle shapes and sizes and to facilitate easy locking without interfering with adjacent bicycles.

6. Be located to prevent damage to bicycles by cars.

7. Be consistent with the surroundings in color and design and be incorporated whenever possible into building or street furniture design.

8. Be located in convenient, highly-visible, active, well-lighted areas.

9. Be located so as not to interfere with pedestrian movements.

10. Be located as near the principal entrance of the building as practicable.

11. Provide safe access from the spaces to the right of way or bicycle lane.

12. Racks or other bicycle parking facilities are not required to be located upon a paved surface.

SECTION 7.08 STORMWATER

7.08.01 Generally

a. Applicability. The terms and provisions of this Section shall apply to all real property lying within the unincorporated areas of Putnam County, Florida.

b. Intent and Purpose. It is the intent and purpose of this Section to implement the goals, objectives, and policies of the Comprehensive Plan of Putnam County by providing standards for the design, construction, and operation of stormwater management systems in conformance with the best overall management practices for the control of runoff volume and treatment of stormwater runoff for the protection of surface water and groundwater quality, and for the control and prevention of erosion, sedimentation, and flooding. It is further the intent of this chapter to provide flexibility in meeting the design standards in an effort to encourage the construction of stormwater management systems that are an amenity to the development.

c. Definitions. For the purposes of this chapter, certain terms or words used herein shall be interpreted to have the following meanings unless another meaning is plainly indicated. The word "shall" is mandatory; the word "may" is permissive.

1. *Construction* -- Any activity, including land clearing, earth moving, or the erection of structures, that will result in the creation of a stormwater management system.

2. *Control elevation* -- Lowest elevation at which water can be released through the discharge structure.

3. *Detention* -- The collection and temporary storage of stormwater with subsequent gradual release of the stormwater.

4. *Engineer* -- A professional engineer registered in Florida, or other person exempted pursuant

to provisions of Chapter 471, Florida Statutes, who is competent in the fields of hydrology and stormwater system design.

5. *Karst areas*-- Areas where sinkhole formation is common and that have landscapes that are formed by the dissolution of limestone.

6. *Regional stormwater management facility* -- A facility designed and constructed to manage stormwater from multiple parcels within a specified drainage area.

7. *Retention* -- The provision for storage of a given volume of stormwater runoff. Only evaporation, evapotranspiration, and/or infiltration shall be used to calculate recovery.

8. *Reuse* -- The deliberate application of stormwater runoff for irrigation, agricultural or industrial water needs.

9. *Seasonal high-water table* -- The elevation to which the groundwater can be expected to rise during a normal wet season.

10. *Sedimentation* -- The deposition of detached soil particles which have been eroded and transported by flowing water or wind.

11. *Stormwater management system* -- A system which is designed and constructed or implemented to control stormwater discharges, incorporating methods to collect, treat, convey, store, absorb, channel, inhibit, divert or reuse water to prevent or reduce flooding, overdrainage, environmental degradation, and water pollution or otherwise affect the quality and quantity of the discharge.

7.08.02 Permit Required

a. Generally. No person shall initiate any construction activity, or construct a stormwater management system, without complying with the provisions of this Section.

b. Specifically. The following activities shall, unless exempt pursuant to **paragraph c** below, require a construction permit from the County Engineer prior to the initiation of any project:

1. Construction, clearing, filling, excavating, grading, paving, dredging, root raking, mining, drilling or related activities that disturb the soil of a site. This is not meant to include clearing of vegetation for timbering, fire control or general maintenance, provided provisions are made to allow a sufficient density of vegetation to remain in place or re-establish itself in order to prevent erosion or a significant disruption to the natural flow of surface water.

2. Building, installing, enlarging, replacing or substantially restoring an impervious surface, or water management system.

3. Converting agricultural lands to nonagricultural uses.

4. Subdivision of land where road improvements are required.

5. Alteration of land and/or the construction of a structure or other impervious surfaces or a

change in the size of one or more structures.

6. Borrow areas or man-made ponds greater than 1/8 acre in size.

c. Exemptions. The following activities shall be exempt from the requirements of this Section:

1. The clearing of land that is to be used solely for agriculture, silviculture, floriculture, or horticulture, provided the property owner provides for the construction, maintenance, and operation of self-contained agricultural drainage systems to prevent off-site diversion of any runoff. This exemption will not apply where clearing and drainage may directly or indirectly impact County or State right-of-ways or areas defined as Conservation Areas pursuant to the Putnam County Comprehensive Plan.

2. The construction, alteration, or maintenance of a single-family residence and accessory structures, provided this activity does not change the natural grade of the land in an area of special flood hazard. This exemption shall not apply where such activity will result in the addition of impervious surfaces or changes in the natural grade of the soils in are an area of special flood hazard, as defined in Section 6.05 of this Code.

d. Waivers. In cases where preliminary investigation shows that a proposed building addition will not have detrimental results, or the impact will be insignificant, and/or where increased runoff discharges to an existing basin with sufficient capacity, a waiver may be obtained. If the alteration results in less than a one percent increase in the overall imperviousness of the site, a waiver may be granted. It is the property owner's or his agent's responsibility to show that a waiver is warranted. The appropriateness of a waiver will be determined by the County Engineer. This waiver will not negate the need for obtaining permits required by other agencies. A waiver will not be granted in cases where it is determined that the existing site is violating current water quality or quantity criteria.

7.08.03 Standards

a. Compliance Required. All stormwater management systems in the unincorporated portions of Putnam County shall be designed and maintained in accordance with the provisions of this Section.

b. General requirements.

1. No site alteration shall cause siltation of downstream surface waters or reduce the natural retention or filtering capabilities of downstream surface waters.

2. No stormwater management system shall cause water to become a health hazard as determined by the County Engineer, the Department of Environmental Protection and/or the Health Department.

3. All storage volumes in detention or retention systems shall be calculated above the seasonal high-water table or normal pool elevations.

4. Permeability soil testing procedures shall be conducted as required in the Department of Transportation's drainage manual, and the results must be submitted to the County Engineer

for review and consideration. The design engineer must take into account confining layers, soil profile, and apparent water table depths when choosing a design permeability rate. The maximum allowable rate in the perforated and confined zones shall be six feet per day. The maximum allowable rate in the unconfined zones shall be 20 feet per day. A safety factor of two shall be applied.

5. Stormwater management systems shall not significantly alter contributing areas or watershed boundaries of any watershed or basin not wholly contained within the project area, except as approved by the county engineer.

6. Runoff from off-site areas which drain to or across a site proposed for development must be accommodated.

7. Treatment volumes must be recovered within 72 hours following the storm event. The remaining storage volumes must be recovered within 14 days following the storm event, except in the case of wet detention facilities.

8. Filtration systems shall be designed with a safety factor of two.

9. Minor components, such as roadside swales, shall be designed for the 10 year/24-hour storm event. All major components, such as collector ditches and storm sewers, shall be designed for the 25 year/24 hour storm event.

10. In no case shall the discharge rates of a stormwater management system exceed the capacity of the outfall conveyance facility.
11. The design shall be such that only debris-free water is allowed to leave the system, and manual removal of the debris shall be the responsibility of the entity responsible for maintenance of the system.

12. The reuse of stormwater runoff in irrigation systems is encouraged.

c. Basin Design Requirements.

1. The following basin design conditions will require fencing:

   (a) Basins with a depth greater than four feet, as measured from the basin bottom to the control elevation, with slopes steeper than 6:1.

   (b) Basins without a controlled outfall, if the design high-water elevation for the design storm is greater than four feet and the side slopes are steeper than 6:1.

   (c) Wet detention basins with a normal pool depth six feet or greater.

2. The following basin design conditions do not require fencing:

   (a) Basins with a depth less than or equal to four feet, as measured from the basin bottom to the control elevation.

   (b) Basins designed to be "dry" with side slopes no steeper than 6:1, regardless of basin

depth.

(c) Wet detention basins with a maximum pool depth less than six feet and side slopes no steeper than 6:1 to a depth of two feet below the control elevation. From this elevation to the basin bottom a maximum side slope of 2:1 is permissible.

3. All fences must be a minimum height of four feet and have a 14-foot-wide gate that is appropriately placed to allow easy access for maintenance equipment. Basins that have a depth greater than six feet must have a six-foot fence. All other fences may be four feet in height.

4. Basins that require a fence and are to be dedicated to the County for maintenance will require a minimum 12-foot maintenance strip between the fence and the basin. All other basins will require a minimum maintenance strip of five feet. Maintenance strips shall have a maximum slope of 8:1.

5. Side slopes steeper than 3:1 must have the sod stapled or pegged. Basin side slopes flatter than 3:1 may be seeded and mulched or sodded.

d. Supplemental standards. In addition to the above standards, the following documents are incorporated herein as part of this Code by reference, for supplemental standards and methodologies for use in designing a stormwater management system to meet the intent of this chapter:

1. Drainage Manual, State of Florida Department of Transportation.

2. Chapter 40B-4, Rules of the Suwannee River Water Management District.

3. Chapter 17-25, Florida Administrative Code, Rules of the State of Florida Department of Environmental Protection.

4. Chapter 17-40, Florida Administrative Code, Rules of the State of Florida Department of Environmental Protection.

5. Chapter 40C-42, Rules of the St. Johns River Water Management District.

6. Florida Development Manual: A Guide to Sound Land and Water Management.

e. Alternate methods. Innovative approaches to stormwater management shall be encouraged and the concurrent control of erosion, sedimentation, flooding and water quality shall be mandatory. The County Engineer has authority to approve alternate methods of meeting the objectives of these technical guidelines and regulations on a demonstration by the applicant that results equivalent to the following design standards can be achieved by the proposed alternate method.

1. For projects that discharge to a stream or open lake, the stormwater management system must be designed such that the proposed peak rate of discharge does not exceed the predevelopment peak rate of discharge for storm events up to and including the 25-year storm. The detention storage shall be sufficient to contain and treat the 25-year 24-hour storm event. However, a 100-year 24-hour storm must be routed through the system to

establish the 100-year flood elevation.

2. For projects that discharge to a closed lake, the stormwater management system must be designed such that the increased volume of runoff for the 100-year 24-hour storm event is retained and that only the predevelopment volume of runoff is discharged at rates not to exceed the predevelopment rates for storm events up to and including the 100-year storm.

3. For projects that have no positive outfall (i.e. water is detained rather than retained), the stormwater management system shall be designed to retain the total volume of stormwater runoff from the contributing watershed for the 25-year 24-hour storm event.

4. All stormwater management systems located within the karst areas of the County should be designed to provide treatment of the stormwater runoff prior to discharging to the aquifer and to preclude the formation of solution pipe sinkholes in the system. In addition, the following minimum design features are required:

   (a) A minimum of three feet of unconsolidated soil material between the surface of the limestone bedrock and the bottom and sides of the stormwater basin.

   (b) Stormwater basin depth should be as shallow as possible with a horizontal bottom.

   (c) Maximum stormwater basin depth of ten feet.

   (d) Fully vegetated basin side slopes and bottoms.

   (e) More stringent requirements may apply for some industrial and commercial sites. These can include:

      (1) More than three feet of soil material between limestone bedrock surface and the bottom and sides of the stormwater basin.

      (2) Basin liners--clay or geotextile.

      (3) Sediment sumps at stormwater inlets.

      (4) Off-line treatment.

      (5) Paint/solvent and water separators.

f. Alternatives to on-site control. A regional stormwater management facility may be provided, in lieu of on-site storage, particularly in areas where individual properties cannot meet the established criteria on-site because of soil limitations or other constraints that may exist.

g. Maintenance. All stormwater management systems require periodic maintenance. The entity designated in the application will be responsible for implementing the maintenance plan. If a system is not functioning as designed, the owner or permittee will be responsible for taking corrective measures to ensure the applicable criteria of this chapter are met.

7.08.04 --Water quality criteria.

a. Class III or Higher Receiving Waters. All stormwater management systems with a discharge to a Class III or higher receiving water must be designed to meet the following applicable minimum treatment criteria:

1. Retention underdrain and exfiltration.

   (a) Off-line treatment: 0.5 inches of runoff or 1.25 inches times impervious area, whichever is greater.

   (b) On-line treatment: 0.5 inch additional treatment volume over that required in off-line.

2. Filtration.

   (a) Off-line treatment: 1.0 inches of runoff or 2.5 inches times impervious area, whichever is greater.

   (b) On-line treatment: 0.5 inch additional treatment volume over that required in off-line.

3. Wet detention. On-line treatment: 1.0 inch of runoff or 2.5 inches times impervious area, whichever is greater.

4. Swale. On-line treatment: 80 percent of the runoff from the three-year, one-hour storm.

5. Wetland treatment. On-line treatment: 1.0 inches of runoff or 2.5 inches times percent impervious area, whichever is greater.

b. Class I, Class II and OFW Receiving Waters. All stormwater management systems with a discharge to Class I, Class II, and Outstanding Florida Waters (OFW) as receiving waters must be designed to meet the following minimum treatment criteria:

1. Detention with underdrain, exfiltration, and/or filtration.

   (a) Off-line: 50 percent additional treatment volume over class III off-line treatment criteria.

   (b) On-line: Runoff from the three-year, one-hour storm or 50 percent additional treatment volume over class III on-line, whichever is greater.

2. Wet detention.

   (a) Off-line: Pretreatment pursuant to class III retention, exfiltration, or underdrain criteria in addition to class III wet detention criteria.

   (b) On-line: 50 percent more treatment volume over class III criteria.

3. Swale. On-line: Runoff from the three-year, one-hour storm.

4. Wetland treatment. On-line: 50 percent additional volume over class III treatment

criteria.

c. Discharge to Active Sinkholes. If a stormwater management system is proposed to discharge into an active sinkhole, the system must be reviewed and approved in writing by the Department of Environmental Protection and/or the Water Management District and shall be designed, at a minimum, to provide treatment for the first two inches of rainfall from the design storm.

d. Impervious Surfaces. All detention systems that receive stormwater from areas with greater than 50 percent directly connected impervious surface shall include a baffle, skimmer, grease trap or other mechanism on the discharge structure.

7.08.05 -- Erosion and Sedimentation Control

a. Generally. The development and implementation of an erosion and sedimentation control system is essential to minimizing the adverse impacts of soil erosion and sediment transport.

b. Design Principles. The system shall be designed according to the following principles:

1. The development plan must be compatible with the existing topography, soils, waterways, and natural vegetation of the site.

2. The smallest possible area should be exposed for the shortest possible time during construction.

3. On-site control measures shall be applied to reduce erosion. Stockpiling and storage of materials should not be located in a manner to impede flow or cause materials to be eroded by stormwater runoff.

4. The erosion and sedimentation control plan shall identify permanent stormwater conveyance structures, final stabilized conditions of the site, provisions for removing temporary control measures, stabilization of the site when temporary measures are removed, and maintenance requirements for any permanent measures. All sedimentation control structures to be used during construction shall be installed prior to any construction activity and shall be maintained in an effective condition until such time as the completion of the permanent system or other erosion control measures can assure adequate erosion and sediment control.

5. All stormwater management facilities shall be stabilized with either grass or sand-based sod. The following minimum requirements shall be met:

(a) All dry basin bottoms must be seeded. The seeding mix must provide both long-term vegetation and rapid growth seasonal vegetation. A topsoil mixture may be required in excessively drained sandy soils.

(b) Erosion protection at the outlet of all drainage structures must be provided. For outlet velocities less than three feet per second, pegged or stapled sod must be provided. For velocities in excess of three feet per second, an energy dissipation device must be installed, such as riprap, baffles, or stilling basins.

(c) A 12-inch strip of sod shall be placed around the full perimeter of all head walls, end walls, and mitered end installations.

(d) During construction, provisions must be made to minimize disturbance to and compaction of soils in the basin bottom.

7.08.06 -- Special Requirements for systems within residential subdivisions.

a. Maintenance. A homeowners' association must be established to provide routine maintenance and associated landscape management responsibilities for the stormwater management system within the residential subdivision. However, the developer or the homeowners' association may opt to have the County implement a stormwater management benefit assessment in accordance with the provisions of section 403.0893, Florida Statutes. When the streets within the subdivision are to be dedicated to the County, Putnam County will be responsible for maintaining the structures associated with the system.

b. Location. Retention/detention basins shall not be located within platted building lots, unless the lot is one acre or greater in size, the soils are well drained and have no confining layers, and the basin is designed with slopes 4:1 or flatter.

c. Access. Reasonable maintenance access to all stormwater management facilities must be provided. This accessway must also be outside the limits of platted building lots and have a minimum width of 12 feet, except in cases where the side slopes are no steeper than 8:1.

7.08.07 -- Submittals

a. Preliminary Development Plan. Class III Developments shall include the following information, plans and supporting data with the applicant's preliminary development plan submitted to the Development Review Committee under section 12.04.05 of this Code:

1. An aerial photograph delineating the project area and the watershed boundaries in which the project is located.

2. A map of the project that shows the following information:

(a) Project boundary.

(b) Existing topography of the project at one-foot contour intervals and existing spot elevations with the existing drainage patterns clearly established. Additional off-site topographical information may be needed to adequately identify drainage patterns.

(c) The drainage boundary of the area of any lands outside the project limits contributing runoff to the project.

(d) Existing 100-year floodplains and/or floodways.

(e) A plan of the proposed land use and land cover, including acreage and percentage of impervious surfaces.

(f) Description of vegetative cover, locations of any wetlands, surface waters or other known conservation areas.

(g) Proposed construction phases.

(h) Rights-of-way, common areas, and/or easement locations.

(i) Location of existing and proposed stormwater retention and/or detention facilities, including size, design capacity, 100-year flood elevation, side slopes, depth of pond, and retained and/or detained runoff volumes.

(j) Detailed grading plan with sufficient spot elevations to determine the direction of flow.

(k) Erosion and sedimentation control plan.

3. Professional certified drainage and pipe calculations, including a description of the proposed stormwater management plan, identification of the classification of the receiving basin and the name of any water body or stream to which the project discharges.

4. Soils report that includes borings, water table encountered, estimation of seasonal high-water table, and estimated permeability rates. Soil borings must be performed to a depth of at least ten feet below the proposed basin bottom and at a frequency of two borings per one-quarter of an acre of basin bottom area. For systems that contain multiple basins, there shall be a minimum of one boring per basin.

5. A statement designating the entity that will be responsible for the operation and maintenance of the stormwater management system. A copy of the restrictive covenants for the establishment of a homeowners' association must be submitted, if applicable. The restrictive covenants shall contain a statement indicating that, upon the homeowners' association's written request, Putnam County will inspect the stormwater management system prior to the developer transferring responsibility for the maintenance of the system to the association.

6. A certification and statement by a Florida licensed engineer in accordance with Chapter 471, Florida Statutes.

7. A proposed maintenance plan for the stormwater management system. This plan, along with the estimated annual maintenance costs, shall be incorporated into the restrictive covenants when applicable.

8. Off-site easements for stormwater management facilities will be required when either of the following conditions exist:

   (a) The discharge is into any man-made facility for which Putnam County does not have either drainage easements or rights-of-way.

(b) The discharge is into a natural system such that the rate or character (i.e., sheet flow versus concentrated flow) of the flow at the property line has been changed. The easement will be required to a point at which natural conditions are duplicated.

b. Other Permits. Prior to the issuance of a construction permit, a copy of all other applicable State, Water Management District, or City permits must be submitted to the County Engineer.

7.08.08 -- Enforcement.

a. Inspections. The Public Works Department will provide inspection services during the construction activities of all approved stormwater management systems. The inspections office will work with the development review office to ensure that the criteria set forth in the review and approval process are adhered to during the construction phase.

b. Procedures. This Section shall be enforced in accordance with procedures outlined in **Article 12of this Code.**

SECTION 7.09 – LIGHTING

7.09.01 -- Generally

a. Height. The maximum height of light fixtures, except as otherwise regulated by this section, shall not exceed 30 feet.

b. Light pollution. All building lighting for security or aesthetics shall be fully cut-off type, not allowing any upward distribution of light.

c. Variance. The lighting requirements in this section may be modified by the Development Review Committee through development plan review, or by the Zoning Board of Adjustment, if development plan review is not required, provided that the applicant establishes that such an increase meets the following standards:

1. Any increase in intensity is reasonably required for security purposes for the use or for conducting the permitted outdoor use;

2. Any increase in intensity will not result in a nuisance to adjoining properties and does not interfere with the lawful use and enjoyment of adjoining properties; and

3. Necessary screening will be erected or exists and maintained to reduce the impact of the any increase in intensity on adjoining properties.

7.09.02 -- Glare on Adjoining Properties

a. Generally. All lighting shall be designed, hooded or shielded to direct light so that the illumination source does not create a glare or a nuisance to any adjoining property or unreasonably interfere with the lawful use and enjoyment of any adjoining property.

b. Specific Standards.

1. Any development adjacent to a residential use shall not create light trespass of more than 0.5 footcandles measured perpendicularly from the light source at a distance of 25 feet from the property line.

2. Any light trespass onto adjacent non-residential properties shall not exceed 1.0 footcandle measured perpendicularly from the light source at a distance of 25 feet from the property line.

3. Roadway lighting is exempt from these light trespass requirements.

4. Directional luminaires such as floodlights, spotlights, sign lights and area lights shall be so installed and aimed that they illuminate only the task intended and that the light they produce does not shine directly onto neighboring properties or roadways.

5. Building facade lighting, sports lighting and other applications using floodlights shall have glare shielding (external or internal shields) to prevent light trespass and light pollution.

7.09.03 -- Exterior Lighting

a. Standards. Lighting which is provided for the security of areas such as, but not limited to, building entrances, stairways, ramps and main walkways or for a permitted outdoor use of land (such as ball parks) shall not exceed a maximum average maintained illumination of 25 footcandles at ground level, and uniformity ratio of 6:1. Exterior wall-mounted lighting shall be full cut-off fixtures (as defined by IESNA).

b. Outdoor recreational lighting. Lighting installations for outdoor recreational uses (including pole heights) shall be designed in accordance with IESNA standards, as outlined in report number RP-6-88, or any update thereto.

SECTION 7.10 – ROADWAYS AND SIDEWALKS

7.10.01. Generally

a. New Roadways. All new roadways shall be paved in accordance with approved design and construction plans prepared to or exceeding the design standards established in this Section.

b. Previously Platted Roadways. Previously platted roadways that have not been constructed are subject to the requirements of this section, unless bonds have been received and accepted on construction of such roadways.

c. FDOT Standards. The design and specifications for Major and Minor Collectors shall comply, at a minimum, with the Florida Department of Transportation (FDOT) "Roadway and Traffic Design Standards" (Standards), "Manual of Uniform Standards for Design, Construction and Maintenance for Streets and Highways" (Green Book), and the "Manual of Uniform Traffic Control Devices" (MUTCD), unless specifically revised by this Code. Material specifications and construction procedures shall comply to the FDOT "Standard Specifications for Road and Bridge Construction" (Specifications). Any roads, including Local Roads, developed to the FDOT design standards and specifications referenced in this paragraph shall be considered to be in compliance with this section.

d. Roadway Classifications

1. Arterial Roads are roadways providing service that is relatively continuous and of relatively high traffic volumes, long trip lengths and higher operating speeds. Examples in Putnam County include SR 19, SR 20, SR 26, SR 100, SR 207 and US 17.

2. Collector Roads are roadways providing service for relatively moderate traffic volumes, moderate trip lengths and moderate operating speeds. Collector roads collect and distribute traffic between local roads and arterial roads. They are further categorized into major collectors and minor collectors. Examples in Putnam County include CR 21, CR 20A, CR 209, CR 308, CR 309, CR 310 and CR 315.

3. Local Roads are roadways providing service for low traffic volumes, short average trip lengths or minimal through traffic. A Local Road may be privately or publicly owned. For purposes of this Code, any privately owned road shall be presumed to be a Local

Road. Any newly constructed Local Road shall be required to meet, at a minimum, the design requirements of this section. The Public Works Department may establish supplemental minimum design standards for Local Roads that are in place prior to the date of adoption of this Article, which may be used when such existing Local Roads are considered in need of repair or improvements for any reason.

7.10.02 -- Right-of-Way Protection and Acquisition

a. Development Within Corridors. No subdivisions or non-residential development shall be permitted within proposed future County or State road right-of-way corridors, as established in the Traffic Circulation Plan and the Goals, Objectives & Policies of the Putnam County Comprehensive Plan, unless approved by the Board of County Commissioners.

b. Development Contiguous to Existing Collector Roadways. Prior to the development of subdivisions or non-residential development contiguous to an existing County Collector Roadway, the right-of-way shall be reserved or dedicated to Putnam County in accordance with the Transportation Element of the Putnam County Comprehensive Plan or other requirements specified within County approved plans, unless otherwise approved by the Board of County Commissioners.

7.10.03. Right-of-Way Requirements

a. Minimum Widths. Minimum Right-of-Way Widths shall be as listed in **Table 7.10A.** These minimum widths may be increased to allow sufficient width for drainage facilities, utilities, sidewalks, bicycle paths, or other appurtenances within the right-of-way.

TABLE 7.10A: MINIMUM RIGHT-OF-WAY WIDTHS

ROADWAY CLASSIFICATION	CURB/GUTTER		SWALE SECTION	
	2-LANE	4-LANE	2-LANE	4-LANE
LOCAL ROADS	66 feet *	N/A	66 feet **	N/A
MINOR COLLECTORS	80 feet	110 feet	80 feet	130 feet
MAJOR COLLECTORS	80 feet	130 feet	100 feet	150 feet

** Right-of-Way Widths for Local Road curb and gutter sections may be reduced to fifty (50) feet upon demonstration that an electric utility easement five (5) feet in width or greater is provided outside of the Right-of-Way on each side.*

** Curb and Gutter may be required by the Director of Public Works if the proposed roadway cannot meet the minimum right-of-way widths established by Table 7.10A above.

b. Special Circumstances.

1. If pavement within a roadway is divided, or if the centerline of the roadway deviates from the centerline of the right-of-way, such as to allow for preservation of trees within the right-of-way, the width for the remaining portion of the right-of-way outside of the

travel lanes shall comply with the Roadway Typical Section for the designated roadway classification. Design of the roadway must be adequate to assure that the tree root system will not adversely affect the integrity of the Roadway in the future or impact the proper location of the utility placement. Utility installation must be in accordance with the Manual of Uniform Utility Installation of Public Rights-of-Way.

2. Intersections. All intersecting roadways shall require additional right-of-way at the corners. The corner clip shall connect the two points which are twenty (20) feet from the intersecting right-of-way lines or a twenty-five (25) foot radius return.

3. Reduction of the minimum right-of-way widths listed in **Table 7.10A** may be permitted if documentation demonstrates sufficient width to safely accommodate all planned or required drainage facilities, utilities, sidewalks, bicycle paths, or other appurtenances within the right-of-way or separate easements.

4. Requirements of this Code shall not prohibit the County from undertaking, or permitting, expansion of existing travel lanes within right-of-way not meeting the minimum widths in **Table 7.10A**, if environmental, legal, or physical constraints prevent expansion of such right-of-way to the minimum widths, so long as public safety is not jeopardized.

7.10.04. General Road Design Requirements

a. Minimum Lane Width.

1. Minimum travel lane widths shall be as follows:

TABLE 7.10B: MINIMUM TRAVEL LANE WIDTHS			
ROADWAY CLASSIFICATION	**MINIMUM LANE WIDTHS**		**SHOULDER WIDTH**
	VEHICLE	**BICYCLE**	
LOCAL ROADS	11 feet per lane	0 feet	3 feet (paving optional)
MINOR COLLECTORS	12 feet per lane	0 feet	3 feet (paving optional)
MAJOR COLLECTORS	12 feet per lane	5 feet	3 feet (2 feet paved)

2. If pavement within a Roadway is divided, such as to allow for preservation of trees, the minimum pavement width shall be twenty (20) feet. The minimum pavement width of twenty (20) feet shall be measured from the edge of pavement. Right-of-way widths for the divided section shall be in accordance with **Table 7.10A**.

b. Cul-de-Sacs.

1. All roadways without a paved outlet shall be terminated with a cul-de-sac.

2. The minimum right-of-way width for a cul-de-sac bulb with curb and gutter sections shall be a fifty (50) foot radius. For a swale section, the minimum right-of-way width shall be

a fifty-five (55) foot radius. These widths may be increased to allow sufficient width for drainage facilities, utilities, sidewalks, bicycle paths, or other appurtenances within the right-of-way.

3. The minimum pavement radii for cul-de-sacs shall be forty (40) feet with the pavement design for the cul-de-sac bulb consistent with the roadway.

4. Other variation or shapes of cul-de-sacs may be allowed if the design conforms to American Association of State Highway and Transportation Officials (AASHTO) criteria contained in "A Policy on Geometric Design of Highways and Streets".

c. Roadway Alignment. Roadways shall be designed with the following minimum radii for the centerline of curves:

TABLE 7.10C: CENTERLINE RADIUS REQUIREMENTS	
ROADWAY CLASSIFICATION	**MINIMUM CENTERLINE RADIUS**
LOCAL ROADS	100 feet
MINOR COLLECTORS	325 feet *
MAJOR COLLECTORS	500 feet *

** Minimum centerline radius may be increased based upon design speed of Roadway.*

d. Shoulder Treatment and Guardrails.

1. All disturbed construction areas within County rights-of-way and easements shall be treated with seed and mulch, at a minimum, to protect the right-of-way against erosion, siltation and rivulets caused by surface run-off.

2. All Roadway work shall require a minimum of thirty-six (36) inches of sod adjacent to the edge of pavement. Grasses shall be Argentine Bahia or an approved alternative. Winter Rye and/or Millet may be mixed for protection until germination. Grasses shall be fully established and free of disease and damaging insects prior to County approval of the project. All soil preparation, grassing, mulching, sod and watering shall meet FDOT specifications for material and method of construction.

3. Major Collectors must have a minimum of 24 inches of paved shoulder.

4. Guardrails and shoulders shall be designed and placed in accordance with FDOT Standards and Specifications.

e. Signing and Pavement Marking.

1. All roadway signs and pavement markings shall comply with the Manual on Uniform Traffic Control Devices (MUTCD) and FDOT standards and specifications. Signing and pavement marking plans shall be submitted on all development plans and shall require approval from the Public Works Director. All traffic control signs and pavement

markings for new developments shall be furnished and installed at no cost to the County.

2. Local Roads shall meet FDOT Standards and Specifications for all pavement markings, including turn lanes, stop bars, crosswalks, and other areas as designated by the Public Works Director. New asphalt shall be allowed a thirty (30) day curing period before placement of thermoplastic materials. Temporary pavement markings shall be applied where necessary to control traffic on roadways during the curing period.

3. All Major and Minor Collectors shall be delineated with roadway pavement markings according to FDOT Standards and Specifications. The approach leg of a Local Road with a Major or Minor Collector shall be delineated with a stop bar and a double yellow centerline for a minimum length of one hundred (100) feet from the stop bar.

4. All Major and Minor Collectors shall be delineated with reflective pavement markers (RPM) according to FDOT Standards and Specifications. Variances may be granted for roads where highway lighting exists, or when, in the judgment of the Public Works Director, the need for Reflective Pavement Markers does not exist.

5. When access is to a Major Collector, the stop sign shall be thirty-six (36) inches wide. The back side of each Sign is required to have the date of installation stenciled on it (month/year), in one (1) inch figures using a long lasting flat black paint or decal.

6. Street Name Signs, whether on Public or Private roadways, shall have white lettering on green background. All Street name Signs shall conform to County specifications for size, shape, lettering style, and other requirements.

7. All signs shall be manufactured with high-intensity sheeting material unless otherwise specified by the Director or by this Code.

f. Traffic Signals. Traffic signals may be required if justified based upon traffic signal warrants contained in the MUTCD and the signal location is approved by the Public Works Director. All expenses, including signal warrant study, design, materials, and installation shall be the responsibility of the applicant at no cost to the County. Traffic signals shall be designed to comply with the MUTCD and FDOT Standards and Specifications, and the signal equipment shall meet County specifications. The traffic signal shall become the property of Putnam County upon acceptance by the County of the signal installation following a ninety (90) day burn-in time period to ensure that all equipment is functioning properly.

7.10.05. Pavement Standards

a. Stabilized Subgrade.

1. All roadway and driveway subgrades shall have a minimum width to meet minimum roadway design requirements of section 7.10.04 above. Minimum depth and bearing values shall be as follows:

TABLE 7.10D -- SUBGRADE DEPTH AND BEARING RATIO		
ROADWAY CLASSIFICATION	**STABILIZED DEPTH**	**LIMEROCK BEARING RATIO (L.B.R.)**
LOCAL ROADS	8 inches	40
MINOR COLLECTORS	12 inches	40
MAJOR COLLECTORS	12 inches	40

2. Where the existing soils to be used in the roadway subgrade have the required bearing value, no additional stabilizing material will be required. The stabilizing material, if required, shall be high-bearing value soil, sandclay, limerock, shell or other materials that meet the standards established in the FDOT Specifications.

3. The construction of the stabilized roadbed shall meet the criteria as set forth in the FDOT specifications. Minimum density shall be ninety-eight percent (98%) (Modified Proctor Method).

4. Tests for the subgrade bearing capacity shall be located no more than five hundred (500) feet apart or every soil change, and tests for compaction shall be located no more than three hundred (300) feet apart. Tests shall be staggered to the left, right, and on the centerline of the Roadway with no less than two (2) tests conducted per Roadway section. When conditions warrant, in the judgment of the Public Works Director, additional tests may be required to assure compliance with FDOT Specifications. The Contractor/Project Engineer will be advised in writing that additional tests will be required and the extent of such additional tests. Special attention shall be given to the need for any compaction retests in subgrade areas disturbed by underground utilities or other construction, specially under curb areas.

5. All test data shall be forwarded to the Public Works Director for review prior to constructing the base course.

b. Base Course.

1. Base course materials shall be limerock or material with an equivalent structural value. The minimum thickness and density for limerock shall be as follows:

TABLE 7.10E -- BASE COURSE DEPTH AND BEARING RATIO		
ROADWAY CLASSIFICATION	**STABILIZED DEPTH**	**LIMEROCK BEARING RATIO (L.B.R.)**

LOCAL ROADS	6 inches*	100
MINOR COLLECTORS	8 inches*	100
MAJOR COLLECTORS	10 inches*	100

*Note: The Director of Public Works may approve a lesser base course depth if provided for using FDOT Standards and Specifications.

2. The base course width shall be a minimum of twelve (12) inches greater than the finished surface course. Limerock shall conform to FDOT Specifications for base course material and construction methods. Under special conditions where base material may be subjected to greater than normal moisture, soil cement or asphaltic base may be used after approval by the Public Works Director. In such instances, the applicant shall submit the justification and geotechnical data to be used to determine mix and depth of the base material, the Contractor's experience record, and quality control procedures. The Engineer of Record shall state whether a fabric or other method will be used in the system to minimize surface cracking.

3. All bases shall be primed in accordance with the FDOT specifications. A tack coat will not be required on primed bases except on areas which have become excessively dirty and cannot be cleaned, or in areas where the prime has cured and lost all bonding effect. Tack coat material and construction methods shall conform to FDOT specifications.

4. The construction of the base shall meet the criteria as set forth in the FDOT specifications. Minimum density shall be ninety-eight percent (98%) Modified Proctor Method.

5. Testing for the base thickness and compaction shall be located no more than three hundred (300) feet apart and staggered to the left, right, and on the centerline of the Roadway with no less than two (2) tests conducted per roadway section. When conditions warrant, in the judgment of the Public Works Director, additional testing may be required to assure compliance with FDOT Specifications, the Contractor/Project Engineer will be advised in writing that additional tests will be required and the extent of such additional tests.

6. All test data shall be forwarded to the Public Works Director for review prior to applying the surface course.

c. Asphaltic Concrete Surface Course. Surface courses for flexible pavements shall meet the following minimum thickness requirements:

TABLE 7.10F -- ASPHALTIC CONCRETE SURFACE COURSE DEPTH				
	STRUCTURAL COURSE		FRICTION COURSE	
ROADWAY CLASSIFICATION	MINIMUM THICKNESS	TYPE	MINIMUM THICKNESS	TYPE
LOCAL ROADS	1-1/4 inches	S-I*	NA	NA
MINOR COLLECTORS	1-1/2 inches	S-I*	NA	NA
MAJOR COLLECTORS	1-1/4 inches	S-I	3/4 inches	S-III

** S-III or other suitable substitute with an equivalent structural value shall be permitted.*

1. Asphaltic concrete types or equivalent structural courses shall conform to the FDOT Standards and Specifications for design, materials, and method of Construction. A mix design shall be submitted to the Public Works Director prior to commencing the paving.

2. Asphalt cores for thickness shall be located no more than two hundred (200) feet apart and staggered to the left, right, and on the centerline of the Roadway with no less than two (2) cores taken per Roadway section.

3. All test data shall be forwarded to the Public Works Director prior to final approval of the roadway.

d. Portland Cement Concrete Pavement

1. Stabilized subgrade requirements for Portland Cement Concrete Pavements shall be the same as those for flexible pavements.

2. Minimum pavement thickness requirements shall be as follows:

TABLE 7.10G -- PORTLAND CEMENT CONCRETE PAVEMENT THICKNESS	
ROADWAY CLASSIFICATION	MINIMUM THICKNESS
LOCAL ROADS	6 inches
MINOR COLLECTORS	8 inches
MAJOR COLLECTORS	10 inches

3. Portland Cement Concrete Pavement, including joints, shall conform to FDOT Specifications for materials and method of Construction. A mix design shall be submitted to the Public Works Director prior to commencing operations.

7.10.06 Roadway Drainage

a. Open Channels

1. The design of open channels shall be in accord with FDOT design standards, using standards for the 25-year/24-hour storm event as the minimum.

2. Provision for on-site and off-site retention of storm water shall be in accordance with St. John's River Water Management District.

3. The design of open channels shall consider the need for channel linings. Standard treatment for roadside swales shall be seeded and mulched and/or hydro-mulching where flow velocities are less than velocities permitted for bare soil conditions. Sodding shall be used when the design flow velocity exceeds values permitted for bare soil conditions, but do not exceed four (4) feet per second or where side slopes exceed a steepness of three (3) feet horizontal to one (1) foot vertical (3:1). Sodding shall be staggered, to avoid continuous seams in the direction of flow. For flow velocities greater than four (4) feet per second, flexible or rigid linings shall be used. Flexible linings may include use of geotextile grids, rock rip-rap, and interlocking concrete grids. Rigid linings shall include concrete pavement. **Table 7.10H** below sets forth guidelines for lining types based on various design factors that include open channel gradient, side slopes, and velocity ranges. Subject to applicability to site conditions, manufacturer's recommendations and approval from the Public Works Director, alternative channel linings may be acceptable.

TABLE 7.10H -- GUIDELINES FOR LINING TYPES

GRADIENT (%)	SIDE SLOPES	VELOCITY RANGE (fps)	PROTECTIVE LINING
0.75% and Less	Flatter than 3:1	Less than 2.0	Grass with Mulch
0.75% to 2.00%	3:1 to 2:1	2.0 to 4.0	Sod
Greater than 2.00%	Steeper than 2:1	Greater than 4.0	Flexible/Rigid Lining

Note: Channel velocities greater than 6 feet per second shall require energy dissipation.

4. For open channels where positive flow conditions are required, a minimum physical slope of 0.1 foot per 100 feet (0.1 percent) or the slope to provide for conveyance of the design flow, whichever is greater, shall be used.

5. The design of all open channels and roadside swales shall consider ease of maintenance and accessibility. Side slopes for roadside swales shall be in general conformance with the roadway typical sections. Side slopes for other facilities requiring regular maintenance shall not be greater than three (3) feet horizontal to one (1) foot vertical (3:1).

b. Cross-Drains

1. Cross-drains shall be sized and designed to handle run-off for a 50-year/24-hour storm event.

2. All cross-drain pipes shall be constructed of reinforced concrete, unless otherwise

approved by the Public Works Director.

3. The minimum allowable pipe diameter for cross drains shall be fifteen (15) inches or the equivalent section for arch or elliptical pipe.

4. The minimum length of pipe to be used, including the end treatment, shall be the length necessary to provide for the required roadway shoulder width and adequate clear zone requirements.

5. All construction drawings submitted for review shall include a schedule showing the size, type, and invert elevation of the side-drain needed to provide access to each subdivided lot.

6. Unless otherwise approved, minimum pipe cover shall be twelve (12) inches measured from the outside top of pipe to the top of the roadway base at any point in the roadway cross-section.

7. Culverts under intersecting side roads shall be considered as cross drains and shall be designed using cross drain criteria.

8. Cross-drains shall be installed with County approved end treatments. End treatments shall include mitered ends and "U" type mitered end walls. Headwalls may be allowed where placement meets clear zone requirements.

c. Side-Drains (Driveway Culverts)

1. Side-drains shall be designed to handle run-off for a 50-year/24-hour storm event.

2. The minimum allowable pipe diameter for side drains shall be fifteen (15) inches or the equivalent section for arch or elliptical pipe.

3. All construction drawings submitted for review shall include a schedule showing the size, type, and invert elevation of the side-drain needed to provide access to each subdivided lot.

4. Side-drains shall be installed with County approved end treatments. End treatments shall be mitered ends and "U" type mitered end walls.

5. Side drains shall be set at an elevation that conforms to the ditch grade.

6. Standard Pipe length including shoulder for side-drains with ditches less than 5 feet in depth shall be based on the following:

TABLE 7.10I -- DRIVEWAY CULVERT PIPE LENGTH REQUIREMENTS		
DRIVEWAY TYPE	**MAXIMUM PIPE LENGTH ***	**MINIMUM PIPE LENGTH ***
Residential Driveways	Driveway Width PLUS 4 feet each side	Driveway width PLUS 2 feet each side
Non-Residential Driveways	Driveway width PLUS 8 feet each side	Driveway width PLUS 4 feet each side

** Pipe length does not include the length of end treatment or slope length. For ditches greater than 5 feet in depth, the pipe length shall be reviewed for approval by the Public Works Director on a case-by-case basis pursuant to FDOT standards.*

d. Curb, Gutter and Inlets

1. The FDOT standards and American Association of State Highway and Transportation Officials (AASHTO) Standard Specifications shall be used as a guideline for selection of drainage structure types and hydraulic capacities.

2. Selection of curb, gutter, and inlet type, location, and spacing shall consider roadway geometry; width of spread (flow); inlet geometry and intake capacity; maximum pipe length without maintenance access; potential for flooding of off-site property; and pedestrian and bicycle safety. Maximum spacing for curb inlets shall be based on the width of spread. Width of spread shall not exceed one-half of the travel lane adjacent to the gutter for a rainfall intensity of four (4) inches per hour. In general, maximum spacing for inlets shall be five hundred (500) feet. Longer spacings may be allowed upon demonstration that the width of spread meets requirements set forth above.

3. Inlets shall be placed at all low points in the gutter grade, and as appropriate at intersections, median breaks, and on side streets where drainage could adversely affect the safety of vehicular or pedestrian movements within the roadway intersection.

4. Curb inlets shall not be located within drop curb locations.

5. The minimum allowable gutter grade shall be 0.3 percent.

e. Pipe Material and Specifications.

1. The FDOT Standard Specifications for Road and Bridge Construction shall be used as a guideline for specifications on pipe material, placement, bedding, and backfill requirements.

2. Pipe material shall be selected based on durability, structural capacity, and hydraulic capacity. The design service life of the facility shall be based on the following:

TABLE 7.10J -- MINIMUM SERVICE LIFE REQUIREMENTS FOR PIPE MATERIAL	
FACILITY TYPE	**SERVICE LIFE**
Stormwater Systems	50 or 100 years*
Cross-Drains	50 years*
Side-Drains	25 years

**Note: Where more than one service life is given, the lower value shall be used for locations on Local and Minor Collector Roadways, and the higher value shall be used for locations on Major Collectors and in urban areas.*

3. In estimating the projected durability of a material, consideration shall be given to actual performance of the material in nearby similar environmental conditions, its theoretical corrosion rate, the potential for abrasion, and other appropriate site factors. To avoid unnecessary site-specific testing, generalized soil maps such as the Soil Conservation Service Soil Survey for Putnam County Area may be used to delete unsuitable materials from consideration. In the event testing is necessary, tests shall be based on FDOT approved test procedures. The potential for future land use changes which may change soil and water corrosion indicators shall also be considered to the extent practical. Backfill material shall not be more corrosive than that which is required to provide the design service life.

4. All gravity flow pipe installations shall have a soil tight joint performance unless site-specific factors warrant watertight joint performance.

5. The approved pipe materials are listed in **Table 7.10K**. Prior to any aluminum pipe installation, test reports on the soil pH shall be submitted with a certification that the material furnished will provide sufficient resistance to corrosion to maintain the design service life.

TABLE 7.10K -- APPROVED PIPE MATERIAL
Corrugated Steel Pipe or Arch
Bituminous Coated Corrugated Steel
Reinforced Concrete
Reinforced Concrete Elliptical Pipe
Aluminum Pipe
Corrugated High Density Polyethylene Pipe

f. Other Drainage Structures.

1. The FDOT Roadway and Traffic Design Standards shall be used as a guideline for selection and Construction of all drainage Structures, including but not limited to: manholes, inlets, pipe end treatment, and box culverts.

2. Bridges shall be designed and constructed in accordance with the FDOT Standards and Specifications, FDOT Structures Design Guidelines, and American Association of State Highway and Transportation Officials (AASHTO) Standard Specifications for Highway Bridges.

3. Bulkhead and/or retaining walls shall be designed by a Professional Engineer holding an active license in the State of Florida.

7.10.07 -- Existing Roadway/Access Facilities

a. Generally.

1. Any new subdivision or non-residential development *that will cause a change to the functional classification of an existing roadway used for access to the proposed development* (e.g. cause a Local Road to become a Minor Collector) shall be required to improve the impacted section of existing roadway to meet the requirements of the new functional classification.

2. Notwithstanding the above, in no case shall a new subdivision be approved unless the roadway used to access the subdivision is a public roadway, nor shall any subdivision or non-residential development be approved by the County if the existing portion of the roadway used to access the subdivision or non-residential development is less than twenty (20) feet in width, unless improvements are made to the existing right-of-way to allow for the necessary right-of-way infrastructure.

3. As used herein, "existing" roadways facilities means roads or related facilities in place prior to the effective date of this Article.

b. Non-Paved Roads.

1. Existing private or public roadways that are non-paved, which are to be used for access to one of the proposed development types described in subparagraphs (a) through (c) below, shall be improved by the developer to meet the roadway design requirements of this Section from the development's point of access to the intersection of the next higher classification roadway:

(a) New subdivision.

(b) New multi-family residential and non-residential development.

(c) New development that will result in more than one (1) residential unit per Lot of Record (e.g. the road servicing the proposed development serves multiple residential units on one lot of record).

(d) The Board of County Commissioners may waive the requirements of this paragraph, if there is competent substantial evidence in the form of traffic studies that are conducted in accordance with generally accepted methodologies, which demonstrate that the proposed development will not exceed the functional capacity of the existing facilities.

2. In all cases, any new development that will result in more than ten (10) residential dwelling units accessed by a private paved or private non-paved roadway, including private access easements, must be approved in writing by the County Engineer prior to

issuance of any construction permits; unless the private roadway is maintained pursuant to a maintenance agreement approved by the Board of County Commissioners for the continual maintenance of the private roadway.

(a) If the County Engineer determines that the proposed development will exceed the functional capacity of the roadway and that improvements are required, the required improvements shall be stated in writing. The Department shall not issue permits for the proposed development until such improvements are in place.

(b) All owners of record abutting the private roadway in question shall be provided a copy if the findings in paragraph (a) above. Determinations of the County Engineer under this subparagraph shall be considered final and subject to appeal pursuant to section 12.13 of this Code.

7.10.08 -- Sidewalks

a. When Required.

1. Sidewalks shall be required on all roads that are classified as County Major or Minor Collectors. Sidewalks shall be constructed on each side of the roadway to be developed unless otherwise provided through an approved pedestrian circulation plan. On all new County Major or Minor Collectors, sidewalks shall be required on both sides.

2. The County may grant an Administrative Waiver for the Construction of sidewalks within its Right-of-Way. However, the Developer may be required to provide funds for the cost of sidewalk to the County. The unit price for sidewalk shall be established by the Public Works Director.

b. Design.

1. Sidewalks shall be designed and constructed in accordance with FDOT Standards except as modified herein. The finished grade of sidewalk shall be constructed to conform to the master drainage plan, if applicable, to prevent ponding.

2. The minimum sidewalk width shall be five (5) feet in width on Major and Minor Collectors, with six (6) feet provided in areas of high pedestrian travel such as near schools, parking facilities, shopping centers, and transportation facilities. Sidewalks provided on Local Roads shall be a minimum of four (4) feet in width and shall be placed three (3) feet inside the Right-of-Way line. Handicap ramps, meeting Florida Accessibility Code specifications, are required on all curb and gutter sections. If an obstruction is unavoidable, the sidewalk shall be widened to compensate for the obstruction.

3. Sidewalks should be placed as far as possible from the Roadway travel lane as practical. If right-of-way constraints require the sidewalk to abut curb and gutter, the minimum sidewalk width shall be six (6) feet. Utility strips should be considered in determining the location of the sidewalk to better serve the needs of the pedestrian traffic as well as the Utility companies and to increase Roadway safety. Location of roadway signs and signal poles should also be a consideration in establishing sidewalk location.

4. Where bicycle paths are called for in the roadway design, whether mandatory or voluntary, the County may require or allow multipurpose walks that are a minimum of seven (7) feet wide in order to allow for use by bicycles. Use of multipurpose sidewalks shall satisfy the bicycle path design requirements of section 7.10.04.

7.10.09 -- Intersection Sight Distance Requirements

a. Definitions. For the purpose of this section, the following definitions apply:

1. *Defined intersection* -- Any intersection that has a County owned or maintained road, street, or any other type of roadway as one of the roadways comprising the intersection.

2. *Visibility Triangle* -- Where the driveway intersects the roadway, the "visibility triangle" shall be measured ten feet each way (i.e. along the right-of-way and along the driveway) from the point of intersection at the pavement. Where a roadway intersects another roadway, the "visibility triangle shall be measured 25 feet each way from the point of intersection of the pavement.

b. Standards. To ensure adequate visibility at defined intersections, the owner(s) of private real property shall not, within a defined visibility triangle:

1. Plant or permit the growth of shrubbery or any other vegetation above the height of thirty (30) inches from the surrounding general ground level; or

2. Allow tree branches to extend below the height of ten (10) feet from the surrounding general ground level; or

3. Allow any berm, fence, wall, or any other structure to be erected, placed or exist, which will obstruct a driver's view of approaching traffic on a through road or Street. Clear sight distance shall be in accordance with criteria established in the applicable sections of the current State of Florida Department of Transportation Roadway and Traffic Design Standards and the Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways.

c. Existing Obstructions. If a visual obstruction described in paragraph 2 (a) – (c) above is in existence before the effective date of this subsection or it was both (a) formally permitted by the County and (b) substantial investment was made on its completion or erection, which investment would be lost by compliance with this subsection, it shall be considered a non-conforming use. Such a non-conforming use may continue to exist but shall not be altered, expanded, replaced, renewed, or enhanced after the effective date of this Code without full compliance with the terms of paragraph 2 (a) – (c) above.

SECTION 7.11 -- ACCESS MANAGEMENT

7.11.01 -- Generally

a. Intent.

1. Putnam County has the authority to establish, control, and limit points of ingress and egress from County and private roadways to ensure the safety and efficiency of its roadway system and the safety of the general public. These standards are intended to implement Florida law. Consequently, this Code shall be consistent with the Florida Department of Transportation (FDOT) "Manual of Uniform Standards for Design, Construction and Maintenance for Streets and Highways" (Green Book), FDOT "Roadway and Traffic Design Standards" (Standards), and the United States Department of Transportation "Manual on Uniform Traffic Control Devices" (MUTCD) unless specifically revised by this Code or the S&D Manual. References will be made to the FDOT "Standard Specifications for Road and Bridge Construction" (Specifications).

2. No facilities for ingress or egress to County or private roadways shall be constructed unless they comply with the standards set forth in this subsection.

3. This subsection adopts access standards for regulation and control of vehicular ingress to, and egress from the County Roadway system. The implementation of these standards is intended to protect public safety and general welfare, provide for the mobility of people and goods, and preserve the functional integrity of the County Roadway system. The standards shall be the basis for connection permitting and the planning and development of County and Developer construction projects.

7.11.02 -- Road Frontage Requirements.

a. Generally. No lot or parcel of land created after the effective date of this Section shall be used for the construction, location or erection of any building or structure (including a mobile home), where such lot does not abut upon a public right-of-way or a private roadway that meets minimum road and drainage standards established by this Article and has an approved maintenance guarantee under section 12.08.12 of this Code.

b. The minimum road frontage shall be 80% of the required lot width of the zoning district, except that when the frontage is on a cul-de-sac or a curve, the minimum frontage shall be 25 feet.

c. Subject to the limitations of section 7.10.07 of this Article, lots created prior to the effective date of this Article that do not meet the frontage requirements of this Article, must obtain an administrative variance under section 9.04.06 of this Code to allow for the construction, location or erection of a residential building or structure (including a mobile home), provided the lot or parcel has at least 35 feet of road frontage and conforms with all other applicable provisions of this Code. If lot frontage is less than 35 feet or if the lot was created after the effective date of this Article, any reduction in lot width shall require a variance from the Zoning Board of Adjustment pursuant to sections 9.04.01 through 9.04.05 of this Code.

d. Non-Residential Uses. Non-residential uses must provide ingress and egress to public roads through a non-residential zoning district. Nonresidential uses or districts shall not be accessed by motorized vehicles from or through property that is zoned residential or used for residential purposes.

7.11.03 -- Connection Permit Required

a. Generally. A permit shall be required from the County Engineer prior to constructing or modifying, as defined below, any connection to the County road system. A connection permit shall be required for the following:

(1) All new connections onto a County road, regardless of whether the development served by the connection is new or existing;

(2) All modifications to existing driveways, desired by the property owner, that will result in a change in the driveway's dimensions, location, profile, or the movement of vehicular or pedestrian traffic or in the manner in which stormwater is routed at the connection;

(3) All modifications to the driveway required by the County Engineer due to changes on-site that affect the safe and efficient operation of traffic at the connection;

(4) All new public or private roads, or modifications to private roads desired by the property owner;

(5) All sidewalk or bikeway connections to the County road system.

b. Exemption From Permit Requirement.

1. For developments that require site plan approval from the Development Review Committee, the issuance of a construction permit by the County Engineer will constitute the approval of the connection and a separate connection permit will not be required.

2. Connections to the State roadway system do not require a connection permit from the County, but may be reviewed during the development review process for to insure an appropriate permit is obtained from the Florida Department of Transportation and to insure consistency with the requirements of this chapter, in regards to location, spacing and number of connections to the property and the impact the development may have on traffic operations at the connection.

c. Permit Application. An application for a connection permit shall be filed with the Department for all connections on the County road system and reviewed by the Public Works Department.

d. Required Information. The plans submitted for review shall depict, at a minimum, the proposed improvements for driveway connections and driveway approaches. The plans shall provide the driveway size, width, return radii, angle to the roadway, approach taper length, existing and proposed pavement marking, existing and proposed drainage pipes or other drains (including pipe size and type of material), and existing and proposed grades (including pavement design).

7.11.04 -- Location of Connections

a. Commercial Uses. The location of commercial driveways should be compatible with the internal movement of traffic and the planned parking layout. The location of the driveway connection shall never allow vehicles to back across the throat of a driveway or back into the

"through" travel lane. Developments with thirty thousand (30,000) square feet gross floor area or more shall have a minimum of seventy-five (75) feet of storage lane at the entrance to avoid obstructing through traffic. The throat length shall be computed from the end of the radius point and extend seventy-five (75) feet into the site.

b. Single Family Uses. Single Family residential driveway connections shall be restricted to Local Roads unless otherwise approved by the Public Works Director.

c. Planned Developments. Planned developments shall incorporate design of the internal roadway systems to alleviate residential driveway connections to Arterials and Major and Minor Collectors.

d. Spacing. The spacing of driveway connections on Major Collectors shall generally comply with the standards in **Table 7.11A.**

TABLE 7.11A – MAJOR COLLECTOR DRIVEWAY SPACING STANDARDS	
Adjoining Road Posted Speed Limit	Minimum Access Spacing (feet)
25 mph	80
30 mph	105
35 mph	145
40 mph	185
45+	200

7.11.05 -- Driveway Design

a. Dimensions. Driveway widths, spacing, radii, and minimum angles for residential and commercial driveways shall be based on the guidelines in Table 7.11B below. An illustration of the driveway connection can be found in Figure 7.3 of Appendix VII.

TABLE 7.11B – DIMENSIONAL CRITERIA FOR DRIVEWAY CONNECTIONS			
Residential Driveways	**Local Roads**	**Minor Collectors**	**Major Collectors**
Nominal Width			
Single Residence (W)	12-18 feet	12-18 feet	14-18 feet
Two or Three Residences (W)	20-24 feet	20-24 feet	22-26 feet
Minimum Flare (F)*	5 feet	5 feet	10 feet
Minimum Radius (R)*	15 feet	15 feet	15 feet
Minimum Spacing	5 feet	5 feet	15 feet
From Property Line (P)	10 feet	10 feet	20 feet
From Street Corner (C)	10 feet	10 feet	10 feet
Between Driveways (S)			
Minimum Angle (A)	80 degrees	80 degrees	80 degrees

Commercial Driveways	**Local Roads**	**Minor Collectors**	**Major Collectors**
Nominal Width			
One-Way (W)	16 feet	16 feet	16-20 feet
Two-Way (W)	24-30 feet	24-36 feet	24-36 feet
Minimum Radius (R)	25 feet	30 feet	35 feet
Minimum Spacing			
From Property Line (P)	25 feet	30 feet	30 feet
From Street Corner (C)	25 feet	50 feet	50 feet
Between Driveways (S)	10 feet	20 feet	See Table 7.11A
Minimum Angle (A)	80 degrees	80 degrees	80 degrees

b. Maximum Number.

1. The maximum number of driveways allowed for projects other than Single Family residential units shall be as follows:

   (a) Property with two hundred (200) frontage feet or less - one (1) driveway

   (b) Property with more than two hundred (200) frontage feet - two (2) driveways Developments shall not be allowed more than two (2) driveways on a single frontage without approval of the Public Works Director. Two (2) one-way connections shall equate to one (1) driveway for the purposes of this requirement.

2. Single Family residential units shall generally be limited to one (1) driveway. Circular driveways with two connections shall be permitted with a minimum one hundred fifty (150) foot frontage.

c. Driveway Grades. **Figure 7.4** establishes maximum grade changes for driveways from the

three classes of roadways. For the values shown, no vertical curve connecting the tangents is necessary. For grade changes more abrupt than those in **Figure 7.4,** vertical curves at least ten (10) feet in length shall be used to connect tangents.

d. Connection Design.

1. Proposed connections shall have no fences, walls, hedges, or other obstacles that will obstruct vision between a height of two and a half (2.5) feet and ten (10) feet above the centerline grade of the intersecting driveway, per FDOT Standards, Index No. 546.

2. All connections to paved roadways shall be permanent type pavement, including Portland Cement Concrete or asphaltic concrete. Gravel, bituminous surface treatments, and other materials without a permanent surface are prohibited.

3. Pavement design requirements of commercial driveway connections, for the extent of permanent pavement required in **Subparagraph e**, below, including stabilized subgrade, base course, and surface course, shall equal or exceed the requirements of the adjacent roadway travel lane. Pavement design requirements of residential driveway connections, for the extent of permanent pavement required in **Subparagraph e**, below, shall equal or exceed the requirements for Local Roads, with the exception of Portland Cement Concrete driveways which shall have a minimum pavement thickness of four (4) inches.

4. Where driveways are constructed within the limits of existing curb and gutter Construction, the existing curb and gutter shall be removed either to the nearest joints or to the extent that no remaining section is less than five (5) feet long. If the curb is not removed to the nearest joint, the curb will be cleanly cut with a concrete saw. Driveway materials type should conform to the original Construction on a section unless otherwise specifically provided on the Permit.

e. Connection Limits. Permanent pavement for all driveways shall extend at least to the end of the driveway curb radius, or to the right-of-way line, whichever is greater. Unless waived in writing by the County Engineer, the property owner or developer shall install any required drainage structures and sufficient base materials for the driveway prior to the first required inspection to inure protection of the drainage structure, drainage and utility easements and right-of-way during construction.

f. Temporary Driveway Connections.

1. Temporary driveway connections shall be permitted for activities that do not require a permanent driveway connection. Examples of activities that may obtain a temporary driveway connection may include, but are not limited to:

(a) Silviculture operations;

(b) Agricultural activities;

(c) Limited duration borrow area or mining activities.

2. Right-of-Way Permits shall be obtained for all temporary driveway connections. Right-

of- Way Permits for temporary connections shall expire after a six (6) month period and may be extended for additional six (6) month periods upon payment of the applicable right-of-way renewal fee. Driveways that are used beyond a twelve (12) month period shall be permitted and designed as permanent driveway connections.

3. Temporary driveway connections shall be stabilized with limerock or other suitable material for a minimum of twenty-five (25) feet, or enough to improve the entire the right-of-way area, whichever is greater. If a roadside ditch or swale is present, a side drain is required which meets the requirements of **Section 7.10**. The temporary driveway connection shall be constructed to ensure that erosion will not occur that could affect the roadway drainage system. The Applicant shall ensure that dirt or debris is not tracked into the roadway travel lanes from the driveway connection or shall make provisions for its immediate removal. The location, width, turning radii, and other design elements of the driveway connection shall be consistent with all other provisions of this Code for a permanent driveway connection.

4. Upon expiration of the temporary driveway connection permit, the driveway connection shall be removed and the right-of-way shall be restored to its original condition. Any damage to the edges of pavement, shoulder, swale or any other feature within the right-of-way caused by the construction, use, or removal of the temporary driveway connection shall be repaired or restored to its original condition at no expense to the County within thirty (30) calendar days after written notice to the Applicant.

g. Auxiliary Lanes.

1. Auxiliary turn lanes shall be required where safety and capacity considerations warrant their use for vehicle deceleration and storage. The provision of auxiliary lanes shall be required under the following conditions unless an engineering study can demonstrate that safety hazards or capacity deficiencies will not exist. Auxiliary turn lanes shall be required at connections to all Major and Minor Collectors under the following criteria:

(a) Collector Roads With Posted Speed Limits of thirty-five (35) mph or Greater:

(1) Right Turn Lane. Development will generate two hundred fifty (250) Vehicles per day (VPD) on the intersecting Roadway or driveway connection; or the Gross Floor Area of a non-residential development is twenty-five thousand (25,000) square feet; or, development will generate ten (10) semi-trailer truck (WB-40 or larger) trips per day.

(2) Left Turn Lane. Development will generate five hundred (500) VPD on the intersecting roadway or driveway connection; or the gross floor area of a non-residential development is fifty thousand (50,000) square feet; or, the development will generate fifteen (15) semi-trailer truck (WB-40 or larger) trips per day.

(b) Collector Roads With Posted Speed Limits of thirty (30) mph or less:

(1) Right Turn Lane Development will generate five hundred (500) VPD on the intersecting roadway or driveway connection; or the gross floor area of a non-

residential development is fifty thousand (50,000) square feet; or development will generate ten (10) semi-trailer truck (WB-40 or larger) trips per day.

(2) Left Turn Lane Development will generate one thousand (1,000) VPD on the intersecting roadway or driveway connection; or the gross floor area of a non-residential development is one hundred thousand (100,000) square feet; or the development will generate fifteen (15) semi-trailer truck (WB-40 or larger) trips per day.

2. The geometric design of the auxiliary lanes shall be in accordance with FDOT Standards. The construction of auxiliary lanes shall meet other provisions of this Code. Pavement design requirements of the auxiliary lanes, including stabilized subgrade, base course, and surface course, shall be the same as the requirements of the adjacent roadway travel lane. The entire width of the road surface must be overlaid for the total length of the auxiliary lanes with a surface course of similar type as the adjacent roadway sections.

3. A driveway shall not be constructed along acceleration or deceleration tapers connecting to interchange ramp terminals, intersecting roadways, bus bays or other driveways unless access would be unreasonably denied and the driveway can be made to function properly (i.e., safe and efficient traffic operation).

4. Signing and pavement marking, traffic signal, and maintenance of traffic criteria and specifications are provided in **Section 7.10.04 of this Article.**

7.11.06 Use of Easements for Driveway Access.

a. A recorded easement may be used for driveway access serving up to two (2) residential dwelling units, provided the driveway meets the following minimum standards:

1. The minimum width of the easement shall be thirty (30) feet.

2. A minimum twenty (20) foot wide stabilized surface with LBR 40 material to a depth of eight (8) inches. Native materials below the stabilized surface shall not contain significant amounts of unsuitable materials (i.e. muck, clay, organics, etc.).

3. A forty (40) foot radius stabilized turnaround or equivalent turnaround area (i.e. a "T" section).

b. Recorded easements for access serving unmanned sites (e.g. antenna towers, relay stations and similar facilities) shall meet the following minimum standards:

1. The minimum width of the recorded easement shall be thirty (30) feet.

2. There shall be a minimum sixteen (16) foot wide stabilized surface with LBR 40 material to a depth of eight (8) inches.

3. There shall be a forty (40) foot radius stabilized turnaround or equivalent turnaround area (i.e. a "T" section).

SECTION 7.12 -- SUBDIVISION DESIGN STANDARDS AND GUIDELINES

7.12.01 -- Access

a. Access to Public Road Required.

1. These regulations shall be supplemental to and interpreted in in accordance with roadway standards found in **Section 7.10** of this Article.

2. Unless expressly approved for private streets under Article 12 of this Code, all lots within a subdivision shall have access to a street dedicated to public use that has been accepted for maintenance by Putnam County, a municipality, or the Florida Department of Transportation. Regardless of whether the internal roadway of the subdivision is public or an approved private road under Article 12, the internal road of any new subdivision shall have immediate access to a public road.

3. Adequate vehicular and pedestrian access shall be provided to each parcel. The primary function of local streets is service to abutting properties. Street widths, placement of sidewalks, pattern of streets and number of intersections are related to safety and efficiency of access to abutting lands.

4. Local circulation systems and land development patterns shall not detract from the efficiency of bordering Minor and Major Collectors and Arterials. This principal may involve control of driveway, intersection placement, and full or partial control of access. Land development should occur so as to minimize direct access to Minor and Major Collectors and Arterials.

5. Design of residential streets should clearly reflect their local function. These streets should have an appearance commensurate with their function as local streets. They should not be over-designed or over-built so as to allow for high speed travel, excessive width etc.

6. Subdivisions shall be designed so as to conform to and take advantage of the topographic and other natural features of the land. Local, state, or federal laws, rules, or regulations in this Code may require development to avoid or minimize impacts to existing trees, wetlands, high aquifer recharge areas, areas of special flood hazard, natural water bodies, potable water supplies, wildlife habitat, and other environmentally sensitive areas.

c. Access to Existing or Proposed Adjoining Roadway System.

1. Arrangement of Roadways. The arrangement of roadways in new subdivisions shall make provisions for the continuation of existing arterial and collector roadways from adjoining areas, or for their projection where adjoining land is not subdivided. Where the subdivision is adjacent to another subdivision, Putnam County School Board property or a neighborhood or community commercial use, direct access shall be provided for non-motorized traffic where feasible. Residential neighborhoods shall be designed to include an efficient system of internal circulation and roadway stub-outs to connect into adjacent developments and link neighborhoods together.

2. Access to Arterial or Collector Roadways. Unless otherwise approved by the Board of County Commissioners prior to the adoption of this Section or for good cause shown, individual residential lots in subdivisions shall not have direct access to an Arterial or Collector Roadway. Residential lots in subdivisions that abut an Arterial or Collector Roadway shall not front on said Roadway and access shall be blocked by a non-access buffer as provided under **Paragraph 7.12.05.c.5.**

3. Access to Local Roads. Residential lots in subdivisions shall front on and have direct access to Local Roads. Local Roads shall be arranged and designed so as to restrict their use by through traffic or high-speed traffic.

7.12.02 -- Medians and Islands.

a. Allowed. Medians and islands within the road rights-of-way are allowed when warranted by traffic conditions and are in conformance with the requirements of the roadway design requirements of the County.

b. Designation of Medians as Park or Recreation Area Prohibited. Medians, islands, and islands in cul-de-sacs shall not be designated as park or recreation areas.

c. Landscaping. Landscaping of medians, islands, and islands in cul-de-sacs shall be in compliance with the landscaping requirements of this Article.

d. Maintenance. Medians and islands shall be shown as separate Parcels/Tracts on the Site Plan and annotated in one of the following ways:

- "Parcel/Tract _____ is dedicated to and will be maintained by Putnam County."
- "Parcel/Tract _____ is private property of _____ and is to be maintained by that Owner."
- "Parcel/Tract _____ is dedicated to and will be maintained by the Homeowners Association".

7.12.03 -- Street Names. New Streets that are extensions of existing streets shall bear the name of the existing street. All others shall be named in the following manner:

Direction of Street	Length: 1,001 Feet or More	Length: 1,000 Feet or Less
East and West	Streets	Places
North and South	Avenues	Courts
Diagonal	Roads	Ways
Curvilinear	Drives	Lanes or Circles

In no case shall a name for a proposed street duplicate an existing street name, even if the street is further described as an avenue, place, court, etc.

7.12.04 Natural Resources and Landscaping. The Subdivision shall be designed in compliance with the applicable standards of **Article 6** of this Code and **Section 7.03** of this Article.

7.12.05 Roadway Layout

a. Local Roads

1. The maximum length of a block shall be one thousand (1,000) feet, unless otherwise approved.

2. Loop roads, cul-de-sac and curvilinear designs are encouraged.

3. The use of "T" intersections (with a minimum offset of two hundred fifty (250) feet between intersections) are desirable.

b. Subdivision Collector Roads. For subdivision collector roads, curvilinear roads are encouraged.

c. Right-of-Way.

1. Generally. Right-of-Way design standards shall comply with right-of-way, drainage and utility regulations of this Article.

2. Existing Roads. Additional right-of-way adjacent to existing Putnam County and State Roads shall be dedicated to the County or the Florida Department of Transportation where needed to provide sidewalks, drainage improvements, auxiliary lanes, storage lanes, and other such improvements necessitated by the development.

3. Intersections. Sight distance shall be provided at all intersections by either providing rounded right-of-way lines or straight corner cuts (sight distance triangles). Rights-of-way at subdivision intersections shall be rounded with a minimum twenty-five (25) foot radius, or as otherwise required by traffic conditions or geometric requirements. Corner cuts shall meet or exceed the limits of the twenty-five (25) foot radius. The developer shall consider sight distance requirements in determining the amount of right-of-way to provide at roadway intersections.

4. Dead-end Streets. The maximum length for a dead-end street shall be eighteen hundred (1,800) feet. A cul-de-sac shall be constructed at the end of a dead-end street and shall be in accordance with the roadway, drainage and utilities standards of this Section. Where a street is to be continued, or is part of a phased construction, a "T" type turnaround will be required when the street is one hundred (150) feet or more in length, as measured from the nearest intersection. The "T" type turnaround will be in accordance with the roadway standards of this Section.

5. Buffer Walls. Buffer walls shall be constructed along all Arterial and Major Collector Roadways abutting residential land uses. As an alternative to masonry buffer walls, vegetated earthen berms shall be allowed meeting the provisions of the buffer/screening requirements of **Article 7** of this Article.

7.12.06 Sidewalks

a. Generally. Sidewalk design requirements and standards shall be in compliance with

Subsection 7.10.08 of this Article.

b. Types.

1. External (Outside The Proposed Site)

(a) External sidewalks shall be located on Major or Minor Collectors adjacent to a subdivision. Sidewalks shall be constructed on the subdivision side of an existing Major or Minor Collector from boundary to boundary of the subdivision and shall extend to the edge of the adjacent roadways. Sidewalks shall be constructed prior to final acceptance of the improvement facilities. The Developer shall be responsible for the construction of sidewalks.

(b) The County may grant an administrative waiver for the construction of sidewalks within its right-of-way; however, the developer shall be required to provide funds for the cost of sidewalk to the County. The unit price for sidewalk shall be established by the Director of Public Works.

2. Internal (Within The Proposed Site). The Developer shall be responsible for the construction of sidewalks prior to certificate of completion and release of bond, unless a separate bond for completion of sidewalks has been provided.

3. Internal (Other). Sidewalks along unbuildable lots, common areas, and stormwater ponds shall be constructed prior to final acceptance of the improvement facilities. The developer shall be responsible for the construction of sidewalks.

7.12.07 Lots

a. Minimum Dimensions. Lots shall be designed to conform to the standards set forth in this Code.

b. Municipal Limits and Lot Lines. Lots shall be designed so that municipal boundary lines do not divide them, except where unavoidable and upon approval of the Board of County Commissioners.

7.12.08 Stormwater Management. Subdivisions shall comply with requirements of the St. Johns River Water Management District (SJRWMD) and **Section 7.08** of this Article.

7.12.09 Water, Wastewater, Reclaimed Water Utilities

a. Generally. Subdivisions shall be in compliance with roadway, drainage and utility standards of this Article.

b. Water and Wastewater. All new subdivisions shall be required to install water lines, wastewater lines and provide a lift station site with a wet well within the subdivision with the following exceptions:

1. Subdivisions containing less than twenty (20) lots, or

2. Subdivisions where all lot sizes are greater than or equal to one (1) acre in size.

Where service with a central utility provider is not immediately available, these water and wastewater lines shall be installed as dry lines in compliance with the standards contained in this Code for future connection to the central utility provider when it becomes available.

c. Golf Courses. Subdivisions containing golf courses shall be required to install on-site central water and sewer systems for the entire subdivision, where a central utility provider is not available to provide service to the development. In addition, such development shall install lines for reclaimed water or on-site surface water to be used as the primary irrigation for the golf course.

7.12.10 Fire Protection.

Subdivisions shall be protected in accordance with Florida Fire Prevention Code and NFPA 1 *Fire Prevention Code* and the regulations provided in **Section 7.06 of this Article.**

7.12.11 Underground Utility Service.

When underground electric service is proposed, the pad mounted transformers shall not be located within the road right-of-way, unless authorized by the Board of County Commissioners.

APPENDIX VII

Figures

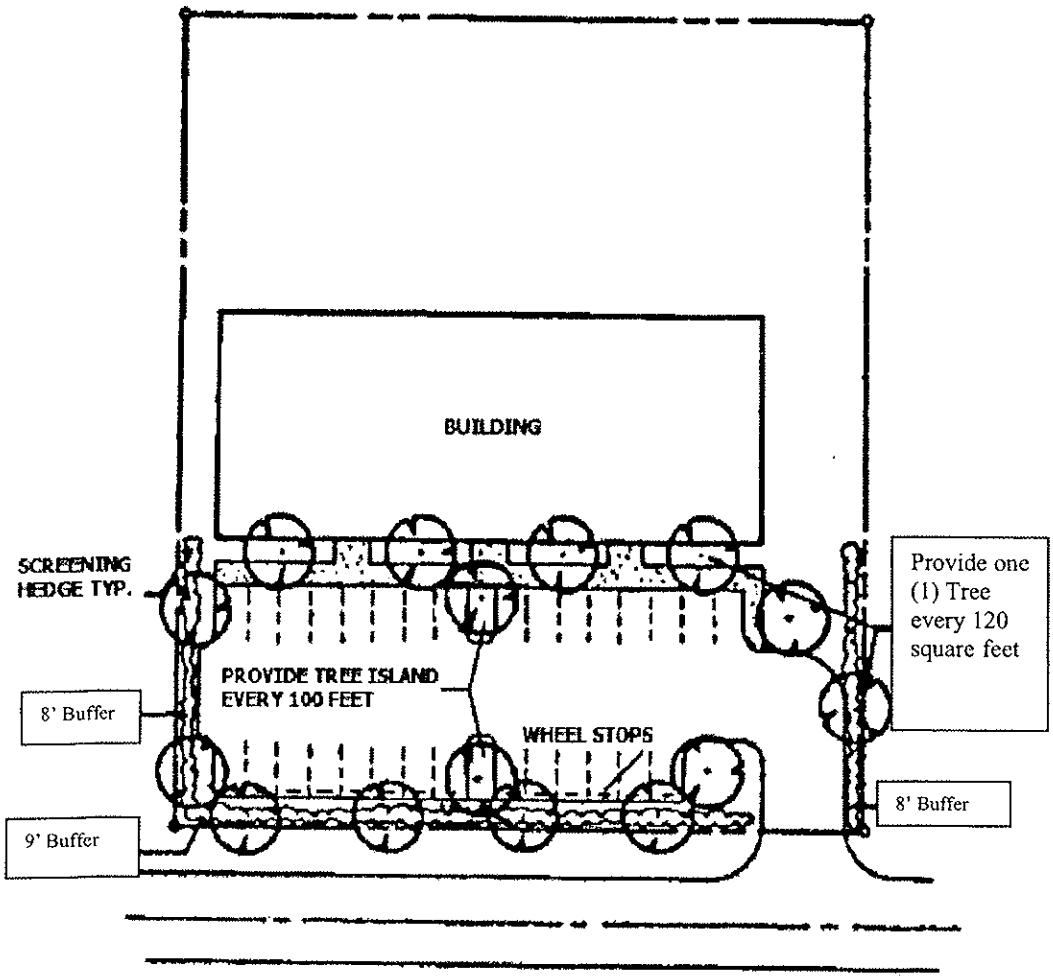

FIGURE 7.1
PERIMETER LANDSCAPING

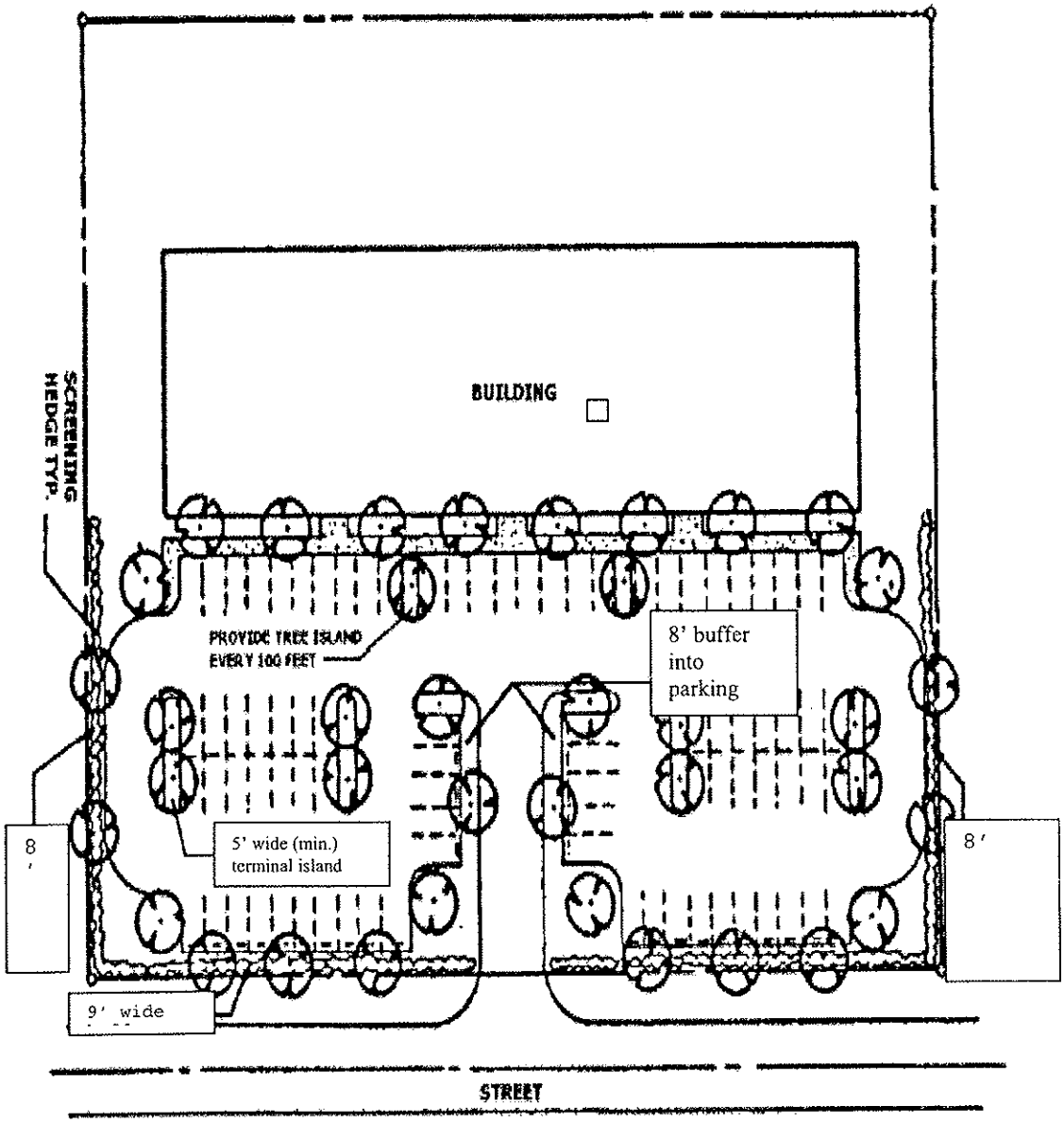

FIGURE 7.2
INTERIOR AND PERIMETER LANDSCAPING

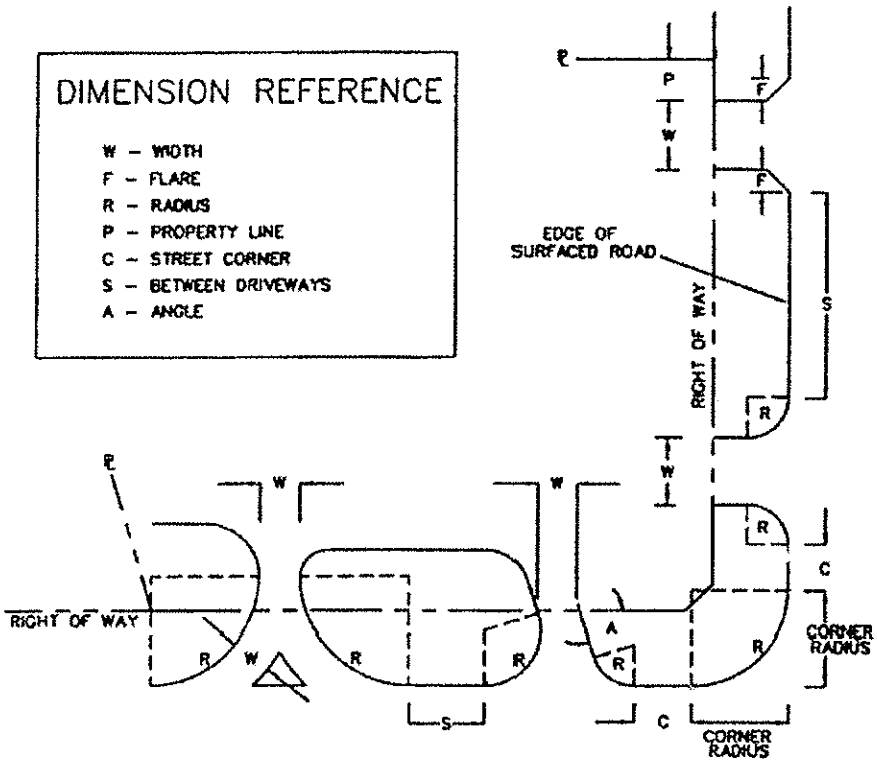

FIGURE 7.3
DRIVEWAY DESIGN STANDARDS

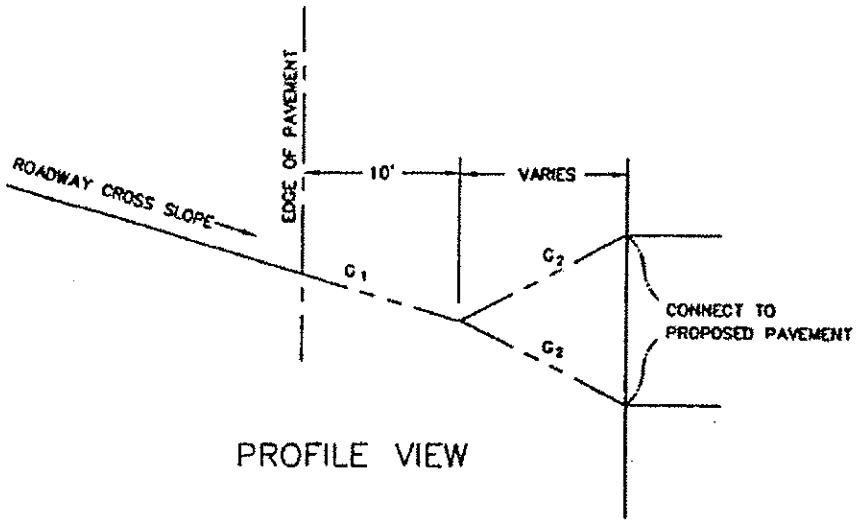

FIGURE 7.4
DRIVEWAY PROFILE

Tables

Table 7.4 – List of Approved Plant Species

H	High water use plant species associated with wetlands or moist soils; requires supplemental irrigation in addition to natural rainfall. This zone includes most manicured turfgrass areas.
M	Moderate water use, drought tolerant plant species that survive on natural rainfall; requires supplemental irrigation during seasonal dry periods to maintain attractive appearance. This zone includes St. Augustine, Bahia and other turf grass areas.
L	Low water use drought tolerant plant species; will survive on natural rainfall without supplemental irrigation.

NATIVE CANOPY TREES (Mature size 40' or more in height)

Botanical Name	Common Name	Water Zone	Street	Parking
Acer rubrum	Red Maple	H,M	Yes	No
Betula nigra	River Birch	H	Yes	No
Carya aquatica	Water Hickory	H	No	No
Carya cordiformis	Bitternut Hickory	M	No	No
Carya glabra	Pignut Hickory	M,L	No	No
Carya tormentosa	Mockernut Hickory	H	No	No
Celtis laevigata	Sugarberry	M,L	*	Yes
Diospyros virginiana	Common Persimmon	M	No	No
Fraxinus americana	White Ash	M	*	No
Fraxinus caroliniana	Carolina Ash	H	No	No
Fraxinus pennsylvanica	Green Ash	M	Yes	Yes
Liriodendron tulipifera	Tuliptree	H	No	No
Liquidambar styraciflua	Sweetgum	M,L	No	No
Magnolia grandiflora	Southern Magnolia	M,L	Yes	No
Magnolia virginiana	Sweetbay Magnolia	H	Yes	No
Morus rubra	Red Mulberry	L	No	No
Nyssa aequatica	Water Tupelo	H	No	Yes
Nyssa sylvatica	Black Tupelo	H	Yes	Yes
Persea borbonia	Red Bay	L	*	No
Pinus clausa	Sand Pine	L	No	No
Pinus elliottii	Slash Pine	L	No	No
Pinus glabra	Spruce Pine	H	*	Yes
Pinus palustris	Longleaf Pine	M,L	No	No
Pinus taeda	Loblolly Pine	L	No	No
Plotanus occidentalis	Sycamore	H,M,L	*	Yes

NATIVE CANOPY TREES (Mature size 40' or more in height)				
Botanical Name	**Common Name**	**Water Zone**	**Street**	**Parking**
Quercus falcata	Southern Red Oak	L	No	No
Quercus hemispherica	Laurel Oak	M,L	No	Yes
Quercus laevis	Turkey Oak	L	No	No
Quercus laurifolia	Diamondleaf Oak	L	No	No
Quercus michauxii	Swamp Chestnut Oak	H,M	*	Yes
Quercus nigra	Water Oak	H,M	No	No
Quercus phellos	Willow Oak	L	*	Yes
Quercus shumardii	Shumard Oak	H,M,L	*	Yes
Quercus stellata	Post Oak	M,L	No	Yes
Quercus virginiana	Southern Live Oak	M,L	*	Yes
Taxodium ascendens	Pond Cypress	L	*	Yes
Taxodium distichum	Bald Cypress	L	*	Yes
Tilia floridana	Florida Basswood	H	No	No
Ulmus alata	Winged Elm	M,L	Yes	Yes
Ulmus americana	American Elm	H,M	No	No
Ulmus crassifolia	Cedar Elm	L	*	No

NON-NATIVE CANOPY TREES (Mature size 40' or more in height)				
Botanical Name	**Common Name**	**Water Zone**	**Street**	**Parking**
Carya illinoiensis	Pecan	H,M	No	No
Phoenix canariensis	Canary Island Date Palm	L	Yes	Yes
Phoenix dactylifera	Date Palm	L	Yes	Yes
Salix babylonica	Weeping Willow	H	No	No
Ulmus parvifolia	Chinese (Drake) Elm	M,L	Yes	Yes
Washingtonia robusta	Washington Palm	L	Yes	No

NATIVE UNDERSTORY TREES (Mature size 12' to 40' height) AND PALMS:				
Botanical Name	**Common Name**	**Water Zone**	**Street**	**Parking**
Acer barbatum	Florida Maple	M	Yes	No
Acer leucoderme	Florida Sugar Maple	M	No	Yes
Aesculus pavia	Red Buckeye	M	No	No

NATIVE UNDERSTORY TREES (Mature size 12' to 40' height) AND PALMS:				
Botanical Name	**Common Name**	**Water Zone**	**Street**	**Parking**
Bumelia tenax	Tough Bumelia	L	Yes	No
Carpinus caroliniana	American Hornbeam	H,M	Yes	No
Cercis canadensis	Eastern Redbud	L	Yes	No
Chamaecyparis thyoides	Atlantic White Cedar	H	No	No
Chionanthus virginicus	Fringetree	M,L	No	No
Cornus florida	Flowering Dogwood	H,M	No	No
Crategus spp.	Hawthorn	M,L	No	No

NATIVE UNDERSTORY TREES (Mature size 12' to 40' height) AND PALMS:				
Botanical Name	**Common Name**	**Water Zone**	**Street**	**Parking**
Halesia carolina	Carolina Silverbell	M	Yes	Yes
Halesia diptera	Two-Winged Silverbell	M,L	Yes	Yes
Ilex spp.	Hollies	L	Yes	Yes
Juniperus silicicola	Southern Redcedar	L	Yes	No
Juniperus virginiana	Eastern Redcedar	L	Yes	No
Myrica cerifera	Wax Myrtle	M,L	No	No
Ostrya virginiana	American Hophornbeam	M,L	Yes	Yes
Persea palustris	Swampbay	H	No	No
Pinckneya pubens	Fevertree	H	No	No
Prunus angustifolia	Chickasaw plum	M,L	No	No
Quercus austrina	Bluff Oak	M	*	Yes
Quercus chapmanii	Chapman Oak	L	No	No
Quercus incana	Bluejack Oak	L	No	No
Quercus myrtifolia	Myrtle Oak	L	No	No
Quercus nuttallii	Nuttal Oak	L	*	Yes
Sabal palmetto	Cabbage Palm	L	Yes	Yes
Salix caroliniana	Willow	H	No	No
Tilia caroliniana	Carolina Basswood	M	No	No
Vaccinium arboreum	Sparkleberry	L	No	No
Viburnum rufidulum	Viburnum	M	No	No

NON-NATIVE UNDERSTORY TREES (Mature size 12' to 40' height) AND PALMS:				
Botanical Name	**Common Name**	**Water Zone**	**Street**	**Parking**
Butia capitata	Pindo Palm	M,L	Yes	Yes
Callistemon rigidus	Bottlebrush	M	No	No
Cupressocyparis leylandii	Leyland Cypress	M,L	No	No
Eriobotrya japonica	Loquat	M	Yes	No
Ilex spp.	Treeform Holly	M,L	Yes	Yes
Lagerstromia indica	Crape Myrtle	M,L	Yes	Yes
Ligustrum japonicum	Waxleaf Privet	M,L	No	No
Magnolia spp.	Deciduous Magnolia	H,M	No	No
Ulmus parvifolia	Chinese Elm	M,L	No	No

NATIVE SHRUBS, SMALL PALMS AND CYCADS:		
Botanical Name	**Common Name**	**Water Zone**
Callicarpa americana	Beautyberry	H,M,L
Calycanthus floridus	Sweetshrub	H,M
Forestiera segregata	Florida Privet	M,L
Ilex glabra	Gallberry	M,L
Ilex vomitoria	Yaupon Holly	L
Illicium parviflorum	Star Anise	H,M
Myrica cerifera	Wax Myrtle	M,L
Rhapidophyllum hystrix	Needle Palm	M,L

NATIVE SHRUBS, SMALL PALMS AND CYCADS:		
Botanical Name	**Common Name**	**Water Zone**
Sabal minor	Bluestem Palmetto	H,M,L
Serenoa repens	Saw Palmetto	M,L
Viburnum obovatum	Walters Viburnum	H,M

NON-NATIVE SHRUBS, SMALL PALMS AND CYCADS:		
Botanical Name	**Common Name**	**Water Zone**
Abelia grandiflora	Abelia	M
Beloperone guttata	Shrimp Plant	H,M
Buxus microphylla	Japanese Boxwood	M
Buxus sempervirens	English Boxwood	M
Camellia japonica	Camellia	M
Camellia sasanqua	Sasanqua Camellia	H
Chamaerops humilis	European Fan Palm	L
Codiaeum variegatum	Croton	H,M,L
Cycas revoluta	King Sago	L
Eleagnus pungens	Silverthorn	M,L
Fatsia japonica	Fatsia	H,M
Gardenia jasminoides	Gardenia	H,M
Hibiscus syriacus	Rose of Sharon	M
Hydrangea spp.	Hydrangea	H,M
Ilex spp.	Shrubform Holly	M
Juniperus spp.	Juniper	M,L
Ligustrum japonica	Waxleaf Privet	M,L
Loropetalum chinense	Chinese Witch Hazel	H,M
Michelia figo	Banana Shrub	H,M
Nerium oleander	Oleander	M,L
Osmanthus fragrans	Sweet Olive	M
Pittosporum tobira	Pittosporum	H,M
Platycladus orientalis	Arborvitae	L
Plumbago auriculata	Plumbago	H,M,L
Podocarpus macrophyllus	Podocarpus	M,L
Pyracantha coccinea	Firethorn	M,L
Raphiolepis indica	Indian Hawthorn	M,L
Rhododendron spp.	Azalea	H,M
Ternstroemia gymnanthera	Clevera	M,L
Trachycarpus fortunei	Windmill Palm	L
Viburnum odoratissimum	Sweet Viburnum	H,M
Viburnum tinus	Laurustius Viburnum	M,L

NATIVE GROUNDCOVERS:		
Botanical Name	**Common Name**	**Water Zone**
Borrichia frutescens	Sea Oxeye Daisy	L
Ceratiola ericordes	Rosemary	M,L
Crinum spp.	Crinum Lily	M

NATIVE GROUNDCOVERS:		
Botanical Name	**Common Name**	**Water Zone**
Gelsemium sempervirens	Carolina Jessamine	M
Helianthus debilis	Beach Sunflower	L
Iva imbricata	Seashore Elder	L
Licania michauxii	Gopher Apple	L
Muhlenbergia capillaris	Muhly Grass	L
Parthenocissus quinquefolia	Virginia Creeper	H,M
Paspalum spp.	Paspalum	H,M
Serenoa repens	Saw Palmetto	M,L
Sesuvium portulacastrum	Sea Purslane	L
Sisyrinchium spp.	Blue-eyed Grass	M
Sorghastrum secundum	Lopsided Indian Grass	L
Spartina patens	Saltmeadow Cord Grass	M,L
Stachytarpheta jamaicensis	Blue Porter Weed	L
Tripsacum dactyloides	Fakahatchee Grass	L
Uniola paniculata	Sea Oats	L
Yucca filamentosa	Beargrass	L
Zamia pumila	Coontie	M

NON-NATIVE GROUNDCOVERS:		
Botanical Name	**Common Name**	**Water Zone**
Agapanthus africanus	Blue Lily of the Nile	M
Ajuga reptans	Bugleweed	H
Aloe spp	Aloe	M,L
Aspidistra elatior	Cast Ironplant	M
Catharanthus roseus	Periwinkle, Vinca	H,M
Convolvulus 'Blue Daze'	Blue Daze	M
Cyrtomium falcatum	Holly Fern	M
Dichondra micrantha	Dichondra	H,M
Dietes bicolor	Butterfly Iris	H
Dietes vegeta	African Iris	M,L
Ficus pumila	Creeping Fig	M,L
Gerbera jamesonnii	Gerbera Daisy	M
Hedera canariensis	Algerian Ivy	L
Hedera helix	English Ivy	L
Hemerocallis spp.	Daylily	M,L
Juniperus spp.	Juniper	M,L
Liriope muscari	Liriope spp.	M
Miscanthus spp.	Miscanthus	L
Nandina domestica	Dwarf Nandina	M,L
Ophiopogon japonicus	Mondo Grass	L
Pittosporum tobira	Dwarf Pittosporum	H,M
Trachelospermum asiaticum	Asiatic Jasmine	L
Trachelospermum jasminoides	Confederate Jasmine	L
Tulbaghia violacea	Society Garlic	M,L

NON-NATIVE GROUNDCOVERS:		
Botanical Name	**Common Name**	**Water Zone**
Vinca major	Bigleaf Periwinkle	M
Trachelospermum jasminoides	Confederate Jasmine	L
Tulbaghia violacea	Society Garlic	M,L
Vinca major	Bigleaf Periwinkle	M

NATIVE VINES:		
Botanical Name	**Common Name**	**Water Zone**
Ipomoea pescaprae	Railroad Vine	M
Ipomoea stolonifera	Beach Morning Glory	L
Gelsemium sempervirens	Carolina Jessamine	M
Lonicera sempervirens	Coral Honeysuckle	L
Parthenocissus quinquefolia	Virginia Creeper	H,M
Passiflora incarnata	Passion Flower	M

NON-NATIVE VINES:		
Botanical Name	**Common Name**	**Water Zone**
Antigonon leptopus	Coral Vine	M,L
Ficus pumila	Creeping Fig	M,L
Hedera helix	English Ivy	L
Hemerocallis spp.	Daylily	M,L
Trachelospermum asiaticum	Asiatic Jasmine	L
Trachelospermum jasminoides	Confederate Jasmine	L

Table 7.5 – Prohibited Plantings

Botanical Name	Common Name
Albizia julibrissin	Mimosa
Broussonetia papyrifera	Paper Mulberry
Cinnamomum camphora	Camphor
Melia azedarach	Chinaberry
Sapium sebiferum	Chinese Tallow

Article 8

Sign Regulations (omitted)

Article 9

Vesting Determinations, Nonconformities and Variances (omitted)

Article 10

Development Agreements (omitted)

Article 11

Development Review and Enforcement Boards (omitted)

Article 12

Administration and Enforcement

ARTICLE 12
ADMINISTRATION AND ENFORCEMENT

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ARTICLE 12
ADMINISTRATION AND ENFORCEMENT

SECTION 12.01 GENERALLY

12.01.01 – Purpose and Definitions: This Article provides the requirements for the following procedures: obtaining development approvals and certain types of permits; as well as procedures for rezoning property, seeking a special use permit, appealing decisions, seeking legislative action to amend this Code and the Comprehensive Plan, and enforcing this Code. For purposes of this Article, the word "development" and certain terms incorporating the word "development" shall be defined as follows:

a. DEVELOPMENT, also referred to as DEVELOPMENT ACTIVITY, means the carrying out of any building activity or mining operation, the making of any material change in the use or appearance of any structure or land or other modifications of the natural landscape above and below ground or water on a particular site. It includes the division of land into two or more parcels, the construction, reconstruction, conversion, structural alteration, relocation, or enlargement of any structure; any mining, excavation, landfill, or land disturbance; and any use or extension of the use of land. It also has the meaning given to it in Section 380.04, Florida Statutes (2001), as amended. Subparagraphs (1) – (2) provide more specific examples of what is and what is not "development" for purposes of this Code. Reference to particular activities, uses or operations is not intended to limit the generality of this subsection.

1. The following activities or uses shall be taken for the purposes of this act to involve "development":

(a) A reconstruction, alteration of the size, or material change in the external appearance of a structure on land.

(b) A change in the intensity of use of land, such as an increase in the number of dwelling units in a structure or on land or a material increase in the number of businesses, manufacturing establishments, offices, or dwelling units in a structure or on land.

(c) Alteration of a wetland or the shore or bank of a river, stream, lake, pond, or canal.

(d) Commencement of drilling, except to obtain soil samples, mining, or excavation on a parcel of land.

(e) Demolition of a structure.

(f) Deposit of refuse, solid or liquid waste, or fill on a parcel of land.

(g) Construction, filling, excavating, grading, paving, dredging, root

raking, mining, drilling or related activities that otherwise significantly disturb the soil of a site.

(h) Building, installing, enlarging, replacing or substantially restoring an impervious surface, or water management system, and including the long-term storage of materials.

(i) Subdividing land into two or more parcels.

(j) Erection of a permanent sign unless expressly exempted by Article 8 of this Code.

(k) Alteration of a historic property for which authorization is required under this Code.

(l) Changing the use of a site so that the need for parking is increased.

(m) Construction, elimination or alteration of a driveway onto a public street.

2. The following operations or uses shall not be taken for the purpose of this act to involve "development":

(a) Work by a highway or road agency or railroad company for the maintenance or improvement of a road or railroad track, if the work is carried out on land within the boundaries of the right-of-way.

(b) Work by any utility and other persons engaged in the distribution or transmission of gas or water, for the purpose of inspecting, repairing, renewing, or constructing on established rights-of-way any sewers, mains, pipes, cables, utility tunnels, power lines, towers, poles, tracks or the like.

(c) Work for the maintenance, renewal, improvement, or alteration of any structure, if the work affects only the interior or the color of the structure or the decoration of the exterior of the structure, except to the extent that such alterations are regulated on a structure designated as historic under Article 4 of this Code.

(d) The use of any land for the purpose of growing plants, crops, trees, and other agricultural or forestry products; raising livestock, or for other agricultural purposes. Provided, however, that agriculture activities and agriculture related uses that may require a special use permit or a commercial or industrial zoning shall be considered development. Examples of these types of uses may

include commercial feedlots, concentrated dairy farms, rendering plants, livestock auction facilities and saw mills.

(e) A change in use of land or structure from a use within a class specified in an ordinance or rule to another use in the same class, unless the original use is the subject of a special use permit, a PUD zoning or development agreement and the change in use will represent a deviation from the conditions of the special use permit, the PUD or the development agreement.

(f) A change in the ownership or form of ownership of any existing parcel (i.e. does not involve the division of land into two or more parcels) or existing structure.

(g) The creation or termination of riparian rights and private covenants concerning development of land or other rights in land.

(h) Clearing vegetation without altering the topography of a single lot or parcel for purposes of building a single family home. All such clearing shall be in accord with the site design requirements and limitations in Article 6 of this Code.

b. DEVELOPMENT APPROVAL means the following:

1. The issuance of a Development Permit for Class I Development.

2. The issuance of a Final Development Order for Class II or Class III development pursuant to the procedures in this Article.

c. DEVELOPMENT AGREEMENT means an enforceable development agreement that may include, but is not limited to, development agreements created pursuant to Article 10 of this Code, or an agreement or development order issued pursuant to Chapter 380, Florida Statutes. Such Development Agreements shall include, at a minimum, the requirements of section 163.3227, Florida Statutes, as amended.

d. DEVELOPMENT ORDER means an order granting, denying, or granting with conditions an application for approval of a development project or activity. A distinction is made between development order, which encompasses all orders and permits, and three distinct types of development orders -- preliminary development order, final development order, and development permit, which are defined as follows:

1. PRELIMINARY DEVELOPMENT ORDER means any preliminary approval that does not authorize actual construction, mining, or alterations

to land and/or structures. A preliminary development order may authorize a change in the allowable use of land or a building, and may include conceptual and conditional approvals where a series of sequential approvals are required before the action authorizes commencement of construction or land alteration. For purposes of this Code, preliminary development orders include Future Land Use Map amendments, Comprehensive Plan amendments that affect land use or development standards, preliminary development plan approval, and master plan approval.

2. FINAL DEVELOPMENT ORDER means the final authorization of a development project; the authorization of which must be granted prior to issuance of a development permit as defined for purposes of this Code. The final development order authorizes the project, whereas the development permit authorizes specific components of the project, such as building construction, parking lot installation, landscaping, and the like. For purposes of this Code, the final development plan approval is the final development order.

3. DEVELOPMENT PERMIT means, for purposes of this Code, an official County document which authorizes the commencement of construction or land alteration without need for further application and approval. Development permits include, but are not limited to: all types of construction permits (plumbing, electrical, foundation, mechanical, and so forth, in addition to the building permit itself), grading permits, septic tank permits, sign permits, etc.

12.01.02 -- Specialized Procedures Elsewhere In the Code: This Code contains additional specialized provisions for approval of certain types of developments, such as Development Agreement provisions of Article 10, the historic district designations of Article 4, the density exceptions provided for in the Comprehensive Plan and the vesting determinations, nonconformities and variances of Article 9. Unless such special procedures are expressly provided for elsewhere in this Code, the administration and enforcement procedures of this Article shall apply.

12.01.03 -- Staff Responsibilities: Except as otherwise provided, the Director of the Planning, Zoning and Building Department and his designees (the "Department") shall administer and enforce the provisions of this Code. Throughout the Code other County staff have been identified as the party responsible for administering and enforcing particular sections of this Code. The Department has primary responsibility for the following:

a. The day-to-day administration of this Code.

b. Assisting applicants in understanding the provisions of this Code.

c. Collecting the required fees and depositing same with the appropriate County fiscal officer.

d. Providing written recommendations to the Planning Commission and the Board of County Commissioners regarding modifications to this Code and the Comprehensive Plan, including all maps and the zoning maps.

e. Conducting field inspections necessary to make decisions related to enforcement and administration of this Code and to adequately advise all boards participating in development review and enforcement procedures.

f. Providing written recommendations, case records and related materials to all boards participating in development review and enforcement procedures.

g. Periodically canvassing the County for Code violations and referring code violations to the Code Enforcement Board.

h. Requesting the state attorney's office to initiate criminal proceedings against the violators of this Code.

i. Requesting Department Counsel to initiate civil proceedings against violators of this Code.

SECTION 12.02 -- PERMIT REQUIRED PRIOR TO UNDERTAKING ANY DEVELOPMENT ACTIVITY

12.02.01 -- Generally: Unless expressly exempt under the Florida Building Code *and* this Code, no development activity may be undertaken in unincorporated Putnam County unless the activity is authorized by a development permit.

12.02.02 -- Post-Permit Changes: After a development permit has been issued, it shall be unlawful to change, modify, alter, or otherwise deviate from the terms or conditions of the permit without first obtaining a modification of the permit. The Department shall determine whether the modification is a major or minor deviation under the criteria for deviations established under section 12.15. A minor deviation shall be handled administratively without need of additional development review. A major deviation shall be processed in the same manner as the original permit. A written record of the modification shall be entered upon the original permit and maintained in the files of the Department.

SECTION 12.03 BASIC ELEMENTS OF DEVELOPMENT REVIEW AND CLASSES OF DEVELOPMENT ACTIVITY

12.03.01 - Basic Elements of Development Review: There are five basic elements of the development review process created by this Part. The five elements are:

a. Pre-application conference: The purpose of the pre-application conference is for the applicant to introduce and describe the proposed development project and for the County to advise the applicant of all the applicable development standards, the applicable review processes, and the design and improvement standards of this Code.

b. Application: This step entails the preparation of and submittal to the County by the applicant, all documents, plans and studies required by this Code.

c. Sufficiency review: At this step, the Department reviews the application and supporting documentation to determine whether all information needed for making a determination has been submitted by the applicant. Sufficiency review takes place at each submittal stage in the Development Review process.

d. Preliminary development plan review: This step entails a review of a development plan that meets the minimum level of detail required by the submittal requirements of Section 12.05 of this Article in order to determine compliance with all applicable requirements of this Code.

e. Final development plan review: This step is for the final review of a development plan to ensure all requirements of this Code are met and that all conditions attached to a preliminary development order, where issued, have been met.

12.03.02 - Classes Of Development Activity: For purposes of prescribing which elements of the review process apply to a particular development, development activities are divided into three classes: Class I, Class II, and Class III. The development activities falling into each class are described below. Any development that is a development of regional impact shall also be reviewed in accordance with Chapter 380 of Florida Statutes.

a. Class I. The following development activities shall be designated as Class I development:

1. Development activities undertaken pursuant to a final development order issued under this Article.

2. Development activity necessary to implement a valid site plan/development plan on which the start of construction took place prior to the adoption of this Code and has continued in good faith.

3. Development activity necessary to implement a valid site plan/development plan which was approved prior to the adoption of this Code and such development commences within one (1) year of the date of the application for the permit at issue.

4. The construction or alteration of a one or two family dwelling on a lot or parcel determined to be a conforming or lawfully created lot or parcel in compliance with this Code.

5. Additions of two hundred fifty (250) square feet or less to existing nonresidential buildings where there is no proposed change of use.

6. The erection of a sign on a previously developed site and independent of any other development activity on the site.

7. The re-surfacing of a vehicle use area if the vehicle use area conforms to all requirements of this Code.

8. A lot split granted pursuant to the procedures in Subsection 12.09 of this Article.

b. Class II. All development activities that are neither Class I development nor Class III development shall be designated as Class II Development.

c. Class III. A development plan shall be designated as a Class III development if it satisfies one or more of the following criteria:

1. Non-residential developments involving a land area in excess of five (5) acres or a gross building area that equals or exceeds 50,000 square feet.

2. Residential developments involving one or more of the following:

(a) Development activity that encompasses more than one hundred (100) acres;

(b) More than one hundred (100) dwelling units;

(c) More than ten (10) acres at a density of five (5) to seven (7) dwelling units per acre;

(d) More than five (5) acres at a density of greater than seven (7) but not more than nine (9) dwelling units per acre;

(e) More than nine (9) dwelling units per acre.

3. Any development that the Department designates as a Class III development project because the proposed development is part of a larger

parcel for which additional development is anticipated that when aggregated with the project in question exceeds the limits of a. or b. above.

12.03.03 - Review Requirements For Each Class Of Development Activity
The following table shows whether an element of development review is mandatory or optional for the three classes of development. Section 12.04 describes in detail each element of the development review process.

		CLASS OF DEVELOPMENT		
		CLASS I	CLASS II	CLASS III
ELEMENTS OF THE REVIEW PROCESS	PRE-APPLICATION CONFERENCE	OPTIONAL	MANDATORY*#	MANDATORY*
	APPLICATION	MANDATORY	MANDATORY	MANDATORY
	SUFFICIENCY REVIEW	MANDATORY	MANDATORY	MANDATORY
	PRELIMINARY DEVELOPMENT PLAN REVIEW	N/A	N/A	MANDATORY*
	FINAL DEVELOPMENT PLAN REVIEW	N/A	MANDATORY	MANDATORY

*Development Review Committee shall be involved at this stage.
#This requirement is waivable by the Department when deemed warranted by the nature of the proposed project.

SECTION 12.04 -- PROCEDURE FOR REVIEW OF DEVELOPMENT PLANS

The following provisions detail the procedural requirements for review of development plans, beginning with the designation of the development class. The development review process is separate and different from the other review processes, such as rezonings (including PUDs), special use permits, variances, nonconforming use determinations, vestings, subdivisions reviews, comprehensive plan amendments and concurrency determinations. For example, the review and approval process for a commercial rezoning will be conducted in accordance with section 12.11, but the final development order under this review will not take place until such time as the rezoning is in place. The County shall conduct a concurrent review of such matters, to the extent concurrent review is possible.

12.04.01 -- Designation Of Plans As Class I, Class II Or Class III Developments

Before submitting a development plan to a specific development procedure, all development plans shall be designated by the Department as a Class I, II or III development, according to the criteria in section 12.03.02 above. Before submitting a development plan for review, the developer shall provide the Department with sufficient information to make this determination. A determination that a development is Class II or Class III shall be supported by written findings and that determination shall be deemed a final administrative decision for purposes of appeal.

12.04.02 -- Pre-Application Conference: Prior to filing for development plan review for projects designated Class II or Class III, the developer shall submit draft versions of the documentation required under section 12.05.01.a. The proposed project shall be placed on the agenda of the next regularly scheduled meeting of the Development Review Committee that allows Committee at least fifteen (15) calendar days to review the plan. There is no required public notice. The applicant will introduce and describe the proposed development project and the County will advise the applicant of all the applicable development standards, the applicable review processes, and the design and improvement standards of this Code and the Comprehensive Plan. No person may rely upon any comment concerning a proposed development plan, or any expression of any nature about the proposal made by any participant at the pre-application conference as a representation or implication that the proposal will be ultimately approved or rejected in any form. The Development Review Committee shall consider, to the extent possible:

1. Characteristics of the site and surrounding area, including important natural and man-made features, the size and accessibility of the site, and surrounding land uses.

2. How the impact to facilities and the concurrency requirements of Article 5 of this Code will be handled if the development were built.

3. The nature of the proposed development, including land-use types and densities; the placement of proposed buildings and other improvements on the site; the location, type and method of maintenance of open space and public use areas; the preservation of natural features; proposed parking areas; internal traffic circulation system, including trails; the approximate total ground coverage of paved areas and structures; and types of water and sewage treatment systems.

4. Conformity of the proposed development with the Comprehensive Plan, this Code and other applicable regulations.

5. Applicable regulations, review procedures, and submission requirements.

6. Other applicable factors and criteria prescribed by the Comprehensive Plan, this Code, or other law.

12.04.03 – Development Plan Review For Class I Developments. The Department shall identify and conduct a sufficiency review of Class I developments upon receipt of the submittals required under section 12.05.01 and shall:

a. Determine that the application and supporting materials are complete and in compliance with requirements of this Code and the Comprehensive Plan, and direct the applicant to submit the documents to the Building Official for a development permit, if needed; or

b. Determine that the information is incomplete or in non-compliance and inform the developer of the deficiencies. The developer may submit an amended Plan at any time without payment of a reapplication fee, but, if more than thirty (30) days have elapsed, must thereafter re-initiate the review process and pay an additional fee.

12.04.04 -- Development Plan Review For Class II Developments

a. The developer of a proposed Class II development shall submit the Development Plan with supporting documentation and information required under sections 12.05.03 and 12.05.04 to the Department.

b. Within ten (10) working days of receipt of a Plan, the Department shall complete a sufficiency review and either:

    1. Determine that the Plan is complete and proceed with the procedures below; or

    2. Determine that there are minor deficiencies in the information submitted and proceed with the procedures below subject to a request to the applicant to correct the deficiencies within a time certain; or

    3. Determine that the information is substantially incomplete and inform the developer in writing of the deficiencies. The developer may submit an amended Plan within thirty (30) working days without payment of a reapplication fee, but, if more than thirty (30) days have elapsed, must thereafter re-initiate the review process and pay an additional fee.

c. A copy of the plan shall be sent to each member of the Development Review Committee. Each member shall review the proposal and submit written comments at the next meeting of the Development Review Committee.

d. The Department shall review the Plan and comments of the Development Review Committee and determine whether the proposal complies with the requirements of this Code.

e. Within ten (10) working days of the meeting of the Development Review Committee, the Department shall:

1. Issue a Final Development Order complying with Section 12.04.08 below if it was a final development plan that was reviewed; or

2. Refuse to issue a Final Development Order based upon it being impossible for the proposed development, even with reasonable modifications, to meet the requirements of this Code.

12.04.05 -- Preliminary And Final Development Plan Review For Class III Developments

a. Review Of Preliminary Development Plans

1. Within ten (10) working days of receipt of a Preliminary Development Plan, the Department shall conduct a sufficiency review and either:

(a) Determine that the information is substantially incomplete and inform the developer in writing of the deficiencies. The developer may submit an amended plan within thirty (30) working days without payment of an additional fee, but, if more than thirty (30) days have elapsed, must thereafter initiate a new application and pay a new fee; or

(b) Determine that there are minor deficiencies in the information submitted and proceed with the procedures below subject to a request to the applicant to correct the deficiencies within a time certain; or

(c) Determine that the information provided is complete and proceed with the following procedures.

2. The Department shall send a copy of the Preliminary Development Plan to each member of the Development Review Committee and shall place the plan on the agenda of the next Committee meeting that allows for a review period of at least fifteen (15) calendar days .

3. Each Committee member shall present comments as to the proposed development's probable effect on the public facilities and services that the member represents and any other comments regarding whether the proposal is in compliance with the requirements of this Code. Additional preliminary review meetings can be scheduled as deemed necessary by the applicant and the Committee.

4. Within ten (10) working days after the Committee meets to consider the plan and comments, the Department shall issue a written report setting forth findings and conclusions supporting such findings, and shall either:

   (a) Issue a Preliminary Development Order complying with Subsection 12.04.07 below; or

   (b) Refuse to issue a Preliminary Development Order based upon it being impossible for the proposed development, even with reasonable modifications, to meet the requirements of this Code; or

   (c) Where the proposed development is a Class III non-residential development, issue a written recommendation to the Zoning Board of Adjustment stating whether a preliminary development order should be issued. Where the recommendation is issuance of the preliminary development order, the recommendation shall include a proposed order. Where the recommendation is to deny the preliminary development order, the recommendation shall state the reasons for the denial.

5. Where the proposed development is a Class III non-residential development, the Zoning Board of Adjustment shall conduct an administrative hearing on the Preliminary Development Plan to determine whether the plan satisfies the requirements of this Code and the Comprehensive Plan. The hearing shall take place no later than forty-five (45) days following the receipt of the application that was found sufficient under paragraph a.1, above. The Zoning Board of Adjustment shall either:

   (a) Issue a Preliminary Development Order complying with Subsection 12.04.07 below; or

   (b) Refuse to issue a Preliminary Development Order based upon it being impossible for the proposed development, even with reasonable modifications, to meet the requirements of this Code.

6. Notice of Preliminary Review Before The Zoning Board of Adjustment: Notice of preliminary review before the Zoning Board of Adjustment shall be issued in accordance with section 12.06 of this Article and consist of the following:

   (a) Advertisement in a newspaper of general circulation;

   (b) Posting of a sign; and

   (c) Mailed notice.

b. Review of Final Development Plans

1. The developer shall submit a Final Development Plan for review within the time period in which the Preliminary Development Order is valid.

2. Within ten (10) working days the Department shall determine whether the Final Development Plan should be approved or denied based on whether the plan conforms to the Preliminary Development Order.

3. The Department shall either:

   (a) Issue a Final Development Order complying with Subsection 12.04.08 below; or

   (b) Refuse to issue a Final Development Order based on the failure of the Development to comply with the conditions imposed by the Preliminary Development Order.

12.04.06 -- Project Phasing: A Master Plan for the entire development site must be approved for a Class III development that is to be developed in phases. The Master Plan shall be submitted simultaneously with an application for review of the Preliminary Development Plan for the first phase of the development and must be approved as a condition of approval of the Preliminary Plan for the first phase. A Preliminary and Final Development Plan must be approved for each phase of the development under the procedures for development review prescribed above. Each phase shall include a proportionate share of the proposed recreational and open space, and other site and building amenities of the entire development, except that more than a proportionate share of the total amenities may be included in the earlier phases with corresponding reductions in the later phases.

12.04.07 -- Required And Optional Contents Of Preliminary Development Orders

a. Required Contents: A Preliminary Development Order shall contain the following:

1. An approved Preliminary Development Plan with findings and conclusions.

2. A listing of conditions that must be met, and modifications to the Preliminary Development Plan that must be made, in order for a Final Development Order to be issued. The modifications shall be described in sufficient detail and exactness to permit a developer to amend the proposal accordingly.

3. A listing of federal, state, and regional permits that must be obtained in order for a Final Development Order to be issued.

4. Findings required in paragraph 1 above shall include the concurrency management requirements in Article 5 as follows:

(a) The initial determination of concurrency.

(b) The time period for which the preliminary development order is valid. This initial determination shall indicate that capacity of the relevant facilities and services is expected to be available for the proposed project, provided that a complete application for a final development order is submitted prior to the expiration date of the preliminary development order.

(c) Notice that the Preliminary development order does not constitute a Final Development Order and that one or more concurrency determinations may subsequently be required. The notice may include a provisional listing of facilities for which commitments may be required prior to the issuance of a Final Development Order.

(d) Notice that issuance of a Preliminary Development Order is not binding with regard to decisions to approve or deny a Final Development Order, and that it does not constitute a binding commitment for capacity of a facility or service.

b. Optional Contents: A Preliminary Development Order may include one or more of the following as conditions of approval:

1. Agreement by the Developer in a recordable written instrument running with the land that no Final Development Order will be requested or approved unless the necessary facilities are programmed for construction within specified time periods.

2. Commitment by the Developer in a recordable written instrument to contract for provision of the necessary services or facilities to achieve the concurrency requirement.

3. Schedule of construction phasing of the proposed development consistent with the anticipated availability of one or more services or facilities.

4. Such other conditions as may be required by the Zoning Board of Adjustment to ensure compliance and consistency with this Code and the Comprehensive Plan, including concurrency for all applicable facilities and services.

5. As provided for in Article 5 of this Code, a certificate of concurrency reservation may be issued in conjunction with the Preliminary Development Order where the developer has prepaid impact fees, utility connection fees, or has provided guarantees as provided for in the Capital Improvements Element of the Putnam County Comprehensive Plan.

12.04.08 -- Contents Of Final Development Orders

a. Required Contents: A Final Development Order shall contain the following:

1. Where required, a determination that a valid Preliminary Development Order exists for the requested development.

2. An approved Final Development Plan with findings and conclusions.

3. A determination where applicable that all conditions of the Preliminary Development Order have been met.

4. A finding that a Certificate of Concurrency has been issued for the proposed development by the Department in conformance with the requirements of Article 5 of this Code.

5. A specific time period during which the development order is valid and during which time development shall commence. A Final Development Order shall remain valid only if development commences and continues in good faith according to the terms and conditions of approval.

6. A commitment by the County to the following:

(a) The necessary facilities shall not be deferred or deleted from the Capital Improvements Element or the adopted one-year capital budget unless the subject final development order expires or is rescinded prior to the issuance of a certificate of occupancy.

(b) Contracts shall provide that construction of necessary facilities must proceed to completion with no unreasonable delay or interruption.

b. Optional Contents: A Final Development Order may contain:

1. A schedule of construction phasing consistent with availability of capacity of one or more services and facilities.

2. A schedule of services or facilities to be provided or contracted for construction by the applicant prior to the issuance of any certificate of occupancy or within specified time periods.

3. Any alternate service impact mitigation measures to which the applicant has committed in a recordable written instrument.

4. A bond in the amount of 110% of the cost of services or facilities that the applicant is required to construct, contract for construction, or otherwise provide.

5. Such other conditions as may be required to ensure compliance with the concurrency requirement.

12.04.09 – Extensions of Time: Applicants may request extensions of time on Preliminary and Final Development Orders and such extensions shall only be granted upon a showing by the applicant that reasonable efforts have been made towards addressing issues raised in the preliminary development review process; or where a final development order is involved, that reasonable efforts towards securing the required permits and commencing work on the project. Such requests shall be heard by the Board of County Commissioners pursuant to section 12.07 of this Article. The applicant shall also be required to obtain a revised Certificate of Concurrency pursuant to Article 5 of this Code.

SECTION 12.05 -- REQUIRED CONTENTS OF SUBMITTALS FOR DEVELOPMENT REVIEW

12.05.01 -- Application For Development Review: Applications for development review shall be available from the Department. The completed application shall be signed by all owners, or their agent, of the property subject to the proposal, and notarized. Signatures by other parties will be accepted only with notarized proof of authorization by the owners. In a case of corporate ownership, the authorized signature shall be accompanied by a notation of the signer's office in the corporation, and embossed with the corporate seal. All applications shall comply with the following submittal requirements and additional submittal requirements that may be required by resolution adopted by the Putnam County Board of County Commissioner. In addition:

a. The application shall include documents and drawings showing:

   1. Name, address and telephone number of owner.
   2. Description of intended use.
   3. Description of proposed development activities.
   4. Location and linear dimensions and size of parcel.
   5. Construction plans for all proposed development activities. This is required for Class I developments only, and is optional for Class II or III developments at the application stage.
   6. Legal description of property involved.
   7. A site plan drawn to scale showing existing and proposed structures, with the setbacks from each other and the property line and the lot coverage, as well as proposed parking and landscaping and a north arrow.

b. Where applicable to the development activity proposed, the Department may require the following to be submitted as part of the application:

   1. Building, structure, sidewalk and pavement location, height and setback.

2. Location, length and width of proposed driveways and driveway alignment with driveways on surrounding land.

3. A map of vegetative cover including the location and identity by common name of all protected trees. Groups of protected trees may be designated as "clusters" with the estimated total number noted.

4. Floor plan for existing and proposed structures.

5. A detailed landscape plan meeting or exceeding the requirements of this Code for all new or existing uses.

6. Sign plans, including the location of signs on the site; dimensions of all signs, including maximum square footage, height and width; and distance from the ground to the bottom of the sign display area (including borders).

7. Survey of property.

12.05.02 -- Submittal Requirements for Preliminary Plan Review of Class III Developments

a. Location Map with a boundary survey, signed and sealed by a certified surveyor, showing all existing and proposed easements, emergency accessways, other cross-access easement agreements, and rights-of-ways.

b. Use and description of the proposed project.

c. A quality scaled drawing of the site showing the following:

1. Location and dimensions of all existing and proposed structures indicating all access points, gross floor area per floor per building, building height and number of stories, statement of number of dwelling units.

2. All existing and proposed vehicular and pedestrian accessways with dimensions.

3. Areas designated for off-street parking showing the number of existing, required, and proposed parking spaces based upon parking standards, including handicapped parking.

5. Designated loading and service areas.

8. Total area of site with percentages allocated to buildings, paving, impervious area and open space.

9. Dimensions of all features on the site must be indicated, including but not limited to setbacks, building separation, driveway and street widths, etc.

10. Designate all common areas.

11. Any proposed or required screening or buffering mechanism, including walls, hedges and/or fences.

d. Location of all adjacent streets, internal streets, driveways and all access points.

e. Identify any known special fire protection and health concerns such as: flammable liquids storage tanks, dry cleaning operations, paint spray operations, manufacturing processes, furnaces, ovens, combustible storage, etc.

f. Provide locations of fire hydrants and the size and locations of water mains that supply them. The point of service for fire protection systems connected to the public water system shall also be designated.

g. Show the paved areas and/or stabilized areas of the site that may be used for access to the structures. This will include cul-de-sacs, dead ends, emergency accesses, limerock based areas of travel, etc.

h. Generalized landscaping and irrigation plan.

i. Indicate the location of all existing utilities on the site.

j. Indicate existing and proposed easements for facilities to be maintained by Putnam County.

k. General location of proposed water and wastewater facilities.

l. Areas of special flood hazard shall be identified, with elevations and the source of information, if applicable.

m. Wetland protection setback line shall be located on plan.

n. Location of proposed storm water management facilities.

o. The occupancy classification of the building.

12.05.03 -- Submittal Requirements For Final Development Plan Review of Class II and III Developments: All final development plans for Class II and Class III developments submitted pursuant to this Article shall conform to the following standards:

a. All plans shall be drawn to a scale of one (1) inch equals twenty (20) feet, unless the Department determines that a different scale is sufficient or necessary for proper review of the proposal.

b. If multiple sheets are used, the sheet number and total number of sheets must be clearly indicated on each.

c. The front cover sheet of each plan shall include:

   1. A general vicinity or location map drawn to scale (both stated and graphic) showing the position of the proposed development in the section(s), township and range, together with the principal roads, municipal boundaries, and/or other pertinent orientation information.

   2. A complete legal description of the property.

   3. The name, address and telephone number of the owner(s) of the property. Where a corporation or company is the owner of the property, the name and address of the president and secretary of the entity shall be shown.

   4. Name, business address, and telephone number of those individuals responsible for the preparation of the drawing(s).

   5. Each sheet shall contain a title block with the name of the development, stated and graphic scale, a north arrow, and date.

   6. The plan shall show the boundaries of the property with a metes and bounds description reference to section, township and range, tied to a section or quarter-section or subdivision name and lot number(s).

   7. The area of the property shown in square feet and acres.

d. The number of copies, as established by the Department, of the submittal shall be required.

e. Unless a format is specifically called for below, the information required may be presented textually, graphically, or on a map, plan, aerial photograph, or by other means, whichever most clearly conveys the required information. It is the responsibility of the developer to submit the information in a form that allows ready determination of whether the requirements of this Code, the Comprehensive Plan, or other federal, state, or regional laws and regulations have been met.

12.05.04 – Specific Submittal Requirements for Final Development Plan: In addition to the requirements of section 12.05.03, all final development plans for Class II and III developments shall, unless expressly excepted by a preliminary or final development order, include the following information:

a. Location Map with a boundary survey, signed and sealed by certified surveyor, showing all existing and proposed easements, emergency accessways, other cross-access easement agreements, and rights-of-ways.

b. Use and description of proposed project.

c. A quality scaled drawing of the site showing the following:

   1. Location and dimensions of all existing and proposed structures indicating all access points, gross floor area per floor per building, building height and number of stories, and a statement of number of dwelling units.

   2. All existing and proposed vehicular and pedestrian accessways with dimensions.

   3. Areas designated for off-street parking showing the number of existing, required, and proposed parking spaces based upon parking standards, including handicapped parking.

   4. Designated loading and service areas.

   5. Total area of site with percentages allocated to buildings, paving, impervious area and open space.

   6. Dimensions of all features on the site must be indicated, including but not limited to setbacks, building separation, driveway and street widths, etc.

   7. Designate all common areas.

   8. Any proposed or required screening or buffering mechanism, including walls, hedges and/or fences.

d. A tree survey showing hardwoods 12" in diameter or more, and pines 18" in diameter or more, at 4 1/2 feet above ground level.

e. Location of all adjacent streets, internal streets, driveways and all access points.

f. Identify any known special fire protection and health concerns such as: flammable liquids storage tanks, dry cleaning operations, paint spray operations, manufacturing processes, furnaces, ovens, combustible storage, etc.

g. Provide locations of fire hydrants and the size and locations of water mains that supply them. The point of service for fire protection systems connected to the public water system shall also be designated.

h. Show the paved areas and/or stabilized areas of the site that may be used for access to the structures. This will include cul-de-sacs, dead ends, emergency accesses, limerick based areas of travel, etc.

i. Specific landscaping and irrigation plan.

j. Indicate the location of all existing utilities on the site.

k. Indicate existing and proposed easements for facilities to be maintained by Putnam County.

l. Location of proposed water and wastewater facilities.

m. Areas of special flood hazard shall be identified, with elevations and the source of information if applicable.

n. Wetland protection setback line shall be located on plan.

o. Location of proposed storm water management facilities.

p. The occupancy classification of the building.

q. Location of all service laterals and water meters including size.

r. Drainage narrative including the following:

    1. Explanation of all assumptions.
    2. Method of analysis with calculations.
    3. Soil boring results, if necessary.
    4. Storm water Management Utility summary sheet.
    5. Signed and sealed by a professional engineer.

s. Drainage plan in accordance with section 12.10 below, which shall include the following:

    1. Typical sections and details of all drainage facilities.
    2. Specifications of construction.
    3. Complete construction notes.
    4. Signed and sealed by an professional engineer.

t. Grading and paving plan, including horizontal control, elevations, complete notes and specifications covering construction (this can be combined with the drainage plan).

u. Sedimentation control plan must be submitted, if appropriate, or a statement must be on the plans that one is not required.

v. A statement outlining the status of federal, state and regional environmental permits.

w. Maintenance statement for the storm water management facilities.

x. A phasing plan where applicable.

12.05.05 -- Master Plan: A master plan is required for any development that is to be developed in phases. A master plan shall provide the following information for the entire development:

a. A concept plan for the entire master plan area.

b. A preliminary development plan for the first phase or phases for which approval is sought.

c. A development phasing schedule including the sequence for each phase; approximate size of the area in each phase; and proposed phasing of construction of public recreation and common open space areas and facilities.

d. Total acreage in each phase and gross intensity (non-residential) and gross density (residential) of each phase.

e. Number, height and type of residential units.

f. Floor area, height and types of non-residential uses.

g. Total land area, and approximate location and amount of open space included in each residential, office, commercial, and industrial area.

h. Approximate location of proposed and existing streets and pedestrian and bicycle routes, including points of ingress and egress.

i. Approximate location and acreage of any proposed public use such as parks, school sites, and similar public or semi-public uses.

j. A vicinity map of the area within one (1) mile surrounding the site showing:

    1. Land use designations and boundaries.
    2. Traffic circulation systems.
    3. Major public facilities.
    4. Municipal boundary lines.
    5. Urban service area boundaries.

k. Other documentation necessary to permit satisfactory review under the requirements of this Code, the Comprehensive Plan, or other federal, state, or regional laws and

regulations that may be applicable and required by special circumstances in the determination of the Department.

12.05.06 -- Withdrawal of Applications: An application for development review may be withdrawn at any time. No application fees will be refunded to the applicant where the application had been submitted for greater than three (3) business days.

SECTION 12.06 -- NOTICE REQUIREMENTS

12.06.01 - Generally: Unless otherwise mandated by State law or elsewhere in this Code, this Section contains notice requirements for all rezoning requests, special exception requests, variance requests, vesting determinations, appeals, development agreements and any other public hearings held by any appointed board formed under this Code or the Board of County Commissioners.

12.06.02 - Notice in the Newspaper:

Notice of each case before the Planning Commission or the Zoning Board of Adjustment shall be published once in a newspaper of general circulation, not less than ten (10) days in advance of the date of such hearing. Such published notice shall be in a form prescribed by the Planning Commission or Zoning Board of Adjustment, whichever board is applicable. The applicant shall pay the cost of publishing the notice for his particular case, and proof of publication from the applicant shall be a prerequisite to holding the hearing. In matters that require a second hearing before a different board, such as the Board of County Commissioners, both hearings may be published together as a dual advertisement.

12.06.03 - Sign Notice:

The applicant shall be responsible for posting signs on the land that is the subject of the application. Such signs shall be posted no later than ten (10) days prior to the date of the public hearings at which such application is to be considered. The sign shall specify that the property is under consideration for review and specify the reviewing body, time, date and place of the meeting. The signs shall be no less than four (4) square feet in size, shall be produced with a bright noticeable color and shall be placed in sufficient numbers and suitable locations so as to be easily seen by the public. All property frontage on public rights of way shall be posted and shall in no case be posted with less than one (1) sign per two hundred (200) feet of frontage. All signs shall be erected in full view of the public on each street side of such land. Where such land does not have frontage on a public street, such signs shall be erected on the nearest street right-of-way with an attached notation indicating generally the direction and distance to the land that is the subject of the hearing. The applicant shall pay for the cost of the sign(s).

12.06.04 Notice by Mail:

Unless otherwise provided, mailed notice required by this Article shall be sent fifteen (15) days prior to the scheduled hearing to all property owners within 300 feet of any part of the property boundary of the parcel(s) that are the subject of the application and hearing. Except that vesting determinations shall only be required to provide notice by mail to the property owners that own the property that is subject to the vesting. The notice shall include the location of the land in question by parcel number and 911 address, the nature of the request being heard and the board reviewing the matter, as well as the date, time and place of the hearing. Mailing addresses shall be obtained from the records of the Putnam County Property Appraiser. The failure of any person to receive notice shall not invalidate an action if a good faith attempt was made to comply with the notice requirements of this Article. The expense of this mailing shall be borne by the applicant.

12.06.05 -- Notice Requirement Table:

Action	Newspaper Notice	Sign(s)	Mail
Preliminary Development Review by ZBOA	Yes	Yes	Yes
Rezoning	Yes	Yes	Yes
Special Exception	Yes	Yes	Yes
Variance	Yes	Yes	Yes
Appeal	Yes	Yes	Yes

SECTION 12.07 -- QUASI-JUDICIAL HEARINGS

12.07.01 – Applicability: Except as otherwise provided in this Code by more specialized procedures, in addition to the requirements of section 11.03 and 11.05 of the Code, each quasi-judicial administrative hearing conducted by any one of the following Boards shall conform to the procedures set forth in this section, as supplemented by law, rule or decision:

a. The Board of County Commissioners;

b. The Planning Commission; and

c. The Zoning Board of Adjustment;

This section shall serve to supplement any specialized procedures provided elsewhere in this Code. To the extent these general procedures conflict with specialized procedures provided elsewhere in this Code, the specialized procedures shall prevail.

12.07.02 – Hearing Procedures

a. Jurisdiction: The reviewing Board shall:

   1. Determine whether it has jurisdiction over the matter.
   2. Determine whether any member must abstain or is disqualified.

b. Official Notice of Relevant and Undisputed Facts and Law: The reviewing Board may take official notice of known information related to the issue, including:

   1. State law and applicable ordinances, resolutions, rules and official policies of the County.
   2. Other public records and facts judicially noticeable by law.

   Matters officially noticed need not be established by evidence and are binding to the extent that they are relevant and material. Requests that official notice be taken shall be made on the record and an opportunity for rebuttal shall be given to opposing parties. The reviewing Board may take notice without prompting or suggestion of matters listed in paragraph b.2 above and shall state all matters officially noticed for the record.

c. Site Visits: Submittal of an application for action by any Board constitutes express permission to the Board members and Planning, Zoning and Building Staff to enter onto the property to investigate matters relevant to the application. The reviewing Board members may view the site of the proposed development with or without notification to the parties, but after the visit, shall place the time, manner and circumstances of the viewing in the record.

d. Order of Proceedings: The order of proceedings at a quasi judicial hearing shall be as follows:

ORDER	ITEM
1	Introduction of Petition
2	Applicant Presentation
3	Staff Presentation
4	Interested Party For
5	Interested Party Against
6	Rebuttals
7	Close of Formal Proceedings
8	Public Input
9	Close Public Hearing, Deliberation and Vote

The reviewing board may alter this order in the interest of fairness, efficiency or other reason so long as the basic due process rights of the parties are respected.

e. For purposes of these proceedings, an "interested party" is a person who is prepared to present evidence to the reviewing board and willing to be subject to cross examination. Persons simply wishing to provide comment or other input without being subject to cross examination may do so during the "public input" portion of the hearing.

f. Direct and Cross Examination: Direct and cross-examination of witnesses shall be permitted in the course the above proceedings. However, the reviewing Board may approve or deny a request from a person attending the hearing to ask a question. Unless the Board specifies otherwise, if the request to ask a question is approved, the Board will direct the question to the person submitting testimony.

g. Time Limits: The time limits for public input presentations at the public input stage may be limited to 3 minutes per speaker at the discretion of the Chairman.

h. Board Deliberation: Before the hearing has concluded, the Board shall restate the issues and comment upon the law and facts pertaining to the decision, and if opportunity for rebuttal is provided, may ask additional questions of any person who has testified or presented information. Board decisions shall be decided by motion.

i. Evidence: Evidence may be submitted that is relevant to the proceedings without regard to whether the evidence would be admissible in civil proceedings in the Courts of this State. The Chairman or acting Chairman of the reviewing Board may curtail testimony or cross examination that is redundant, irrelevant, disruptive, belligerent or otherwise out of order.

j. Ex Parte Communications: All Boards established under this Code are subject to the following *ex parte* disclosure requirements:

   1. A county employee, elected official, or other person who is or may become a party to a quasi-judicial proceeding shall avoid engaging in *ex parte* communications with a member of the reviewing board.

   2. If a person engages in an *ex parte* communication with a member of the reviewing board, the member shall place on the record of the pending case all *ex parte* written communications received, all written responses to such communications, a memorandum or verbal statement setting forth the substance of all oral communications received, and all oral responses made, and shall advise all parties that such matters have been placed on the record.

3. The foregoing is not meant to inhibit discussions between members of the reviewing board and county staff that pertain solely to scheduling of hearings and other administrative matters unrelated to the merits of the case.

12.07.03 -- Findings And Order: Unless the reviewing Board and the applicant agree to an extension, the Board shall, within thirty-five (35) days of the hearing, prepare an order including:

a. A statement of the applicable criteria and standards against which the proposal was tested.

b. Findings of facts that established compliance or noncompliance with the applicable criteria and standards of this Code.

c. The reasons for a conclusion to approve, conditionally approve, or deny.

12.07.04 -- Record Of Proceedings

a. All proceedings shall be recorded electronically and shall be summarized in written meeting minutes. Copies of the electronic recordings and meeting minutes will be made available to the public upon request. Reproduction and copying costs shall be borne by the requesting party and shall include Staff time spent in obtaining the requested items. Applicant(s), interested parties or members of the general public that want a verbatim record of the proceedings shall be responsible insuring that such a verbatim record is made.

b. The Board shall, where practicable, include in the hearing record each item of physical or documentary evidence presented and shall mark each item to show the identity of the person who presented it. Each exhibit received into evidence shall be retained in the hearing file until after the applicable appeal period has expired, when it may be returned to the person identified thereon, or otherwise disposed of in accordance with Florida law.

c. The findings and order shall be included in the record.

SECTION 12.08 -- PROCEDURES FOR REVIEW OF SUBDIVISIONS

12.08.01 -- Purpose: The purpose of this Section is to promote and protect the public health, safety and welfare of the citizens of the County by requiring the orderly and progressive review of development of subdivisions and requiring the platting of all Type I subdivisions, regardless of its land use and zoning designations, within the unincorporated areas of the County.

12.08.02 -- Scope of Section: A subdivision of land within the unincorporated limits of the County is the division of a parent tract of land into three (3) or more lots, parcels, tracts, tiers, blocks, sites, units, or any other division of land. Any such subdivision must

first receive the approval of the Board of County Commissioners pursuant to the procedures set forth herein. Developments such as, but not limited to, condominiums and mobile homes parks with a gross density of six or more units per acre shall meet the requirements of a Type I subdivision. A subdivision created pursuant to any density exception in the comprehensive plan shall meet the requirements of a Type I subdivision if three or more lots are to be created. A "parent tract," for purposes of Section 12.08, shall mean the lot of record or parcel that exists as of the effective date of this Article. Any parcels, lots, tracts, tiers, blocks or units of land created after the effective date of this Article shall be counted in determining whether a subdivision has or will be created under this section, regardless of ownership.

12.08.03 -- Classifications Of Subdivisions. There shall be two (2) kinds of subdivisions as follows:

a. Type I subdivisions, which shall be those subdivisions other than Type II subdivisions in which the streets and drainage are dedicated to the public or to the Board of County Commissioners.

b. Type II subdivisions, which shall be limited to large lot subdivisions as described in section 12.08.05.

12.08.04 -- Requirements for Type I Subdivisions

a. It shall be a violation of this Code for the owner of any land within a Type I subdivision to transfer, sell, agree to sell, or negotiate to sell such land by reference to, exhibition of or other use of a plat of a subdivision of such land without having the plat approved and recorded as required by this Section. All Type I subdivision plats shall be recorded and shall fulfill the requirements of Chapter 177, Part I, Florida Statutes.

b. In Type I subdivisions all streets must be paved and drainage improvements constructed pursuant to the paved street design and construction criteria of section 83-9.82 of Ordinance 83-9 and the Storm water Management requirements of section 83-9.83 of Ordinance 83-9, as well as the drainage regulations in Ordinance 72-6, as amended by 83-1 and 83-8 and Article 6 of the Code.

c. Unless otherwise specifically authorized pursuant to paragraph d below, all streets, sidewalks, and associated right of way shall be transferred by warranty deed to Putnam County for ownership and maintenance by the County. Upon the recommendation of the Putnam County Public Works Department, the County Commission may require that other improvements such as, but not limited to, drainage facilities and parks, be transferred to the County for ownership and maintenance where necessary or desirable to protect or promote the public interest.

d. The Board of County Commissioners may approve private streets, sidewalks and/or other improvements when such improvements will be constructed to the

specifications of this Code, and when the County Commission determines, at its sole discretion and with the concurrence of the County Attorney and Public Works Director, that adequate provision for initial installation and future private maintenance is made for such improvements. The presumption shall always be, however, that streets, sidewalks and other improvements shall be deeded to the County as set forth in paragraph c above, and in no event shall this paragraph be interpreted as requiring the County Commission to approve a subdivision with private streets or sidewalks.

12.08.05 -- Requirements for Type II Subdivisions: Type II subdivisions may be approved in areas designated Agriculture I and Agriculture II in the Putnam County Comprehensive Plan when the following conditions are met:

a. The subdivision shall conform to minimum lot size, lot dimension requirements, and density restrictions in the Putnam County Comprehensive Plan and Land Development Code.

b. No more than six (6) parcels may be created by the division, and no new parcel resulting from the division shall be smaller than ten (10) acres.

c. All new parcels resulting from the division shall have frontage on a county-maintained road, and no roadway construction is proposed within the subdivision.

d. The parent tract is not the result of a prior Type II subdivision or Lot Split under this Code.

12.08.06 – Preapplication Review of Type I Subdivisions.

a. The subdivider shall submit to Planning and Zoning staff a preapplication plan of the proposed project to be reviewed by the Development Review Committee prior to filing an application for preliminary subdivision development and plat approval. The preapplication plan shall include:

    1. Nine (9) copies of a map showing an outline of the proposed subdivision boundaries and its location within the County.

    2. Nine (9) copies of drawings showing street and lot layouts.

    3. General information concerning the proposed subdivision.

    4. A non-refundable preapplication review fee, which shall be applied towards the actual subdivision application fee, if the application is submitted in a timely fashion. The fee shall be established by resolution of the Board of County Commissioners.

b. The pre-application plan shall be considered by the Development Review Committee within thirty (30) days of the date of receipt of the plan by the Department. The Development Review Committee, upon review of the plan, shall provide written recommendations to the applicant. These comments and recommendations shall not limit the Development Review Committee's authority in subsequent stages of subdivision development and plat review.

12.08.07 -- Application For Type I Subdivision Development And Plat Approval.

a. The applicant shall prepare and submit to the Department thirteen (13) copies of the application submittals under subparagraph c.

b. Fees as established by resolution by the Board of County Commissioners shall be paid at the time of submittal of application, and is not refundable.

c. Application for subdivision development and plat approval shall consist of the following:

1. The application.

2. A letter from the developer naming the developer's designated representative if such a person is to represent the developer in matters concerning the application.

3. The legal description of the parent tract, if any, from which the subdivision property was taken.

4. A title opinion of an attorney-at-law licensed in the state or a certification of an abstractor or a title company showing that record title to the land as described and shown on the plat is in the name of the person, persons, or corporation executing the dedication, if any, as it is shown on the plat and if the plat does not contain a dedication, that the developer has record title to the land. The title opinion or certification shall also show all mortgages not satisfied or released of record.

5. A certified survey map showing the proposed layout of the subdivision, including location of lots, location of open/common area, location of roads and drainage, and the location of areas of special flood hazard, wetland areas and any areas of environmental or archeological significance.

6. A map of the proposed subdivision, drawn at the same scale as the plat, indicating the location of different soil types found on the property. These soils shall be identified by U.S. Soil Conservation Service description.

7. A proposed schedule for completion of the construction of improvements.

8. A plan indicating the proposed use of the lots.

12.08.08 -- Public Hearing For Consideration Of Type I Subdivision Applications

a. Within forty-five (45) days of the date of receipt of a complete application for subdivision development and plat approval by the Department, the Planning Commission shall hold a quasi-judicial hearing to consider the application. The application and the required submittals shall immediately be forwarded to the relevant members of the Development Review Committee and scheduled for review by the Committee at its next regularly scheduled meeting. The Development Review Committee shall prepare written comments and recommendations for the Planning Commission.

b. The Planning Commission shall consider all evidence and testimony pertinent to applications for subdivision development and plat approval. All Planning Commission action in matters concerning final disposition of applications shall be the result of evidence and testimony presented during the public hearings. The Department shall make certain that notice of the hearing is provided by newspaper, posting and mail as provided in section 12.05, and said notices shall include the following information:

   1. An announcement of public hearing by the Planning Commission or by the Board of County Commissioners.

   2. Scheduled date, time and place of the public hearing.

   3. Name of the type of application.

   4. Name of the proposed subdivision.

   5. Name of applicant.

   6. Location by section, township, and range of the proposed subdivision.

   Public hearings, once opened, may be continued to a date, time, and place certain without additional publication of notice.

c. Upon consideration of the application, the Planning Commission shall vote to forward a recommendation for approval, approval with conditions, or disapproval of the application to the Board of County Commissioners. The following shall be mandatory conditions that shall be met prior to review by the Board of County Commissioners:

   1. At least fifteen days prior to the Board of County Commissioners hearing, the applicant shall a submit a reproduction of the preliminary plat of the proposed subdivision prepared by a land surveyor as described in section 177.061, Florida Statutes and constructed as follows:

(a) The size of each sheet shall be twenty-four (24) inches by thirty-six (36) inches with a marginal line completely around each sheet placed so as to leave at least a one-half-inch margin on each of three (3) sides and a three-inch margin on the left side of the plat for binding purposes, as described in section 177.091, Florida Statutes.

(b) When more than one (1) sheet must be used to accurately portray the lands subdivided, each sheet must show the particular number of that sheet and the total number of sheets included, as well as clearly labeled match lines to show where other streets match or adjoin. An index or key map must be included as designated in section 177.091(2), Florida Statutes

(c) The scale shall be no smaller than one hundred (100) feet to the inch unless otherwise approved in advance by the County's designated representative.

(d) The name of the plat shall be shown in bold legible letters, as stated in section 177.051, Florida Statutes. The name of the subdivision shall be shown on each sheet included. Such name shall not be the same or in any way so similar to any name appearing on any recorded plat in the same county as to confuse the records or to mislead the public as to the identity of the subdivision, except when the subdivision is subdivided as an additional unit or section by the same applicant or his successors in title. The name of the professional surveyor and mapper that prepared the plat, along with the street and mailing address must be shown on each sheet.

(e) Where the subdivision is approved for private streets, sidewalks and other infrastructure improvements, there shall be a statement on the face of the plat as follows: "All purchasers are herein notified that the improvements in this subdivision are privately maintained and the County will not accept responsibility for the maintenance of the improvements. All maintenance shall be the responsibility of the developer or the homeowners association as provided in this chapter."

(f) A prominent "north arrow" shall be drawn on every sheet included showing any portion of the lands subdivided. The bearing or azimuth reference shall be clearly stated on the face of the plat in the notes or legend.

(g) Permanent reference monument locations shall be shown. The locations of permanent reference monuments shall conform to the requirements of Chapter 177, Florida Statutes.

(h) The plat shall show the section, township, and range as applicable, or, if in a land grant, the plat will so state.

(i) The name "PUTNAM COUNTY, FLORIDA" shall appear under the name of the plat.

(j) Each plat shall show a description of the lands subdivided, and the description shall be the same in the title certification. The description must be so complete that from it, without reference to the plat, the starting point and boundary can be determined.

(k) All section lines and quarter section lines occurring in the map or plat shall be indicated by lines drawn upon the map or plat, with appropriate words and figures. If the description is by metes and bounds, the point of beginning shall be indicated, together with all bearings and distances of the boundary lines. If the platted lands are in a land grant or are not included in the subdivision of government surveys, then the boundaries are to be defined by metes and bounds and curves. The initial point in the description shall be tied to the nearest government corner or other recorded and well-established corner.

(l) Location, width, and names of all streets waterways, or other rights-of-way shall be shown, as applicable. The streets must provide adequate ingress and egress to all lots.

(m) Location and width of easements shall be shown on the plat or in the notes or legend, and their intended use shall be clearly stated as required by section 177.091(16), Florida Statutes.

(n) All contiguous properties shall be identified by subdivision title, plat book, and page, or, if unplatted, land shall be so designated. If the subdivision platted is a re-subdivision of a part or the whole of a previously recorded subdivision, sufficient ties shall be shown to controlling lines appearing on the earlier plat to permit an overlay to be made; the fact of its being a re-subdivision shall be stated as a subtitle following the name of the subdivision wherever it appears on the plat.

(o) Sufficient angles, bearings, or azimuth to show direction of all lines shall be shown, and all bearings, angles, or azimuth shall be shown to the nearest second of arc.

(p) The centerlines of all streets shall be shown with distances, angles, bearings or azimuth, Points of Curvature (P.C.s), Points of Tangency (P.T.s), Points of Reverse Curvature (P.R.C.s), Points of Compound Curvature (P.C.C.s), Permanent Control Points (P.C.P.s), arc distance, central angles, tangents, radii, chord, and chord bearing or azimuth or both.

(q) Park and recreation parcels as applicable shall be so designated.

(r) All interior excepted parcels shall be clearly indicated and labeled "Not a part of this plat."

(s) The purpose of all areas dedicated must be clearly indicated or stated on the plat.

(t) When it is not possible to show curve detail information on the map, a tabular form may be used. Where tabular data is used, the data shall appear on the face of the sheet of plat to which it applies

(u) The land surveyor's calculations showing closure within a tolerance of one (1) foot in ten thousand (10,000) feet.

2. A drainage plan for the proposed subdivision prepared by a professional engineer currently registered in the state consisting of, but not limited to, the following:

   (a) A map of the area of the proposed subdivision indicating the subdivision boundaries; the boundaries of the surface water basins within which the proposed subdivision is located with the total acreage of each drainage basin clearly indicated; arrows indicating the directions of flow of surface water into, through, and out of the subdivision; and existing watercourses by proper name and/or type with the locations of any surface water gauging stations indicated. The map shall not be larger than twenty-four (24) inches by thirty-six (36) inches.

   (b) A map of the proposed subdivision drawn at the same scale as the plat indicating topographic contours at a contour interval of not more than five (5) feet except in the immediate vicinity of proposed drainage improvements where the contour interval shall not be more than one (1) foot, the locations of existing watercourses by name and/or type, the locations of proposed drainage improvements, and the location and elevation of a permanent bench mark to be established on the property with elevation referenced to mean sea level or assumed (where a bench mark referenced to mean sea level exists within one (1) mile of the property, its elevation shall be used to determine the elevation of the bench mark on the property).

   (c) Engineering design plans with supporting drainage calculations for all proposed drainage improvements.

3. A basic street construction plan prepared by a professional engineer currently registered in the state including profiles and plan views of all streets showing natural and finished grades and proposed construction details drawn to a scale of not less than one (1) inch equals fifty (50) feet horizontal, and one (1) inch equals five (5) feet vertical.

4. Three (3) independent itemized estimates of the cost of the construction of the proposed improvements, prepared by experts in the field of street and drainage improvements construction.

d. At least fifteen days prior to hearing before the Board of County Commissioners, the Development Review Committee shall meet to review the submittals required for the Board of County Commissioner's hearing and issue written comments and recommendations on the submittals. The applicant shall receive copies of the Committee's comments and recommendations prior to the Board hearing.

e. Within thirty (30) days of the date of the Planning Commission's action or when all required preconditions are met by the applicant, whichever comes later, the Board of County Commissioners will consider the application and the Planning Commission's recommendations at a regularly scheduled meeting of the Board. The Board shall review the proposed subdivision for consistency to the Comprehensive Plan and compliance with the Land Development Code. The Board of County Commissioners shall not be bound by the Planning Commission's recommendation and may approve or disapprove the application or remand consideration of the application to the Planning Commission for further action.

f. If remanded to the Planning Commission, the Planning Commission shall reconsider the application within thirty (30) days of the date of such action by the Board of County Commissioners or at the next regularly scheduled hearing of the Planning Commission, which ever comes later. After consideration of additional information, the Planning Commission shall again forward its recommendations to the Board of County Commissioners. The Board of County Commissioners shall then again consider the Planning Commission's recommendations and shall take final action to approve or disapprove the application.

g. If the application is disapproved, the grounds for disapproval shall be stated in the records of the Board of County Commissioners and in a letter transmitted to the developer or his designated representative.

h. If the application is approved, the Board of County Commissioners may make such approval contingent upon reasonable conditions and shall establish the estimated cost of the construction of improvements to be used to establish the amount of collateral as described in section 12.17, and shall establish a schedule with time limits for partial and final completion of the construction of improvements.

12.08.09 -- Submittal Of Final Plat And Plans for Type I Subdivisions

a. Within thirty (30) days of the date of final approval of application for subdivision development and plat approval by the Board of County Commissioners, the original reproducible final plat and plans for development shall be submitted to the Department.

b. The reproducible plat and plans shall be made with black permanent drawing ink or varitype process on a good grade linen tracing cloth or with a suitable permanent black drawing ink on a stable base film, a minimum of 0.003 inches thick coated upon completion with a suitable plastic material to prevent flaking and to assure permanent legibility; or non-adhered scaled print on a stable base film made by photographic processes from a film scribing tested for residual hypo testing solution to assure permanency. Certificates and approval forms shall be printed on the plat with a permanent black drawing ink. Four (4) reproducible copies and one digital copy of the original drawings shall be submitted with the original drawings. The digital copy shall be provided in a format established by the Putnam County GIS Coordinator. The information on the plat and plans shall be the same as that approved by the Board of County Commissioners. Any changes in the plat and plans required by the Board of County Commissioners as conditions for approval shall be included on the plat.

c. The dedications required by F.S. 177.071 and 177.081, a form for approval by the Board of County Commissioners, a form for the certificate of the Clerk of the Circuit Court, and the land surveyor's certificate and seal shall be included.

d. The dedication shall be executed by all developers having a record interest in the lands subdivided, in the same manner in which deeds are required to be executed. All mortgages having a record interest in the lands subdivided shall execute, in the same manner in which deeds are required to be executed, either the dedication contained on the plat or a separate instrument, joining in and ratifying the plat and all dedications and reservations thereon. If a separate instrument is executed, it shall be submitted at the time of submittal of the final plat.

e. The final plat shall include the following language in a place of prominence: "NOTICE: This plat, as recorded in its graphic form is the official depiction of the subdivided lands described herein and will in no circumstances be supplanted in authority by any other graphic form of the plat. There may be additional restrictions that are not recorded on this plat that may be found in the public records of this County."

f. The final plat for recording shall contain a minimum of two separate state plane coordinates for locating the subdivision..

g. PRMs and monuments shall be placed at each lot corner in accordance with sections 177.091(7) and 177.091(9), Florida Statutes.

12.08.10 -- Approvals, Certification and Recording Of Type I Subdivisions

a. Within ten (10) business days from the date of receipt of the final plat and plans described in 12.08.09 above , upon assurance that Permanent Reference Markers ("P.R.M.s") have been set as per the requirements of section 177.091(7), Florida

Statutes, and assurances from the Department through consultation with the County Surveyor that the plat meets the minimum standards of this Article and Chapter 177, and upon receipt of satisfactory evidence of good and sufficient collateral as described in section 12.16, the Department shall forward the plat to the Clerk of the Circuit Court, which shall secure the necessary approval of the Board of County Commissioners by having the Chairman of the Board permanently affix his signature on the plat and shall certify and seal the plat himself and shall then have the plat recorded in compliance with Chapter 177, Florida Statutes.

b. There shall be no promotions for sale or sales of lands within the proposed subdivision by reference to the plat prior to recording of the plat.

c. The documents for transfer of lands in a subdivision for which the County Commission has approved the installation of improvements to be privately owned and maintainted shall have clearly written on the face of the documents a statement indicating that improvements within the subdivision are not owned or maintained by the County and referencing maintenance and ownership by a homeowners association or some other suitable single entity.

12.08.11 -- Review of Type II Subdivisions:

a. Submittals: The Department shall consider a proposed Type II Subdivision upon the submittal of the following materials:

   1. A completed application form provided by the Department, which shall include land descriptions and acreage or square footage of the original and proposed parcels.

   2. Five (5) copies of a scaled survey drawing showing the intended division signed and sealed by a Florida licensed surveyor in accordance with minimal technical standards. The survey shall clearly describe the parcels of land and any existing principal or accessory structures. The survey shall contain a notation in not less than 14 point type as follows: "Pursuant to County regulations, no land that is subject to this Type II subdivision may be further divided by way of the Putnam County lot split procedure in Section 12.09 of the Putnam County Land Development Code."

b. Procedure: The Department shall review an Application for a Type II subdivision and approve or deny the application with thirty (30) calendar days of receipt of a complete application.

12.08.12 -- Improvement Agreements Required:

a. As a condition precedent to commencing development of a Type I subdivision, the Board of County Commissioners shall require the developer to provide assurance that all required improvements, including, but not limited to storm drainage facilities,

streets and highways, and water and sewer lines, shall be satisfactorily constructed according to the approved development plan. The following information shall be provided:

1. Agreement that all improvements, whether required by this Code or constructed at the developer's option, shall be constructed in accordance with the standards and provisions of this Code.

2. The term of the agreement indicating that all required improvements shall be satisfactorily constructed within the period stipulated. The term shall not exceed five (5) years from the recording of the plat or thirty percent (30%) occupancy of the development, whichever comes first.

3. The projected total cost for each improvement. Cost for construction shall be determined by either of the following:

   (a) Estimate prepared and provided by the applicant's engineer.
   (b) A copy of the executed construction contract provided.

4. Specification of the public improvements to be made and conveyed to the County together with the timetable for making improvements.

5. Agreement that upon failure of the applicant to make required improvements (or to cause them to be made) according to the schedule for making those improvements, the County shall utilize the security provided in connection with the agreement.

6. Provision of the amount and type of security provided to ensure performance.

7. Provision that the amount of the security may be reduced periodically, but not more than two (2) times during each year, subsequent to the completion, inspection and acceptance of improvements by the County.

b. The amount of the security listed in the improvement agreement shall be determined by the Director of Public Works.

c. Security requirements may be met by but are not limited to the following:

   1. Cashiers check

   2. Certified check

   3. Developer/Lender/County Agreement

   4. Interest Bearing Certificate of Deposit

5. Irrevocable Letters of Credit

6. Surety Bond

d. The amount of security shall be one hundred and ten (110) percent of the total construction costs for the required developer installed improvements. The amount of security may be reduced commensurate with the completion and final acceptance of required improvements. In no case, however, shall the amount of the bond be less than one hundred and ten (110) percent of the cost of completing the remaining required improvements.

e. Nothing in this section shall be construed as relieving a developer of any requirement relating to concurrency or a development exaction under Article 5 of this Code.

f. This section does not modify existing agreements between a developer and the County for subdivisions platted and final development orders granted prior to the effective date of this Code, providing such agreements are current as to all conditions and terms thereof.

12.08.13 -- Completion and Maintenance Of Improvements

a. When improvements are completed in a Type I subdivision, final inspection shall be conducted and corrections, if any, shall be completed before final acceptance is recommended by the Director of Public Works . A recommendation for final acceptance shall be made upon receipt of a certification of project completion and one (1) copy of an as-built survey.

b. As required improvements are completed and accepted, the developer may apply for release of all or a portion of the security.

c. A maintenance agreement and security shall be provided to assure the County that all required improvements shall be maintained by the developer according to the following requirements:

1. The period of maintenance shall be a minimum of one (1) year.

2. The maintenance period shall begin with the acceptance by the County of the improvements.

3. The security shall be in the amount of fifteen percent (15%) of the construction cost of the improvements.

4. The original agreement shall be maintained by the Director of Public Works.

5. Upon satisfactory completion of the one-year improvements maintenance period, the maintenance of streets, sidewalks, and any other conveyed improvements shall become the responsibility of the County.

d. For those subdivisions where a surety bond or letter of credit is used as collateral, the bond or letter of credit shall be released by the Clerk of the Circuit Court upon notification from the public works department that satisfactory completion of the one-year improvements maintenance period has been achieved.

e. For those subdivisions where an interest bearing escrow account is used as collateral, the funds including interest shall be returned to the developer in increments upon the completion of construction within each scheduled time limit established by the Board of County Commissioners. The amount of each incremental return of escrowed funds shall be based upon the percentage by cost of the work accomplished within each scheduled time limit and shall be set by the Clerk of the Circuit Court.

12.08.14 Vacation of Plats

a. Initiated by Property Owner

A plat may be vacated by the County upon a petition filed by the owner of the land covered by the plat, or portion of a plat, pursuant to the procedures and standards therefore in Section 177.101, Florida Statutes. The petition shall be submitted to the Department and the Department shall set the matter on the next available agenda of the Board of County Commissioners, allowing adequate notice pursuant to section 12.06 of this Code, and the final order vacating the plat, or portion thereof, shall be recorded in the official records for Putnam County.

b. Initiated by County

The County may initiate the vacation of a recorded plat, or portion thereof, upon a determination by the County Commission that the following circumstances are likely to exist:

1. The plat of the subdivision was recorded as provided by law not less than twenty years before the county-initiated vacation.

2. Within the area covered by the plat, or portion thereof, to be vacated, eighty percent or more of the lots are owned by a single person or entity and less than twenty percent (20%) of the actual lots depicted are individually developed. For purposes of determining the number of lots developed, a single residence using multiple lots will be considered one developed lot, but each of the lots used for that residence will be counted to determine the total number of platted lots.

3. Within the area covered by the plat, or portion thereof, to be vacated, no substantial amount of legally installed improvements have been constructed.

4. It would be impossible or economically infeasible to install improvements and develop the lots in conformity with the Putnam County Comprehensive Plan or Putnam County land development regulations in effect at the time the vacation is initiated.

c. Procedure for County-Initiated Vacations

1. Proposed subdivisions for a County-initiated plat vacations shall come before the Board of County Commissioners ("County Commission") by a recommendation from the Development Review Committee ("DRC") or directly from a Commissioner. The County Commission shall first decide, by a majority vote, whether to direct the Department to prepare a report indicating whether a given plat, or portion thereof, meets the criteria set forth in subsection b above.

2. Upon receipt of the report from the Department that indicates the plat meets the criteria set forth in subsection b above, the County Commission shall then decide, by majority vote, whether to direct that the Department initiate the vacation of the relevant plat, or portion thereof. The direction to prepare a report and the determination to initiate a plat vacation may be considered concurrently at the same meeting, if the Department prepared the required report in anticipation of Board direction to do so.

3. If directed by the County Commission to initiate the vacation of a plat, or portion thereof, the Department shall set the matter on the next available agenda of the County Commission allowing adequate notice pursuant to section 12.06 of this Code.

4. The County Commission shall hold a quasi-judicial hearing on the matter pursuant to the procedures set forth in Section 12.07 of this land development code. The County Commission may issue a final order vacating the plat upon making the following determinations:

   (a) The plat, or portion thereof, meets the criteria in subsection b above.

   (b) Vacation of the plat is consistent with the Putnam County Comprehensive Plan.

   (c) Vacation of the plat is in the public interest.

   (d) There will be no substantial interference with vested private property rights.

5. The final order vacating the a plat, or portion thereof, shall be recorded in the official records for Putnam County.

d. **Effect.** Every such order vacating a plat, or portion thereof, shall have the effect of:

1. Vacating all streets and rights-of-way which have not become necessary for use by the traveling public, and of vacating all other dedications to the public. A right-of-way or dedication, or portion thereof, that is not intended to be vacated shall be expressly excepted out of the vacation order.

2. Returning the property to acreage.

3. Requiring future development or land uses to comply with the Putnam County Comprehensive Plan and the most current land development regulations.

SECTION 12.09 -- PROCEDURE FOR OBTAINING A LOT SPLIT

12.09.01 -- Review By The Planning, Zoning and Building Department

a. Authorization: The Department may approve a Lot Split in the following circumstances:

1. The division of a single platted lot or other parcel into two (2) parcels (including the creation of two lots pursuant to a density exception in the comprehensive plan); or

2. The division of single platted lot into two parts where each part is to be combined with an adjoining lot or lots to create conforming, buildable parcels. For purposes of meeting the requirements below, the combined parcel and lots shall be considered the "new parcel."

b. Submittals: The Department shall consider a proposed Lot Split upon the submittal of the following materials: (1) An application form provided by the Department; (2) Five (5) paper copies of the proposed Lot Split; (3) A statement indicating whether water and/or sanitary sewer service is available to the property; and (4) land descriptions and acreage or square footage of the original and proposed parcels and a scaled drawing showing the intended division signed and sealed by a Florida licensed surveyor in accordance with minimal technical standards. The survey shall clearly describe the affected platted lots or parcels of land and any existing principal or accessory structures. The survey shall contain a notation in not less than 14 point type as follows: "Pursuant to County regulations, this land may not be further divided by way of the Putnam County lot split procedure in Section 12.09 of the Putnam County Land Development Code."

c. Review Procedure

1. The Department shall transmit a copy of the proposed Lot Split to the Property Appraiser, County Surveyor, the Health Department and any other divisions of

the State or local government deemed by the Department to be pertinent to the issues raised in the replat for review and comments.

2. If the proposed Lot Split meets the conditions of Subsection 12.09.02 below and otherwise complies with all applicable laws and ordinances, the Department shall approve the Lot Split by signing the application form.

d. Records: Upon approval of the Lot Split, the Department shall maintain an original signed and sealed survey of the division in the subdivision records maintained by the Department. Reference to the Lot Split shall be noted in the Property Appraiser's legal description data.

12.09.02 -- Standards And Restrictions

a. Standards: All Lot Splits shall conform to the following standards:

1. Each new parcel shall conform to the requirements of this Code, including the applicable zoning district regulations.

2. Each new parcel shall abut a public or private street (except as may be otherwise provided by this Code) for the required minimum lot width. If the original parcel fronts on a local access road, both new parcels shall take access from that road.

3. If any new parcel abuts a street right-of-way that does not conform to the design specifications provided in this Code, the owner may be required to dedicate one-half the right-of-way width necessary to meet the minimum design requirements.

4. The division shall not increase the density of the subdivision, unless it results in a density that is allowed under the applicable future land use designation or the division is done through a valid and previously approved density exception.

b. Restriction: No further division of a parcel created by a Lot Split shall be permitted under this Section.

SECTION 12.10 -- PROCEDURE FOR SUBMITTING SURFACE WATER AND STORMWATER MANAGEMENT PLANS:

a. Applicability: No Class II, Class III or non-residential Class I development may occur without approval of a surface water and storm water management plan by the County, and, where applicable, the appropriate Water Management District, the Florida Department of Environmental Protection or pertinent federal agency (i.e. the Army Corp of Engineers or the Environmental Protection Agency).

b. Surface and storm water management systems shall be reviewed in the context of the development permit and review process described in this Article, which may include an application for a development permit for the sole purpose constructing a surface and storm water management system. If the proposed development requires a Florida Department of Environmental Protection or Water Management District permit, a copy of the completed application package including backup information provided to the state or district shall be submitted to the County by the applicant. For development and redevelopment projects that are not regulated by the district, a storm water management plan shall be submitted with all the development permit applications.

1. Submittal Requirements: A surface and storm water management plan shall be submitted using appropriate forms as provided by the County. The following specific items are the minimum submittal requirements :

(a) Most recent aerial photograph of the project vicinity, taken not more than three years before the application date, covering the project area and the total lands that contribute runoff.

(b) Topographic map of the project area, showing the location and elevation of benchmarks, including at least one benchmark for each control structure. Benchmark elevations shall be referenced to the mean sea level (msl).

(c) Land use map showing both current and proposed conditions for the total lands that contribute runoff.

(d) Soils and vegetation map displaying the most recent U.S. Soil Conservation Service information and encompassing the project area and total drainage areas that contribute runoff to the project.

(e) Proposed grading, drainage, paving, and building plan showing details of proposed grading, drainage, paving, improvements and buildings.

(f) Erosion and sediment control plan, identifying the type, location, and schedule for implementing erosion and sediment control measures, including appropriate provisions for maintenance and disposition of temporary measures.

(g) Technical report, prepared by an Engineer, describing the assumptions, calculations, and procedures used for determining compliance with the 25-year frequency, 24-duration design requirements of Policy D.1.2.3 of the Comprehensive Plan.

c. Sufficiency review: An application sufficiency review shall be conducted by the Director of Public Works, and within 30 days from the submittal date, written

comments shall be provided to the applicant regarding the completeness of the application and requesting additional information, if necessary.

d. Issuance: If the Director of Public Works determines that the submittals are in compliance with all provisions of this ordinance, a permit may be issued. If the Director of Public Works determines that the submittals do not conform with all provisions of this ordinance, permit issuance shall be denied and a written statement as to the reasons for the denial shall be provided to the applicant.

e. Permit posting: Activities requiring a surface and storm water management plans shall not be commenced until the development permit card is posted in a conspicuous place in front of the premises. The permit card shall be protected from weather and shall remain posted until final inspection approval has been issued.

f. Plan duration: Unless revoked or otherwise modified, the duration of a surface and storm water management plans approved pursuant to this ordinance shall be three (3) years or when construction of the permitted project discharge structure is completed, whichever occurs first.

g. Plan Modification: If the surface water and storm water management plan authorized by the permit is not completed according to the approved schedule and permit conditions, the Director of Public Works shall be notified. For schedule revisions resulting in an extension of more than 30 days results in deviations from the permit conditions, approval of a plan modification is required.

h. Plan Revocation: approval of surface and storm water management plan may be revoked if the approved schedule and permit conditions are violated without approval of a plan modification.

SECTION 12.11 -- PROCEDURE FOR REZONINGS

12.11.01 -- Amendments Rezoning Land.

a. The procedure for rezoning property in the County is as provided in this section.

b. Any property owner or owners desiring to rezone property must file an application with the Planning and Zoning Department. The Board of County Commissioners may also initiate a rezoning of any property pursuant to this section.

c. Prior to submitting the application, the applicant shall meet with the Department to discuss the purpose of the proposed rezoning and rezoning review process. No person may rely upon any comment or expression of any nature about the proposal made by any participant at this pre-application conference as a representation or implication that the proposal will be ultimately approved or rejected in any form.

d. No application can be accepted until after the applicant attends a pre-application meeting with the Department required under paragraph c above.

e. Filing deadlines shall be established by the Department to provide sufficient time for required public notice and Staff review of the application, but in all cases, the Planning Commission shall consider the rezoning within sixty (60) days from the established deadline date. Applications and a schedule of hearing dates and filing deadlines are available in the Department. Department staff will submit the application to the Planning Commission for review no later than seven (7) days prior to the hearing date.

f. The applicant or the duly designated and authorized agent for the applicant shall appear before the Planning Commission to present the request, evidence in support thereof, and to answer questions that the commission may have. To be eligible to appear as an agent, an applicant must have designated the agent as such in writing and under oath; such written designation must be submitted to the Department before the hearing.

g. All applications for rezoning shall include the following information:

1. Legal description of the property to be rezoned, including lot and block numbers when the property is in a subdivision.

2. Names and addresses of all owners of the property to be rezoned.

3. Existing and proposed zoning classification of the property.

4. A statement of the applicant's interest in the property to be rezoned, including a recorded legal document conveying ownership of real property.

(a) If joint or several ownership, all owners of record must sign the rezoning application, except as provided in paragraph (d) below.

(b) If an authorized agent for the property owner, a copy of the agency agreement or the written consent of the owner.

(c) If a corporation or other business entity, the name of the officer or person responsible for the presentation of the application and written proof that the representative has the delegated authority to represent the corporation or other business entity.

(d) If a group of property owners is requesting the rezoning of the area in which their property is located, the written consent of at least fifty-one (51) percent of the people owning property in the area described in the application.

(e) The owner of the property must sign and file the application under oath.

5. A vicinity map indicating the general location of the site, abutting streets and utilities, and boundary lines of the subject property and the surrounding area. (i.e. a quarter panel of the applicable parcel map)

6. A statement of the intended use of the property.

h. The Department shall review all applications for zoning changes for consistency with the Comprehensive Plan.

i. The Planning Commission shall hold a public hearing, with due public notice by newspaper, posting and mail, to consider rezoning requests and to receive public input within sixty (60) days after the deadline filing date. The Planning Commission shall submit a written report to the Board of County Commissioners indicating whether the rezoning should be approved. The report shall address whether the proposed rezoning is consistent with the Comprehensive Plan, and whether the rezoning complies with the applicable procedures and requirements of the Land Development Code. The report shall include meeting minutes and any physical evidence considered by the Planning Commission. The hearing held by the Planning Commission shall not be a formal quasi-judicial hearing, but rather a hearing designed to obtain public input in an informal way.

j. The Board of County Commissioners shall schedule a de novo quasi-judicial hearing to commence within twenty (20) days from the date of issuance of the written recommendations of the Planning Commission, at which time the Board of County Commissioners shall consider the recommendations of the Planning Commission, including the record of the Planning Commission hearing and any evidence that may be presented at the Board of County Commission hearing.

k. Following the public hearings, the Board of County Commissioners shall determine whether: (1) the rezoning is consistent with Comprehensive Plan; and (2) the rezoning complies with the applicable procedures and requirements of the Land Development Code. If the proposed rezoning meets the above requirements, the Board may nevertheless deny the application if the Board finds that the existing zoning serves a legitimate public purpose. The Board shall either change the Zoning Map for the applicant's property through the adoption of an ordinance; or deny the application. Rezoning applications may be withdrawn at any time prior to the final action of the Board of County Commissioners. If the application is denied by final action of the Board of County Commissioners, no further action shall be taken on another application for basically the same proposal, on the same property, until twelve (12) months after the date the application was denied.

12.11.02 -- Required Signs and Published Notices

Rezoning hearings shall be noticed by newspaper, by the posting of signs and by mail in accordance with section 12.05 of this Article. Dual notice of the Planning Commission and Board of County Commissioners hearings is acceptable.

12.11.03 -- Application Requirements For Rezoning To PUD

a. The standard rezoning applications requirements of sections 12.11.01 and 12.11.02 shall apply to a request to rezone to PUD, except as follows:

   2. In addition to the standard rezoning application and submittals, the applicant shall submit the information and documentation required by section 23-201, Zoning Ordinance 88-1, as amended.

   3. Development Review Committee: Prior to any public hearings, the PUD application, including the development plan, will be reviewed by the Development Review Committee.

b. The PUD Ordinance must include the following:

   1. Written findings complying with subparagraph c below;

   2. The written description of the PUD ;

   3. The master plan for the PUD;

   4. The schedule for development of the PUD;

   5. The legal description of the area within the PUD; and

   6. A development agreement executed by all owners within the PUD, which includes the following commitments:

      (a) The proposed development shall proceed in accordance with the PUD ordinance and such conditions and safeguards as may be established by the Board of County Commissioners in such ordinance.

      (b) A written statement of a proposal for completion of such development according to plans approved by such ordinance, and for continuing operating and maintenance to such areas, functions and facilities as are not to be provided, operated or maintained by the County pursuant to written agreement.

      (c) The terms and conditions shall bind their successors in title to any commitments made in the application.

c. The Board's decision to adopt the ordinance must be based on the findings listed below.

1. The request for a rezoning to PUD is consistent with the Comprehensive Plan.

2. The PUD meets the general intent of the County's Land Development Code even though it differs in one or more respects from the usual application of the standards in the Code.

3. The PUD accomplishes one or more of the purposes listed in Article 4 of the County's Land Development Code and the applicable policies of the Comprehensive Plan.

4. The PUD complies with standards for applicability listed in Section 4.02 of the County's Land Development Code.

5. The PUD complies with the development standards listed in Section 4.02 of the County's Land Development Code.

6. The PUD is either not being placed in an area of agricultural land use, or if placed in an area of agricultural land use, the activity of the PUD will be consistent with policies of the Comprehensive Plan with regard to development in agriculture lands.

d. Specific development plans must be submitted according to the schedule adopted as part of the PUD ordinance. Such development plans shall be in the form of a subdivision plat or a site plan.

1. In the case where a PUD involves a subdivision plats, final development plans must follow the general requirements for subdivision approval provided in Article 12 of this Code. The committees and boards reviewing the subdivision plats must find the plats consistent with the PUD ordinance and all other applicable standards of this Code. In order to facilitate minor adjustments, changes which comply with the following criteria may be approved:

   (a) The number of subdivision lots is the same or less and are located in the same general location.

   (b) The open space is in the same general location and in the same amount, or greater amount.

   (c) The streets follow approximately the same layout.

   (d) There is no change in the use.

2. For all non-residential PUD developments, the staff, committees and boards shall review the plans under either the Class I, II or III development review processes in sections 12.03 and 12.04 above and they must find the site plans consistent with the PUD ordinance. The Department will allow for concurrent review under the PUD and development review processes where appropriate. In order to facilitate minor adjustments, changes which comply with the following criteria may be approved:

   (a) The number of dwelling units is the same or less.

   (b) The open space is in the same general location and in the same amount, or greater amount.

   (c) The floor area of the buildings is the same or less.

   (d) The streets follow approximately the same layout.

   (e) Access points for the project site are the same or less in number and in the same general location.

e. Time Limits.

   1. The development of the PUD must proceed according to the schedule for development included in the PUD Ordinance. If the development does not commence within the time frame specified in the PUD Ordinance, or in the case of a phased development, a phase of development does not commence within the time frame specified in the PUD Ordinance, the ordinance shall become invalid and no further development will be permitted under the ordinance. If no time frames are specified the expiration date is one year from the date of adoption of the PUD Ordinance. Upon expiration of the time limits, County Department staff may initiate action to rezone the property to another appropriate zoning by following the rezoning procedure described in Article 12 of this Code. No development shall be permitted under an expired PUD.

   2. Extensions of time: Applicants may request extensions of time on PUD Ordinances and such extensions shall only be granted for a maximum of up to three (3) years and only upon a showing by the applicant that reasonable efforts have been made towards securing the required permits and commencing work on the project. Such requests shall be heard by the Board of County Commissioners pursuant to section 12.07 of this Article. The applicant shall also be required to obtain a revised Certificate of Concurrency pursuant to Article 5 of this Code, where applicable

f. Permits. All construction in the development of a PUD shall proceed only under applicable permits issued by the County and any other regulatory agency of the government. No building permit, certificate, or other document authorizing

construction or occupancy within a PUD shall be issued except in accordance with the approved development plan.

SECTION 12.12 -- PROCEDURE FOR OBTAINING APPROVAL OF SPECIAL USE PERMITS

12.12.01 -- Generally

a. The Zoning Board of Adjustment, when granting special use permits, may prescribe appropriate conditions and safeguards as deemed necessary in order to protect public health, safety and general welfare of County residents. Special use permits, along with all conditions and safeguards attached thereto, shall run with the land.

b. Special Use Permits granted by the Zoning Board of Adjustment shall allow only those uses specifically described in the application and are subject to the terms or conditions expressed therein. The expansion or extension of the special use beyond the scope or terms of the permit is unlawful and is in violation of this Code.

c. The Zoning Board of Adjustment may establish a reasonable time limit within which the action or use authorized by the special use permit must begin and end. If such action or use is not commenced or completed within the established time limits the special use permit shall become invalid and all rights granted thereunder shall be terminated. If no specific time limit for commencement is established, the period for commencing the use or action shall be 540 days; except in the case of cellular towers, which shall in all cases be limited to one (1) year. The Board may extend such time limits for a reasonable length of time, if probable cause is shown. Time limits shall not be extended for more than one (1) year.

d. If the use or action authorized by a special use permit ceases for a period of twelve (12) consecutive months, the use shall terminate. Holders of a special use permit shall notify the Department if they terminate the use or action authorized.

e. Any activity shall be carried out in accordance with the development plan approved with the special use, including any conditions placed on the use, and in accordance with standard Land Development Code requirements. No changes shall be made to the development plan for the special use without the approval of the Department. If the Department determines that there is a major deviation from the approved site plan, the owner or applicant and their successors shall file another application and another public hearing may be conducted to review the proposed change pursuant to the criteria of Section 12.12.03.

12.12.02 -- Application and Issuance

a. A person requesting a special use permit shall submit an application to the Department on a form made available by staff. The application must contain the following information:

1. The legal description of the property for which the special use is requested and a recorded legal document conveying ownership of real property.

2. A description of the property according to street address.

3. The names and addresses of the owners of the property.

4. A detailed description of the special use requested.

5. Current zoning classification of the property.

6. Reason for requesting the special use.

7. A vicinity map indicating the general location of the site, abutting streets and utilities, a complete legal description of the property, and a site plan that includes the details listed below. Applications may be rejected if they do not contain site plans that contain each of the following items:

   (a) Name, location and owner.

   (b) Present zoning.

   (c) Location of the site in relation to surrounding properties, including the means of ingress and egress to such properties and any screening or buffers on such properties.

   (d) Date, North arrow and graphic scale.

   (e) Location, number, dimension and surface type of all proposed parking areas and loading areas.

   (f) Location, size and design of landscaped areas and building screens or architectural enclosures.

   (g) The location of all existing and proposed structures and major features and complete dimensions of same. Also included shall be setbacks, distances between structures, floor areas, width of driveways, property or lot lines and the percentage of the property covered by structures.

   (h) Location and acreage of open space, recreational, recharge and landscaped areas.

8. The notarized signature of the applicant and/or his authorized agent.

b. Prior to submitting the application, the applicant shall meet with the Department to discuss the nature of the proposed special use permit and the review process. No application shall be accepted until this preapplication meeting takes place. No person may rely upon any comment concerning a proposed special use, or any expression of any nature about the proposal made by any participant at this pre-application conference as a representation or implication that the proposal will be ultimately approved or rejected in any form.

c. Filing deadlines shall be established by the Department to provide sufficient time for required public notice and Staff review of the application, but in all cases, the Zoning Board of Adjustment shall consider the special use permit request within sixty (60) days from the established deadline date. Applications and a schedule of hearing dates and filing deadlines are available in the Department. Department staff will submit the application to the Zoning Board of Adjustment for review no later than seven (7) days prior to the hearing date.

d. Upon completion and receipt of the application, the Department shall place the request on the agenda of the next meeting of the Zoning Board of Adjustment. The Zoning Board of Adjustment shall hold a quasi-judicial public hearing to review requests for special use permits and shall make a decision within sixty (60) days from the deadline filing.

e. At conclusion of the hearing, the Zoning Board of Adjustment shall make a formal determination that the proposed use meets the issuance criteria in section 12.12.03 of this Article and shall either grant the special use permit with or without conditions; or determine that the special use permit fails to meet one or more of the issuance criteria and deny the application, setting forth the criteria under which it failed and why it failed to meet them.

f. If the application is denied by final action of the Zoning Board of Adjustment, no further action shall be taken on another application for basically the same proposal, on the same property, until twelve (12) months after the date the application was denied.

g. Applications may be withdrawn at any time prior to the final action of the Zoning Board of Adjustment. If the Zoning Board of Adjustment denies an application for a special use permit, the denied application may not be resubmitted nor may any action be taken on a new application for basically the same proposal within twelve (12) months after the date the last application was denied. Appeals shall be to the Circuit Court.

12.12.03 -- Issuance Criteria: When deciding requests for a special use permit, the Zoning Board of Adjustment shall not grant the special use unless it makes written findings that the special use satisfied the following criteria:

a. The use is consistent with the Comprehensive Plan, and meets all concurrency requirements. A detailed statement of the facts and policies demonstrating compliance, or non-compliance, shall be included in the final order.

b. The use is allowed as a special use in the zoning district in which the property is located, and will conform to all applicable regulations of this Code and the zoning district in which it is proposed.

c. The special use will not adversely impact nor unduly restrict the enjoyment of permitted uses in the surrounding area.

d. The special use will not substantially diminish or impair property values in the area, nor impede the orderly development and improvement of the surrounding property for permitted uses.

e. Adequate access roads, on-site parking, on-site loading and unloading berths, and drainage have been or will be provided where required.

f. Adequate measures have been taken to provide ingress and egress to the property that are designed in a manner to minimize traffic impacts on local roads.

g. Adequate screening and buffering of the special use will be provided, if needed.

h. The special use will not have signs or exterior lighting that will cause glare, adversely impact area traffic safety or have a negative effect on the area. Any signs or exterior lighting required by the special use shall be compatible with development in the zoning district and shall, at a minimum, meet the requirements of Article 8.

i. There will be no undue risks to persons or property from hazardous substances.

j. The proposed special use will not adversely affect the general public health, safety and welfare of the residents of Putnam County. An application may not be denied on this basis unless the Zoning Board of Adjustment makes findings as to the specific manner in which the proposed use would have such adverse affect.

SECTION 12.13 APPEALS

12.13.01 -- Appeals to the Zoning Board of Adjustment.

a. Unless a different appeal procedure is specified elsewhere in this code, any aggrieved person or any officer, board or bureau of the County affected by any final administrative determination made by the Department or any other department working under the Board of County Commissioners that has been delegated final decision making authority in the administration of this Code may appeal the determination to the Zoning Board of Adjustment. If the final administrative determination is not otherwise reduced to writing and dated, any aggrieved person or

county official may request that any final administrative determination, including an interpretation of the provisions of this Land Development Code, be reduced to writing and dated for purposes of taking an appeal pursuant to this section. This section shall not apply to final decisions of the Board of County Commissioners, the Planning Commission, the Zoning Board of Adjustment or any other Board formed and appointed under Article 11 of this Code.

b. A notice of appeal, stating the grounds for the appeal, along with the applicable filing fee established by resolution of the Board, must be filed with the secretary to the Zoning Board of Adjustment within thirty (30) days after the rendition of determination from which the appeal was filed. The Department, upon notification of the filing of the appeal, shall transmit to the Zoning Board of Adjustment all materials constituting the record upon which the action appealed was taken, along with a written report summarizing the determination made and the facts supporting the determination, including the applicable code and Comprehensive Plan provisions that were used in making the determination.

c. An appeal to the Zoning Board of Adjustment stays all work on the project and all proceedings in furtherance of the action being appealed, unless the Department certifies to the Board of Adjustment that, by reason of the facts stated in the certificate, a stay would cause imminent peril to life and property. In such cases proceedings or work shall not be stayed except by a restraining order granted by the Zoning Board of Adjustment or by a court of record. If a stay is issued, the issuing body shall immediately notify the Department.

d. The Zoning Board of Adjustment shall, within thirty (30) days after receipt of the notice of appeal, conduct its review. The Department shall insure that due notice of the time and place of the review is provided in the newspaper, by posting a sign and by mail in accordance with section 12.05 of this Article. At the review either party may appear in person or be represented by his agent or attorney.

e. The hearing shall be a *de novo* hearing, at which the Zoning Board of Adjustment will take evidence and testimony in accord with the standard hearing procedures outlined in section 12.07.

f. The Zoning Board of Adjustment, by majority vote of its members, may reverse, affirm or modify the order, requirement, decision or determination being appealed. The ruling of the Zoning Board shall be in writing and state the findings of fact and conclusions of law that support the Zoning Boards decision. Rulings of the Zoning Board shall become effective thirty (30) days after the date of such ruling or decision.

12.13.02 -- Appeal Of Board Decisions: The appeal of a final decision or determination of the Board of County Commissioners or any Board appointed under Article 11 shall be to the Circuit Court in accordance with Florida law. It shall be the responsibility of the

appellant to provide or obtain a verbatim transcript if one is desired by the appellant or required by the Circuit Court.

SECTION 12.14 -- SPECIAL PROVISIONS RELATING TO ADMINISTRATIVE, QUASI-JUDICIAL AND APPELLATE DECISION-MAKERS

12.14.01 -- Challenges to Impartiality: A party to an administrative, quasi-judicial or appellate hearing may challenge the impartiality of any member of the hearing body. The challenge shall state by affidavit facts relating to a bias, prejudgment, personal interest, or other facts from which the challenger has concluded that the decision-maker cannot participate in an impartial manner. Except for good cause shown, the challenge shall be delivered by personal service to the Department no less than forty-eight (48) hours prior to the time set for the hearing. The Department shall attempt to notify the person whose qualifications are challenged prior to the hearing. The challenge shall be incorporated into the record of the hearing.

12.14.02 -- Disqualification: No member of a hearing body shall hear or rule upon a proposal if:

a. Any of the following have a direct or substantial financial interest in the proposal: the decision-maker's or the decision-maker's spouse, brother, sister, child, parent, father-in-law, mother-in-law; any business in which the decision-maker is then serving or has served within the previous two years; or any business with which the decision-maker is negotiating for or has an arrangement or understanding concerning prospective partnership or employment; or

b. The decision-maker has a direct private interest in the proposal; or

c. For any other valid reason, the decision-maker has determined that he cannot impartially participate in the hearing and decision.

12.14.03 -- Participation By Interested Officers Or Employees: No officer or employee of the County who has a financial or other private interest in a proposal shall participate in discussions with or give an official opinion to the hearing body on the proposal without first declaring for the record the nature and extent of the interest.

12.14.04 -- Ex Parte Contacts: All citizen board meetings are open to the public. All boards established under this Section shall be subject to the *ex parte* disclosure requirements in section 12.07.02.j of this Article.

12.14.05 -- Involuntary Disqualification: A majority of the members of a hearing body present and voting may for reasons prescribed by this Article or other applicable law vote to disqualify a member who has refused to disqualify himself.

12.14.06 -- Rights Of Disqualified Member Of The Hearing Body:

a. An abstaining or disqualified member of a hearing body shall not be counted for purposes of forming a quorum.

b. A member who takes a position on the issue based upon personal interest may do so only by abstaining from voting on the proposal, vacating the seat on the hearing body, physically joining the audience, and making full disclosure of his status and position at the time of addressing the hearing body.

c. If the hearing body is reduced by abstentions or disqualifications to less than a quorum otherwise required by this Article, the quorum requirement may be reduced. However, if only two or fewer members are voting, then the matter shall be tabled until the next regular or specially called meeting of the hearing body when such delay creates the opportunity for other members of the hearing body to participate in the decision. Where there is no opportunity for a larger quorum, the matter shall be heard and decided by the Putnam County Board of County Commissioners.

d. A member absent during the presentation of evidence in a hearing may not participate in the deliberations or final decision regarding the matter of the hearing unless the member has reviewed the evidence received.

SECTION 12.15 -- ENFORCEMENT OF DEVELOPMENT PERMITS AND ORDERS

12.15.01 -- Definitions:

a. Minor Deviations: A minor deviation is a deviation from a Final Development Plan that falls within the following limits and that is necessary in light of technical or engineering considerations first discovered during actual development and not reasonably anticipated during the initial approval process:

   1. Alteration of the location of any road, walkway, landscaping or structure by not more than five (5) feet; or any such alteration in location that does not increase the density or intensity of the use or the proximity of the use to surrounding property owners, provided such changes meet the express conditions of the final development plan approval and the requirements of this Code.

   2. Reduction of the total amount of open space by not more than five (5) percent, or reduction of the yard area or open space associated with any single structure by not more than five (5) percent; provided that such reduction does not cause the required yard area or open space to be less than that required by this Code.

b. Major Deviations: A major deviation is a deviation other than a Minor Deviation from a Final Development Plan.

12.15.02 -- On-Going Inspections

a. Inspections of Subdivisions

1. Periodic inspections: The County may inspect the construction of improvements periodically and without prior notice to the developer or his designated representative. If at any time during construction, in the opinion of the County, construction is not proceeding according to the approved plans, the County shall immediately so notify the developer or his designated representative, and if necessary, issue a stop work order until the issue(s) are addressed. All deficiencies so noted shall be corrected prior to inspection of completed construction by the County.

2. Inspection of completed construction: The developer shall notify the County in writing upon completion of the construction of all improvements, and the land surveyor shall furnish the clerk of the circuit court his certificate that the "P.C.P.s" have been set and the date the "P.C.P.s" were set. Upon receipt of such notifications, the County shall conduct an inspection of the improvements and shall notify the developer in writing of any deficiencies noted during the inspection. The construction of improvements shall not be considered satisfactorily completed until all deficiencies are corrected to the satisfaction of the County.

3. Satisfactory completion of improvements: When it is determined by the County's designated representative that all construction has been completed in accordance with the approved plans and all "P.C.P.s" have been properly set, said representative shall, in writing, so notify the developer or the developer's designated representative and the clerk of the circuit court. Such notification shall constitute proof of satisfactory completion. The date of inspection of the completed improvements shall be indicated in the written notification and shall constitute the date of satisfactory completion.

4. One-year improvements maintenance period: For a period of one (1) year following the date of satisfactory completion, the developer of a Type I subdivision shall perform maintenance, at his/her expense, on the improvements in the subdivision.

5. Inspections during one-year improvements maintenance period: The Putnam County Public Works Department shall conduct periodic inspections of the improvements in Type I subdivisions during the first year following the date of satisfactory completion. Following each inspection, all deficiencies in need of correction shall be reported in writing to the developer or his designated representative. All such deficiencies shall be corrected in a timely manner so as to not result in additional damage to the improvements and so as not to result in a threat to the health, safety and welfare of the citizens of the County.

6. Final inspection: A final inspection of the improvements in Type I subdivisions shall be conducted by the Public Works Department just prior to the end of the improvements maintenance period. A written report describing the results of the inspection and listing all deficiencies, if any, shall be forwarded to the developer or his designated representative and to the Clerk of the Circuit Court. If the improvements are found to be in substantially the same condition as that which existed at the time of satisfactory completion, except for anticipated and acceptable wear, the one-year improvements maintenance period shall be considered satisfactorily completed.

7. Stop work orders: If at any time during the construction of improvements the Public Works Department or the Planning, Zoning and Building Department determines that construction is not proceeding according to the approved plans for the improvements, the relevant Department may order the construction to be stopped. Construction shall not resume except upon authorization of the department issuing the stop work order.

8. Tests: The County may conduct tests of construction materials and workmanship any time during the construction without prior consent of the developer or his designated representative.

9. Cease and desist from sale orders: If satisfactory completion of the construction of improvements is not achieved within the time limits set forth by the Board of County Commissioners, the County's designated representative shall so advise the clerk of the circuit court who shall so advise the developer and the board, and shall cause an automatic cease and desist from sale order to be placed in the public records thereby notifying all prospective purchasers that the developer has failed to construct the improvements according to the requirements of the board, thereby creating a caveat, and shall proceed under the board's guidance concerning the disposition of the collateral.

10. Adjustments; correction of defects: If a satisfactory one-year improvements maintenance period is not achieved, the Clerk of the Circuit Court shall so advise the developer and the Board of County Commissioners. The Board of County Commissioners may grant an extension of time during which all deficiencies must be corrected. If not corrected within the extended period, the County's designated representative shall so advise the clerk who shall so advise the developer and the Board of County Commissioners, and shall proceed under the board's guidance concerning the fate of the retained collateral.

b. Inspection Of All Other Developments: The Department shall implement a procedure for periodic inspection of development work in progress to insure compliance with the Development Permit which authorized the activity. Inspections related to permits issued under the jurisdiction of the Florida Building Code are under the purview of the Building Official and are not governed by these provisions.

1. Minor Deviations: If the work is found to have one or more Minor Deviations, the Department shall amend the Development Order to conform to actual development. The Department may, however, refer any deviation that significantly affects the development's compliance with the purposes of this Code to the Zoning Board of Adjustment for treatment as a Major Deviation.

2. Major Deviations: If the work is found to have one or more Major Deviations, the Department shall:

   (a) Where the development is a Class II or Class III development, place the matter on the next agenda of the Zoning Board of Adjustment, allowing for adequate notice, and recommend appropriate action for the Board to take.

   (b) In all cases, issue a stop work order and/or refuse to allow occupancy of all or part of the development if deemed necessary to protect the public interest. The order shall remain in effect until the Department determines that the deviations have been corrected or that work or occupancy may proceed pursuant to the decision of the Zoning Board of Adjustment.

   (c) Refer the matter to the Building Official if it appears that the Developer has committed violations within the jurisdiction of the Florida Building Code.

3. The Zoning Board of Adjustment shall hold a public hearing on the matter and shall take one of the following actions:

   (a) Order the developer to bring the development into substantial compliance (i.e. having no deviation or only Minor Deviations) within a reasonable period of time. The Development Order or Permit may be revoked if this order is not complied with.

   (b) Amend the Development Order or Permit to accommodate adjustments to the development made necessary by technical or engineering considerations first discovered during actual development and not reasonably anticipated during the initial approval process. Amendments shall be the minimum necessary to overcome the difficulty, and shall be consistent with the intent and purpose of the development approval given and the requirements of this Code.

   (c) Revoke the relevant Development Order or Permit based on a determination that the development cannot be brought into substantial compliance and that the Development Order or Permit should not be amended to accommodate the deviations.

4. Action Of Developer After Revocation Of Development Order: After a Development Order or Permit has been revoked, development activity shall not

proceed on the site until a new Development Order or Permit is granted in accordance with procedures for original approval.

12.15.03 -- Application For Certificate Of Occupancy: Upon completion of work authorized by a Development Permit or Development Order, and before the development is occupied, the developer shall apply to the Department for a Certificate of Occupancy. The Department shall inspect the work and issue the Certificate if found to be in conformity with the Permit or Order. The Department may require that as-built drawings be provided to the Department as a condition of issuance of the Certificate of Occupancy.

12.15.04 – Authority of the Building Official: This Article does not serve to define the manner in which the Building Official enforces the applicable building codes. The County Building Official shall carry out implementation of the applicable building codes and conduct inspections of on-going construction activities in accordance with his authority and the mandates of State law. The Department shall make every effort to achieve concurrent review by the Building Official in the administration and enforcement process outlined in this Article.

SECTION 12.16 -- PROCEDURE FOR AMENDING THIS CODE AND THE COMPREHENSIVE PLAN

12.16.01 -- State Law Controlling: The procedures in this part shall be followed in amending this Code and the Comprehensive Plan. This part supplements the mandatory requirements of State law, which must be adhered to in all respects.

12.16.02 -- Application: Any person, board, or agency may apply to the Department to amend this Code or the Comprehensive Plan in compliance with procedures prescribed by the Department. Formal application is not required for amendments recommended at the direction of the Department, any one of the citizen boards appointed under Article 11 or the Board of County Commissioners.

12.16.03 -- Recommendation Of Planning Commission: The Planning Commission shall hold a hearing on each application to amend this Code or the Comprehensive Plan and thereafter submit to the Board of County Commissioners a written recommendation which:

a. Identifies any provisions of the Code, Comprehensive Plan, or other law relating to the proposed change and describes how the proposal relates to them.

b. States factual and policy considerations pertaining to the recommendation.

c. In the case of proposed amendments to this Code, includes the written comments, if any, received from the Zoning Board of Adjustment.

12.16.04 -- Decision By County Commission: The County Commission shall hold a legislative hearing on the proposed amendment and may enact or reject the proposal, or enact a modified proposal that is within the scope of matters considered in the hearing.

12.16.05 -- Legislative Hearing: Each legislative hearing shall conform to the following requirements:

a. Notice: Notice that complies with the requirements of state law and section 12.06 of this Code shall be given. Where the proposed amendment is to the Future Land Use Map, such notice shall be by newspaper and mail. Posting of signs shall not be required except in the case of "small scale" comprehensive plan amendments, as that term is defined by State law.

b. Hearing: The public hearings shall as a minimum:

1. Comply with the requirements of state law, including holding two hearings where required.

2. Present the Department's analysis of the proposed decision.

3. Present the Department's summary of reports by other agencies.

4. Permit any person to submit written recommendations and comments before or during the hearing.

5. Permit a reasonable opportunity for interested persons to make oral statements.

c. Timing and scheduling: Hearings for Comprehensive Plan amendments shall be scheduled as follows:

1. Small-scale Comprehensive Plan amendments shall be filed and heard in accordance with deadlines and timing requirements of a rezoning under section 12.11.

2. Large scale Comprehensive Plan amendments or text amendments shall be filed and heard in accordance with the deadlines and timing requirements of a rezoning under section 12.11, and implementation of any such amendments shall be subject to the following:

(a) Approval of the amendments by the Board of County Commissioners will not become final until final approval has occurred through the State.

(b) Minimum submittal requirements under State law may require that two or more proposed amendments be bundled to together and sent to the State under one package. This may require that such proposed amendments be withheld from transmittal to the State for up to eight (8) months before being submitted to the State for final approval.

Where the applicant for the proposed amendment is someone other than the County, any such proposed amendments shall not be withheld from submittal to the State for more than eight (8) months. The deadline for applications to be included as part of the first submittal of the year shall be October 31st of the previous year, and the deadline for the second submittal shall be March 31st of the relevant year. Should the deadline date fall on the weekend or a holiday, the deadline shall fall on the first workday that follows.

SECTION 12.17 -- FEES

A schedule of fees shall be established by resolution of the Board of County Commissioners, and shall apply to all applications filed and actions taken under this Code. A receipt showing payment of the applicable fee shall accompany an application. Such fees are to offset costs incidental to administrative review and review by the various boards and do not include the cost of notice. Costs for newspaper advertisements, signs and mailed notices shall be paid for by the applicant for the action. The applicant shall be billed directly by the County for the costs of signs and mailed notices, which costs shall be paid prior to consideration of the matter so noticed.

SECTION 12.18 – CODE ENFORCEMENT

12.18.01 Violations. It is unlawful for any persons or persons to violate any of the provisions of this Code and related codes and ordinances referenced in sections 1.04 and 11.06.0.2.a of this Code, and any restrictions and limitations promulgated under the provisions of this Code and related codes and ordinances referenced in sections 1.04 and 11.06.0.2.a of this Code.

12.18.02 Penalties. Penalties shall be as allowed by Florida Law or as stated in this Code and related codes and ordinances referenced in sections 1.04 and 11.06.0.2.a of this Code.

12.18.03 Enforcement Procedures and Remedies

a. Upon determination by County staff responsible for enforcement that there is a violation, a written notice shall be sent to the owner of the property and/or building involved and to the person responsible for the violation. This notice shall include:

    1. The section of the code or ordinance being violated.

    2. An order to cease such violation.

    3. A list of remedial actions indicating the necessary steps to abate such violation.

    4. Information concerning penalties for violation of this ordinance.

b. To determine violations, staff responsible for enforcement is authorized to conduct inspections and obtain inspection warrants as provided by Chapter 933, Florida

Statutes.

c. If violations are not corrected in the time specified, the person or entity found to be in violation of this code may be prosecuted for said violation in the same manner as misdemeanors are prosecuted, as provided in section 125.69, Florida Statutes. Alternatively, violations may also be prosecuted as provided in section 11.06 of this Code, cited as provided in section 12.19.04 of this Code, or any other method provided by law.

d. Each day a violation continues after a notice shall constitute a separate violation and may be punished as set forth in the preceding paragraph.

e. Violations may be restricted by injunction, including a mandatory injunction, and otherwise abated in any manner provided by law, and such suit or action may be instituted and maintained by the Putnam County Board of County Commissioners, or by any person, firm or corporation, association or other group or body with standing to do so under the laws of Florida.

f. Reasonable costs, including attorney fees, incurred by the County or the Court in an enforcement action may be assessed against the landowner, violator, or both.

12.18.04 Citations

a. In addition to the proceedings before the Code Enforcement Board described Article 11, a code inspector may issue a citation to a person when, based upon personal investigation, the code inspector has reasonable cause to believe that the person has committed a civil infraction in violation of the codes or ordinances described in Section 11.06.02(a) of this Code, as follows:

1. Prior to issuing a citation, a code inspector shall provide notice to the person that the person has committed a violation of a code or ordinance and shall establish a reasonable time period within which the person must correct the violation. Such time period shall not exceed 30 days. If, upon personal investigation, the inspector finds that the person has not corrected the violation within the time period or if the violation is corrected and then recurs, the inspector may issue a citation to the person who has committed the violation. The inspector does not have to provide the person with a reasonable time period to correct the violation prior to issuing a citation and may immediately issue a citation if a repeat violation is found or if the inspector has reason to believe that the violation presents a serious threat to the public health, safety, or welfare, or if the violation is irreparable or irreversible.

2. A citation shall be in a form prescribed by the County and shall contain:

(a) The date and time off issuance,

(b) The name and address of the person to whom the citation is issued.

(c) The date and time the civil infraction was committed,

(d) The facts consisting reasonable cause.

(e) The number or section of the code or ordinance violated.

(f) The name and authority of the code inspector.

(g) The procedure for the person to follow in order to pay the civil penalty or to contest the citation.

(h) The applicable civil penalty if the person elects to contest the citation.

(i) The applicable civil penalty if the person elects not to contest the citation.

(j) A conspicuous statement that if the person fails to pay the civil penalty within the time allowed, or fails to appear in court to contest the citation, the person shall be deemed to have waived his right to contest the citation and that, in such case, judgment may be entered against the person for an amount up to the maximum civil penalty.

3. After issuing a citation to an alleged violator, a code inspector shall deposit the original citation (and one copy) with the county court, which shall hear the case.

b. It shall be unlawful for any person to hinder or prevent the performance of any act or duty authorized or required hereunder. Violation of any provision of this Ordinance is a civil infraction with a maximum fine of $500. Any person charged who does not wish to contest the citation shall pay, within 20 days of the date of receiving the citation, the sum of $250.00, either by mail or in person to the Clerk of the County Court. If the person cited follows the above procedure, he or she shall be deemed to have admitted the infraction and to have waived his or her right to a hearing.

c. Any person who wishes to contest the citation must, within 30 days of the date of receiving the citation, appear in person at the office of the Clerk of County Court and enter a not guilty plea. A hearing date will be set by the Court and the Clerk shall mail a Notice of Hearing. The County Judge, after the hearing, shall make a determination as to whether an infraction has been committed. If the commission of an infraction has been proven, the County Judge may impose a fine not to exceed $500.00 and may assess costs as appropriate.

d. Failure to pay the fine or to timely contest the citation shall result in an Order to Show Cause being issued by the Court. Said Order to Show Cause shall require the offender to appear before the County judge on a certain date to show cause why he

should not be held in contempt of court for failure to respond. The Court may fine the offender up to Five Hundred Dollars ($500.00) and may assess costs as appropriate.

e. Any person who willfully refuses to sign and accept a citation issued by a code inspector shall be guilty of a misdemeanor of the second degree, punishable as provided in s. 775.082 or s. 775.083, Florida Statutes.

f. The provisions of this section are additional and supplemental means of enforcement. Nothing contained in this section shall prohibit the County from enforcing its codes or ordinances by any other means, including, without limitation, a proceeding under Section 11.06 hereof or a court action.

EXHIBIT VI

PUTNAM COUNTY COMPREHENSIVE PLAN

FLU map date 5/6/05

PUTNAM COUNTY

COMPREHENSIVE

PLAN

ORDINANCE NO. 91-30, AS AMENDED BY ORDINANCE 93-19

AN ORDINANCE OF THE BOARD OF COUNTY COMMISSIONERS OF PUTNAM COUNTY, FLORIDA, AMENDING, REVISING AND REPLACING IN ITS ENTIRETY THE COMPREHENSIVE PLAN OF PUTNAM COUNTY, FLORIDA, WHICH WILL CONTROL FUTURE LAND USE, GUIDE PUBLIC FACILITIES, AND PROTECT NATURAL RESOURCES PURSUANT TO THE LOCAL GOVERNMENT COMPREHENSIVE PLANNING AND LAND DEVELOPMENT REGULATION ACT (CHAPTER 163, PART II, FLORIDA STATUTES), INCLUDING A FUTURE LAND USE ELEMENT; TRAFFIC CIRCULATION ELEMENT; HOUSING ELEMENT; SANITARY SEWER, SOLID WASTE, DRAINAGE, POTABLE WATER, AND NATURAL GROUNDWATER AQUIFER RECHARGE ELEMENT; CONSERVATION ELEMENT; RECREATION AND OPEN SPACE ELEMENT; INTERGOVERNMENTAL COORDINATION ELEMENT; AND CAPITAL IMPROVEMENTS ELEMENT; PROVIDING FOR SEVERABILITY; AND PROVIDING FOR AN EFFECTIVE DATE.

BE IT ORDAINED by the Board of County Commissioners of the County of Putnam, Florida:

WHEREAS, Chapter 125, Florida Statutes, empowers the Board of County Commissioners of the County of Putnam to prepare and enforce comprehensive plans for the development of the County; and

WHEREAS, Sections 163.3161 through 163.3215, Florida Statutes, the Local Government Comprehensive Planning and Land Development Regulation Act, empowers and requires the Board of County Commissioners of the County of Putnam to (a) plan for the County's future development and growth; (b) adopt and amend comprehensive plans, or elements or portions thereof, to guide the future growth and development of the County; (c) implement adopted or amended comprehensive plans by the adoption of appropriate land development regulations; and (d) establish, support, and maintain administrative instruments and procedures to carry out the provisions and purposes of the Act; and

WHEREAS, the Putnam County Planning Commission has been established pursuant to Putnam County Ordinance 76-02; and

WHEREAS, pursuant to Section 163.3174(1), Florida Statutes, the Board of County Commissioners of the County of Putnam by Ordinance 76-02, duly designated said Planning Commission as the Local Planning Agency for the unincorporated are of Putnam County; and

WHEREAS, the Putnam County Planning Commission has undertaken, prepared and approved on November 9, 1988, an evaluation and appraisal report, as specified in Section 163.3191, Florida Statutes, setting forth an assessment and evaluation of the Putnam County Comprehensive Plan, adopted April 13, 1982, and subsequently amended; and

Words underlined were added by Ordinance 93-19.

WHEREAS, the 1985 Growth Management Task Force and the Visions 2001 Committee assisted in formulating general goals, objectives and policies for the revised Comprehensive Plan; and

WHEREAS, the 1985 Growth Management Task Force addressed the needs and desires of County residents and made recommendations to meet those needs and desires; and

WHEREAS, the Putnam County Visions 2001 Committee was comprised of twenty-five (25) members representing a cross section of the County, and conducted six public hearings throughout the County to provide broad based public participation before developing a Visions statement with specific goals an objectives by topics of concern that the County should strive for by the year 2001; and

WHEREAS, supporting data and analysis documentation was prepared as background and justification for the revised comprehensive plan's goals, objectives, and policies; and

WHEREAS, the Putnam County Planning Commission, empowered by the above-cited laws and ordinances, and by Sections 163.3161 through 163.3215, Florida Statutes, prepared an amendment to the above-cited Putnam County Comprehensive Plan, altering it in its entirety to address more adequately and prepare for Putnam County's future development and growth; and

WHEREAS, the Putnam County Planning Commission has, in the preparatio of the amended version of the Putnam County Comprehensive Plan, caused the performance of necessary studies and surveys; the collection of relevant and appropriate data; the holding of numerous public hearings, public workshops, and public meetings; and has effectively provided for full public participation, broad dissemination of proposals and alternatives, opportunity for written comments, open discussion, communication programs, information services, and consideration and response to public and official comments; and

WHEREAS, pursuant to Section 163.3174, Florida Statutes, the Putnam County Planning Commission as the Local Planning Agency held several public hearings on the amended version of the Putnam County Comprehensive Plan with due public notice having been provided, and having reviewed and considered all comments received during the public hearings and having provided for necessary revisions, on March 13, 1991, March 27, 1991, and May 8, 1991, recommended the amended version of the Putnam County Comprehensive Plan to the Board of County Commissioners for approval; and

WHEREAS, pursuant to Section 163.3184, Florida Statutes, the Board of County Commissioners of the County of Putnam provided notice to real property owners, held several public workshop sessions, public meetings, and several public hearings on the amended version of the comprehensive plan with due public notice having been provided, to obtain public comment, and having considered all written and oral comments received during said workshops and

public hearings, including the data collection and analysis packages and recommendations of the Planning Commission, and having provided for necessary revisions on May 30, 1991, approved the comprehensive plan as amended in its entirety and the evaluation and appraisal report for transmittal to the State Land Planning Agency (Department of Community Affairs) for review and comment; and

WHEREAS, pursuant to Section 163.3184, Florida Statutes, the Board of County Commissioners of the County of Putnam, on June 21, 1991, transmitted ten (10) copies of the amended version of the comprehensive plan to the Department of Community Affairs as the State Land Planning Agency for written comment, and transmitted one (1) copy to each of the local government or governmental agencies in the State of Florida having filed with the Board of County Commissioners, a request for copy of or portions thereof the amended version of the comprehensive plan; and

WHEREAS, the Department of Community Affairs, by letter dated October 12, 1991, transmitted its objections, recommendations, and comments on the amended version of the comprehensive plan; and

WHEREAS, the amended version of the comprehensive plan was revised in view of objections, recommendations, and comments by the Department of Community Affairs; and

WHEREAS, pursuant to Section 163.3184, Florida Statutes, on December 18, 1991, and December 19, 1991, the Board of County Commissioners of the County of Putnam, held public hearings, with due public notice having been provided, on the amended version of the comprehensive plan; and

WHEREAS, the Board of County Commissioners of the County of Putnam further considered all oral and written comments received during public hearings, including the data collection and analyses packages, the recommendations of the Putnam County Planning Commission, and objections, recommendations and comments of the Department of Community Affairs; and

WHEREAS, in exercise of its authority, the Board of County Commissioners of the County of Putnam has determined it necessary and desirable to adopt the amended version of the comprehensive plan to preserve and enhance present advantages; encourage the most appropriate use of land, water and resources, consistent with the public interest; overcome existing disadvantages; and deal effectively with future problems that may result from the use and development of land within Putnam County.

NOW, THEREFORE, BE IT ORDAINED by the Board of County Commissioners of the County of Putnam, Florida, as follows:

SECTION 1. PURPOSE AND INTENT.

This Ordinance is enacted to carry out the purpose and intent of, and exercise the authority set out in the Local Government Comprehensive Planning and Land

... underlined were added by Ordinance 93-19.

SECTION 13. SEVERABILITY.

If any provision or portion of this Ordinance is declared court of competent jurisdiction to be void, unconstitutional, o unenforceable, then all remaining provisions and portions of thi Ordinance shall remain in full force and effect.

SECTION 14. COPY ON FILE.

(a) A certified copy of this Ordinance, as may be amended from t to time, shall be filed in the Office of the Clerk of Circui Court, and also, in the office of the Director of the Planni Zoning and Building Department of the County of Putnam. The Director shall also make copies available to the public for reasonable publication charge.

(b) For the purpose of publication of the Putnam County Comprehen sive Plan, a certified copy of the enacting ordinance and any amendments thereto shall be hereafter filed in the Putnam County Comprehensive Plan in the locations indicated therein. Amendments to any other portions of the Putnam County Compre- hensive Plan shall be incorporated within the specific text o the Putnam County Comprehensive Plan as amended.

SECTION 15. EFFECTIVE DATE.

This Ordinance shall be filed with the Office of the Secret State of Florida and shall immediately take effect upon receipt o official acknowledgement from the Secretary of State that said Ordinance has been filed with that office. For purposes of conformance with Florida Statutes, Section 163.3184, the effectiv date and time for the Putnam County Comprehensive Plan as represe in this Ordinance shall be 5:00 p.m., December 19, 1991.

DONE, ORDERED AND ADOPTED, with a quorum present and voting, the Board of County Commissioners of the County of Putnam, Florid this 19th day of December, A.D. 1991.

BOARD OF COUNTY COMMISSIONERS
PUTNAM COUNTY, FLORIDA

ATTEST:

By Andrew F. Nixon
Andrew F. Nixon, Chairman

Edward L. Brooks, Clerk of Courts

A. PUTNAM COUNTY COMPREHENSIVE PLAN
FUTURE LAND USE ELEMENT
GOALS, OBJECTIVES, AND POLICIES
ADOPTED AND EFFECTIVE 12/19/91, 5:00 P.M.

This section proposes objectives and policies, which will assist Putnam County Commissioners and residents in their efforts to guide and manage future development and growth. Further, the formulation and implementation of land use management plans, programs and projects to be used by Putnam County in attaining the stated goals are to be guided by the related planning policies.

GOAL 1 [9J-5006(3)a, FS 187.201(16)3]: Maintain and manage the County's natural resources and quality of life by establishing a pattern of development that is harmonious with the County's natural environment and provides a desired lifestyle for County residents.

Objective A.1.1 [9J-5.006(3)(b)1; FS 187.201(16)1, 5]: Upon Plan adoption, in order to achieve maximum utilization of land by reducing sprawl and thereby providing the opportunity for improved use of resources (both man-made and natural), the County shall coordinate future land uses with the appropriate topography, adjacent land uses, soil conditions and the availability of facilities and services through implementing the following policies:

Policy A.1.1.1 [Rev. 93-19; 9J-5.006(3)(c)1, 2 & 6; FS 187.201(25)2; identical to Policy E.1.2.17]: Putnam County shall use the latest version of the Flood Insurance Rate Maps provided by FEMA to determine the location of areas of special flood hazard which include the 100-year floodplain and floodways within the 100-year floodplain. The County shall provide specifications for regulating development and land use activities within these areas in its Land Development Regulations. The specifications will include the following which will be in effect upon Plan adoption:

A. Development and land use activities listed below shall be allowed in areas of special flood hazard and are subject to meeting the requirements provided in Sections B and C below.

1. New residential development shall be limited to the lowest density of the future land use category in which the property is located except for lots existing on December 19, 1991 at 5:00 p.m. which cannot meet this requirement. These lots will be considered lots of record and may be developed with one residence.

2. The following may be permitted in land use categories that allow such non-

residential development or land use activity:

a. Resource-based recreational facilities such as trails, boardwalks, piers, and boat ramps.

b. Water dependent components of commercial development such as port facilities, marinas, fish camps, and commercial fishing and shellfishing operations.

c. General Agriculture shall protect wetlands and water bodies by following BMPs as provided in Policies A.1.4.9 and E.1.3.5 and E.1.2.8.

d. Silviculture shall follow the most recent editions of the best management practices and management guideline manuals of the Florida Department of Agriculture and Consumer Services, Division of Forestry as provided in Policy A.1.4.9 and identical Policy E.1.3.5.

e. Mining activities shall be located a minimum of 500 feet from a water body as currently required by Section 24-5 of the County Zoning Ordinance 88-1, as amended by Ordinance 91-31.

f. Essential public services.

3. The following uses shall be prohibited in areas of special flood hazard:

a. Land uses requiring the storage, disposal, generation or use of hazardous waste.

b. Landfills

c. Underground storage of toxic materials

d. Auto salvage yards

e. Junkyards

B. The County will incorporate the existing Flood Control Ordinance 87-1 into the Land Development Regulations which includes the following requirements in compliance with FEMA regulations:

1. Residential structures in all areas of special flood hazard must be elevated one (1) foot above the base flood elevation.

2. Non-residential structures in all areas of special flood hazard must either be elevated one (1) foot above the base flood elevation or flood-proofed as certified by a registered professional engineer or architect.

3. New construction, fill, and other improvements are prohibited in the floodway unless certification (with supporting technical data) by a registered professional engineer is provided demonstrating that encroachments shall not result in any increase in flood levels of the base flood discharge.

C. Development in areas of special flood hazard shall comply with the following:

1. Applications for subdivision approval shall include a soils map indicating the location on the property of soil types identified by U.S. Soil Conservation Service descriptions and a map showing any portions of the property located in areas of special flood hazard as currently required by Ordinance 83-9, County Subdivision Regulations.

2. Development proposals for sites larger than 5 acres or greater than 50 lots shall provide base flood elevation data as currently required by federal regulations and County Flood Control Ordinance 87-1.

3. Dredging and filling of lands within floodplains shall not be permitted to adversely impact upon the natural functions of the 100-year floodplain, and shall be carried out, only in strict accordance with state or federal permits.

4. All proposed development shall be located or clustered on the portions of the site outside areas of special flood hazard wherever possible.

5. No hazardous waste shall be generated, stored, or disposed of within the 100-year floodplain;

6. Use of septic tanks in the 10-year floodplain and floodways will be restricted by the County Health Department in compliance with Sec. 10D-6.0471, FAC.

Policy A.1.1.2 [9J-5.006(3)(c)6; FS 187.201(25)(a)(b)2, 5]: Putnam County shall adopt a site plan review ordinance which requires that any required permits, from the appropriate county, state and federal agencies be secured prior to the issuance of a building permit.

Policy A.1.1.3 [9J-5.006(3)(c)3]: Developments which provide centralized water or sewer systems as a condition of development shall be required to ensure that the capacities of the proposed system are designed and constructed to meet the full build-out requirements of the project and provide a maintenance plan that will ensure operation of the system after completion of the project.

Policy A.1.1.4 [9J-5.006(3)(c)4]: The County Subdivision and Zoning Code shall be reviewed and where necessary revised to address drainage and stormwater issues as identified in the Public Facility Element; open space requirements as addressed in the Recreation and Open Space Element; and, on-site traffic flow and vehicle parking as addressed in the Traffic Circulation Element.

A. Drainage and stormwater management will identify interim measures to be adopted until a County-wide Stormwater Master Drainage Plan is adopted.

B. Open space requirements will meet the LOS adopted in the Recreation and Open Space Element.

C. On-site traffic will, at a minimum, require that adjacent commercial, high density/medium density (or combinations thereof) properties provide interconnections to reduce requirements for road trips.

D. Parking requirements shall be specified in terms of number of parking space units per type and size of facility.

Policy A.1.1.5 [9J-5.006(3)(c)1]: The County shall review its zoning code to ensure that current signage regulations preserve the rural character of Putnam County. Where, through citizen participation, it is determined that current signage regulations regarding location, size, height, motion, etc., should be revised, changes to the current regulation shall be discussed in public hearing and proposed changes considered for adoption by the Board of County Commissioners.

Objective A.1.2 [9J-5.006(3)(b)2]: Upon Plan adoption, Putnam County shall provide incentives for the redevelopment and renewal of blighted properties through implementing the following policies:

Policy A.1.2.1 [9J-5.006(3)(c)1,2,4]: Land Development Regulations shall be updated which require the upgrading or revitalization of deteriorating or incompatible commercial sites, in the few instances where the need may be found to exist, through methods such as provision of common parking areas, store front renewal, sign control. The expansion or replacement of commercial uses which are inappropriately located or have adverse impact on surrounding uses shall be prohibited through implementing the land use spatial distribution as depicted on the County FLUM and the nonconforming land use construction restrictions of the County Zoning Code.

Policy A.1.2.2 [9J-5.006(3)(c)7]: The County shall adopt Land Development Regulations which continue to provide for the Southern Building Code Congress Standard Building Code and Standard Housing Code as a minimum housing code. The minimum housing code shall be utilized to upgrade existing housing within designated revitalization areas. Designation of proposed revitalization sites will be made subsequent to area housing surveys conducted by the County.

Objective A.1.3 [9J-5.006(3)(b)3; 187.201(16)(a)]: Upon plan adoption, Putnam County shall act to eliminate or reduce land uses inconsistent with the uses identified on the Future Land Use Map and associated adopted Goals, Objectives and Policies through implementing the following policies:

Policy A.1.3.1 [9J-5.006(3)(c)2,7]: Land Development Regulations, specifically the County Zoning Code, shall be revised to reinforce its current provisions regarding the elimination of nonconforming land uses by expanding the definition of nonconforming land uses to include all uses which are inconsistent with the Future Land Use Map 2001 or cannot be made compatible with adjacent land uses. The requirements of this provision shall be enforced upon application for building permits to repair or improve such structures.

Policy A.1.3.2 [9J-5.006(3)(c)2,7]: Land Development Regulations shall be adopted which require adequate buffering and separation between land uses of different densities or intensities of use so as to minimize interference between uses equal to the minimum required adjacent yard distance of the less intense land use and a wall or opaque shrubbery barrier at least six feet in height.

Policy A.1.3.3 [Rev. 93-19; 9J-5.006(3)(c)1]: The County's Subdivision Regulation and Zoning Code shall be reviewed and where necessary revised to ensure that land use categories are regulated in accordance with the Future Land Use Map and that controls are

adopted for the regulation of subdivisions and the use of land in areas of special flood hazard consistent with the requirements of Policy A.1.1.1 and identical Policy E.1.2.17.

Objective A.1.4 [9J-5.006(3)(b)4; 187.201(23)(a)(b)1]: Upon plan adoption Putnam County shall manage natural resources through implementing the following policies.

Policy A.1.4.1 [9J-5.006(3)(c)7]: Putnam County shall assume an active role in agricultural protection by making available to landowners information regarding the benefits that may be derived through participation in established agricultural land protection programs such as Greenbelt taxing districts, and ensuring that parcels of land are being used in accordance with the land use designations as shown on the Future Land Use Map.

Policy A.1.4.2 [9J-5.006(3)(c)1,3]: Land development regulations shall be adopted which will prevent development which removes agricultural lands from production before development pressure warrants such land use changes. In particular, land uses shall be administered in strict conformance with the Future Land Use Map which maintains silviculture land use at 1 unit per 10 acres to 1 unit per 20 acres; agricultural land use in primarily 1 unit per 5 acres to 1 unit per 10 acres; and rural residential land use at 1 unit per acre to 1 unit per 5 acres; within the requirements of concurrency as defined in the Concurrency Management Plan and 9J-5.0055(2)(a), (b), and (c).

Policy A.1.4.3 [9J-5.006(3)(c)2]: Residential, commercial or industrial uses shall not be permitted as a mixed use in the agricultural area where such uses will adversely impact on the agricultural productivity of the area. For example: Community reaction to agriculture odors and noises or livestock reaction to development noises and activities that could result in litigation requiring reduced levels of agricultural activity.

Policy A.1.4.4 [9J-5.006(3)(c)2,6]: Public water well fields shall be protected from adverse impacts of development by requiring a 200-foot arbitrary fixed buffer of nonpolluting land uses Radii Zone around each well field as described in the SJRWMD publication "Guide to Groundwater Protection in Florida", Volume 1, October 1990, page 55. When sufficient data are provided by the SJRWMD and SRWMD to more accurately calculate appropriate buffer zones around well heads based upon Time-of-Travel (TOT), these 100-foot zones shall be expanded or contracted as the calculation may dictate.

Policy A.1.4.5 [9J-5.006(3)(c)2,6]: Residential water wells shall be protected from the use or storage of hazardous materials, petroleum and petroleum products as defined in SARA, Title III (Consolidated List of Hazardous Materials) within the Reasonable Fixed Radius

Zone through the Land Development Regulations.

Policy A.1.4.6 [9J-5.006(3)(c)4]: The County shall require paved roads in new residential subdivisions to reduce soil erosion.

Policy A.1.4.7 [9J-5.006(3)(c)6]: Land development regulations shall specify on-site erosion control practices during new construction which will reduce soil erosion from wind and water. Controls shall include such techniques as spreading hay or other mulch materials over potential erosion areas, lining drainage swales with sand, sod or burlap, spraying non-polluting binding materials over the site, etc.

Policy A.1.4.8 [Rev. 93-19; 9J-5.006(3)(c)6; identical to Policy E.1.3.5]: The County shall inform the Division of Forestry, the Department of Environmental Protection and the Agricultural Soil and Water Conservation District of violations to ensure that agriculture (row crops, ranching, etc.) and silviculture follow Best Management Practices (BMPs) as contained in the following:

A. Pages 7-6 through 7-13 of the "Florida Non-Point Source Management Plan, Volume Two", May 1989, DER, applicable to general agriculture.

B. "Silviculture Best Management Practices Manual", (Revised May 1990, Florida Department of Agriculture and Consumer Services, Division of Forestry); and "Management Guidelines for Forested Wetlands in Florida" (December 1988, Florida Department of Agriculture and Consumer Services, Division of Forestry and Florida Forestry Association), applicable to silviculture. Upon implementation by the Department of Agriculture and Consumer Services, silviculture shall follow BMPs provided in the 1993 revision of "Silviculture Best Management Practices Manual" which will replace the May 1990 revision of the same document and will also replace "Management Guidelines for Forested Wetlands in Florida" (December 1988, Florida Department of Agriculture and Consumer Services, Division of Forestry and Florida Forestry Association).

Policy A.1.4.9 [Rev. 93-19; 9J-5.006(3)(c)6; identical to Policy E.1.3.5]: The County shall inform the Division of Forestry, the Department of Environmental Protection and the Agricultural Soil and Water Conservation District of violations to ensure that agriculture (row crops, ranching, etc.) and silviculture follow Best Management Practices (BMPs) as contained in the following:

A. Pages 7-6 through 7-13 of the "Florida Non-Point Source Management Plan, Volume Two", May 1989, DER, applicable to general agriculture.

Policy A.1.4.10 [9J-05.006(3)(c)2]: Reclamation of mined lands shall be subject to applicable state regulations.

Policy A.1.4.11 [Rev. 93-19; 9J-5.006(3)(c)4 & 6; identical to Policy E.1.2.5]: The County shall adopt and enforce regulations that require the preservation or restoration of a vegetated upland buffer or filter for any waterfront development. The buffer strip shall provide for sheet flow of the surface runoff, and shall be a minimum of 50 feet in width, except as provided below. Development and land use activities excepted below in Sections B. through G. shall be allowed only when permitted by the land use designation; site characteristics are such that impacts cannot be avoided; the impacts are limited to the minimum necessary to allow the permitted use of the property; and the site development or use is in compliance with HRS, DEP, WMD, and COE regulations for permitting and mitigation.

A. It is certified that either the existing condition or a buffer has been established which meets the USDA SCS specifications in the Code 393 Field Office Technical Guide, Florida Supplement dated January, 1988, for a minimum design width of:

1. 15 feet in areas of less than four and one-half percent slope where the vegetation is ground cover species or mixed woody (trees and shrubs) and ground cover species.

2. 25 feet in areas of four and one-half percent or greater slope where the vegetation is ground cover species or mixed woody (trees and shrubs) and ground cover species.

3. 30 feet in areas of less than four and one-half percent slope where the vegetation is only woody species (trees and shrubs).

4. 50 feet in areas of four and one-half percent or greater slope where the vegetation is only woody species (trees and shrubs).

B. Resource-based recreational facilities such as trails, boardwalks, piers, and boat ramps.

C. Water dependent components of commercial development such as port facilities, marinas, fish camps, and commercial fishing and shellfishing operations.

D. General Agriculture shall follow BMPs as provided in Policies A.1.4.9 and E.1.3.5 and E.1.2.8.

E. Silviculture shall follow the most recent editions of the best management practices and management guideline manuals of the Florida Department of Agriculture and Consumer Services, Division of Forestry as provided in Policy A.1.4.9 and identical Policy E.1.3.5.

F. Mining activities shall be located a minimum of 500 feet from a water body as currently required by Section 24-5 of the County Zoning Ordinance 88-1, as amended by Ordinance 91-31.

G. Essential public services.

Policy A.1.4.12 [Rev. 93-19; 9J-5.006(3)(c)4&6; identical to Policy E.1.2.18]: Subsequent to Plan adoption development in and adjacent to wetland and water bodies shall be subject to the following:

A. All applicable state and federal regulations for permitting and mitigation must be met prior to the County issuing any construction permits. This will be enforced through the site plan review process required by Policy A.1.1.2.

B. The County through its subdivision regulations shall require all new lots to have adequate area to meet the 20 foot wetland buffer requirements of Policy D.1.6.4 and the water body buffer requirements of Policy A.1.4.12 and identical Policy E.1.2.5. In addition if the new lot will be serviced by an onsite septic system it must comply with the following:

1. The usable land requirements and wetland and water body setbacks of Chapter 10D-6 of the Florida Administrative Code must be met.

2. If the new lot is within 500 feet of the mean or ordinary high water line of a water body, it must have 100 feet of frontage along the water body; and when developed, the septic system must meet the special design standards currently provided in Ordinance 87-5 which will be incorporated into the land development regulations and the system must be set back 100 feet from the mean or ordinary high water line.

C. The County shall ensure the protection of wetlands by requiring structures and other site improvements to be located outside of wetlands and the 20 foot buffer required by Policy D.1.6.4 except as provided below. All exceptions are applicable only when the land use designation on the property permits the development or land use activity listed below; site characteristics are such that wetland impacts cannot be avoided; the impacts are limited to the minimum necessary to allow the permitted use of the property; and the site development or use complies with HRS, DEP, WMD, and COE regulations for permitting

and mitigation.

1. Residential lots of record existing on, or before the adoption of the comprehensive plan on December 19, 1991 at 5:00 p.m. which do not contain sufficient uplands to permit development of a residence without encroaching into wetlands, may be developed with one residential dwelling.

2. Resource-based recreational facilities such as trails, boardwalks, piers, and boat ramps.

3. Water dependent components of commercial development such as port facilities, marinas, fish camps, and commercial fishing and shellfishing operations.

4. General Agriculture shall maintain the natural hydrology and function of wetland areas in accord with the most recent version of USDA SCS guidelines established in the 1985 Food Securities Act and amended in 1990; and by following BMPs as provided in Policies A.1.4.9 and E.1.3.5 and E.1.2.8.

5. Silviculture shall follow the most recent editions of the best management practices and management guideline manuals of the Florida Department of Agriculture and Consumer Services, Division of Forestry as provided in Policy A.1.4.9 and identical Policy E.1.3.5.

6. Mining activities shall be located a minimum of 500 feet from a water body as currently required by Section 24-5 of the County Zoning Ordinance 88-1, as amended by Ordinance 91-31.

7. Essential public services.

D. Transfer of density from wetlands to the upland portion of a site shall be permitted through approval of appropriate Planned Unit Development (PUD) Zoning applications and by establishing flexibility in the lot area requirements in the various zoning districts established in the Land Development Regulations. The wetland area will be included in calculating the gross density applicable to a property.

E. Wetland and water body protection shall be considered when the County evaluates variance requests for setback modifications that would move development away from wetlands and water bodies.

F. Development in the area adjacent to water bodies shall be limited according to vegetated buffer and use restrictions of Policy A.1.4.12 and the 50 foot building setback required by Policy A.1.4.17. Development in water bodies shall be allowed only for uses permitted by DEP and COE.

Policy A.1.4.13 [9J-5.006(3)(c)4]: By June 1992, the County shall adopt an interim storm water management ordinance which will regulate the quality and quantity of stormwater run-off for all development. Upon plan adoption, the criteria contained in Policy D.1.2.3 shall be enforced.

Policy A.1.4.14 [Rev. 98-02; 9J-5.006(3)(c)4]: By 1999, the County shall initiate the development of a Master Stormwater Management Plan.

Policy A.1.4.15 [9J-5.006(3)(c)4]: By June 1992, the County shall adopt Land Use Regulations which endorse current state codes, Chapter 40C-40,025, FAC and Rule 17-302.55, FAC, for maintaining the quality of surface waters in rivers, streams and lakes.

Policy A.1.4.16 [9J-5.006(3)(c)4]: Riverfront and lakefront development shall be designed so as not to affect the water quality of adjacent waters. Design standards shall include: density; set back of sanitary sewer drainfield (septic tank) from the mean high water line or the ordinary water line and a 50-foot set-back required between building site and water body, as well as the requirements of Policy A.1.4.12.

Policy A.1.4.17 [9J-5.006(3)(c)6]: The County shall, through available state and federal programs, promote the acquisition of floodplains along the St. Johns and Ocklawaha Rivers.

Objective A.1.5 [9J-5.006(3)(b)4; FS 187.201(16)(a)(b)5]: The County shall adopt Land Development Regulations, and upon plan adoption, shall implement the following policies, which provide incentives to maintain and restore historically significant areas and structures within Putnam County.

Policy A.1.5.1 [9J-5.006(3)(c)8]: Significant historic resources shall be protected through designation as historic sites by the state or County. Such designated sites shall require plan review procedures for proposed alterations or remodeling that will ensure through the permitting process that the proposed activity will not degrade or destroy the historical/archaeologic significance of the site.

Policy A.1.5.2 [9J-5.006(3)(c)8]: Adaptive reuse of historic structures shall be given

priority over actions that would harm or destroy the historic value of such resources. Adaptive reuse shall include the permitting of historic structures to be remodeled or rehabilitated for a use that would be nonconforming to adjacent properties so long as the remodeling/ rehabilitation does not affect the historical significance of the structure and the proposed use is or can be made compatible with adjacent land uses.

Policy A.1.5.3 [9J-5.006(3)(c)8]: Proposed development on adjacent properties shall be reviewed at the time of issuing a building permit to determine its potential impacts on known historic sites. Where such construction or other development activity may impact adversely on a historic/archaeologic site, the proposed development must provide sufficient buffering (spatial separation, physical wall, or other method approved by the Board of County Commissioners) before a permit is issued.

Policy A.1.5.4 [9J-5.006(3)(c)8]: The County shall seek funding and technical support from the Department of State, Division of Historic Resources to review and conduct further field surveys to identify any additional historical/archaeological sites that may exist in Putnam County.

Policy A.1.5.5 [Added by Ord. 2000-25] The County shall attempt to preserve and enhance the character of the Melrose Historic District.

a) The Melrose Historic District shall include the area designated in Figure A-16.

b) Commercial uses in the historic district shall be of the type and variety that will not generate large amounts of traffic, have outside storage, or adversely impact the architectural character of any historic building.

c) New development within the boundaries of the Historic District shall be of an architectural style that is compatible with the architecture in the District.

d) There shall be an Historic District Protection Zone as defined by Figure A-17.

e) Old growth trees shall be protected within the historic district boundaries. Old growth trees will be any tree that is over fifteen (15) years old.

Objective A.1.6 [9J-5.006(3)(b)7]: Upon plan adoption, Putnam County shall discourage urban sprawl by immediately implementing the following policies. Further, Land Development Regulations shall also be adopted that implement the following policies:

Policy A.1.6.1 [9J-5.006(3)(c)]: Provide incentives which direct development infilling in areas of the County which have in place infrastructure facilities with excess LOS capacities. These incentives may include, but not be limited to, the following examples: providing a greater density of development through special use designations under the County Zoning Code or providing for a 1-year extension in the construction of recreational facilities as provided in 9J-5.0055(2)(b) 1 and 2.

Policy A.1.6.2 [9J-5.006(3)(c)3]: Minimize scattered and highway strip commercial by creating commercial areas allocating development to occur in a planned and compact manner through in-filling and within designated commercial nodes, neighborhood commercial and rural centers as indicated in Policy A.1.9.3.

Policy A.1.6.3 [9J-5.006(3)(c)3]: Promote development in areas where infrastructure already satisfies required levels of service or are planned to meet the requirements of the County Concurrency Management Plan and: for potable water, sewer, solid waste, and drainage meet the provisions of 9J-5.0055(2)(a); for parks and recreation meet the provisions of 9J-5.0055(2)(b); and for roads meet the provisions of 9J-5.0055(2)(c), FAC.

Objective A.1.7 [9J-5.006(3)(b)8; FS 187.201(17)(a)]: Upon plan adoption, through the development review process Putnam County shall ensure the availability of suitable land for utility facilities necessary to support proposed development.

Policy A.1.7.1 [9J-5.006(3)(c)4]: Criteria to be used in approving proposed development shall be: access to highways, specific parking-space requirements, levels of buffering of the project. Specific criteria shall be as contained in Policies: A.1.3.2, B.1.4.4 and B.1.4.5 and other criteria identified in the adopted Comprehensive Plan and Land Development Regulations.

Policy A.1.7.2 [9J-5.006(3)(c)3]: Commercial development adjacent to Highway and Interstate roadways and interchanges shall provide sufficient depth to allow adequate set back distances and clearance to access ramps as defined by FDOT to accommodate possible future roadway improvements.

Policy A.1.7.3 [9J-5.006(3)(c)3; FS 187.201(16)(a) & (b)4]: Land suitable for utility facilities to support future development, when identified, shall be designated on the Future Land Use Map and a means shall be established for acquiring the sites through the development review process.

Objective A.1.8 [9J-5.006(3)(b)9; FS 187.201(16)(b)3]: Putnam County's Land Development Code shall contain provisions for mixed land use development techniques.

Policy A.1.8.1 These mixed land use development techniques shall promote the following:

A. Flexibility and efficiency in site design to reduce infrastructure costs, improve interior circulation patterns, and promote open space;

B. Development that is adapted to natural features in the landscape such as wetlands, vegetation and habitat, and which avoids the disruption of natural drainage patterns;

C. A mix of land use to promote convenience in the location of related uses and to reduce travel congestion and costs.

Policy A.1.8.2 [9J-5.006(3)(c)5]: The Land Development Code shall include provisions for a Planned Unit Development zoning district as described in Policy A.1.9.3.C.

Policy A.1.8.3 [9J-5.010(3)(b)1,3]: The Land Development Code shall provide definite benefits for developer application of innovative and efficient land development techniques. For example, additional Density bonuses shall be allowed for developments which integrate into their design features of significant public benefit, which may include, but shall not be limited to, bonuses for the provision of conventional single and multi-family low and moderate income housing units, the installation or extension of potable water and/or sanitary sewer systems, and the allowance of open space or the preservation of habitat which supports an endangered or threatened species.

Objective A.1.9 [FS 187.201(2)(b)2]: The County shall enforce the following policies supporting this objective and shall manage future growth and development through the preparation, adoption, implementation and enforcement of future land use categories and land development regulations.

Policy A.1.9.1: Adopt land development regulations that shall contain specific and detailed provisions required to implement the adopted Comprehensive Plan.

Policy A.1.9.2 [9J-5.006(3)(c)7]: Land development regulations shall be adopted which address the location and Intensity of land uses in accordance with the Future Land Use Map and the policies, guidelines and standards which describe the categories, Densities and Intensities of land use contained in this Element.

Policy A.1.9.3 [Rev. 93-19; 9J-5.006(3)(c)7]: Land development regulations adopted to implement this Plan shall be based on the intent of the following future land use category descriptions, guidelines and standards:

A. Future Land Use Categories: The Future Land Use Map depicts generalized future land use categories. The future land use categories outline the general direction of future development and redevelopment of the County in the future. Each category permits a range of land uses, Densities and Intensities that will be implemented through specific and detailed standards provided in the County's land development regulations. The intent of the future land use descriptions is to provide a general explanation of the types of development patterns, forms, and typical uses found in each of the future land use categories. Each of the future land use categories include standards that establish maximum thresholds of Density and Intensity of use that may vary and be further regulated only with a more restrictive standard through the various zoning districts specified in the implementing land development regulations.

1. Urban Service Area: The Urban Service Area category on the Future Land Use Map consists of areas where urban type infrastructure has been provided or will be provided in the next 10 years. Urban type infrastructure includes central water and sewer systems, storm water management systems, and major paved streets or highways. The types of land uses allowed in this future land use category, and guidelines and standards applicable to them are listed below.

a. Future development will be encouraged to locate in these areas as infill where urban type infrastructure exists to support such uses.

b. Property currently zoned for agriculture is considered a "holding" zone and may be used as allowed by the agricultural zoning district. Rezoning to agricultural districts shall not be allowed without a future land use map amendment to an appropriate future land use designation. Agricultural activities must comply with the best management practices provided for in Policy A.1.4.9 and identical Policy E.1.3.5.

c. Residential development shall be allowed within a maximum Density range of one dwelling unit per acre up to a maximum of 9 dwelling units per acre as determined by utilizing the point score criteria provided in Policy A.1.9.4. Residential Density will not exceed two (2) dwelling units per acre without a community scale potable water and/or sanitary sewer system, consistent with applicable state law. Housing types and lot sizes are subject to further regulation by

residential zoning district standards provided in the land development code.

d. Neighborhood Commercial development and Community Commercial development are permitted. The site and location standards for Commercial Uses in Policy A.1.9.3.A.5.c. under the Commercial Future Land Use category shall apply. In addition, future Commercial Uses will be discouraged from locating in a strip pattern along roadways. Commercial acreage in each distinct Urban Service Area shall not exceed 25 percent of its total land area without a comprehensive plan amendment to designate the area as Commercial future land use. Types of Commercial Uses and site development standards are subject to further regulation by commercial zoning district standards provided in the land development code.

e. Industrial Uses are permitted. Heavy and light industrial are both allowed in accordance with the requirements for Industrial Uses in Policy A.1.9.3.A.6.d. under the Industrial Future Land Use Category. Industrial acreage in each distinct Urban Service Area shall not exceed 20 percent of its total land area without a comprehensive plan amendment to designate the area as Industrial future land use.

f. Community Facilities and Services Types 1, 2, and 3 are permitted subject to compliance with standards provided in the land development code. Community Facilities and Services shall be located on sites that are accessible to their intended service area and do not require significant non-residential vehicular traffic to pass through established neighborhoods. Community Facilities and Services acreage in each distinct Urban Service Area shall not exceed 15 percent of its total land area without a comprehensive plan amendment to designate the area as Public Facilities future land use.

g. Activity-Based and resource-based recreational uses are permitted subject to compliance with standards provided in the land development code.

h. The maximum Floor Area Ratio allowed for non-residential uses is 1:1. The maximum Impervious Surface coverage for non-residential uses is 85 percent. The maximum Floor Area Ratio for residential uses is 0.7:1. The maximum Impervious Surface coverage for residential uses is 50 percent. The actual maximum Floor Area Ratio and Impervious Surface coverage allowed for any land use may vary, but will not exceed the above standards, as determined by the applicable zoning district standards.

2. Urban Reserve: The Urban Reserve category on the Future Land Use Map consists of areas in close proximity to municipalities or adjacent to designated Urban Service areas Many of these areas have not been provided with the full range of urban type infrastructure. Future development in this category is expected to be at a lower Density and Intensity of use than the Urban Service designations. The types of land uses allowed in this future land use category, and guidelines and standards applicable to them are listed below.

a. Property currently zoned for agriculture is considered a "holding" zone and may be used as allowed by the agricultural zoning district. Rezoning to agricultural districts shall not be allowed without a future land use map amendment to an appropriate future land use designation. Agricultural activities must comply with the best management practices provided for in Policy A.1.4.9 and identical Policy E.1.3.5.

b. Residential development shall be allowed within a maximum Density range of one dwelling unit per acre up to a maximum of 4 dwelling units per acre as determined by utilizing the point score criteria provided in Policy A.1.9.4. Residential Density will not exceed two (2) dwelling units per acre without a community scale potable water and/or sanitary sewer system, consistent with applicable state law. Housing types and lot sizes are subject to further regulation by residential zoning district standards provided in the land development code.

c. Neighborhood Commercial development and Community Commercial development are permitted. The site and location standards for Commercial Uses in Policy A.1.9.3.A.5.c. under the Commercial Future Land Use category shall apply. In addition, future Commercial Uses will be discouraged from locating in a strip pattern along roadways. Commercial acreage in each distinct Urban Reserve Area shall not exceed 20 percent of its total land area without a comprehensive plan amendment to designate the area as Commercial future land use. Types of Commercial Uses and site development standards are subject to further regulation by commercial zoning district standards provided in the land development code.

d. Industrial Uses are permitted. Heavy and light industrial are both allowed in accordance with the requirements for Industrial Uses in Policy A.1.9.3.A.6.d. under the Industrial Future Land Use Category. Industrial acreage in each distinct Urban Service Area shall not exceed 15 percent of its total land area without a comprehensive plan amendment to designate the area as Industrial future land use.

e. Community Facilities and Services Types 1, 2, and 3 are permitted subject to compliance with standards provided in the land development code. Community Facilities and Services shall be located on sites that are accessible to their intended service area and do not require significant non-residential vehicular traffic to pass through established neighborhoods. Community Facilities and Services acreage in each distinct Urban Service Area shall not exceed 10 percent of its total land area without a comprehensive plan amendment to designate the area as Public Facilities future land use.

f. Activity-Based and resource-based recreational uses are permitted subject to compliance with standards provided in the land development code.

g. The maximum non-residential Floor Area Ratio is 0.85:1. The maximum Impervious Surface coverage for non-residential uses is 80 percent. The maximum residential Floor Area Ratio is 0.5:1. The maximum Impervious Surface coverage for residential uses is 50 percent. The actual maximum Floor Area Ratio and Impervious Surface coverage allowed for any land use may vary, but will not exceed the above standards, as determined by the applicable zoning district standards.

3. Rural Center: The Rural Center category on the Future Land Use Map consists of areas in the County that are focal points of existing and future development in the rural areas of the County. Rural Centers typically include some or all of the following: the intersection of two collector and/or arterial roadways; commercial buildings; existing public and community buildings; and developing subdivisions. For the more defined and settled Rural Centers, the boundaries are drawn around locations of existing development and shaped by the presence of natural or man-made features that restrict development. It is intended that Rural Centers include a mix of uses located in a compact, contiguous pattern that support the surrounding rural lands. The Rural Centers that are not clearly defined are depicted on the map as a circle with a radius of fifteen hundred feet drawn around the road intersection. The types of land uses allowed in this future land use category, and guidelines and standards applicable to them are listed below.

a. Property currently zoned for agriculture is considered a "holding" zone and may be used as allowed by the agricultural zoning district. Rezoning to agricultural districts shall not be allowed without a future land use map amendment to an appropriate future land use designation. Agricultural activities must comply with the best management practices provided for in Policy A.1.4.9 and identical Policy E.1.3.5.

b. Residential development shall be allowed within a maximum Density range of one dwelling unit per acre up to a maximum of 4 dwelling units per acre. Residential development in excess of 2 dwelling units per acre shall be serviced by a central, community scale potable water and/or sanitary sewer system, consistent with applicable state law. Housing types and lot sizes are subject to further regulation by residential zoning district standards provided in the land development code.

c. Neighborhood Commercial development and Community Commercial development are permitted. The site and location standards for Commercial Uses in Policy A.1.9.3.A.5.c. under the Commercial Future Land Use category shall apply. In addition, future Commercial Uses will be discouraged from locating in a strip pattern along roadways. Commercial acreage in each distinct Rural Center shall not exceed 35 percent of its total land area without a comprehensive plan amendment to designate the area as Commercial future land use. Types of Commercial Uses and site development standards are subject to further regulation by commercial zoning district standards provided in the land development code.

d. Industrial Uses are permitted. Heavy and light industrial are both allowed in accordance with the requirements for Industrial Uses in Policy A.1.9.3.A.6.d. under the Industrial Future Land Use Category. Industrial acreage in each distinct Rural Center shall not exceed 25 percent of its total land area without a comprehensive plan amendment to designate the area as Industrial future land use.

e. Community Facilities and Services Types 1, 2, and 3 are permitted subject to compliance with standards provided in the land development code. Community Facilities and Services shall be located on sites that are accessible to their intended service area and do not require significant non-residential vehicular traffic to pass through established neighborhoods. Community Facilities and Services acreage in each distinct Rural Center shall not exceed 25 percent of its total land area without a comprehensive plan amendment to designate the area as Public Facilities future land use.

f. Activity-Based and resource-based recreational uses are permitted subject to compliance with standards provided in the land development code.

g. The maximum non-residential floor area ratio is 0.7:1. The maximum impervious surface area for non-residential uses is 75 percent. The maximum residential floor area ratio for residential uses is 0.5:1. The maximum impervious surface area for residential uses is 50 percent. The actual maximum floor area ratio and impervious

surface coverage allowed for any land use may vary, but will not exceed the above standards, as determined by the applicable zoning district standards.

4. **Rural Residential:** The Rural Residential category on the Future Land Use Map consists of areas located adjacent to municipalities, and areas designated Urban Service, Urban Reserve, and Rural Center; areas interspersed within the active agricultural areas; and areas around water bodies. In certain locations the Rural Residential category provides a transition of land use, Density and Intensity between the rural areas designated Agriculture I or II, and the municipalities and areas designated Urban Service, Urban Reserve, and Rural Center. The types of land uses allowed in this future land use category, and guidelines and standards applicable to them are listed below.

   a. Limited Agricultural Uses are permitted and are subject to further regulation in the land development code. New Intensive Agricultural Uses are prohibited. Property currently zoned for agriculture is considered a "holding" zone and may be used for Agricultural Uses other than Intensive Agricultural Uses. Rezoning to agricultural districts shall not be allowed without a future land use map amendment to an appropriate future land use designation. Agricultural activities must comply with the best management practices provided for in Policy A.1.4.9 and identical Policy E.1.3.5.

   b. Residential development shall be allowed within a maximum Density range of one dwelling unit per 5 acres up to a maximum of 1 dwelling unit per acre as determined by utilizing the point score criteria provided in Policy A.1.9.4. Vested subdivisions, which exceed the maximum Density, may be assigned a zoning district appropriate for the lot dimensions in the subdivision. Vesting determinations must be made in accordance with the requirements of Policy A.1.9.3.B and standards provided in the land development code. Housing types and lot sizes are subject to further regulation by residential zoning district standards provided in the land development code.

   c. Neighborhood Commercial Uses may be permitted when approved through a PUD zoning district in compliance with the requirements for PUD's in the Land Development Code and the following guidelines and standards. Neighborhood Commercial Uses must be located on sites that have direct access to paved roadways with a collector or higher roadway functional classification and prohibit the location interior to residential neighborhoods in a manner that will encourage the use of local streets for non-residential traffic. Neighborhood Commercial Uses must be developed at a size and scale compatible with the surrounding residential area and

the proposed development will promote compact commercial centers or districts rather than a strip commercial development pattern that is characterized by a continuous linear commercial frontage along the roadway. Commercial acreage in each distinct Rural Residential area shall not exceed 10 percent of its total land area without a comprehensive plan amendment to designate the area as Commercial future land use.

d. Industrial Uses are not permitted.

e. Community Facilities and Services Types 1 and 2 are permitted subject to compliance with standards provided in the land development code. Community Facilities and Services must be located on sites that are accessible to their intended service area and do not require significant non-residential vehicular traffic to pass through established neighborhoods. The location, scale and intensity of Community Facilities and Services Types 1 and 2 shall be compatible with the overall character of the existing and future development of the area. Community Facilities and Services acreage in each distinct Rural Residential area shall not exceed 20 percent of its total land area without a comprehensive plan amendment to designate the area as Public Facilities future land use.

f. Activity-Based and resource-based recreational uses are permitted subject to compliance with standards provided in the land development code. The location, scale and intensity of activity and resource-based recreational uses shall be compatible with the overall character of the existing and future development of the area. Certain resource-based recreational uses shall be further regulated as follows:

1. Marinas and fish camps will be permitted only adjacent to Georges Lake, Crescent Lake, Lake George and the St. Johns River and its major tributaries and are subject to compliance with detailed and specific standards of the land development regulations.

2. Marinas, fish camps, campgrounds and other camps may be limited in scale in the development review process to mitigate impacts on the natural resources they utilize and to mitigate impacts on adjacent residential development.

3. The density of any of the uses listed in item 2 above cannot exceed 12 units or spaces per acre. The appropriate number of units can be lowered as part of the development review process.

g. The maximum Floor Area Ratio allowed for residential uses and non-residential uses is 0.4:1. The maximum Impervious Surface coverage allowed for residential uses is 40 percent. The maximum Impervious Surface coverage allowed for non-residential uses is 70 percent. The actual maximum Floor Area Ratio and Impervious Surface coverage allowed for any land use may vary, but will not exceed the above standards, as determined by the applicable zoning district standards.

5. Commercial: The Commercial category on the Future Land Use Map consists of areas intended to serve as the primary commercial locations in the future. These areas are located in close proximity to concentrations of population and have good access to arterial and collector roads. Additional commercial locations are allowed in several other future land use categories. The types of land uses allowed in this future land use category, and guidelines and standards applicable to them are listed below.

a. Property currently zoned for agriculture is considered a "holding" zone and may be used as allowed by the agricultural zoning district. Rezoning to agricultural districts shall not be allowed without a future land use map amendment to an appropriate future land use designation. Agricultural activities must comply with the best management practices provided for in Policy A.1.4.9 and identical Policy E.1.3.5.

b. Limited residential uses that are accessory to a Commercial Use will be permitted subject to detailed and specific standards provided in the land development code, and subject to the following conditions:

(i) The site must contain a conforming commercial use;
(ii) The residential unit must be occupied by the owner or employees of the commercial use on the site;
(iii) The residential unit must be accessory in use and size; and
(iv) The residential unit must be located on the same site as the commercial use.

c. Neighborhood Commercial development and Community Commercial development are permitted. Commercial Uses will be directed to Nodal Areas, large and contiguous commercial districts, and appropriate commercial infill locations. Commercial Uses shall be located on sites that have direct access to paved roadways with a collector or higher roadway functional classification; are accessible to their intended market or service area; and do not require significant non-residential vehicular traffic to pass through established neighborhoods. Types of Commercial Uses and site development standards are subject to further regulation by commercial

zoning district standards provided in the land development code.

d. Limited light industrial uses associated with a primary Commercial Use are permitted. Examples of such uses include, but are not limited to, flex office and warehouse buildings, building contractor offices with limited outdoor storage, and research and development parks that may involve some light manufacturing or processing.

e. Community Facilities and Services Types 1, 2, and 3 are permitted subject to compliance with standards provided in the land development code. Community Facilities and Services shall be located on sites that are accessible to their intended service area and do not require significant non-residential vehicular traffic to pass through established neighborhoods.

f. Activity-Based and resource-based recreational uses are permitted subject to compliance with standards provided in the land development code.

g. The maximum permitted Floor Area Ratio is 1:1. The maximum permitted Impervious Surface area is 85 percent. The maximum Floor Area Ratio and Impervious Surface coverage allowed for any development may vary based on the applicable zoning district regulations, but development will not exceed the standards specified above.

6. Industrial: The Industrial category on the Future Land Use Map consists of areas intended to be the primary industrial locations in the future. Additional industrial locations are allowed in several other future land use categories. The types of land uses allowed in this future land use category, and guidelines and standards applicable to them are listed below.

a. Property currently zoned for agriculture is considered a "holding" zone and may be used as allowed by the agricultural zoning district. Rezoning to agricultural districts shall not be allowed without a future land use map amendment to an appropriate future land use designation. Agricultural activities must comply with the best management practices provided for in Policy A.1.4.9 and identical Policy E.1.3.5.

b. Limited residential uses that are accessory to an Industrial Use will be permitted subject to detailed and specific standards provided in the land development code, and the following conditions:

(v) The site must contain a conforming industrial use;

(vi) The residential unit must be occupied by the owner or employees of the industrial use on the site;

(vii) The residential unit must be accessory in use and size; and

(iv) The residential unit must be located on the same site as the industrial use.

c. Commercial Uses are permitted. Commercial Uses will be directed to Nodal Areas, large and contiguous commercial districts, and appropriate commercial locations such as business and industrial parks where industrial uses may also exist. Commercial development shall be located on sites that have direct access to paved roadways with a collector or higher roadway functional classification; are accessible to their intended market or service area; and do not require significant non-residential vehicular traffic to pass through established neighborhoods.

d. Industrial Uses are permitted. Heavy and light industrial are both allowed. The difference between heavy industrial and light industrial is determined by scale and impact resulting from noise, odor, dust, smoke, fumes, glare, amount and type of heavy truck traffic, amount and type of hazardous and toxic waste storage, transport, use and generation and similar potential community impacts. Industrial Uses shall be located on sites that utilize existing utilities or resources; utilize one or more transportation facilities such as air ports, water ports, collector roads, arterial roads, and railroads; do not require significant non-residential vehicular traffic to pass through established neighborhoods; and are sufficiently separated and/or buffered when necessary from residential and other urban uses to minimize adverse impacts of noise, glare, dust, smoke, odor or fumes.

e. Community Facilities and Services Types 1, 2, and 3 are permitted subject to compliance with standards provided in the land development code. Community Facilities and Services shall be located on sites that are accessible to their intended service area and do not require significant non-residential vehicular traffic to pass through established neighborhoods.

f. Activity-Based and resource-based recreational uses are permitted subject to compliance with standards provided in the land development code.

g. The maximum permitted Floor Area Ratio is 1:1. The maximum permitted Impervious Surface coverage is 85 percent. The actual maximum Floor Area Ratio

and Impervious Surface coverage allowed for any land use may vary, but will not exceed the above standards, as determined by the applicable zoning district standards.

7. Mining: The Mining category on the Future Land Use Map consists of areas of potentially valuable minerals or extractable resources currently under ownership or lease for present or future planned mining activities. The types of land uses allowed in this future land use category, and guidelines and standards applicable to them are listed below.

a. Activities permitted shall include the appropriate use, réclamation and protection of areas suitable for the extraction of minerals and extractable resources, in accord with the environmental protection policies of the Plan.

b. Mining area ownerships and leaseholds that have been approved for mining operations by Putnam County, prior to the adoption of this Plan, shall have a continuing right to conduct mining operations. After Plan adoption, proposed mining areas shall be permitted only after zoning review and approval.

c. Mined out, reclaimed and restored areas shall be reviewed under the comprehensive plan and placed in other land use categories after a comprehensive plan land use amendment in accordance with Section 163.3187, FS.

d. Agricultural Uses are permitted. Intensive Agricultural Uses are permitted and shall be further regulated by standards provided in the land development code. Agricultural activities must comply with best management practices as provided for in Policy A.1.4.9 and identical Policy E.1.3.5.

e. Community Facilities and Services Types 1, 2, and 3 are permitted subject to compliance with standards provided in the land development code. Community Facilities and Services shall be located on sites that are accessible to their intended service area and do not require significant non-residential vehicular traffic to pass through established neighborhoods.

f. Activity-Based and resource-based recreational uses are permitted subject to compliance with standards provided in the land development code.

8. Public Facilities: The Public Facilities category on the Future Land Use Map consists of areas either in use or appropriate for Community Facilities and Services. These areas are the primary areas for development of Community Facilities and Services. Additional

locations for Community Facilities and Services are allowed in several other future land use categories. The types of land uses allowed in this future land use category, and guidelines and standards applicable to them are listed below.

a. Existing Agricultural Uses will be subject to the non-conforming use provisions of the land development code.

b. Limited residential uses that are accessory to a principal use will be permitted subject to detailed and specific standards of the land development code and the following conditions:

(viii) The site must contain a conforming public facilities use;
(ix) The residential unit must be occupied by the owner or employees of the public facilities use on the site;
(x) The residential unit must be accessory in use and size; and
(iv) The residential unit must be located on the same site as the public facilities use.

c. Compatible commercial and industrial development related to a public facility use is permitted.

d. Community Facilities and Services Types 1, 2, 3 and 4 are permitted subject to compliance with standards provided in the land development code. Community Facilities and Services shall be located on sites that are accessible to their intended service area and do not require significant non-residential vehicular traffic to pass through established neighborhoods.

e. Activity-Based and resource-based recreational uses are permitted subject to compliance with standards provided in the land development code.

f. The maximum permitted Floor Area Ratio is 0.5:1. The maximum permitted Impervious Surface area is 70 percent. The actual maximum Floor Area Ratio and Impervious Surface coverage allowed for any land use may vary, but will not exceed the above standards, as determined by the applicable zoning district standards.

9. Agriculture I: The Agriculture I category on the Future Land Use Map consists of areas used for cropland, pasture and other agricultural activities, vacant land, and residential parcels of land some of which exceed the Density allowed in this future land use category. It is intended that a large share of this land will remain in active agricultural

production in the future. The types of land uses allowed in this future land use category, and guidelines and standards applicable to them are listed below.

a. Agricultural Uses are permitted. Intensive Agricultural Uses are permitted and shall be further regulated by standards provided in the land development code. Agricultural activities must comply with best management practices as provided for in Policy A.1.4.9 and identical Policy E.1.3.5.

b. Residential development shall be allowed within a maximum Density range of 1 dwelling unit per 10 acres to a maximum of 1 dwelling unit per 5 acres subject to a Density determination made according to the point score methodology provided in Policy A.1.9.4. Vested subdivisions, which exceed the maximum Density, may be assigned a zoning district appropriate for the lot dimensions in the subdivision. Vesting determinations must be made in accordance with the requirements of Policy A.1.9.3.B and standards provided in the land development code. Housing types and lot sizes are subject to further regulation by residential zoning district standards provided in the land development code.

c. Commercial Uses and Industrial Uses that are directly related to Agricultural Uses shall be located on sites within the area they are designed to serve and are accessible by one or more transportation facilities such as airports, water ports, collector roads, arterial roads, and railroads. Other Industrial Uses that are larger than 10 acres and below the threshold for a Chapter 380, F.S. Development of Regional Impact, may be permitted through a PUD consistent with the provisions of Policy A.1.9.3.C. and the land development code. All Industrial Uses will be allowed in accordance with the provisions of Policy A.1.9.3.A.6.d. under the Industrial Future Land Use Category. Other Industrial Uses will be allowed up to a total maximum acreage of 1,500 acres and until the County adds additional Industrial designations and they become effective. At the time in which additional Industrial designations become effective, or December 31, 2005, whichever occurs first, other industrial uses will no longer be allowed in Agriculture I/II without a future land use map amendment to designate the land Industrial.

d. Community Facilities and Services Types 1, 2, and 3 are permitted subject to compliance with standards provided in the land development code. Community Facilities and Services shall be located on sites that are accessible to their intended service area and do not require significant non-residential vehicular traffic to pass through established neighborhoods. The location, scale and intensity of Community Facilities and Services Types 1, 2 and 3 shall be compatible with the overall

character of the existing and future development of the area. Community Facilities and Services acreage in each distinct Agriculture I area shall not exceed 5 percent of its total land area without a comprehensive plan amendment to designate the area as Public Facilities future land use.

e. Activity-Based and resource-based recreational uses are permitted subject to compliance with standards provided in the land development code. The location, scale and intensity of activity-based recreation uses shall be compatible with the overall character of the existing and future development of the area. Activity-based recreation uses in each distinct Agriculture I area shall not exceed 5 percent of its total land area without a comprehensive plan amendment to designate the area as Public Facilities future land use.

f. Rural Recreational Uses are permitted. The land development code will regulate the more intensive Rural Recreational Uses by requiring a special use permit or special exception. The land development code shall include review standards for assessing the impacts of such uses on surrounding uses. At a minimum, the review standards of the land development code shall include specific criteria for natural resource protection, and the mitigation of off-site traffic and noise impacts. The location, scale and intensity of Rural Recreational Uses shall be compatible with the overall character of the existing and future development of the area. Rural Recreation Uses in each distinct Agriculture I area shall not exceed 5 percent of its total land area without a comprehensive plan amendment to designate the area as an appropriate future land use.

g. The maximum Impervious Surface coverage for residential land uses is 50 percent. The maximum Impervious Surface coverage for non-residential land uses is 85 percent. The actual maximum Impervious Surface coverage allowed for any land use may vary, but will not exceed the above standards, as determined by the applicable zoning district standards.

10. Agriculture II: The Agriculture II category on the Future Land Use Map consists of areas used for silviculture and range land and other Agricultural Uses, vacant land, and residential parcels of land some of which exceed the Density allowed in this future land use category. It is intended that a large share of this land will remain in active agricultural production in the future. The types of land uses allowed in this future land use category, and guidelines and standards applicable to them are listed below.

a. Agricultural Uses are permitted. Intensive Agricultural Uses are permitted and shall be further regulated by standards provided in the land development code. Agricultural activities must comply with best management practices as provided for in Policy A.1.4.9 and identical Policy E.1.3.5.

b. Residential development shall be allowed within a maximum Density range of 1 dwelling unit per 20 acres to a maximum of 1 dwelling unit per 10 acres subject to a Density determination made according to the point score methodology provided in Policy A.1.9.4. Vested subdivisions, which exceed the maximum Density, may be assigned a zoning district appropriate for the lot dimensions in the subdivision. Vesting determinations must be made in accordance with the requirements of Policy A.1.9.3.B and standards provided in the land development code. Housing types and lot sizes are subject to further regulation by residential zoning district standards provided in the land development code.

c. Commercial Uses and Industrial Uses that are directly related to Agricultural Uses shall be located on sites within the area they are designed to serve and are accessible by one or more transportation facilities such as airports, water ports, collector roads, arterial roads, and railroads. Other Industrial Uses that are larger than 10 acres and below the threshold for a Chapter 380, F.S. Development of Regional Impact, may be permitted through a PUD consistent with the provisions of Policy A.1.9.3.C. and the land development code. All Industrial Uses will be allowed in accordance with the provisions of Policy A.1.9.3.A.6.d. under the Industrial Future Land Use Category. Other Industrial Uses will be allowed up to a total maximum acreage of 1,500 acres and until the County adds additional Industrial designations and they become effective. At the time in which additional Industrial designations become effective, or December 31, 2005, whichever occurs first, other industrial uses will no longer be allowed in Agriculture I/II without a future land use map amendment to designate the land Industrial.

d. Community Facilities and Services Types 1, 2, and 3 are permitted subject to compliance with standards provided in the land development code. Community Facilities and Services shall be located on sites that are accessible to their intended service area and do not require significant non-residential vehicular traffic to pass through established neighborhoods. The location, scale and intensity of Community Facilities and Services Types 1, 2 and 3 shall be compatible with the overall character of the existing and future development of the area. Community Facilities and Services acreage in each distinct Agriculture II area shall not exceed 5 percent of its total land area without a comprehensive plan amendment to designate the area as

Public Facilities future land use.

e. Activity-Based and resource-based recreational uses are permitted subject to compliance with standards provided in the land development code. The location, scale and intensity of activity-based recreation uses shall be compatible with the overall character of the existing and future development of the area. Activity-based recreation uses in each distinct Agriculture II area shall not exceed 5 percent of its total land area without a comprehensive plan amendment to designate the area as Public Facilities future land use.

f. Rural Recreational Uses are permitted. The land development code will regulate the more intensive Rural Recreational Uses by requiring a special use permit or special exception. The land development code shall include review standards for assessing the impacts of such uses on surrounding uses. At a minimum, the review standards of the land development code shall include specific criteria for natural resource protection, and the mitigation of off-site traffic and noise impacts. The location, scale and intensity of Rural Recreational Uses shall be compatible with the overall character of the existing and future development of the area. Rural Recreation Uses in each distinct Agriculture II area shall not exceed 5 percent of its total land area without a comprehensive plan amendment to designate the area as an appropriate future land use.

g. The maximum Impervious Surface coverage for residential land uses is 50 percent. The maximum Impervious Surface coverage for non-residential land uses is 85 percent. The actual maximum Impervious Surface coverage allowed for any land use may vary, but will not exceed the above standards, as determined by the applicable zoning district standards.

11. Conservation: The Conservation land use category depicted on the Future Land Use Map includes areas designated for the purpose of conserving or protecting natural resources including ground water, surface water, wildlife habitats, vegetative communities, floodplains, and wetlands. Areas warranting protection, which are subject to re-evaluation by the County and may result in map amendments to designate other areas as Conservation include seepage streams, slope forests, spring run streams, sandhill upland lakes, known listed species, scrub uplands and longleaf pine-xeric oak vegetative communities, public and private lands acquired for the purpose of preservation, all jurisdictional wetlands adjacent to the main stem of the St. Johns River, Dunns Creek, and Crescent Lake including the wetlands associated with Murphy, Hog and Drayton Islands, all out parcels within the Ocala National Forest, and the jurisdictional wetlands of Levy's Prairie,

Goodson's Prairie and Fowlers Prairie. Conservation of resources will also be accomplished in the other land use categories through implementation of environmental protection policies stated throughout the plan. The types of land uses allowed in this future land use category, and guidelines and standards applicable to them are listed below.

a. Limited Agricultural Uses are permitted and are subject to further regulation in the land development code. New Intensive Agricultural Uses are prohibited. Agricultural activities must comply with the best management practices provided for in Policy A.1.4.9 and identical Policy E.1.3.5.

b. Residential development on public and semi-public lands will not be permitted except for uses such as residences for park managers, caretakers, owners and operators. Residential development on privately-owned lands shall be limited to a maximum density of 1 dwelling unit per 30 acres.

c. Commercial Uses are not permitted, except for Commercial Uses permitted under paragraph f. below as resource-based recreational uses.

d. Industrial Uses are not permitted.

e. Community Facilities and Services Types 1 and 2 are permitted subject to compliance with standards provided in the land development code. Community Facilities and Services must be located on sites that are accessible to their intended service area and do not require significant non-residential vehicular traffic to pass through established neighborhoods. The location, scale and intensity of Community Facilities and Services Types 1 and 2 shall be compatible with the overall character of the existing and future development of the area.

f. Resource-based recreational uses are permitted subject to compliance with standards provided in the land development code. The location, scale and intensity of resource-based recreation uses shall be compatible with the overall character of the existing and future development of the area.

g. All residential and non-residential development permitted in the Conservation future land use category shall be limited to 10 percent impervious surface coverage on a site.

B. Exceptions to the Land Use Designations on the Future Land Use - 2001 Map

1. Boundary Adjustments - The exact boundaries of land use designations delineated on the Map may require interpretation in order to determine the land use category applicable to certain parcels, lots, and tracts. For basic boundary adjustments, the criteria listed below shall be used to establish the location of a specific boundary line on the Future Land Use - 2001 Map.

a. The boundary line does not obviously correspond to a major roadway right-of-way, canal, waterbody, section line, or any boundary delineated on the Future Land Use - 2001 Map.

b. The boundary line does not obviously correspond to a parcel or lot line existing on December 19, 1991 at 5:00 p.m., the date and time of Plan adoption.

c. If the location of a boundary line is subject to interpretation because it does not obviously correspond to a natural or man-made feature listed above, then the extent of the boundary adjustment and the location of the boundary line shall be determined according to the following criteria:

(1) The site characteristics clearly fit the description of a single land use category.

(2) The boundary line may be extended up to 500 feet to incorporate the entire split lot, parcel or tract provided that no more than five additional acres are added.

(3) A boundary line may be extended one time only and shall be permanently fixed and final unless changed by an approved plan amendment.

2. Vested Development - Vesting determinations will be made by the Board of County Commissioners with advice of legal counsel.

a. Any on-going Development of Regional Impact or other development project may be vested from one or more policies of the Plan. In order to vest development, it must be found to be consistent with either subsection (1) or (2) below.

(1) Section 163.3167(8), FS, which provides, "Nothing in this act shall limit or modify the rights of any person to complete any development that has been authorized as a development of regional impact pursuant to chapter 380 or who has been issued a final local development order and development has commenced and is continuing in good faith."
(2) The principles of common law equitable estoppel, which are based upon the following four part test for vested rights:

(a) Upon some act or omission of the County,
(b) a property owner relying in good faith,
(c) has made such a substantial change in position or has incurred such extensive obligations and expenses that it would be highly inequitable and unjust to destroy the rights acquired, and
(d) that the development has commenced and is continuing in good faith.

b. A legally created parcel of land existing on December 19, 1991 at 5:00 p.m., the date and time of Plan adoption, that is not part of a subdivision plan subject to a vesting determination and would exceed the maximum Density allowed by the Future Land Use Category in which it is located, may be developed with a maximum of one residential dwelling unit. Such a parcel is exempt from the Density provisions of the plan only, and all other provisions of the plan apply.

3. Residential Density Exception for Family Members - Development of parcels of property located within Agriculture I, Agriculture II, Conservation or Rural Residential land use classifications, may exceed the Density or Intensity of use allowed by the land use category, provided:

a. The parcel is developed as a homesite, for an individual who is a member of the owner's immediate family (parent, stepparent, adopted parent, sibling, child, stepchild, adopted child, grandchild or grandparent of the owner or owner's spouse).

b. The parcel is subdivided and developed as a homesite, for an individual who is a member of the owner's immediate family (parent, stepparent, adopted parent, sibling, child, stepchild, adopted child, grandchild or grandparent of

the owner or owner's spouse).

c. The lot or homesite complies with all other applicable land development regulations regarding use, subdivision, lot area, frontage, width, depth and setbacks.

d. This exception is applied only once to any individual.

4. Limited Residential Density Exception - Each land owner in Putnam County who owns one or more parcels of property located within Agriculture I or II, or Rural Residential land use classification that have been held by the current owner for a minimum period of five (5) years, may sell and/or develop a total of two, one acre or larger, tracts per year from one of these parcels subject to the following:

a. An annual threshold of no more than 25 new lots during any calendar year is established. If the new lot threshold is reached, the County shall, within one (1) year, submit a plan amendment to readdress the rural land use policies within this plan. Among other things, the plan amendment will consider the need for additional rural land use planning techniques or changes in the land use categories depicted on the Future Land Use Map and the policies herein. Similarly, if 70 percent of the threshold is reached for two consecutive years, a plan amendment will be submitted by the County.

b. The lot or home site complies with all other applicable land development regulations regarding use, subdivision, lot area, frontage, width, depth and setbacks.

c. In order to avoid sprawl, subdivision and development allowed pursuant to this section shall be clustered and located adjacent to any existing development on the site or adjacent to an area that was previously subdivided.

d. The development does not have significant adverse effect on natural resources or surrounding agricultural uses, as shown by meeting the requirements of the several goals, objectives and policies of the Comprehensive Plan.

e. The development meets all requirements of local building and zoning codes.

f. The developer shall provide for all infrastructure in accordance with

Comprehensive Plan requirements for Levels of Service and concurrency.

5. Limited Residential Density Exception – Each land owner in Putnam County who owns one or more parcels of property located within Agriculture I or II, or Rural Residential land use classification that have been held by the current owner for a minimum period of five (5) years, may sell and/or develop a total of two, one acre or larger, tracts per year from one of these parcels subject to the following:

a. An annual threshold of no more than 25 new lots during any calendar year is established. If the new lot threshold is reached, the County shall, within one (1) year, submit a plan amendment to readdress the rural land use policies within this plan. Among other things, the plan amendment will consider the need for additional rural land use planning techniques or changes in the land use categories depicted on the Future Land Use Map and the policies herein. Similarly, if 70 percent of the threshold is reached for two consecutive years, a plan amendment will be submitted by the County.

b. The lot or homesite complies with all other applicable land development regulations regarding use, subdivision, lot area, frontage, width, depth and setbacks.

c. In order to avoid sprawl, subdivision and development allowed pursuant to this section shall be clustered and located adjacent to any existing development on the site or adjacent to an area that was previously subdivided.

d. The development does not have significant adverse effect on natural resources or surrounding agricultural uses, as shown by meeting the requirements of the several goals, objectives and policies of the Comprehensive Plan.

e. The development meets all requirements of local building and zoning codes.

f. The developer shall provide for all infrastructure in accordance with Comprehensive Plan requirements for Levels of Service and concurrency.

C. Floating Zone – Planned Unit Development (PUD) Zoning

1. The PUD Floating Zone may be applied as an optional zoning district within any future land use designation. The approval of a PUD application will not require a land use amendment provided the proposed PUD:

   a. is shown to be consistent with the goals, objectives and policies of the Plan and the applicable standards and criteria of the County land development regulations;

   b. does not increase the Intensity or Density of use defined for the overlying land use or qualifies for additional Density bonuses to the overlying land use category based upon the provision of design features of significant public benefit as described in subsection A.1.9.3.C.5 below.

Policy A.1.9.4: The following point-score methodology shall be used as the basis for determining the maximum residential Density allowed for parcels of land designated Agriculture I, Agriculture II, Rural Residential, Urban Reserve and Urban Service as depicted on the Future Land Use Map. This policy establishes the maximum Density allowed for future development in the applicable future land use designations, however the applicable zoning district will establish the minimum lot size. The lot size allowed by zoning may vary so long as the maximum Density is not exceeded for any legally established parcel of land that existed on or before December 19, 1991 at 5:00 p.m. The purpose of allowing variations in lot size is to encourage the clustering of residential development and preservation of environmentally sensitive lands and open space. The land development code will specify appropriate mechanisms to ensure that the maximum Density is not exceeded on any parcel of land.

Residential Density shall be expressed in terms of the number of dwelling units allowed per net acre of land. The net acreage of any parcel of land is determined by subtracting the total acreage of any surface water body such as lakes, rivers and creeks from the total acreage of a parcel of land. For purposes of residential Density, vegetated wetlands shall not be considered surface water body. For example, if the point score methodology determines the maximum Density allowed on a 10-acre parcel is one dwelling unit per net acre, and the parcel of land contains 2 acres of surface water and 2 acres of vegetated wetland, then the parcel of land could contain up to a maximum of 8 dwelling units. The 8 dwelling units will be required to be sited on the 6 acres of upland.

FUTURE LAND USE POINT-SCORE METHODOLOGY
FOR RESIDENTIAL DENSITY ALLOCATION

Allowable Credit Points	Points
1. Clustering	0 - 30
2. Paved Road Access	0 - 20
3. Fire Protection	0 - 10
4. Emergency Medical Service	0 - 10
5. Affordable Housing	0 - 30
6. Central Water/Sewer	0 - 40
7. Soil Suitability for Septic Tank	0 - 15
8. Soil Suitability for Dwelling	0 - 15
9. Access to Primary and Secondary Schools	0 - 20
10. Access to work/shopping	0 - 25
11. Provision of On-site Recreation	0 - 25

A. Residential Density Allocation Schedule Notes

1. If the application of Density points to a parcel results in a fraction of a dwelling unit, the fraction shall be increased to the next higher whole number if the fraction is 0.5 or larger and to the next lower whole number if the fraction is less than 0.5.

B. Point Score Allocation Table (Maximum Score: 240 points)

Land Use Category	Unit Density Permitted by Credit Point Group (In Units per Acre)				
	0 - 24	25 - 49	50 - 74	75 – 99	100 & Over
AGRICULTURE II	1/20ac.	1/20ac.	1/15ac.	1/12.5ac.	1/10ac.
AGRICULTURE I	1/10ac.	1/9ac.	1/8ac.	1/6.5ac.	1/5ac.
RURAL RESIDENTIAL	1/5ac.	1/4ac.	1/3ac.	1/2ac.	1/1ac.
URBAN RESERVE	1/1ac.	1/.75ac.	2/ac.	3/ac.	4/ac.
URBAN SERVICE	1/1ac.	2/ac.	4/ac.	6/ac.	9/ac.

C. Determination of Credit Points — Points

1. Clustering of Housing Units (Open space shall be reserved solely for habitat protection, recreational use, and/or agricultural activities.)

a. Reserve less than 25 percent of land area	0
b. Reserve 25-49 percent of land area	10
c. Reserve 50-70 percent of land area	20
d. Reserve over 70 percent of land area	30

2. Paved Road Access (Credit will be given if the road is in the adopted Capital Improvements Program.)

a. Immediately on paved road	20
b. Within one-quarter mile of a paved road	10
c. More than one-quarter mile, but no more than one-half mile from a paved road	5
d. More than one-half mile from a paved road	0

3. Fire Protection (all distances measured by existing roads)

a. That portion of the property within 1 mile of a fire station	10
a. That portion of the property which is more than 1 mile and no more than 5 miles from a fire station	5
b. Property is more than 5 miles from a fire station	0

4. Emergency Medical Service (all distances measured from property by existing roads)

a. Located within 5 miles of a facility	10
b. Located more than 5 miles but no more than 10 miles from a facility	5
c. Property is more than 10 miles from a facility	0

5. Affordable Housing (Moderate and low income housing means an equal amount of each unit type.)

a. Over 80 percent of units in moderate and low income housing	30
b. 60 to 80 percent of units in moderate and low income housing	25
c. 40 to 59 percent of units in moderate and low income housing	20
d. 20 to 39 percent of units in moderate or low income housing	5
e. Less than 20 percent of units in moderate or low income housing	0

6. Provision of Central Water/Sewer Service

a. Central water service to the development	10
b. Central sewer service to the development	15
c. Central water and sewer service to the development	40

7. Soil Suitability for "Septic Tank Absorption Fields"

a. Soils having an SCS rating of "slight"	15

b. Soils having an SCS rating of "moderate" 5

8. Soil Suitability for "Dwellings Without Basements"

a. Soils having an SCS rating of "slight" 15
b. Soils having an SCS rating of "moderate" 5

9. Access to Primary and Secondary Schools. That portion of any parcel:

a. Within half-mile travel of an existing school and linked by sidewalks/bicycle paths 20
b. Within one mile travel of an existing school 15
c. Within two mile radius of an existing school; requiring no bussing as verified by the School Board 10

10. Access to work/shopping

a. Within 3 miles of existing work/shopping sites 25
b. More than 3 miles but no more than 5 miles from existing work/shopping sites 15
c. Within 5 miles of projected work/shopping sites 5

11. Provision of On-site Recreation

a. Provide recreational contribution of land or cash in-lieu-of land to the County, at the County's discretion, at a rate equal to 2.5 acres per 100 homes. 25
b. Provide LOS recreational facilities for development residents and facilities that are available to the public 15
c. Provide LOS recreational facilities for residents only 5

Objective A.1.10 [FS 187.201(25)(b)2; 187.201(16)(b)5]: Putnam County shall establish and implement formal procedures for the review and approval of development within the County:

Policy A.1.10.1: Putnam County shall establish a "Memorandum of Agreement" with local governments of adjacent counties/towns/cities to arbitrate the siting of "Locally Undesirable Land Uses" (LULUs) within two (2) miles of adjacent local government boundaries and implement procedures for reviewing such cases.

Policy A.1.10.2 [9J-5.006(3)(c)2]: The County shall develop and adopt standards and procedures in accordance with Section 333, FS, to ensure that incompatible land uses will be restricted from placement in accident and noise zones surrounding the Kay Larkin Airport.

Policy A.1.10.3 [9J-5.006(3)(c)2]: The County shall not permit the placement of tall structures such as high-rise buildings or radio/TV towers within areas that are take-off or landing zones or are otherwise defined as areas of special safety concern.

Policy A.1.10.4 [9J-5.006(3)(c)2]: The County shall coordinate with the City regarding land use issues that affect the operations at Kay Larkin Airport.

Policy A.1.10.5 [9J-5.006(3)(c)2]: Within one year of Plan submittal, the County shall establish and adopt land development regulations to ensure that incompatible land uses shall be restricted from accident and noise zones surrounding the airport through the use of overlay zoning.

Objective A.1.11 [187.201(15)(b)1,2,3]: Putnam County shall protect private property rights and recognize the existence of private interest in land use.

Policy A.1.11.1: Putnam County will regulate the use of land only for valid public purposes in a reasonable manner, in accordance with due process.

Policy A.1.11.2 [187.201(15)(b)3]: Putnam County shall promote the acquisition of lands by state, county, or local government where regulation will severely limit practical use of real property.

Policy A.1.11.3: This Plan shall not limit or modify the rights of any person to complete any development that has been authorized as a development of regional impact pursuant to Chapter 380, FS, or who has been issued a final local development order and development has commenced and is continuing in good faith.

Objective A.1.13: [Added by 2000-15] Locate schools in a manner consistent with the Putnam County comprehensive plan proximate to urban residential areas and collocate them with public facilities such as parks, libraries and community centers with schools to the extent possible.

Policy A.1.13.1: The site for private or public schools shall be located within lands designated Urban Reserve, Urban Service, Rural Center, Public Buildings and Grounds or Commercial on the Future Land Use Map. In addition to these listed land use categories, schools may also be located in other land use categories if adjacent to an existing school site, except lands designated Industrial or Mining on the Future Land Use Map. Private or public schools may only be located within or abutting lands designated Industrial or Mining when needed to enhance technical or vocational schools.

Policy A.1.13.2: Proposed school sites should be located away from major arterial roadways, industrial uses (except where needed to enhance technical and vocational schools), railroads, airports and similar land use to avoid noise, odors, dust, traffic impacts and hazards.

Policy A.1.13.3: Disrupting influences caused by school yard noise and traffic should be minimized when possible by avoiding adjacent land uses such as hospitals, adult communities, nursing homes and similar land uses or by providing an appropriate buffer from these areas.

Policy A.1.13.4: Whenever feasible community facilities such as libraries, parks and community centers should be collocated with schools.

Objective A.1.14: Putnam County has a supply of platted lands which is greater than the long-term need. These platted lands may exist on or near environmentally sensitive lands and/or create additional roadway and drainage problems, the County will strive to reduce the number of platted vacant lots by January 1, 2005.

Policy A.1.14.1: Putnam County will reduce the number of platted lots through the following measures:

a. Establishing criteria for the purpose of identifying antiquated subdivisions. In instances where antiquated subdivisions are predominantly or entirely under one ownership, the County may assist private owners with assembly, deplatting including the closing of unused or unnecessary public rights of way and replatting for eventual development or other purposes. In instances where antiquated

subdivisions are subject to multiple lot ownership the county may assist groups of private lot owners to vacate and replat portions of subdivisions, where practical, including the closing of unused or unnecessary public right of ways.

b. Encourage the build-out of vacant lots in subdivisions determined not to be antiquated subdivisions. The county may encourage construction on such lots by providing additional infrastructure by use of MSBU's or other appropriate means.

c. Public acquisition of platted lots which have been identified as providing a public benefit for the purpose of establishing park and recreational facilities, outdoor education, or environmentally sensitive lands for preservation, using public funds as appropriate and available.

d. Consider selective acquisition of individual lots through use of the tax deed process for tax delinquent land, where the county is the certificate holder, or outright purchase from private owners of lots located in areas determined to be appropriate for redevelopment, for use in property assemblage, lot exchange, establishing deed restrictions, or transfers of Density or development rights, where such action facilitates bringing such land into conformity with the provisions of the comprehensive plan and ultimately returns the property to private ownership.

Policy A.1.14.2: Putnam County will encourage and assist private land owners to work towards solutions to the platted lands problem through participation in applicable state land acquisition programs.

Comprehensive Plan Definitions

The following definitions shall be used in review or interpretation of this Comprehensive Plan. Where a definition contained within this section is different or inconsistent with the definition contained in enabling State legislation (Section 163.3164, F.S.), or is inconsistent with the definition contained in Section 9J-5.003, F.A.C., the definition contained herein shall be utilized.

ACTIVITY-BASED RECREATIONAL USES means recreational activities providing the participant user with a built court, field or structure for a specific activity or activities. Examples of activity-based uses include, but are not limited to, playgrounds, softball and baseball fields, basketball courts and recreation centers.

AGRICULTURAL USES means the use of land for agricultural purposes including but not limited to, the cultivation of crops; the keeping and raising of livestock; pasturage; silviculture; horticulture; floriculture; aquaculture; viticulture; animal and poultry husbandry; and confined feeding operations. (see also the definition of "intensive agricultural uses")

INTENSIVE AGRICULTURAL USES means Agricultural Uses which, by nature of either the customary operation of the use, or the manner in which such uses customarily utilize a site, are likely to have adverse impacts of noise, odor, dust or other adverse sensory impacts on adjacent or nearby residential uses. Such uses include, but are not limited to, slaughtering or processing of farm animals; sawmills; borrow pits of 5 acres in size or greater; and feedlots, hog farms, poultry farms and dairies which require a waste disposal permit from the Florida Department of Environmental Protection.

COMMERCIAL USE means an occupation, employment or enterprise associated with the sale, rental or distribution of products, or performance of service.

COMMUNITY COMMERCIAL means Commercial Uses which serve the day-to-day needs and supply the more durable and permanent needs of a community. Community Commercial uses include, but are not limited to, Commercial Uses allowed in Neighborhood Commercial, home improvement centers, furniture stores, movie theaters, bowling alleys, department stores, and automobile, boat and RV sales.

NEIGHBORHOOD COMMERCIAL means Commercial Uses which serve the daily needs of contiguous neighborhoods.

COMMUNITY FACILITIES AND SERVICES are facilities or services which may be public or privately owned, and are established and intended to provide public benefit. There are four

types of Community Facilities and Services:

Type 1 are community services including, but not limited to, government buildings; libraries; religious facilities; civic and community centers; police, fire and emergency services facilities; child/day care; and schools.

Type 2 are light infrastructure facilities, including but not limited to, water wells, water tanks, sewage pump stations, electrical substations, and water and wastewater treatment plants with a capacity of less than 500,000 gallons per day.

Type 3 are post-secondary community services including but not limited to, public or private universities, colleges, and vocational/technical schools.

Type 4 are heavy infrastructure facilities, including but not limited to, maintenance yards, motor pools (vehicle maintenance facilities), airports, landfills, solid waste transfer stations, water and wastewater treatment plants with a capacity of 500,000 gallons per day or greater, correctional facilities and similar uses.

DENSITY for the purpose of residential Density means an objective measurement of the number of residential units allowed per net acre of land. Net acreage is determined by subtracting the acreage of Surface Water Bodies from the total acreage of a parcel of land.

ENVIRONMENTALLY SENSITIVE LANDS are land areas such as wetlands, floodplains, areas of high aquifer recharge and other lands that have been deemed as such by an appropriate federal or state agency.

FLOOR AREA RATIO is the gross floor area of all buildings on a lot divided by the lot area.

IMPERVIOUS SURFACE means a surface which has been compacted or covered with a layer of material so that it is highly resistant to infiltration by water, including surfaces such as compacted sand, limerock, shell, or clay, as well as most conventionally surfaced or paved streets, roofs, sidewalks, parking lots, wet retention/detention ponds, pools and other similar structures.

INDUSTRIAL USES means uses associated with manufacturing, assembly, processing, fabrication, repair or storage of products.

INTENSITY means an objective measurement of the extent to which land may be developed or used, including the consumption or use of the space above, on or below ground, and the

measurement of or demand on facilities and services, and the allocation of typical uses within each of the future land use categories. For purposes of this plan, Floor Area Ratio, Impervious Surface coverage, the concurrency management system and the types of permitted uses in each of the future land use categories as shown on the Future Land Use Map are measures of Intensity.

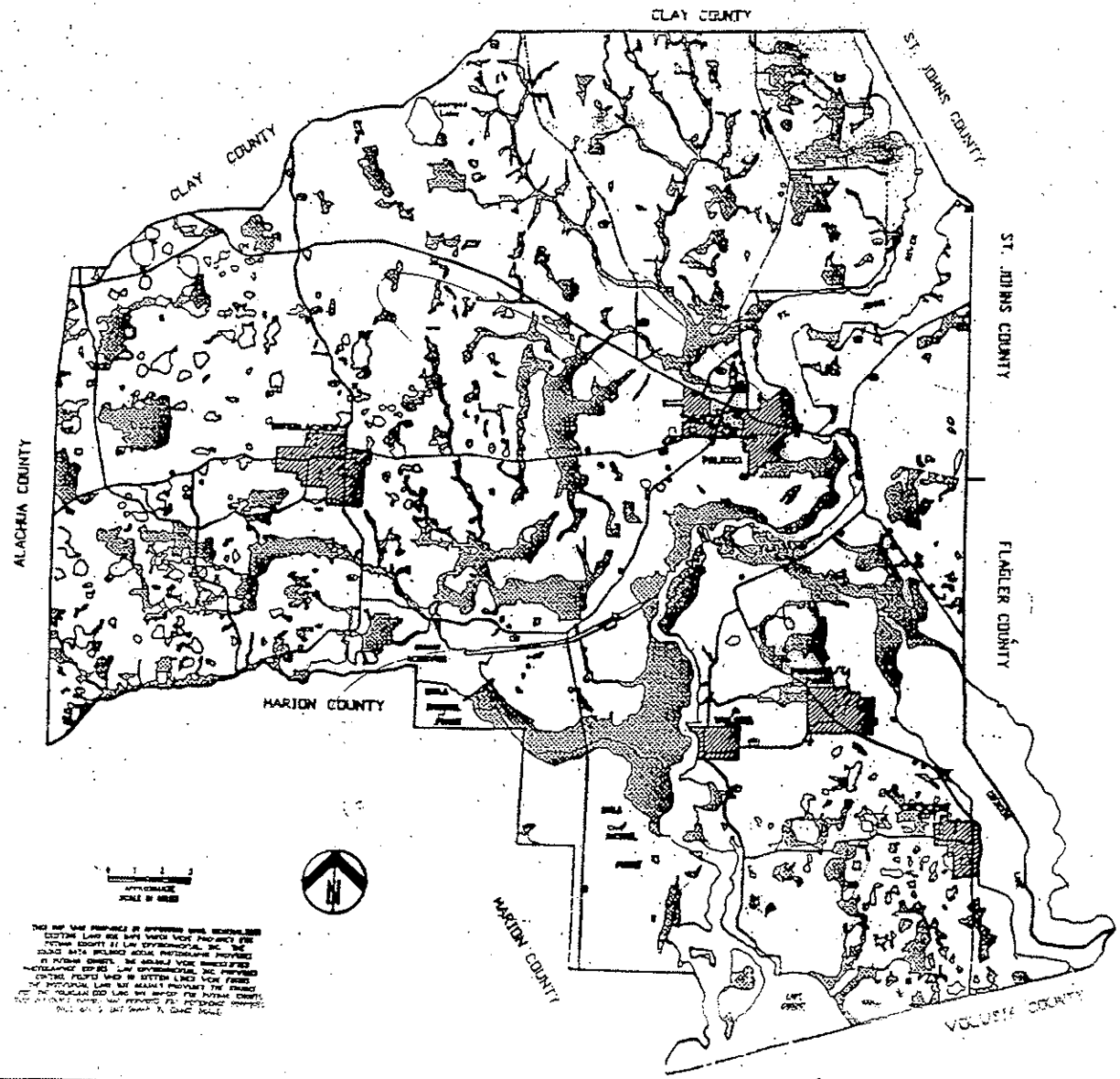
NODE or NODAL AREA means the developed or developable land area at the confluence of collector or higher classified roadways, which are suitable for medium to high Densities and Intensities of use for either single, multiple or mixed use development.

RURAL RECREATIONAL USE means any commercial or non-commercial recreational activity, which by the nature of either the customary operation of the use or the noise impacts of such use, requires that the use be located on a large parcel of land and may be appropriately located outside the urban area. Allowed uses shall include, but not be limited to, racetracks, gun and archery ranges, off road vehicle facilities, mud bogging and motorcycle dirt tracks and courses.

SURFACE WATER See Water Bodies.

URBAN SPRAWL means urban development or uses which are located in predominantly rural areas, or rural areas interspersed with generally low-Intensity or low-Density urban uses, and which are characterized by one or more of the following conditions: (a) The premature or poorly planned conversion of rural land to other uses; (b) The creation of areas of urban development or uses which are not functionally related to land uses which predominate the adjacent area; or (c) the creation of areas of urban development or uses which fail to reasonably utilize existing public facilities or areas within which public services are currently provided. Urban Sprawl is typically manifested in one or more of the following land use or development patterns: Leapfrog or scattered development; ribbon or strip commercial or other development; or large expanses of predominantly low-Intensity, low-Density, or single-use development.

WATER BODIES or SURFACE WATER BODIES for the purpose of determining permitted Density and implementing resource protection standards, shall be defined to include river, lake, creek or pond beds and any other permanently or historically water-covered land that occurs naturally at the intended site up to the mean high water level. Maintained drainage ditches and retention ponds are not considered Water Bodies or Surface Water Bodies in the context of determining permitted Density and implementing resource protection standards.



WETLANDS

LEGEND

WETLANDS

MUNICIPALITIES

MAJOR HIGHWAYS

MUNICIPAL BOUNDARY

COUNTY BOUNDARY

ISSUE DATE:		PREPARED BY:	
PRINT DATE:	3-7-91	STATUS:	
REVISION DATE:		FILE NAME:	

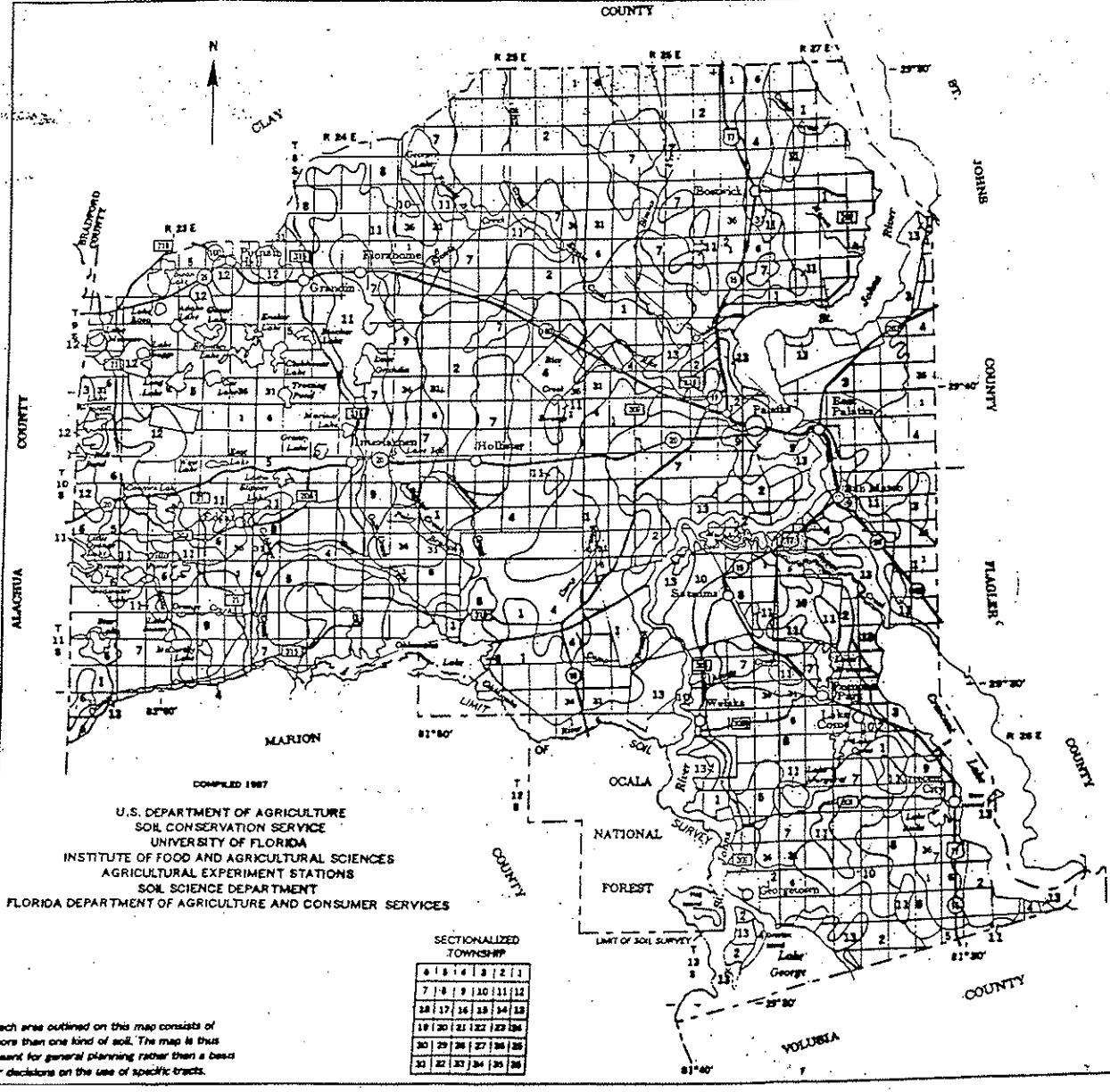
COMPREHENSIVE PLAN FOR PUTNAM COUNTY FLORIDA

FIGURE A-1

PREPARED BY:

NORTHEAST FLORIDA REGIONAL PLANNING COUNCIL

1990



COMPILED 1987

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
UNIVERSITY OF FLORIDA
INSTITUTE OF FOOD AND AGRICULTURAL SCIENCES
AGRICULTURAL EXPERIMENT STATIONS
SOIL SCIENCE DEPARTMENT
FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES

Each area outlined on this map consists of more than one kind of soil. The map is thus meant for general planning rather than a basis for decisions on the use of specific tracts.

LEGEND

SOILS ON THE FLATWOODS

1	Pomona-Palmetto: Nearly level, poorly drained soils that are sandy to a depth of more than 40 inches and are loamy below. These soils have layers at a depth of 10 to 30 inches that are stained by organic matter
2	Myakka-Zolfo-Immokalee: Nearly level, poorly drained and somewhat poorly drained soils that are sandy throughout. These soils have a dark subsoil at a depth of 20 to more than 50 inches
3	Pomona-Wauchula-[illegible]: Nearly level, poorly drained soils; some are sandy to a depth of 20 to 40 inches and are loamy below; some are sandy to a depth of 40 to 79 inches and are loamy below; and some have a dark subsoil above the loamy layer
4	Holopaw-Riviera-[illegible]: Nearly level, poorly drained and very poorly drained soils; some are sandy to a depth of 20 to 40 inches and are loamy below; some are sandy to a depth of 40 to 79 inches and are loamy below; and some are loamy and have a clayey subsoil

SOILS ON THE UPLANDS

5	Candler-Apopka: Nearly level to steep, excessively drained and well drained soils; some are sandy to a depth of more than 80 inches and have thin lamellae at a depth of 50 to 80 inches; and some are sandy and have a loamy subsoil below a depth of 40 to 79 inches
6	Millhopper-Sparr: Nearly level to moderately sloping, moderately well drained and somewhat poorly drained soils that are sandy and have a loamy subsoil below a depth of 40 to 79 inches
7	Tavares-Centenary-Zolfo: Nearly level and gently sloping, moderately well drained and somewhat poorly drained soils that are sandy throughout. Some have a dark subsoil at a depth of more than 50 inches
8	Astatula-Tavares: Nearly level to moderately steep, excessively drained and moderately well drained soils that are sandy throughout
9	Candler-Tavares-Adamsville: Nearly level to steep, excessively drained, moderately well drained, and somewhat poorly drained soils that are sandy throughout; some have lamellae at a depth of 60 to 80 inches
10	Orsino-Astatula-Paola: Nearly level to moderately steep, moderately well drained and excessively drained soils that are sandy throughout

SOILS IN THE BROAD SWAMPS AND MARSHES

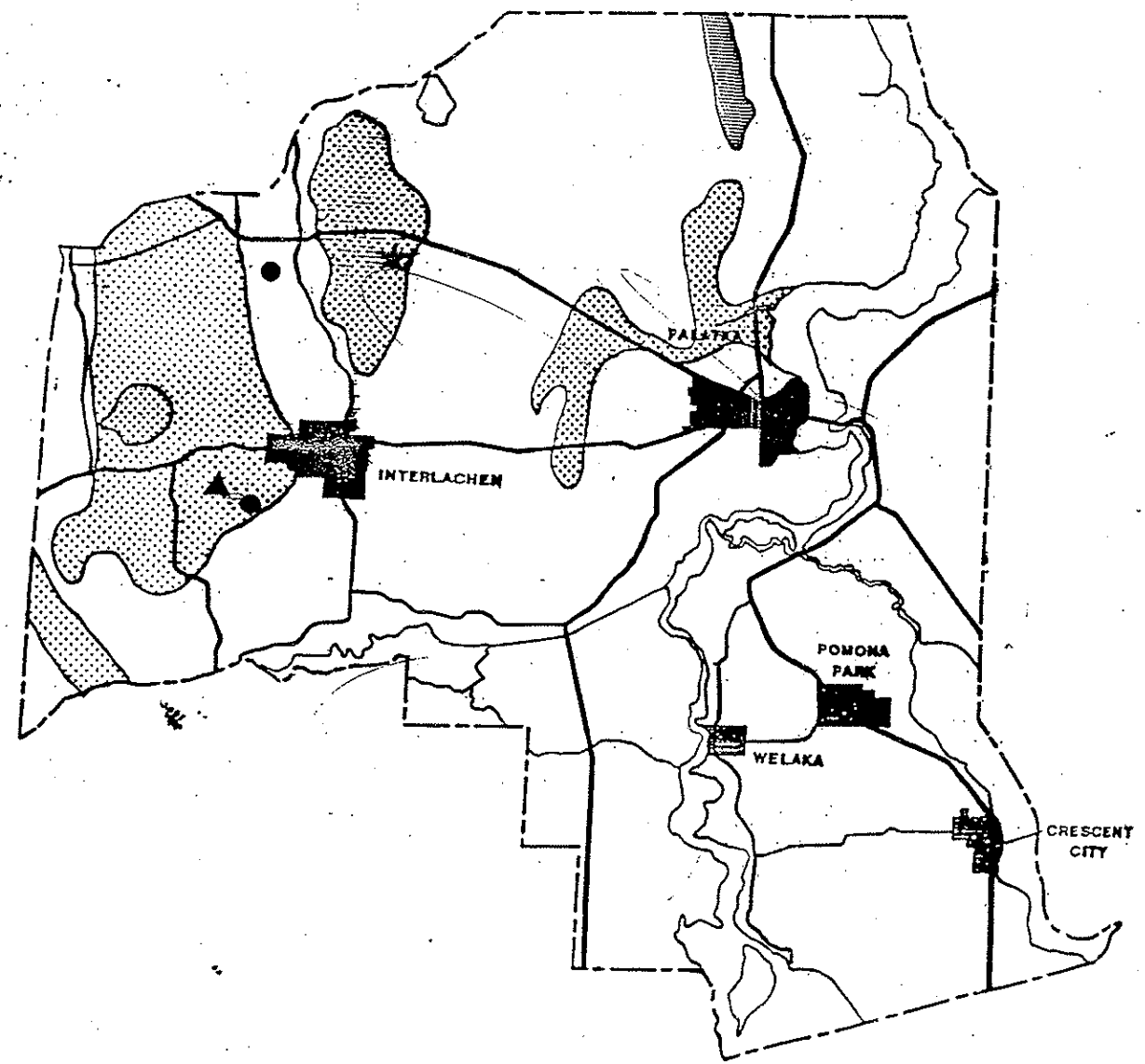
11	[illegible]-Samsula: Nearly level, very poorly drained organic soils; some are [illegible] to a depth of 16 to 51 inches and are sandy or loamy below; and some are organic to a depth of more than 51 inches
12	[illegible]-Samsula: Nearly level, very poorly drained organic soils; some are organic to a depth of more than 51 inches; and some are organic to a depth of 16 to 51 inches and are sandy below

SOILS ON THE FLOOD PLAINS

13	Terra Ceia-[illegible]: Nearly level, very poorly drained, frequently flooded soils; some are organic to a depth of more than 51 inches; and some are organic to a depth of 16 to 51 inches and are clayey below

COMPREHENSIVE PLAN FOR
PUTNAM COUNTY
FIGURE A-12
FUTURE LAND USE - 2001
GENERAL SOIL MAP
PUTNAM COUNTY AREA
FLORIDA

Scale 1:253,440
1 0 1 2 3 4 Miles
1 0 4 8 Km



MINERAL DEPOSITS AND MINE SITES

LEGEND:

- KAOLIN BEARING SANDS
- PEAT
- HEAVY MINERALS

ACTIVE MINES

- SAND/KAOLIN
- PEAT
- SAND

Preparation of this document was aided through financial assistance received from the State of Florida under the Local Government Comprehensive Planning Assistance Program authorized by 86-187, Laws of Florida, and administered by the Florida Department of Community Affairs.

Source:

Northeast Florida Regional Planning Council

COMPREHENSIVE PLAN FOR

PUTNAM COUNTY

FIGURE A-13

FUTURE LAND USE - 2001

~4 MILES

N

PREPARED BY

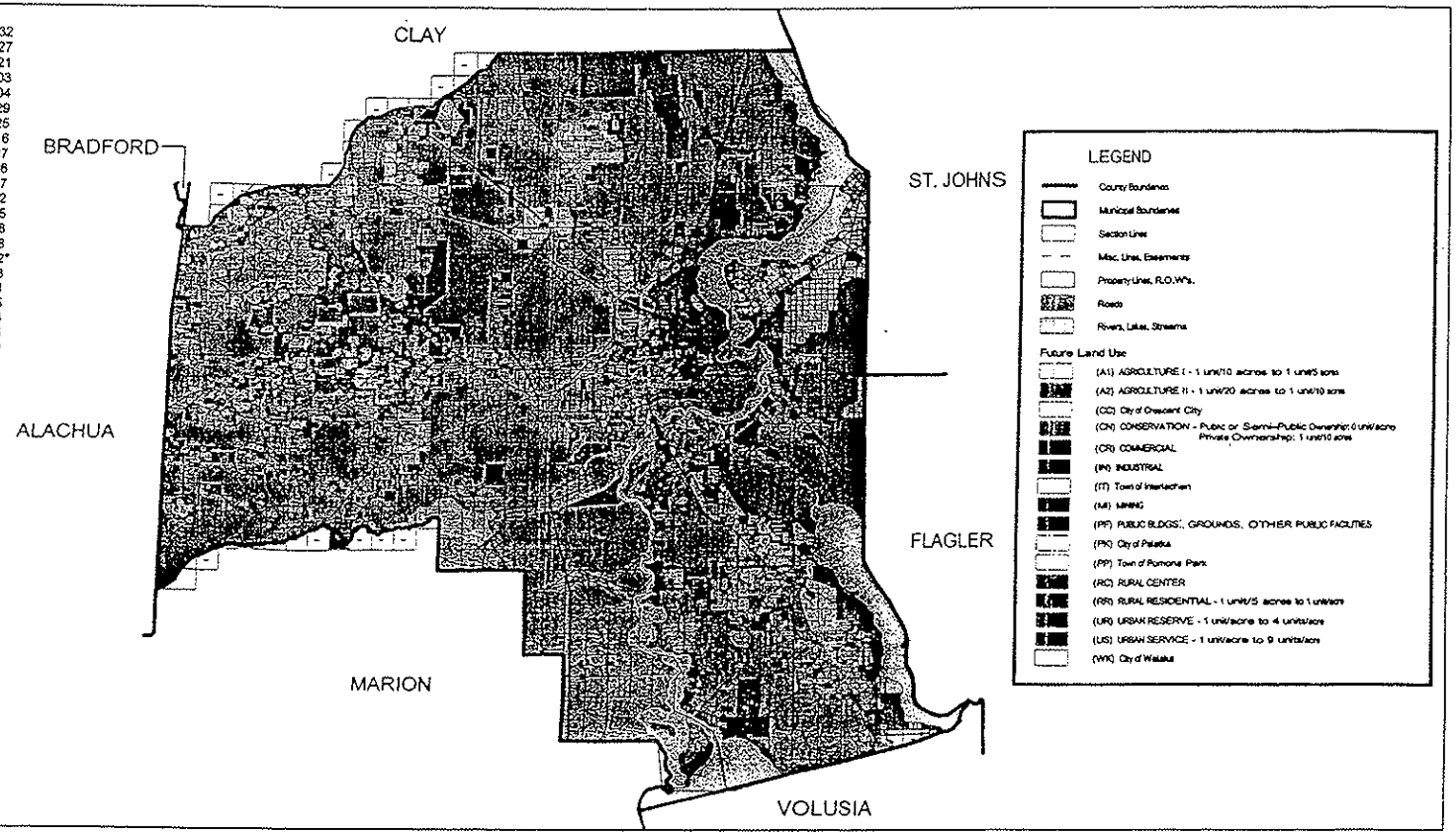
NORTHEAST FLORIDA REGIONAL PLANNING COUNCIL

1989

FUTURE LAND USE MAP

Revision Date: 02/12/02; Amended; ORD 01-32
Revision Date: 12/26/01; Amended; ORD 01-27
Revision Date: 10/26/01; Amended; ORD 01-21
Revision Date: 02/23/01; Amended; ORD 01-03
Revision Date: 01/23/01; Amended; ORD 01-04
Revision Date: 11/28/00; Amended; ORD 00-29
Revision Date: 09/26/00; Amended; ORD 00-25
Revision Date: 04/25/00; Amended; ORD 00-16
Revision Date: 11/23/99; Amended; ORD 99-27
Revision Date: 11/23/99; Amended; ORD 99-26
Revision Date: 12/22/98; Amended; ORD 98-37
Revision Date: 11/24/98; Amended; ORD 98-32
Revision Date: 10/23/98; Amended; ORD 98-25
Revision Date: 08/28/98; Amended; ORD 98-18
Revision Date: 05/29/98; Amended; ORD 98-08
Revision Date: 03/06/98; Amended; ORD 98-02*
Revision Date: 02/27/98; Amended; ORD 98-03
Revision Date: 08/22/97; Amended; ORD 97-21
Revision Date: 06/03/97; Amended; ORD 97-05
Revision Date: 05/17/96; Amended; ORD 96-04
Revision Date: 11/11/94; Amended; ORD 94-25
Revision Date: 10/19/93; Amended; ORD 93-19
First Print Date: 12/19/91; Adopted; ORD 91-30

(*)Revised date for industrial park: 03/11/99;
Beechers Point status recinded: 01/26/99(*)



Prepared by: JGJ	Checked by: RJS	Approved by: BOCC
Date: 07/30/02	Date: 07/30/02	Date:
Source: F.P. & L., Putnam County PA and P & Z		
Revisions:		
Revisions:		
Revisions:		

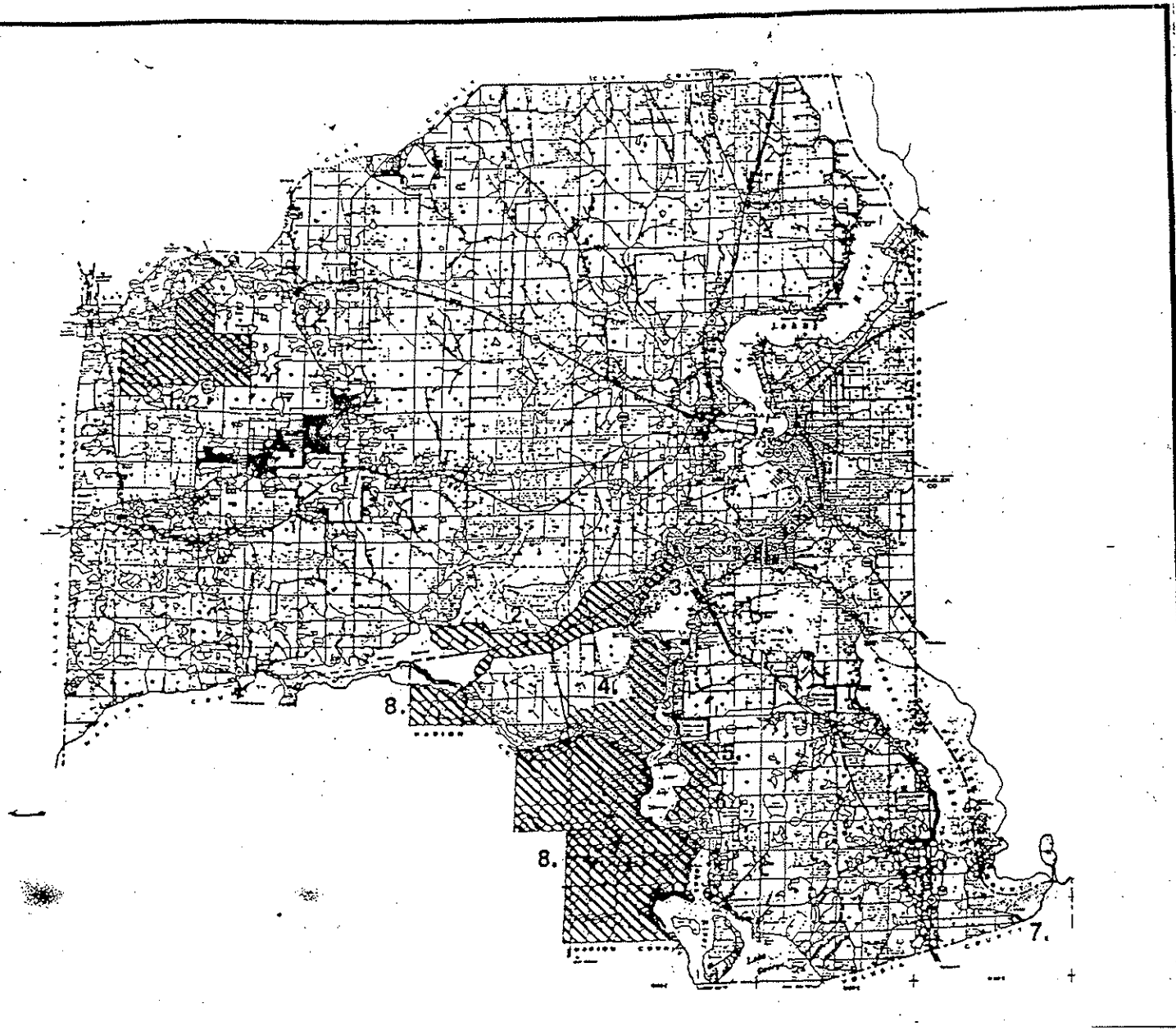
"This map was created using digital database information from multiple local government sources within Putnam County, FL, and may include additional information from other sources which may be subject to license and/or copyright. As provided Putnam County GIS data is to be considered a generalized spatial representation that is subject to revisions and should be independently verified with the appropriate office. This information is provided as a visual representation only and is not intended to be used as a legal or official representation of legal boundaries."

N
W E
S
(NOT TO SCALE)

PUTNAM COUNTY, FLORIDA

(Future Land Use)

PREPARED BY
PUTNAM COUNTY PLANNING & ZONING
PUTNAM COUNTY, FLORIDA
2002



RECREATION AND OPEN SPACE

PUBLIC LANDS

1. SWISHER MEMORIAL/CATHERINE ORDWAY PRESERVE
2. CROSS FLORIDA BARGE CANAL AUTHORITY
3. SEVEN SISTERS ISLANDS (SJRWMD)
4. CARRAVELLE RANCH (SJRWMD)
5. WELAKA NATIONAL FISH HATCHERY
6. U. of F. CONSERVATION RESERVE
7. HAW CREEK STATE PRESERVE
8. OCALA NATIONAL FOREST

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Source:
Northeast Florida Regional Planning Council

COMPREHENSIVE PLAN FOR

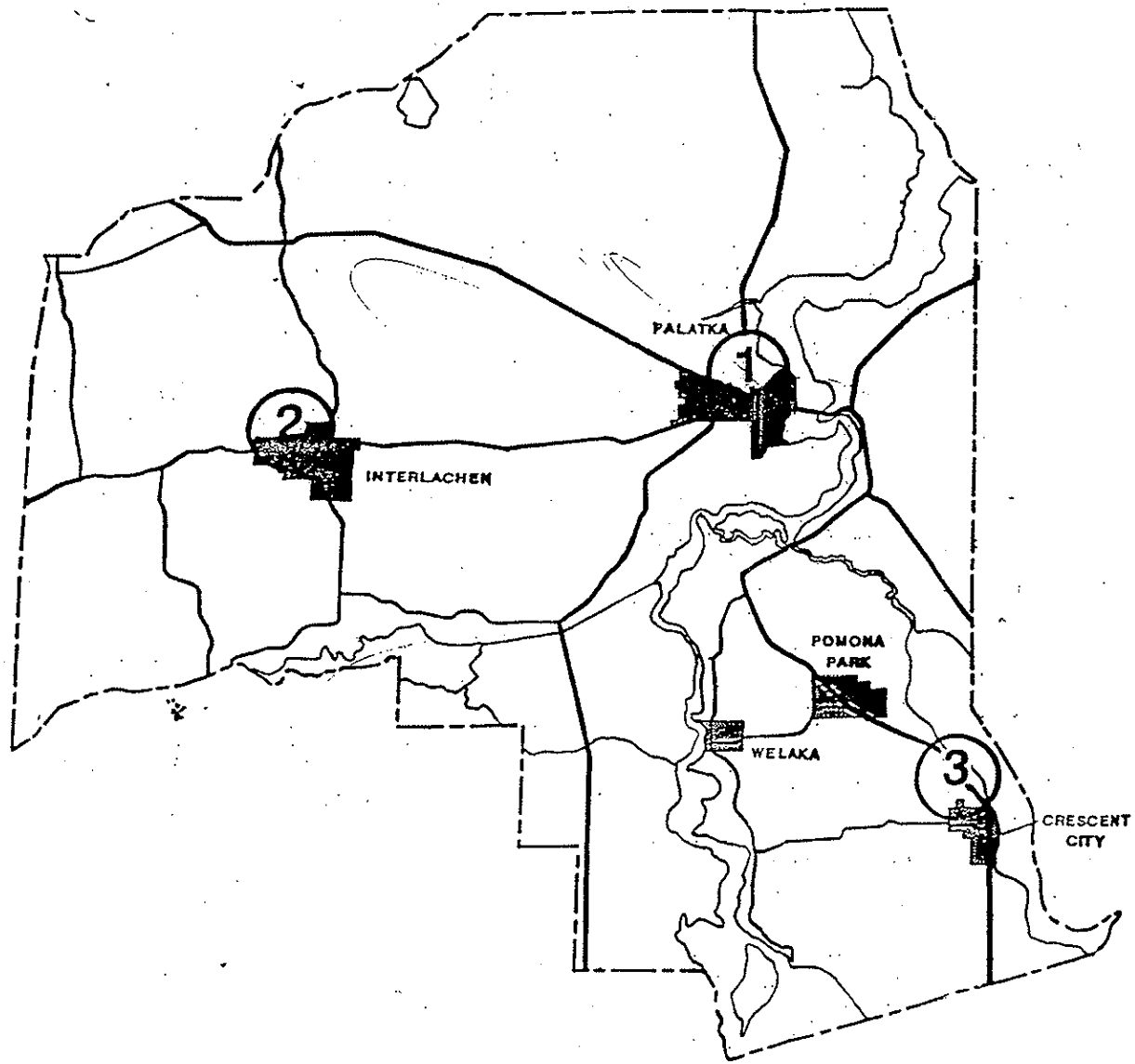
PUTNAM COUNTY

FIGURE A-15A
FUTURE LAND USE - 2001

= 4 MILES

N

PREPARED BY
NORTHEAST FLORIDA
REGIONAL PLANNING COUNC
1989



PLANNED RECREATION SITES

1 North of Palatka, at the intersection of US 17 and SR 19

2 Interlachen area

3 Crescent City at the intersection of Union Ave. and US 17

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Source:
Northeast Florida Regional Planning Council

COMPREHENSIVE PLAN FOR

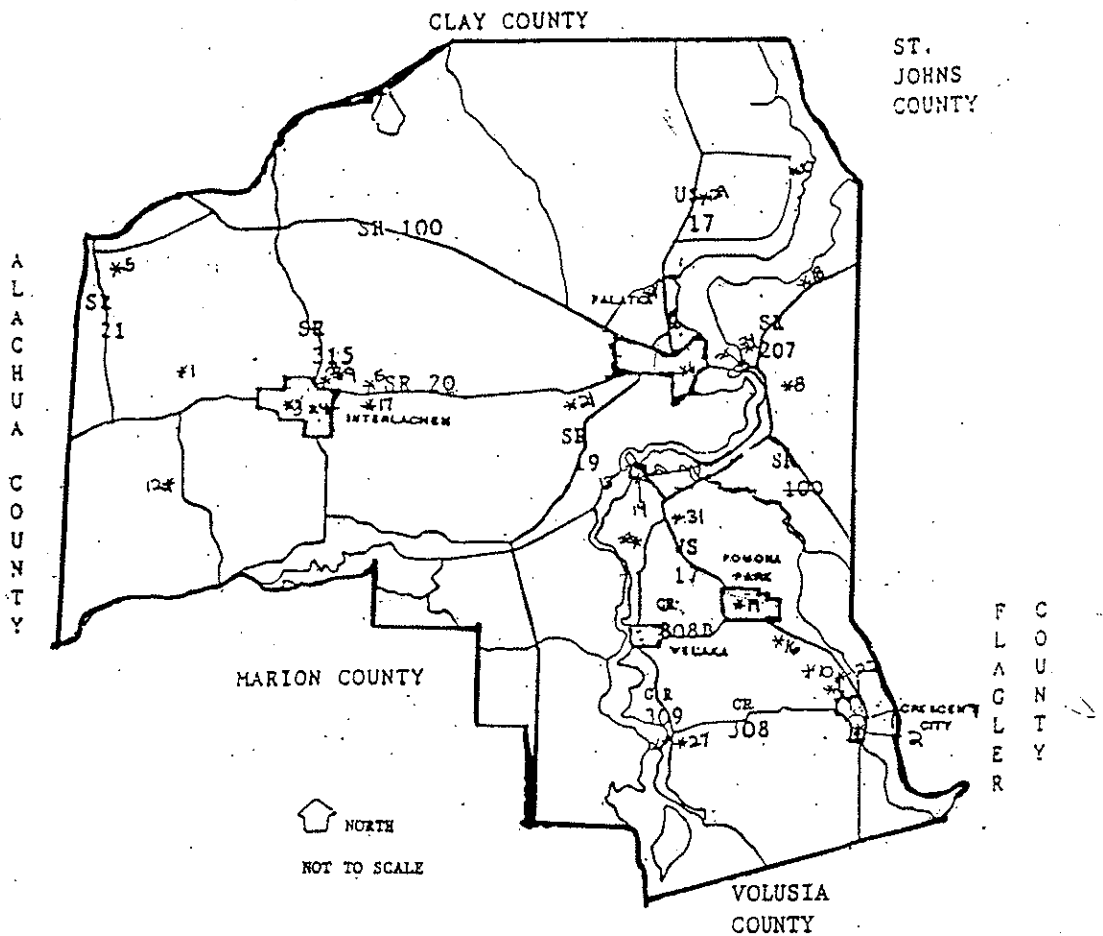
PUTNAM COUNTY

FIGURE A-15B
FUTURE LAND USE _ 2001

= 4 MILES

N

PREPARED BY
NORTHEAST FLORIDA
REGIONAL PLANNING COUNCI
1989



EXISTING AND PLANNED WATER WELLS
IN PUTNAM COUNTY

1. Baden Powell Scout Camp
2. City of Crescent
3. City of Interlachen
4. City of Interlachen
5. City of Melrose
6. City of Palatka
7. Crescent Hills
8. Dept of Corrections
9. Donel: Westwood Apts.
10. Doves Meadows
11. Georgia Pacific - Plant Mgr
12. Georgia Pacific - Vernon Adams
13. Hermits Cove
14. Highland Section 5
15. Interlachen Lake Estates
16. Lake Como Water Association
17. Park Manor
18. PBV Corp
19. Pomona Park
20. Putnam Barge Port Authority
21. Putnam County School Board EH Miller
22. Putnam County School Board Crescent
23. Putnam County School Board Interlachen
24. Putnam County School Board St. Augustine
25. River Grove Subdivision
26. River Park Subdivision
27. River Park Trailer Park
28. Saratoga Harbor
29. Seminole Electric Co-op
30. St. Johns Harbor Water Assoc.
31. Welaka Mobile Home Park

Source: Unpublished data prepared for the St. Johns River Water Management District by Kimball Lloyd, May 1991; and the Putnam County Comprehensive Plan, 1981

Prepared by the Putnam County Planning, Zoning and Building Department
August, 1993

COMPREHENSIVE PLAN FOR
PUTNAM COUNTY

Figure A-15C
Future Land Use - 2001

B. PUTNAM COUNTY COMPREHENSIVE PLAN
TRAFFIC CIRCULATION ELEMENT
GOALS, OBJECTIVES, AND POLICIES
ADOPTED AND EFFECTIVE 12/19/91, 5:00 P.M.
AMENDED 8/24/93, EFFECTIVE 10/19/93

GOAL B.1 [9J-5.007(3)(a); CRPP 19.1.1]: Develop and maintain a well balanced and integrated transportation system which provides for the safe, convenient, and efficient movement of people and goods throughout Putnam County, and which is consistent with desired land use patterns, conserves energy, and protects the natural environment.

Objective B.1.1 [9J-5.007(3)(b)1; CRPP 19.1.1]: Upon plan implementation, the County shall provide for a safe, convenient and efficient motorized and non-motorized transportation system by correcting all existing roadway deficiencies identified in this plan and maintain the adopted level of service standards in the future on a priority basis.

Policy B.1.1.1 [Rev. 98-02; Rev. 93-19; 9J-5.007(3)(c)1; CRPP 19.2.1.9, identical to Policy H.5.1.11]:

The County hereby adopts the following peak hour LOS standards for each listed facility type:

1. principal arterials –
   LOS C – Multi-Lane
   LOS D – Two-Lane

2. collectors and minor arterials - LOS D

3. local roadways - LOS D.

4. Florida Intrastate Highway System-
   LOS B – Rural Multi-Lane
   LOS C- Rural Two-Lane
   LOS C - Urban and transition urban

Any modification to the level of service standards provided above shall be submitted as a comprehensive plan amendment. The level of service standard for a roadway in the Florida Intrastate Highway System, shall not be different than the standards adopted by

Policy B.1.1.8 [9J-5.007(3)(c)1; CRPP 19.2.1.9]: The County shall maintain and enhance as necessary, a comprehensive traffic counting system for annually monitoring the level of service on, at a minimum, the County roadway system.

Objective B.1.2 [9J-5.007(3)(b)1; CRPP 19.2.1.1]: Putnam County shall continue to identify transportation improvement needs, including road paving, and establish a priority schedule, which will be updated annually.

Policy B.1.2.1 [9J-5.007(3)(c)1; CRPP 19.2.1.1]: The County shall establish and maintain a Transportation Improvement Plan (TIP) and shall establish a mechanism whereby the plan will be periodically updated and prioritized according to the criteria specified in Policy B.1.2.2.

Policy B.1.2.2 [9J-5.007(3)(c)1; CRPP 19.2.1.1]: Proposed roadway projects for the TIP shall be evaluated and ranked in order of priority according to the following group rating:

A. Group 1 projects are those which are essential to protect public health and safety and fulfill the County's legal commitment to provide facilities and services, consistent with the approved Comprehensive Plan, and have been evaluated based on established criteria, including the following factors:

1. street conditions
2. number of residents served
3. amount of traffic using the street
4. environmental impact
5. physical/geometric requirement
6. local policy
7. Group 1 projects should be implemented with available funds based upon capital cost effectiveness (i.e. capital cost/total annual person trips = cost per person trip).

B. Group 2 projects are those which meet the criteria specified above and should be implemented if funds are available after completion of priority 1 projects.

C. Group 3 projects are those which would improve facilities, but lie outside the five-year implementation period.

Objective B.1.3 [9J-5.007(3)(b)2,4; CRPP 19.2.1.8]: Upon plan adoption, the County shall identify collector and arterial right-of-way needs and establish a priority schedule for acquisition of future right-of-way and protection of existing and future right-of-way from building encroachment.

Policy B.1.4.3 [9J-5.007(3)(c)1; CRPP 19.2.1.1]: The County shall review all proposed transportation plans and improvements to determine the impacts such projects or proposals will have on the County's traffic circulation system.

Policy B.1.4.4 [9J-5.007(3)(c)3; CRPP 19.2.1.7]: The County shall ensure that the necessary transportation facilities, including motorized and non-motorized vehicle parking, are in place when a development permit is issued or that a development permit is issued subject to the condition that the necessary transportation facilities will be in place when the impacts of development occur.

Policy B.1.4.5 [Rev. 98-02; 9J-5.007(3)(c)2; CRPP 19.2.1.6]: Putnam County shall minimize the connection of access points of driveways and roads to roadways through the use of land development regulations addressing subdivision regulations, a drive access ordinance, and State driveway permit procedures, and coordinating with FDOT in implementing strategies contained in FDOT Access Management Rules 14-96 and 14-97 for development on State roadways. In general, land development regulations will be developed to limit drivewav spacing according to the following schedule

Adjoining Road Posted Speed Limit	Minimum Access Spacing (feet)
25 mph	80
30 mph	105
35 mph	145
40 mph	185
45 mph	200

For roadways designated as part of the Florida Intrastate Highway System (FIHS), which includes State Road 20 from the Alachua/Putnam County line to State Road 19; State Road 19 from its intersection with SR 20 to State Road 100; State Road 100 from its intersection with SR19 to its intersection with US 17; SR100 and US 17 to their intersection with SR 207; SR 207 to the Putnam/St. Johns County line, driveway and road access will be limited pursuant to FDOT requirements.

Policy B.1.4.6 [9J-5.007(3)(c)5; CRPP 19.1.1.5]: Putnam County shall review all plans in conjunction with highway improvements and residential development, particularly for connecting residential areas to park and recreation areas, schools and major shopping centers, to determine the need for pedestrian ways and bikeways.

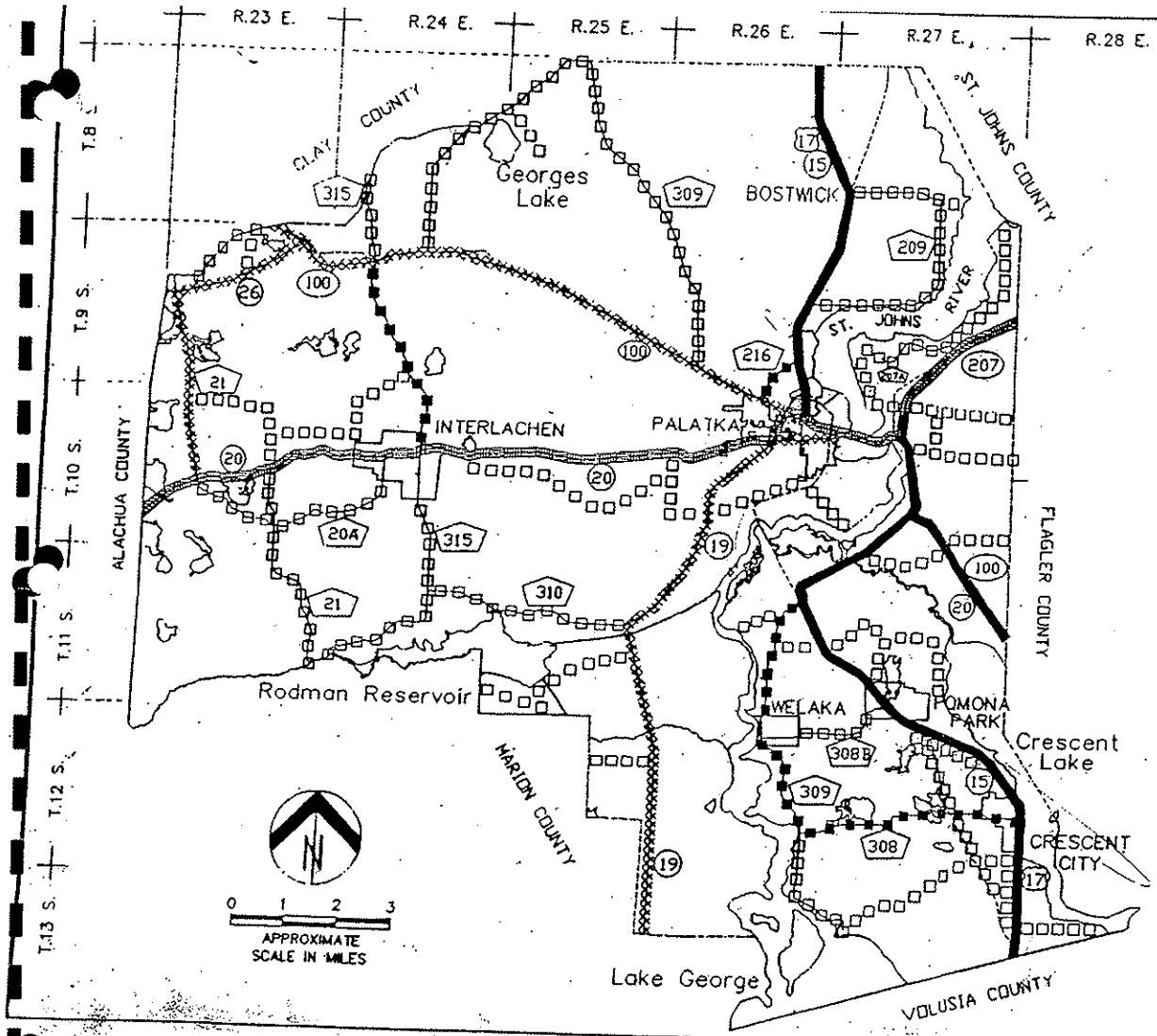
the responsiveness of the County's transportation planning process to the needs of the County residents by developing a mechanism for citizen participation.

Policy B.1.6.4 [9J-5.007(3)(c)1; CRPP 19.2.1.1]: The County shall review for compatibility with this element, the traffic circulation plans and programs of the incorporated areas within the County as they are amended in the future.

Policy B.1.6.5 [9J-5.007(3)(c)1; CRPP 19.2.1.1]: Although the County is located outside the limits of any Metropolitan Planning Organization, intergovernmental coordination with MPOs and resource planning pursuant to Chapter 380 in north Florida shall be accomplished through continued cooperation and communication with the Northeast Florida Regional Planning Council and other contiguous councils when and where appropriate.

Policy B.1.6.6 [9J-5.007(3)(c); CRPP 19.3.1.2]: County transportation services for the disadvantaged should work together to eliminate duplication of services through the joint-use of programs.

Policy B.1.6.7 [9J-5.007(3)(c); CRPP 19.3.1.3]: State, regional, and local agencies providing planning and operating assistance in transporting the disadvantaged should encourage participation of private for profit and private non-profit organizations.



FUTURE ROADWAY FUNCTIONAL CLASSIFICATION

LEGEND

STATE HIGHWAY SYSTEM

- Florida Intrastate
- Principal Arterial
- Minor Arterial

COUNTY ROAD SYSTEM

- Rural Major Collector
- Rural Minor Collector

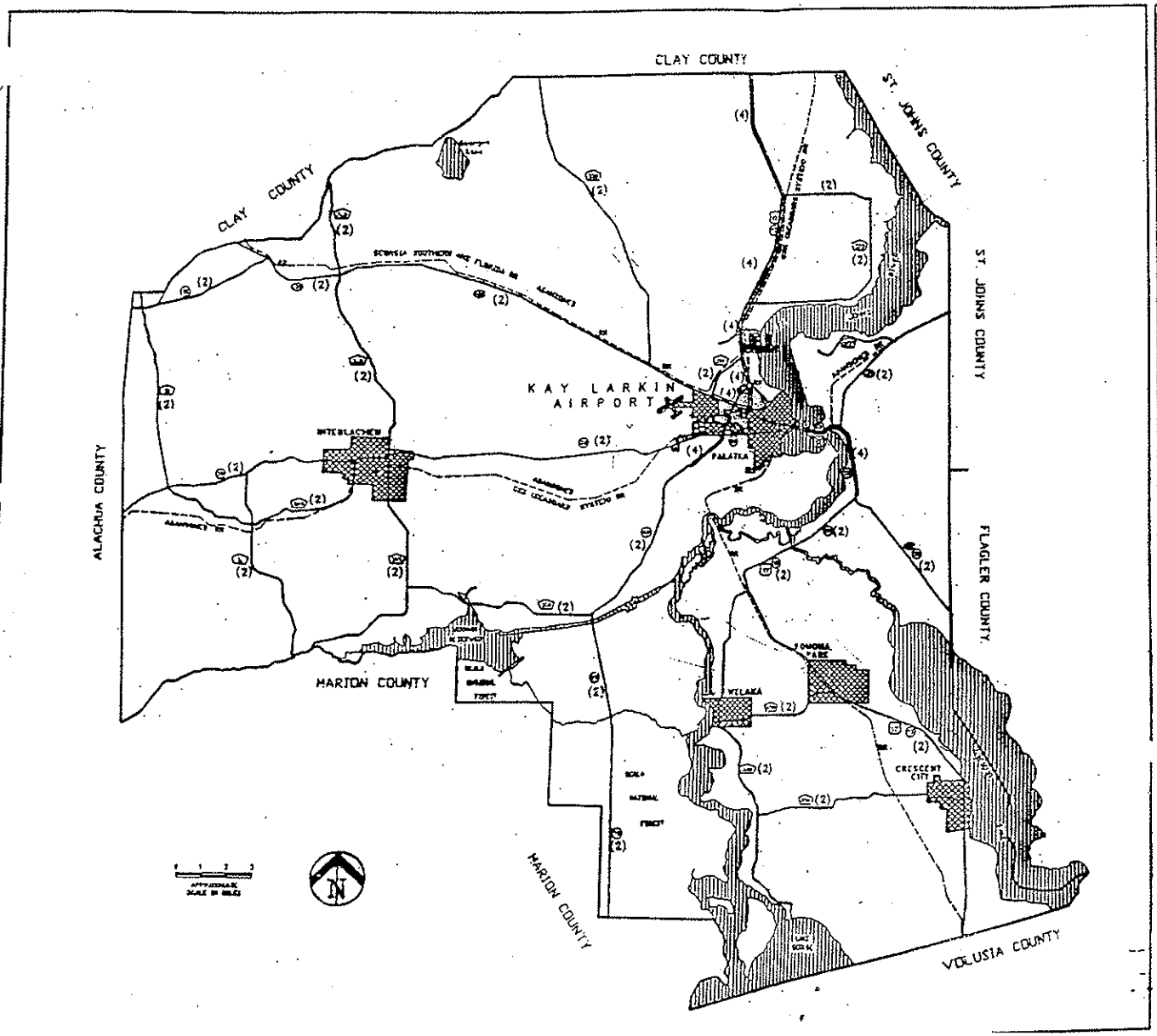
Preparation of this document was aided through financial assistance received from the State of Florida under the Local Government Comprehensive Planning Assistance Program authorized by 86-187, Laws of Florida, and administered by the Florida Department of Community Affairs.

Source:
Northeast Florida Regional Planning Council

COMPREHENSIVE PLAN FOR PUTNAM COUNTY, FLORIDA

MAP B-7

PREPARED BY:
PUTNAM COUNTY,
PLANNING & ZONING
1997



FUTURE – 2001 AVIATION, RAIL AND PORT FACILITIES MAP

LEGEND

- BARGE PORT
- AIRPORT
- (2) Number of Lanes
- MUNICIPALITIES
- RIVERS & MAJOR LAKES
- MAJOR HIGHWAYS
- MUNICIPAL BOUNDARY
- COUNTY BOUNDARY
- RAILROADS

REVISION DATE		MAP MADE BY:	MDF
REVISION DATE	10-16-91	STATUS	
FIRST PRINT DATE	7-25-91	FILE NAME	ROADWAY

COMPREHENSIVE PLAN FOR PUTNAM COUNTY FLORIDA

MAP B-8

PREPARED BY:

NORTHEAST FLORIDA REGIONAL PLANNING COUNCIL

1991

C. PUTNAM COUNTY COMPREHENSIVE PLAN
HOUSING ELEMENT
GOALS, OBJECTIVES, AND POLICIES
ADOPTED AND EFFECTIVE 12/19/91; 5:00 P.M.

GOAL C.1 [9J-5.010(3)(a); CRPP 5.1.3, 5.1.4, 5.1.5]: Stimulate the housing industry to provide safe and sanitary housing in numbers and types sufficient to meet the needs and choices of the County's current and projected populations.

Objective C.1.1: Upon Plan adoption, the County shall assist the private sector to deliver 5,521 housing units to accommodate the projected very low, lower and moderate income households through year 2001 by implementing the following policies:

Policy C.1.1.1: The County shall continue formal coordination with the Palatka Housing Authority via an existing interlocal agreement which shall be expanded to establish a more regular exchange of housing needs information.

Policy C.1.1.2: The County shall develop interlocal supportive partnerships with the County's municipalities to identify and implement programs that will be jointly beneficial in developing adequate and affordable housing for low and moderate income households.

Policy C.1.1.3 [9J-5.010(3)(c)1]: The County Building Official shall provide information and technical assistance to the development community regarding incentives available within the County for siting and construction of housing in sufficient numbers and types to meet County needs.

Policy C.1.1.4: Upon Plan adoption the County shall ensure that all permitting and regulatory practices conducted by the County allow for fast-track processing for affordable housing developments for the very low, low, and moderate income groups.

Policy C.1.1.5: The County shall establish coordination procedures with state and federal agencies, as well as the agricultural community to upgrade available housing for farming and migratory families.

Policy C.1.1.6: Towards providing incentives to builders and developers to build affordable housing, the County shall offer fast-track permitting, density bonuses, reduction of permitting fees, and zero lot line allowances in all regulatory processes for affordable housing projects for very low, lower and moderate income households.

Objective C.1.2 [9J-5.010(3)(b)2]: Upon Plan adoption, the County shall support the efforts of the private sector to, by 1995, rehabilitate the 344 conventionally built homes and the 46 mobile homes found to be substandard and replace the 148 conventionally built homes and 26 mobile homes found to warrant demolition.

Policy C.1.2.1 [9J-5.010(3)(c)7]: The County shall continue to pursue and use CDBG and other available housing-related grant revenues to target substandard housing rehabilitation and blighted neighborhood conservation.

Policy C.1.2.2 [9J-5.010(3)(c)4]: The County shall make available to the citizenry published information on methods of obtaining revenues for the rehabilitation of substandard dwelling units.

Policy C.1.2.3 [9J-5.010(3)(c)4]: Upon Plan adoption, the County shall assist neighborhood upgrading by providing code enforcement assistance, providing County resources to assist in neighborhood "clean-up" campaigns, and prioritizing capital and/or operating maintenance budgets to support improvements in such neighborhoods.

Policy C.1.2.4: The County shall continue to enforce the Southern Building Code Congress Standard Building Code and Standard Housing Code and standards for mobile homes as specified in the County Mobile Home Ordinance 86-5 as amended by Ordinances 88-3 and 89-09 as a component of its Land Development Regulations. The County shall provide for the protection of stable residential neighborhoods through its zoning regulations.

Objective C.1.3: Upon Plan adoption, the County shall continue to ensure that sufficient sites are made available to provide for the addition of 3,361 affordable mobile/manufactured homes by the year 1995; a total of 7,108 mobile/manufactured homes by the year 2001 as well as ensuring the availability of sites for locating conventionally built affordable low and moderate income housing.

Policy C.1.3.1: The County shall ensure non-discriminatory standards and criteria for the placement of mobile and manufactured homes in accordance with Section 320.8285(5) and 553.38(2), FS.

Policy C.1.3.2: The County shall maintain an inventory of vacant and underdeveloped land and provide the findings to builders, residential loan establishments and affordable housing agencies such as the Farmers Home Administration.

Objective C.1.4 [9J-5.010(3)(b)4]: The County shall continue to ensure that sites are available within Putnam County to locate group homes and foster care facilities throughout the County and that over concentration of such facilities in any single residential area is avoided.

Policy C.1.4.1: The County shall ensure non-discriminatory standards and criteria for the siting of foster care and group homes in accordance with Section 419.001(2) and (3)(c), FS.

Policy C.1.4.2 [9J-5.010(3)(c)1]: The County shall provide incentives to the development community in the form of assistance with grant and federal/state funding applications for the construction of group/foster care housing for the elderly and infirm.

Policy C.1.4.3: Putnam County regulatory ordinances shall allow fair housing opportunities to all residents regardless of age, race, handicap, disability, sex or family size in accordance with the Florida Fair Housing Act, Chapter 760.020, F.S.

Objective C.1.5 [9J-5.010(3)(b)5]: Upon Plan adoption, the County shall reinforce its policies regarding the identification, rehabilitation and conservation of historically significant structures within the unincorporated area of Putnam County.

Policy C.1.5.1: The County shall request the Department of State, Division of Historic Preservation to conduct a survey of the County to identify all sites of historical or archaeological significance.

Policy C.1.5.2: The County shall provide to owners of recognized historical properties informational announcements and publications on grant and low interest funding for the purpose of rehabilitating structures of historic significance.

Policy C.1.5.3: The County shall request the Department of State, Division of Historic Resources to provide technical assistance in applying for National Historical Register designation for qualified historical structures in the County.

Policy C.1.5.4 [9J-5.010(3)(b)2]: The County shall provide exceptions in its zoning codes to permit the use or rehabilitation of historic structures in a non-conforming setting if necessary to preserve the structure from demolition.

Objective C.1.6 [9J-5.010(3)(b)6]: Upon Plan adoption, the County shall ensure that persons and businesses displaced by public actions will be relocated in equal or better accommodations prior to any displacement action.

Policy C.1.6.1: Putnam County citizens affected by public action demolition programs will be afforded non-discriminatory relocation treatment in accordance with the Federal Relocation Act.

Objective C.1.7 [9J-5.010(3)(b)7]: Upon Plan adoption, the County shall ensure that housing implementation programs are in-place and available to support private sector development activities.

Policy C.1.7.1 [9J-5.010(3)(c)2]: The County shall codify its Land Development Regulations for easy reference to principles and criteria which establish the rules for locating low and moderate income housing, mobile home/manufactured home units, group and foster care facilities serving citizens with special needs.

Policy C.1.7.2 [9J-5.010(3)(c)4]: By 1992, the County shall clearly identify in its 5-year capital improvement plan those items of infrastructure and public facilities that are prioritized to support neighborhood rehabilitation and the development of low and medium income housing.

D. PUTNAM COUNTY COMPREHENSIVE PLAN SANITARY SEWER, SOLID WASTE, DRAINAGE, AND NATURAL GROUNDWATER AQUIFER RECHARGE (INFRASTRUCTURE) ELEMENT GOALS, OBJECTIVES, AND POLICIES ADOPTED AND EFFECTIVE 12/19/91, 5:00 P.M.

GOAL D.1 [9J-5.011 (2)(a); CRPP 6.2.1, 8.1.3, 8.1.4, 17.1.1, 17.1.2, & 17.2.1]: Putnam County shall ensure that Sanitary Sewer, Potable Water, Solid Waste and Drainage shall meet existing and projected demands at the Level of Service identified in this Element. Also, the County, containing land areas of high aquifer recharge capacity, shall protect and preserve this resource for the long-term benefit of its residents and all populations which draw water from this shared resource.

Objective D.1.1 [9J-5.011(2)(b)1 & 2; CRPP 17.1.2]: To correct existing deficiencies as well as to coordinate the extension of facilities to meet future needs, the County shall, upon plan adoption, implement the following policies.

Policy D.1.1.1 [9J-5.011 (2)(c)1; CRPP 17.1.2]: Upon Plan adoption, the County shall develop and maintain a five-year schedule of capital improvement needs for public facilities, to be updated annually in conformance with the requirement established by 9J-5.016(4)(a)1.

Policy D.1.1.2 [9J-5.011(2)(c)1; CRPP 17.1.2]: The County Commission or its designated representative will coordinate, evaluate, and rank capital improvement projects proposed for inclusion in the 5-year schedule of capital improvement needs, according to the following priority level guidelines:

Level One - Whether the project is needed to protect public health and safety, and to provide the County's legal commitment to provide services.

Level Two - Whether the project eliminates existing capacity deficits to developed service areas shown for such facilities in the Future Land Use element of this plan.

Level Three - Whether the project represents a logical extension of facilities and services within a designated service area thereby controlling urban sprawl.

Policy D.1.1.3 [9J-5.011 (2)(c)1; CRPP 17.1.2]: Unless modified by an amendment to the element, projects shall be completed in accordance with the schedule provided in the Capital Improvements Five-Year Plan.

Policy D.1.1.4 [9J-5.011 (2)(c)1; CRPP 17.1.2.1]: The County shall maintain up-to-date inventories of all public facilities and identify locations required to support future development needs.

Objective D.1.2 [9J-5.011(2)(b)2 & 3]: Upon Plan adoption, the County shall maximize the use of existing infrastructure, coordinate the extension of, or increase the capacity of, potable water, sanitary sewer, solid waste and drainage facilities to meet future needs.

Policy D.1.2.1 [Rev. 93-19; 9J-5.011(2)(c)2, identical to Policy H.5.1.1]: The County shall ensure that the continuation of current service and the extension of service into the future meets the needs of the residents of Putnam County through the endorsement of state regulations pertaining to permitting, construction and quality standards of potable water, specifically:

A. Private water wells shall be permitted and constructed in accordance with the requirements of Chapter 17-532, FAC, Chapter 10D-4, FAC, Rules 40A-E3, FAC, and Putnam County Ordinance 87-2.

B. Water systems serving the public shall be permitted and constructed in accordance with the requirements of Chapters 17-550, 17-555, 17-560, and 10D-4, FAC, and Putnam County Ordinance 87-2.

C. Drinking water shall meet the quality standards established in Chapter 17-555 Part III, and 10D-4, FAC.

D. The minimum gallons per day requirement of new potable water systems serving the public shall be established at a level of service based upon the sewage flow volumes contained in Rule 10D-6.048, FAC, plus ten percent.

E. Water systems designed to serve the public in Putnam County shall provide storage for the number of gallons of potable water at a rate equal to ten times the peak flow per minute (peak flow per minute equals minimum daily design flow divided by 1440 times 4.5).

F. A public water system in Putnam County shall provide a minimum pressure of 20 pounds per square inch at all service connections during peak water demands.

G. The County will not issue construction permits unless the design and location of water supply system (including private wells) has been approved by the County Health Department and/or DEP.

Policy D.1.2.2 [Rev. 93-19; 9J-5.011(2)(c)2; identical to Policy H.5.1.3]: The County shall establish the following level of service standards to ensure that the continuation of current service and the extension of service into the future meets the needs of the residents of Putnam County. The permitting, construction and standards for sanitary sewer treatment and disposal shall comply with the following:

A. No septic tank or other domestic on-site sewage disposal system shall be installed until an application form HRS-H Form 4015 is submitted and an "Onsite Sewage Disposal System Construction Permit" (HRS-H Form 4016) has been obtained from the Department of Health and Rehabilitative Services.

B. The sizing and location of sanitary sewer disposal systems (including septic tanks) shall be in accordance with Chapter 10D-6, sections .044 through .049, FAC, and Putnam County Ordinance Numbers 87-5 and 80-1, as amended by Ordinances 87-8 and 91-03. Rule 10D-6.048, FAC, provides minimum design flows based on estimated daily sewage flow as determined from Table II or according to methodology provided in the rule, which will be used for level of service standards.

C. Treatment and disposal of the sewage flow from a building or establishment shall be in compliance with Florida Department of Environmental Protection (DEP) standards and rules when:

1. The volume of domestic sewage from an establishment exceeds 5,000 gallons per day. Rule 10D-6-048(1) shall be used for determining the total daily establishment sewage flow from all sources located on one or more parcels of land.

2. Sewage or wastewater contains industrial or toxic or hazardous chemical waste.

3. An area is zoned for industrial or manufacturing use, or its equivalent, and where system use may be for disposing of other than domestic wastes.

D. Site evaluation for the location of septic tanks shall meet the site evaluation criteria specified in Chapters 10D-6.047 and 17-600, Part I, FAC.

E. Discharge water quality of wastewater treatment plants shall meet the criteria specified in Chapter 17-600, Part II, FAC.

F. Mandatory connections to municipally owned or investor-owned public sewerage systems shall be required as provided in Sections 10D-6.041(2), 10D-6.042(9), and 10D-6.046(7), FAC.

G. The County will not issue construction permits unless the design and location of the sewage treatment system has been approved by the County Health Department and/or DEP.

Policy D.1.2.3 [9J-5.011 (2)(c)2]: The following level of service standards for drainage facilities shall be used as the basis for determining the availability of facility capacity and the demand generated by a development.

Stormwater management facilities shall be designed to accommodate the 25-year frequency, 24-hour duration design storm to meet the standards that follow:

Water Quantity - Peak post-development run-off rates shall not exceed peak pre-development run-off rates.

Water Quality - Stormwater treatment shall be required for all new development and redevelopment to provide a level of treatment which meets the standards of Chapter 40C-42.025, FAC. Ambient water quality standards will be maintained in accordance with the requirements of Rule 17-302.55, FAC.

Wetland Stormwater Discharge - Permits for wetland stormwater discharge shall follow Rule 17-25.042, FAC.

Stormwater Discharge Facilities - Permits for construction of new stormwater discharge facilities shall follow Rule 17-25.040, FAC.

Closed Conduits - 10 year frequency, 24-hour duration; IDF curve Zone 5, DOT Drainage Manual 1987.

Open Channels - 25 year frequency, 24-hour duration; IDF curve Zone 5, DOT Drainage Manual 1987.

Level of Service - Shall meet DER Stormwater Drainage Rule 17-25 (retain the first inch of stormwater for drainage basins over 100 acres; the first one-half inch of stormwater for drainage basins under 100 acres).

The standards stated above shall pertain to all new development and redevelopment without exception. The exemption regarding project size thresholds provided in Rule 17-25.040, FAC, does not apply for concurrency determination.

Note: The Florida Administrative Code (FAC) citations refer to these regulations as they exist at the time of adoption of this comprehensive plan.

Policy D.1.2.4 [9J-5.011 (2)(c)2; CRPP 16.2.1.4]: The level of service standards for the County's solid waste facilities of 6.4 pounds per capita per day shall be adopted and utilized to assess adequacy of service and project the expected lifetime of the County landfill.

Policy D.1.2.5 [9J-5.011(2)(c)2; CRPP 13.2.1]: By 1992, the County shall enter into interlocal agreements with the municipalities (of the County) whereby the County and municipalities shall commit themselves to negotiate a solid waste disposal capacity which the County will provide at its landfill to meet reasonable solid waste generation projections of local communities.

Policy D.1.2.6 [9J-5.011(2)(c)2]: The County shall continue its recycling effort to meet the requirements of Florida Statutes 403.706(2) and (4), and 187.201(13)(b)1 which commands each county and municipality to undertake recycling efforts and to reduce the volume of solid waste requiring disposal by 30 percent, by 1994. The County shall continue interlocal agreements with each municipality which stipulate how each municipality shall assist in meeting the requirements of Senate Bill 1192.

Policy D.1.2.7 [9J-5.011 (2)(c)2; CRPP 17.1.1.3]: All improvements for replacement, expansion, or increase in capacity of facilities shall be compatible with the level of service standards for the facilities stated in this Element and with the scheduling for implementation identified in Subparagraphs 9J-5.0055(2)(a), (b), and (c), FAC.

Objective D.1.3 [9J-5.011 (2)(b)3]: Upon plan adoption, the County shall regulate land use and control urban sprawl by adopting land development regulations which require maximum use of current available and planned infrastructure facilities.

Policy D.1.3.1 [9J-5.011 (2)(c)2; CRPP 17.1.1.1]: The County shall adopt and implement the spatial distribution of land use as identified in the Future Land Use Map.

Policy D.1.3.2: The County shall adopt Land Development Regulations that specify density bonuses for development which includes the construction of central water/sewer systems which serve that development and additional bonuses for the construction of

water/sewer systems with excess capacity that is made available to new construction that may occur beyond the limits of the planned subdivision. Land development infrastructure density bonuses shall be as provided in the Future Land Use Element adoptable document.

Objective D.1.4 [9J-5.011 (2)(b)4; CRPP 8.1.3.1, 2, & 6]: Upon Plan Adoption, the County shall conserve potable water resources by implementing specific measures in the policies listed below.

Policy D.1.4.1 [9J-5.011 (2)(c)3]: The County shall request the assistance of the Suwannee River Water Management District, St. Johns River Water Management District and other agencies to facilitate and conduct a public information program alerting residents of wasteful water practices encouraging responsible and practical use of potable and water resources. Through this program the County shall maintain a public awareness of the diminishing supply of potable water in the State of Florida and be prepared to explore alternative sources of water if the situation becomes exacerbated. The Planning, Zoning and Building Department will display brochures provided by SJRWMD and SRWMD concerning water conservation techniques.

Policy D.1.4.2 [9J-5.011 (2)(c)3]: The County shall adopt land development regulations that implement the requirements of Chapter 553.14, FS, "The Water Conservation Act", and continue to require low water consumption plumbing devices and other water conservation measures, such as xeriscaping.

Policy D.1.4.3: To protect the long-term life of the Floridan Aquifer the County shall request the assistance of the SJRWMD and SRWMD to identify and utilize alternative sources of water for commercial, agricultural and industrial operations.

Objective D.1.5 [9J-5.011 (2)(b)5; CRPP 13.2.2.2, 3, & 6]: The County shall adopt land development regulations that protect the functions of natural groundwater recharge areas and natural drainage features.

Policy D.1.5.1 [9J-5.011 (2)(c)4]: The County shall coordinate with Florida Department of Environmental Regulation to establish schedules for routine inspection of all County-owned wastewater treatment plants.

Policy D.1.5.2 [9J-5.011 (2)(c)4]: The County shall continue to enforce Section 1A of County Ordinance 80-1, as enacted on the date of plan adoption, which regulates wastewater effluent discharges into the St. Johns River.

Policy D.1.5.3 [9J-5.011 (2)(c)4; CRPP 8.2.1.5]: The County shall endorse SJRWMD and SRWMD programs to determine all known point and nonpoint sources of pollution within the County. All discharges requiring permits shall be required to meet State Water Quality Standards. Any discharges not requiring permits shall be required to meet any existing Best Management Practices (BMPs).

Policy D.1.5.4 [9J-5.011(3)(c)4; CRPP 8.1.2.1]: Groundwater quality within Areas of High Recharge Potential (8 inches or more per year) to the Floridan Aquifer as defined by the SJRWMD and SRWMD shall be protected through prohibition of landfills, underground storage of toxic materials and locating of hazardous waste sites within such areas, except as may be permitted by other jurisdictional agencies.

Policy D.1.5.5 [9J-5.011(2)(c)4]: The County shall adopt Land Development Regulations that protect Areas of High Aquifer Recharge Potential. Areas of high aquifer recharge would include areas where recharge is 8 inches or more per year, as shown on the St. Johns River Water Management District Map entitled Floridian Aquifer Recharge Areas of Putnam County (December 1996) and as identified on Map D-5 of the Putnam County Comprehensive Plan Infrastructure Element. That portion of the County that falls within the Suwannee River Water Management District is in a high aquifer recharge area. Development in these areas must provide a method of capturing storm water run-off on site in a facility that will treat it and recharge the aquifer, except that a site may be developed without addressing additional stormwater management standards particular to aquifer recharge if it has an impervious surface area of less than 35% of the total area of the site. Site specific information may be substituted for the identified map for the purpose of determining whether or not a particular site is in an area of high recharge. Approval of a required storm water retention facility by the Director of Public Works is to occur at the time of building permit application. Building permits will not be issued unless this policy is met.

Objective D.1.6 [9J-5.011 (2)(b)5; CRPP 8.2.1, 8.2.1.6, & 8.2.2.4]: Upon plan adoption, the County shall take specific flood protection measures, which will protect all surface water bodies from pollutants.

Policy D.1.6.1 [Rev. 98-02; 9J-5.011 (2)(c)4]: The County shall adopt as a land development regulation the level of service standards of Policy D.1.2.3 for stormwater management as required by Section 163.3202, FS. By 1999 the county shall develop a drainage master plan for enaction as a stormwater management ordinance. Upon approval by the Putnam County Board of County Commissioners, the Drainage Master Plan shall be incorporated in a stormwater management ordinance and be made part of the Public Facilities Element through the amendment process presented in Section 163.3187, FS.

Policy D.1.6.6 [9J-5.011(2)(c)4]: The County shall adopt Land Development Regulations which require that surface water runoff from new construction sites be retained on-site to permit no greater runoff than existed prior to construction activities. Exempted from this policy are subdivisions with an approved master drainage plan and construction associated with a DRI.

Policy D.1.6.7: The County shall adopt Land Development Regulations that reinforce the Florida Administrative Code 17-3.051 which states that all surface waters of the state shall at all places and at all times be free from domestic, industrial, agricultural or other man-induced non-thermal components of discharge which contribute to surface water pollution.

Policy D.1.6.8: [Added by 2000-25] The County shall ask the St. Johns River Water Management District and Florida Department of Environmental Protection to identify the storm water drainage from County maintained roads and facilities that is causing degradation of the St. Johns River and its tributaries. Upon identification, the County shall apply for state and federal funds to improve storm water management and restore degraded aquatic ecosystems.

Objective D.1.7: Upon Plan adoption, the County shall implement the following policy to reduce the potential of groundwater contamination through well head intrusion into the aquifer.

Policy D.1.7.1: Public water wellheads shall be protected from adverse impacts of development by requiring a minimum 200-foot Reasonable Fixed Radius Zone of non-polluting land uses around each wellhead as described in the SJRWMD publication, SJ91-SP9, "Guide to Groundwater Protection in Florida", Volume II, January, 1991, pages 62-63; or greater, where required by Chapter 17-555.312, FS.

Non-polluting land uses shall include Recreational and Conservation land uses, low and medium density residential land uses and commercial land uses that do not, in their operations, produce, store, use nor sell toxic materials as defined in SARA Title III (Consolidated List of Hazardous Materials).

Any nonconforming land use located within 200 feet of a well serving the public will not be permitted to expand or be improved.

Should later calculations of zones of influence or zones of contribution by the Water Management District find that cones of influence for wells within the County are greater or less than 200 feet, the Plan shall be amended through procedures identified in Chapter 163, FS, to reserve land use in an amount appropriate to adequate protection.

E. PUTNAM COUNTY COMPREHENSIVE PLAN
CONSERVATION ELEMENT
GOALS, OBJECTIVES AND POLICIES
ADOPTED AND EFFECTIVE 12/19/91, 5:00 P.M.

GOAL E.1: [9J-5.013(2)(a)] Conserve and protect the natural resources of Putnam County and maintain an acceptable quality of life for its citizens.

Objective E.1.1: [9J-5.013(2)(b)1] Upon Plan adoption, the air quality in Putnam County shall be maintained with no further degradation.

Policy E.1.1.1: [9J-5.013(2)(c)] Future industry locating in the County shall, as a minimum standard, be required to meet the air quality standards established by state and federal agencies as a condition of continued operation or development approval.

Policy E.1.1.2: [9J-5.013(2)(c)] Developments of Regional Impact, future power generation projects, future major transportation projects, future commercial centers and future industry shall be required to conduct assessments of their impacts on air quality and shall be required to meet the air quality standards established by state and federal agencies as a condition of approving a development order.

Policy E.1.1.3: [9J-5.013(2)(c)] The County shall reduce the potential for mobile emissions by:

A. Requiring mixed use DRI's and developments to link the uses with bike and pedestrian paths.

B. Promoting bike and pedestrian paths.

C. Requiring efficient on-site circulation movement within new developments.

D. Promoting mixed-use communities within new development which combine living/shopping/working in close proximity.

Objective E.1.2: [9J-5.013(2)(b)2] Upon plan adoption, the County shall implement the following policies that are to conserve, appropriately use and protect the quality and quantity of current and projected water sources and waters that flow into estuarine waters.

Policy E.1.2.1: [9J-5.013(2)(c)6] The County shall prohibit the dumping of raw sewage from live-aboard vessels, recreational vehicles, passenger trains and other mobile facilities situated in or transiting through the County. Furthermore, the County shall require sewage pumpout facilities in the design of all new or redeveloped marinas.

Policy E.1.2.2: [9J-5.013(2)(c)6] The County shall adopt state standards of Chapter 17-61, FAC, for all underground storage tanks and attached piping located within waterfront marinas and shall participate in on-going inspections of these facilities.

Policy E.1.2.3: [9J-5.013(2)(c)6] The County shall annually monitor FDER's routine inspection schedules for all package treatment plants as a means to further these facilities' continued meeting water quality standards for discharge.

Policy E.1.2.4: [9J-5.013(2)(c)6] New waterfront development shall be designed so that stormwater runoff and erosion are retained on-site or are channeled so as to not degrade ambient water quality of adjacent waters.

Policy E.1.2.5: [Rev. 93-19; 9J-5.013(2)(c)3,6; identical to Policy A.1.4.12] The County shall adopt and enforce regulations that require the preservation or restoration of a vegetated upland buffer or filter for any waterfront development. The buffer strip shall provide for sheet flow of the surface runoff, and shall be a minimum of 50 feet in width, except as provided below. Development and land use activities excepted below in Sections B through G shall be allowed only when permitted by the land use designation; site characteristics are such that impacts cannot be avoided; the impacts are limited to the minimum necessary to allow the permitted use of the property; and the site development or use is in compliance with HRS, DEP, WMD, and COE regulations for permitting and mitigation.

A. It is certified that either the existing condition or a buffer has been established which meets the USDA SCS specifications in the Code 393 Field Office Technical Guide, Florida Supplement dated January, 1988, for a minimum design width of:

1. 15 feet in areas of less than four and one-half percent slope where the vegetation is ground cover species or mixed woody (trees and shrubs) and ground cover species.

2. 25 feet in areas of four and one-half percent or greater slope where the vegetation

is ground cover species or mixed woody (trees and shrubs) and ground cover species.

3. 30 feet in areas of less than four and one-half percent slope where the vegetation is only woody species (trees and shrubs).

4. 50 feet in areas of four and one-half percent or greater slope where the vegetation is only woody species (trees and shrubs).

B. Resource-based recreational facilities such as trails, boardwalks, piers, and boat ramps.

C. Water dependent components of commercial development such as port facilities, marinas, fish camps, and commercial fishing and shellfishing operations.

D. General Agriculture shall follow BMPs as provided in Policies A.1.4.9 and E.1.3.5 and E.1.2.8.

E. Silviculture shall follow the most recent editions of the best management practices and management guideline manuals of the Florida Department of Agriculture and Consumer Services, Division of Forestry, as provided in Policy A.1.4.9 and identical Policy E.1.3.5.

F. Mining activities shall be located a minimum of 500 feet from a water body as currently required by Section 24-5 of the County Zoning Ordinance 88-1, as amended by Ordinance 91-31.

G. Essential public services.

Policy E.1.2.6: [9J-5.013(2)(c)3,6] Residents of waterfront developments shall be made aware, through public education, of the various techniques available to protect water quality including maintenance of vegetated upland buffers, maintenance of littoral zones rather than use of bulkheads, maintenance of septic tanks, and controlled application of pesticides and fertilizers.

Policy E.1.2.7: [9J-5.013(2)(c)6] Minimum lake levels as established by the St. Johns River and Suwannee River Water Management Districts shall not be exceeded by surface water withdrawals as controlled by the County Concurrency Management System.

Policy E.1.2.8: [Rev. 93-19; 9J-5.013(2)(c)6] Agricultural runoff shall meet State Water Quality Standards to maintain ambient water quality in accordance with the requirements of Rule 17-302.55, FAC, and shall meet the Best Management Practices (BMPs), as provided on Pages 7-6 through 7-13 of the "Florida Non-Point Source Management Plan,

Volume Two", May 1989, DER.

Policy E.1.2.9: [9J-5.013(2)(c)3,6] The County shall adopt and enforce regulations that require that new roads and driveways be designed so that stormwater runoff is retained on-site or is channeled so as to control erosion and maintain ambient water quality in accordance with the requirements of Rule 17-302.55, FAC, which otherwise can adversely affect adjacent surface water bodies and wetlands.

Policy E.1.2.10: [9J-5.013(2)(c)3,6] The County shall recommend to the SJRWMD and the SRWMD that those water bodies identified as having water quality problems be included in the SWIM program for further analysis to determine pollution sources and feasible techniques to upgrade water quality.

Policy E.1.2.11: [9J-5.013(2)(c)6] The County shall continue to enforce its Ordinance prohibiting additional sewage wastewater effluent discharges into the St. Johns River.

Policy E.1.2.12: [9J-5.013(2)(c)1,4] Water conservation measures shall be promoted for all water users including domestic, public, institutional, industrial, and agricultural. The County shall make available at County Offices water conservation materials published by the FDER, FDNR, SJRWMD and SRWMD.

Water conservation measures endorsed by the County include the plugging of unused artesian wells, landscape vegetation watering restrictions during periods of drought, and the physical restrictions and water-saving devices as shall be required by updated building and energy codes that are required when upgrading residential, commercial or industrial plumbing systems.

Emergency water conservation measures enacted by the SJRWMD and endorsed by the County include the "Water Shortage Rule" (Chapter 40C-21, FAC) and the "Water Conservation Rule" (Chapter 40C-2, FAC).

Policy E.1.2.13 [9J-5.013(2)(c)1]: Recharge functions in Areas of High Recharge Potential to the Floridan Aquifer as defined by the County as 8 inches or more per year and as identified by the SJRWMD and SRWMD shall be protected through the establishment of criteria in the Land Development Regulations including retention of runoff and maximum permitted coverage of impervious surfaces per lot.

Policy E.1.2.14 [9J-5.013(2)(c)1]: Groundwater quality within Areas of High Recharge Potential to the Floridan Aquifer as defined by the County as (8 inches or more per year and as identified by the SJRWMD and SRWMD shall be protected through prohibition of

possible polluting land uses such as: landfills, hazardous waste sites, and auto salvage and junkyards; along with limitations for siting septic tanks and underground tanks which store hazardous or potentially polluting substances through the implementation of Land Development Regulations.

Policy E.1.2.15: [9J-5.013(2)(c)1] Public water wellheads shall be protected from adverse impacts of development by requiring a minimum 200-foot Reasonable Fixed Radius Zone of non-polluting land uses around each wellhead as described in the SJRWMD publication, SJ91-SP9, "Guide to Groundwater Protection in Florida", Volume II, January, 1991, pages 62-63; or greater, where required by Chapter 17-555.312, FS.

Non-polluting land uses shall include Recreational and Conservation land uses, low and medium density residential land uses and commercial land uses that do not, in their operations, produce, store, use nor sell toxic materials as defined in SARA Title III (Consolidated List of Hazardous Materials).

Any nonconforming land use located within 200 feet of a well serving the public will not be permitted to expand or be improved.

Should later calculations of zones of influence or zones of contribution by the Water Management District find that cones of influence for wells within the County are greater or less than 200 feet, the Plan shall be amended through procedures identified in Chapter 163, FS, to reserve land use in an amount appropriate to adequate protection.

Policy E.1.2.16: [9J-5.013(2)(c)1,10] No facilities that use, handle, generate, transport, or dispose of hazardous waste shall be permitted within public wellfield cones of influence.

Policy E.1.2.17: [Rev. 93-19; 9J-5.013(2)(c)6; identical to Policy A.1.1.1] Putnam County shall use the latest version of the Flood Insurance Rate Maps provided by FEMA to determine the location of areas of special flood hazard which include the 100-year floodplain and floodways within the 100-year floodplain. The County shall provide specifications for regulating development and land use activities within these areas in its Land Development Regulations. The specifications will include the following which will be in effect upon Plan adoption:

A. Development and land use activities listed below shall be allowed in areas of special flood hazard and are subject to meeting the requirements provided in Sections B and C below.

1. New residential development shall be limited to the lowest density of the future

land use category in which the property is located except for lots existing on December 19, 1991 at 5:00 p.m. which cannot meet this requirement. These lots will be considered lots of record and may be developed with one residence.

2. The following may be permitted in land use categories that allow such non-residential development or land use activity:

a. Resource-based recreational facilities such as trails, boardwalks, piers, and boat ramps.

b. Water dependent components of commercial development such as port facilities, marinas, fish camps, and commercial fishing and shellfishing operations.

c. General Agriculture shall protect wetlands and water bodies by following BMPs as provided in Policies A.1.4.9 and E.1.3.5 and E.1.2.8.

d. Silviculture shall follow the most recent editions of the best management practices and management guideline manuals of the Florida Department of Agriculture and Consumer Services, Division of Forestry as provided in Policy A.1.4.9 and identical Policy E.1.3.5.

e. Mining activities shall be located a minimum of 500 feet from a water body as currently required by Section 24-5 of the County Zoning Ordinance 88-1, as amended by Ordinance 91-31.

f. Essential public services.

3. The following uses shall be prohibited in areas of special flood hazard:

a. Land uses requiring the storage, disposal, generation or use of hazardous waste.

b. Landfills

c. Underground storage of toxic materials

d. Auto salvage yards

e. Junkyards

B. The County will incorporate the existing Flood Control Ordinance 87-1 into the Land Development Regulations which includes the following requirements in compliance with FEMA regulations:

1. Residential structures in all areas of special flood hazard must be elevated one (1) foot above the base flood elevation.

2. Non-residential structures in all areas of special flood hazard must either be elevated one (1) foot above the base flood elevation or flood-proofed as certified by a registered professional engineer or architect.

3. New construction, fill, and other improvements are prohibited in the floodway unless certification (with supporting technical data) by a registered professional engineer is provided demonstrating that encroachments shall not result in any increase in flood levels of the base flood discharge.

C. Development in areas of special flood hazard shall comply with the following:

1. Applications for subdivision approval shall include a soils map indicating the location on the property of soil types identified by U.S. Soil Conservation Service descriptions and a map showing any portions of the property located in areas of special flood hazard as currently required by Ordinance 83-9, County Subdivision Regulations.

2. Development proposals for sites larger than 5 acres or greater than 50 lots shall provide base flood elevation data as currently required by federal regulations and County Flood Control Ordinance 87-1.

3. Dredging and filling of lands within floodplains shall not be permitted to adversely impact upon the natural functions of the 100-year floodplain, and shall be carried out, only in strict accordance with state or federal permits.

4. All proposed development shall be located or clustered on the portions of the site outside areas of special flood hazard wherever possible.

5. No hazardous waste shall be generated, stored, or disposed of within the 100-year floodplain.

6. Use of septic tanks in the 10-year floodplain and floodways will be restricted by

the County Health Department in compliance with Section 10D-6.0471, FAC.

Policy E.1.2.18: [New 93-19; 9J-5.013(2)(c)6, identical to Policy A.1.4.13] Subsequent to Plan adoption development in and adjacent to wetland and water bodies shall be subject to the following:

A. All applicable state and federal regulations for permitting and mitigation must be met prior to the County issuing any construction permits. This will be enforced through the site plan review process required by Policy A.1.1.2.

B. The County through its subdivision regulations shall require all new lots to have adequate area to meet the 20 foot wetland buffer requirements of Policy D.1.6.4 and the water body buffer requirements of Policy A.1.4.12 and identical Policy E.1.2.5. In addition if the new lot will be serviced by an onsite septic system it must comply with the following:

1. The usable land requirements and wetland and water body setbacks of Chapter 10D-6 of the Florida Administrative Code must be met.

2. If the new lot is within 500 feet of the mean or ordinary high water line of a water body, it must have 100 feet of frontage along the water body; and when developed, the septic system must meet the special design standards currently provided in Ordinance 87-5 which will be incorporated into the land development regulations and the system must be set back 100 feet from the mean or ordinary high water line.

C. The County shall ensure the protection of wetlands by requiring structures and other site improvements to be located outside of wetlands and the 20 foot buffer required by Policy D.1.6.4. except as provided below. All exceptions are applicable only when the land use designation on the property permits the development or land use activity listed below; site characteristics are such that wetland impacts cannot be avoided; the impacts are limited to the minimum necessary to allow the permitted use of the property; and the site development or use complies with HRS, DEP, WMD, and COE regulations for permitting and mitigation.

1. Residential lots of record existing on or before the adoption of the comprehensive plan on December 19, 1991 at 5:00 p.m. which do not contain sufficient uplands to permit development of a residence without encroaching into wetlands, may be developed with one residential dwelling.

2. Resource-based recreational facilities such as trails, boardwalks, piers, and boat

ramps.

3. Water dependent components of commercial development such as port facilities, marinas, fish camps, and commercial fishing and shellfishing operations.

4. General Agriculture shall maintain the natural hydrology and function of wetland areas in accord with the most recent version of USDA SCS guidelines established in the 1985 Food Securities Act and amended in 1990; and by following BMPs as provided in Policies A.1.4.9 and E.1.3.5 and E.1.2.8.

5. Silviculture shall follow the most recent editions of the best management practices and management guideline manuals of the Florida Department of Agriculture and Consumer Services, Division of Forestry as provided in Policy A.1.4.9 and identical Policy E.1.3.5.

6. Mining activities shall be located a minimum of 500 feet from a water body as currently required by Section 24-5 of the County Zoning Ordinance 88-1, as amended by Ordinance 91-31.

7. Essential public services.

D. Transfer of density from wetlands to the upland portion of a site shall be permitted through approval of appropriate Planned Unit Development (PUD) Zoning applications and by establishing flexibility in the lot area requirements in the various zoning districts established in the Land Development Regulations. The wetland area will be included in calculating the gross density applicable to a property.

E. Wetland and water body protection shall be considered when the County evaluates variance requests for setback modifications that would move development away from wetlands and water bodies.

F. Development in the area adjacent to water bodies shall be limited according to vegetated buffer and use restrictions of Policy A.1.4.12 and the 50 foot building setback required by Policy A.1.4.17. Development in water bodies shall be allowed only for uses permitted by DEP and COE.

Objective E.1.3: [9J-5.013(2)(b)3] Upon plan adoption, the County shall implement the following policies that are to conserve, appropriately use, and protect minerals, soils, and native vegetation communities including forests.

Policy E.1.3.1: [9J-5.013(2)(c)2] Existing working mining sites and sites with potential for future mineral extraction shall be identified and land uses that diminish the long-term economic viability of the mineral resources shall be prohibited within or adjacent to these sites through the control of development densities within the Future Land Use Element and Future Land Use Map.

Policy E.1.3.2: [9J-5.013(2)(c)2] The County shall annually review mining operation progress with DNR and other federal and state agencies to ensure that lands disrupted by mining operations are restored to aesthetically pleasing and physically useful condition at the completion of such operations through enforcement of Reclamation Rules 16C-37 and 16C-39, FAC.

Policy E.1.3.3: [9J-5.013(2)(c)6] Existing agricultural areas shall be protected from premature conversion to non-agricultural uses through maintenance of densities as identified on the Future Land Use Map.

Policy E.1.3.4: [9J-5.013(2)(c)6] Developers shall be required to apply erosion control practices to reduce soil erosion from wind and water during and after construction activities. Controls shall be specified in Land Development Regulations and shall include such techniques as spreading hay or other mulch materials over potential erosion areas, lining drainage swales with sand, sod or burlap, spraying non-polluting binding materials over the site, etc.

Policy E.1.3.5: [Rev. 93-19; 9J-5.013(2)(c)6, identical to Policy A.1.4.9] The County shall inform the Division of Forestry, the Department of Environmental Protection and the Agricultural Soil and Water Conservation District of violations to ensure that agriculture (row crops, ranching, etc.) and silviculture follow Best Management Practices (BMPs), as contained in the following:

A. Pages 7-6 through 7-13 of the "Florida Non-Point Source Management Plan, Volume Two", May 1989, DER, applicable to general agriculture.

B. "Silviculture Best Management Practices Manual", (Revised May 1990, Florida Department of Agriculture and Consumer Services, Division of Forestry); and "Management Guidelines for Forested Wetlands in Florida" (December 1988, Florida Department of Agriculture and Consumer Services, Division of Forestry and Florida Forestry Association), applicable to silviculture. Upon implementation by the Department of Agriculture and Consumer Services, silviculture shall follow BMPs provided in the 1993 revision of "Silviculture Best Management Practices Manual" which will replace the May 1990 revision of the same document and will also replace "Management Guidelines

for Forested Wetlands in Florida" (December 1988, Florida Department of Agriculture and Consumer Services, Division of Forestry and Florida Forestry Association).

Policy E.1.3.6. [9J-5.013(2)(c)3., 6.] The County shall protect environmentally sensitive areas and native vegetative communities as follows:

A. Proposed mining activities shall be required to submit their reclamation plan to the County prior to its approval by the State Bureau of mines, so that the County can submit any comments regarding the reclamation plan to the Bureau for consideration.

B. In the process of reviewing site plans, the County shall assess the compatibility of land use activities and development on parcels adjacent to the Ocala National Forest, Wildlife Management Areas, State or Private Preserves, or other State and Federal natural resource areas.

C. The County shall maintain and distribute a recommended native plant listing and other educational materials available from the Florida Game and Fresh Water Fish Commission, Water Management District, Florida Department of Agriculture (Division of Forestry) and other state or federal agencies to increase public awareness of the need to utilize native plant species in the developed landscape and eliminate exotic nuisance plants from existing developed areas.

D. For all new development at a minimum vegetative buffers and 80 percent of landscaping of a site required by Comprehensive Plan policies and/or the implementing land development regulations shall utilize native plant species, and invasive or exotic plant species shall be prohibited. Areas required to have vegetative buffers shall preserve all existing native vegetation if present within the required buffer. All other unvegetated areas within the required vegetative buffer shall be planted with native vegetation which is adapted to that particular environment whether it is xeric, mesic or hydric.

E. Sites containing the following Environmentally Sensitive Lands as identified in the Putnam County Environmental Lands Study (Slope Forests – Map #4, Seepage Streams – Map #7, Spring Run Streams – Map #7, and Sandhill Upland Lakes – Map #7) shall not be designated with a more intense future land use designation than already exists.

F. Development proposed on sites containing the longleaf pine-xeric oak vegetative community shall preserve a minimum of 25 percent of this communities' vegetation except for single family residential development on existing lots of record.

Policy E.1.3.7 [Rev. 93-19; 9J-5.013(2)(c)3, 6]: In the process of reviewing land use actions including comprehensive plan amendments and rezonings, the County shall assess the compatibility of future land use activities and development on parcels adjacent to the Ocala National Forest, Wildlife Management Areas, State or Private Preserves, or other State and Federal natural resource areas.

Policy E.1.3.8 [9J-5.013(2)(c)7]: The County shall ensure that land uses adjacent to recreational sites are compatible with the recreation land use.

Policy E.1.3.9 [9J-5.013(2)(c)8]: The County shall negotiate interlocal agreements with adjacent local jurisdictions and state/federal agencies to conserve and protect unique vegetative communities that are located within and extend beyond the immediate County line.

Policy E.1.3.10 [Added by Ord. 2000-25]: The County shall ask the Florida Bureau of Invasive Plant Management and other appropriate public and private entities to identify exotic pest plants, as identified in the Florida Pest Plant Council's most recent List of Florida's Most Invasive Species, on County owned property. Once identified the County shall utilize volunteers or apply for State funds to remove the exotic plants from County owned property.

Objective E.1.4 [9J-5.013(2)(b)4]: Upon plan adoption, the County shall implement the following policies that are to conserve, appropriately use and protect marine and wildlife habitat.

Policy E.1.4.1 [Rev. 93-19; 9J-5.013(2)(c)5,6]: Future development in the vicinity of known sites in Putnam County containing plant or animal species listed by the U.S. Fish and Wildlife Service, FGFWFC, DEP, or the Florida Department of Agriculture as endangered, threatened or as species of special concern, shall comply with the management criteria of the U.S. Fish and Wildlife Service and the Florida Game and Fresh Water Fish Commission.

Policy E.1.4.2 [9J-5.013(2)(c)3,5,6,9]: The County shall request technical assistance from State agencies to study the feasibility of designating viable wildlife corridors in the County including a corridor between Rice Creek Swamp and the Ocala National Forest. Once identified, the County shall work with environmental groups and the DNR to acquire corridor properties as conservation designated land.

Policy E.1.4.3: [Rev. 98-02] The County shall request technical assistance from the Department of Environmental Protection as their schedule permits to develop a manatee protection plan which shall include marina and boat ramp locational criteria for inclusion

in the Land Development Regulations. An interim Manatee Protection Plan will be adopted along with the submission of the Evaluation and Appraisal Report for the County.

Policy E.1.4.4: [Added by 2000-25] In coordination with public and private conservation entities, the County shall identify, enhance, and promote a greenway that includes lands that are environmentally valuable or provide recreational opportunities in Putnam County.

Policy E.1.4.5: [Added by 2000-25] The County shall ask the St. Johns River Water Management District and Florida Department of Environmental Protection to identify the storm water drainage from County maintained roads and facilities that is causing degradation of the St. Johns River and its tributaries. Upon identification, the County shall apply for state and federal funds to improve storm water management and restore degraded aquatic ecosystems caused by storm water runoff.

Objective E.1.5 [9J-5.013(2)(b)2]: Upon plan adoption, the County shall implement the following policies and continue to require that large and small quantity generators of hazardous waste shall properly dispose of their waste in accordance with federal and state law.

Policy E.1.5.1 [9J-5.013(2)(c)10]: Commercial generators of hazardous waste (as defined by the Department of Environmental Regulation) shall have on-site facilities to contain and store hazardous waste in a safe manner prior to disposal by a certified handler.

Policy E.1.5.2 [9J-5.013(2)(c)10]: County residents and small quantity generators of hazardous waste shall be informed in accordance with Sections 403.7234 and 703.7225(16), FS, and through distribution of public education materials of hazardous waste disposal locations and proper methods of disposal.

Policy E.1.5.3 [9J-5.013(2)(c)10]: Landfills shall be monitored by the County to eliminate the illegal disposal of hazardous waste.

Policy E.1.5.4 [9J-5.013(2)(c)10]: The County shall develop an ordinance to be enacted at the same time as the Land Development Regulations which will require the proper disposal of hazardous waste including used automobile and truck tires and batteries as well as household hazardous waste so as to halt illegal dumping or other disposal, and protect the natural resources of the county.

F. PUTNAM COUNTY COMPREHENSIVE PLAN
RECREATION AND OPEN SPACE ELEMENT
GOALS, OBJECTIVES, AND POLICIES
ADOPTED AND EFFECTIVE 12/19/91, 5:00 P.M.

GOAL F.1: Putnam County, through meeting established levels of service, shall ensure the provision of sufficient parks and recreational facilities to meet the needs of the County's citizens and visitors.

Objective F.1.1 [9J-5.014(3)(b)1]: Upon plan adoption, the County shall ensure public access to all identified recreational facilities, including rivers, and freshwater beaches through implementing the following policies.

Policy F.1.1.1 [9J-5.014(3)(c)3]: The County shall implement a program to acquire and develop rights-of-way for access to public parks and facilities where it is shown that deficiencies exist, to wit: The County Commission shall assign the Planning Commission the responsibility to identify, by 1993, access deficiencies and their locations, to public parks and facilities. Upon the identification of access needs, the Planning Commission shall determine ownership of property and property values for land needed to improve existing access. At this stage, acquisition of lands will follow the procedures specified in Policies F.1.4.1 and/or F.1.4.2.

Policy F.1.1.2 [9J-5.014(3)(c)3]: The County shall review the availability of parking at boat ramps, freshwater beaches and other recreational facilities within the County and work with responsible agencies to establish parking levels of service for various recreational facilities/sites based upon the average daily use of each facility.

Policy F.1.1.3: The County, through its Transportation for the Disadvantaged Program, shall ensure that the County recreational facilities shall be accessible to the handicapped, the elderly and the transportation disadvantaged.

Objective F.1.2 [9J-5.014(3)(b)2]: Upon plan adoption, the County shall coordinate public and private resources to meet County recreational needs through implementing the following policies.

Policy F.1.2.1 [9J-5.014(2)(c)2]: The County shall implement incentives in its subdivision and zoning regulations which promote developers' interest in providing recreation and open space components in their development plans. Guidelines and

incentives for the provision of additional recreation and open space facilities are included in Future Land Use Element Policy A.1.9.4.

Policy F.1.2.2: The County shall continue to work with local civic groups in sponsoring recreational activities for the County's youth and elderly citizens.

Policy F.1.2.3: Wherever possible, the County shall coordinate its recreational plans with local private/civic groups to ensure that the greatest benefit is derived from County recreational funding.

Objective F.1.3 [9J-5.014(3)(b)3]: Upon plan adoption, the County shall continue to ensure that parks and recreational facilities are adequately and efficiently provided.

Policy F.1.3.1 [9J-5.014(3)(c)4]: The County shall ensure that there are sufficient recreational facilities to meet adopted levels of service in accordance with its Concurrency Management System and the requirements of 9J-5.0055(2)(b)1 and 2.

Policy F.1.3.2 [Rev. 98-02; 9J-5.014(3(c)1 and 4]: The County shall adopt recreational levels of service as identified below:

-Neighborhood Parks:	One acre per 3,500 persons
-Community Parks:	One acre per 1,100 persons
-Boat Ramps:	One lane per 3,700 persons
-Baseball/softball fields:	One field per 3,500 persons
-Football/soccer fields:	One field per 12,500 persons
-Basketball goals:	One goal per 3,800 persons
-Tennis Courts:	One court per 7,500 persons
-Equipped play area:	One area per 9,250 persons
-Picnic Areas:	One table per 6,000 persons

Policy F.1.3.3 [9J-5.014(3)(c)5]: Upon plan adoption, the County shall improve any existing deficiencies in parks or recreation facilities through budgeting for such improvements in its 5-year Capital Improvement Plan.

Policy F.1.3.4 [9J-5.014(3)(c)5]: Where of mutual benefit, as determined by the participating jurisdictions, the County shall enter into interlocal agreements with local municipalities and adjacent counties to meet the recreational needs of Putnam County residents.

Policy F.1.3.5 [9J-5.014(3)(c)2]: Designated open space/recreational lands shall be identified in the Future Land Use Element and on the Future Land Use Map or map series. These lands shall be protected from adjacent incompatible land uses and development through the adoption and implementation of land development regulations that control land use and density as outlined in Policies A.1.3.1, A.1.3.2,

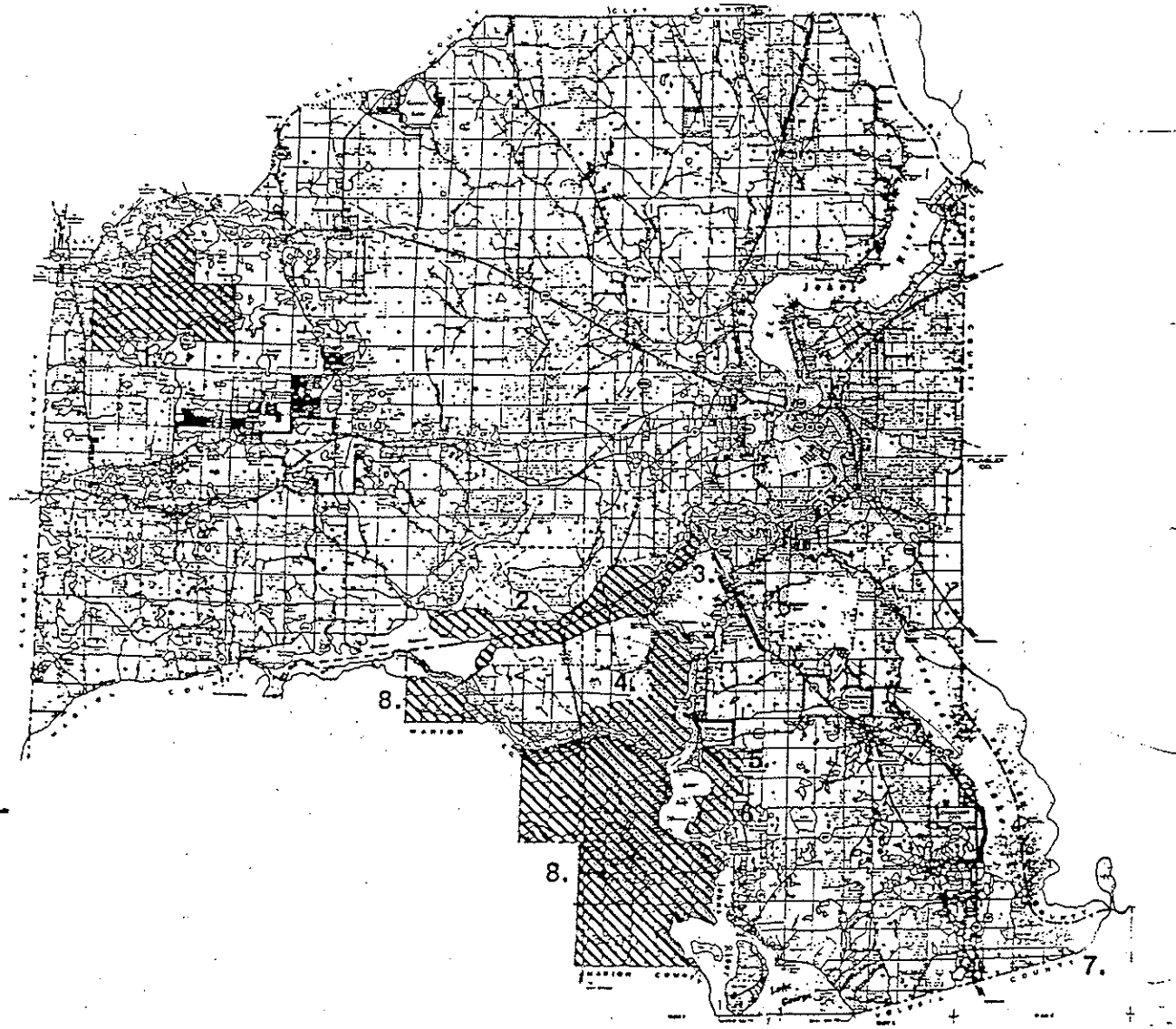
A.1.4.4, A.1.8.3, A.1.9.3 and A.1.9.4 of the Future Land Use Element.

Objective F.1.4 [9J-5.014(3)(b)4]: Upon plan adoption, the County shall ensure the provision of open space by public agencies and private enterprise.

Policy F.1.4.1 [9J-5.014(3)(c)2]: The County shall, in accordance with Open Space Level of Service requirements, continue to require the designation of open space in its subdivision and zoning regulations as a prerequisite of development approval.

Policy F.1.4.2 [9J-5.014(3)(c)2]: When deemed appropriate by the Board of County Commissioners, the County shall consider the implementation of an impact fee as a means of raising revenue to purchase land, construct recreational facilities and/or reserve open space to meet adopted levels of service.

Policy F.1.4.3: The County shall coordinate with the Putnam County Chamber of Commerce to ensure cooperation with the private sector in meeting recreational/open space needs of County residents; particularly, those needs that cannot efficiently be provided by the public sector, such as movie theaters, bowling alleys, etc.



RECREATION AND OPEN SPACE

PUBLIC LANDS

1. SWISHER MEMORIAL/CATHERINE ORDWAY PRESERVE
2. CROSS FLORIDA BARGE CANAL AUTHORITY
3. SEVEN SISTERS ISLANDS (SJRWMD)
4. CARRAVELLE RANCH (SJRWMD)
5. WELAKA NATIONAL FISH HATCHERY
6. U. of F. CONSERVATION RESERVE
7. HAW CREEK STATE PRESERVE
8. OCALA NATIONAL FOREST

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Source:
Northeast Florida Regional Planning Council

COMPREHENSIVE PLAN FOR

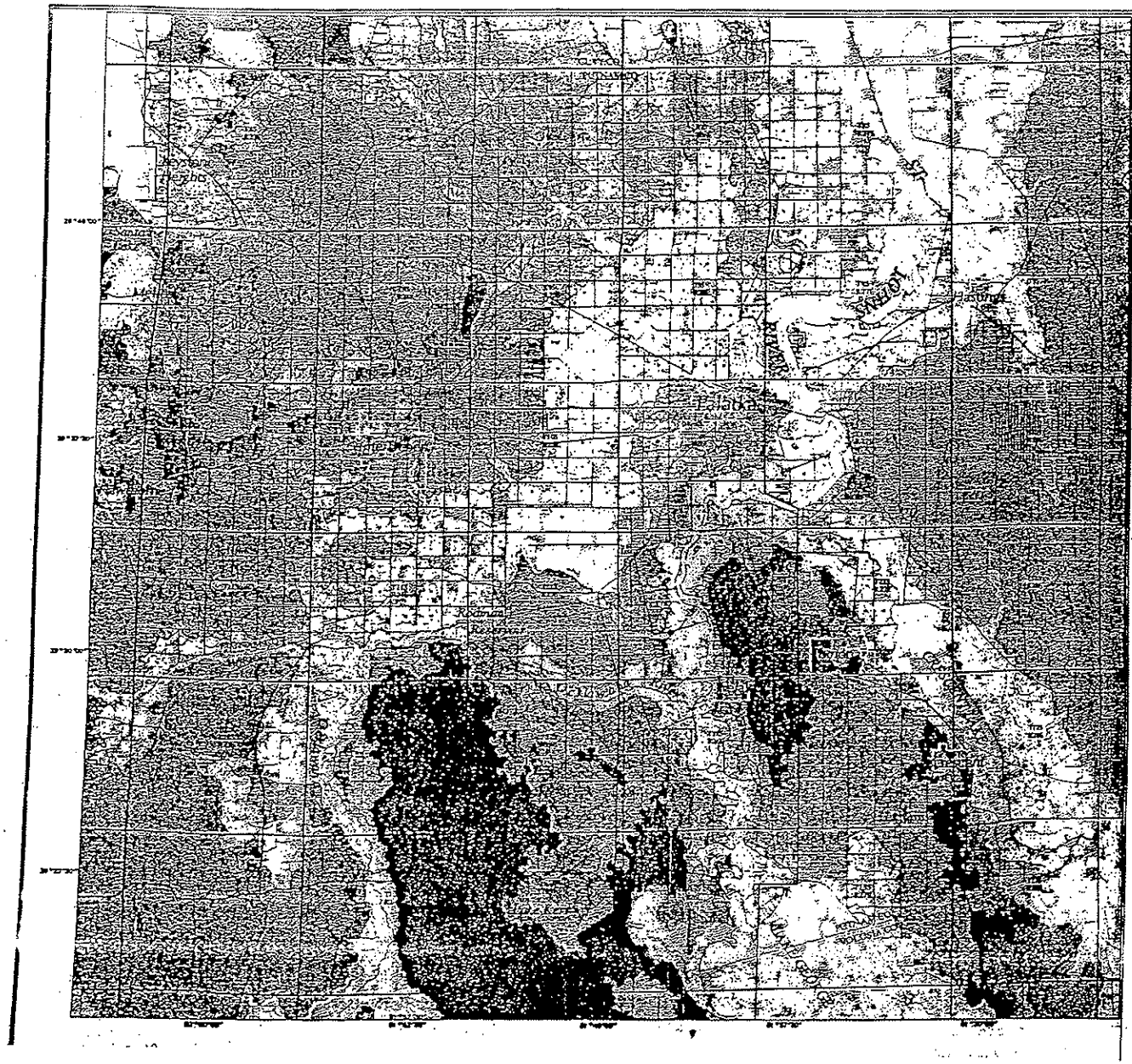
PUTNAM COUNTY

FIGURE F-1

= 4 MILES

N

PREPARED BY
NORTHEAST FLORIDA
REGIONAL PLANNING COUNCIL

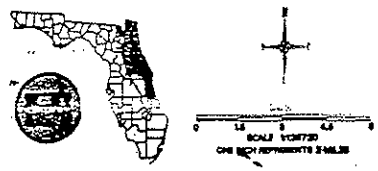


Recharge Areas of the Floridan Aquifer

Putnam County, Florida

LEGEND

FIGURE D-7



5 YEAR CAPITAL BUDGET

CATEGORY - TRANSPORTATION

n/Project Name	FY 1998-1999	FY 1999-2000	FY 2000-2001	FY 2001-2002	FY 2002-2003	TOTAL	FUNDING SOURCE
) Gordon ıpel Resurface ı Susan Lake to SR 20	0	$382,800	0	0	0	$382,800	Small County Road Project FDOT
) East River d from wood Road to 207A urface	0	$139,200	0	0	0	$139,200	Road Projects Fund
) CR 309 :08 to Hwy. 17 urface	0	0	$965,700	0	0	$965,700	Small County Road Project Fund (FDOT)
Horsemans oad SR 19 urface	0	$87,000	0	0	0	$87,000	Road Projects Fund
Bardin Road ge acement	0	0	$1,500,000	0	0	$1,500,000	Grant
Old US 17 Union Avenue h to US 17 nstruct	0	0	0	$135,000	0	$135,000	Road Projects Fund
Huntington cut Road from ey to Lake) Drive rface	0	0	0	$252,300	0	$252,300	Road Projects Fund
Bridge rs	0	0	0	$300,000	$300,000	$600,000	New Revenue Sources Required
racker Rd. +/- 4.6 Drainage ements & ace	0	0	0	0	$820,000	$1,640,000 (FY 2003-2004 $820,000)	New Revenue Sources Required Road Project Fund

5 YEAR CAPITAL BUDGET

CATEGORY - TRANSPORTATION

em/Project Name	FY 1998-1999	FY 1999-2000	FY 2000-2001	FY 2001-2002	FY 2002-2003	TOTAL	FUNDING SOURCE
8.) Troupe Road elocation N	0	$30.000	0	0	0	$30.000	Road Projects Fund
9.) Kay Larkin improvements N	0	$40.000	0	0	0	$40.000	Road Projects Fund

5 YEAR CAPITAL BUDGET

CATEGORY - FACILITIES (UTILITY)

Item/Project Name	FY 1998-1999	FY 1999-2000	FY 2000-2001	FY 2001-2002	FY 2002-2003	TOTAL	FUNDING SOURCE
(1.) East Palatka Wastewater Facility PW	$750,000	0	0	0	0	$750,000	CDBG Grant State Line Appropriation
(2.) Port Buena Vista Water Treatment Plant --- Plant Improvements PW	$55,000	0	0	0	0	$55,000	User Fees General Fund
(3.) Port Buena Vista Waste Water Plant Improvements PW	$60,000	0	0	0	0	$60,000	User Fees General Fund
(4.) East Palatka Water Treatment Plant Phase II PW	$150,000	$600,000	0	0	0	$750,000	State Line Appropriation
(5.) East Palatka Regional Waste Water Treatment Plant PW	0	$200,000	$5,000,000	$5,000,000	0	$10,200,000	Federal Grants SRF Funds State Grants USDA/RDA Loan/Grant
(6.) East Palatka Regional Water Treatment Plant PW	0	$200,000	$4,835,000	0	0	$5,035,000	State Line Appropriation USDA/RDA Loan/Grant
(7.) Port Buena Vista Water Distribution System Replacement PW	0	$25,000	$150,000	0	0	$175,000	SRF Funds State Grants User Fees
(8.) Port Buena Vista Collection System Replacement PW	0	$75,000	$175,000	0	0	$250,000	SRF Funds State Grants User Fees

5 YEAR CAPITAL BUDGET

CATEGORY - FACILITIES (L-FILLS)

Item/Project Name	FY 1998-1999	FY 1999-2000	FY 2000-2001	FY 2001-2002	FY 2002-2003	TOTAL	FUNDING SOURCE
.) NPDES ermit Central L/F AN	$25,000	0	0	0	0	$25,000	Enterprise Fund
.) Central ndfill Phase artial Closure esign and ermit) AN	0	$70,000	0	0	0	$70,000	Enterprise Fund
.) Central L/F ass III pansion (Design Permit) AN	0	$120,000	0	0	0	$120,000	Enterprise Fund
) Central L/F s III Closure gn N	0	$60,000	0	0	0	$60,000	Enterprise Fund
Property quisition N	0	$350,000	0	0	0	$350,000	Enterprise Fund
) Central L/F ase II Cell 1 sure (Const.) N	0	0	$1,420,000	0	0	$1,420,000	Enterprise Fund
Central L/F ss III nstruction N	0	0	$553,000	0	0	$553,000	Enterprise Fund
Interlachen Expansion g & Const.) N	0	0	$100,000	0	0	$100,000	Enterprise Fund
Leachate Main	0	0	$50,000	$300,000	0	$350,000	Enterprise Fund
Closure of s III Landfill	0	0	0	$1,056,367	0	$1,056,367	Enterprise Fund

5 YEAR CAPITAL BUDGET

CATEGORY - FACILITIES (OTHER)

Item /Project Name	FY 1998-1999	FY 1999-2000	FY 2000-2001	FY 2001-2002	FY 2002-2003	TOTAL	FUNDING SOURCE
1.) Lights - entral Complex ield 4 EC	$35.000	0	0	0	0	$35.000	General Fund
2.) C escent ity E:pansion IB	$244.850	0	0	0	0	$244.850	State Const. Grant-BOCC-Local Funds
3.) Soccer Field outh Putnam omplex EC	$30.000	0	0	0	0	$30.000	Capital Project Fund
4.) St. Johns dustrial Park ngineering and sign	$75.000	$75.000	0	0	0	$150.000	OTTED Grant Economic Dev. Fund
5.) McKinnon ilding enovation	$50.000	$450.000	0	0	0	$500.000	General Fund. Cash Carry Forward
6.) Jail xpansion O	0	$2.000.000	0	0	0	$2.000.000	Bonds
7.) Youth ports Complex	$62.000	$62.000	0	0	0	$124.000	FRDAP Grant/General Fund
8.) C urthouse enovations N	$70.000	$100.000	$100.000	$100.000	0	$370.000	Courthouse Article V Grant Legislative Allocation
9.) Various uildings A/C eplacements V	$25.000	$30.000	$25.000	$25.000	$25.000	$130.000	General Fund
10.) Health nt. Roof all	$65.000	0	0	0	0	$65.000	General Fund
mbination ce all pose. Storage ding	0	0	$60.000	0	0	$60.000	General Fund

5 YEAR CAPITAL BUDGET

CATEGORY - FACILITIES (OTHER)

Item/Project Name	FY 1998-1999	FY 1999-2000	FY 2000-2001	FY 2001-2002	FY 2002-2003	TOTAL	FUNDING SOURCE
(12.) Melrose Expansion LIB	0	$146,000	0	0	0	$146,000	Grant - Donations General Fund
(13.) Tele-communications Tower Upgrades	0	$1,604,900	0	0	0	$1,604,900	Grants/ Communica-tions Improvement Fund
(14.) Animal Shelter Improvements SAN	0	$50,000	0	0	0	$50,000	General Fund
(15.) Fire Alarms Admin./ urthouse/ perty Appraiser and Tax Collector	0	0	$50,000	0	0	$50,000	General Fund
.6.) Various Buildings Floor Coverings PW	0	$16,000	$54,000	0	0	$70,000	General Fund
(17.) Facilities Improvements Property Appraiser/Tax Collector's Office PA	0	0	$300,000	$300,000	0	$600,000	Tax Collector Excess Fees
(18.) ADA Transition Items	0	0	$25,000	$25,000	$25,000	$75,000	General Fund
(19.) EOC PS	0	0	$50,000	$75,000	$50,000	$175,000	Base Grant Funding / Grants
(20.) Additional Tennis Courts - ntral Complex EC	0	0	0	0	$36,000	$36,000	General Func
.) Shelter Retrofit PS	0	0	0	0	$40,000	$40,000	Grant

5 YEAR CAPITAL BUDGET

CATEGORY - MISCELLANEOUS

Item/Project Name	FY 1998-1999	FY 1999-2000	FY 2000-2001	FY 2001-2002	FY 2002-2003	TOTAL	FUNDING SOURCE
(1.) Generators	$54,000	0	0	0	0	$54,000	Emergency Management Grant
(2.) 911 Equipment Upgrade PS	$36,000	0	0	0	0	$36,000	E-911 Fund
(3.) 911 Equipment replacement PS	$38,500	0	0	0	0	$38,500	E-911 Fund
(4.) G.I.S. System PA	0	0	$450,000	0	0	$450,000	Grants. Donation. FP&L
[illegible].) Replacement of [illegible]50 Computers [illegible]S	0	0	$150,000	0	0	$150,000	General Fund

5 YEAR CAPITAL BUDGET

CATEGORY - VEHICLES & EQUIPMENT

ıtem/Project Name	FY 1998-1999	FY 1999-2000	FY 2000-2001	FY 2001-2002	FY 2002-2003	TOTAL	FUNDING SOURCE
'EHICLES & :QUIPMENT ıNNUAL TOTALS:	$1,214,000	$1,544,404	$1,634,000	$1,660,000	$1,550,000	$7,602,404	AS LISTED BELOW
1.) D-5 Dozer ;AN	$184,000	0	0	0	0	$184,000	Enterprise Fund
2.) Front End oader ;AN	0	$130,000	0	0	0	$130,000	Enterprise Fund
3.) Front End oader ;AN	0	0	$180,000	0	0	$180,000	Enterprise Fund
4.) 1 Ton Crew Cab ruck ^N	0	0	$30,000	0	0	$30,000	Enterprise Fund
Trash pactor AN ıTE (A)	0	$450,000	0	0	0	$450,000	Enterprise Fund
6.) Dump Truck AN	0	0	$37,000	0	0	$37,000	Enterprise Fund
7.) Tractor Mower AN	0	0	$25,000	0	0	$25,000	Enterprise Fund
8.) Scraper Pan AN	0	0	0	$320,000	0	$320,000	Enterprise Fund
9.) Roll-off Truck AN	0	0	0	0	$70,000	$70,000	Enterprise Fund
10.) D-8 Dozer AN	0	0	0	0	$350,000	$350,000	Enterprise Fund
11.) Trash ompactor	0	0	0	$350,000	0	$350,000	Enterprise Fund
Wheel Loader	$120,000	$105,000	0	0	0	$225,000	Transporta Fund
Rubber Tire cavator	$225,000	0	0	0	0	$225,000	Transporta Fund

5 YEAR CAPITAL BUDGET

CATEGORY - VEHICLES & EQUIPMENT

m/Project Name	FY 1998-1999	FY 1999-2000	FY 2000-2001	FY 2001-2002	FY 2002-2003	TOTAL	FUNDING SOURCE
.) Pickup Truck placement N	0	$18,000	0	0	0	$18,000	Enterprise Fund
.) Motor Grader /	$125,000	0	$125,000	$130,000	$130,000	$510,000	Transportation Fund
.) Dump Truck /	$60,000	$63,000	$130,000	0	$65,000	$318,000	Transportation Fund
.) Vibratory ler /	0	0	$65,000	0	0	$65,000	Transportation Fund
.) Pick-up Truck ad and Bridge /	0	$36,000	$18,000	$18,000	$18,000	$90,000	Transportation Fund
Vehicle 9176	0	$35,000	0	0	0	$35,000	General Func
.) Replace trucks ,17,000 ea. for pections Z	0	$17,000	$34,000	$34,000	$17,000	$102,000	General Fun
.) Chief's icle S	0	0	$25,000	0	0	$25,000	General Fun
.) Replace 9183 S	0	0	$120,000	0	0	$120,000	General Fun
.) Pick-Up Truck ding and unds	0	0	0	$18,000	0	$18,000	General Fu
) Remount 9185 S	0	0	0	$95,000	0	$95,000	General Fu
Remount 9187	0	0	0	0	$100,000	$100,000	General Fu
Remount 9186	0	0	0	0	$100,000	$100,000	General Fu

5 YEAR CAPITAL BUDGET

CATEGORY - VEHICLES & EQUIPMENT

tem/Project Name	FY 1998-1999	FY 1999-2000	FY 2000-2001	FY 2001-2002	FY 2002-2003	TOTAL	FUNDING SOURCE
27.) Replace rucks @ $20,000 a. for Codes B&Z	0	$20,000	$20,000	$20,000	0	$60,000	General Fun
28.) Replace 9179 MS	0	0	$120,000	0	0	$120,000	General Fun
29.) Trucks (One on Crew Cab) W	0	$68,000	0	0	0	$68,000	General Fun
30.) Fire Apparatus S OTE (B)	$500,000	$358,404	$600,000	$600,000	$700,000	$2,758,404	Fire Taxing Unit *Provid millage increases fr .5 to .83
.) Replace 9178 MS	0	$120,000	0	0	0	$120,000	General Fu
2.) Truck eplacement Animal ontrol AN	0	$20,000	$20,000	0	0	$40,000	General F
3.) Pickup Truck eplacement W	0	$54,000	$18,000	0	0	$72,000	Transporta Fund
4.) Vehicle urchase 5 yd. crew ab W	0	$50,000	$50,000	$50,000	0	$150,000	Transporta Fund
5.) Vehicle urchase - Van urchasing	0	0	0	$25,000	0	$25,000	General F
6.) Vehicle urchase Pickup C	0	0	$17,000	0	0	$17,000	General F

TE (A): LEASE/PURCHASED @ $123,000 X 4 yrs.
(B): LEASE/PURCHASED @ $107,521 X 4yrs.

PUTNAM COUNTY COMPREHENSIVE PLAN
ECONOMIC DEVELOPMENT ELEMENT
GOALS, OBJECTIVES AND POLICIES
ADOPTED 3/25/97, EFFECTIVE 6/3/97

Introduction

This section contains the Goals, Objectives and Policies to be used to guide the future economic growth of Putnam County. The formulation and implementation of economic development, land management and infrastructure sufficiency plans, programs and projects to be used by Putnam County in achieving the following goals and objectives will be coordinated through the policies outlined in this section. An outline of the Goals and Objectives found in this section is provided below.

GOAL I.1.0: Putnam County shall work to develop a positive business environment by addressing economic issues, which are important in facilitating the expansion of the County's economic base.

Objective I.1.1: The Putnam County Commission shall annually designate an Economic Development Representative/Agency.

> **Policy I.1.1.1:** The designated economic development representative shall serve as the lead agency for coordination of County economic development activities.

Objective I.1.2: Annually the County will fund all or part of the implementation of this element through a contractual agreement with a designated representative knowledgeable in economic development. Specific responsibilities shall be set forth in such agreement to ensure compliance with this element and the Comprehensive Plan.

> **Policy I.1.2.1:** The County shall develop or contract, within available resources, for the designated representative to develop a three-year marketing plan for attracting appropriate business and industry which shall be updated annually. This program shall be in operation by April 1, 1997.

> **Policy I.1.2.2:** The County or the designated representative shall accomplish the following work items with the resources available.

1. Develop and maintain an updated inventory of available industrial sites and buildings.

2. Create and maintain a record of available electricity, water, sewer, and natural gas and its cost, by October 1, 1997.

3. Create and maintain an inventory of Putnam County labor force characteristics by October 1, 1997.

4. Create and maintain demographic and statistical Putnam County data for distribution of promotional information by April 1, 1997.

Policy I.1.2.3: The designated economic development representative shall be responsible for coordination of visits by prospective business and industry representatives and serve as the liaison with governmental agencies. Confidentiality will be maintained in accordance with law and accepted economic development practices.

Objective I.1.3: The County should encourage the use of innovative methods of financing for infrastructure and services, wherever possible, in order to minimize increases in the current and future tax burden.

Policy I.1.3.1: The County and the designated economic development representative should initiate efforts and support the efforts of other agencies to obtain grant monies and other funds designed to assist local economic development efforts to increase employment opportunities.

Policy I.1.3.2: Recognizing the current trend towards decentralization or elimination of federal financial assistance for community and economic development projects, the County and/or the designated economic development representative should support and encourage the development of public/private partnerships.

Policy I.1.3.3: The County shall participate in the review and support of grant proposals relating to economic development.

Policy I.1.3.4: The County should encourage the full utilization by businesses and industries of the economic development enhancement programs implemented by the Legislature for the purpose of the development and expansion of permanent job opportunities, especially for the economically disadvantaged, through enterprise zones, tax incentives, community development corporations, and other programs designed to enhance economic and employment opportunities.

Objective I.1.4: By January 1, 1998, Putnam County, in coordination with the designated development representative, shall negotiate intergovernmental agreements with County municipal governments, to protect the integrity of existing municipal and county infrastructure and to promote the development of appropriate new infrastructure within planned growth areas of the County to facilitate economic development.

Policy I.1.4.1: The County shall work towards establishing cooperative agreements with municipal governments to provide public water and sewer facilities for unincorporated areas of the County where economic growth is occurring.

Policy I.1.4.2: The County shall work with municipalities providing infrastructure services to unincorporated areas to review the feasibility and desirability of annexation of these areas into the servicing municipality.

Policy I.1.4.3: The County shall coordinate the expansion and enhancement of the overall transportation network with the economic development representative, the Florida Department of Transportation, and local governments to provide reasonable access to agricultural, commercial, industrial, and business locations throughout the County.

Policy I.1.4.4: The economic development representative shall seek a working relationship with railroad companies to maintain active rail lines to service existing and future business and industrial areas.

Objective I.1.5: Putnam County shall implement the objectives and policies of this Economic Development Element through appropriate techniques, which include careful evaluation of proposed County actions for conformance with the policies in this Element and land use regulations. All objectives and policies within the Comprehensive Plan shall be considered when making growth management decisions.

Policy I.1.5.1: The County or the designated representative should set forth guidelines for economic development for business and industrial growth matters and coordinate these with the County's Comprehensive Plan and Zoning Ordinances. Such guidelines should be reviewed annually to ensure consistency with this Plan.

GOAL I.2.0: To create and maintain a diversified and stable economic environment that will support and enhance the standard of living of all citizens, and be compatible with the growth management and environmental goals of the County.

Objective I.2.1: All existing business and industry are recognized as vital to the County's economy and the expansion of existing business and industry is an integral component in the diversification of the economic base. The County and the designated economic development representative shall promote the expansion of existing business and industry.

Policy I.2.1.1: The County and its economic development representative should encourage expansion of existing business and industry and/or development of new business and industry in appropriate locations within designated areas in order to maximize the use of existing public services and infrastructure.

Policy I.2.1.2: The County through its economic development representative shall encourage the location of business and industry in areas designated for future infrastructure improvements in the County's Public Facilities Element and Capital Improvement Program.

Policy I.2.1.3: Putnam County shall create a positive business climate that provides opportunities for expansion of existing business and industry and the location of new business and industry by taking action to improve those service components which increase the County's competitive position in the marketplace. These improvements include transportation resources, labor supply, available land and buildings, business

support services, local government cooperation and the quantity and quality of educational, recreational, and community services.

Policy I.2.1.4: The County shall ensure that the Future Land Use Element provides for ample agricultural, commercial, and industrial land uses to allow for a viable economy.

Policy I.2.1.5: The County, with its designated economic development representative, shall encourage clustering of major commercial and industrial activities in locations that:

a. are in close proximity to principle arterials;

b. have access to utilities (water, sewer, electricity, natural gas, telephone) or to allow for provision of these utilities;

c. have on-site rail facilities, when appropriate;

d. have access to mass transit routes;

e. minimize impacts to the natural environment and adjacent land uses;

f. have access to barge port facilities, when appropriate.

Objective I.2.2: The County, through its designated economic development representative, shall provide and promote lists of programs which are designed to expand and enhance the County's economic base.

Policy I.2.2.1: The County shall support the expansion of the Economic Development Program being directed by its designated economic development representative, as needed, to fulfill the needs of targeted business and industry.

Policy I.2.2.2: The County shall promote economic diversity and growth by creating an environment which encourages entrepreneurs to engage in business and industrial activities, and also encourages the continuance of a vital agricultural industry.

Policy I.2.2.3: The designated economic development representative shall continue programs which assist existing business and industry in expansion efforts.

Policy I.2.2.4: The designated economic development representative shall continue programs which encourage and assist in the location of new business and industry which build on the economic base.

Policy I.2.2.5: Upon adoption of the Economic Development Element, the County and its designated economic development representative shall develop a strategy to provide financial, or other incentives to assist in the expansion of business and industry.

Policy I.2.2.6: The County Planning Department and the designated economic development representative shall work with organizations representing the commercial, industrial and agricultural industry in Putnam County.

Policy I.2.2.7: The County shall continue a program of economic diversification to mitigate the impact of any significant economic downturns of existing business and industry.

Objective I.2.3: The County economy will be diversified through growth in commercial/industrial and business sectors serving tourists, seasonal residents, and retired persons. Putnam County will work actively to provide a desirable environment necessary to attract and retain these businesses while maintaining a high standard of living. Site location factors that will be supported include an exemplary public education system; moderate local tax rates; adequate utilities, improved transportation infrastructure; consistently enforced land use regulations, quality parks and recreation facilities; quality health care; and effective public safety.

Policy I.2.3.1: The County shall vigorously pursue State, and Federal grant funds that may be applicable to recreational and infrastructure improvements as well as other activities which enhance the County's competitive position in attracting new business and industry.

Objective I.2.4: The County shall, through land use regulations, protect its environmental resources and shall seek to maintain and improve its recreational resources, to provide an attractive environment for businesses and industry and their employees.

Policy I.2.4.1: The County will ensure that the types of new and expanding business and industry in Putnam County will contribute to maintaining a clean environment by meeting all applicable local, state and federal guidelines.

Policy I.2.4.2: The Putnam County Board of County Commissioners shall continue to provide appropriate funding to foster promotion of Putnam County as a tourist destination.

Policy I.2.4.3: The County through its designated economic development representative will study the feasibility of establishing a destination type attraction and resort facilities to enhance its tourist appeal. The designated economic development representative shall complete the studies and report to the County Commission by June 1, 1998.

Objective I.2.5: The County will support the development and expansion of minority owned business and industry, and assist in obtaining funds from appropriate governmental agencies for the development of minority owned business and industrial areas.

Policy I.2.5.1: The Board of County Commissioners shall continue to ensure that the County's purchasing policies provide equal access for local and minority owned business.

Policy I.2.5.2: The County, shall encourage minority-owned businesses to obtain State and Federal funds to promote the development of those businesses and industries.

GOAL I.3.0: To achieve a coordinated and stable economy that is compatible with growth and will provide maximum employment opportunities for all citizens in Putnam County.

Objective I.3.1: The County shall facilitate and participate in the coordination of economic development activity in Putnam County by fostering partnerships among educational institutions, government, the Putnam County Chamber of Commerce, utility service providers, and others to enhance development of a positive business, living and working climate.

Policy I.3.1.1: The County shall coordinate economic development and planning efforts with its designated economic development representative and other public and private entities, as required, to share economic growth initiatives.

Policy I.3.1.2: The County through its designated economic development representative will develop and maintain relationships with appropriate state, federal, and local agencies involved in economic development. The resources of private site location consultants will also be utilized.

Policy I.3.1.3: The designated economic development representative shall consider nontraditional industries for recruitment.

Policy I.3.1.4: The County shall assist the efforts of its designated economic development representative to enlarge the base of industrial support services to recruit and serve major employers.

Objective I.3.2: Ensure the allocation of an appropriate quantity of lands that are desirable for commercial and industrial purposes to serve growth needs of the County.

Policy I.3.2.1: The County and its designated economic development representative shall annually review the Future Land Use Element of the Comprehensive Plan to ensure that appropriate quantities of land are available to support actual/projected commercial/industrial growth.

Policy I.3.2.2: Ensure the provision and maintenance of sufficient public infrastructure to serve the growth needs of new and expanding business and industry.

Policy I.3.2.3: The County, in consultation with its designated economic development representative shall incorporate land use regulations into the Putnam County development regulations, as specified by Section 163.3202 (1) Florida Statute, to implement the economic development element.

Objective I.3.3: Expand employment opportunities and income earning potential for County residents by ensuring that employment opportunities are available for all residents of Putnam

County, with emphasis on employment for those at or near the poverty level.

Policy I.3.3.1: The County and its designated economic development representative shall encourage the location of business and industry that will utilize the existing labor force and provide competitive salaries.

Policy I.3.3.2: The designated economic development representative shall coordinate educational, vocational, and technical training opportunities with the needs of new and existing employers.

Policy I.3.3.3: The County shall encourage development of competitive employment opportunities and training which will attract and maintain a qualified workforce.

Policy I.3.3.4: The designated economic development representative shall monitor underemployment in the county and assist in reducing underemployment through recruitment of targeted business and industry that will utilize and train the local labor force to be the majority of their employees.

Policy I.3.3.5: The County and its designated economic development representative shall encourage efforts to attract a Masters Degree level program to Putnam County, and report to the County Commission by January 31, 1997.

Policy I.3.3.6: The County and its designated economic development representative shall encourage the expansion of existing and new vocational facilities and services.

Objective I.3.4: The designated economic development representative shall compile and maintain a Targeted Industries List by December 1, 1997. This list shall be reviewed and updated periodically.

Policy I.3.4.1: The County with its designated economic development representative shall establish and carry out the economic development marketing plan to recruit business and industry and shall incorporate into its annual budget a reasonable sum to fund implementation of the plan. The plan shall be reviewed periodically.

Policy I.3.4.2: The County through its designated economic development representative will undertake marketing efforts that may include advertising to attract business and industry.

Policy I.3.4.3: Industries and businesses that are willing to participate in the training of skilled and unskilled workers through available local training sources; should be given a high priority and encouraged to located in Putnam County.

G. PUTNAM COUNTY COMPREHENSIVE PLAN
INTERGOVERNMENTAL COORDINATION ELEMENT
GOALS, OBJECTIVES, AND POLICIES
ADOPTED AND EFFECTIVE 12/19/91, 5:00 P.M.

GOAL G.1 [9J-5.015(3)(a)]: Improve coordination between Putnam County and adjacent local governments and local, regional and state agencies in order to coordinate all development activities, preserve the quality of life, and maximize use of available resources.

Objective G.1.1 [9J-5.015(3)(b)1, 2]: Upon Plan adoption, Putnam County shall ensure that the County, through its Land Development Regulations, continues to coordinate its Comprehensive Plan with the plans of the County School Board and other units of the County which provide service but do not have regulatory authority over the use of land.

Policy G.1.1.1 [9J-5.015(3)(c)1]: Upon Plan adoption, the County Planning, Zoning and Building Department shall review School Board and other Agency plans for the coordinating of these plans with specific elements of the County Comprehensive Plan.

Policy G.1.1.2 [9J-5.015(3)(c)5]: Upon Plan adoption, the County shall establish agreements with Crescent City, Interlachen, Palatka, Pomona Park and Welaka, whereby the local governments notify each other and have the opportunity to review development orders which are near or adjacent to each others' corporate boundaries.

Policy G.1.1.3: Upon Plan adoption, the County shall develop interlocal supportive partnerships with the County's municipalities to identify and implement programs for providing housing for low and moderate income households.

Objective G.1.2 [9J-5.015(3)(b)1]: Upon Plan adoption, Putnam County shall continue to maintain coordinating relationships with adjacent local governments to ensure the compatibility of adjacent land uses and the preservation of wildlife and plant habitats.

Policy G.1.2.1 [9J-5.015(3)(c)1]: The Putnam County Planning, Zoning and Building Department shall review proposed land use activities (land use amendments/rezonings) proposed by Putnam's municipalities and adjacent counties that impact Putnam County land uses and provide comments and recommendations to the land use change process.

Policy G.1.2.2 [9J-5.015(3)(c)2]: Upon Plan adoption, Putnam County shall establish formal procedures for using the Regional Planning Council auspices in resolving conflicts with neighboring jurisdictions regarding land use and the protection of natural resources. The County will participate in RPC-sponsored

workshops relating to land planning. Upon Plan adoption, the County shall establish "Memoranda of Agreement" with the County municipalities and other adjacent local governments to arbitrate the siting of "Locally Undesirable Land Uses" (LULUs) within two miles of the shared jurisdictional boundary and implement procedures for reviewing such cases.

Policy G.1.2.3 [9J-5.015(3)(c)4]: Putnam County shall continue to comply with State procedures in all annexation activities.

Policy G.1.2.4: The County shall establish "Memoranda of Agreement" with the County municipalities and other adjacent local governments to arbitrate the siting of "Locally Undesirable Land Uses" (LULUs) within two miles of the shared jurisdictional boundary and implement procedures for reviewing such cases.

Objective G.1.3 [9J-5.015(3)(b)2]: Putnam County shall adopt Land Development Regulations which ensure that the County establishes procedures to coordinate its Comprehensive Plan and proposed amendments thereto with adjacent local government plans.

Policy G.1.3.1 [9J-5.015(3)(c)5]: The County, through the County Planning, Building and Zoning Department, shall review and coordinate the elements of its Comprehensive Plan with the Plans and amendments of the County's municipalities.

Policy G.1.3.2 [9J-5.015(3)(c)7]: The County Planning, Building and Zoning Department shall provide potentially affected adjacent local governments with copies of proposed amendments to the comprehensive plan and notices for meetings to consider the amendments and will request that adjacent local governments provide the same.

Objective G.1.4 [9J-5.015(3)(b)3]: Upon Plan adoption, the County shall ensure coordination of adopted levels of service with the state, regional or local entities which have operational and maintenance responsibility for such facilities.

Policy G.1.4.1 [9J-5.015(3)(c)1]: Putnam County shall continue to rely on the HRS local office for the permitting and inspection of private wells and septic tanks. Any deficiencies or violations found by HRS will be corrected by the owner of the facility.

Policy G.1.4.2 [9J-5.015(3)(c)1]: Putnam County shall continue to rely on the state DER for the permitting and inspection of potable water and sanitary sewer treatment plants. Any deficiencies or violations found by DER will be corrected by the owner of the facility.

Policy G.1.4.3 [9J-5.015(3)(c)1]: Putnam County shall continue to review adopted plans and programs of the FDOT relating to the construction and maintenance of state roads and associated drainage facilities which meet the requirements of state

regulations and the LOS identified in the County Comprehensive Plan Drainage Sub-Element and Traffic Circulation Element. The County Public Works and Planning Departments shall participate in FDOT 5-year construction program workshops to further County interests.

Policy G.1.4.4 [9J-5.015(3)(c)1]: Putnam County, on an annual basis, shall review its agreement to provide recreational facilities and the maintenance thereof within the City limits of Palatka and Crescent City.

Policy G.1.4.5 [9J-5.015(3)(c)1]: Upon initiation by the County's municipalities, Putnam County shall negotiate with the County's municipalities agreements to provide those local governments with a reasonable level of cubic yard disposal space within the County landfills.

Policy G.1.4.6 [9J-5.015(3)(c)3]: Putnam County shall coordinate with state agencies and County municipalities in providing information to its respective residents regarding the conservation of water resources and the disposal of hazardous waste.

Policy G.1.4.7: The County shall coordinate with the Department of State, Division of Historic Preservation to establish programs for surveying County sites of potential historical significance.

Objective G.1.5 [9J-5.007(3)(b)3; CRPP 19.1.1]: Putnam County shall coordinate with related local, state, regional, and federal agencies for an integrated, cost effective transportation program.

Policy G.1.5.1: The County Public Works Department shall establish a regular review of roadway improvement programs before approval of the final annual capital improvements plan between the County and surrounding counties and municipalities within Putnam County and the Florida Department of Transportation to ensure effective application of available revenue.

Policy G.1.5.2 [9J-5.007(3)(c)1; CRPP 19.2.1.1]: Although the County is located outside the limits of any Metropolitan Planning Organization, intergovernmental coordination with MPOs and resource planning pursuant to Chapter 380 in north Florida shall be accomplished through continued cooperation and communication with the Northeast Florida Regional Planning Council and other contiguous councils when and where appropriate.

Objective G.1.6: [Added by Ord. 00-15] Intergovernmental coordination mechanisms must be used to establish a collaborative planning process involving the school board and the local governments within Putnam County to establish school location criteria and identify areas where schools will be needed in the future.

Policy G.1.6.1: Planners for the school board and county comprehensive land use, parks and recreation representatives, library representatives, a representative from a non-governmental

organization that works to protect Putnam County's natural environment, and public representation should be included in the development of the school location criteria, the school siting process, and participate in a joint process for collaborative planning and decision making on population projections.

Policy G.1.6.2: Development of school location criteria should be initiated and the location of potential sites for new schools determined as early as possible. Consistent with Subsection 235.193(4) and (5), Florida Statutes, to improve coordination relative to potential educational facility sites the following shall be adhered to:

The school board shall provide written notice to the local government at least 60 days prior to acquiring or leasing property for a new school. The local government, upon receipt of such notice, shall notify the board within 45 days if the proposed site is consistent with the land use categories and policies of the comprehensive plan. The local government shall determine within 90 days after receiving a school board's request for a determination whether a proposed school is consistent with the local comprehensive plan and land development regulations. This is to be done as early in the design phase as feasible and at least before commencing construction. If determination is affirmative, school construction may proceed and further approvals are not required, except as provided in this section. Failure to make a determination in writing within 90 days after a school board's request for a determination of consistency shall be considered an approval of the school board's application.

Non Applicable Items

9J-5.015(3)(c)6
Putnam County is not required to prepare a Coastal Management Element to its Comprehensive Plan.

H. PUTNAM COUNTY COMPREHENSIVE PLAN
CAPITAL IMPROVEMENTS ELEMENT
GOALS, OBJECTIVES, AND POLICIES
ADOPTED AND EFFECTIVE 12/19/91, 5:00 P.M.

GOAL H.1 [9J-5.016,3,(a); CRPP 17.1.1.3, 17.1.2, 17.1.2.1, 17.2.1, 20.2.1.2]: To provide a financially feasible plan by which the County can provide public facilities, recreational facilities and roads for its residents concurrent with new development in an amount which meets or exceeds adopted standards for Level of Service (LOS).

Objective H.1.1 [9J-5.016,3,(b)1; CRPP 16.1.1.3, 16.2.1.4, 17.1.2]: Maintain and annually update a five year capital budget detailing the expenditures necessary for each new or renovated public facility, ranked in a list of need priorities and then compared with estimated funds available for debt service.

Policy H.1.1.1 [9J-5.016(3)(c)(1)a & b]: Review all current deficiencies reported in the Comprehensive Plan and identify facility needs in accordance with the following criteria:

1. Facilities that are needed to protect, or that eliminate a hazard to, the public health, welfare or safety.

2. Facilities that must be upgraded to eliminate existing capacity deficits.

3. Facilities required to serve development areas that have vested development approval prior to the adoption of the plan.

4. Facilities required to serve redevelopment areas identified in the comprehensive plan.

5. Facilities needed to provide service to new development in accord with the land use element of the plan.

6. Facilities that will serve the identified needs in future plans of the St. Johns River and Suwannee River Water Management Districts and other state agencies that may provide public facilities within the County.

Policy H.1.1.2: Review projects with each department and appropriate consultants or other sources to provide best cost and time estimates for each proposed facility.

Policy H.1.1.3 [9J-5.016(3)(c)1]: Include all identified facility needs identified in the Public Facilities, Recreation and Traffic Circulation Elements.

Objective H.1.2 [9J-5.016(3)(b)1]: By June 1, 1992, develop and annually maintain a list of inefficient, worn-out or obsolete facilities that may become infrastructure deficiencies requiring upgrading or replacement before the year 2001.

Policy H.1.2.1 [9J-5.016(3)(c)1 & 3]: County departments shall review capital facilities annually to determine the extent of effective economic life remaining in each facility.

Policy H.1.2.2 [9J-5.016(3)(c)1 & 3]: County departments shall estimate the construction costs for each facility proposed for replacement within the five-year capital budgeting period.

Policy H.1.2.3 [9J-5.016(3)(c)1 & 3]: County departments shall review outmoded and other economically inefficient public facilities for inclusion in new proposed infrastructure.

Objective H.1.3 [9J-5.016(3)(b)1 & 3; CRPP 16.1.1.3]: Upon Plan adoption, maintain and annually update a five year Schedule of Capital Improvements (Table H-9) to coordinate and accommodate land use decisions and desired future growth in accord with the provisions of the comprehensive plan detailing the timing and expenditures costing more than $25,000, necessary for each new or to be renovated public facility, ranked by priority of need, with funding sources available for debt service.

Policy H.1.3.1 [9J-5.016(3)(c)(1) d & e; CRPP 17.2.1.2]: Review and rank need for new and additional public infrastructure as detailed in the Comprehensive Plan with the advice of the County department heads and the public annually.

Policy H.1.3.2 [9J-5.016(3)(c)(1) c & f]: Review projects with each department and appropriate consultants or other sources to provide best construction cost and time estimates for each proposed facility or addition.

Policy H.1.3.3 [9J-5.016(3)(c)(1) c & f]: Review Putnam County budget and other available revenue sources and estimate future funds available for public facility debt service.

Policy H.1.3.4 [9J-5.016(3)(c)5]: Review outstanding land development orders to insure public facility impacts of development are included in the capital budgeting process

annually.

Policy H.1.3.5 [9J-5.016,3,(c)9; CRPP 16.2.1.1, 16.2.1.4, & 17.1.2]: Review all proposed new capital facilities against the criteria contained in the various Comprehensive Plan Elements to ensure that the proposed facilities are in conformance with the planned goals and objectives of Putnam County.

Policy H.1.3.6 [9J-5.016(3)(c)7]: Include adoption of a Five Year Capital Budget with an annually updated Five Year Schedule of Improvements (Table H-9) at the time of the adoption of the annual governmental budget of Putnam County.

Policy H.1.3.7 [9J-5.016(3)(c)(2)a]: There shall be no limitation placed on the use of revenue bonds as a percentage of the total public debt of Putnam County.

Policy H.1.3.8 [9J-5.016(3)(c)(2)b]: The maximum debt service that may be outstanding for capital improvement bonds in any given year shall not exceed the total of: twenty (20) percent of the general fund revenues and fifty (50) percent of the total enterprise fund revenues as estimated to be collected by the County in that year.

Policy H.1.3.9 [9J-5.016(3)(c)(2)c]: The ratio of outstanding capital improvement bonded indebtedness shall not exceed twenty (20) percent of the total nonexempt real property just value (ad valorem tax base) of the County.

GOAL H.2 [9J-5.016(3)(a); CRPP 16.1.1 & 16.2.1]: Coordinate land use decisions with projected new or improved public facilities to maintain the required level of service.

Objective H.2.1 [9J-5.016(3)(b)5]: By June 1, 1992, all new development or redevelopment shall be provided with infrastructure at the required level of service, as stated in the Comprehensive Plan, in accordance with the schedule specified by 9J-5.0055(2)a, b and c.

Policy H.2.1.1 [9J-5.016(3)(c)6; CRPP 16.1.1.1 & 16.2.1.1]: Review land use decision impacts and timing against existing and future facilities as proposed in the Capital Improvements schedule for maintenance of required level of service.

Policy H.2.1.2 [9J-5.016(3)(c)6; CRPP 16.2.1.4]: Require the Designated Official to certify that required levels of service will be maintained concurrent with project needs before the project is permitted to be heard by the County Planning Board for approval of development orders, or building permits are issued.

Policy H.2.1.3 [9J-5.016(3)(c)8]: The County shall require each applicant to pay his share of the cost of upgrading or expanding existing County facilities, or to construct new

facilities, as necessary in order to maintain the level of service required to be provided in the Comprehensive Plan before a building permit is issued.

GOAL H.3 [9J-5.016(3)(a)]: Require future development to pay their fair share of the costs of providing public infrastructure at the levels of service included in the Comprehensive Plan.

Objective H.3.1 [9J-5.016(3)(b)4]: By June 1, 1992, adopt Land Development Regulations to obtain fair share exaction from developers to hold harmless present residents and taxpayers of Putnam County for the provision of public infrastructure at the required LOS.

Policy H.3.1.1 [9J-5.016(3)(c)8]: Set fair share exaction where necessary by evaluating impact of new development against level of service, existing facilities capacity and the fair share cost of improving infrastructure capacity to maintain an adequate level of service.

Policy H.3.1.2 [9J-5.016(3)(c)8]: Collect a fair share exaction in those cases where the new development will create the necessity that Putnam County construct new capital facilities or expand existing capital facilities to maintain a required level of service.

GOAL H.4 [9J-5.016(3)(a)]: The County shall periodically monitor and review level of service standards as contained in the Comprehensive Plan to maintain and improve the quality of the County's life services.

Objective H.4.1 [9J-5.016(3)(b)3 and 5; CRPP 17.2.1]: Public or private infrastructure currently serving all areas of the County shall meet or exceed the required Level of Service by June 1, 1994.

Policy H.4.1.1 [9J-5.016(3)(c)6]: Complete the evaluation of the level of service presently in existence and outlining the actions necessary to achieve the levels of service stated in the Comprehensive Plan by June 1, 1992.

Policy H.4.1.2 [9J-5.016(3)(c)6]: Require all developers or builders to prove to the Building Official's satisfaction that infrastructure supplying the needed levels of service will be available concurrent with development impact before a development order is issued, in accordance with 9J-5.0055(2)a, b and c.

GOAL H.5 [9J-5.016(3)(a)]: That all new and existing construction be provided with infrastructure adequate to meet the required level of service standards.

Objective H.5.1 [9J-5.016(3)(b)5]: Upon plan adoption, the County shall enforce Level of Service (LOS) standards against which the adequacy and deficiencies of infrastructure facilities shall be measured for the purposes of concurrency management.

Policy H.5.1.1 [Rev. 93-19; 9J-5.016(3)(c)4, identical to Policy D.1.2.1]: The County shall ensure that the continuation of current service and the extension of service into the future meets the needs of the residents of Putnam County through the endorsement of state regulations pertaining to permitting, construction and quality standards of potable water, specifically:

A. Private water wells shall be permitted and constructed in accordance with the requirements of Chapter 17-532 FAC, Chapter 10D-4 FAC, Rules 40A-E3 FAC and Putnam County Ordinance 87-2.

B. Water systems serving the public shall be permitted and constructed in accordance with the requirements of Chapters 17-550, 17-555, 17-560, and 10D-4 FAC, and Putnam County Ordinance 87-2.

C. Drinking water shall meet the quality standards established in Chapter 17-555 Part III, and 10D-4 FAC.

D. The minimum gallons per day requirement of new potable water systems serving the public shall be established at a level of service based upon the sewage flow volumes contained in Rule 10D-6.048 FAC plus ten percent.

E. Water systems designed to serve the public in Putnam County shall provide storage for the number of gallons of potable water at a rate equal to ten times the peak flow per minute (peak flow per minute equals minimum daily design flow divided by 1440 times 4.5).

F. A public water system in Putnam County shall provide a minimum pressure of 20 pounds per square inch at all service connections during peak water demands.

G. The County will not issue construction permits unless the design and location of water supply system (including private wells) has been approved by the County Health Department and/or DEP.

Policy H.5.1.2 [9J-5.016(3)(c)4]: Putnam County shall not issue a building or other development order in any case where the above standards for potable water levels of service are not met.

Policy H.5.1.3 [Rev. 93-19; 9J-5.016(3)(c)4, identical to Policy D.1.2.2]: The County shall establish the following level of service standards to ensure that the continuation of current service and the extension of service into the future meets the needs of the residents

of Putnam County. The permitting, construction and standards for sanitary sewer treatment and disposal shall comply with the following:

A. No septic tank or other domestic on-site sewage disposal system shall be installed until an application form HRS-H Form 4015 is submitted and an "Onsite Sewage Disposal System Construction Permit" (HRS-H Form 4016) has been obtained from the Department of Health and Rehabilitative Services.

B. The sizing and location of sanitary sewer disposal systems (including septic tanks) shall be in accordance with Chapter 10D-6, sections .044 through .049 FAC and Putnam County Ordinance Numbers 87-5 and 80-1, as amended by Ordinances 87-8 and 91-03. Rule 10D-6.048, FAC provides minimum design flows based on estimated daily sewage flow as determined from Table II or according to methodology provided in the rule, which will be used for level of service standards.

C. Treatment and disposal of the sewage flow from a building or establishment shall be in compliance with Florida Department of Environmental Protection (DEP) standards and rules when:

1. The volume of domestic sewage from an establishment exceeds 5,000 gallons per day. Rule 10D-6-048(1) shall be used for determining the total daily establishment sewage flow from all sources located on one or more parcels of land.

2. Sewage or wastewater contains industrial or toxic or hazardous chemical waste.

3. An area is zoned for industrial or manufacturing use, or its equivalent, and where system use may be for disposing of other than domestic wastes.

D. Site evaluation for the location of septic tanks shall meet the site evaluation criteria specified in Chapters 10D-6.047 and 17-600, Part I, FAC.

E. Discharge water quality of wastewater treatment plants shall meet the criteria specified in Chapter 17-600, Part II, FAC.

F. Mandatory connections to municipally owned or investor-owned public sewerage systems shall be required as provided in Sections 10D-6.041(2), 10D-6.042(9), and 10D-6.046(7), FAC.

G. The County will not issue construction permits unless the design and location of the sewage treatment system has been approved by the County Health Department and/or DEP.

Policy H.5.1.4 [9J-5.016(3)(c)4]: Putnam County shall not issue a building or other development order in any case where the above standards for sanitary wastewater treatment levels of service are not met.

Policy H.5.1.5 [9J-5.016(3)(c)4]: The following level of service standards for drainage facilities shall be used as the basis for determining the availability of facility capacity and the demand generated by a development.

Stormwater management facilities shall be designed to accommodate the 25-year frequency, 24-hour duration design storm to meet the standards that follow:

Water Quantity - Peak post-development run-off rates shall not exceed peak pre-development run-off rates.

Water Quality - Stormwater treatment shall be required for all new development and redevelopment to provide a level of treatment which meets the standards of Chapter 40C-42.025, FAC. Ambient water quality standards will be maintained in accordance with the requirements of Rule 17-302.55, FAC.

Wetland Stormwater Discharge - Permits for wetland stormwater discharge shall follow Rule 17-25.042, FAC.

Stormwater Discharge Facilities - Permits for construction of new stormwater discharge facilities shall follow Rule 17-25.040, FAC.

Closed Conduits - 10 year frequency, 24-hour duration; IDF curve Zone 5, DOT Drainage Manual 1987.

Open Channels - 25 year frequency, 24-hour duration; IDF curve Zone 5, DOT Drainage Manual 1987.

Level of Service - Shall meet DER Stormwater Drainage Rule 17-25 FAC (retain the first inch of storm-water for drainage basins over 100 acres; the first one-half inch of stormwater for drainage basins under 100 acres).

The standards stated above shall pertain to all new development and redevelopment without exception. The exemption regarding project size thresholds provided in Rule 17-25.040, FAC, does not apply for concurrency determination.

Note: The Florida Administrative Code (FAC) citations refer to these regulations as

they exist at the time of adoption of this comprehensive plan.

Policy H.5.1.6 [9J-5.016(3)(c)4]: Putnam County shall not issue a building or other development order in any case where the above standards for drainage facility levels of service are not met.

Policy H.5.1.7 [9J-5.016(3)(c)4]: The level of service standards for the County's solid waste facilities of 6.4 pounds per capita per day shall be adopted and utilized to assess adequacy of service and project the expected lifetime of the County landfill.

Policy H.5.1.8 [9J-5.016(3)(c)4]: Putnam County shall not issue a building or other development order in any case where the above standards for solid waste disposal levels of service are not met.

Policy H.5.1.9 [Rev. 98-02; 9J-5.016(3)(c)4]: The County shall adopt recreational levels of service as identified below:

-Neighborhood Parks:	One acre per 3,500 persons
-Community Parks:	One acre per 1,100 persons
-Boat Ramps:	One lane per 3,700 persons
-Baseball/softball fields:	One field per 3,500 persons
-Football/soccer fields:	One field per 12,500 persons
-Basketball goals:	One goal per 3,800 persons
-Tennis Courts:	One court per 7,500 persons
-Equipped play area:	One area per 9,250 persons
-Picnic Areas:	One table per 6,000 persons

Policy H.5.1.10 [9J-5.016(3)(c)4]: Putnam County shall not issue a building or other development order in any case where the above standards for the recreational levels of service are not met.

Policy H.5.1.11 [Rev. 02-28; Rev. 98-02; Rev. 93-19; 9J-5.016(3)(c)4; identical to Policy B.1.1.1]: The County hereby adopts the following peak hour LOS standards for each listed facility type:

1 principal arterials –
LOS C – Multi-Lane
LOS D – Two-Lane

2. collectors and minor arterials - LOS D

3. local roadways - LOS D.

4. Florida Intrastate Highway System-
   LOS B – Rural Multi-Lane
   LOS C- Rural Two-Lane
   LOS C - Urban and transition urban

Any modification to the level of service standards provided above shall be submitted as a comprehensive plan amendment. The level of service standard for a roadway in the Florida Intrastate Highway System, shall not be different than the standards adopted by FDOT unless data and analysis clearly establish that designation of the roadway as constrained or backlogged is necessary to further the achievement of important planning goals and policies and FDOT approves of the designation.

Provisions which allow operation of road segments below the adopted level of service standards are included in the County's Concurrency Management System and are consistent with applicable State laws and rules.

Policy H.5.1.12 [Rev. 93-19]: Putnam County shall not issue a building permit or other development order where an evaluation of a proposed development completed according to requirements in the County's Concurrency Management System indicates the impact of the proposed development exceeds the roadway level of service standards provided above in Policy H.5.1.11.

Non-Applicable Items

A. 9J-016(3)(b)2, "The limitation of public expenditures that subsidize development in high-hazard coastal areas," is not applicable because
there are no high-hazard coastal areas in Putnam County since it is some 35 miles inland from the nearest high hazard coastal zone.

Five-Year Capital Improvements Schedule

The five year schedule of capital improvements required for identification as the program to be adopted to ensure that the goals, objectives and policies established in the capital improvements element are met or exceeded is contained in Table H-9, Capital Improvements Schedule-Fiscal Years 1991-92 to 1995-96. It contains the project description, location, determination of consistency, and projected costs and revenue sources needed to construct the project.

The schedule will be the basis for the annual capital improvement program that will be adopted by ordinance. As the capital improvements element is updated each year projects will be considered for inclusion or deletion from the program. The data for this assessment will be reviewed by a county staff committee annually.

Projects, expenditures and funding sources are included in Table H-9 for fiscal years 1991/92 through 1995/96. Since the schedule of improvements will be projected ahead a minimum of five years there will always be ample lead time to assure that projects can be constructed in time to be in operation concurrent with demonstrated public needs. Therefore, the minimum standards for level of service will be maintained.

CAPITAL IMPROVEMENTS ELEMENT
MONITORING AND EVALUATION PROCEDURES
Comprehensive Planning Process

The Local Government Comprehensive Plan and the status of required implementation procedures and the effect on goal attainment are critical to the support and success of Florida's integrated growth management process. Implementation procedures will help to determine whether plans are being carried out, and goal attainment procedures will help to determine if the plans are having the desired effect.

The local government planning process in Florida is intended to be a continuous and ongoing process. In light of this, Rule 9J-5.005(7) requires that each comprehensive plan contain a section identifying the procedures to be followed in preparation of the required five year evaluation and appraisal reports. These procedures are commonly called the Monitoring and Evaluation Report (MER). The MER according to Rule 9J-5.005(7) must address the following:

A. Citizens Participation: Public participation procedures, also known as citizens participation procedures have been developed and adopted by Putnam County and they are the responsibility of both the County Commission and the Planning Commission. These procedures include the following:

1. Provisions to assure that real property owners are put on notice, through advertisement in a newspaper of general circulation in the area or the method adopted by the local government, of official actions that will affect the use of their property;

2. Provisions for notice to keep the general public informed;

3. Provisions to assure that there are opportunities for the public to provide written comments;

4. Provisions to assure that the required public hearings are held; and

5. Provisions to assure the consideration of and response to public comments.

The 9J-5 Rule also encourages local governments to make executive summaries of the comprehensive plan available to the general public and release information at regular intervals to keep its citizenry appraised of planning activities.

B. Updating appropriate data and measurable objectives: Baseline data which can be quantified will be updated every five years as required by the Local Government Comprehensive Planning and Land Development Regulation Act. In addition, those objectives which can be measured

will be evaluated and updated to reflect what should be done for the next 5 year planning period and for the long term period also.

C. Accomplishments of the Goals, Objectives, and Policies: All of the goals, objectives, and policies will be reviewed to determine how successfully each has been accomplished during the five year planning period.

D. Obstacles or Problems: All of the goals, objectives, and policies will be reviewed to determine if they should be modified, or if additional ones are needed to correct discovered problems.

E. Ensuring continuous monitoring and evaluation: Continuous monitoring and evaluation of the plan during the five year planning period will be accomplished primarily through the annual review of the Capital Improvements Element. Pursuant to Chapter 163.3177(3)(b) F.S., the Capital Improvements Element must be reviewed annually by the local government and shall be modified as necessary to meet changing conditions. This review will be the most logical means of achieving a required and effective monitoring and evaluation of the plan. Some of the policies included in the goals and objectives of the Capital Improvement Element that call for an annual monitoring and evaluation of the Plan are as follows:

Policy H.1.3.1 [9J-5.016(3)(c)(1) d & e]: Review and rank need for new and additional public infrastructure as detailed in Comprehensive Plan with the advice of the County department heads and the public annually.

Policy H.1.3.4 [9J-5.016(3)(c)5]: Review outstanding land development orders to insure public facility impacts of development are included in the capital budgeting process annually.

Policy H.1.3.6 [9J-5.016(3)(c)7]: Include adoption of a Five Year Capital Budget with an annually updated Five Year Schedule of Improvements (Table H-9) at the time of the adoption of the annual governmental budget of Putnam County.

Policy H.2.1.1 [9J-5.016(3)(c)6]: Review land use decision impacts and timing against existing and future facilities as proposed in the Capital Improvements schedule for maintenance of required level of service.

Policy H.2.1.2 [9J-5.016(3)(c)6]: The Designated Official shall certify that required levels of service will be maintained concurrent with project needs before the project is permitted to be heard by the County Planning Commission for approval of development orders, or building permits are issued.

Policy H.4.1.1 [9J-5.016(3)(c)6]: Evaluate level of service presently in existence and actions necessary to achieve levels of service stated in the Comprehensive Plan by June 1, 1992.

In addition, certain key goals and measurable objectives will be selected by the Putnam County Planning Commission as key indicators for annual monitoring. Data will be collected by the building department which will facilitate the monitoring and evaluation of these key indicators. Input from citizens, County staff, Planning Commission members, and County Commission members will also be used as a means of continuous monitoring and evaluation.

APPENDIX "A"
CONCURRENCY MANAGEMENT SYSTEM
PUTNAM COUNTY COMPREHENSIVE PLAN

TABLE OF CONTENTS

PUTNAM COUNTY
PROCEDURES AND GUIDELINES FOR A CONCURRENCY MANAGEMENT SYSTEM

AS IT RELATES TO
THE ISSUANCE OF DEVELOPMENT PERMITS WITHIN PUTNAM COUNTY;
PROVIDING FOR: LEVELS OF SERVICE; THRESHOLD CAPACITY LIMITS;
CONDITIONS OF APPROVAL AND EXEMPTIONS

Introduction

Chapter 163.3202, Florida Statutes, requires that local governments adopt land development regulations within one year after submission of its revised comprehensive plan; and that the local land development regulations contain specific and detailed provisions necessary or desirable to implement the adopted comprehensive plan.

The land development regulations shall provide that public facilities and services meet or exceed the standards established in the Capital Improvements element and are available in accordance with the minimum requirements for concurrency specified in Section 9J-5.0055(2)(a), (b) and (c). According to Florida Statute, a local government shall not issue a development permit which results in a reduction in the level of services for the affected public facilities below the level of services provided in the comprehensive plan.

The Concurrency Management System is designed to measure the potential impact of any development permit application upon the established minimum acceptable levels of service (LOS) and shall control the issuance of development orders/permits dependent upon the ability of the infrastructure (potable water, sanitary sewer, solid waste, drainage, roads and recreational facilities) to support the proposed development.

Relationship of the Concurrency Management System to the Comprehensive Plan

The Concurrency management System implements the following Goals, Objectives and Policies of the Putnam County Comprehensive Plan - 2001.

(a) Future Land Use Element:

Objective A.1.1
Policy A.1.1.1
Policy A.1.1.2
Policy A.1.1.3
Policy A.1.1.4
Policy A.1.1.5
Policy A.1.2.2
Policy A.1.4.5
Policy A.1.4.6
Policy A.1.4.7
Policy A.1.4.14
Policy A.1.4.16
Objective A.1.5
Policy A.1.5.3
Objective A.1.7
Policy A.1.7.1
Policy A.1.7.2
Policy A.1.7.3
Objective A.1.9
Policy A.1.9.1
Policy A.1.9.2

Policy A.1.3.2	Objective A.1.6	Policy A.1.9.3
Policy A.1.4.2	Policy A.1.6.4	Policy A.1.10.2

(b) Traffic Circulation Element:

Objective B.1.1	Objective B.1.3	Policy B.1.4.2
Policy B.1.1.1	Policy B.1.3.1	Policy B.1.4.4
Policy B.1.1.1.A	Policy B.1.3.2	Policy B.1.4.5
Policy B.1.1.1.B	Policy B.1.3.3	Policy B.1.4.7
Policy B.1.1.4	Objective B.1.4	Policy B.1.4.8
Policy B.1.1.5	Policy B.1.4.1	

(c) Public Facilities Element:

Objective D.1.2	Objective D.1.3	Policy D.1.6.4
Policy D.1.2.1	Policy D.1.3.2	Policy D.1.6.5
Policy D.1.2.2	Policy D.1.4.2	Policy D.1.6.6
Policy D.1.2.3	Objective D.1.5	Policy D.1.6.7
Policy D.1.2.4	Policy D.1.5.5	Policy D.1.7.1
Policy D.1.2.7		

(d) Recreation and Open Space Element:

Objective F.1.2	Policy F.1.3.2	Policy F.1.4.1
Policy F.1.2.1	Policy F.1.3.5	Policy F.1.4.2
Policy F.1.3.1	Objective F.1.4	

(e) Capital Improvements Element

Policy H.1.1.1	Policy H.3.1.1	Objective H.5.3
Objective H.1.3	Policy H.3.1.2	Policy H.5.3.1
Policy H.1.3.4	Objective H.4.1	Objective H.5.4
Objective H.2.1	Policy H.4.1.2	Policy H.5.4.1
Policy H.2.1.1	Objective H.5.1	Objective H.5.5
Policy H.2.1.2	Policy H.5.1.1	Policy H.5.5.1
Policy H.2.1.3	Objective H.5.2	Objective H.5.6
Objective H.3.1	Policy H.5.2.1	Policy H.5.6.1

Definitions

(a) "Availability" or "Available", with regard to the provision of facilities and services

concurrent with the impacts of development, means that at a minimum the facilities and services will be provided in accordance with the standards set forth in Rule 9J-5.0055(2), FAC.

(b) "Capital Improvement" means physical assets constructed or purchased to provide, improve or replace a public facility and which are large scale and high in cost. The cost of a capital improvement is generally nonrecurring and may require multi-year financing. For the purposes of this rule, physical assets which have been identified as existing or projected needs in the individual Comprehensive Plan elements shall be considered capital improvements.

(c) "Certificate of Concurrency" is a document prepared by the office of the Designated Official which certifies that sufficient infrastructure resources are available to meet the requirements of a proposed development.

(d) "Concurrency" means that the necessary public facilities and services to maintain the adopted level of service standards are available when the impacts of development occur.

(e) "Concurrency Management System" means the procedures and/or process that the local government will utilize to assure that development orders and permits are not issued unless the necessary facilities and services are available concurrent with the impacts of development.

(f) "Development Order" includes building permits, Approved DRIs, Approved subdivision plans.

(g) "Impact" means the effect of development on infrastructure resources.

(h) "Infrastructure" includes potable water, sanitary sewer, solid waste, drainage, roads and recreational facilities.

(i) "Level of Service" (LOS) is the amount of an infrastructure resource established by the Comprehensive Plan as the minimum amount acceptable by the County to support citizen needs.

Procedures for Application and Evaluation

A. Application

1. Application for a Concurrency Evaluation concurrent with a request for a Land

Use Change Amendment.

Any party requesting a change of land use must provide the County with sufficient information to determine the practicality of effecting such a change. The party making such a request must provide the following information to the County Designated Official, on a form provided by the County (Exhibit A) and pay such fee as may be established by resolution of the Board of County Commissioners:

a. Applicant name, address and telephone number.
b. Owner name, address and telephone number.
c. General location of parcel.
d. Number of acres or fraction thereof.
e. Existing Land Use designation.
f. Proposed Land Use designation.
g. Number of units to be developed, by type.
h. Roads serving site.
i. Recreational facilities serving site.
j. Will site be served by central water? sewer?
k. Is site in 100 year flood zone?
l. Does site contain critical habitat for endangered/threatened species?
m. Will proposed change affect beach accessibility?
n. State reason for requested change.

Approval of an application for a land use change amendment to the Comprehensive Plan does not reserve infrastructure capacity for future development.

2. Application for a Certificate of Concurrency prior to approval of a site plan, subdivision plat or building.

Any party requesting a Certificate of Concurrency in conjunction with or prior to application for site plan, subdivision plat or building permit approval, must provide the County Designated Official with the information required with an application for a change of land use, plus the following information, and pay such fee as may be established by resolution of the Board of County Commissioners.

a. Legal description of the property.
b. Current zoning.
c. Where potable water/sanitary sewer is to be provided by the County or

other public/private centralized system, the applicant must provide sufficient information for the County to determine gallon-per-day demand on the available facilities to meet development requirements.

Once a "certificate of concurrency" is issued for a proposed development, the development must proceed at a level consistent with the information on which the concurrency evaluation was based. If, during any stage in the development process, the applicant increases the density or intensity of the development, or creates any other substantial deviation from the approved development, the certificate of concurrency will be cancelled and an additional fee must be paid for the County to conduct a new concurrency evaluation and issue a new certificate of concurrency based upon the revised application.

B. Criteria for Concurrency Evaluation [Revised 93-19]:

The following criteria shall be applied to determine whether levels of service available for the six critical components of infrastructure (potable water, sanitary sewer, solid waste, drainage, recreation and roads) are adequate to support the proposed development:

1. Traffic Circulation (Roads):

   a. The capacity for transportation facilities shall be evaluated using the table: "Maximum Peak Hour Volume for each LOS by Facility Type", as adopted by FDOT and published in the "Level of Service Standards and Guidelines Manual, Florida Highway System Plan"; latest edition.

   b. The impact on the transportation network shall be determined using the trip generation standards cited in the ITE "Trip Generation Manual" (latest edition).

   c. The impact of traffic generated by a development shall be evaluated for its impact on the road network as designated on the Future Traffic Circulation Map in the Putnam County Comprehensive Plan. The County Public Works Department will determine which road segments in the network would be potentially affected based on the type and size of the proposed development. A professionally accepted and applied methodology shall be used to determine the magnitude of impacts and for determining the roads that would be affected by the development. To determine impact, new traffic generated by the proposed

development will be added to background traffic already in-place and impacting on the road network as well as traffic generated by development already approved but not yet in-place.

d. The calculation of infrastructure demand impact for purpose of issuing a "Certificate of Concurrency" shall be based upon 100 percent buildout of the proposed development. A Certificate of Concurrency may be issued for a single (or more) phase of development if the development order specifies a phased development schedule.

2. Sanitary Sewer:

a. The impact of a proposed development on available public/private sanitary sewer facilities shall be calculated by first establishing available capacity which is to be determined by subtracting the currently committed capacity (those demands already on-line, plus demands for which a Certificate of Concurrency already has been issued) from the design capacity of the collection and wastewater treatment facilities; and second, subtracting the anticipated demand of the proposed development from available capacity to determine impact.

b. The impact on the wastewater treatment plant shall be determined utilizing the County's current LOS standard for sanitary wastewater.

c. Where septic tanks are to be utilized for sanitary sewer effluent disposal pending hook-up to a central sanitary sewer system, the Putnam County Health Services Division shall utilize the standards of Chapter 10 D-6, FAC to determine acceptability of the application. The applicant shall submit a certificate from the Putnam County Health Department that certifies the site is or can be made suitable for septic tank operation before a Certificate of Concurrency may be issued.

3. Potable Water:

a. The impact of a proposed development on available public/private centralized potable water facilities shall be calculated in a manner as described in 2.1. for sanitary sewer determination.

b. The impact on the treatment plant shall be determined utilizing the County's current LOS standard for potable water.

c. Where private wells are to be utilized, the standards of the St. Johns and Suwannee River Water Management Districts and applicable state regulations shall apply and proof of compliance with these regulations shall be required prior to the issuance of a Certificate of Concurrency.

4. Solid Waste Disposal:

The adequacy of landfill facilities to support solid waste generated by the proposed development shall be determined at the time of the engineering review based upon the current City of Palatka LOS criteria established for per capita solid waste generation.

5. Drainage Facilities:

The adequacy of stormwater drainage facilities for proposed developments shall be determined at the time of the engineering review based upon the current Putnam County LOS criteria for drainage.

6. Recreation Facilities and Open Space:

a. The adequacy of open space shall be based upon the adopted current Comprehensive Plan Putnam County Recreation and Open Space LOS criteria. The need for developed recreational facilities shall be based upon the number and availability of recreational facilities as required by the LOS in the County's Comprehensive Plan Recreation and Open Space Element.

b. The impact of a proposed development on the County's Open Space or Recreation LOS shall be calculated in a manner as described in 2.a. for sanitary sewer determination.

Determination of Concurrency Finding (Exhibit B)

A. Schedule of Availability [Revised 93-19]: In order to pass the test of concurrency, components of infrastructure must be available to the proposed development in accordance with the following schedule taken from Chapter 9J-5.0055:

1. 9J-5.0055(2)(a) -- For potable water, sanitary sewer, solid waste and drainage, at a minimum infrastructure must satisfy the following standards to meet the concurrency requirement:

a. The necessary facilities and services are in place at the time a development

permit is issued; or

b. A development permit is issued subject to the condition that the necessary facilities and services will be in place when the impacts of the development occur; or

c. The necessary facilities are under construction at the time a permit is issued; or

d. The necessary facilities and services are guaranteed in an enforceable development agreement that includes the provisions of Rules 9J-5.0055(2)(a)1.-3. An enforceable development agreement may include, but is not limited to, development agreements pursuant to section 163.3220, FS, or an agreement or development order issued pursuant to Chapter 380, FS. The agreement must guarantee that the necessary facilities and services will be in place when the impacts of the development occur.

2. 9J-5.0055(2)(b) -- For open space and recreation the proposed development must satisfy the following standards to meet the concurrency requirement:

a. Comply with the standards defined above for potable water, sanitary sewer, solid waste and drainage; or

b. At the time the development permit is issued, the necessary facilities and services are the subject of a binding executed contract which provides for the commencement of the actual construction of the required facilities or the provision of services within one year of the issuance of the development permit; or

c. The necessary facilities and services are guaranteed in an enforceable agreement which requires the commencement of the actual construction of the facilities or the provision of services within one year of the issuance of the applicable development permit. An enforceable development agreement may include, but is not limited to, development agreements pursuant to Section 163.3220, FS, or an agreement or development order issued pursuant to Chapter 380, FS.

3. 9J-5.0055(2)(c) -- For roads designated in the adopted Comprehensive Plan, the proposed development must meet the standards identified in 1. and 2. above. In addition the County may adopt and implement a concurrency management system for roads based on an adequate capital improvements program and schedule, and adequate implementing regulations in accordance with the requirements of Sections 9J-5.055(2)(c)1-9., FAC. The

concurrency requirement for roads can be achieved provided:

a. The capital improvements element and five-year schedule of capital improvements is financially feasible. In addition, only transportation projects included in the first three years of the applicable, adopted Florida Department of Transportation five-year work program may be relied upon for meeting concurrency requirements on state roads.

b. The five-year schedule of capital improvements includes both necessary facilities to maintain the adopted level of service standards to service the new development proposed to be permitted and the necessary facilities required to eliminate those portions of existing deficiencies which are a priority to be eliminated during the five-year period under the County's schedule of capital improvements in this comprehensive plan.

c. The County's capital improvements schedule is based on a realistic, financially feasible funding system based on currently available revenue sources as defined in 9J-5.003(23). The revenues must be adequate to fund the public facilities required to serve the development authorized by the development order or development permit and which public facilities are included in the five-year schedule of capital improvements in this Comprehensive Plan.

d. The five-year schedule of capital improvements in this Comprehensive Plan includes the estimated date of commencement of actual construction and the estimated date of project completion.

e. The five-year schedule of capital improvements in this Comprehensive Plan demonstrates that the actual construction of the roads are scheduled to commence in or before the third year of the five-year schedule of capital improvements.

f. This Comprehensive Plan contains clear designations of the areas within which facilities will be provided by the County with public funds in accordance with the five-year capital improvements schedule of this Comprehensive Plan.

g. An amendment to this Comprehensive Plan is required to eliminate, defer, or delay construction of any road which is needed to maintain the adopted level of service standards and which is listed in the five-year schedule of improvements in this Comprehensive Plan, and

h. The County shall have adopted land development regulations, which, in conjunction with the capital improvements element, ensure that development orders and permits are issued in a manner that will assure that the necessary public facilities will be available to accommodate the impact of that development, and

i. The County shall have adopted a monitoring system which determines whether the County is adhering to the adopted level of service standards and the schedule of capital improvements in this Comprehensive Plan, and which demonstrates the County's capability of monitoring the availability of public facilities.

B. Finding of Deficiency

If the concurrency evaluation test finds that a proposed development will cause a deficiency on any public facility or service for which a LOS has been established, the County reserves the authority to take any of the following actions:

-- deny or defer the development proposal,

-- cause the development request to be modified to achieve consistency with the County's minimum LOS, or

-- process the application as a conditional development permit subject to later review and modification.

-- an application processed as a deferred or conditional development permit must meet the LOS that will be in effect at the time of later review or modification.

C. Finding of Concurrency

If the concurrency evaluation test finds the proposed development meets concurrency requirements a "Certificate of Concurrency" will be issued by the Designated Official and the request for development approval may proceed through to site plan, subdivision or building permit approval.

Period of Concurrency Validation

A. Schedule of Reserved Resources - When a Certificate of Concurrency is issued, the infrastructure resources required by the proposed development are removed from the

"available" category and placed in the "reserved" category of infrastructure resources. This reservation of resources is approved for a period of six (6) months for the purpose of requesting development approval. Upon County approval of a site plan, subdivision, building permit or other development order the Certificate of Concurrency and "reserved" resources shall be permanently continued in favor of a valid permit or other development order exhibiting a good faith effort to proceed as defined and established by the County.

1. For an application for site development plan approval, the finding shall remain valid for a period not to exceed six (6) months, except where the intensiveness of the proposed use may exceed the "reserved" capacity stated in the most recent Certificate of Concurrency. In this instance, another concurrency evaluation finding and Certificate shall be required.

   However, the validity period of the Certificate of Concurrency may be extended administratively for two six (6) month periods upon a showing of a good faith effort to proceed in the application process for a valid development order. The standards for establishing a good faith effort to proceed shall be subsequently established by Resolution by the Board of County Commissioners.

2. For a residential subdivision, or phase, or unit thereof, including residential subdivision phases of planned unit developments, the Certificate of Concurrency shall remain in effect for a period of sixty (60) months from the date of the construction permit's approval; providing a valid construction permit is maintained and the work authorized proceeds in a timely manner as prescribed by the Board of County Commissioners.

3. For an individual single-family lot or parcel, the finding shall remain valid for twenty-four (24) months for the purpose of obtaining a construction building permit. The Certificate shall remain in effect as long as the permit remains valid and the work authorized proceeds in a timely manner. Lots included within subdivisions which have not passed a concurrency evaluation, or where the concurrency evaluation and vesting period have expired, are included in this category.

4. For a commercial, industrial or multi-family building permit, the Certificate shall remain valid for thirty-six (36) months for the purpose of obtaining a construction building permit. The Certificate shall then remain in effect as long as the work authorized proceeds in a timely manner.

B. Expiration of Concurrency Approval

Where any of the applicable time periods, as set forth in A.1, 2, 3 or 4 above, expire, a new concurrency evaluation and Certificate of Concurrency shall be required with all applicable fees once again paid to the County.

Operating Procedures of the Concurrency Management System

A. Maintaining Level of Service Records

The Concurrency Management System shall maintain a cumulative record of the level of service capacity which is (1) in use, (2) in reserve, or (3) available. This record shall be available to the public at the office of the County Designated Official.

B. Monitoring

The Designated Official shall maintain all records of the status of infrastructure commitment. Records will be reviewed quarterly to ensure that developments having committed use of resources remain functional and that projects having reserved use of resources are proceeding within allocated schedules. When committed resources are no longer required or when projects with reserved resources are not proceeding on schedule, these resources will be returned to the category of "available" resources.

C. Exceptions

The following development activities are exempt from the provisions of this Ordinance:

1. Construction of public transportation, potable water, sanitary sewer, solid waste, drainage, roads, and/or recreational facilities which serve the general public or any development determined by the Board of County Commissioners as providing for public health, safety or welfare; and

2. Accessory structures to established principal land uses provided the principal land use is in place and functional; and

3. Any on-going Development of Regional Impact or other vested development as determined by the Board of County Commissioners on advice of legal counsel.

EXHIBIT A
PUTNAM COUNTY LAND USE AMENDMENT CHANGE REQUEST

DATE:_____

1. Application Number:_____

2. Applicant Name:_____

   Address:_____

3. Agent Name:_____

   Address:_____

4. Owner Name(s):_____

   Address:_____

5. General Location:_____

6. Number of Acres or Fraction Thereof:_____

7. Location Map: (Attachment A)_____

8. Legal Description: (Attachment B)_____

9. Current Zoning Map: (Attachment C)_____

10. Proposed Land Use Change

    a) Current Designation:_____

    b) Proposed Designation:_____

11. Population Assumptions

    a) Maximum population of site now under current land use:

    _____

b) Maximum population under proposed land use:_____

12. Traffic Circulation - Facilities immediately serving site:

Road	Current ADT	Projected ADT

13. Recreation and Open Space

a) Facilities immediately serving site:

_____

_____

_____

b) Is this site within a targeted Park Land? (Y/N)_____

14. Water/Sewer

Provided On-Site:_____

Provided by Off-Site Utility (Name):_____

Water:_____

Sewer:_____

Letter of Confirmation for projected capacities: if provided by Utility System. (Attachment D)

15. Solid Waste

If requested land use amendment is for other than residential land use:

Commercial: Type and square feet of proposed commercial use.

_____

Industrial: Type and square feet of proposed industrial use.

_____

16. Drainage

Detention/Retention facilities immediately serving the site:

_____

Available downstream facilities: _____

Is site situated within a known floodplain area? (Y/N)_____

17. Additional Comments:_____

_____

_____

EXHIBIT B
PUTNAM COUNTY CAPACITY DETERMINATION FORM

RECORD No._____ DATE OF CONCURRENCY TEST STATEMENT

USED:_____

(Please record this Record Number with all subsequent development orders issued for this parcel)

STATUS OF FACILITY/SERVICE

Traffic Circulation **SEE ATTACHED TRANSPORTATION CONCURRENCY ANALYSIS REPORT**

Water Supply
Acceptable _____
Unacceptable _____
Not Applicable_____
Service Provider_____
Area_____

Sanitary Sewer
Acceptable _____
Unacceptable _____
Not Applicable_____
Service Provider_____
Area_____

Solid Waste
Acceptable _____
Unacceptable _____
Not Applicable_____
Service Provider_____
Area_____

Drainage
Acceptable _____
Unacceptable _____
Not Applicable_____
Service Provider_____
Area_____

Recreation & Open Space
Acceptable _____
Unacceptable _____
Not Applicable_____
Service Provider_____
Area_____

Representative Name:_____ Phone:_____

Project Name:_____

Project Address:_____

SIGNATURE_____ DATE OF ISSUE_____

An acceptable determination means that Putnam County has reviewed the applicant's capacity request for the indicated facility/service, and has determined that, as of the date of the applicant's request, capacity for the indicated facility is available. **This determination addresses capacity only; it does not guarantee that water taps, sewer taps, or other infrastructure is readily available.** This reservation will be good for the period of time specified by the Concurrency Management System. Failure to obtain any development orders/permits within the required time limits will cause this capacity reservation to become invalid.

EXHIBIT B
PUTNAM COUNTY CAPACITY DETERMINATION FORM

RECORD No._____ DATE OF CONCURRENCY TEST STATEMENT

USED:_____

(Please record this Record Number with all subsequent development orders issued for this parcel)

STATUS OF FACILITY/SERVICE

Traffic Circulation **SEE ATTACHED TRANSPORTATION CONCURRENCY ANALYSIS REPORT**

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Area_____

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Unacceptable _____
Not Applicable_____
Service Provider_____
Area_____

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Acceptable _____
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Service Provider_____
Area_____

Representative Name:_____ Phone:_____

Project Name:_____

Project Address:_____

SIGNATURE_____ DATE OF ISSUE_____

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CAPITAL IMPROVEMENT PLAN

BOARD OF COUNTY COMMISSIONERS, PUTNAM COUNTY
FISCAL YEAR 1999-00 BUDGET

FY 1999-00 THRU 2003-2004 CAPITAL IMPROVEMENT PROGRAM (BY DEPARTMENT)

:P	FUND	ITEM(S) REQUESTED	NOTE	FY 99-00 REQUESTED	FY 99-00 BUDGETED	REQUEST BY YEAR - CASH PURCHASE COST- FY 00-01	FY 01-02	FY 02-03	FY 03-04	TOTAL REQUESTS
53	GEN	A/C UNITS & HANDLERS		55.000	55.000	85.000	85.000	85.000	85.000	$395.000
53	GEN	FLOOR COVERING		54.000	16.000	54.000	54.000	54.000	54.000	$270.000
53	GEN	HVAC REPLACEMENTS		30.000	30.000					$30.000
58	GEN	DELIVERY VAN					25.000			$25.000
40	GEN	VEHICLE REPLACEMENTS (1)		42.030	17.000	42.030	42.030	21.015		$147.105
42	GEN	VEHICLES (1)		39.376	20.000		19.688			$59.064
91	GEN	EOC CONSTRUCTION		30.000	0					$30.000
05	GEN	VEHICLE REPLACEMENT (2)		165.000	155.000	240.000	120.000	200.000	120.000	$845.000
05	GEN	DEFIBRILLATORS		40.000	0					$40.000
06	GEN	PICK-UP TRUCKS (1)		40.000	20.000					$40.000
06	GEN	ANIMAL CONTROL SHELTER		50.000	50.000					$50.000
01	GEN	TRUCK		17.545	0					$17.545
01	GEN	OFFICE FOR REC STAFF		60.000	0					$60.000
02	GEN	12 PASSENGER VAN		18.000	0					$18.000
1	FTU	VEHICLE		30.000	0					$30.000
1	FTU	APPARATUS REPLACEMENT (2)		500.000	358.404	(TO BE LEASE / PURCHASED X 4 YRS)				$500.000
1	MIS	REPLACEMENT 3450 COMPUTER (2)				150.000				$150.000
3	COMM	COMMUNICATION TOWERS/EQUI	(1)		842.000	(TO BE LEASE / PURCHASED X 8 YRS)				$0
	GRANT	EOC BUILDING ADDITION				50.000	50.000	50.000	50.000	$200.000
	PW	PICK-UP TRUCKS (3)		54.000	54.000	18.000				$72.000
2	PW	MOTOR GRADER		125.000	0	125.000	130.000	130.000		$510.000
2	PW	1/2 TON PICK-UP TRUCKS (2)		36.000	36.000	18.000	18.000	20.000		$92.000
2	PW	5 YARD CREW CAB		50.000	50.000	100.000				$150.000
2	PW	1 TON CREW CABS (2)		68.000	68.000					$68.000
2	PW	FRONT END LOADER		105.000	105.000					$105.000
2	PW	12 YARD DUMP TRUCK		63.000	63.000	130.000	65.000	65.000	65.000	$388.000
0	WM	CATERPILLER 826 TRASH COMPACTOR		450.000	450.000	(TO BE LEASE / PURCHASED X 4 YRS)				$450.000
0	WM	FRONT END LOADER (REPLACE)		130.000	130.000					$130.000
0	WM	FRONT END LOADER (REPLACE)		180.000	0					$180.000
0	WM	1/2 TON PICK-UP TRUCK (REPLACE)		18.000	18.000					$18.000
3	WM	CENTRAL PHASE II - PARTIAL CLOSURE		70.000	70.000					$70.000
3	WM	CENTRAL CLASS III LANDFILL EXPANSIO		120.000	120.000					$120.000
3	WM	CENTRAL CLASS III LANDFILL CLOSURE		60.000	60.000					$60.000
1	WM	LANDFILL PROPERTY ACQUISTION		350.000	350.000					$350.000
1	WM	CENTRAL PHASE II CELL I CLOSURE				1.420.000				$1.420.000
:	WM	CENTRAL CLASS III LANDFILL EXPANSIO				553.000				$553.000
	WM	INTERLACHEN CENTER EXPANSION				100.000				$100.000
	WM	LEACHATE FORCE MAIN				50.000	300.000			$350.000
		TOTALS		$3.049.951	$3.137.404	$3.135.030	$908.718	$625.015	$374.000	$8.092.714

1 COMMUNICATION TOWERS/EQUIPMENT - $430.000 TO BE LEASE/PURCHASED @ 64.800 X 8 yrs.

FUND SUMMARY:	REQUESTED	BUDGETED
GENERAL FUND (GEN)	$640.951	$363.000
MIS / GIS FUND (MIS)	0	0
FIRE TAX UNIT FUND (FTU)	530.000	358.404
TRANSPORTATION FUND (PW)	501.000	376.000
WASTE MANAGEMENT FUND (WM)	1.378.000	1.198.000
ALL OTHER / MISC FUNDS	0	842.000
TOTALS	$3.049.951	$3.137.404

CAPITAL IMPROVEMENT PLANS

BOARD OF COUNTY COMMISSIONERS, PUTNAM COUNTY
FISCAL YEAR 1999-00 BUDGET

FY 1999-00 THRU 2003-2004 CAPITAL IMPROVEMENT PROGRAM (BY DEPARTMENT)

P	FUND	ITEM(S) REQUESTED	NOTE	FY 99-00 REQUESTED	FY 99-00 BUDGETED	REQUEST BY YEAR - CASH PURCHASE COST- FY 00-01	FY 01-02	FY 02-03	FY 03-04	TOTAL REQUESTS
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53	GEN	HVAC REPLACEMENTS		30.000	30.000					$30.000
58	GEN	DELIVERY VAN					25.000			$25.000
40	GEN	VEHICLE REPLACEMENTS (1)		42.030	17.000	42.030	42.030	21.015		$147.105
42	GEN	VEHICLES (1)		39.376	20.000		19.688			$59.064
91	GEN	EOC CONSTRUCTION		30.000	0					$30.000
05	GEN	VEHICLE REPLACEMENT (2)		165.000	155.000	240.000	120.000	200.000	120.000	$845.000
05	GEN	DEFIBRILLATORS		40.000	0					$40.000
06	GEN	PICK-UP TRUCKS (1)		40.000	20.000					$40.000
06	GEN	ANIMAL CONTROL SHELTER		50.000	50.000					$50.000
01	GEN	TRUCK		17.545	0					$17.545
01	GEN	OFFICE FOR REC STAFF		60.000	0					$60.000
02	GEN	12 PASSENGER VAN		18.000	0					$18.000
11	FTU	VEHICLE		30.000	0					$30.000
11	FTU	APPARATUS REPLACEMENT (2)		500.000	358.404	(TO BE LEASE / PURCHASED X 4 YRS)				$500.000
11	MIS	REPLACEMENT 3450 COMPUTER (2)				150.000				$150.000
3	COMM	COMMUNICATION TOWERS/EQUI	(1)		842.000	(TO BE LEASE / PURCHASED X 8 YRS)				$0
	GRANT	EOC BUILDING ADDITION				50.000	50.000	50.000	50.000	$200.000
	PW	PICK-UP TRUCKS (3)		54.000	54.000	18.000				$72.000
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3	WM	CENTRAL PHASE II - PARTIAL CLOSURE		70.000	70.000					$70.000
3	WM	CENTRAL CLASS III LANDFILL EXPANSIO		120.000	120.000					$120.000
3	WM	CENTRAL CLASS III LANDFILL CLOSURE		60.000	60.000					$60.000
3	WM	LANDFILL PROPERTY ACQUISTION		350.000	350.000					$350.000
	WM	CENTRAL PHASE II CELL I CLOSURE				1.420.000				$1.420.000
	WM	CENTRAL CLASS III LANDFILL EXPANSIO				553.000				$553.000
	WM	INTERLACHEN CENTER EXPANSION				100.000				$100.000
	WM	LEACHATE FORCE MAIN				50.000	300.000			$350.000
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CAPITAL IMPROVEMENT PLAN

BOARD OF COUNTY COMMISSIONERS, PUTNAM COUNTY
FISCAL YEAR 1999-00 BUDGET

FY 1999-00 THRU 2003-2004 CAPITAL IMPROVEMENT PROGRAM (BY DEPARTMENT)

EP	FUND	ITEM(S) REQUESTED	NOTE	FY 99-00 REQUESTED	FY 99-00 BUDGETED	REQUEST BY YEAR - CASH PURCHASE COST- FY 00-01	FY 01-02	FY 02-03	FY 03-04	TOTAL REQUESTS
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553	GEN	HVAC REPLACEMENTS		30.000	30.000					$30.000
558	GEN	DELIVERY VAN					25.000			$25.000
440	GEN	VEHICLE REPLACEMENTS (1)		42.030	17.000	42.030	42.030	21.015		$147.105
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106	GEN	PICK-UP TRUCKS (1)		40.000	20.000					$40.000
106	GEN	ANIMAL CONTROL SHELTER		50.000	50.000					$50.000
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TOTALS	$3.049.951	$3.137.404

BOARD OF COUNTY COMMISSIONERS, PUTNAM COUNTY
FISCAL YEAR 1999-00
5 YEAR CAPITAL BUDGET

CATEGORY - DRAINAGE

Item/Project Name	FY 1998-1999	FY 1999-2000	FY 2000-2001	FY 2001-2002	FY 2002-2003	TOTAL	FUNDING SOURCE
)RAINAGE ıNNUAL 'OTALS:	$0	$562,214	$840,000	$0	$450,000	$1,852,214	AS LISTED BELOW
I.) Roddy Road ırainage nprovements W	0	$110,000	0	0	0	$110,000	Road Projects Fund
.) Bannerville oad Drainage ıprovements N	0	$40,000	0	0	0	$40,000	Transportation Fund
.) Hoot Owl dge Drainage rovements	0	$25,000	0	0	0	$25,000	Transportation Fund
) San Mateo . Box Culvert place Fabriform /	0	$42,214	0	0	0	$42,214	FEMA
Hermits Cove ınage ırovements	0	$45,000	0	0	0	$45,000	Transportation Fund
Riversho re Drainage rovements	0	$25,000	0	0	0	$25,000	Transportation Fund
Moonstone Port Comfort d Drainage ovements	0	0	$87,000	0	0	$87,000	Road Projects Fund
Pine Oak Way rface ıje vements	0	$5,000	0	0	0	$5,000	District 5 Discretionary Funds Transportation Fund

5 YEAR CAPITAL BUDGET

CATEGORY - DRAINAGE

Item/Project Name	FY 1998-1999	FY 1999-2000	FY 2000-2001	FY 2001-2002	FY 2002-2003	TOTAL	FUNDING SOURCE
(9.) Palm Avenue Eng. Analysis & Design Drainage mp.	0	$50.000	0	0	0	$50.000	Road Projects Fund
10.) Langston .itigation - ullwood Outfall W	0	$100.000	0	0	0	$100.000	Road Projects Fund - Grant Water Management District
11.) Wolfbay oad Drainage nprovements	0	$45.000	0	0	0	$45.000	Transportation Fund
2.) Master tormwater Mgmt. lan W	0	$50.000	$50.000	0	0	$100.000	Grants
3.) Westover & ampbell Storm rainage Analysis d Repair N	0	$25.000	$503.000	0	0	$528.000	Grant Road Projects Fund
4.) Palm Shores D Drainage provements V	0	0	$200.000	0	0	$200.000	MSBU
.) Coral Farms ad South lvert place	0	0	0	0	$450.000	$450.000	Grant Road Projects Fund

10.4 Existing State Permits

10.4.1 Conditions of Certification No. PA78-10

The following pages contain the Conditions of Certification for SGS Units 1 and 2

State of Florida Department of Environmental Regulation
Seminole Electric Cooperative, Inc.
Seminole Units 1 & 2
PA 78-10I

CONDITIONS OF CERTIFICATION **Modified 07/05/05**

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I. Air

The construction and operation of Units No. 1 and 2 at the Seminole steam electric power plant site shall be in accordance with all applicable provisions of Chapters 62-210, 62-212, 62-213, 62-296, and 62-297, Florida Administrative Code. In addition to the foregoing, the permittee shall comply with the following conditions of certification:

A. Emission Limitations

1. Stack emissions from Units 1 and 2 shall not exceed the following when burning bituminous coal:

a. SO_2 - 1.2 lb. per million Btu heat input, and 10 percent of the potential combustion concentration (90 percent reduction).

b. NO_x - 0.60 lb per million Btu heat input and 35 percent of the potential combustion concentration (65 percent reduction).

c. Particulates - 0.03 lb per million Btu heat input and 1 percent of the potential combustion concentration (99 percent reduction) when combusting solid fuel.

d. Compliance with the emission limitations and percent reductions in 1.a. and 1.b. shall be determined on a 30 day rolling average.

e. Compliance with the particulate matter emission limitation under 40 CFR 60.42a(a)(1) (paragraph 1.c., above) constitutes compliance with the percent reduction requirements for particulate matter and compliance with the nitrogen oxides emission limitation under 40 CFR 60.44a(a) (paragraph 1.b., above) constitutes compliance with the percent reduction requirements for nitrogen oxides.

2. The height of the boiler exhaust stack for Units No. 1 & 2 shall not be less than 675 ft. above grade.

Stack emissions from Units 1 and 2 shall comply with the following conditions when burning a mixture of coal and petroleum coke:

a. SO_2 Sulfur Dioxide Emissions

Unit 1: $E_{SO2} = [(\%C_{HI}/100*P_S*(1-(\%R_0/100))]+[(1-(\%C_{HI}/100))*(0.74 \text{ lb. } SO_2/MMBtu)]$ (Eqn. 1)

Unit 2: $E_{SO2} = [(\%C_{HI}/100)*P_S)*(1-\%R_0/100))]+[(1-(\%C_{HI}/100))*(0.72 \text{ lb. } SO_2/MMBtu)]$ (Eqn. 2)

$\%C_{HI}$ = percent of coal on a heat input basis.

P_S = potential SO_2 combustion concentration (unwashed coal without emissions control systems) as defined by NSPS Subpart Da: lb SO_2/MMBtu 30 days rolling average

$\%R_0$ =overall percent SO_2 reduction from Equation 19-21 of EPA Reference Method 19. Per NSPS Subpart Da, $\%R_0$ must not be less than 90%, 30-day rolling average

Compliance with the lb per million Btu heat input emission limitations and percent reduction requirement shall be determined on a 30-day rolling average basis.

b. Nitrogen oxide emissions:

(1) 0.60 lb. Per million Btu heat input, and 35 percent of the potential combustion concentration (65 percent reduction). Compliance with the lb. per million Btu heat input emission limitation and percent reduction requirement shall be determined on a 30-day rolling average basis. Compliance with the 0.60 lb per million Btu heat input emission limitations shall also constitute compliance with the 65 percent reduction requirement; and

(2) 0.50 lb. per million Btu heat input determined on an annual average basis, when subject to the 40 C.F.R. 76.8 Early Election Program for Group 1, Phase II Boiler or in any year when petroleum coke is burned.

c. Particulate Matter Emissions

0.03 lb. per million Btu heat input, and 1 percent of the potential combustion concentration (99 percent reduction). Compliance with the 0.03 lb. per million Btu heat input emission limitation shall also constitute compliance with the 99 percent reduction requirement.

d. Carbon Monoxide Emissions

The permittee shall maintain and submit to the Department on an annual basis for a period of five years from the date the units begin firing petroleum coke, test results demonstrating that the operational changes did not result in a significant emissions increase of the pollutant when compared to the past actual coal levels. The carbon monoxide emissions shall be based on test results using EPA Method 10.

e. Sulfuric Acid Emission

The permittee shall maintain and submit to the Department on an annual basis for a period of five years from the date the units begin firing

petroleum coke, test results demonstrating that the operational changes did not result in a significant emissions increase of the pollutant when compared to the past actual coal levels. The sulfuric acid mist emissions shall be based on test results using EPA Method 8.

f. Fuel Specifications

Fuel fired shall consist of coal and petroleum coke blends containing a maximum of 30 percent petroleum coke by weight. The maximum weight of the petroleum coke burned shall not exceed 186,000 pounds per hour (averaged over 24 hours). The petroleum coke sulfur content shall not exceed 7.0 percent by weight, dry basis.

3. Particulate emissions from the coal handling facilities:

a. The applicant shall not cause to be discharged into the atmosphere from any coal processing or conveying equipment, coal storage system or coal transfer and loading system processing coal, visible emissions which exceed 20 percent opacity. Particulate emissions shall be controlled by use of control devices having a removal efficiency of not less than 99.9%.

b. The applicant must submit to the Department within ten (10) working days after it becomes available, copies of technical data pertaining to the selected particulate emissions control for the coal handling facility. These data should include, but not be limited to, guaranteed efficiency and emission rates, and major design parameters such as air/cloth ratio and flow rate. The Department may, upon review of these data, disapprove the use of such device if the Department determines the selected control device to be inadequate to meet the emission limits specified in 3.a., above. Such disapproval shall be issued within 30 days of receipt of the technical data.

4. Particulate emissions from the FGD sludge fixing facility shall be in compliance with Section 62-296.310(2).

5. Handling of Petroleum Coke

All prior conditions of approval that address coal handling shall also apply to the handling of petroleum coke.

6. For the Electric Utility Steam Generating Units When Burning No. 2 Fuel Oil Use of No. 2 fuel oil is authorized for startups, flame stabilization and required emergency electric reserve capacity. It is also authorized for normal continuous operation when coal quality, process conditions, and/or burner equipment prevent demand with solid fuels only.

B. Air Monitoring Program

1. The permittee shall install and operate continuous monitoring devices for the Units No. 1 & 2 boiler exhausts for sulfur dioxide, nitrogen dioxide and opacity. The monitoring devices shall meet the applicable requirements of Rule 62-296.800, F.A.C., and 40 CFR 60. The opacity monitor may be placed in the ductwork between the electrostatic precipitator and the FGD scrubber.

2. The permittee shall maintain a daily log of the amounts and types of fuels used and copies of fuel analyses containing information on sulfur content, ash content and heating values.

3. The permittee shall provide sampling ports into the stack and shall provide access to the sampling ports in accordance with Rule 62-297.345, F.A.C., and 40 CFR 60.8.

4. The ambient monitoring program may be reviewed annually, beginning two years after start-up of Unit No. 2 by the Department and the permittee.

5. Prior to operation of the source, the applicant shall submit to the Department a standardized plan or procedure that will allow the applicant to monitor emission control equipment efficiency and enable the applicant to return malfunctioning equipment to proper operation as expeditiously as possible.

C. Stack Testing

1. Within 60 calendar days after achieving the maximum capacity at which each unit will be operated, but no later than 180 operating days after initial startup, the owner or operator shall conduct performance tests for particulates and SO_2 and furnish the Department a written report of the results of such performance tests.

2. Compliance tests for particulate matter shall be conducted and data reduced in accordance with Rule 62-297.330, Table 62-297.330-1, F.A.C.

3. Compliance tests shall be conducted under such conditions as the Department shall specify based on representative performance of the facility. The owner or operator shall make available to the Department such records as may be necessary for the Department to determine the appropriate operating conditions of the compliance tests.

4. The owner or operator shall provide 13 days prior written notice of the compliance tests to afford the Department the opportunity to have an observer present.

5. Compliance tests for particulates shall be performed annually during a testing period that commences not earlier than 60 days before and not later than 60 days after the anniversary date of the last compliance test in accordance with Conditions C.2, 3, and 4 above, provided that the requirements of Rule 62-297.340(1)(d), F.A.C., for testing each fiscal year (October 1 - September 30) are met. If the plant is shut down for reasons beyond the control of the owner such that testing during the normal testing period cannot be accomplished, the annual compliance test shall be performed within 60 days after the unit is restarted and reaches its normal commercial production rate.

6. SO_2 and NO_x Continuous Emission Monitors required by Rule 62-297.500, F.A.C., and 40 CFR 60 Subpart Da shall comply with the quality assurance requirements for continuous emission monitoring systems described in 40 CFR Part 60, Appendix F.

D. Reporting

1. For each Unit, stack monitoring, fuel usage and fuel analysis data shall be reported to the Department on a quarterly basis in accordance with Rule 62-296.800, F.A.C.

2. Beginning one month after certification the applicant shall submit to the Department a quarterly status report briefly outlining progress made on engineering design and purchase of major pieces of equipment (including control equipment). All reports and information required to be submitted under this condition shall be submitted to the Administrator of Power Plant Siting, Department of Environmental Protection, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

3. Documentation verifying that the coal and petroleum coke fuel blends combusted in Units 1 and 2 have not exceeded the 30 percent maximum petroleum coke by weight limit specified by Condition of Approval, Section D, Item 6 shall be maintained and submitted to the Department's Northeast District Office with each annual report.

4. The Permittee shall maintain and submit to the Department on an annual basis for a period of five years from the date the units begin firing Petroleum coke, data demonstrating that the operational changes associated with the use of petroleum coke did not result in a significant emission increase pursuant to Rule 62-210.200(12)(d), F.A.C.

II. Water Discharges

Any discharges into waters of the State during construction and operation of Units No. 1 & 2 shall be in accordance with all applicable provisions of Chapters 62-302

and 62-520, Florida Administrative Code, and 40 C.F.R 423 *Effluent Guidelines and Standards for Steam Electric Power Generating Point Source Category* except as provided herein. Also the permittee shall comply with the following conditions of certification:

A. Plant Effluents and Receiving Body of Water

For discharges made from the power plant the following conditions shall apply.

1. Receiving Body of Water (RBW)

The receiving body of water has been determined by the Department to be those waters of the St. Johns River and any other water affected which are considered to be waters of the State within the definition of Chapter 403, Florida Statutes.

2. Point of Discharge (POD)

The point of discharge will be determined by the Department to be where the effluent physically enters the waters of the State.

3. Chemical Wastes and Boiler Blowdown

All discharges of low volume wastes (demineralizer regeneration, floor drainage, lab drains and similar wastes), shall comply with Chapter 62-302. If violations of Chapter 62-302 occur, corrective action shall be taken. These wastewaters shall be discharged to an adequately sized and constructed treatment facility. Preoperational cleaning wastes shall be treated to comply with 40 CFR Part 423 and Chapter 62-302, F.A.C., prior to discharge. Boiler blowdown, boiler fireside wash, air preheater wash, and stack wash shall be disposed of in an adequately sized percolation pond; provided, however, that boiler blowdown from either unit may also be recycled to the Unit 1 and 2 cooling towers.

4. Coal Pile and Limestone Pile

Coal pile runoff and Limestone Pile runoff from less than 10-year 24-hour rainfall shall be treated as required to limit the suspended solids to 50 mg/l and to prevent increases in turbidity to less than 29 NTU above background in waters of the State beyond a distance of 150 meters from the POD.

5. Industrial Wastewater Permit

a. In addition to the Conditions of Certification set forth in this subsection, Water Discharges, the operation of Units 1 and 2 at the Seminole steam electric power plant site also shall be in accordance with the separate Industrial Wastewater Facility Permit No. FL0036498-Major, issued to Seminole by the Department on January 7, 2000. The provisions of Industrial Wastewater Facility Permit No. FL0036498-Major, which is attached as Appendix "A", are hereby incorporated as part of these Conditions of Certification for the SECI Seminole Power Plant. Seminole shall comply with the substantive conditions and limitations set forth in that Permit as part of the Conditions of Certification, and as those conditions may be modified in the future by the Department. The substantive requirements of Industrial Wastewater Facility Permit No. FL0036498-Major are Conditions of this Certification, are fully enforceable as Conditions of Certification for this facility, and are subject to the provisions of §403.516, F.S., and Chapter 62-17.211, F.A.C.

b. Any renewed or modified Industrial Wastewater Facility Permit for the plant shall be made a part of this certification in accordance with the Department's rules for modifications of certification in accordance with the Department's rules for modifications of certification in Chapter 62-17.211(4), Florida Administrative Code. If that Permit is subsequently renewed or modified in the future, Seminole shall comply with the more stringent of the substantive conditions and limitations contained in these Conditions of Certification or in the separate Industrial Wastewater Facility Permit until the certification is modified to reflect any renewed or modified Industrial wastewater Facility Permit.

III. Groundwater

A. General

The use of groundwater from two wells for plant service water for Units 1 and 2 shall be minimized to the greatest extent practicable, but in no case shall exceed 3.9 mgd on a maximum daily basis or 0.55 mgd on an average annual basis. If, in the future, the demand for groundwater use is expected to increase above this amount, Seminole shall submit necessary and appropriate information to the department and to the St. Johns River Water Management District (SJRWMD) to demonstrate that the increased water use complies with the applicable substantive consumptive use permitting criteria. The Department, in consultation with the SJRWMD, may authorize such increase in writing. Seminole shall then operate the plant in compliance with that approval and these conditions of certification.

B. Well Criteria

The submission of well logs and test results and location, design and construction of wells to provide plant service water shall be in accordance with applicable rules of the Department of Environmental Protection and the St. Johns River Water Management District (SJRWMD). Total water use per month shall be reported quarterly to SJRWMD commencing with the start of construction.

C. Water Use Restriction

Groundwater is restricted to uses other than main steam condensing. Any change in the use of said water will require a modification of this condition.

D. Emergency Shortages

In the event an emergency water shortage should be declared pursuant to Section 373.175 or 373.246, F.S., by St. Johns River Water Management District for an area including the location of these withdrawal points, the Department, pursuant to Section 403.516, F.S., may alter, modify, or declare to be inactive, all or parts of Condition III. A.- F. An authorized Water Management District Representative, at any reasonable time, may enter the property to inspect the facilities.

E. Monitoring and Reporting

Seminole shall implement the following groundwater monitoring program:

1. Static groundwater levels shall be monitored prior to purging the wells for sample collection. All measurements shall be referenced to NGVD at a precision of ± 0.01 foot. The results shall be logged for each monitor approved by the DEP and the St. Johns River Management District, in accordance with the schedule shown in Table 1 at the wells shown in Figure 3. Chemical analyses shall be made on samples from all monitored wells identified in this condition. The location, frequency and selected chemical analyses shall be as given in Condition III.E.4.

2. The chemical analyses shall be in accord with the latest edition of *Standard Methods for the Analysis of Water and Wastewater*.

3. Seminole shall operate flow meters in compliance with SJRWMD specifications on all production wells.

4. After consultation with the DEP and SJRWMD, Seminole shall install a monitoring well system as generally shown in Figure 3 to monitor groundwater quality in the top 40 feet of surficial aquifer. One well shall be installed to a depth greater than 40 feet but less than 100 to monitor vertical dispersion or groundwater contaminants. Monitoring well locations and designs shall be submitted to the

Department and SJRWMD for review. Approval or disapproval of the locations and design shall be granted within 60 days. The water samples collected from each of the monitor wells shall be collected immediately after removal by pumping of a quantity of water equal to three well volumes and stabilization of field parameters (i.e., conductivity, temperature, and pH), or five well volumes (if field parameters not monitored). The water quality analyses shall be performed monthly during the year prior to commercial operation and two years after operation and quarterly or annually thereafter in accordance with the schedule shown in Table 1. Results shall be submitted to the Department and the SJRWMD as specified in Condition III.E.9. Testing for the following constituents is required.

Conductance	Nickel
pH	Selenium
Chloride	Chromium
Iron	Arsenic
Cadmium	Beryllium
Zinc	Mercury
Copper	Lead
Sulfate	Gross Alpha
Silver	Barium

5. A scaled drawing shall be submitted which depicts the location of monitor wells in relation to property lines, facility structures, roads, etc. The drawing shall include the identity of each monitor well, along with the latitude, longitude and top of casing elevation. The drawing shall be revised within 45 days of any new monitor well construction.

6. New monitor wells constructed after January 1, 1995, shall be installed by a Florida licensed water well contractor. Well design, installation, and development shall be in accordance with A.S.T.M. standard D-5092 "Standard Practice for Design and Installation of Monitoring Wells in Aquifers", with screened intervals limited to ten feet unless otherwise approved by the Department. All monitor wells are to be permanently labeled as to identity and top-of-casing elevation.

7. Within 30 days of any new monitor well installation, a Monitor Well Completion Report, DEP Form 62-522.900(3) shall be completed and submitted.

8. In the event that a monitor well is damaged, a written report describing both the damage and proposed corrective measures shall be submitted to the DEP within 7 days. Approval shall be obtained from the Department prior to repair or replacement of any monitor well.

9. Quarterly ground water sampling and analytical reporting must be in accordance with the following schedule:

Sample Period	**Report Due**

1st Quarter (January - March)	April 28th
2nd Quarter (April - June)	July 28th
3rd Quarter (July - September)	October 28th
4th Quarter (October - December)	January 28th

10. Ground water analysis shall be reported on DEP Form 62-522.900(2), or a facsimile thereof. A copy of the laboratory analysis report is to accompany the completed monitoring report form.

11. Commencing with the first quarter of 1995, Seminole is authorized to discontinue monitoring of compliance wells 2 and 15. However, SECI shall monitor data collected at intermediate wells 7C and 14A to determine if a trend or trends exist indicating that maximum contaminant levels in 62-550, F.A.C., for the parameters listed in Condition III.E.4. may be exceeded at the boundary of the zone of discharge. DEP may require resumption of quarterly monitoring at either well 2 or 15, as appropriate, upon determining that such maximum contaminant level trends are occurring for specific parameters in wells 7C or 14A.

12. An analysis shall be conducted once every 5 years on the effluent(s) which are discharged to ground water via the percolation ponds. The analysis shall be run on a 24-hour flow-proportioned sample for the priority pollutants (excluding pesticides).

13. After the second year of monitoring and periodically thereafter, the Department and the applicant shall review the results of the monitoring program and determine the necessity for modifying or continuing the program.

Table I. Groundwater Monitoring Frequency

	FGD Area Wells 3, 5, 7C, 18, 19, 20		**Coal Pile Area Wells 6, 8, 9, 10, 12, 13A**		**Perc Pond Area Wells 14A, 14C, 16, 17B**	
	Monthly	**Quarterly**	**Monthly**	**Yearly**	**Monthly**	**Quarterly**
Conductance	X	X	X	X	X	X
pH	X	X		X	X	X
Chloride	X	X		X	X	X
Sulfate	X	X		X	X	X
Cadmium		X		X		X
Zinc	X	X		X	X	X
Iron	X	X	X	X	X	X
Copper		X		X		X
Silver		X		X		X
Nickel		X		X		X
Selenium	X	X		X	X	X
Chromium		X		X		X
Beryllium		X		X		X
Mercury	X	X		X	X	X
Lead		X		X		X

Table I. Groundwater Monitoring Frequency						
	FGD Area Wells 3, 5, 7C, 18, 19, 20		Coal Pile Area Wells 6, 8, 9, 10, 12, 13A		Perc Pond Area Wells 14A, 14C, 16, 17B	
	Monthly	Quarterly	Monthly	Yearly	Monthly	Quarterly
Barium		X		X		X
Arsenic	X	X		X	X	X
Gross Alpha		X		X		X

F. Leachate

1. Zone of Discharge

Leachate from the FGD/sludge landfill, coal storage pile, bottom ash sump, percolation and FGD emergency pond shall not contaminate waters of the State (including both surface and groundwaters) in excess of the limitations of Chapter 62-520, F.A.C., beyond the boundary of the site.

2. Corrective Action

When the groundwater monitoring system show a violation of the groundwater water quality standards of Chapter 62-520, the appropriate ponds, FGD landfill, or coal pile shall be sealed, relocated or closed, or the operation of the affected facility shall be altered in such a manner as to assure the Department that no violation of the groundwater standards will occur beyond the boundary of the site.

IV. Control Measures During Construction

A. Stormwater Runoff

During construction and plant operation, necessary measures shall be used to settle, filter, treat or absorb silt containing or pollutant laden stormwater runoff to limit the suspended solids to 50 mg/l or less at the POD during rainfall periods less than the 10-year, 24-your rainfall, and to prevent an increase in turbidity of more than 50 Jackson Turbidity Units above background in waters of the state beyond 150 meters from the POD.

Control measures shall consist at the minimum, of filters, sediment traps, barriers, berms or vegetative planting. Exposed or disturbed soil shall be protected as soon as possible to minimize silt and sediment laden runoff. The pH shall be kept within the range of 6.0 to 8.5 at the POD.

B. Sanitary Wastes

Disposal of sanitary wastes from construction toilet facilities shall be in accordance with applicable regulations of the Department and appropriate local health agency. The sewage treatment plant shall be operated in accordance with Chapters 62-302, 62-601, and 17-602, F.A.C. Plans and specifications for the sewage treatment plant shall be submitted to the Departments St. Johns River Subdistrict Manager for review and approval prior to installation.

C. Environmental Control Program

An environmental control program shall be established under the supervision of a qualified person to assure that all construction activities conform to good environmental practices and the applicable conditions of certification.

The permittee shall notify the Department if unexpected harmful effects or evidence of irreversible environmental damage are detected during construction, shall immediately report to the Department and shall within two weeks provide an analyses of the problem and a plan to eliminate or significantly reduce the harmful effects or damage, and to prevent reoccurrence.

V. Solid Wastes

Solid Wastes resulting from construction or operation shall be disposed of in accordance with the applicable regulations of Chapter 62-701, F.A.C. The permittee shall submit a program for approval outlining the methods to be used in handling and disposal of solid wastes indicating at least methods for erosion control, covering, vegetation, and quality control.

Open burning in connection with land clearing shall be in accordance with Chapter 62-256, F.A.C. No additional permits shall be required, but the Division of Forestry shall be notified prior to burning. Open burning shall not occur if the Division of Forestry has issued a ban on burning due to fire hazard conditions.

VI. Operation Safeguards

The overall design, layout, and operation of the facilities shall be such as to minimize hazards to humans and the environment. Security control measures shall be utilized to prevent exposure of the public to hazardous conditions. The Federal Occupational Safety and Health Standards will be complied with during construction and operation. The Safety Standards specified under Section 440.56, F.S., by the Industrial Safety Section of the Florida Department of Commerce will also be complied with.

VII. Screening

The permittee shall provide screening of the site through the use of aesthetically acceptable structures, vegetated earthen walls and/or existing or planted vegetation.

VIII. Potable Water Supply System

The potable water supply system shall be designed and operated in conformance with Chapters 62-550, 62-551, and 62-560, F.A.C. Information as required in Chapters 62-550, 62-551, 62-555, and 62-560, F.A.C., shall be submitted to the Department prior to construction and operation. The operation of the potable water supply system shall be certified in accordance with Chapters 62-602 and 62-699, F.A.C.

IX. Transformer and Electric Switching Gear

The foundations for transformers, capacitors, and switching gear necessary for Seminole Units 1 and 2 to connect with the existing transmission/distribution system shall be constructed of an impervious material and shall be constructed in such a manner to allow complete collection and recovery of any spills or leakage of oily, toxic, or hazardous substances.

X. Toxic, Deleterious, or Hazardous Materials

The spill of any toxic, deleterious, or hazardous materials shall be reported in the manner specified by Condition XV.

XI. Construction and Emergency Maintenance Activities in Waters of the State

A. No construction on sovereignty submerged lands shall commence without obtaining lease or title from the Trustees of the Internal Improvement Trust Fund.

B. Construction and maintenance of intake and discharge structures should be done in a manner to minimize turbidity. Turbidity screens should be used to prevent turbidity in excess of 29 NTU above background beyond 150 meters from the dredging, pile driving or construction site.

C. Dredging of the intake channel and discharge pipe trench should be performed by hydraulic dredge (small "mudcat" type is suitable): clamshell or other excavating equipment is satisfactory behind cofferdams or other turbidity control devices.

D. All spoil shall be piped hydraulically or trucked to an upland disposal site of sufficient capacity to retain all material. The discharge pipe trench should be refilled with clean sand sized material.

E. Effective stabilization of submerged bottom sediments at the discharge pipe exits should be achieved and maintained during the period of operation by the placement of riprap or other suitable material.

XII. FGD/Sludge Landfill and Coal Pile

SECI is authorized, pursuant to Section 62-701.320(1), F.A.C., to utilize flyash from the Seminole Power Plant and from other coal fired electric generating facilities in the on-site FGD sludge stabilization process.

Adequate geophysical testing of landfill increments 1 and 2 and any subsequent increments shall be conducted in accordance with Chapter 62-701, F.A.C.

The existing and proposed FGD sludge landfill areas shall be monitored and studied pursuant to a detailed groundwater testing and monitoring program as defined in Condition III.E.

The results of the program will be used by the Department in determining whether Seminole has affirmatively demonstrated that Florida Water Quality Standards (62-520, F.A.C.) will not be violated beyond the site boundary.

If the Department determines that Seminole has failed to affirmatively demonstrate that Florida Water Quality Standards (Chapter 62-520, F.A.C.) will not be violated, Seminole shall present to the Department, within 90 days of such determination, a plan of correction, (which may include, if appropriate, an impermeable liner) for review and approval by the Department, and for timely implementation by Seminole.

SECI is granted the authority to dispose of FGD wastes by implementation of microencapsulation and/or macroencapsulation methods as described below:

A. Microencapsulation or fixation of unoxidized FGD waste shall be accomplished by following good engineering practices and applicable environmental standards. The fixated material shall achieve an ultimate permeability of no greater than 7×10^{-7} cm/sec.

B. Macroencapsulation of physically stabilized unoxidized FGD waste shall be accomplished by following good engineering practices and applicable environmental standards. The macroencapsulation cells shall be constructed on an initial bed of fixated material measuring a minimum of 8.0 feet thick and having an ultimate permeability of 7×10^{-7} cm/sec. An open cell design configuration with a gradually

sloped bottom shall be constructed to allow the stabilized FGD material to drain and minimize the potential of developing a hydraulic head. The cell walls and cap shall be constructed of fixated material having an ultimate permeability no greater than 7×10^{-7} cm/sec. The cells shall be filled with physically stabilized FGD material to the full vertical extent and shall be capped with 5.0 feet of fixated material as the cells develop.

C. A quality control program shall insure that the permeability of the fixated FGD material does not exceed prescribed levels. Perimeter berms and/or swales constructed of fixated FGD material may be used to capture and route all runoff from the landfill area to the closed FGD scrubber/wastewater recycling system.

SECI is authorized to continue FGD/Sludge disposal activities in the areas designated as Landfill Increment 1 and Landfill Increment 2 as shown in attached Figure 4, provided:

A. SECI shall provide three sets of the final landfill construction drawings and retention pond design calculations to the Florida Department of Environmental Protection, Siting Coordination Office, for review prior to construction of landfill Increments 1 & 2 shown in attached Figure 4.

B. Prior to finalizing the construction plans for Landfill Increments 1 & 2, SECI shall apply for and receive a binding jurisdictional determination from the Department, which delineates the boundaries of any wetlands adjacent to landfill increments. SECI shall notify the Siting Coordination Office of the submittal of the application for the binding determination and when the determination is granted.

C. If the binding jurisdictional determination required above shows that the proposed construction will occur in wetlands, SECI shall provide the Siting Coordination Office with complete postcertification information regarding the wetland impacts, including a joint application form and detailed drawings of the proposed work. The Department shall have 30 days to review the information for sufficiency and request additional information as needed. If the Department determines that it is necessary, SECI shall provide mitigation to offset the wetland impacts of the project. Once the information is sufficient, the Department shall have 90 days to issue a determination of compliance of the project.

D. With regard to the existing FGD/Sludge landfill and Increments 1 & 2, Seminole may construct the landfill and appurtenant facilities and may dispose of solid waste within 200 feet of any natural or artificial body of water, including wetlands within the jurisdiction of the Department, pursuant to Rule 62-701.300(2)(g).

XIII. Transmission Lines

Directly associated transmission lines shall be constructed and maintained in a manner to minimize environmental impacts in accordance with Chapter 403, F.S.

A. Construction

1. Filling and construction in waters of the State shall be minimized to the extent practicable. No such activities shall take place without obtaining lease or title from the Trustees of the Internal Improvement Trust Fund.

2. Placement of fill in wetland areas shall be minimized by spanning such areas with the maximum transmission lines span practicable.

3. Construction and access roads should avoid wetlands and be located in surrounding uplands. Any fill required in wetlands for construction but not required for maintenance purposes shall be removed and the ground restored to its original contours after transmission line placement.

4. Keyhole fills from upland areas are preferable to a single road and should be oriented as nearly parallel to surface water flow lines as possible.

5. Sufficient culverts shall be placed through fill causeways to maintain sheet flow. The number and locations of such culverts will be determined in the field by consultation with DEP field inspectors.

6. Maintenance roads shall be planted with native species to prevent erosion and subsequent water quality degradation.

7. Construction activities should proceed as much as possible during the dry season.

8. Turbidity control measures, where needed, shall be employed to prevent violation of water quality standards.

9. Good environmental practices as described in *Environmental Criteria for Electric Transmission Systems* as published by the U.S. Department of Interior and the U.S. Department of Agriculture should be followed.

10. Any archaeological sites discovered during construction of the transmission lines shall be disturbed as little as possible and such discovery shall be communicated to the Department of State, Division of Archives, History and Records Management.

B. Maintenance

1. Vegetative removal for maintenance should be carried out in the following manner:

Vegetative clearing operations to be carried out within the corridor should follow the general standards for clearing rights-of-way for overhead transmission lines and follow good environmental practices as described in *Environmental Criteria for Electric Transmission Systems*, as published by the U.S. Department of the Interior and the U.S. Department of Agriculture, thus preserving immature tree species along the peripheries of the right-of-way. These standards define the zone that shall be cleared of all tree growth as the area between structures 10 ft. to either side of the outside conductor. The remainder of the right-of-way from the cleared area to the right-of-way limit shall be screened. This translates to mean that only trees in excess of 10 ft. in height would be removed from the outer zone except where location of the access roads necessitates complete clearing.

2. Approved Chemicals or herbicides may be used for vegetation control along the transmission line without prior approval of the Department.

XIV. Change in Discharge

All discharges or emission authorized herein shall be consistent with the terms and conditions of this certification. The discharge of any pollutant not identified in the application, or any discharge more frequent than, or at a level in excess of that authorized herein, shall constitute a violation of the certification. Any anticipated facility expansions, production increases, or process modification which will result in new, different or increased discharges or expansion in steam generating capacity will require a submission of a new or supplemental application pursuant to Chapter 403, Florida Statutes.

XV. Noncompliance Notification

If, for any reason, the permittee does not comply with or will be unable to comply with any limitation specified in this certification, the permittee shall notify the Director of District Management for the Northeast District of the Department by telephone during the working day during which permittee becomes aware of said noncompliance and shall confirm this situation in writing within seventy-two (72) hours of first becoming aware of such conditions, supplying the following information:

A. A description and cause of noncompliance; and

B. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being take to reduce, eliminate and prevent recurrence of the noncomplying event.

XVI. Facilities Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this certification. Such systems are not to be bypassed without prior department approval, except, during periods of when light oil is used for ignition, the FGD system may be bypassed.

XVII. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact resulting from noncompliance with any limitation specified in this certification, including but not limited to such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying event.

XVIII. Right of Entry

The permittee shall allow the Secretary of the Florida Department of Environmental Protection and/or authorized representatives, upon the presentation of credentials:

A. To enter upon the permittee's premises where an effluent source is located or in which records are required to be kept under the terms and conditions of this permit; and

B. To have access to and copy all records required to be kept under the conditions of this certification; and

C. To inspect and test any monitoring equipment or monitoring method required in this certification and to sample any discharge or pollutants, and

D. To assess any damage to the environment or violation of ambient standards.

XIX. Revocation or Suspension

This certification may be suspended or revoked pursuant to Section 403.512, Florida Statutes, or for violations of any Condition or certification.

XX. Civil and Criminal Liability

This certification does not relieve the permittee from civil or criminal responsibility or liability for noncompliance with any conditions of this certification, applicable rules or regulations of the Department, or Chapter 403, Florida Statutes, or regulations thereunder.

Subject to Section 403.511, Florida Statutes, this certification shall not preclude the institution of any legal action or relieve the permittee from any responsibilities or penalties established pursuant to any other applicable State Statutes or regulations.

XXI. Property Rights

The issuance of this certification does not convey any property rights in either real or personal property tangible or intangible, nor any exclusive privileges, nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations. The applicant will obtain title, lease or right of use form the State of Florida, to any sovereign submerged lands occupied by the plant, transmission line structures, or appurtenant facilities.

XXII. Severability

The provisions of this certification are severable, and if any provision of this certification, or the application of any provision of this certification to any circumstances is held invalid, the application of such provision to other circumstances and the remainder of the certification shall not be affected thereby.

XXIII. Definitions

The meaning of terms used herein shall be governed by the definitions contained in Chapter 403, Florida Statutes, and any regulation adopted pursuant thereto. In the event of any dispute over the meaning of a term used in these general or special conditions which is not defined in such statutes or regulations, such dispute shall be resolved by reference to the most relevant definitions contained in any other state or federal statute or regulation or, in the alternative by the use of the commonly accepted meaning as determined by the Department.

XXIV. Review of Site Certification

The certification shall be final unless revised, revoked or suspended pursuant to law. At least every five years from the date of issuance of this certification or any National Pollutant Discharge Elimination System Permit issued pursuant to the Federal Water Pollution Control Act Amendments of 1972, for the plant units, the Department shall review all monitoring data that has been submitted to it during the preceding five-

year period, for the purposes of determining the extent of the permittee's compliance with the conditions of this certification of the environmental impact of this facility. The Department shall submit the results of its review and recommendations to the permittee. Such review will be repeated at least every five years thereafter.

XXV. Modification of Conditions

The conditions of this certification may be modified in the following manner:

A. The Board hereby delegates to the Secretary the authority to modify, after notice and opportunity for hearing, any conditions pertaining to monitoring, testing and evaluation programs, sampling, groundwater, mixing zones, zones of discharge or variances to water quality standards, or location of transmission line corridors within areas already approved at the land use hearing.

B. This certification shall be automatically modified to conform to any subsequent amendments, modifications, or renewals made by DEP under a federally delegated or approved program to any separately issued Prevention of Significant Deterioration (PSD) permit, Title V Air Permit, or National Pollutant Discharge Elimination System (NPDES) permit for the certified facility. SECI shall send each party to the original certification proceedings (at the party's last known address as shown in the record of such proceeding notice of requests submitted by SECI for modifications or renewals of the above listed permits if the request involves a relief mechanism (e.g., mixing zone, variance, etc.) from state standards, a relaxation of conditions included in the permit due to state permitting requirements, or the inclusion of less restrictive air emission limitations in the air permits. DEP shall notify all parties to the certification proceeding of any intent to modify conditions under this section prior to taking final agency action.

C. All other modifications shall be made in accordance with Section 403.516, Florida Statutes.

XXVI. Rail Car Maintenance Facility

The rail car maintenance and surface coating facility shall be designed, constructed and operated in conformance with Chapters 62-296, 62-25, and 62-302, F.A.C., and the following limitations:

A. Visible Emissions - shall not exceed 20% opacity.

B. VOC Emissions - shall not exceed 38.75 lbs/hr or 11.84 T/year.

C. Particulate Emissions - Unconfined particulate emissions from abrasive blasting shall be controlled as required by Section 62-296.310(3)(c), F.A.C., using the following precautions:

1. The cover and the partial enclosure of the shelter will act as a windbreak to minimize the amount of residual particulate that becomes airborne.

2. Containment screens shall be installed on the northern and southern ends of the shelter.

D. Stormwater Runoff - shall be collected in existing runoff ditches and routed to percolation/evaporation areas on site.

E. Wastewater - There shall be no discharge of wastewater from the maintenance facility site.

F. Sanitary Waste - Shall be disposed of in accordance with the applicable substantive requirements of Chapter 10D-6, F.A.C.

G. Water - The associated drinking water system shall comply with the substantive requirements of Chapters 10D-4, 62-550, and 62-555, F.A.C. Consumptive use of groundwater shall be governed by the nonprocedural provisions of 40C-2.381, F.A.C., and Section 18.0.1, part III, "Applicants Handbook Consumptive Uses of Water."

H. Spent Blast Media - Spent blast media associated with the railcar maintenance facility shall be containerized during storage and subsequently disposed of in the onsite FGD/sludge landfill.

XXVII. Gypsum and Flyash Reuse Facilities

A. Seminole may modify its Flue Gas Desulfurization (FGD) system by introducing an oxidation system to convert sulfite and by installing a chloride bleed system to produce synthetic gypsum for reuse, as long as the emission limitations of condition I.A. are not exceeded. Flyash may be processed for reuse or sale as well.

B. If any wallboard manufacturing facility or other operation that reuses gypsum is to be located within the property currently comprising Seminole's certified site, Seminole shall file a revised site map and legal description excluding from the certified site that area conveyed to the manufacturer or related operation. The revised site map shall also include a depiction of any easements that Seminole conveys to any manufacturer or other operation for that portion of the site which is not conveyed to the manufacturer. Any parcels conveyed for gypsum reuse shall be located within that area generally identified for that purpose in Seminole's April 8, 1999 request. The revised site map shall become effective upon written acknowledgment of receipt by the Department. The owner or operator of any wallboard plant or related facility shall be

responsible for applying for, obtaining and complying with all appropriate permits and for complying with all regulations applicable to its separate activities, including the wallboard plant, and any conveyor used to deliver gypsum from the Seminole plant to the wallboard or other gypsum reuse facility. Those separate facilities and their operations shall not be subject to this Certification and its conditions unless otherwise expressly stated in this Certification.

C. If construction of new facilities occurs within jurisdictional wetlands within Seminole's revised site, Seminole shall submit information to the Department in accordance with the wetland-related provisions of Condition XII above. If the Department determines that it is necessary based upon review of the information submitted, Seminole shall provide mitigation to offset the wetland impacts of those facilities. After the information is submitted, the Department shall have 90 days to issue a determination of compliance of the project with these conditions and applicable regulations.

D. Off-specification gypsum, ash by products, FGD system wastes, and other miscellaneous wastes may continue to be disposed in encapsulation cells at the onsite landfill after conversion of the FGD system is completed, in accordance with Condition XII above. However, by no later than three months before the date on which Seminole expects to commence the production of calcium sulfate (gypsum), Seminole shall submit to the Department a report assessing the required landfill capacity needed for prospective on-site disposal of solid wastes, the manner and location for such disposal, and existing and proposed procedures and actions associated with modifying or terminating usage of existing or future landfill areas. Seminole shall commence implementation of all action items set forth in that report upon written approval by the Department.

E. Seminole has applied to the Department to modify the Plant's separate NPDES permit for approval of the purge stream treatment system associated with the gypsum conversion project in accordance with Section 403.0885, Florida Statutes and Chapter 62-620, F.A.C. All additional effluent limitations, monitoring requirements and other substantive conditions which will be required in the Chapter 62-620, F.A.C., permit shall become new Conditions of Certification pursuant to Condition XXV. The Department will issue any orders needed to revise these conditions to conform to the new or revised conditions of the NPDES permit.

F. If a wallboard manufacturing plant or other gypsum reuse facility is constructed adjacent to the Seminole plant, water may be withdrawn from Seminole's onsite water wells for those activities as authorized by a consumptive use permit issued by the St. Johns River Water Management District to the wallboard plant or other gypsum reuse facility. However, this water shall not be used for electric power production purposes.

History Notes

Certification Issued 09/18/79; signed by Governor Graham
Modified 10/12/88; signed by Secretary Twachtmann
Modified 03/26/91; signed by Secretary Browner
Modified 10/14/92; signed by Secretary Browner
Modified 11/25/92; signed by Secretary Browner
Modified 03/02/95; signed by Secretary Wetherell
Modified 05/12/97; signed by Secretary Wetherell
Modified 02/01/00; signed by Deputy Secretary Green
Modified 04/03/00, signed by Deputy Secretary Green
Modified 07/05/05; signed by Siting Administrator Oven

Table 1 Groundwater Monitoring Frequency

	FGD Area Wells 3, 5, 7C, 18, 19, 20		Coal Pile Area Wells 6, 8, 9, 10, 12, 13A		Perc Pond Area Wells 14A, 14C, 16, 17B	
	Monthly	Quarterly	Monthly	Yearly	Monthly	Quarterly
Conductance	X	X	X	X	X	X
pH	X	X		X	X	X
Chloride	X	X		X	X	X
Sulfate	X	X		X	X	X
Cadmium		X		X		X
Zinc	X	X		X	X	X
Iron	X	X	X	X	X	X
Copper		X		X		X
Silver		X		X		X
Nickel		X		X		X
Selenium	X	X		X	X	X
Chromium		X		X		X
Beryllium		X		X		X
Mercury	X	X		X	X	X
Lead		X		X		X

Barium		X		X		X
Arsenic	X	X		X	X	X
Gross Alpha		X		X		X

Figure 1 Location of Ambient Air Quality Monitoring Stations

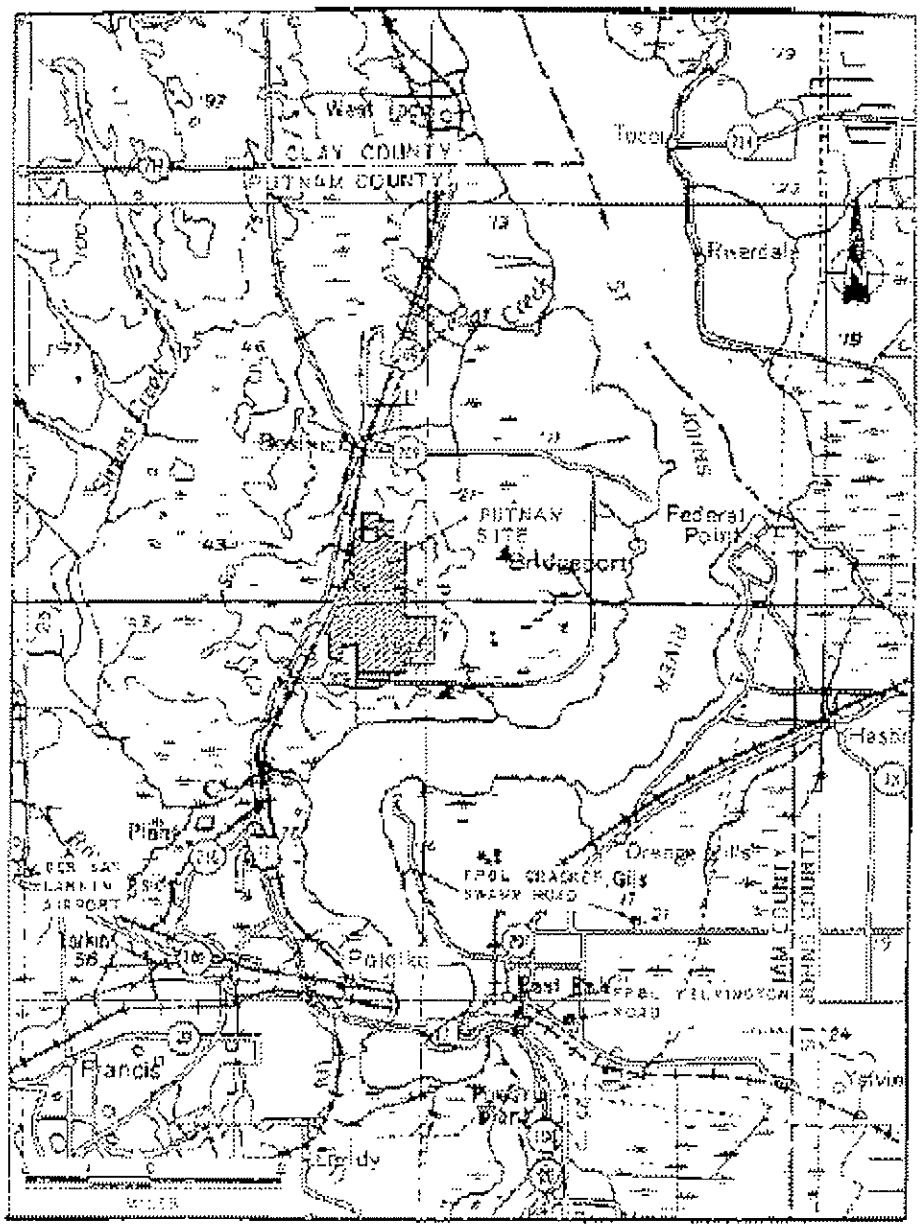
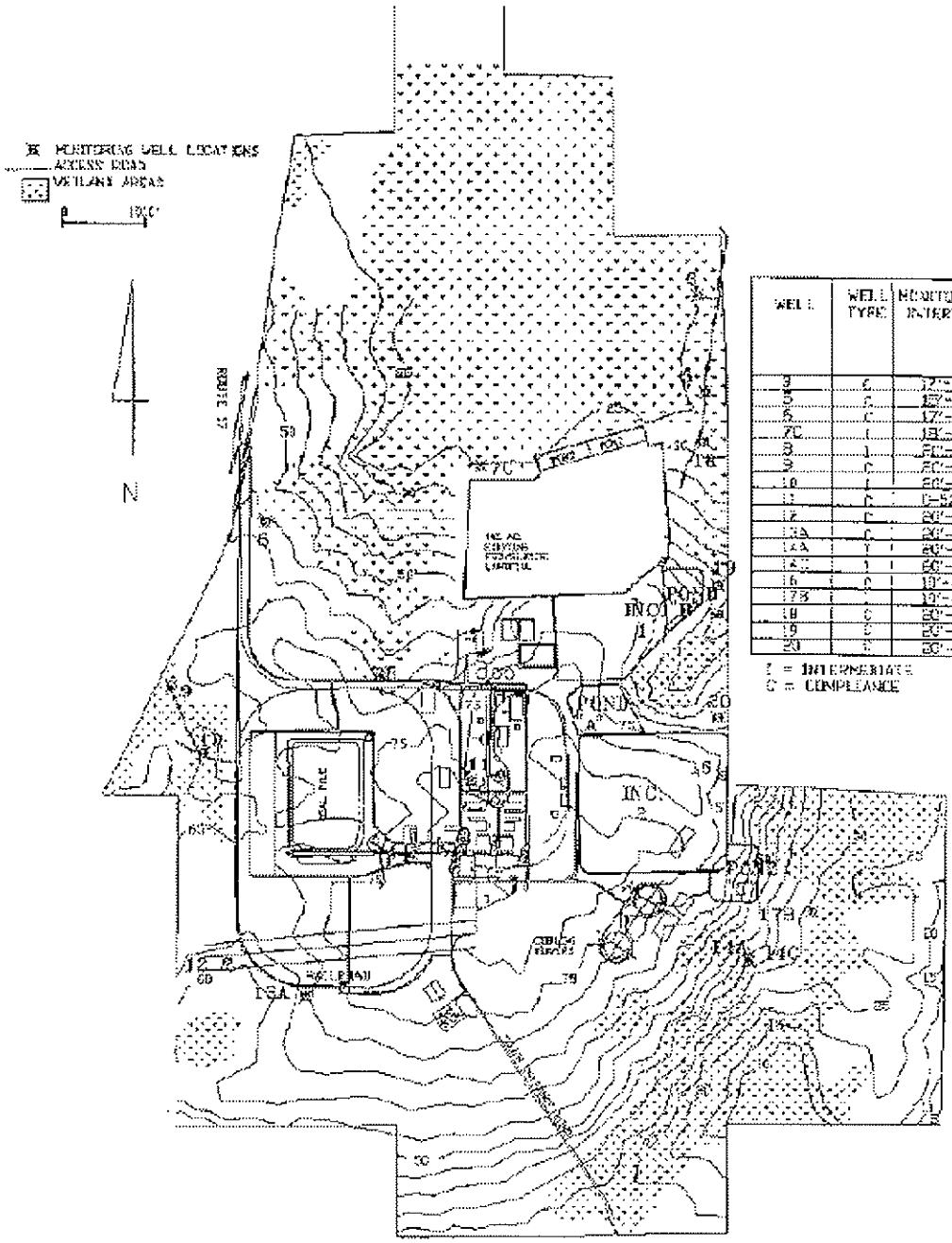
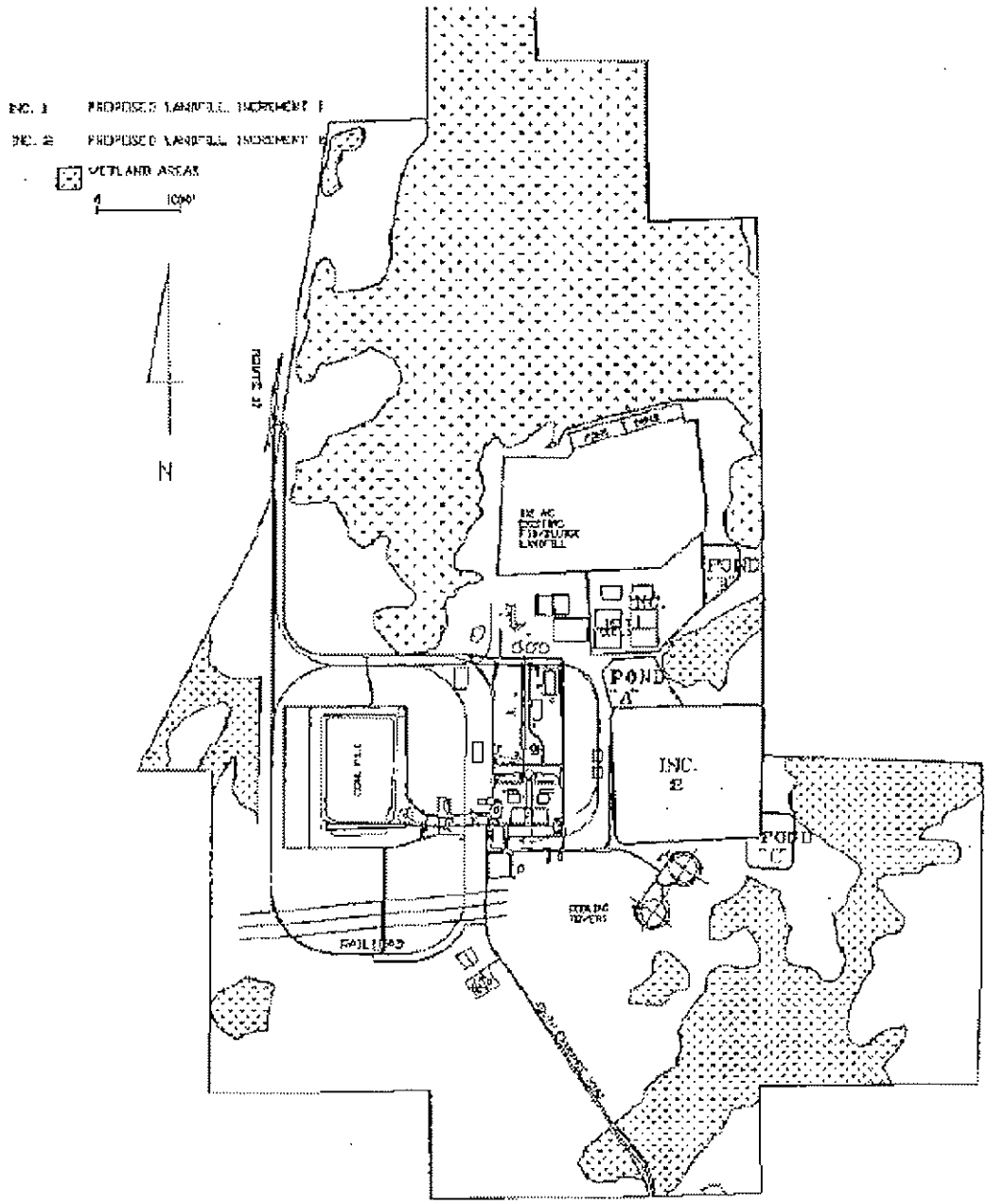


Figure 1. Location of Ambient Air Quality Monitoring Stations.



WELL	WELL TYPE	MONITORED INTERVAL
3	C	12'-32'
5	C	15'-35'
6	C	17'-37'
7C	I	18'-38'
8	I	20'-40'
9	C	20'-40'
10	I	20'-40'
11	C	0'-520'
12	C	20'-40'
13A	C	20'-40'
14A	I	20'-40'
15	I	20'-80'
16	C	10'-40'
17S	I	10'-40'
18	C	20'-40'
19	C	20'-40'
20	C	20'-40'

I = INTERMEDIATE
C = COMPLIANCE


INC. 1 PROPOSED LANDFILL INCREMENT 1
INC. 2 PROPOSED LANDFILL INCREMENT 2
WETLAND AREAS
1 1000'
N
ROUTE 31
POND
POND A
INC. 2
POND C
RAILROAD

10.4.2 Hazardous Waste ID/Management Plan

The EPA Federal ID #FLD 000 772 194 which authorizes the shipping and transportation of hazardous wastes from the SGS. Seminole currently manages hazardous waste in accordance with a Hazardous Waste Management Plan. The Hazardous Waste Management Plan is a component of the facility Integrated Contingency Plan and addresses RCRA (40 CFR 265, subpart D); SPCC(40 CFR 112); Community Right-To-Know (40 CFR 355) and OSHA requirements for emergency response management(29 CFR 1910.38(a), 1910.119, and 1910.120).

The procedures which address waste, hazardous waste, universal waste and waste minimization that are applicable to the SGS Unit 3 project are attached.

FLD 000 772 194

NOV. 11, 1980

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EPA

ACKNOWLEDGEMENT OF NOTIFICATION OF HAZARDOUS WASTE ACTIVITY

ED NOV 11 '80

This is to acknowledge that you have filed a Notification of Hazardous Waste Activity for the installation located at the address shown in the box below to comply with Section 3010 of the Resource Conservation and Recovery Act (RCRA). Your EPA Identification Number for that installation appears in the box below. The EPA Identification Number must be included on all shipping manifests for transporting hazardous wastes; on all Annual Reports that generators of hazardous waste, and owners and operators of hazardous waste treatment, storage and disposal facilities must file with EPA; on all applications for a Federal Hazardous Waste Permit, and other hazardous waste management reports and documents required under Subtitle C of RCRA.

EPA I.D. NUMBER ➤ FLD000772194

INSTALLATION ADDRESS ➤ SEMINOLE POWER PLANT UNITS 1 AND 2
PO BOX 1576
PALATKA FL 32077

STATE RT 17
PALATKA FL 32077

EPA Form 8700-12A (4-80)

1.0 INTENT

Seminole Electric is regulated by both State and Federal agencies with regard to all waste generated on site. Waste management and disposal is an environmental priority.

2.0 PURPOSE

The purpose of this Plant Practice is to provide a general guideline for disposal of waste products at the Seminole Generating Station.

It is impractical to list every combination of waste that is regulated in this practice since some substances require chemical analysis to determine method of disposal. General methods of disposal are described in the Practice. However, any questions regarding proper waste disposal should be directed to the Environmental Compliance Department.

3.0 SCOPE

This practice applies to all Seminole employees and contractors.

4.0 RESPONSIBILITIES

Environmental Compliance Department

It is the responsibility of the Plant Environmental Compliance Department to provide information on the proper handling and disposal of waste generated on site, and to arrange for final disposal of most non-hazardous and hazardous wastes. Additionally, the Environmental Compliance Department is responsible for regulatory support and routine reporting associated with waste generated on the site.

Plant Shift Supervisor

It is the responsibility of the Plant Shift Supervisor to monitor overall plant operations and to ensure that these activities remain in compliance with good Solid Waste Management practices.

Security

It is the responsibility of the Plant Supervisor and Security personnel to observe and report suspicious activities occurring on the Plant Site which are not in keeping with proper waste handling and storage procedures. Additionally, they are responsible for monitoring the gate and perimeter at the Waste Management Facility and assuring that this area remains locked at all times.

Security personnel are to check vehicles leaving the Plant Site with waste and verify that proper channels have been followed to transport the waste off site.

All Employees

It is the responsibility of every individual who generates any waste material to properly handle and promptly dispose of or transfer the waste to the Lube Crew for processing/disposal. At no time are waste to be left at the Lube Crew Building or Solid Waste areas without properly notifying the Lube Crew. Employees observing questionable disposal practices shall report same to their supervisor or the Environmental Compliance Department.

Outage work often presents new waste streams to be considered for disposal. It is important to notify the Environmental Compliance Department before the work begins for disposal guidance of the waste to be generated. Samples may need to be collected from these non-routine/new waste streams and analyzed prior to actual disposal of the waste. Sampling should be performed in advance, if possible, as it often takes 14 days for analyses results to be received. Sampling in advance prevents work delays and handling the waste twice before actual disposal.

5.0 PRACTICE

Most types of waste generated on the site will be in the following categories. Included are proper methods of disposal.

1. Scrap Metals

Scrap metal shall be placed in the dumpsters provided for proper recycling of

these materials. The designated locations for these dumpsters are at the Unit 1 and Unit 2 bottom ash dewatering areas. If alternate or additional scrap metal dumpsters are needed, the Environmental Compliance Department must approve the new site prior to placing the dumpster. Scrap metal should be placed in these dumpsters only after any excess oil and grease have been removed. The Waste Management Facility also has a covered scrap metal dumpster for storage of scrap metal generated from empty 55 gallon drums and other waste containers awaiting recycling.

2. "Normal" Household Garbage

Household type garbage (ex. paper, food, etc.) shall be placed in trash receptacles or dumpsters placed around the plant for this purpose. The covers located on these dumpsters must remain in the closed position unless wastes are currently being added to the dumpster.

Note: 1) Empty containers of cleaning agents, bleach, floor wax, etc. may be placed in these receptacles as well. Empty is defined as no free liquid.

3. Degreasers, Cleaning Solvents, Etc.

Individuals involved in plant site activities such as degreasing, cleaning, etc. that require the use of materials that can become a hazardous waste shall make every effort to prevent the disposal of usable products. Partial containers should be properly stored for use at a later date. The citrus based degreaser *C-Solv* is preferred for use since waste generated from this degreaser is not hazardous and can be placed in a used oil drum.

When it is necessary to dispose of spent or contaminated wastes from these activities, packaging of this hazardous waste should be in the empty container from which the material originated. If this is not possible, contact the Environmental Compliance Department for direction on proper packaging prior to disposal. Once the waste has been packaged, contact the Environmental Compliance Department for a hazardous waste container label. Additionally, use a permanent marker to label the container with the following information: date,

employees name, drum contents, scope and location of work. Contact the Lube Crew for placement of the waste into the Waste Management Facility. The Lube Crew will not pick up waste containers/drums that have improper or incomplete labels or are improperly packed. The Lube Crew will notify the responsible party of drum labeling deficiencies when found.

New materials are constantly being added to the inventory or purchased for use on specific jobs. Any new product intended for use at the Plant Site must be approved through the Pre-Purchase Approval Plant Practice 5001.54.

A partial list of cleaning agents which produce hazardous wastes are:

Freon
Mineral Spirits
1,1,1, Trichloroethane
Acetone
Methyl ethyl ketone (MEK)
Trichloroethylene
Tetrachloroethylene

4. Petroleum Naphtha (Mineral Spirits) in Parts Cleaners

Petroleum Naphtha used in the parts cleaners is classified as hazardous waste. This material must remain in the parts cleaners and is only removed by the designated recycling contractor. Parts cleaner lids are to remain closed when not in use.

5. Used Oils

Used oils are disposed of in drums that are labeled for this purpose. Contents of these drums are composited into the Used Oil Storage Tanks located at the Waste Management Facility. When one of these tanks become full it is tagged out of service and analyzed for SECI documentation prior to arranging for recycling with our used oil recycling contractor.

6. Waste Grease

Waste grease should be placed into 55 gallon package drums. Keep the outside of

the containers or drums clean by using oversized plastic trash bags inside the drum with excess folded over the outside of the drum. Contact the Lube Crew for disposal.

7. Used Oil Filters

Used oil filters are to be placed in a 55 gal package drum labeled for this purpose and the Lube Crew contacted for processing prior to recycling. If quantities do not warrant use of a package drum, place filters in a labeled 5 gallon bucket with lid attached.

8. Lab Wastes

The Plant Chemist, after consultation with Plant Environmental Compliance Department, is responsible for proper storage of all hazardous waste generated in the lab. These waste will be entered into the Chem Lab Satellite Hazardous Waste Accumulation Point (SHWAP) until quantities warrant a waste shipment. This SHWAP is located on the exterior east wall of the demineralizer room and is checked weekly by the Environmental Compliance Department for proper container storage. The Plant Chemist will furnish the Environmental Compliance Department with an updated list of wastes stored in this location upon request.

9. Waste of Unknown Origin

Any waste whose source is unknown must be treated as a hazardous waste until it is identified. Notify the Environmental Compliance Department Upon discovery of any unknown wastes.

10. Waste Batteries

Wet cell waste batteries shall be disposed of through a recycling contractor at the direction of the Environmental Compliance Department. Any individual requiring disposal of waste batteries (other than "household" type batteries) shall contact the Lube Crew for pick up. The Environmental Compliance Department will then identify the composition of the battery and arrange for proper disposal.

11. Used Antifreeze

Used antifreeze shall be placed in 55 gallon drums which are marked specifically for this purpose. Antifreeze is shipped off site for recycling. Contact the Lube Crew for pick up.

12. Used Pallets and Scrap Wood

All used pallets and scrap wood should be disposed of at the scrap wood dumpster located by the warehouse south entrance road.

13. Used Rags

55 gallon drums with fireproof lids will be placed at each of the collection points listed in attachment "A"for collection of **ALL** rags utilized on plant site. Signs and drum labeling will be used to identify the Used Rag disposal drums from other drums on site.

The Lube Crew will check each Used Rag collection point daily to pick up full drums and to provide new drums as needed. These drums will be issued from the Lube Crew with Hazardous Waste labels identifying the contents as used rags.

14. Paint Related Materials

Every effort shall be made to utilize the entire contents of these product containers as most paint related materials will be considered hazardous wastes when discarded. Thinners should be reused and stored properly until exhaustion. Paint related material containers are only considered "empty" for disposal purposes when there is less than 1" of residue left in the bottom of the container. All empty and partial containers should be sent to the Waste Management Facility for disposal.

15. EHC Fluid

Most used EHC Fluid is eligible for a vendor buy back program dependent upon the quality of the material. Each drum is sampled and sent off for analysis to

determine the eligibility for buy back. Therefore, used EHC fluid should be placed back into an empty EHC drum or a new closed head package drum to minimize exposure to contaminants. Spills and/or leaks of EHC fluid which necessitate the use of drisorb or absorbent mats shall be placed in a package drum for disposal.

16. Aerosols

A 55 gallon drum with fireproof lid will be placed at each of the collection points listed in attachment "A"for the collection of ALL waste aerosol cans. Signs and drum labeling will be used to identify the aerosol can drums from other drums on site.

This drum will be labeled Aerosol Cans for Recycling. All aerosol cans, empty, full or partially filled, shall be placed in this drum and sent to the Waste Management Facility for puncturing prior to recycling. The can cap and nozzle shall be removed from the can prior to placing into the recycling drum. Because the contents drained from punctured aerosol cans will be collected and shipped as Hazardous Waste; it is imperative all aerosol cans be utilized until the contents have been exhausted in order to minimize the quantity of waste generated. Therefore, only those partial or full cans which experience a malfunction and are unable to be completely discharged shall be placed in the aerosol can recycling drum.

The Lube Crew will check each Aerosol Recycling collection point daily to pick up full drums and to provide new drums as needed. These drums will be issued from the Lube Crew with labels identifying the contents as Aerosol Cans for Recycling.

17. Propane Cylinders

Empty, non-refillable propane cylinders shall be sent to the Waste Management Facility for proper disposal. Place cylinders in a labeled 5 gallon bucket with lid attached.

18. Tires

All used tires should be routed to the Waste Management Facility with the exception of heavy equipment tires which should be routed to the Coal Yard.

19. Spent Blast Media

Spent bead blast media generated from the bead blast machine located at the maintenance shop lean-to shall be placed into a package drum and labeled as such. Upon completely filling the drum, the Lube Crew shall be notified to transport the drum to the Waste Management Facility.

Spent "black beauty" generated from blasting operations shall be stored in package drums or , if large quantities are generated, placed in a covered dumpster designated for that use or stored on visquene and covered with visquene. Notify the Environmental Compliance Department of the generation of the spent waste and its location so it can be sampled if required.

Spent Aluminum oxide used during turbine outages shall be placed into a package drum and labeled as such. Upon completely filling the drum, notify the Environmental Compliance Department of the generation of the spent waste and its location so it can be sampled if required. The Lube Crew shall be notified to transport the drum to the Waste Management Facility.

20. Use of "Overpack" Drums

The overpack 85 gallon drums are to be used exclusively to "overpack" damaged or leaking drums. No material shall be placed in these drums loose.

21. Onsite Landfill Disposal

Some sludges generated on site are encapsulated at the EPF landfill after analysis indicates it is non-hazardous. Examples of these sludges include cooling tower, percolation pond, equalization basin and sump sludges. Spent sand blast media is also placed in the EPF landfill after analysis indicates it is non-hazardous. In order for the wastes to be land filled at the EPF a SECI Solid Waste Disposal

Approval Log (blank forms located in administration building forms box) will need to be completed by the requestor and forwarded to the Environmental Compliance Department for approval and finally, accompany the waste when it is delivered to the EPF. The form should be submitted to the Shift Supervisor at the EPF so exact location for waste disposal can be given.

22. Other Wastes

Directions for disposal of other wastes generated at the Plant Site should be obtained from the Environmental Compliance Department.

23. Packaging of Wastes

Wastes shall be properly packaged in either a 5 gallon pail or a 55 gallon package drum with the lid attached. Containers shall be in good shape with no rust or dents. Packaging shall be compatible with the substance being packaged and no residue shall be left on the exterior of the container. Chemical resistant package drum liners are available from warehouse stock and Lube Crew. Aggressive fluids/substances (ex. sulfuric acid and neutralized ferrous chloride) shall be placed in drums with liners; drums containing aggressive chemicals should be transported to the Waste Management Facility promptly so disposal can be scheduled in a timely manner. The containers shall be labeled in the following manner: Date, Name of employee packaging the waste, drum contents, location and scope of work. All information shall be labeled with a permanent marker. Again, the Lube Crew will not pick up waste containers/drums that have improper or incomplete labels or are improperly packed.

All questions pertaining to proper packaging shall be directed to the Environmental Compliance Department prior to packaging.

24. Waste Minimization/Absorption

Waste minimization is the responsibility of all SECI employees. If a medium (Drisorb) is used to absorb a spill/leak, use only the amount required to absorb the fluid. The preferred absorbent for most spills is Drisorb or Magicsorb. Some larger spills may require the use of limestone; contact the Environmental

Compliance Department for guidance because the disposal costs associated with limestone wastes are generally higher. The following are available from warehouse stock:

Drisorb – To be used for all non-aggressive fluids.

Magicsorb – To be used for aggressive fluids such as acids, caustics, sodium hypochlorite, ferrous chloride etc.

Attachment A:

Collection Points for Used Rag Drums:

Warehouse, Effluent Processing Facility, Effluent Processing Facility oil shed, Support Systems oil storage shed, Maintenance Contractor's shop, Contract Maintenance oil shed, Contract Maintenance Fiberglass shop, Coal Yard, Contract Maintenance Coal Yard shop, Green Maintenance building, Central Maintenance shop, Electric/I&C shop, Unit 1 and Unit 2 bottom ash hoppers, Railcar Maintenance, Wastewater/Pretreatment and Waste Management Facility, Parts Cleaner Machines at Central Maintenance, Substation building, Lube Crew building, Unit 1 and Unit 2 FGD modules.

Collection Points for Aerosol Can Drums:

Warehouse, Effluent Processing Facility, Support Systems oil storage shed, Maintenance Contractor's shop, Contract Maintenance oil shed, Contract Maintenance Fiberglass shop, Coal Yard, Contract Maintenance Coal Yard shop, Green Maintenance building, Central Maintenance shop, Electric/I&C shop, Unit 1 and Unit 2 bottom ash hoppers, Railcar Maintenance, Wastewater/Pretreatment and Waste Management Facility, Substation building, Unit 1 and Unit 2 FGD modules.

1.0 PURPOSE

The purpose of this Practice is to comply with Code of Federal Regulations 40 CFR 273 and Florida Administrative Code (FAC) 62-730 and 62-737 which are applicable to Seminole Generating Station. The "Universal Waste Rule" was implemented by EPA and the State of Florida primarily to promote recycling of various batteries and mercury containing lamps and devices. 40 CFR 273 outlines requirements for waste batteries and mercury lamps and thermostats. FAC 62-730 adopts the Federal "Universal Waste Rule" (40 CFR 273) in its entirety. FAC 62-737 specifically describes requirements for spent mercury containing lamps and devices destined for recycling.

SGS is considered a small quantity handler of universal wastes. The regulation requires steps to be taken to minimize the possibility of these wastes entering the environment. Such steps include properly identifying the waste so that it can be correctly managed, storing the waste in a closed container that is structurally sound and ensuring the waste is compatible with the storage container. Immediate steps must be taken to remedy any container which shows evidence of leaking, spillage, or damage. Emergency clean up supplies found in the SGS warehouse include neutralizing absorbent material and neutralizing spill pads for battery acid spills and a mercury clean up kit for containing liquid mercury and mercury vapors released from a broken mercury containing device or lamp.

2.0 SCOPE

This practice applies to all SGS employees and contractors.

3.0 RESPONSIBILITIES

3.1 **Environmental Compliance Department:** It is the responsibility of the Plant Environmental Compliance Department to provide information on the proper handling of universal wastes generated on site and to arrange for pick up and recycling of these wastes.

3.2 **Plant Shift Supervisor:** It is the responsibility of the Plant Shift Supervisor to monitor overall plant operations and maintenance to ensure these activities remain in compliance with sound waste management practices.

3.3 **Plant Security Department:** It is the responsibility of the plant security department to monitor the gate and perimeter of the Waste Management Facility and assuring this area remains locked at all times.

3.4 **Lube Crew:** It is the responsibility of the Lube Crew to receive universal wastes, ensure proper storage and keep adequate records to track the time they are stored at SGS and when they are transferred to the recycling vendor. It is also the responsibility of the Lube Crew to furnish the Environmental Compliance Department with a completed "Universal Waste Inventory" form on the first work day of each month.

3.5 **All Employees:** It is the responsibility of all employees to ensure that waste batteries and mercury containing lamps and devices are routed to the Waste Management Facility for storage until transportation to a licensed recycling center occurs. All wastes must be packaged so as to minimize the chance of breakage or spillage. At no time are wastes to be left at the Lube Crew Area or Waste Management Facility without properly notifying the Lube Crew.

4.0 PRACTICE

The following Universal Wastes are generated at SGS

4.1 **Waste Batteries**

Waste batteries considered universal waste are nickel-cadmium (ni-cad) and sealed lead acid batteries. These batteries are typically generated from electronic equipment, mobile telephones, portable computers and emergency back up lighting. Upon becoming a waste, batteries should be sealed in a plastic Ziploc bag. The exterior of the bag should be labeled with the generators name, date, the type and quantity of batteries contained in the bag. Once properly bagged and labeled these batteries shall be transferred to the Lube Crew. Car batteries should be transferred to the Lube Crew intact. If the battery is cracked, it should be placed in a plastic bucket with neutralizing absorbent and a tightly secured lid.

4.2 **Mercury Containing Lamps**

Mercury containing lamps considered universal wastes are fluorescent lamps, mercury vapor lamps, metal halide lamps and sodium vapor lamps. Lamps should be carefully placed back into the original shipment box and the exterior of the box should be labeled with the date, type and quantity of lamps contained in the box. Once properly boxed and labeled these lamps shall be transferred to the Lube Crew.

4.3 **Mercury Containing Devices & Equipment**

Mercury containing devices and equipment that are considered to be Universal Wastes are thermostats, mercury switches and relays, thermometers, manometers, barometers or ampoules removed from lamps or these devices. Upon becoming a waste, any mercury containing device should be sealed in a plastic Ziploc bag. The exterior of the bag should be labeled with the generators name, the date, type and quantity of devices contained in the bag. Once properly bagged and labeled these devices shall be transferred to the Lube Crew.

4.4 **Other**

Questions concerning recycling of other types of batteries, lamps or devices should be directed to the Environmental Compliance Department.

INTENT:

Seminole Electric is regulated by both State and Federal agencies with regard to waste generated on site. Solid waste minimization is an environmental priority.

PURPOSE

This practice is written to provide a comprehensive overview of the waste minimization practices at the Seminole Electric Generating Station. This practice includes efforts to reduce the volume and toxicity of wastes generated at Seminole Generating Station (SGS) and address treatment and disposal options, recycling efforts and storage methods. SGS is a Large quantity Generator of Hazardous Waste and a Small Quantity Handler of Universal Wastes. These wastes are managed in accordance with the applicable State and Federal rules.

SCOPE

This practice applies to all Seminole Employees and Contractors working at SGS.

RESPONSIBILITIES

Environmental Department

It is the responsibility of the Plant Environmental Department to provide guidelines to plant employees and contractors by

- using the pre-purchase/pre-service approval practice to limit hazardous materials used on plant site
- providing guidance for proper handling and disposal of waste generated on site
- to arrange for the recycling of specific wastes or waste products to a permitted facility
- to arrange for the final disposal of hazardous and non-hazardous wastes to a permitted facility.

Plant Shift Supervisor

It is the responsibility of the Plant Shift Supervisor to monitor overall plant operations and to ensure that these activities remain in compliance with good Solid Waste Management practices.

Supervision

It is the responsibility of the plant supervisors to observe and report suspicious activities occurring on the Plant Site which are not in keeping with proper waste handling and storage procedures..

Security

Security personnel are to check vehicles leaving the Plant Site with waste and verify appropriate approvals have been obtained to allow transport of waste offsite. Additionally, they are responsible for monitoring the gate and perimeter at the Waste Management Facility and assuring that this area remains locked at all times.

All Employees

It is the responsibility of all employees to assist with solid waste minimization from the time an item is approved for purchase, through its use and storage, and ultimately transferring to the Lube Crew for ultimate recycling or disposal. It is the responsibility of every individual who generates any waste material to properly clean up, containerize, label , handle and promptly transfer the waste to the Lube Crew for processing/disposal. At no time are wastes to be left at the Lube Crew Building or Solid Waste areas without properly notifying the Lube Crew. Employees observing questionable disposal practices shall report same to their supervisor or the Environmental Department.

PRACTICE

1. Reduction of Waste Volume

? When hazardous wastes are identified, efforts are made to reduce the volume of waste generated by means of waste segregation. The component producing the hazardous waste is segregated so as not to contaminate additional waste with the hazardous waste.

? Laboratory chemicals are purchased in the smallest practicable size to ensure usage prior to expiration.

? Product substitution for absorbents, rags and wipers. Better absorbing properties result in less absorbent rags and wipers to be used.

? When painting activities occur, employees are encouraged to use the paint product in its entirety so as not to produce a waste.

2. Reduction of the Toxicity of Wastes

? Chemical products used on site are evaluated through a pre-purchase approval. All new products, including in-town purchases, will be evaluated by the Plant Safety Department and the Plant Environmental Department through the use of the Pre-Purchase Approval Request Form. Selection is made based on performance of the product and the potential for the product to produce a hazardous waste. Product substitution is used whenever possible, to eliminate the generation of a hazardous waste.

? Restricting the use of products which are expected to produce a hazardous waste. Products that will produce a known hazardous waste are limited for use to specific groups with specific needs. The warehouse enforces the practice through the issue counter.

3. Recycling Practices

? SGS recycles the following materials:

1. Antifreeze
2. Scrap Metal
3. Circuit Boards
4. Batteries – lead acid and nickel cadmium
5. Aerosol cans – Aerosol cans are depressurized and the residuals collected for disposal. The cans are then sent as scrap metal.
6. Propane Cylinders – Hand held propane cylinders are depressurized through a filter and the cans are then sent as scrap metal.
7. Fluorescent lamps, mercury vapor lamps, metal halide lamps and sodium vapor lamps

8. Mercury thermostats, electric mercury switches and relays, thermometers, manometers, or ampoules removed from lamps or these devices.
9. Used oil filters
10. Parts Washer Fluid – Petroleum naptha recycle for re-use
11. Cathode Ray Tubes (CRT)
12. Electronic Equipment

4. Energy Recovery Practices

? SGS sends the following non-hazardous wastes for energy recovery:

1. Used oil
2. Petroleum contaminated absorbents, mats and soil

5. Packaging, Labeling and Storing Wastes at SGS

? Packaging Wastes

Wastes shall be properly packaged in either a 5 gallon pail or a 55 gallon package drum with the lid attached. Containers shall be in good shape with no rust or dents. Packaging shall be compatible with the substance being packaged and no residue shall be left on the exterior of the container. Chemical resistant package drum liners are available from warehouse stock and the Lube Crew. Aggressive fluids/substances shall be placed in drums with liners; drums containing aggressive chemicals should be transported to the Waste Management Facility promptly so disposal can be scheduled in a timely manner.

? Labeling Wastes

The containers shall be labeled in the following manner: Date, name of employee packaging the waste, drum contents, location and scope of work. All information shall be labeled with a permanent marker. All hazardous waste shall be labeled with the words "hazardous waste."

? Storing Wastes

All wastes generated at SGS will be routed to the onsite Waste Management Facility to be stored until recycling or disposal occurs. Hazardous wastes are

stored inside a building located in this area until transferred to permitted contractor for transportation and disposal.

6. Onsite Waste Management Facility

? This facility includes the following activities:

1. 90 day storage area
2. Bulk used oil tanks
3. Aerosol depressurizing stations
4. Drum compacting and drum crushing station
5. Covered scrap metal dumpster
6. Enclosed and open waste storage areas

? A Drum Tracking Log and Container Storage Checklist for Generators will be completed and forwarded weekly to the Environmental Department. The tracking log reflects the number of drums/cans received that week, as well as contents of each drum/can. The storage checklists will also contain a certification section for the proper use and management of all hazardous and non-hazardous containers and requests a drum/container count for all hazardous wastes. The Environmental Department will respond by assigning a profile number or disposal route for all drums/containers. It is the responsibility of the Lube Crew Technician to assure the assigned profile numbers are placed on the appropriate drum/can. Once this is complete, the profiled drums/cans shall be placed in their designated area according to the assigned profile number. Profiled drums will remain at the Waste Management Facility until the Environmental Department notifies the Lube Crew Technician of contractor pick up date.

7. Training

? Employees are trained in emergency response practices. Employees are to report all spills/leaks as soon as they are found to the Unit 1 CRO who initiates an emergency response team. Immediate actions are then implemented to minimize further contamination.

? Employees are also trained in applicable sections of RCRA and the Hazardous

Communication Standard by using a combination of on and off site resources.

1.0 INTENT

Seminole Electric Cooperative, Inc. (SECI) is regulated by both State and Federal agencies with regard to pollution prevention. Pollution prevention involves air, water, and solid waste issues. Pollution prevention is a high SECI Corporate priority.

2.0 PURPOSE

This practice is written to provide a guideline for pollution prevention at the Seminole Electric Generating Station.

3.0 SCOPE

This practice applies to all Seminole Electric employees and contractors.

4.0 RESPONSIBILITIES

4.1 Environmental

It is the responsibility of the Plant Environmental Engineer to provide information on pollution prevention. This information includes training on the Integrated Contingency Plan, the Storm Water Pollution Prevention Plan, and the NPDES BMP3 Plan. Additionally, the Environmental Affairs Department is responsible for regulatory support and preparation of the above referenced plans.

4.2 All Employees

It is the responsibility of all employees to assist with pollution prevention from the time an item is requested for purchase, through its use, and disposal.

5.0 PRACTICE

5.1 Materials/substances being considered for purchase for any use by any department or contractor are subject to Plant Practice 5001.54, the Pre-Purchase Hazard Review of New Products/Substances. This practice is used to identify (prior to purchase) those materials which have health or physical hazards; alternative

products which may be less hazardous; identifying intended users and locations of storage and use; establishing control responsibilities for those items which are necessary for plant operations.

5.2 Pollution prevention includes several categories of activity. These include good housekeeping, preventive maintenance, visual inspections, spill prevention, sediment and erosion control, control of storm water runoff, fugitive emissions, and dust control. Many of these activities are covered under various plant practices and details should be reviewed in those plant practices.

5.2.1 Good Housekeeping includes:

5.2.1.1 Placing scrap metals in designated scrap metal dumpsters

5.2.1.2 Placing household garbage in trash receptacles or dumpsters designated for trash only

5.2.1.3 Returning painting materials, degreasers and solvents back into original containers for reuse, if possible. Unusable materials are returned to the Lube Crew for classification and/or storage in the Waste Management Facility.

5.2.1.4 Used oils are collected in satellite drums located throughout the plant site. These drums are labeled as "Used Oil." The drum contents are consolidated into the Used Oil Storage Tanks and after testing confirms specifications are met, the oil is recycled for energy recovery. Any oil that tests as hazardous waste is handled in accordance with the Hazardous Waste Management Plan.

5.2.1.5 Waste greases are placed into labeled 55 gallon drums and are deposited with the Lube Crew and are transported to the Waste Management Facility.

5.2.1.6 Used oil filters are placed in containers labeled as "used oil filters."

5.2.1.7 Lab wastes are stored in the lab's satellite hazardous waste accumulation point before disposal.

5.2.1.8 Unknown waste is segregated and handled in accordance with the Hazardous Waste Management Plan until tested and is then disposed of properly.

5.2.1.9 Waste batteries are collected and stored in the Waste Management Facility until sufficient quantities are available for pick up by a licensed contractor.

5.2.1.10 Waste antifreeze is placed in labeled 55 gallon drums and stored in the Waste Management Facility prior to shipment off site for recycling.

5.2.1.11 Over pack drums are used to package damaged or leaking drums as required.

5.2.1.12 Other wastes are packaged in 5 gallon pails, 55 gallon package drums, or 55 gallon closed head drums and labeled with information such as the description of the material and the name of the personnel packaging the wastes, location of the source of the waste, and the type of work that produced the waste.

5.2.1.13 Aggressive fluids from the Chem. Lab are packaged in original containers and stored in the Chem. Lab. Satellite Hazardous Waste Accumulation Point.

5.2.1.14 Minor spills or leaks of non-hazardous materials are absorbed with Drisorb or Magicsorb in the amount necessary to contain the fluid. Contaminated material is packaged in drums and transported to the Waste Management Facility for storage prior to disposal.

5.2.1.15 It is the responsibility of the Lube Crew to supply drums for waste disposal on an as needed basis.

5.2.1.16 Plant practices require all recyclable drums to be returned to the Warehouse for recycling. The Lube Crew confirms non-reusable metal drums are empty and then crushes and places them in scrap bins.

5.2.2 Preventative Maintenance includes use of the Preventive Maintenance Information System (PMIS) which is a computer system that tracks items that require periodic maintenance.

5.2.3 Visual inspections include:

5.2.3.1 Visual inspection of the exterior of each above ground storage tank systems containing pollutants and the secondary containment system surrounding the tank. These tanks are inspected monthly for wetting, discoloration, blistering, corrosion, cracks, or other signs of structural damage or leakage.

5.2.3.2 Visual inspections of grounding equipment and external pipe connections.

5.2.3.3 Tank level gauges are inspected during filling operations.

5.2.3.4 Inspect at least weekly for cracks or slow leaks in and around pipes, pumps, storage tanks, drums, pressure vessels, pressure release valves, and material handling equipment (see Plant Practice Numbers 5006.04 and 5006.05 for Underground and Aboveground Storage Tank procedures).

5.2.3.5 Water levels in the percolation ponds are recorded daily to insure the ponds are not overfilled.

5.2.3.6 Water levels in the coal pile runoff pond and the wastewater equalization basins are routinely recorded at least every shift by the plant shift supervisor.

5.2.3.7 Unit 1 and 2 cooling tower basin levels are recorded daily in the operations log.

5.2.3.8 Water level elevations in the FGD effluent processing area runoff collection ponds and the emergency ponds are recorded every shift.

5.2.3.9 Sewage treatment plant is inspected for proper operation at least once every 12 hours by Operations during non-regular working hours and by the Environmental Department during regular working hours. The inspection includes observing for system operation and status including all mechanical systems and system controls. The clarifier contents and level are also checked during these inspections.

5.2.3.10 Conduct timely inspection and maintenance of storm water management devices such as oil/water separators, catch basins, piping, culverts, swales, ditches and ponds.

5.2.3.11 The Waste Management Facility is inspected weekly for container corrosion, bulges and leaks. Hazardous Waste Storage and Accumulation areas are inspected weekly for container bulges, leaks and corrosion and as new waste is added.

5.2.4 Spill Prevention includes:

5.2.4.1 Fueling Stations

5.2.4.11 Avoid over filling fuel tanks.

5.2.4.1.2 Control spills immediately using dry clean up methods such as sorbents, absorbent socks, sweeping, vacuuming. No spilled material is to be washed into storm drains or ditches.

5.2.4.1.3 Use a damp cloth or mop if wet clean up is required.

5.2.4.1.4 Monitor storage tank filling operations closely and assure proper procedures are followed to prevent spills.

5.2.4.1.5 Provide routine inspections, cleaning and maintenance of oil/water separators.

5.2.4.2 Vehicle and Equipment Maintenance Areas

5.2.4.2.1 Use drip pans to prevent spills and drips of cleaning solvents on shop floors and ground.

5.2.4.2.2 Clean parts at centralized stations when possible and remove parts slowly to minimize splashing.

5.2.4.2.3 Promptly transfer used fluids to the proper waste or recycling drums.

5.2.4.2.4 Control spills immediately using dry clean up methods such as sorbents, socks, sweeping and/or vacuuming. Do not wash petroleum spills into storm drains or ditches.

5.2.4.3 Painting Operations

5.2.4.3.1 Use tarps as a shield to collect solid waste produced by sanding or painting.

5.2.4.3.2 Use vacuums or sweeping to collect fugitive debris from sanding or blasting activities associated with painting work preparation.

5.2.4.3.3 Spent sandblasting waste must be cleaned up from the job site at the end of each shift. Spent blast waste should be stored in a package drum or other authorized storage container. Spent blast media must be sampled and analyzed to determine proper disposal route.

5.2.4.3.4 Use tarps, drip pans, or other collection devices to prevent spills of paints, solvents, or other liquid materials.

5.2.4.3.5 Enclose outdoor sanding areas with tarps.

5.2.4.3.6 Avoid sanding and painting in windy weather if possible.

5.2.5 Sediment and Erosion Control includes:

5.2.5.1 Leave as much vegetation in place as possible during maintenance and construction activities.

5.2.5.2 Stabilize disturbed areas with grass, mulch, sod, geotextile fabrics, gravel or approved chemical additives such as polymers.

5.2.5.3 Prevent runoff from flowing across disturbed areas by diverting it to adjacent vegetated or stabilized areas.

5.2.5.4 Install hay bales or silt screens around construction areas to capture sediments and filter runoff prior to entering storm water ditches.

5.2.5.5 Minimize the time that soils are exposed during construction activities and stabilize soils as soon as possible with grass, mulch, sod, geotextile fabrics, or chemical additives.

5.2.5.6 Remove excess sediments from storm water management devices and properly dispose of the materials.

5.2.5.7 Perform routine mowing of ditches, swales, and pond banks.

5.2.6 Control of Storm Water Runoff includes proper maintenance of:

5.2.6.1 Treatment ponds

5.2.6.2 Treatment ditches

5.2.6.3 Oil skimmers

5.2.6.4 Secondary containment systems

5.2.6.5 Curbed and bermed areas

5.2.6.6 Tophats

5.2.7 Dust Control - The control of dust and fugitive emissions includes the following practices:

5.2.7.1 Effluent Processing Facility: Dust emissions originating in processing area equipment and storage silos is controlled by sock fabric filters, canister filters, or wet scrubbers.

5.2.7.2 Coal Yard: dust emissions from the coal transfer system is controlled by sock fabric filters, wet suppression, and panel filters. The coal pile dust is controlled by limiting heavy equipment traffic, slope contouring, and compaction methods. Fueling and maintenance area dust is controlled by sprinklers and water truck application.

5.2.7.3 Railcar Maintenance Facility: Dust suppression is controlled by the use of curtains on the abrasive blasting building and the paint spray building.

5.2.7.4 Support Systems: Truck unloading areas and the hydrated lime silo is controlled by panel filters. A wet spray system is used in the limestone conveying system. Dust from the limestone pile is controlled by slope contouring and compaction methods.

5.2.7.5 General Plant Fugitive Dust from paved and unpaved road dust is controlled by water application via water truck, use of vacuum sweepers and application of dust suppressant on unpaved roads.

10.4.3 NPDES Permit No. FL0036498

The following pages contain the current NPDES permit for SGS Units 1 and 2. It should be noted that this permit is currently being processed for renewal and is scheduled for reissuance during the second quarter of 2006.

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

STATE OF FLORIDA
INDUSTRIAL WASTEWATER FACILITY PERMIT

PERMITTEE:

Seminole Electric Cooperative, Inc.
Post Office Box 272000
Tampa, Florida 33688-2000

Attention: Plant General Manager

PERMIT NUMBER: FL0036498 - Major
ISSUANCE DATE: January 7, 2000
EXPIRATION DATE: January 6, 2000

FACILITY:

Seminole Electric Cooperative, Inc.
Palatka Plant
State Road 17
Putnam County
Palatka, Florida 32078

Latitude: 29° 42' 41" Longitude: 81° 38' 14"

This permit is issued under the provisions of Chapter 403, Florida Statutes, and applicable rules of the Florida Administrative Code and constitutes authorization to discharge to waters of the state under the National Pollutant Discharge Elimination System (NPDES) program. The above named permittee is hereby authorized to operate the facilities shown on the application and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

The facility consists of two coal-fired steam boilers.(Units 1 and 2) for electric generation with a nameplate rating of 1200 MW.

WASTEWATER TREATMENT:

Coal pile runoff, bottom ash dewatering system flow, water treatment system wastewater, and other low volume wastewater are treated in an on-site wastewater treatment system (herein referred to as the low volume wastewater treatment system) consisting of equalization, neutralization, coagulation/flocculation, and sedimentation. Domestic wastewater is treated in an on-site 0.018 MGD extended aeration package treatment plant. Cooling tower make-up water is treated for biofouling control and the cooling tower blowdown is dehalogenated prior to discharge. All the above treated effluent streams are discharged to the plant's surge tank and subsequently discharged by common Outfall D-001 to surface waters.

The facility proposes to modify the plant's Flue Gas Desulfurization (FGD) system at the Palatka Plant resulting in a new wastewater purge stream from the FGD system. The new purge stream will be treated in a new on-site wastewater treatment system consisting of chemical precipitation/flocculation followed by clarification and filtration. The treated purge stream will be combined with the low volume wastewater treatment system effluent and discharged

to the plant's surge tank. Alternatively, the treated FGD purge stream may be discharged to the head of the low volume wastewater treatment system.

EFFLUENT DISPOSAL:

Surface Water Discharge:

This permit authorizes the discharge from Outfall D-001 (combined plant discharge from Units 1 and 2); Internal Outfall I-002 (low volume treated effluent); Internal Outfall I-003 (domestic wastewater treatment system effluent); Internal Outfalls I-04A and I-04B (cooling tower blowdown from Units 1 and 2, respectively); and Outfall I-006 - Treated FGD Purge Stream (proposed). The combined plant discharge, Outfall D-001, discharges to the St. Johns River, a Class III fresh water. The existing annual average daily surface water discharge at Outfall D-001 is 3.77 MGD. The projected annual average daily surface water discharge at Outfall D-001, after the addition of the new purge stream from the FGD system, is 4.346 MGD.

Land Application:

Air preheater wash, boiler fireside wash, and boiler blowdown are discharged to the plant's percolation ponds. The permittee is authorized to discharge to the percolation ponds and to monitor groundwater quality in accordance with the Conditions of Certification, PA 78-10, or modifications thereof.

IN ACCORDANCE WITH: The limitations, monitoring requirements and other conditions set forth in Part I through Part VIII on pages 3 through 26 of this permit.

Department of
Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

RECEIVED JAN 13 2000

NOTICE OF PERMIT

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

In the Matter of an
Application for Permit
by: Seminole Electric Cooperative, Inc.
Palatka Plant
Post Office Box 272000
Tampa, Florida 33688-2000

DEP File No. FL0036498-001-IW1S
Putnam County

Attention: Plant General Manager

Enclosed is Permit Number FL0036498 to discharge cooling tower blowdown and treated wastewater from the Seminole Electric Cooperative, Inc., Palatka Plant located off U.S. Highway 17, Palatka, Putnam County, Florida 32177, issued under Section 403.0885, Florida Statutes and DEP Rule 62-620, Florida Administrative Code.

Any party to this order (permit) has the right to seek judicial review of the permit under section 120.68 of the Florida Statutes, by the filing of a Notice of Appeal under rule 9.110 of the Florida Rules of Appellate Procedure, with the Clerk of the Department of Environmental Protection, Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000 and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within thirty days after this notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Mimi Drew
Director
Division of Water Resource Management
2600 Blair Stone Road
Tallahassee, FL 32399-2400
(850) 487-1855

PERMITTEE:
Seminole Electric Cooperative, Inc.
Palatka Plant
Post Office Box 272000
Tampa, Florida 33688-2000

PERMIT NUMBER: FL0036498 Major
ISSUANCE DATE: January 7, 2000
EXPIRATION DATE: January 6, 2005

I. Effluent Limitations and Monitoring Requirements

A. Surface Water Discharges

1. During the period beginning on the effective date of this permit and lasting through expiration, the permittee is authorized to discharge from **Outfall D-001 - Combined Plant Discharge from Units 1 and 2** during periods of normal plant operation to the St. Johns River.

   a. Such discharges shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
EFFLUENT PARAMETERS	Maximum Daily Avg.	Instantaneous Maximum	Measurement Frequency	SampleType	Sample Point
Flow, MGD	Report	Report	1/Hour	Recorder	EFF-1
Discharge Temperature, °F	96.3	98.9	Continuous	Recorder	EFF-1
Total Residual Oxidant (TRO), mg/l	N/A	0.01	1/Week	Multiple Grabs[1]	EFF-1
Turbidity, NTU	See Item c. below		1/Week	Grab	EFF-1
pH, standards units	See Item d. below		1/Week	Grab	EFF-1
Oil and Grease, mg/l	N/A	7.68	1/Week	Grab	EFF-1
Whole Effluent Toxicity	See Item i. below			Grab	EFF-1
Unionized Ammonia, mg/l as NH_3	N/A	0.02	1/Quarter	Calculated	EFF-1
Total Ammonia, mg/l as N	N/A	Report	1/Quarter	8-Hr Composite	EFF-1
Total Kjeldahl Nitrogen, mg/l as N	N/A	Report	1/Quarter	8-Hr Composite	EFF-1
Nitrate-Nitrite, mg/l as N	N/A	Report	1/Quarter	8-Hr Composite	EFF-1
Total Phosphorus, mg/l	N/A	Report	1/Quarter	8-Hr Composite	EFF-1
Orthophosphate, mg/l	N/A	Report	1/Quarter	8-Hr Composite	EFF-1
Effluent Hardness, mg/l as CaCO3	NA	Report	1/Quarter	8-Hr Composite	EFF-1
Specific Conductivity, µmhos/cm	N/A	8,653	1/Quarter[2]	8-Hr Composite[2]	EFF-1
Beryllium, µg/l	See Item e. below		1/Quarter	8-Hr Composite	EFF-1
Copper, µg/l	N/A	306.0/295.0[3]	1/Quarter	8-Hr Composite	EFF-1
Cyanide, µg/l	N/A	19.6	1/Quarter	8-Hr Composite	EFF-1
Iron, mg/l	N/A	2.40/2.33[3]	1/Quarter	8-Hr Composite	EFF-1
Mercury, µg/l	N/A	0.2	1/Quarter	8-Hr Composite	EFF-1
Nickel, µg/l	N/A	See Footnote[4]	1/Quarter	8-Hr Composite	EFF-1
Selenium, µg/l	N/A	11.7	1/Quarter	8-Hr Composite	EFF-1
Silver, µg/l	N/A	0.07	1/Quarter	8-Hr Composite	EFF-1
Zinc, µg/l	N/A	434.0/419.0[3]	1/Quarter	8-Hr Composite	EFF-1

[1] Multiple grabs shall consist of grab samples collected at approximately the beginning, middle, and end of an 8-hour period following initiation of cooling tower blowdown.

[2] Upon initiation of the new FGD purge stream sampling shall be monitored and reported in accordance with General Condition VIII.18.b.

[3] The first value is the interim limitation and the second value is the final limitation. Interim limitations apply until such time there is discharge from the new FGD purge stream wastewater treatment plant after which time final limitations apply.

[4] The water quality standard is the hardness-based standard as specified in FAC 62-302.530 (dated 12-26-96) for Class III freshwater. The water quality standard shall be calculated by inserting the appropriate effluent hardness value into the following formula: $Ni = e^{[0.846(\ln H+1.1645)]}$

b. The location of sampling points as specified above are as follows:

EFF-1 - at the discharge from the surge tank prior to mixing with the receiving waters.

c. The turbidity shall be not greater than 29 NTUs above background as measured at the plant intake.

d. The pH shall not be less than 6.0 standard units or greater than 8.5 standard units.

e. The annual average limitation for beryllium is 0.13 µg/l.

f. All metals shall be analyzed and reported as total recoverable.

g. Interim and final mixing zones for those effluent parameters identified below are being granted to the permittee. Due to the fact that the proposed FGD purge stream will act as a diluent for some parameters it became necessary to grant interim and final mixing zones for those parameters. The interim mixing zones will be in effect at the time of permit issuance and will remain in effect until there is a discharge from the new FGD purge stream wastewater treatment plant. After that time final mixing zones will be in effect for those parameters. For parameters that do not have interim mixing zones, final mixing zones are in effect at the time of permit issuance.

Parameter	Interim Mixing Zone Size (m^2)	Final Mixing Zone Size (m^2)
Copper	110,040	36,949
Cyanide	NA	108
Iron	154	15
Mercury	NA	36,277
Oil and Grease	NA	23
Selenium	NA	7
Specific Conductivity	NA	170
Temperature	NA	39
Zinc	315	29

Compliance with the effluent limitations in Section I.A.1.a above will provide demonstration that State water quality standards at the edge of the approved mixing zones are being met.

h. The segment of the St. Johns River (2213L) that the Palatka Plant discharges into via Outfall D-001 is listed in the State 305(b) report for lead, cadmium, copper, silver, and nutrients; however, the Total Maximum Daily Load(s) (TMDL) for this segment of the St. Johns River has not been established for these parameters. Once a final TMDL for Segment 2213L of the St. Johns River has been established, this permit may be modified, by the Department and pursuant to Florida Administrative Code rule 62-620.325, to incorporate the final findings of the TMDL.

i. The permittee shall initiate a series of tests described below (beginning within 30 days of permit issuance) to evaluate whole effluent toxicity of the discharge from Outfall D-001. The permittee is required to conduct toxicity tests twice per year for the duration of the permit or until the initiation of discharge of the proposed treated FGD purge stream at which time the frequency of toxicity testing shall be increased to four times per year. If the results of the toxicity tests during a one year period (four quarterly tests) indicate no unacceptable toxicity as defined in 4.a. below, the permittee may petition the Department to reduce the frequency of toxicity testing. Only upon written approval by the Department shall the testing frequency be reduced.

All test species, procedures and quality assurance criteria used shall be in accordance with Methods for Measuring Acute Toxicity of Effluents to Freshwater and Marine Organisms, EPA/600/4-90/027F, or the most current edition.

The control water and the effluent used will be adjusted to an appropriate salinity using artificial sea salts as described in EPA/600/4-90/027F, Section 7, or the most current edition. The appropriate tests salinity shall be determined as follows:

- When the salinity of the effluent is between 1 and 5 parts per thousand (ppt), the following salinity adjustment shall be used in the test of 100% effluent. For the **Mysidopsis bahia** bioassays, the effluent and the control (0% effluent) shall be adjusted using artificial sea salts to a final test salinity determined as the effluent salinity plus 6 ppt. No salinity adjustment shall be done for the **Menidia beryllina** bioassay test of the 100% effluent.
- When the salinity of the effluent is greater than 5 parts per thousand, no salinity adjustment shall be made and the test shall be run at the effluent salinity.

A standard reference toxicant quality assurance (QA) acute toxicity test shall be conducted concurrently or no greater than 30 days before the date of the "routine" test, with each species used in the toxicity tests. The results of all QA toxicity tests shall be submitted with the discharge monitoring report (DMR). Any deviation from the bioassay procedures outlined herein shall be submitted in writing to the Department for review and approval prior to use.

1. (a) The permittee shall conduct 96-hour acute static renewal toxicity tests using the mysid shrimp, **Mysidopsis bahia**, and the inland silverside, **Menidia beryllina**. All tests will be conducted on a single grab sample of 100% effluent collected during the mid-period of cooling tower blowdown.

   (b) If control mortality exceeds 10% for either species in any test, the test(s) for that species (including the control) shall be repeated. A test will be considered valid only if control mortality does not exceed 10% for either species. If, in any separate grab sample test, 100% mortality occurs prior to the end of the test, and control mortality is less than 10% at that time, that test (including the control) shall be terminated with the conclusion that the sample demonstrates unacceptable acute toxicity.

2. Results from "routine" tests shall be reported according to EPA/600/4-90/027F, Section 12, Report Preparation (or the most current edition), and shall be submitted to:

   Florida Department of Environmental Protection
   Industrial Wastewater Section
   Twin Towers Office Building
   2600 Blair Stone Road
   Tallahassee, Florida 32399-2400

3. (a) All "routine" test shall be conducted using a control (0% effluent) and one test concentration of **100%** final effluent.

   (b) Mortalities of greater than 50% in any sample of 100% effluent in any "routine" test or an LC50 of less than 100% effluent in any additional definitive test will constitute a violation of these permit conditions and Rule 62-302.200(1), Rule 62-302.500(1)(a)4, and Rule 62-4.244(3)(a), F. A. C.

4. (a) If unacceptable acute toxicity (greater than 20% mortality in any grab sample of 100% effluent) is determined in a "routine" test, the permittee shall conduct three additional tests on each species indicating acute toxicity. Each additional test will include a grab sample taken as described in 1.a. and

run as a definitive analysis. Results for each additional test will include the determination of LC50 values with 95% confidence limits.

(b) The first additional test shall be conducted using a control (0% effluent) and a minimum of five dilutions: 100%, 50%, 25%, 12.5% and 6.25% effluent. The dilution series may be modified in the second and third test to more accurately identify the toxicity, such that at least two dilutions above and two dilutions below the target toxicity and a control (0% effluent) are run.

(c) For each additional test, the sample collection requirements and the test acceptability criteria specified in Section 1 above must be met for the test to be considered valid. The first test shall begin within two weeks of the end of the "routine" tests, and shall be conducted weekly thereafter until three additional, valid tests are completed. The additional tests will be used to determine if the toxicity found in the "routine" test is still present.

(d) Results from additional tests, required due to unacceptable toxicity in the "routine" tests, shall be submitted in a single report prepared according to EPA/600/4-90/027F, Section 12, or the most current edition and submitted within 45 days of completion of the third additional, valid test. If the additional test(s) demonstrate unacceptable toxicity, the permittee will meet with the Department within 30 days of the report submittal to identify corrective actions necessary to remedy the unacceptable toxicity.

2. During the period beginning on the effective date of this permit and lasting through expiration, the permittee is authorized to discharge from **Internal Outfall I-002 - Low Volume Treated Effluent**[5], during periods of normal plant operation to the surge tank thence Outfall D-001.

   a. Such discharges shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
EFFLUENT PARAMETERS	Maximum Monthly Average	Instantaneous Maximum	Measurement Frequency	Sample Type	Sample Point
Flow, MGD	Report	Report	Continuous	Recorder	EFF-2
Oil and Grease, mg/l	12.0	15.0	1/Week	Grab	EFF-2
Total Suspended Solids, mg/l	30.0	81.0	1/Week	Grab	EFF-2

   b. The location of sampling points as specified above are as follows: EFF-2 - at a location after low volume wastewater treatment system effluent mixes with the treated FGD purge stream but prior to discharge to the surge tank.

3. During the period beginning on the effective date of this permit and lasting through expiration date of this permit, the permittee is authorized to discharge from **Internal Outfall I-003 - Domestic Wastewater Treatment System Effluent**, during periods of normal plant operation to the surge tank thence Outfall D-001.

   a. Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS		
EFFLUENT PARAMETERS	Maximum Annual Average	Maximum Monthly Average	Maximum Daily Average	Measurement Frequency	Sample Type	Sample Point
Flow, MGD	N/A	N/A	0.018	Continuous	Totalizer	EFF-3
Biochemical Oxygen Demand (5-day), mg/l	20.0	25.0	60.0	1/month	Grab	EFF-3
Total Suspended Solids, mg/l	20.0	30.0	60.0	1/month	Grab	EFF-3
Fecal Coliform Bacteria, #/100ml	See Item b. below			1/month	Grab	EFF-3
Total Residual Chlorine, mg/l	See Item c. below			5/Week	Grab	EFF-3

   b. The fecal coliform count shall not exceed 800 per 100 ml for any one sample and the annual average shall not exceed 200 per 100 ml.

[5] This outfall includes the discharge from both the low volume wastewater treatment system and the proposed FGD purge stream treatment system.

c. The total residual chlorine shall not be less than 0.5 mg/l.

d. During the period of operation authorized by this permit, the wastewater facilities shall be operated under the supervision of an operator certified in accordance with Chapter 61E12-41, F.A.C. In accordance with Chapter 62-699, F.A.C., this facility is a Category III, Class D facility and, at a minimum, an operator with appropriate certification must be on the site as follows:

A Class D or higher operator for 3 nonconsecutive visits/week for 1 1/2 hours/week.

e. The location of sampling points as specified above are as follows: EFF-3 - at the outlet from the domestic wastewater treatment system but prior to discharge to the surge tank.

4. During the period beginning on the effective date of this permit and lasting through expiration date of this permit, the permittee is authorized to discharge from **Internal Outfalls I-04A and I-04B - Cooling Tower Blowdown From Units 1 and 2,** respectively, during periods of normal plant operation to the surge tank thence Outfall D-001.

a. Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS		**MONITORING REQUIREMENTS**		
EFFLUENT PARAMETERS	Monthly Average	Instantaneous Maximum	Measurement Frequency	Sample Type	Sample Point
Flow, MGD	Report	Report	Continuous	Recorder	EFF-4, -5
Temperature, °F	Report	Report	Continuous	Recorder	EFF-4, -5
Total Suspended Solids, mg/l	Report	NA	1/week	Grab	EFF-4, -5
Time of Chlorine Discharge, hours/day/unit	See Item f. below		Daily	Logs	EFF-4, -5
Specific Conductivity, µmhos/cm	Report	Report	Continuous	Recorder	EFF-4, -5

b. The location of sampling points as specified above are as follows:

EFF- 4 and 5 - the outlets from the Unit 1 and 2 cooling towers, respectively, and at a location after the dechlorination system but prior to discharge to the surge tank.

c. Discharge of blowdown from the cooling towers shall be limited to the minimum discharge of recirculating water necessary for the purpose of discharging materials, contained in the process, the further buildup of which would cause concentrations or amounts exceeding limits established by best engineering practice. Discharge temperature shall not exceed the lowest temperature of the recirculating cooling water prior to the addition of makeup.

d. Discharge of detectable levels of asbestos due to asbestos-containing fill or other cooling tower components is not authorized by this permit.

e. The permittee shall, within 30 days of permit issuance and yearly thereafter, provide certification that the 126 priority pollutants (as listed in 40 CFR Part 423, Appendix A) are not being discharged in detectable concentrations in the cooling tower blowdown as a result of the addition of any maintenance chemicals. Compliance shall be demonstrated by one of the three methods:

Method 1 - sampling at a frequency of not less than once per year for all priority pollutants referenced above with submission of analysis results with each certification.

Method 2 - submission of certification(s) from the manufacturer that each product used contains no priority pollutants. Such submission is required only once for each product used, unless subsequent changes in the product formulation occur or the product is obtained from a different source. Certifications for all products in use shall be maintained on site.

Method 3 - calculations to assure that if priority pollutants are contained in any product(s), no discharge of any individual priority pollutant can occur at concentrations greater than 10 micrograms per liter due to dilution within the cooling system.

The certification shall be in the following form: "I certify that no priority pollutants in excess of 10 ppb are being discharged from any maintenance chemicals added to the cooling towers. Compliance is demonstrated by Method _____."

f. Neither Free Available Oxidant (FAO) nor Total Residual Oxidant (TRO) shall be discharged from any one unit for more than two hours in any one day and not more than one unit shall discharge FAO or TRO at any one time (as required in 40 CFR 423.15(j)(1) and (2)).

5. During the period beginning at discharge and lasting through expiration date of this permit, the permittee is authorized to discharge from **Outfall I-006 - Treated FGD Purge Stream** (proposed) to the surge tank or, alternatively, to the head of the low volume wastewater treatment system.

   a. The discharge shall be monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
EFFLUENT PARAMETERS	Maximum Daily Average	Instantaneous Maximum	Measurement Frequency	Sample Type	Sample Point
Flow, MGD	Report	Report	Continuous	Totalizer	EFF-6
Total Ammonia, mg/l as N	NA	Report	1/Quarter	8-Hr Comp.	EFF-6
Arsenic (total), µg/l	NA	Report	1/Quarter	8-Hr Comp.	EFF-6
Beryllium, µg/l	NA	Report	1/Quarter	8-Hr Comp.	EFF-6
Cadmium, µg/l	NA	Report	1/Quarter	8-Hr Comp.	EFF-6
Total Chromium, ug/l	NA	Report	1/Quarter	8-Hr Comp.	EFF-6
Copper, µg/l	NA	Report	1/Quarter	8-Hr Comp.	EFF-6
Cyanide, µg/l	NA	Report	1/Quarter	8-Hr Comp.	EFF-6
Iron, mg/l	NA	Report	1/Quarter	8-Hr Comp.	EFF-6
Lead, µg/l	NA	Report	1/Quarter	8-Hr Comp.	EFF-6
Mercury, µg/l	NA	Report	1/Quarter	8-Hr Comp.	EFF-6
Nickel, µg/l	NA	Report	1/Quarter	8-Hr Comp.	EFF-6
Selenium, µg/l	NA	Report	1/Quarter	8-Hr Comp.	EFF-6
Silver, µg/l	NA	Report	1/Quarter	8-Hr Comp.	EFF-6
Zinc, µg/l	NA	Report	1/Quarter	8-Hr Comp.	EFF-6
Specific Conductivity, µmhos/cm	NA	Report	1/Quarter	8-Hr Comp.	EFF-6

   b. The location of sampling points as specified above are as follows:

      EFF-6 - after the discharge from the FGD purge stream wastewater treatment plant but prior to mixing with other waste streams.

   c. After four quarters of reporting the permittee may request a reduction or discontinuance of monitoring for the above parameters.

6. During the period beginning on the effective date of this permit and lasting through expiration date of this permit, the permittee shall monitor the **Plant Intake (D-005).**

   a. The intake shall be monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
EFFLUENT PARAMETERS	Maximum Daily Average	Instantaneous Maximum	Measurement Frequency	Sample Type	Sample Point
Flow, MGD	Report	Report	Continuous	Totalizer	INT-1
Temperature, °F	Report	Report	Continuous	Recorder	INT-1
Oil and Grease, mg/l	NA	Report	1/Week	Grab	INT-1
Turbidity, NTU	NA	Report	1/Week	Grab	INT-1
Ammonia, mg/l	NA	Report	1/Quarter	8-Hr Comp.	INT-1
Unionized Ammonia, mg/l as NH_3	NA	Report	1/Quarter	Calculated	INT-1
Total Kjeldahl Nitrogen, mg/l as N	NA	Report	1/Quarter	8-Hr Comp.	INT-1
Nitrate-Nitrite, mg/l as N	NA	Report	1/Quarter	8-Hr Comp.	INT-1
Copper, µg/l	NA	Report	1/Quarter	8-Hr Comp.	INT-1
Cyanide, µg/l	NA	Report	1/Quarter	8-Hr Comp.	INT-1
Iron, mg/l	NA	Report	1/Quarter	8-Hr Comp.	INT-1
Mercury, µg/l	NA	Report	1/Quarter	8-Hr Comp.	INT-1
Selenium, µg/l	NA	Report	1/Quarter	8-Hr Comp.	INT-1
Zinc, µg/l	NA	Report	1/Quarter	8-Hr Comp.	INT-1
Specific Conductivity, µmhos/cm	NA	Report	1/Quarter	8-Hr Comp.	INT-1

   b. The location of sampling points as specified above are as follows:

   INT-1 - at the intake to the plant.

B Other Limitations and Monitoring and Reporting Requirements:

1. The approved analytical methods and corresponding Department established MDL (method detection limit) and PQL (practical quantification limit) are listed for the following parameters:

Parameter	EPA Method	MDL (ug/l)	PQL (ug/l)
Arsenic	206.2/200.7	1.0/3.2	4.0/10.0
Beryllium	200.7/210.2	1.0/1.0	5.0/5.0
Cadmium	213.2/200.7	0.02/0.71	0.08/5.0
Total Chromium	218.2/200.7	1.0/2.1	4.0/10.0
Copper	220.2/200.7/220.1	1.0/6.0/15.0	10.0/25.0/50.0
Cyanide	335.3/335.2	8.8/10.0	10.0/16.0
Iron	236.2/200.7/236.1	2.0/18/30.0	10.0/50.0/100.0
Lead	239.2/200.7	1.0/1.5	4.0/5.0
Mercury	245.1/245.2	0.2/0.2	0.5/0.5
Nickel	200.7/249.1	10.0/20.0	50.0/50.0
Selenium	270.3/200.7/270.2	2.0/2.0/3.3	5.0/5.0/10.0
Silver	272.2/200.7	0.10/0.10	0.50/0.50
Zinc	289.1/200.7	15.0/5.9	15.0/20.0
Oil & Grease	1664	1800	5000
Total Residual Oxidant	330.1/330.5/330.4	10.0/10.0/10.0	30.0/30.0/30.0

The MDLs and PQLs listed above shall constitute the minimum reporting levels for the life of the permit. The Department shall not accept results for which the laboratory's MDLs or PQLs are greater than those listed above. Unless otherwise specified, sample results shall be reported as follows:

When the analytical results are below method detection or practical quantification limits, the permittee shall report the analytical results in accordance with the instructions on the applicable discharge monitoring report (DMR).

2. Monitoring results obtained for each calendar month shall be summarized for that month and reported on a Discharge Monitoring Report (DMR), Form 62-620.910(10), postmarked no later than the 28th day of the month following the completed calendar month. For example, data for January shall be submitted by February 28. Signed copies of the DMR shall be submitted to the address specified below:

Florida Department of Environmental Protection
Mail Station 3551
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

If no discharge occurs during the reporting period, sampling requirements of this permit do not apply. The statement "No discharge" shall be written on the DMR form. If, during the time period of this permit, the facility ceases to discharge, the Department shall be notified immediately upon cessation of discharge. Such notification shall be in writing.

3. Unless specified otherwise in this permit, all other reports and notifications required by this permit, including twenty-four hour notifications, shall be submitted to or reported to, as appropriate, the Department's Northeast District Office at the address specified below:

   Florida Department of Environmental Protection
   Northeast District
   Suite 2008, 7825 Baymeadows Way
   Jacksonville, FL 32256
   Phone Number (904) 448-4300

4. The discharge of metal cleaning waste to surface waters is not authorized by this permit. Metal cleaning waste is any wastewater resulting from cleaning , with or without chemical cleaning compounds any metal process equipment including , but not limited to, boiler tube cleaning, boiler fireside cleaning , and air preheater cleaning. For clarification, waterborne residues derived from cleaning any metal process equipment are considered metal cleaning waste. Other unauthorized discharges includes the discharge of construction runoff.

5. The permittee shall not store coal , soil, or other similar erodable materials in a manner in which runoff is uncontrolled, nor conduct construction activities in a manner which produces uncontrolled runoff unless such uncontrolled runoff has been specifically approved by the Department. "Uncontrolled shall mean without a sedimentation basin or other controls approved by the Department.

6. Flush water used to remove ash adhering to the boiler tubes after a unit is taken off-line (i.e., non-chemical boiler flush water) may be discharged to the bottom ash transport water system and the low volume wastewater treatment facility prior to final discharge via Outfall D-001.

   Intake screen backwash may be discharged without limitation or monitoring requirements.

7. In order to determine compliance with the discharge limitations specified in Section I.A of this permit sampling results shall be calculated and reported as follows:

   Daily Average Value - the average of all sampling results for a parameter for a single day.

   Monthly Average Value - the average of all daily average values for a monthly period.

   Instantaneous Value - the value of a single sampling result taken at any given time or for composite samples the value of a single composite sample result.

   When only one sample is required to be taken per day then the value of that sampling result shall be the daily average value. Likewise for weekly and monthly averages when only one sample is taken during the week or month, respectively.

8. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

9. There shall be no discharge of floating debris, scum, oil, or other matter in such amounts as to form nuisances or produce color, odor, taste, turbidity, or other conditions in such degree as to create a nuisance or otherwise interfere with the beneficial use of the receiving waters in accordance with FAC 62-302.500(1)(a) and 62-302.530(50)(b). Any such discharges to water of the State shall be reported to the Department when submitting DMR's.

10. Monitoring requirements specified in Section I.A of this permit shall begin on the first day of the next month after the permit issuance date.

11. Discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act to any waste stream which ultimately may be released to lakes, rivers, streams, or other waters of the United States is prohibited unless specifically authorized elsewhere in this permit. This requirement is not applicable to products used for lawn and agricultural purposes or to the use of herbicides if used in accordance with labeled instructions and any applicable State permit. Discharge of chlorine from the use of chlorine gas, sodium hypochlorite, or other similar chlorination compounds for disinfection in plant potable and service water systems and in sewage treatment is authorized. The company shall notify the Department in writing prior to instituting use of any biocide or chemical (except the use of chlorine in the cooling towers) used in the cooling systems or any other portion of the treatment system which may be toxic to aquatic life. Such notification shall include:

    a. Name and general composition of biocide or chemical
    b. Frequencies of use
    c. Quantities to be used
    d. Proposed effluent concentrations
    e. Acute and/or chronic toxicity data (laboratory reports shall be prepared according to Section 12 of EPA document no. EPA/600/4-90/027 entitled, Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters for Freshwater and Marine Organisms, or most current addition.)
    f. Product data sheet
    g. Product label

    The Department shall review the above information to determine if a minor or major permit revision is necessary. Discharge associated with the use of such biocide or chemical is not authorized without prior approval by the Department.

12. Discharge of any waste resulting from the combustion of toxic, hazardous, or metal cleaning wastes to any waste stream which ultimately discharges to waters of the United States is prohibited, unless specifically authorized elsewhere in this permit.

13. The permittee shall ensure that all laboratory analytical data submitted to the department as required by this permit is from a laboratory which has a currently valid and Department-approved Comprehensive Quality Assurance Plan (ComQAP) [or a ComQAP pending approval] for all parameters being reported as required by Chapter 62-160, Florida Administrative Code

14. Within 60 days of initiation of discharge of the treated FGD purge stream to Outfall 001, the permittee shall perform a one time chemical analysis of the combined discharge from Outfall 001. This analysis shall include all parameters included in DEP Form 2CS-Part VII-C except for pesticide compounds. This data is subject to the re-opener clause of Section VII-C of this permit.

15. Within 60 days of initiation of discharge of the treated FGD purge stream to Outfall 001, the permittee shall conduct additional mercury monitoring of the combined discharge from Outfall 001 and the intake at D-005 using the low-level EPA Method 1631. Monitoring shall consists of a minimum of one grab sample taken once every month for 18 months at both the intake (INT-1) and the discharge (EFF-1). Sampling at the intake and discharge shall be done concurrently. Results of the monitoring shall be submitted to the Department in accordance with the compliance schedule contained in Part VI of this permit. The monitoring results will be used by the Department to further assess the mercury levels in the discharge and to determine the size of the mercury mixing zone for the next permit cycle, if a mixing zone is requested at that time. Hg

II. Industrial Sludge Management Requirements

A. Basic Management Requirements:

1. The disposal of sludge or other solids generated from treatment and disposal systems shall be reused, reclaimed, or otherwise disposed of in accordance with the requirements of Chapter 62-701, F.A.C. and as allowed in the facility's Conditions of Certification or modifications thereof, Reference 78-10.

III. Ground Water Monitoring Requirements

The ground water monitoring requirements for this facility are provided in the facility's Conditions of Certification, PA 78-10, or modifications thereof.

IV. Other Land Application Requirements -

The permittee is authorized to discharge to the percolation ponds in accordance with the Conditions of Certification, PA 78-10, or modifications thereof.

V. Operation and Maintenance Requirements

A. Operation of Treatment and Disposal Facilities

1. The permittee shall ensure that the operation of this facility is as described in the application and supporting documents.
2. The operation of the pollution control facilities described in this permit shall be under the supervision of a person who is qualified by formal training and/or practical experience in the field of water pollution control appropriate for those facilities.

B. Record keeping Requirements:

1. The permittee shall maintain the following records on the site of the permitted facility and make them available for inspection:
   a. Records of all compliance monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, including, if applicable, a copy of the laboratory certification showing the certification number of the laboratory, for at least three years from the date the sample or measurement was taken;
   b. Copies of all reports, other than those required in items a. and b. of this section, required by the permit for at least three years from the date the report was prepared, unless otherwise specified by Department rule;
   c. Records of all data, including reports and documents used to complete the application for the permit for at least three years from the date the application was filed, unless otherwise specified by Department rule;
   d. A copy of the current permit;
   e. A copy of any required record drawings;

f. Copies of the logs and schedules showing plant operations and equipment maintenance for three years from date on the logs for schedule.

VI. Compliance Schedules and Self-Imposed Improvements Schedules

1. The permittee shall achieve compliance with the effluent limitations specified for discharge in accordance with the following schedule:

a. Operational level attained.....	Issuance Date (ID) of permit
b. Best Management Practices Pollution Prevention (BMP3) Plan (See Part VII, Subpart D)	
(1) Develop plan.....	ID of permit plus 3 months
(2) Implement plan.....	ID of permit plus 6 months
b. Submittal of DEP Form 2CS-Part VII-C except for pesticide compounds (See Condition I.B.14)	Initiation of FGD purge stream discharge plus 3 months
d. Submittal of additional Mercury monitoring (See Condition I.B.15)	Initiation of FGD purge stream discharge plus 20 months

2. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by an identified date, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

VII. Other Specific Conditions

A. Specific Conditions Applicable to all permits

1. Drawings, plans, documents or specifications submitted by the permittee, not attached hereto, but retained on file with the Department, are made a part hereof.
2. if significant historical or archaeological artifacts are discovered at any time within the project site, the permittee shall immediately notify the District Office and the Bureau of Historic Preservation, Division of Archives, History and Records Management, R.A. Gray Building, Tallahassee, Florida 32301.
3. Where required by Chapter 471 (P.E.) or Chapter 492 (P.G.) Florida Statutes, applicable portions of reports to be submitted under this permit, shall be signed and sealed by the professional(s) who prepared them.
4. This permit satisfies industrial wastewater program permitting requirements only and does not authorize operation of this facility prior to obtaining any other permits required by local, state or federal agencies.

B. Duty to Reapply

1. The permittee shall submit an application to renew this permit at least 180 days before the expiration date of this permit.

2. The permittee shall apply on the appropriate form listed in Rule 62-620.910, F.A.C., and in the manner established in Rules 62-620.400 through 62-620.460, F.A.C., including submittal of the appropriate processing fee set forth in Rule 62-4.050, F.A.C.
3. An application filed in accordance with subsections 1. and 2. of this part shall be considered timely and sufficient. When an application for renewal of a permit is timely and sufficient, the existing permit shall not expire until the Department has taken final action on the application for renewal or until the last day for seeking judicial review of the agency order or a later date fixed by order of the reviewing court.
4. The late submittal of a renewal application shall be considered timely and sufficient for the purpose of extending the effectiveness of the expiring permit only if it is submitted and made complete before the expiration date.

C. Reopener Clause

1. The permit shall be modified, or alternatively, revoked and reissued to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(23)(C) and (D), 304(b)(2) and 307(a)(2) of the Clean Water Act (the Act), as amended, if the effluent standard or limitation so issued or approved:

   a.) Contains different conditions or is otherwise more stringent than any condition in the permit/or;

   b.) Controls any pollutant not addressed in the permit.

   The permit as modified or reissued under this paragraph shall contain any other requirements of the Act then applicable.

   The permit may be reopened to adjust effluent limitations or monitoring requirements should future wasteload allocation determinations, water quality studies, DEP approved changes in water quality standards, or other information show a need for a different limitation or monitoring requirement.

D. Specific Conditions Related to Best Management Practices Condition

1. Best Management Practices Plan:

   In accordance with Rule 62-620.620(1)(n), the permittee shall develop and implement a Best Management Practices plan incorporating pollution prevention measures. References which may be used in developing the plan are "Criteria and Standards for Best Management Practices Authorized Under Section 304(e) of the Act", found at 40 CFR Section 122.44(k), the Storm Water Management Industrial Activities Guidance Manual, EPA/833-R92-002 and other EPA documents relating to Best Management Practice guidance.

2. Definitions:

   a. The term "pollutants" refers to conventional, non-conventional and toxic pollutants, as appropriate for the NPDES storm water program and toxic pollutants.

   b. Conventional pollutants are: biochemical oxygen demand (BOD), suspended solids, pH, fecal coliform bacteria and oil & grease.

   c. Non-conventional pollutants are those which are not defined as conventional or toxic, such as phosphorus, nitrogen or ammonia. (Ref: 40 CFR Part 122, Appendix D, Table IV)

   d. For purposes of this part, Toxic pollutants include, but are not limited to: a) any toxic substance listed in Section 307(a)(1) of the CWA, any hazardous substance listed in Section 311 of the CWA, and b) any substance (that is not also a conventional or non-conventional pollutant) for which EPA has published an acute or chronic toxicity criterion, or that is a pesticide regulated by the Federal Insecticide, Fungicide,

and Rodenticide Act (FIFRA).

e. "Pollution prevention" refers to the first category of EPA's preferred hazardous waste management strategy - source reduction.

f. "Significant Materials" is defined as raw materials; fuels; materials such as solvents and detergents; hazardous substances designated under Section 101(14) of CERCLA; and any chemical the facility is required to report pursuant to EPCRA, Section 313; fertilizers; pesticides; and waste products such as ashes, slag and sludge.

g. "Source reduction" means any practice which: i) reduces the amount of any pollutant entering a waste stream prior to recycling, treatment or disposal; and ii) reduces the hazards to public health and the environment associated with the release of such pollutant. The term includes equipment or technology modifications, process or procedure modifications, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control. It does not include any practice which alters the physical, chemical, or biological characteristics or the volume of a pollutant through a process or activity which itself is not integral to, or previously considered necessary for, the production of a product or the providing of a service.

h. "BMP3" means a Best Management Plan incorporating the requirements of 40 CFR § 125, Subpart K, plus pollution prevention techniques, except where other existing programs are deemed equivalent by the permittee. The permittee shall certify the equivalency of the other referenced programs.

i. "Reportable Quantity (RQ) Discharge" A RQ release occurs when a quantity of a hazardous substance or oil is spilled or released within a 24-hour period of time and exceeds the RQ level assigned to that substance under CERCLA or the Clean Water Act. These levels or quantities are defined in terms of gallons or pounds. Regulations listing these quantities are contained at 40 CFR 302.4, 40 CFR 117.21 and 40 CFR 110.

j. The term "material" refers to chemicals or chemical products used in any plant operation (i.e., caustic soda, hydrazine, degreasing agents, paint solvents, etc.). It does not include lumber, boxes, packing materials, etc.

3. Best Management Practices/Pollution Prevention Plan:

The permittee shall develop and implement a BMP3 plan for the facility which is the source of wastewater and storm water discharges. The plan shall be directed toward reducing those pollutants of concern which discharge, or could discharge, to surface waters to and shall be prepared in accordance with good engineering and good housekeeping practices. For the purposes of this permit, pollutants of concern shall be limited to toxic pollutants and significant materials, as defined above, known to the discharger. The plan shall address all activities which could or do contribute these pollutants to the surface water discharge, including storm water, water and waste treatment, and plant ancillary activities.

4. Signatory Authority & Management Responsibilities:

A copy of the BMP3 plan shall be retained at the facility and shall be made available to the permit issuing authority upon request.
The BMP3 plan shall contain a written statement from corporate or plant management indicating management's commitment to the goals of the BMP3 program. The BMP3 plan shall be signed and reviewed by the plant management.

5. BMP3 Plan Requirements:

The following requirements may be incorporated by reference from existing facility procedures:

a. Name and description of facility

b. A site map - At a minimum the site map must include information of the following: discharge points ("outfalls"); drainage patterns; identification of the types of pollutants likely to be discharged from each drainage area; direction of flow; surface water bodies, including any proximate stream, river, lake, or other waterbody receiving storm water discharge from the site; structural control measures (physically constructed features used to control storm water flows); locations of "significant materials" exposed to storm water; locations of industrial activities (such as fueling stations, loading and unloading areas, vehicle or equipment maintenance areas, waste disposal areas, storage areas).

c. A materials inventory including the types of materials that are handled, stored, or processed onsite, particularly significant materials. To complete the materials inventory, the permittee must list materials that have been exposed to storm water in the past 3 years (focus on areas where materials are stored, processed, transported, or transferred and provide a narrative description of methods and location of storage and disposal areas, materials management practices, treatment practices, and any structural/nonstructural control measures.

d. A list of significant spills and leaks of toxic or hazardous materials that have occurred in the past 3 years. "Significant spills" includes releases in excess of reportable quantities.

e. A summary of any existing storm water sampling data and a description of the sample collection procedures used.

f. A site evaluation summary - The Site Evaluation Summary should provide a narrative description of activities with a high potential to contaminate storm water at the site, including those associated with materials loading and unloading, outdoor storage, outdoor manufacturing or processing, onsite disposal, and significant dust or particulate generating activities. The summary should also include a description of any pollutants of concern that may be associated with such activities.

g. A narrative description of the following BMP's:

(i) - Good Housekeeping Practices

(ii) - Preventive Maintenance The permittee must develop a preventive maintenance program that involves inspections and maintenance of storm water management devices and routine inspections of facility operations to detect faulty equipment. Equipment (such as tanks, containers, and drums) should be checked regularly for signs of deterioration.

(iii) - Visual Inspections Regular inspections shall be performed by qualified, trained plant personnel. Reports shall note when inspections were done, the name of the person who conducted the inspection, which areas were inspected, what problems were found, and what steps were taken to correct any problems.

(iv) - Spill Prevention and Responses Areas where spills are likely to occur and their drainage points must be clearly identified in the BMP3 plan. Employees shall be made aware of response procedures, including material handling and storage requirements, and should have access to appropriate cleanup equipment.

(v) - Sediment and Erosion Control The BMP3 must identify activities that present a potential for significant soil erosion and measures taken to control such erosion.

(vi) - Management of Runoff The permittee must describe existing storm water controls found at the facility and any additional measures that can be implemented to improve the prevention and control of polluted storm water. Examples include: vegetative swales, reuse of collected storm water, infiltration trenches, and detention ponds.

6. Best Management Practices & Pollution Prevention Committee:

A Best Management Practices Committee (Committee) should be established to direct or assist in the implementation of the BMP3 plan. The Committee should be comprised of individuals within the plant organization who are responsible for developing, implementing, monitoring of success, and revision of the BMP3 plan. The activities and responsibilities of the Committee should address all aspects of the facility's BMP3 plan. The scope of responsibilities of the Committee should be described in the plan.

7. Employee Training:

Employee training programs shall inform appropriate personnel of the components & goals of the BMP3 plan and shall describe employee responsibilities for implementing the plan. Training shall address topics such as good housekeeping, materials management, recordkeeping and reporting, spill prevention & response, as well as specific waste reduction practices to be employed. The plan shall identify periodic dates for such training.

8. Plan Development & Implementation:

The BMP3 plan shall be developed or updated 6 months prior to commercial operation and implemented upon commercial operation, unless any later dates are specified by the Department.

9. Plan Review & Modification:

If following review by the Permit Issuing Authority, or authorized representative, the BMP3 plan is determined insufficient, he/she may notify the permittee that the BMP3 plan does not meet one or more of the minimum requirements of this Part. Upon such notification from the Permit Issuing Authority, or authorized representative, the permittee shall amend the plan and shall submit to the Permit Issuing Authority a written certification that the requested changes have been made. Unless otherwise provided by the Permit Issuing Authority, the permittee shall have 30 days after such notification to make the changes necessary.

The permittee shall modify the BMP3 plan whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to surface waters of the State or if the plan proves to be ineffective in achieving the general objectives of reducing pollutants in wastewater or storm water discharges. Modifications to the plan may be reviewed by Permit Issuing Authority in the same manner as described above.

10. Annual Site Compliance Evaluation:

Qualified personnel must conduct site compliance evaluations at appropriate intervals, but at least once a year. Compliance evaluations shall include:

- inspection of storm water drainage areas for evidence of pollutants entering the drainage system;
- evaluation of the effectiveness of BMP's;
- observations of structural measures, sediment controls, and other storm water BMP's to ensure proper operation
- revision of the plan as needed within 2 weeks of the inspection, and implementation of any necessary changes within 12 weeks of the inspection; and

- preparation of a report summarizing inspection results and follow-up actions, identifying the date of inspection and personnel who conducted the inspection.

The inspection report shall be signed by the plant environmental engineering staff and plant management and kept with the BMP3 plan.

11. Recordkeeping and Internal Reporting:

For at least one year after the expiration of this permit, the permittee shall record and maintain records of spills, leaks, inspections, and maintenance activities. For spills and leaks, records should include information such as the date and time of the incident, weather conditions, cause, and resulting environmental problems.

E. Specific Conditions Related to Existing Manufacturing, Commercial, Mining, and Silviculture Wastewater Facilities or Activities

1. Existing manufacturing, commercial, mining, and silvicultural wastewater facilities or activities that discharge into surface waters shall notify the Department as soon as they know or have reason to believe: [62-620.624(1)]

   (a) That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following levels
   (1) One hundred micrograms per liter,
   (2) Two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter for antimony, or
   (3) Five times the maximum concentration value reported for that pollutant in the permit application.

   (b) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following levels
   (1) Five hundred micrograms per liter,
   (2) One milligram per liter for antimony, or
   (3) Ten times the maximum concentration value reported for that pollutant in the permit application.

VIII. General Conditions

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit are binding and enforceable pursuant to Chapter 403, Florida Statutes. Any permit noncompliance constitutes a violation of Chapter 403, Florida Statutes, and is grounds for enforcement action, permit termination, permit revocation and reissuance, or permit revision. [62-620.610(1), 11-29-94]

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviations from the approved drawings, exhibits, specifications or conditions of this permit constitutes grounds for revocation and enforcement action by the Department. [62-620.610(2), 11-29-94]

3. As provided in Subsection 403.087(6), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor authorize any infringement of federal, state, or local laws or regulations. This permit is not

a waiver of or approval of any other Department permit or authorization that may be required for other aspects of the total project which are not addressed in this permit. [62-620.610(3), 11-29-94]

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title. [62-620.610(4), 11-29-94]

5. This permit does not relieve the permittee from liability and penalties for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted source; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department. The permittee shall take all reasonable steps to minimize or prevent any discharge, reuse of reclaimed water, or residuals use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. [62-620.610(5), 11-29-94]

6. If the permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee shall apply for and obtain a new permit. [62-620.610(6), 11-29-94]

7. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control, and related appurtenances, that are installed and used by the permittee to achieve compliance with the conditions of this permit. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to maintain or achieve compliance with the conditions of the permit. [62-620.610(7), 11-29-94]

8. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit revision, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. [62-620.610(8), 11-29-94]

9. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, including an authorized representative of the Department and authorized EPA personnel, when applicable, upon presentation of credentials or other documents as may be required by law, and at reasonable times, depending upon the nature of the concern being investigated, to

   a. Enter upon the permittee's premises where a regulated facility, system, or activity is located or conducted, or where records shall be kept under the conditions of this permit;
   b. Have access to and copy any records that shall be kept under the conditions of this permit;
   c. Inspect the facilities, equipment, practices, or operations regulated or required under this permit; and
   d. Sample or monitor any substances or parameters at any location necessary to assure compliance with this permit or Department rules. [62-620.610(9), 11-29-94]

10. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data, and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except as such use is proscribed by Section 403.111, Florida Statutes, or Rule 62-620..302, Florida Administrative Code. Such evidence shall only be used to the extent that it is consistent with the Florida Rules of Civil Procedure and applicable evidentiary rules. [62-620.610(10), 11-29-94]

11. When requested by the Department, the permittee shall within a reasonable time provide any information required by law which is needed to determine whether there is cause for revising, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also provide to the Department upon request copies of records required by this permit to be kept. If the permittee becomes aware

    of relevant facts that were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be promptly submitted or corrections promptly reported to the Department. [62-620.610(11), 11-29-94]

12. Unless specifically stated otherwise in Department rules, the permittee, in accepting this permit, agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard. [62-620.610(12), 11-29-94]

13. The permittee, in accepting this permit, agrees to pay the applicable regulatory program and surveillance fee in accordance with Rule 62-4.052, F.A.C. [62-620.610(13), 11-29-94]

14. This permit is transferable only upon Department approval in accordance with Rule 62-620.340, F.A.C. The permittee shall be liable for any noncompliance of the permitted activity until the transfer is approved by the Department. [62-620.610(14), 11-29-94]

15. The permittee shall give the Department written notice at least 60 days before inactivation or abandonment of a wastewater facility and shall specify what steps will be taken to safeguard public health and safety during and following inactivation or abandonment. [62-620.610(15), 11-29-94]

16. The permittee shall apply for a revision to the Department permit in accordance with Rules 62-620.300, 62.420 or 62.620.450, F.A.C., as applicable, at least 90 days before construction of any planned substantial modifications to the permitted facility is to commence or with Rule 62-620.300 for minor modifications to the permitted facility. A revised permit shall be obtained before construction begins except as provided in Rule 62-620.300, F.A.C. [62-620.610(16), 11-29-94]

17. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The permittee shall be responsible for any and all damages which may result from the changes and may be subject to enforcement action by the Department for penalties or revocation of this permit. The notice shall include the following information:

    a. A description of the anticipated noncompliance;
    b. The period of the anticipated noncompliance, including dates and times; and
    c. Steps being taken to prevent future occurrence of the noncompliance.
    [62-620.610(17), 11-29-94]

18. Sampling and monitoring data shall be collected and analyzed in accordance with Rule 62-4.246, Chapter 62-160 and 62-601, F.A.C., and 40 CFR 136, as appropriate.

    a. Monitoring results shall be reported at the intervals specified elsewhere in this permit and shall be reported on a Discharge Monitoring Report (DMR), DEP Form 62-620.910(10).
    b. If the permittee monitors any contaminant more frequently than required by the permit, using Department approved test procedures, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.
    c. Calculations for all limitations which require averaging of measurements shall use an arithmetic mean unless otherwise specified in this permit.
    d. Any laboratory test required by this permit for domestic wastewater facilities shall be performed by a laboratory that has been certified by the Department of Health and Rehabilitative Services (DHRS) under Chapter 10D41, F.A.C., to perform the test. In domestic wastewater facilities, on-site tests for dissolved oxygen, pH, and total chlorine residual shall be performed by a laboratory certified to test for those parameters or under the direction of an operator certified under Chapter 61E12-41, F.A.C.
    e. Under Chapter 62-160, F.A.C., sample collection shall be performed by following the protocols outlined in "DEP Standard Operating Procedures for Laboratory Operations and Sample Collection Activities" (DEP-QA-001/92). Alternatively, sample collection may be performed by an organization who has an approved Comprehensive Quality Assurance Plan (CompQAP) on file with the Department. The CompQAP shall be approved for collection of samples from the required matrices and for the required tests. [62-620.610(18), 11-29-94]

19. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule detailed elsewhere in this permit shall be submitted no later than 14 days following each schedule date. [62-620.610(19), 11-29-94]

20. The permittee shall report to the Department any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain: a description of the noncompliance and its cause; the period of noncompliance including exact dates and time, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

    a. The following shall be included as information which must be reported within 24 hours under this condition:

        (1) Any unanticipated bypass which causes any reclaimed water or the effluent to exceed any permit limitation or results in an unpermitted discharge,
        (2) Any upset which causes any reclaimed water or the effluent to exceed any limitation in the permit, - 1000 gallons
        (3) Violation of a maximum daily discharge limitation for any of the pollutants specifically listed in the permit for such notice, and
        (4) Any unauthorized discharge to surface or ground waters.

Does not apply

    b. If the oral report has been received within 24 hours, the noncompliance has been corrected, and the noncompliance did not endanger health or the environment, the Department shall waive the written report. [62-620.610(20), 11-29-94]

21. The permittee shall report all instances of noncompliance not reported under Conditions VIII.17 and .19 of this permit at the time monitoring reports are submitted. This report shall contain the same information required by Condition VIII.20 of this permit. [62-620.610(21), 11-29-94]

22. Bypass Provisions.

    a. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless the permittee affirmatively demonstrates that:

       (1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and
       (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
       (3) The permittee submitted notices as required under Condition VIII.22.b. of this permit.

    b. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Department, if possible at least 10 days before the date of the bypass. The permittee shall submit notice of an unanticipated bypass within 24 hours of learning about the bypass as required in Condition VIII. 20. of this permit. A notice shall include a description of the bypass and its cause; the period of the bypass, including exact dates and times; if the bypass has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the bypass.

    c. The Department shall approve an anticipated bypass, after considering its adverse effect, if the permittee demonstrates that it will meet the three conditions listed in Condition VIII.22. a. of this permit.

    d. A. permittee may allow any bypass to occur which does not cause reclaimed water or effluent limitations to be exceeded if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provision of Condition VIII.22. a. through c. of this permit.
    [62-620.610(22), 11-29-94]

23. Upset Provisions

    a. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed contemporaneous operating logs, or other relevant evidence that:

       (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
       (2) The permitted facility was at the time being properly operated;
       (3) The permittee submitted notice of the upset as required in Condition VIII. 20. of this permit; and
       (4) The permittee complied with any remedial measures required under Condition VIII.5. of this permit.

    b. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.
    c. Before an enforcement proceeding is instituted, no representation made during the Department review of a claim that noncompliance was caused by an upset is final agency action subject to judicial review.
    [62-620.610(23),11-29-94]

PERMITTEE:
Seminole Electric Cooperative, Inc.
Palatka Plant
Post Office Box 272000
Tampa, Florida 33688-2000

PERMIT NUMBER: FL0036498 Major
ISSUANCE DATE: January 7, 2000
EXPIRATION DATE: January 6, 2005

Executed in Tallahassee, Florida.

STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL PROTECTION

Mimi Drew

Mimi Drew
Director
Division of Water Resource Management

2600 Blair Stone Road
Tallahassee, FL 32399-2400
(850) 487-1855

B Other Limitations and Monitoring and Reporting Requirements:

1. The approved analytical methods and corresponding Department established MDL (method detection limit) and PQL (practical quantification limit) are listed for the following parameters:

Parameter	EPA Method	MDL (ug/l)	PQL (ug/l)
Arsenic	206.2/200.7	1.0/3.2	4.0/10.0
Beryllium	200.7/210.2	1.0/1.0	5.0/5.0
Cadmium	213.2/200.7	0.02/0.71	0.08/5.0
Total Chromium	218.2/200.7	1.0/2.1	4.0/10.0
Copper	220.2/200.7/220.1	1.0/6.0/15.0	10.0/25.0/50.0
Cyanide	335.3/335.2	8.8/10.0	10.0/16.0
Iron	236.2/200.7/236.1	2.0/18/30.0	10.0/50.0/100.0
Lead	239.2/200.7	1.0/1.5	4.0/5.0
Mercury	245.1/245.2	0.2/0.2	0.5/0.5
Nickel	200.7/249.1	10.0/20.0	50.0/50.0
Selenium	270.3/200.7/270.2	2.0/2.0/3.3	5.0/5.0/10.0
Silver	272.2/200.7	0.10/0.10	0.50/0.50
Zinc	289.1/200.7	15.0/5.9	15.0/20.0
Oil & Grease	1664	1800	5000
Total Residual Oxidant	330.1/330.5/330.4	10.0/10.0/10.0	30.0/30.0/30.0

The MDLs and PQLs listed above shall constitute the minimum reporting levels for the life of the permit. The Department shall not accept results for which the laboratory's MDLs or PQLs are greater than those listed above. Unless otherwise specified, sample results shall be reported as follows:

When the analytical results are below method detection or practical quantification limits, the permittee shall report the analytical results in accordance with the instructions on the applicable discharge monitoring report (DMR).

2. Monitoring results obtained for each calendar month shall be summarized for that month and reported on a Discharge Monitoring Report (DMR), Form 62-620.910(10), postmarked no later than the 28th day of the month following the completed calendar month. For example, data for January shall be submitted by February 28. Signed copies of the DMR shall be submitted to the address specified below:

Florida Department of Environmental Protection
Mail Station 3551
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

If no discharge occurs during the reporting period, sampling requirements of this permit do not apply. The statement "No discharge" shall be written on the DMR form. If, during the time period of this permit, the facility ceases to discharge, the Department shall be notified immediately upon cessation of discharge. Such notification shall be in writing.

3. Unless specified otherwise in this permit, all other reports and notifications required by this permit, including twenty-four hour notifications, shall be submitted to or reported to, as appropriate, the Department's Northeast District Office at the address specified below:

   Florida Department of Environmental Protection
   Northeast District
   Suite 2008, 7825 Baymeadows Way
   Jacksonville, FL 32256
   Phone Number (904) 448-4300

4. The discharge of metal cleaning waste to surface waters is not authorized by this permit. Metal cleaning waste is any wastewater resulting from cleaning , with or without chemical cleaning compounds any metal process equipment including , but not limited to, boiler tube cleaning, boiler fireside cleaning , and air preheater cleaning. For clarification, waterborne residues derived from cleaning any metal process equipment are considered metal cleaning waste. Other unauthorized discharges includes the discharge of construction runoff.

5. The permittee shall not store coal , soil, or other similar erodable materials in a manner in which runoff is uncontrolled, nor conduct construction activities in a manner which produces uncontrolled runoff unless such uncontrolled runoff has been specifically approved by the Department. "Uncontrolled shall mean without a sedimentation basin or other controls approved by the Department.

6. Flush water used to remove ash adhering to the boiler tubes after a unit is taken off-line (i.e., non-chemical boiler flush water) may be discharged to the bottom ash transport water system and the low volume wastewater treatment facility prior to final discharge via Outfall D-001.

   Intake screen backwash may be discharged without limitation or monitoring requirements.

7. In order to determine compliance with the discharge limitations specified in Section I.A of this permit sampling results shall be calculated and reported as follows:

   Daily Average Value - the average of all sampling results for a parameter for a single day.

   Monthly Average Value - the average of all daily average values for a monthly period.

   Instantaneous Value - the value of a single sampling result taken at any given time or for composite samples the value of a single composite sample result.

   When only one sample is required to be taken per day then the value of that sampling result shall be the daily average value. Likewise for weekly and monthly averages when only one sample is taken during the week or month, respectively.

8. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

9. There shall be no discharge of floating debris, scum, oil, or other matter in such amounts as to form nuisances or produce color, odor, taste, turbidity, or other conditions in such degree as to create a nuisance or otherwise interfere with the beneficial use of the receiving waters in accordance with FAC 62-302.500(1)(a) and 62-302.530(50)(b). Any such discharges to water of the State shall be reported to the Department when submitting DMR's.

10.4.4 NPDES Multi-Sector Stormwater Permit

The following pages contain the NPDES Multi-Sector General Stormwater Permit and the associated Stormwater Pollution Plan.

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David Struhs
Secretary

April 20, 2001

Michael P. Opalinski
Seminole Electric Cooperative, Inc.
P.O. Box 272000
Tampa, FL 33688-2000

RECEIVED [illegible] 0 2001

RE: Facility ID: FLR05B869
Seminole Units 1 & 2
890 North Highway 17
Palatka, FL 32177

Dear Applicant:

The Florida Department of Environmental Protection has received your *Notice of Intent to Use Generic Permit for Multi-Sector Generic Permit for Stormwater Discharge Associated with Industrial Activity* (NOI) for the facility referenced above, but will not be able to process the NOI until the information indicated below is provided. **You will not be covered under the generic permit until we receive the missing information and process your NOI.**

Your facility identification number is FLR05B869. Please make reference to this number on all future correspondence including any checks made out to the Department.

PRINT the correct information to the right of each item listed below. Then print your name and date, SIGN the certification statement, and return this letter immediately to:

NPDES Stormwater Notices Center, MS #2510
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Discharge Information: Stormwater discharges through ditches to unamed wetland areas.

Certification: I certify under penalty of law that is document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Name: Michael P. Opalinski

Signature: M. P. Opalinski Date: May 8, 2001

Upon receipt of the above information, your NOI will be processed and a letter confirming permit coverage will be sent. If you have any questions concerning this letter, please contact the NPDES Stormwater Notices Center at (866) 336-6312 or (850) 297-1232.

10.4.5 Title V Permit 1070025-001-AV and PSD Permit FL-018(A)

The following pages contains the Title V Permit for SGS Units 1 and 2.

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

NOTICE OF FINAL TITLE V AIR OPERATION PERMIT

In the Matter of an
Application for Permit Renewal:

Michael P. Opalinski
Vice President of Technical Services
Seminole Electric Cooperative, Inc.
Post Office Box 272000
Tampa, Florida 33688

FINAL Permit Project No.: 1070025-002-AV
Seminole Generating Station
Putnam County

Enclosed is the FINAL Permit, No. 1070025-002-AV. The purpose is for the renewal of the Title V Air Operation Permit No. 1070025-001-AV, issued on January 14, 2000. The facility is located in Putnam County. This permit renewal is issued pursuant to Chapter 403, Florida Statutes (F.S.). There were no comments received from Region 4, U.S. EPA, regarding the PROPOSED Permit.

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Legal Office; and, by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 (thirty) days from the date this Notice is filed with the Clerk of the Department.

An electronic version of this permit renewal has been posted on the Division of Air Resource Management's world wide web site for the United States Environmental Protection Agency (U.S. EPA) Region 4 office's review. The web site address is:

http://www.dep.state.fl.us/air/eproducts/airpermit/AirSearch.asp

Executed in Tallahassee, Florida.

Trina L. Vielhauer
Chief
Bureau of Air Regulation

TLV/ch

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF FINAL TITLE V AIR OPERATION PERMIT (including the FINAL Determination and the FINAL Permit) was sent by certified mail before the close of business on 12/28/04 to the person(s) listed or as otherwise noted:

Michael Opalinski, Seminole Electric Cooperative, Inc.

The undersigned duly designated deputy agency clerk hereby certifies that a copy of this NOTICE OF FINAL TITLE V AIR OPERATION PERMIT was sent by U.S. Mail before the close of business on 12/28/04 to the person(s) listed or as otherwise noted:

Thomas Davis, P.E., ECT, Inc.
Mike Roddy, Seminole Electric
USEPA, Region 4 (INTERNET E-mail Memorandum)
Chris Kirts, P.E., FDEP, NED
Jim Pennington, P.E., FDEP-DARM

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52(7), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Patricia J. Smiley 12/28/04
(Clerk) (Date)

FINAL Determination

Title V Air Operation Permit Renewal
FINAL Permit No.: 1070025-002-AV
Seminole Electric Cooperative, Inc.
Seminole Generating Station

I. Comment(s).

No comments were received from the USEPA during their 45 day review period of the PROPOSED Permit.

II. Conclusion.

In conclusion, the permitting authority hereby issues the FINAL Permit.

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

Permittee:
Seminole Electric Cooperative, Inc.
16313 North Dale Mabry Highway
Tampa, Florida 33618

FINAL Permit No.: 1070025-002-AV
Facility ID No.: 1070025
SIC Nos.: 49, 4911
Project: Title V Air Operation Permit Renewal

The purpose of this permit is to renew Title V Air Operation Permit, No. **1070025-001**-AV, for the operation of the Seminole Generating Station. This facility is located east of U.S. Highway 17, approximately seven miles north of Palatka, Putnam County.

This Title V air operation permit renewal is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213, and 62-214. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

Referenced attachments made a part of this permit:
Appendix U-1, List of Unregulated Emissions Units and/or Activities
Appendix I-1, List of Insignificant Emissions Units and/or Activities
Appendix TV-4, Title V Conditions (version dated 02/12/02)
APPENDIX SS-1, STACK SAMPLING FACILITIES (version dated 10/07/96)
TABLE 297.310-1, CALIBRATION SCHEDULE (version dated 10/07/96)
FIGURE 1 - SUMMARY REPORT-GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE REPORT (40 CFR 60; July 1996)
Appendix 40 CFR 60 Subpart A - General Provisions (version dated 07/01/03)
Phase II Acid Rain Application/Compliance Plan received 06/08/04
Phase II NO_X Compliance Plan dated 06/29/04.
Attachment Seminole Electric Cooperative: Protocol for Startup and Shutdown
Appendix CAM
Seminole Electric Cooperative, Inc.: Support Systems Operation Manual Plant Practice Section

Effective Date: January 1, 2005
Renewal Application Due Date: July 5, 2009
Expiration Date: December 31, 2009

Michael G. Cooke, Director
Division of Air Resource Management

MGC/jkp/ch

The coal receiving, storage and transfer systems at the coal storage yard support the operation of the two power boilers. Particulate matter emissions are controlled at the "as-received transfer tower", the "as-fired transfer tower", and the conveyors to the silos by fabric filter systems. Water sprays, full enclosures or partial enclosures are also utilized, where appropriate. The emissions unit is regulated under NSPS - 40 CFR 60, Subpart Y, Standards of Performance for Coal Preparation Plants, adopted and incorporated by reference in Rule 62-204.800(7), F.A.C.; Prevention of Significant Deterioration (PSD); Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT) Determination, dated June 15, 1979. The coal storage yard began commercial operation in 1985.

The limestone handling and storage system consists of a limestone unloading facility where particulate matter emissions are controlled by a panel filter, a limestone handling and storage system which utilizes a partial enclosure to control particulate matter emissions. In the FGD sludge processing system particulate emissions, which originate from the transfer of quicklime and flyash from both truck and rail delivery, are controlled by the use of bag house filters. Scrubbers are also utilized to control particulate emissions in the FGD sludge processing building. The emissions unit is regulated under Prevention of Significant Deterioration (PSD); Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT) Determination, dated June 15, 1979.

For purposes of periodic monitoring for the pollutants SO_2, NO_X, and opacity, the permittee will utilize continuous emission monitors, which are otherwise required by the Acid Rain program and/or 40 CFR Part 60.

Also included in this permit are miscellaneous unregulated/insignificant emissions units and/or activities.

Based on the Title V permit renewal application received July 2, 2004, this facility is a major source of hazardous air pollutants (HAPs).

Section I. Facility Information.

Subsection A. Facility Description.

This facility consists of two 714.6 megawatt, electric, coal fired steam electric generators; a coal handling and storage system; a limestone unloading, handling and storage system; a flue gas desulfurization (FGD) sludge stabilization system; and a rail car maintenance facility.

Also included in this permit are miscellaneous unregulated/insignificant emissions units and/or activities.

Based on the Title V Air Operation Permit Renewal application received July 2, 2004, this facility is a major source of hazardous air pollutants (HAPs).

Subsection B. Summary of Emissions Unit ID No(s). and Brief Description(s).

E.U. ID No.	Brief Description
-001	Steam Electric Generator No. 1
-002	Steam Electric Generator No. 2
-004	Coal Storage Yard
-005	Limestone and FGD Sludge Handling and Storage

Unregulated Emissions Units and/or Activities

-006	One or more emergency generators not subject to the Acid Rain Program
-007	One or more heating units and general purpose internal combustion engines not subject to the Acid Rain Program
-008	General plant fugitives including plant-wide abrasive blasting, painting, moveable abrasive blast material bin, soil borrow pit, and vehicular travel on unpaved roads.

Please reference the Permit No., Facility ID No., and appropriate Emissions Unit(s) ID No(s). on all correspondence, test report submittals, applications, etc.

Subsection C. Relevant Documents.

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action.

These documents are provided to the permittee for information purposes only:
Table 1-1, Summary of Air Pollutant Standards and Terms
Table 2-1, Summary of Compliance Requirements
Appendix A-1, Abbreviations, Acronyms, Citations, and Identification Numbers
Appendix H-1, Permit History

These documents are on file with the permitting authority:
Title V Permit Renewal Application received July 2, 2004.
Statement of Basis
Proposed Permit was posted for EPA Review on November 12, 2004.

Section II. Facility-wide Conditions.

The following conditions apply facility-wide:

1. APPENDIX TV-4, TITLE V CONDITIONS, is a part of this permit.
{Permitting note: APPENDIX TV-4, TITLE V CONDITIONS, is distributed to the permittee only. Other persons requesting copies of these conditions shall be provided a copy when requested or otherwise appropriate.}

2. Not federally enforceable. General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited. The permittee shall not cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor.
[Rule 62-296.320(2), F.A.C.]

3. General Particulate Emission Limiting Standards. General Visible Emissions Standard.
Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C.
[Rules 62-296.320(4)(b)1. & 4., F.A.C.]

4. Prevention of Accidental Releases (Section 112(r) of CAA).
a. The permittee shall submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center when, and if, such requirement becomes applicable. Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent to:

RMP Reporting Center
Post Office Box 1515
Lanham-Seabrook, Maryland 20703-1515
Telephone: 301/429-5018

and,
b. The permittee shall submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C.
[40 CFR 68]

5. Unregulated Emissions Units and/or Activities. Appendix U-1, List of Unregulated Emissions Units and/or Activities, is a part of this permit.
[Rule 62-213.440(1), F.A.C.]

6. Insignificant Emissions Units and/or Activities. Appendix I-1, List of Insignificant Emissions Units and/or Activities, is a part of this permit.
[Rules 62-213.440(1), 62-213.430(6) and 62-4.040(1)(b), F.A.C.]

7. General Pollutant Emission Limiting Standards. Volatile Organic Compounds Emissions or Organic Solvents Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.
[Rule 62-296.320(1)(a), F.A.C.]

8. Emissions of Unconfined Particulate Matter. Pursuant to Rules 62-296.320(4)(c)1., 3. & 4., F.A.C., reasonable precautions to prevent emissions of unconfined particulate matter at this facility include the following requirements (see Condition 57. of APPENDIX TV-4, TITLE V CONDITIONS):

The following requirements are "not federally enforceable":

a. Chemical or water application to unpaved roads and unpaved yard areas;
b. Paving and maintenance of roads, parking areas and plant grounds;
c. Landscaping or planting of vegetation;
d. Confining abrasive blasting where possible; and,
e. Other techniques as necessary.

[Rule 62-296.320(4)(c)2., F.A.C.; and, proposed by the applicant in the renewal Title V permit application received July 2, 2004.]

9. When appropriate, any recording, monitoring, or reporting requirements that are time-specific shall be in accordance with the effective date of the permit, which defines day one.
[Rule 62-213.440, F.A.C.]

10. Statement of Compliance. The annual statement of compliance pursuant to Rule 62-213.440(3)(a)2., F.A.C., shall be submitted to the Department and EPA within 60 (sixty) days after the end of the calendar year using DEP Form No. 62-213.900(7), F.A.C.
[Rules 62-213.440(3) and 62-213.900, F.A.C.]

{Permitting Note: This condition implements the requirements of Rules 62-213.440(3)(a)2. & 3., F.A.C. (see Condition 51. of APPENDIX TV-4, TITLE V CONDITIONS.}"

11. The permittee shall submit all compliance related notifications and reports required of this permit to the Department's Northeast District office:

Department of Environmental Protection, Northeast District Office
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256-7590
Telephone: 904/807-3300; Fax: 904/448-4319

12. Any reports, data, notifications, certifications, and requests required to be sent to the United States Environmental Protection Agency, Region 4, should be sent to:

United States Environmental Protection Agency, Region 4
Air, Pesticides & Toxics Management Division
Air and EPRCA Enforcement Branch
Air Enforcement Section
61 Forsyth Street
Atlanta, Georgia 30303
Telephone: 404/562-9155; Fax: 404/562-9163

13. Certification by Responsible Official (RO). In addition to the professional engineering certification required for applications by Rule 62-4.050(3), F.A.C., any application form, report, compliance statement, compliance plan and compliance schedule submitted pursuant to Chapter 62-213, F.A.C., shall contain a certification signed by a responsible official that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Any responsible official who fails to submit any required information or who has submitted incorrect information shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary information or correct information.
[Rule 62-213.420(4), F.A.C.]

Section III. Emissions Unit(s) and Conditions.

Subsection A. This section addresses the following emissions units.

E.U. ID No.	Brief Description
-001	Steam Electric Generator No. 1
-002	Steam Electric Generator No. 2

Steam Electric Generator Nos. 1 and 2 are coal fired utility, dry bottom wall-fired boilers, each having a maximum generator rating of 714.6 megawatts, electric. The maximum heat input to each emissions unit is 7,172 million Btu per hour. Steam Electric Generator Nos. 1 and 2 are each equipped with an electrostatic precipitator (ESP) to control particulate matter, a wet limestone flue gas desulfurization (FGD) unit to control sulfur dioxide, and low NO_X burners and low excess-air firing to control nitrogen oxides.

{Permitting note(s): IMPORTANT REGULATORY CLASSIFICATIONS - The emissions units are regulated under Acid Rain, Phase II and Phase I; NSPS - 40 CFR 60, Subpart Da, Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978, adopted and incorporated by reference in Rule 62-204.800(7), F.A.C.; Rule 212.400(5), F.A.C., Prevention of Significant Deterioration (PSD); and Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT) Determination, dated August 9, 1979. Steam Electric Generator No. 2 began commercial operation in 1984 and Steam Electric Generator No. 1 began commercial operation in 1985. Units 1 and 2 are subject to CAM for monitoring controlled emissions of particulate matter. Units 1 and 2 are not subject to CAM for controlled emissions of SO_2 because CEMS are used for continuous compliance. Units 1 and 2 are not subject to CAM for NO_X because there are no add-on control devices.}

The following specific conditions apply to the emissions unit(s) listed above:

{Permitting note: In addition to the requirements listed below, these emissions units are also subject to the standards and requirements contained in the Acid Rain Part of this permit (see Section IV).}

Essential Potential to Emit (PTE) Parameters

A.1. Permitted Capacity. The maximum operation heat input rate is as follows:

Emissions Unit No.	MMBtu/hr Heat Input
-001	7,172
-002	7,172

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

{Permitting note: The heat input limitations have been placed in each permit to identify the capacity of each unit for the purposes of confirming that emissions testing is conducted within 90 to 100 percent of the unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate emission limits and to aid in determining future rule applicability. Regular record keeping is not required for heat input. Instead the owner or operator is expected to determine heat input whenever emission testing is required, to demonstrate at what percentage of the rated capacity that the unit was tested. Rule 62-297.310(5), F.A.C., included in the permit, requires measurement of the process variables for emission tests. Such heat input determination may be based on measurements of fuel

consumption by various methods including but not limited to fuel flow metering or tank drop measurements, using the heat value of the fuel determined by the fuel vendor or the owner or operator, to calculate average hourly heat input during the test.}

A.2. Emissions Unit Operating Rate Limitation After Testing. See specific condition **A.47.**
[Rule 62-297.310(2), F.A.C.]

A.3. Methods of Operation. Fuel(s). The only fuels allowed to be fired are coal, coal with a maximum of 30 percent petroleum coke (by weight), No. 2 fuel oil, and on-specification used oil. The maximum weight of petroleum coke burned shall not exceed 186,000 pounds per hour (averaged over 24 hours), **see Specific Condition A.66.** On-specification used oil containing any quantifiable levels of PCBs can only be fired when the emissions unit is at normal operating temperatures.
[Rule 62-213.410(1), F.A.C.; 40 CFR 271.20(e)(3); and PSD-FL-018(A)]

{Permitting note: The fuel restrictions specified in Specific Condition **A.3.** apply to each emissions unit.}

A.4. Hours of Operation. These emissions units are allowed to operate continuously, i.e., 8,760 hours/year.
[Rule 62-210.200(PTE), F.A.C.]

Emission Limitations and Standards

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

{Permitting note: Unless otherwise specified, the averaging times for Specific Conditions **A.5.** through **A.17.** are based on the specified averaging time of the applicable test method.}

A.5. Particulate Matter. No owner or operator subject to the provisions of 40 CFR 60, Subpart Da shall cause to be discharged into the atmosphere from any affected facility any gases which contain particulate matter in excess of:
(1) 13 ng/J (0.03 lb/million Btu) heat input derived from the combustion of coal or fuel oil;
(2) 1 percent of the potential combustion concentration (99 percent reduction) when combusting solid fuel; and
(3) 30 percent of potential combustion concentration (70 percent reduction) when combusting liquid fuel.
[40 CFR 60.42a(a) and PSD-FL-018]

A.6. Particulate Matter. No owner or operator shall cause to be discharged into the atmosphere when combusting a coal and petroleum coke blend any gases which contain particulate matter in excess of 0.03 lb/million Btu heat input, and one percent of the potential combustion concentration (99 percent reduction). Compliance with the 0.03 lb/million Btu heat input emission limitation shall also constitute compliance with the 99 percent reduction requirement.
[PSD-FL-018(A)]

A.7. Visible Emissions. No owner or operator subject to the provisions of 40 CFR 60, Subpart Da shall cause to be discharged into the atmosphere from any affected facility any gases which exhibit greater

than 20 percent opacity (6 minute average), except for one 6-minute period per hour of not more than 27 percent opacity.
[40 CFR 60.42a(b)]

A.8. Sulfur Dioxide (Coal, Only). No owner or operator subject to the provisions of 40 CFR 60, Subpart Da shall cause to be discharged into the atmosphere from any affected facility which combusts coal any gases which contain sulfur dioxide in excess of:
(1) 520 ng/J (1.20 lb/million Btu) heat input and 10 percent of the potential combustion concentration (90 percent reduction), or
(2) 30 percent of the potential combustion concentration (70 percent reduction), when emissions are less than 260 ng/J (0.60 lb/million Btu) heat input.
[40 CFR 60.43a(a)(1) & (2); and, PSD-FL-018]

A.9. Sulfur Dioxide. No owner or operator subject to the provisions of 40 CFR 60, Subpart Da shall cause to be discharged into the atmosphere from any affected facility which combusts liquid fuel any gases which contain sulfur dioxide in excess of:
(1) 340 ng/J (0.80 lb/million Btu) heat input and 10 percent of the potential combustion concentration (90 percent reduction), or
(2) 100 percent of the potential combustion concentration (zero percent reduction), when emissions are less than 86 ng/J (0.20 lb/million Btu) heat input.
[40 CFR 60.43a(b)(1) & (2); and, PSD-FL-018]

A.10. Sulfur Dioxide. Compliance with the emission limitation and percent reduction requirements are both determined on a 30-day rolling average basis.
[40 CFR 60.43a(g)]

A.11. Sulfur Dioxide. When coal and fuel oil are combusted simultaneously, the applicable standard is determined by proration using the following formula:

$PS_{SO2} = X(340) + Y(520) / 100$

where:

PS_{SO2} is the prorated standard for sulfur dioxide when combusting coal and fuel oil simultaneously (ng/J heat input).

X is the percentage of total heat input derived from the combustion of fuel oil.

Y is the percentage of total heat input derived from the combustion of coal.
[PSD-FL-018]

A.12. Sulfur Dioxide. Stack emissions from Units 1 and 2 shall comply with the following standards when burning blends of coal and petroleum coke:

(1) Unit 1:
$E_{SO2} = [(\%C_{HI} / 100) * (P_S) * (1 - (\%R_O / 100))] + [(1 - (\%C_{HI} / 100)) * (0.74 \text{ lb } SO_2 / \text{MMBtu})]$

(2) Unit 2:
$E_{SO2} = [(\%C_{HI} / 100) * (P_S) * (1 - (\%R_O / 100))] + [(1 - (\%C_{HI} / 100)) * (0.72 \text{ lb } SO_2 / \text{MMBtu})]$

where:

E_{SO2} = allowable SO_2 emission rate; pounds per million Btu heat input (lb SO_2/MMBtu), 30-day rolling average.

$\%C_{HI}$ = percent of coal used on a heat input basis.

P_S = potential SO_2 combustion concentration (unwashed coal without emission control systems) as defined by NSPS Subpart Da; lb SO_2/MMBtu, 30-day rolling average.

$\%R_O$ = overall percent SO_2 reduction from Equation 19-21 of EPA Reference Method 19. Per NSPS Subpart Da, $\%R_O$ must not be less than 90%, 30-day rolling average.

0.74 = historical 2-year annual average SO_2 emission rate for Unit 1, lb/MMBtu.

0.72 = historical 2-year annual average SO_2 emission rate for Unit 2, lb/MMBtu.

Compliance with the lb/MMBtu heat input emission limitations and percent reduction requirement shall be determined on a 30-day rolling average basis.
[PSD-FL-018(A)]

A.13. Sulfur Dioxide. The petroleum coke sulfur content shall not exceed 7.0 percent by weight, dry basis.
[PSD-FL-018(A)]

A.14. Nitrogen Oxides. No owner or operator subject to the provisions of 40 CFR 60, Subpart Da shall cause to be discharged into the atmosphere from any affected facility any gases which contain nitrogen oxides in excess of the following emission limits, based on a 30-day rolling average.
(1) NO_X emissions limits. Bituminous coal emission limit for heat input: 260 ng/J (0.60 lb/million Btu); All other liquid fuels emission limit for heat input: 130 ng/J (0.30 lb/million Btu).
(2) NO_X reduction requirement. Solid fuels: 65 percent reduction of potential combustion concentration; Liquid fuels: 30 percent reduction of potential combustion concentration.
[40 CFR 60.44a(a)(1) & (2)]

A.15. Nitrogen Oxides. When coal and fuel oil are combusted simultaneously, the applicable standard is determined by proration using the following formula:

$PS_{NOX} = X(130) + Y(260) / 100$

where:

PS_{NOX} is the prorated standard for nitrogen oxides when combusting coal and fuel oil simultaneously (ng/J heat input).

X is the percentage of total heat input derived from the combustion of fuel oil.

Y is the percentage of total heat input derived from the combustion of coal.

[PSD-FL-018]

A.16. Nitrogen Oxides. Stack emissions from Units 1 and 2 shall comply with the following standards when burning blends of coal and petroleum coke:
(1) 0.60 lb/MMBtu heat input, and 35 percent of the potential combustion concentration (65 percent reduction). Compliance with the lb/MMBtu heat input emission limitation and the percent reduction requirement shall be determined on a 30-day rolling average basis. Compliance with the 0.60 lb/MMBtu heat input emission limitation shall also constitute compliance with the 65 percent reduction requirement; and
(2) 0.50 lb/MMBtu heat input determined on an annual average basis, when subject to the 40 CFR 76.8 Early Election Program for Group 1, Phase II Boilers or in any year when petroleum coke is burned.
[40 CFR 60.44a(a)(1) & (2) and PSD-FL-018(A)]

A.17. "On-Specification" Used Oil. Only "on-specification" used oil shall be fired in each unit. The quantity fired in each unit shall not exceed 500,000 gallons per calendar year. "On-specification" used oil is defined as used oil that meets the 40 CFR 279 (Standards for the Management of Used Oil) specifications listed below. Used oil that does not meet all of the following specifications is considered "off-specification" oil and shall not be fired.

CONSTITUENT / PROPERTY *	ALLOWABLE LEVEL
Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Total Halogens	1000 ppm maximum
Flash Point	100 °F minimum
PCBs	less than 50 ppm

* As determined by approved methods specified in EPA Publication SW-846 (Test Methods for Evaluating Solid Waste, Physical/Chemical Methods).
[40 CFR 279.11; and, Requested by the Applicant in the initial Title V application received June 17, 1996]

Excess Emissions

A.18. The opacity standards set forth in 40 CFR 60 shall apply at all times except during periods of startup, shutdown, malfunction and as otherwise provided in the applicable standard.
At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
[40 CFR 60.11(c) & (d)]

{Permitting note: The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of a NSPS, NESHAP, or Acid Rain program provision.}

A.19. Excess emissions resulting from malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.
[Rule 62-210.700(1), F.A.C.]

A.20. As necessary, the permittee will operate in accordance with the Procedures for Startup and Shutdown attached to this permit. The Procedures shall be used where applicable and where there is/are conflict with Specific Condition A.19.
[Rule 62-210.700(5), F.A.C.]

A.21. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.
[Rule 62-210.700(4), F.A.C.]

Monitoring of Operations

A.22. Determination of Process Variables.
(a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
(b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.
[Rule 62-297.310(5), F.A.C.]

Compliance Provisions

A.23. Compliance with the particulate matter emission limitation under 40 CFR 60.42a(a)(1) constitutes compliance with the percent reduction requirements for particulate matter under 40 CFR 60.42a(a)(2) and (3).
[40 CFR 60.46a(a)]

A.24. Compliance with the nitrogen oxides emission limitation under 40 CFR 60.44a(a)(1) constitutes compliance with the percent reduction requirements under 40 CFR 60.44a(a)(2).
[40 CFR 60.46a(b)]

A.25. The particulate matter emission standards under 40 CFR 60.42a and the nitrogen oxide standards under 40 CFR 60.44a apply at all times except during periods of startup, shutdown, or malfunction. The sulfur dioxide emission standards under 40 CFR 60.43a apply at all times except during periods of startup, shutdown, or when both emergency conditions exist and the procedures under 40 CFR 60.46a(d) are implemented.
[40 CFR 60.46a(c)]

A.26. During emergency conditions in the principle company, an affected facility with a malfunctioning flue gas desulfurization system may be operated if sulfur dioxide emissions are minimized by:
(1) Operating all operable flue gas desulfurization modules, and bringing back into operation any malfunctioned module as soon as repairs are completed,
(2) Bypassing flue gases around only those flue gas desulfurization system modules that have been taken out of operation because they were incapable of any sulfur dioxide emission reduction or which would have suffered significant physical damage if they had remained in operation.
[40 CFR 60.46a(d)(1) & (2)]

A.27. Compliance with the sulfur dioxide emission limitations and the percentage reduction requirements under 40 CFR 60.43a and the nitrogen oxides emissions limitations under 40 CFR 60.44a is based on the average emission rate for 30 successive boiler operating days. A separate performance test is completed at the end of each boiler operating day and a new 30 day average emission rate for both sulfur dioxide and nitrogen oxides and a new percent reduction for sulfur dioxide are calculated to show compliance with the standards.
[40 CFR 60.46a(e)]

A.28. Compliance is determined by calculating the arithmetic average of all hourly emission rates for SO_2 and NO_X for the 30 successive boiler operating days, except for data obtained during startup, shutdown, or malfunction (NO_X only), or emergency conditions (SO_2 only). Compliance with the percentage reduction requirement for SO_2 is determined based on the average inlet and average outlet SO_2 emissions rates for the 30 successive boiler operating days.
[40 CFR 60.46a(g)]

A.29. If the owner or operator has not obtained the minimum quantity of emission data as required under 40 CFR 60.47a, compliance of the affected facility with the emission requirements under 40 CFR 60.43a and 60.44a for the day on which the 30-day period ends may be determined by the Administrator following the applicable procedures in section 7 of Method 19.
[40 CFR 60.46a(h)]

Continuous Monitoring Requirements

A.30. Opacity. The owner or operator of an affected facility shall install, calibrate, maintain, and operate a continuous monitoring system, and record the output of the system, for measuring the opacity of emissions discharges to the atmosphere. If opacity interference due to water droplets exists in the stack (for example, from the use of a FGD system), the opacity is monitored upstream of the interference (at the inlet to the FGD system). If opacity interference is experienced at all locations (both at the inlet and outlet of the sulfur dioxide control system), alternate parameters indicative of the particulate matter control system's performance are monitored (subject to the approval of the Administrator).
[40 CFR 60.47a(a)]

A.31. Sulfur Dioxide. The owner or operator of an affected facility shall install, calibrate, maintain, and operate a continuous monitoring system, and record the output of the system, for measuring sulfur dioxide emissions as follows:
(1) Sulfur dioxide emissions are monitored at both the inlet and outlet of the sulfur dioxide control device.
(3) An "as fired" fuel monitoring system (upstream of coal pulverizers) meeting the requirements of Method 19 (appendix A) may be used to determine potential sulfur dioxide emissions in place of a

continuous sulfur dioxide emission monitor at the inlet to the sulfur dioxide control device as required by paragraph (1), above.
[40 CFR 60.47a(b)(1) & (3)]

A.32. Nitrogen Oxides. The owner or operator of an affected facility shall install, calibrate, maintain, and operate a continuous monitoring system, and record the output of the system, for measuring nitrogen oxides emissions discharged to the atmosphere.
[40 CFR 60.47a(c)]

A.33. The owner or operator of an affected facility shall install, calibrate, maintain, and operate a continuous monitoring system, and record the output of the system, for measuring the oxygen or carbon dioxide content of the flue gases at each location where sulfur dioxide or nitrogen oxides emissions are monitored.
[40 CFR 60.47a(d)]

A.34. The continuous monitoring systems required under specific conditions **A.31.**, **A.32.** and **A.33.** are operated and data recorded during all periods of operation at the affected facility including periods of startup, shutdown, malfunction, or emergency conditions, except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments.
[40 CFR 60.47a(e)]

A.35. The owner or operator shall obtain emission data for at least 18 hours in at least 22 out of 30 successive boiler operating days. If this minimum data requirement cannot be met with a continuous monitoring system, the owner or operator shall supplement emission data with other monitoring systems approved by the Administrator or the reference methods and procedures as described in 40 CFR 60.47a(h).
[40 CFR 60.47a(f)]

A.36. The 1-hour averages required under 40 CFR 60.13(h) are expressed in ng/J (lb/million Btu) heat input and used to calculate the average emission rates under 40 CFR 60.46a. The 1-hour averages are calculated using the data points required under 40 CFR 60.13(b). At least two data points must be used to calculate the 1-hour averages.
[40 CFR 60.47a(g)]

A.37. When it becomes necessary to supplement continuous monitoring system data to meet the minimum data requirements in 40 CFR 60.47a(f), the owner or operator shall use the reference methods and procedures as specified in this paragraph. acceptable alternative methods are given in 40 CFR 60.47a(j).
(1) Method 6 shall be used to determine the SO_2 concentration at the same location as the SO_2 monitor. Samples shall be taken at 60-minute intervals. The sampling time and sample volume for each sample shall be at least 20 minutes and 0.020 dscm (0.71 dscf). Each sample represents a 1-hour average.
(2) Method 7 shall be used to determine the NO_X concentration at the same location as the NO_X monitor. Samples shall be taken at 30-minute intervals. The arithmetic average of two consecutive samples represents a 1-hour average.
(3) The emission rate correction factor, integrated bag sampling and analysis procedure of Method 3B shall be used to determine the O_2 or CO_2 concentration at the same location as the O_2 or CO_2 monitor. Samples shall be taken for at least 30 minutes in each hour. Each sample represents a 1-hour average.

(4) The procedures in Method 19 shall be used to compute each 1-hour average concentration in ng/J (lb/million Btu) heat input.
[40 CFR 60.47a(h)]

A.38. The owner or operator shall use methods and procedures in this paragraph to conduct monitoring system performance evaluations under 40 CFR 60.13(c) and calibration checks under 40 CFR 60.13(d). Acceptable alternative methods and procedures are given in 40 CFR 60.47a(j).
(1) Methods 6, 7, and 3B, as applicable, shall be used to determine O_2, SO_2, and NO_X concentrations.
(2) SO_2 or NO_X (NO), as applicable, shall be used for preparing the calibration gas mixtures (in N_2, as applicable) under Performance Specification 2 of appendix B of 40 CFR 60.
(3) For affected facilities burning only fossil fuel, the span value for a continuous monitoring system for measuring opacity is between 60 and 80 percent and for a continuous monitoring system measuring nitrogen oxides firing solid fuel is 1,000 ppm.
(5) For affected facilities burning fossil fuel, alone or in combination with non-fossil fuel, the span value of the sulfur dioxide continuous monitoring system at the inlet to sulfur dioxide control device is 125 percent of the maximum estimated hourly potential emissions of the fuel fired, and the outlet of the sulfur dioxide control device is 50 percent of maximum estimated hourly potential emissions of the fuel fired.
[40 CFR 60.47a(i)(1), (2), (3), & (5)]

A.39. The owner or operator may use the following as alternatives to the reference methods and procedures specified in 40 CFR 60.47a.
(1) For Method 6, Method 6A or 6B (whenever Methods 6 and 3 or 3B data are used) or 6C may be used. Each Method 6B sample obtained over 24 hours represents 24 1-hour averages. If Method 6A or 6B is used under 40 CFR 60.47a(i), the conditions under 40 CFR 60.46(d)(1) apply (see specific condition **A.71.**); these conditions do not apply under 40 CFR 60.47a(h).
(2) For Method 7, Method 7A, 7C, 7D, or 7E may be used. If Method 7C, 7D, or 7E is used, the sampling time is 1 hour.
(3) For Method 3, Method 3A or 3B may be used if the sampling time is 1 hour.
(4) For Method 3B, Method 3A may be used.
[40 CFR 60.47a(j)]

Test Methods and Procedures

{Permitting note: Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

A.40. In conducting performance tests, the owner or operator shall use as reference methods and procedures the methods in appendix A of 40 CFR 60 or the methods and procedures as specified in 40 CFR 60.48a, except as provided in 40 CFR 60.8(b). 40 CFR 60.8(f) does not apply for SO_2 and NO_X. Acceptable alternative methods are given in 40 CFR 60.48a(e).
[40 CFR 60.48a(a)]

A.41. Particulate Matter. The owner or operator shall determine compliance with the particulate matter standard as follows:
(1) The dry basis F factor (O_2) procedures in Method 19 shall be used to compute the emission rate of particulate matter.
(2) For the particulate matter concentration, Method 5 shall be used at affected facilities without wet FGD systems and Method 5B shall be used after wet FGD systems.
(i) The sampling time and sample volume for each run shall be at least 120 minutes and

1.70 dscm (60 dscf). The probe and filter holder heating system in the sampling train may be set to provide an average gas temperature of no greater than 160 ± 14 °C (320 ± 25 °F).

(ii) For each particulate run, the emission rate correction factor, integrated or grab sampling and analysis procedures of Method 3B shall be used to determine the O_2 concentration. The O_2 sample shall be obtained simultaneously with, and at the same traverse points as, the particulate run. If the particulate run has more than 12 traverse points, the O_2 traverse points may be reduced to 12 provided that Method 1 is used to locate the 12 O_2 traverse points. If the grab sampling procedure is used, the O_2 concentration for the run shall be the arithmetic mean of all the individual O_2 concentrations at each traverse point.

(3) Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity, or,
(4) Use of a continuous opacity monitor is authorized to determine opacity.
[40 CFR 60.48a(b) and 40 CFR 60.11(b)]

A.42. Sulfur Dioxide. The owner or operator shall determine compliance with the sulfur dioxide standards as follows:
(1) The percent of potential SO_2 emissions ($\%P_S$) to the atmosphere shall be computed using the following equation:

$$\%P_S = [(100 - \%R_F)(100 - \%R_S)] / 100$$

where:
$\%P_S$ = percent of potential SO_2 emissions, percent.
$\%R_F$ = percent reduction from fuel pretreatment, percent.
$\%R_S$ = percent reduction by SO_2 control system, percent.

(2) The procedures in Method 19 may be used to determine percent reduction ($\%R_F$) of sulfur by such processes as fuel pretreatment (physical coal cleaning, hydrodesulfurization of fuel oil, ect.), coal pulverizers, and bottom and flyash interactions. This determination is optional.
(3) The procedures in Method 19 shall be used to determine the percent SO_2 reduction ($\%R_S$) of any SO_2 control system. Alternatively, a combination of an "as fired" fuel monitor and emission rates measured after the control system, following the procedures in Method 19, may be used if the percent reduction is calculated using the average emission rate from the SO_2 control device and the average SO_2 input rate from the "as fired" fuel analysis for 30 consecutive boiler operating days.
(4) The appropriate procedures in Method 19 shall be used to determine the emission rate.
(5) The continuous monitoring system in 40 CFR 60.47a(b) and (d) shall be used to determine the concentrations of SO_2 and CO_2 or O_2.
[40 CFR 60.48a(c)]

A.43. Nitrogen Oxides. The owner or operator shall determine compliance with the NO_X standard as follows:
(1) The appropriate procedures in Method 19 shall be used to determine the emission rate of NO_X.
(2) The continuous monitoring system in 40 CFR 60.47a(c) and (d) shall be used to determine the concentrations of NO_X and CO_2 or O_2.
[40 CFR 60.48a(d)]

A.44. The owner or operator may use the following as alternatives to the reference methods and procedures specified in 40 CFR 60.48a:
(1) For Method 5 or 5B, Method 17 may be used at facilities with or without wet FGD systems if the stack temperature at the sampling location does not exceed the average temperature of 160 °C (320 °F). Procedures 2.1 and 2.3 of Method 5B in 40 CFR 60, Appendix A may be used in Method 17 only if it is used after wet FGD systems. Method 17 shall not be used after wet FGD systems if the effluent is saturated or laden with water droplets.
(2) The F_C factor (CO_2) procedures in Method 19 may be used to compute the emission rate of particulate matter under the stipulations of 40 CFR 60.46(d)(1). The CO_2 shall be determined in the same manner as the O_2 concentration.
[40 CFR 60.48a(e)]

A.45. Compliance with the "on-specification" used oil requirements will be determined as follows:
(a) Analysis of a sample collected from each batch delivered for firing; or,
(b) The new batch delivery is from a collection site that has an acceptable analysis already on file with the facility and the analytical results are assumed by the facility for the batch.
(c) For quantification purposes, the highest concentration of each constituent as determined by any analysis is assumed to be the concentration of the constituent of the blended used oil.
See specific condition **A.17.**
[Rule 62-213.440(1)(b)2.a., F.A.C.]

A.46. Required Number of Test Runs. For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five day period allowed for the test, the Secretary or his or her designee may accept the results of the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is at least 20 percent below the allowable emission limiting standards.
[Rule 62-297.310(1), F.A.C.]

A.47. Operating Rate During Testing. Testing of emissions shall be conducted with the emissions unit operation at permitted capacity, which is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emissions unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.
[Rules 62-297.310(2) & (2)(b), F.A.C.]

A.48. Calculation of Emission Rate. The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule.
[Rule 62-297.310(3), F.A.C.]

A.49. Applicable Test Procedures.

(a) Required Sampling Time.

1. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.

2. Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:

a. For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation shall be equal to the duration of the batch cycle or operation completion time.

b. The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a proposed surrogate standard and an existing mass emission limiting standard.

c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.

(b) Minimum Sample Volume. Unless otherwise specified in the applicable rule, the minimum sample volume per run shall be 25 dry standard cubic feet. **See Specific Condition A.41.**

(c) Required Flow Rate Range. For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.

(d) Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, attached as part of this permit.

(e) Allowed Modification to EPA Method 5. When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube.

[Rule 62-297.310(4), F.A.C.]

A.50. Required Stack Sampling Facilities. When a mass emissions stack test is required, the permittee shall comply with the requirements contained in Appendix SS-1, Stack Sampling Facilities, attached to this permit.

[Rule 62-297.310(6), F.A.C.]

A.51. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

(a) General Compliance Testing.

2. For excess emission limitations for particulate matter specified in Rule 62-210.700, F.A.C., a compliance test shall be conducted annually while the emissions unit is operating under soot blowing conditions in each federal fiscal year during which soot blowing is part of normal emissions unit operation, except that such test shall not be required in any federal fiscal year in which a fossil fuel

steam generator does not burn liquid and/or solid fuel for more than 400 hours other than during startup.

3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:

a Did not operate; or

b. In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours.

4. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:

a. Visible emissions, if there is an applicable standard;

b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and

c. Each NESHAP pollutant, if there is an applicable emission standard.

5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.

9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.

(b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

(c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.; and, SIP approved]

Recordkeeping and Reporting Requirements

A.52. For sulfur dioxide, nitrogen oxides, and particulate matter emissions, the performance test data from the performance evaluation of the continuous monitors (including the transmissometer) are

submitted to the Administrator.
[40 CFR 60.49a(a)]

A.53. For sulfur dioxide and nitrogen oxides the following information is reported to the Administrator for each 24-hour period.
(1) Calendar date.
(2) The average sulfur dioxide and nitrogen oxides emission rates (ng/J or lb/million Btu) for each 30 successive boiler operating days, ending with the last 30-day period in the quarter; reasons for non-compliance with the standards; and, description of corrective actions taken.
(3) Percent reduction of the potential combustion concentration of sulfur dioxide for each 30 successive boiler operating days, ending with the last 30-day period in the quarter; reasons for non-compliance with the standard; and, description of corrective actions taken.
(4) Identification of the boiler operating days for which pollutant or dilutent data have not been obtained by an approved method for at least 18 hours of operation of the facility; justification for not obtaining sufficient data; and, description of corrective actions taken.
(5) Identification of the times when emissions data have been excluded from the calculation of average emission rates because of startup, shutdown, malfunction (NO_X only), emergency conditions (SO_2 only), or other reasons, and justification for excluding data other than startup, shutdown, malfunction, or emergency conditions.
(6) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.
(7) Identification of the times when hourly averages have been obtained based on manual sampling methods.
(8) Identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system.
(9) Description of any modifications to the continuous monitoring system which could affect the ability of the continuous monitoring system to comply with Performance Specifications 2 or 3.
[40 CFR 60.49a(b)]

A.54. If the minimum quantity of emission data as required by 40 CFR 60.47a is not obtained for any 30 successive boiler operating days, the following information obtained under the requirements of 40 CFR 60.46a(h) is reported to the Administrator for that 30-day period:
(1) The number of hourly averages available for outlet emission rates (n_o) and inlet emission rates (n_i) as applicable.
(2) The standard deviation of hourly averages for outlet emission rates (so) and inlet emission rates (si) as applicable.
(3) The lower confidence limit for the mean outlet emission rate (Eo*) and the upper confidence limit for the mean inlet emission rate (Ei*) as applicable.
(4) The applicable potential combustion concentration.
(5) The ratio of the upper confidence limit for the mean outlet emission rate (Eo*) and the allowable emission rate (Estd) as applicable.
[40 CFR 60.49a(c)]

A.55. If any standards under 40 CFR 60.43a are exceeded during emergency conditions because of control system malfunction, the owner or operator of the affected facility shall submit a signed statement:
(1) Indicating if emergency conditions existed and requirements under 40 CFR 60.46a(d) were met during each period, and
(2) Listing the following information:
    (i) Time periods the emergency condition existed;

(ii) Electrical output and demand on the owner or operator's electric utility system and the affected facility;
(iii) Amount of power purchased from interconnected neighboring utility companies during the emergency period;
(iv) Percent reduction in emissions achieved;
(v) Atmospheric emission rate (ng/J) of the pollutant discharged; and
(vi) Actions taken to correct control system malfunction.
[40 CFR 60.49a(d)]

A.56. If fuel pretreatment credit toward the sulfur dioxide emission standard under 40 CFR 60.43a is claimed, the owner or operator of the affected facility shall submit a signed statement:
(1) Indicating what percentage cleaning credit was taken for the calendar quarter, and whether the credit was determined in accordance with the provisions of 40 CFR 60.48a and Method 19 (appendix A); and
(2) Listing the quantity, heat content, and date each pretreated fuel shipment was received during the previous quarter; the name and location of the pretreatment facility; and the total quantity and total heat content of all fuels received at the affected facility during the previous quarter.
[40 CFR 60.49a(e)]

A.57. For any periods for which opacity, sulfur dioxide or nitrogen oxides emissions data are not available, the owner or operator of the affected facility shall submit a signed statement indicating if any changes were made in operation of the emission control system during the period of data unavailability. Operations of the control system and the affected facility during periods of data unavailability are to be compared with operation of the control system and the affected facility before and following the period of data unavailability.
[40 CFR 60.49a(f)]

A.58. The owner or operator of the affected facility shall submit a signed statement indicating whether:
(1) The required continuous monitoring system calibration, span, and drift checks or other periodic audits have or have not been performed as specified.
(2) The data used to show compliance was or was not obtained in accordance with approved methods and procedures of this part and is representative of plant performance.
(3) The minimum data requirements have or have not been met; or, the minimum data requirements have not been met for errors that were unavoidable.
(4) Compliance with the standards has or has not been achieved during the reporting period.
[40 CFR 60.49a(g)]

A.59. For the purposes of the reports required under 40 CFR 60.7, periods of excess emissions are defined as all 6-minute periods during which the average opacity exceeds the applicable opacity standards under 40 CFR 60.42a(b). Opacity levels in excess of the applicable opacity standard and the date of such excesses are to be submitted to the Administrator each calendar quarter.
[40 CFR 60.49a(h)]

A.60. The owner or operator of an affected facility shall submit the written reports required under this section and Subpart A to the Administrator for every calendar quarter. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.
[40 CFR 60.49a(i)]

A.61. In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall

be submitted in a quarterly report, if requested by the Department.
[Rule 62-210.700(6), F.A.C.]

A.62. Submit to the Department a written report of emissions in excess of emission limiting for each calendar quarter. The nature and cause of the excess emissions shall be explained. This report does not relieve the owner or operator of the legal liability for violations. All recorded data shall be maintained on file by the Source for a period of five years.
[Rule 62-213.440, F.A.C.]

A.63. Test Reports.
(a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test.
(b) The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.
(c) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:

1. The type, location, and designation of the emissions unit tested.
2. The facility at which the emissions unit is located.
3. The owner or operator of the emissions unit.
4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
8. The date, starting time and duration of each sampling run.
9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
10. The number of points sampled and configuration and location of the sampling plane.
11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
12. The type, manufacturer and configuration of the sampling equipment used.
13. Data related to the required calibration of the test equipment.
14. Data on the identification, processing and weights of all filters used.
15. Data on the types and amounts of any chemical solutions used.
16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
18. All measured and calculated data required to be determined by each applicable test procedure for each run.

19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.
21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rule 62-297.310(8), F.A.C.]

A.64. Records shall be kept of each delivery of "on-specification" used oil with a statement of the origin of the used oil and the quantity delivered/stored for firing. In addition, monthly records shall be kept of the quantity of "on-specification" used oil fired in this unit. The above records shall be maintained in a form suitable for inspection, retained for a minimum of five years, and be made available upon request.
[Rule 62-213.440(1)(b)2.b., F.A.C.]

A.65. The permittee shall include in the "Annual Operating Report for Air Pollutant Emitting Facility" a summary of the "on-specification" used oil analyses for the calendar year and a statement of the total quantity of "on-specification" used oil fired during the calendar year.
[Rule 62-213.440(1)(b)2.b., F.A.C.]

A.66. Reporting and Recordkeeping
(1) Documentation verifying that the coal and petroleum coke fuel blends combusted in Units 1 and 2 have not exceeded the 30 percent maximum petroleum coke by weight limit shall be maintained and submitted to the Department's Northeast District office with each annual report; and
(2) The permittee shall maintain and submit to the Department, on an annual basis for a period of five years from the date the units begin firing petroleum coke, data demonstrating that the operational change associated with the use of petroleum coke did not result in a significant emission increase pursuant to Rule 62-210.200(12)(d), F.A.C.
[PSD-FL-018(A)]

Miscellaneous Requirements.

A.67. These emissions units are subject to the Compliance Assurance Monitoring (CAM) requirements contained in the attached Appendix CAM. Failure to adhere to the monitoring requirements specified does not necessarily indicate an exceedance of a specific emissions limitation; however, it may constitute good reason to require compliance testing pursuant to Rule 62-297.310(7)(b), F.A.C.
[40 CFR 64; Rules 62-204.800 and 62-213.440(1)(b)1.a., F.A.C.]

A.68. The permittee shall comply with the requirements contained in Appendix 40 CFR 60, Subpart A, attached to this permit.
[Rule 62-204.800(7)(d), F.A.C.]

A.69. Carbon Monoxide. The permittee shall maintain and submit to the Department on an annual basis for a period of five years from the date the units begin firing petroleum coke, test results demonstrating that the operational changes associated with the use of petroleum coke did not result in a significant emission increase of the pollutant when compared to past emissions while firing coal. The carbon monoxide emissions shall be based on test results using EPA Method 10.
[PSD-FL-018(A)] {Permitting Note: Condition completed.}

A.70. Sulfuric Acid Mist. The permittee shall maintain and submit to the Department on an annual basis for a period of five years from the date the units begin firing petroleum coke, test results demonstrating that the operational changes associated with the use of petroleum coke did not result in a significant emission increase of the pollutant when compared to past emissions while firing coal. The sulfuric acid mist emissions shall be based on test results using EPA Method 8.
[PSD-FL-018(A)] {Permitting Note: Condition completed.}

A.71. The owner or operator may use the following as alternatives to the reference methods and procedures in 40 CFR 60.46 or in other sections as specified:
(1) The emission rate (E) of particulate matter, SO_2 and NO_X may be determined by using the Fc factor, provided that the following procedure is used:

(i) The emission rate (E) shall be computed using the following equation:

$$E = C\ F_c\ (100 / \%\ CO_2)$$

where:
E = emission rate of pollutant, ng/J (lb/million Btu).
C = concentration of pollutant, ng/dscm (lb/dscf).
% CO_2 = carbon dioxide concentration, percent dry basis.
F_c = factor as determined in appropriate sections of Method 19.

(ii) If and only if the average F_c factor in Method 19 is used to calculate E and either E is from 0.97 to 1.00 of the emission standard or the relative accuracy of a continuous emission monitoring system is from 17 to 20 percent, then three runs of Method 3B shall be used to determine the O_2 and CO_2 concentration according to the procedures in 40 CFR 60.46(b) (2)(ii), (4)(ii), or (5)(ii). Then if F_o (average of three runs), as calculated from the equation in Method 3B, is more than ± 3 percent than the average F_o value, as determined from the average values of F_d and F_c in Method 19, i.e., F_{oa} =0.209 (F_{da} / F_{ca}), then the following procedure shall be followed:

(A) When Fo is less than 0.97 Foa, then E shall be increased by that proportion under 0.97 Foa, e.g., if Fo is 0.95 Foa, E shall be increased by 2 percent. This recalculated value shall be used to determine compliance with the emission standard.

(B) When F_o is less than 0.97 F_{oa} and when the average difference ($\bar{d}$) between the continuous monitor minus the reference methods is negative, then E shall be increased by that proportion under 0.97 F_{oa}, e.g., if F_o is 0.95 F_{oa}, E shall be increased by 2 percent. This recalculated value shall be used to determine compliance with the relative accuracy specification.

(C) When F_o is greater than 1.03 F_{oa} and when $\bar{d}$ is positive, then E shall be decreased by that proportion over 1.03 F_{oa}, e.g., if F_o is 1.05 F_{oa}, E shall be decreased by 2 percent. This recalculated value shall be used to determine compliance with the relative accuracy specification.
[40 CFR 60.46(d)(1)]

Ambient Monitoring.

A.72. Not Federally Enforceable Air Monitoring Program. The permittee shall operate an ambient monitoring device for sulfur dioxide in accordance with EPA reference methods in 40 CFR, Part 53 an ambient monitoring device for total suspended particulate as shown in Figure 1, previously submitted as a part of the Power Plant Site Certification. The monitoring device shall be specifically located at a

location approved by the Department. The frequency of operation shall be every six days commencing as specified by the Department. The ambient monitoring program may be reviewed annually by the Department and the permittee.
[PA 78-10, Revised August 10, 1989]

A.73. Not Federally Enforceable Air Monitoring Program Reporting. Ambient air monitoring data shall be reported to the Department quarterly commencing on the date of certification by the last day of the month following the quarterly reporting period utilizing the SAROAD or other format approved by the Department in writing.
[PA 78-10, Revised August 10, 1989]

Section III. Emissions Unit(s) and Conditions.

Subsection C. This section addresses the following emissions unit(s).

E.U. ID No.	Brief Description
-004	Coal Storage Yard

The coal receiving, storage and transfer systems at the coal storage yard support the operation of the two power boilers. Particulate matter emissions are controlled at the "as-received transfer tower", the "as-fired transfer tower", and the conveyors to the silos by fabric filter systems. Water sprays, full enclosures or partial enclosures are also utilized, where appropriate.

{Permitting note(s): IMPORTANT REGULATORY CLASSIFICATIONS - The emissions unit is regulated under NSPS - 40 CFR 60, Subpart Y, Standards of Performance for Coal Preparation Plants, adopted and incorporated by reference in Rule 62-204.800(7), F.A.C.; Prevention of Significant Deterioration (PSD); Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT) Determination, dated June 15, 1979. The coal storage yard began commercial operation in 1985.}

The following specific conditions apply to the emissions unit(s) listed above:

Essential Potential to Emit (PTE) Parameters

C.1. Permitted Capacity. The maximum throughput rate shall not exceed 3,000 tons per hour for unloading trains and 1,700 tons per hour for reclaim operation.
[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; and, Initial Title V application received June 17, 1996]

{Permitting note: The throughput limitations have been placed in each permit to identify the capacity of each unit for the purposes of confirming that emissions testing is conducted within 90 to 100 percent of the unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate emission limits and to aid in determining future rule applicability. Regular record keeping is not required for throughput. Also, see permitting note under specific condition **C.7.**}

C.2. Emissions Unit Operating Rate Limitation After Testing. See specific condition **C.7.**
[Rule 62-297.310(2), F.A.C.]

C.3. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year.
[Rule 62-210.200(PTE), F.A.C.]

Emission Limitations and Standards

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

{Permitting note: Unless otherwise specified, the averaging times for Specific Condition **C.4** is based on the specified averaging time of the applicable test method.}

C.4. Visible Emissions. An owner or operator shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system

processing coal, gases which exhibit 20 percent opacity or greater.
[40 CFR 60.252(c); and, PSD-FL-018]

Monitoring of Operations

C.5. Determination of Process Variables.
(a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
(b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.
[Rule 62-297.310(5), F.A.C.]

{Permitting note: Emission limiting standards for the coal handling and storage emission unit consist only of visible emissions (VE). Compliance with the VE standard is determined using EPA Method 9. A determination of compliance is not dependent on the use of instruments or equipment to determine process variables.}

Test Methods and Procedures

{Permitting note: Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

C.6. Visible Emissions. EPA Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity.
[40 CFR 60.254(b)(2); and, PSD-FL-018]

C.7. Operating Rate During Testing. Testing of emissions shall be conducted with the emissions unit operation at permitted capacity, which is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emissions unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.
[Rules 62-297.310(2) & (2)(b), F.A.C.]

{Permitting note: The permitted capacity of the coal handling and storage emissions unit is based on conveyor belt capacity. Conveyor belt speed is set and does not vary during normal operation. However, feeder belts which supply coal to the conveyor belts are variable speed. Bins, crushers, and silos are filled on a batch process basis by the conveyor belts which are either on or off. The period at which the highest opacity emissions can reasonably be expected to occur at the emissions points subject to the standard, (i.e., CH-002, CH-011, and U1 and U2 Silo Dust Collectors) will be when the conveyor belts are on during normal operation. Therefore, the period during which the conveyor belts are on during normal operation shall represent permitted capacity of this emissions unit for purposes of compliance testing.}

C.8. Applicable Test Procedures.

(a) Required Sampling Time.

2. Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:

c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.

[Rule 62-297.310(4)(a)2.c., F.A.C.]

{Permitting note: EPA Method 9 has been previously specified as the applicable opacity test method.}

C.9. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

(a) General Compliance Testing.

3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:

a. Did not operate;

4. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:

a. Visible emissions, if there is an applicable standard;

9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.

(b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

(c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department

shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.
[Rule 62-297.310(7), F.A.C.; and, SIP approved]

{Permitting note: The individual coal handling and storage emission points requiring an annual VE test are those containing baghouse controls. These baghouse locations are emission points CH-002, CH-011, and U1 and U2 Silo Dust Collectors For those emissions points specified herein containing a baghouse, the permittee shall maintain daily records of the differential pressure to assure that the baghouse is operating properly. Maintenance activities are initiated according Seminole's previously submitted Action Plan.}

Recordkeeping and Reporting Requirements

C.10. Test Reports.
(a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test.
(b) The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.
[Rule 62-297.310(8), F.A.C.]

Miscellaneous Requirements.

C.11. The permittee shall comply with the requirements contained in Appendix 40 CFR 60, Subpart A, attached to this permit.
[Rule 62-204.800(7)(d), F.A.C.]

C.12. The opacity standards set forth in 40 CFR 60 shall apply at all times except during periods of startup, shutdown, malfunction and as otherwise provided in the applicable standard.
At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
[40 CFR 60.11(c) & (d)]

Section III. Emissions Unit(s) and Conditions.

Subsection D. This section addresses the following emissions unit(s).

E.U. ID No.	Brief Description
-005	Limestone and FGD Sludge Handling and Storage

The limestone handling and storage system consists of a limestone unloading facility where particulate matter emissions are controlled by a panel filter, a limestone handling and storage system which utilizes a partial enclosure to control particulate matter emissions. In the FGD sludge processing system particulate emissions, which originate from the transfer of lime and flyash from both truck and rail delivery, are controlled by the use of bag house filters. Scrubbers are also utilized to control particulate emissions in the FGD sludge processing building.

{Permitting note(s): IMPORTANT REGULATORY CLASSIFICATIONS - The emissions unit is regulated under Prevention of Significant Deterioration (PSD); Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT) Determination, dated June 15, 1979.}

The following specific conditions apply to the emissions unit(s) listed above:

Essential Potential to Emit (PTE) Parameters

D.1. Permitted Capacity. The maximum limestone unloading or transfer rate shall not exceed 400 tons per hour. The throughput rates for the sludge stabilization system are intermittent and variable.
[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; and, Initial Title V application received June 17, 1996]

{Permitting note: The limestone unloading or transfer rate limitations have been placed in each permit to identify the capacity of each unit for the purposes of confirming that emissions testing is conducted within 90 to 100 percent of the unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate emission limits and to aid in determining future rule applicability. Regular record keeping is not required for unloading or transfer rates. Also, see permitting note under specific condition **D.7.**}

D.2. Emissions Unit Operating Rate Limitation After Testing. See specific condition **D.7.**
[Rule 62-297.310(2), F.A.C.]

D.3. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year.
[Rule 62-210.200(PTE), F.A.C.]

Emission Limitations and Standards

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

{Permitting note: Unless otherwise specified, the averaging times for Specific Condition **D.4** is based on the specified averaging time of the applicable test method.}

D.4. Visible Emissions. An owner or operator shall not cause to be discharged into the atmosphere gases which exhibit 20 percent opacity or greater.
[PSD-FL-018]

Monitoring of Operations

D.5. Determination of Process Variables.
(a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
(b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.
[Rule 62-297.310(5), F.A.C.]

{Permitting note: Emission limiting standards for the limestone and FGD sludge handling and storage emission unit consist only of visible emissions (VE). Compliance with the VE standard is determined using EPA Method 9, which is not dependent on the use of instruments or equipment to determine process variables.}

Test Methods and Procedures

{Permitting note: Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

D.6. Visible Emissions. EPA Method 9 shall be used to determine opacity compliance pursuant to Chapter 62-297, F.A.C.
[Rules 62-213.440 and 62-297.401, F.A.C.]

D.7. Operating Rate During Testing. Testing of emissions shall be conducted with the emissions unit operation at permitted capacity, which is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emissions unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.
[Rules 62-297.310(2) & (2)(b), F.A.C.]

{Permitting note: The permitted capacity of the limestone handling and storage emissions unit is based on trucks per hour. Trucks per hour has no bearing on determining the period at which the highest opacity emissions can reasonably be expected to occur at emission point L-001. Normal operating conditions when trucks are delivering/unloading constitute the appropriate time period for VE testing. Therefore, such periods shall represent permitted capacity for compliance testing.}

D.8. Applicable Test Procedures.

(a) Required Sampling Time.

2. Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:

c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.

[Rule 62-297.310(4)(a)2.c., F.A.C.]

{Permitting note: EPA Method 9 has been previously specified as the applicable opacity test method.}

D.9. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

(a) General Compliance Testing.

3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:

a. Did not operate;

4. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:

a. Visible emissions, if there is an applicable standard;

9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.

(b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

(c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means

of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.
[Rule 62-297.310(7), F.A.C.; and, SIP approved]

{Permitting note: The individual limestone and FGD sludge handling points requiring an annual VE test are those containing filter and wet scrubber equipment. These locations are emissions points L-001, FGD-002, FGD-003 or FGD-004, FGD-005 or FGD-006, FGD-007 or FGD-008, and FGD-009 or FGD-010 For those emissions points specified herein containing a baghouse, the permittee shall maintain daily records of the differential pressure to assure that the baghouse is operating properly. Maintenance activities are initiated according to Seminole's previously submitted Action plan.}

Recordkeeping and Reporting Requirements

D.10. Test Reports.
(a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test.
(b) The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.
[Rule 62-297.310(8), F.A.C.]

Section IV. This section is the Acid Rain Part.

Operated by: Seminole Electric Cooperative, Inc.
ORIS code: 136

Subsection A. This subsection addresses Acid Rain, Phase II.

The emissions units listed below are regulated under Acid Rain, Phase II.

E.U. ID No.	Brief Description
-001	Steam Electric Generator No. 1
-002	Steam Electric Generator No. 2

A.1. The Phase II permit application(s) submitted for this facility, as approved by the Department, are a part of this permit. The owners and operators of these Phase II acid rain unit(s) must comply with the standard requirements and special provisions set forth in the application(s) listed below:

DEP Form No. 62-210.900(1)(a), dated June 8, 2004

A.2. Sulfur dioxide (SO_2) allowance allocations for each Acid Rain unit is as follows:

E.U. ID No.	EPA ID	Year	2005	2006	2007	2008	2009
-001	1	SO2 allowances, under Table 2 or 3 of 40 CFR Part 73	18,381*	18,381*	18,381*	18,381*	18,381*
-002	2	SO2 allowances, under Table 2 or 3 of 40 CFR Part 73	18,381*	18,381*	18,381*	18,381*	18,381*

* The number of allowances held by an Acid Rain source in a unit account may differ from the number allocated by the USEPA under Table 2 or 3 of 40 CFR 73.]

A.3. Emission Allowances. Emissions from sources subject to the Federal Acid Rain Program (Title IV) shall not exceed any allowances that the source lawfully holds under the Federal Acid Rain Program. Allowances shall not be used to demonstrate compliance with a non-Title IV applicable requirement of the Act.
1. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the Federal Acid Rain Program, provided that such increases do not require a permit revision pursuant to Rule 62-213.400(3), F.A.C.
2. No limit shall be placed on the number of allowances held by the source under the Federal Acid Rain Program.
3. Allowances shall be accounted for under the Federal Acid Rain Program.
[Rule 62-213.440(1)(c), F.A.C.]

A.4. Fast-Track Revisions of Acid Rain Parts. Those Acid Rain sources making a change described at Rule 62- 214.370(4), F.A.C., may request such change as provided in Rule 62-213.413, F.A.C., Fast-Track
Revisions of Acid Rain Parts.
[Rules 62-213.413 and 62-214.370(4), F.A.C.]

A.5. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the Federal Acid Rain Program, provided that such increases do not require a permit revision pursuant to Rule 62-213.400, F.A.C.
[40 CFR 70.6(a)(4)(i); and, Rule 62-213.440(1)(c)1., F.A.C.]

A.6. Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions shall be incorporated into the permit and shall be enforceable by the Administrator.
[40 CFR 70.6(a)(1)(ii); and, Rule 62-210.200, Definitions - Applicable Requirements, F.A.C.]

A.7. Comments, notes, and justifications: None.

Subsection B. This subsection addresses Acid Rain, Phase II.

The emissions unit listed below is regulated under Acid Rain Part, Phase II, for Seminole Electric Cooperative, Inc, Seminole Generating Station, **Facility ID No.:** 1070025, **ORIS code:** 136.

E.U. ID No.	Brief Description
-001	Steam Electric Generator No. 1
-002	Steam Electric Generator No. 2

The provisions of the Phase II permit govern(s) those emissions unit(s) from January 1, 2000 through the expiration date of this Title V permit. The Phase II permit governs all other affected units for the effective period of this permit.

B.1. The owners and operators of these Phase II acid rain unit(s) must comply with the standard requirements and special provisions set forth in the plan(s) listed below:

Phase II NO_X Compliance Plan dated June 29, 2004. **See Specific Condition B.2.**
[Chapter 62-213, F.A.C. and Rule 62-214.320, F.A.C.]

B.2. Nitrogen oxide (NO_X) requirements for each Acid Rain unit is as follows:

E.U. ID No.	EPA ID	NO_X limit
-001	1	Pursuant to 40 CFR 76.8(d)(2), the Florida Department of Environmental Protection approves a NO_X early election compliance plan for unit U1. The compliance plan is effective for calendar year 2000 through calendar year 2007. Under the compliance plan, this unit's annual average NO_X emission rate for each year, determined in accordance with 40 CFR part 75, shall not exceed the applicable emission limitation, under "40 CFR 76.5(a)(2) of 0.50 lb/mmBtu" for dry bottom wall-fired boilers. If the unit is in compliance with its applicable emission limitation for each year of the plan, then the unit shall not be subject to the applicable emission limitation, under "40 CFR 76.7(a)(2) of 0.46 lb/mmBtu" for dry bottom wall-fired boilers until calendar year 2008. In addition to the described NO_X compliance plan, this unit shall comply with all other applicable requirements of 40 CFR part 76, including the duty to reapply for a NO_X compliance plan and the requirements covering excess emissions.
-002	2	Pursuant to 40 CFR 76.8(d)(2), the Florida Department of Environmental Protection approves a NO_X early election compliance plan for unit U2. The compliance plan is effective for calendar year 2000 through calendar year 2007. Under the compliance plan, this unit's annual average NO_X emission rate for each year, determined in accordance with 40 CFR part 75, shall not exceed the applicable emission limitation, under "40 CFR 76.5(a)(2) of 0.50 lb/mmBtu" for dry bottom wall-fired boilers. If the unit is in compliance with its applicable emission limitation for each year of the plan, then the unit shall not be subject to the applicable emission limitation, under "40 CFR 76.7(a)(2) of 0.46 lb/mmBtu" for dry bottom wall-fired boilers until calendar year 2008. In addition to the described NO_X compliance plan, this unit shall comply with all other applicable requirements of 40 CFR part 76, including the duty to reapply for a NO_X compliance plan and the requirements covering excess emissions.

B.3. Comments, notes, and justifications: none

APPENDIX TV-4, TITLE V CONDITIONS (version dated 02/12/02)

[Note: This attachment includes "canned conditions" developed from the "Title V Core List."]

{Permitting note: APPENDIX TV-4, TITLE V CONDITIONS, is distributed to the permittee only. Other persons requesting copies of these conditions shall be provided one copy when requested or otherwise appropriate.}

Chapter 62-4, F.A.C.

1. **Not federally enforceable.** General Prohibition. Any stationary installation which will reasonably be expected to be a source of pollution shall not be operated, maintained, constructed, expanded, or modified without the appropriate and valid permits issued by the Department, unless the source is exempted by Department rule. The Department may issue a permit only after it receives reasonable assurance that the installation will not cause pollution in violation of any of the provisions of Chapter 403, F.S., or the rules promulgated thereunder. A permitted installation may only be operated, maintained, constructed, expanded or modified in a manner that is consistent with the terms of the permit.
[Rule 62-4.030, Florida Administrative Code (F.A.C.); Section 403.087, Florida Statute (F.S.)]

2. **Not federally enforceable.** Procedures to Obtain Permits and Other Authorizations; Applications.
(1) Any person desiring to obtain a permit from the Department shall apply on forms prescribed by the Department and shall submit such additional information as the Department by law may require.
(2) All applications and supporting documents shall be filed in quadruplicate with the Department.
(3) To ensure protection of public health, safety, and welfare, any construction, modification, or operation of an installation which may be a source of pollution, shall be in accordance with sound professional engineering practices pursuant to Chapter 471, F.S. All applications for a Department permit shall be certified by a professional engineer registered in the State of Florida except, when the application is for renewal of an air pollution operation permit at a non-Title V source as defined in Rule 62-210.200, F.A.C., or where professional engineering is not required by Chapter 471, F.S. Where required by Chapter 471 or 492, F.S., applicable portions of permit applications and supporting documents which are submitted to the Department for public record shall be signed and sealed by the professional(s) who prepared or approved them.
(4) Processing fees for air construction permits shall be in accordance with Rule 62-4.050(4), F.A.C.
(5)(a) To be considered by the Department, each application must be accompanied by the proper processing fee. The fee shall be paid by check, payable to the Department of Environmental Protection. The fee is non-refundable except as provided in Section 120.60, F.S., and in this section.
(c) Upon receipt of the proper application fee, the permit processing time requirements of Sections 120.60(2) and 403.0876, F.S., shall begin.
(d) If the applicant does not submit the required fee within ten days of receipt of written notification, the Department shall either return the unprocessed application or arrange with the applicant for the pick up of the application.
(e) If an applicant submits an application fee in excess of the required fee, the permit processing time requirements of Sections 120.60(2) and 403.0876, F.S., shall begin upon receipt, and the Department shall refund to the applicant the amount received in excess of the required fee.
(6) Any substantial modification to a complete application shall require an additional processing fee determined pursuant to the schedule set forth in Rule 62-4.050, F.A.C., and shall restart the time requirements of Sections 120.60 and 403.0876, F.S. For purposes of this Subsection, the term "substantial modification" shall mean a modification which is reasonably expected to lead to substantially different environmental impacts which require a detailed review.
(7) Modifications to existing permits proposed by the permittee which require substantial changes in the existing permit or require substantial evaluation by the Department of potential impacts of the proposed modifications shall require the same fee as a new application for the same time duration except for modification under Chapter 62-45, F.A.C.
[Rule 62-4.050, F.A.C.]

3. Standards for Issuing or Denying Permits. Except as provided at Rule 62-213.460, F.A.C., the issuance of a permit does not relieve any person from complying with the requirements of Chapter 403, F.S., or Department rules.
[Rule 62-4.070(7), F.A.C.]

4. Modification of Permit Conditions.

(1) For good cause and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions and on application of the permittee the Department may grant additional time. For the purpose of this section, good cause shall include, but not be limited to, any of the following: **(also, see Condition No. 38.)**.

(a) A showing that an improvement in effluent or emission quality or quantity can be accomplished because of technological advances without unreasonable hardship.

(b) A showing that a higher degree of treatment is necessary to effect the intent and purpose of Chapter 403, F.S.

(c) A showing of any change in the environment or surrounding conditions that requires a modification to conform to applicable air or water quality standards.

(e) Adoption or revision of Florida Statutes, rules, or standards which require the modification of a permit condition for compliance.

(2) A permittee may request a modification of a permit by applying to the Department.

(3) A permittee may request that a permit be extended as a modification of the permit. Such a request must be submitted to the Department in writing before the expiration of the permit. Upon timely submittal of a request for extension, unless the permit automatically expires by statute or rule, the permit will remain in effect until final agency action is taken on the request. For construction permits, an extension shall be granted if the applicant can demonstrate reasonable assurances that, upon completion, the extended permit will comply with the standards and conditions required by applicable regulation. For all other permits, an extension shall be granted if the applicant can demonstrate reasonable assurances that the extended permit will comply with the standards and conditions applicable to the original permit. A permit for which the permit application fee was prorated in accordance with Rule 62-4.050(4)(1), F.A.C., shall not be extended. In no event shall a permit be extended or remain in effect longer than the time limits established by statute or rule.

[Rule 62-4.080, F.A.C.]

5. Renewals. Prior to 180 days before the expiration of a permit issued pursuant to Chapter 62-213, F.A.C., the permittee shall apply for a renewal of a permit using forms incorporated by reference in the specific rule chapter for that kind of permit. A renewal application shall be timely and sufficient. If the application is submitted prior to 180 days before expiration of the permit, it will be considered timely and sufficient. If the renewal application is submitted at a later date, it will not be considered timely and sufficient unless it is submitted and made complete prior to the expiration of the operation permit. When the application for renewal is timely and sufficient, the existing permit shall remain in effect until the renewal application has been finally acted upon by the Department or, if there is court review of the Department's final agency action, until a later date is required by Section 120.60, F.S., provided that, for renewal of a permit issued pursuant to Chapter 62-213, F.A.C., the applicant complies with the requirements of Rules 62-213.420(1)(b)3. and 4., F.A.C.

[Rule 62-4.090, F.A.C.]

6. Suspension and Revocation.

(1) Permits shall be effective until suspended, revoked, surrendered, or expired and shall be subject to the provisions of Chapter 403, F.S., and rules of the Department.

(2) Failure to comply with pollution control laws and rules shall be grounds for suspension or revocation.

(3) A permit issued pursuant to Chapter 62-4, F.A.C., shall not become a vested property right in the permittee. The Department may revoke any permit issued by it if it finds that the permit holder or the his agent:

(a) Submitted false or inaccurate information in his application or operational reports.

(b) Has violated law, Department orders, rules or permit conditions.

(c) Has failed to submit operational reports or other information required by Department rules.

(d) Has refused lawful inspection under Section 403.091, F.S.

(4) No revocation shall become effective except after notice is served by personal services, certified mail, or newspaper notice pursuant to Section 120.60(7), F.S., upon the person or persons named therein and a hearing held if requested within the time specified in the notice. The notice shall specify the provision of the law, or rule alleged to be violated, or the permit condition or Department order alleged to be violated, and the facts alleged to constitute a violation thereof.

[Rule 62-4.100, F.A.C.]

7. **Not federally enforceable.** Financial Responsibility. The Department may require an applicant to submit proof of financial responsibility and may require the applicant to post an appropriate bond to guarantee compliance with the law and Department rules. [Rule 62-4.110, F.A.C.]

8. Transfer of Permits.
(1) Within 30 days after the sale or legal transfer of a permitted facility, an "Application for Transfer of Permit" (DEP Form 62-1.201(1)) must be submitted to the Department. This form must be completed with the notarized signatures of both the permittee and the proposed new permittee. For air permits, an "Application for Transfer of Air Permit" (DEP Form 62-210.900(7)) shall be submitted.
(2) The Department shall approve the transfer of a permit unless it determines that the proposed new permittee cannot provide reasonable assurances that conditions of the permit will be met. The determination shall be limited solely to the ability of the new permittee to comply with the conditions of the existing permit, and it shall not concern the adequacy of these permit conditions. If the Department proposes to deny the transfer, it shall provide both the permittee and the proposed new permittee a written objection to such transfer together with notice of a right to request a Chapter 120, F.S., proceeding on such determination.
(3) Within 30 days of receiving a properly completed Application for Transfer of Permit form, the Department shall issue a final determination. The Department may toll the time for making a determination on the transfer by notifying both the permittee and the proposed new permittee that additional information is required to adequately review the transfer request. Such notification shall be served within 30 days of receipt of an Application for Transfer of Permit form, completed pursuant to Rule 62-4.120(1), F.A.C. If the Department fails to take action to approve or deny the transfer within 30 days of receipt of the completed Application for Transfer of Permit form, or within 30 days of receipt of the last item of timely requested additional information, the transfer shall be deemed approved.
(4) The permittee is encouraged to apply for a permit transfer prior to the sale or legal transfer of a permitted facility. However, the transfer shall not be effective prior to the sale or legal transfer.
(5) Until this transfer is approved by the Department, the permittee and any other person constructing, operating, or maintaining the permitted facility shall be liable for compliance with the terms of the permit. The permittee transferring the permit shall remain liable for corrective actions that may be required as a result of any violations occurring prior to the sale or legal transfer of the facility.
[Rule 62-4.120, F.A.C.]

9. Plant Operation-Problems. If the permittee is temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or by other cause, the permittee shall immediately notify the Department. Notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules. **(also, see Condition No. 10.).**
[Rule 62-4.130, F.A.C.]

10. For purposes of notification to the Department pursuant to Condition No. 9., Condition No. 12.(8), and Rule 62-4.130, F.A.C., Plant Operation-Problems, "immediately" shall mean the same day, if during a workday (i.e., 8:00 a.m. - 5:00 p.m.), or the first business day after the incident, excluding weekends and holidays; and, for purposes of 40 CFR 70.6(a)(3)(iii)(B), "prompt" shall have the same meaning as "immediately". **[also, see Conditions Nos. 9. and 12.(8).]**
[40 CFR 70.6(a)(3)(iii)(B)]

11. **Not federally enforceable.** Review. Failure to request a hearing within 14 days of receipt of notice of proposed or final agency action on a permit application or as otherwise required in Chapter 62-103, F.A.C., shall be deemed a waiver of the right to an administrative hearing.
[Rule 62-4.150, F.A.C.]

12. Permit Conditions. All permits issued by the Department shall include the following general conditions:
(1) The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
(2) This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
(3) As provided in Subsections 403.087(7) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.
(4) This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
(5) This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of F.S. and Department rules, unless specifically authorized by an order from the Department.
(6) The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
(7) The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:

(a) Have access to and copy any records that must be kept under conditions of the permit;

(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and,

(c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules. Reasonable time may depend on the nature of the concern being investigated.

(8) If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information: **(also, see Condition No. 10.)**

(a) A description of and cause of noncompliance; and,

(b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

(9) In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the F.S. or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
(10) The permittee agrees to comply with changes in Department rules and F.S. after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by F.S. or Department rules.
(11) This permit is transferable only upon Department approval in accordance with Rule 62-4.120, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
(12) This permit or a copy thereof shall be kept at the work site of the permitted activity.
(14) The permittee shall comply with the following:

(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least five (5) years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

1. the date, exact place, and time of sampling or measurements;
2. the person responsible for performing the sampling or measurements;
3. the dates analyses were performed;
4. the person responsible for performing the analyses;
5. the analytical techniques or methods used;
6. the results of such analyses.

(15) When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.
[Rules 62-4.160 and 62-213.440(1)(b), F.A.C.]

13. Construction Permits.
(1) No person shall construct any installation or facility which will reasonably be expected to be a source of air or water pollution without first applying for and receiving a construction permit from the Department unless exempted by statute or Department rule. In addition to the requirements of Chapter 62-4, F.A.C., applicants for a Department Construction Permit shall submit the following as applicable:

(a) A completed application on forms furnished by the Department.

(b) An engineering report covering:

1. plant description and operations,
2. types and quantities of all waste material to be generated whether liquid, gaseous or solid,
3. proposed waste control facilities,
4. the treatment objectives,
5. the design criteria on which the control facilities are based, and,
6. other information deemed relevant.

Design criteria submitted pursuant to Rule 62-4.210(1)(b)5., F.A.C., shall be based on the results of laboratory and pilot-plant scale studies whenever such studies are warranted. The design efficiencies of the proposed waste treatment facilities and the quantities and types of pollutants in the treated effluents or emissions shall be indicated. Work of this nature shall be subject to the requirements of Chapter 471, F.S. Where confidential records are involved, certain information may be kept confidential pursuant to Section 403.111, F.S.

(c) The owners' written guarantee to meet the design criteria as accepted by the Department and to abide by Chapter 403, F.S. and the rules of the Department as to the quantities and types of materials to be discharged from the installation. The owner may be required to post an appropriate bond or other equivalent evidence of financial responsibility to guarantee compliance with such conditions in instances where the owner's financial resources are inadequate or proposed control facilities are experimental in nature.

(2) The construction permit may contain conditions and an expiration date as determined by the Secretary or the Secretary's designee.
(3) When the Department issues a permit to construct, the permittee shall be allowed a period of time, specified in the permit, to construct, and to operate and test to determine compliance with Chapter 403, F.S., and the rules of the Department and, where applicable, to apply for and receive an operation permit. The Department may require tests and evaluations of the treatment facilities by the permittee at his/her expense.
[Rule 62-4.210, F.A.C.]

14. **Not federally enforceable.** Operation Permit for New Sources. To properly apply for an operation permit for new sources, the applicant shall submit the appropriate fee and certification that construction was completed noting any deviations from the conditions in the construction permit and test results where appropriate.
[Rule 62-4.220, F.A.C.]

Chapters 28-106 and 62-110, F.A.C.

15. Public Notice, Public Participation, and Proposed Agency Action. The permittee shall comply with all of the requirements for public notice, public participation, and proposed agency action pursuant to Rules 62-110.106 and 62-210.350, F.A.C.
[Rules 62-110.106, 62-210.350 and 62-213.430(1)(b), F.A.C.]

16. Administrative Hearing. The permittee shall comply with all of the requirements for a petition for administrative hearing or waiver of right to administrative proceeding pursuant to Rules 28-106.201, 28-106.301 and 62-110.106, F.A.C.
[Rules 28-106.201, 28-106.301 and 62-110.106, F.A.C.]

Chapter 62-204, F.A.C.

17. Asbestos. This permit does not authorize any demolition or renovation of the facility or its parts or components which involves asbestos removal. This permit does not constitute a waiver of any of the requirements of Chapter 62-257, F.A.C., and 40 CFR 61, Subpart M, National Emission Standard for Asbestos, adopted and incorporated by reference in Rule 62-204.800, F.A.C. Compliance with Chapter 62-257, F.A.C., and 40 CFR 61, Subpart M, Section 61.145, is required for any asbestos demolition or renovation at the source.
[40 CFR 61; Rule 62-204.800, F.A.C.; and, Chapter 62-257, F.A.C.]

Chapter 62-210, F.A.C.

18. Permits Required. The owner or operator of any emissions unit which emits or can reasonably be expected to emit any air pollutant shall obtain an appropriate permit from the Department prior to beginning construction, modification, or initial or continued operation of the emissions unit unless exempted pursuant to Department rule or statute. All emissions limitations, controls, and other requirements imposed by such permits shall be at least as stringent as any applicable limitations and requirements contained in or enforceable under the State Implementation Plan (SIP) or that are otherwise federally enforceable. Except as provided at Rule 62-213.460, F.A.C., issuance of a permit does not relieve the owner or operator of an emissions unit from complying with any applicable requirements, any emission limiting standards or other requirements of the air pollution rules of the Department or any other such requirements under federal, state, or local law.

(1) Air Construction Permits.

(a) Unless exempt from permitting pursuant to Rule 62-210.300(3)(a) or (b), F.A.C., or Rule 62-4.040, F.A.C., an air construction permit shall be obtained by the owner or operator of any proposed new or modified facility or emissions unit prior to the beginning of construction or modification, in accordance with all applicable provisions of Chapter 62-210, F.A.C., Chapter 62-212, F.A.C., and Chapter 62-4, F.A.C. Except as provided under Rule 62-213.415, F.A.C., the owner or operator of any facility seeking to create or change an air emissions bubble shall obtain an air construction permit in accordance with all the applicable provisions of Chapter 62-210, F.A.C., Chapter 62-212, F.A.C., and Chapter 62-4, F.A.C. The construction permit shall be issued for a period of time sufficient to allow construction or modification of the facility or emissions unit and operation while the new or modified facility or emissions unit is conducting tests or otherwise demonstrating initial compliance with the conditions of the construction permit.

(b) Notwithstanding the expiration of an air construction permit, all limitations and requirements of such permit that are applicable to the design and operation of the permitted facility or emissions unit shall remain in effect until the facility or emissions unit is permanently shut down, except for any such limitation or requirement that is obsolete by its nature (such as a requirement for initial compliance testing) or any such limitation or requirement that is changed in accordance with the provisions of Rule 62-210.300(1)(b)1., F.A.C. Either the applicant or the Department can propose that certain conditions be considered obsolete. Any conditions or language in an air construction permit that are included for informational purposes only, if they are transferred to the air operation permit, shall be transferred for informational purposes only and shall not become enforceable conditions unless voluntarily agreed to by the permittee or otherwise required under Department rules.

1. Except for those limitations or requirements that are obsolete, all limitations and requirements of an air construction permit shall be included and identified in any air operation permit for the facility or emissions unit. The limitations and requirements included in the air operation permit can be changed, and thereby superseded, through the issuance of an air construction permit, federally enforceable state air operation permit, federally enforceable air general permit, or Title V air operation permit; provided, however, that:

a. Any change that would constitute an administrative correction may be made pursuant to Rule 62-210.360, F.A.C.;

b. Any change that would constitute a modification, as defined at Rule 62-210.200, F.A.C., shall be accomplished only through the issuance of an air construction permit; and

c. Any change in a permit limitation or requirement that originates from a permit issued pursuant to 40 CFR 52.21, Rule 62-204.800(10)(d)2., F.A.C., Rule 62-212.400, F.A.C., Rule 62-212.500, F.A.C., or any former codification of Rule 62-212.400 or Rule 62-212.500, F.A.C., shall be accomplished only through the issuance of a new or revised air construction permit under Rule 62-204.800(10)(d)2., Rule 62-212.400, or Rule 62-212.500, F.A.C., as appropriate.

2. The force and effect of any change in a permit limitation or requirement made in accordance with the provisions of Rule 62-210.300(1)(b)1., F.A.C., shall be the same as if such change were made to the original air construction permit.

3. Nothing in Rule 62-210.300(1)(b), F.A.C., shall be construed as to allow operation of a facility or emissions unit without a valid air operation permit.

(2) Air Operation Permits. Upon expiration of the air operation permit for any existing facility or emissions unit, subsequent to construction or modification, or subsequent to the creation of or change to a bubble, and demonstration of compliance with the conditions of the construction permit for any new or modified facility or emissions unit, any air emissions bubble, or as otherwise provided in Chapter 62-210, F.A.C., or Chapter 62-213, F.A.C., the owner or operator of such facility or emissions unit shall obtain a renewal air operation permit, an initial air operation permit or general permit, or an administrative correction or revision of an existing air operation permit, whichever is appropriate, in accordance with all applicable provisions of Chapter 62-210, F.A.C., Chapter 62-213, F.A.C., and Chapter 62-4, F.A.C.

(a) Minimum Requirements for All Air Operation Permits. At a minimum, a permit issued pursuant to this subsection shall:

1. Specify the manner, nature, volume and frequency of the emissions permitted, and the applicable emission limiting standards or performance standards, if any;

2. Require proper operation and maintenance of any pollution control equipment by qualified personnel, where applicable in accordance with the provisions of any operation and maintenance plan required by the air pollution rules of the Department.

3. Contain an effective date stated in the permit which shall not be earlier than the date final action is taken on the application and be issued for a period, beginning on the effective date, as provided below.

a. The operation permit for an emissions unit which is in compliance with all applicable rules and in operational condition, and which the owner or operator intends to continue operating, shall be issued or renewed for a five-year period, except that, for Title V sources subject to Rule 62-213.420(1)(a)1., F.A.C., operation permits shall be extended until 60 days after the due date for submittal of the facility's Title V permit application as specified in Rule 62-213.420(1)(a)1., F.A.C.

b. Except as provided in Rule 62-210.300(2)(a)3.d., F.A.C., the operation permit for an emissions unit which has been shut down for six months or more prior to the expiration date of the current operation permit, shall be renewed for a period not to exceed five years from the date of shutdown, even if the emissions unit is not maintained in operational condition, provided:

(i) the owner or operator of the emissions unit demonstrates to the Department that the emissions unit may need to be reactivated and used, or that it is the owner's or operator's intent to apply to the Department for a permit to construct a new emissions unit at the facility before the end of the extension period; and,

(ii) the owner or operator of the emissions unit agrees to and is legally prohibited from providing the allowable emission permitted by the renewed permit as an emissions offset to any other person under Rule 62-212.500, F.A.C.; and,

(iii) the emissions unit was operating in compliance with all applicable rules as of the time the source was shut down.

c. Except as provided in Rule 62-210.300(2)(a)3.d., F.A.C., the operation permit for an emissions unit which has been shut down for five years or more prior to the expiration date of the current operation permit shall be renewed for a maximum period not to exceed ten years from the date of shutdown, even if the emissions unit is not maintained in operational condition, provided the conditions given in Rule 62-210.300(2)(a)3.b., F.A.C., are met and the owner or operator demonstrates to the Department that failure to renew the permit would constitute a hardship, which may include economic hardship.

d. The operation permit for an electric utility generating unit on cold standby or long-term reserve shutdown shall be renewed for a five-year period, and additional five-year periods, even if the unit is not maintained in operational condition, provided the conditions given in Rules 62-210.300(2)(a)3.b.(i) through (iii), F.A.C., are met.

4. In the case of an emissions unit permitted pursuant to Rules 62-210.300(2)(a)3.b., c., and d., F.A.C., include reasonable notification and compliance testing requirements for reactivation of such emissions unit and provide that the owner or operator demonstrate to the Department prior to reactivation that such reactivation would not constitute reconstruction pursuant to Rule 62-204.800(7), F.A.C.

[Rules 62-210.300(1) & (2), F.A.C.]

19. **Not federally enforceable.** Notification of Startup. The owner or operator of any emissions unit or facility which has a valid air operation permit which has been shut down more than one year, shall notify the Department in writing of the intent to start up such emissions unit or facility, a minimum of 60 days prior to the intended startup date.

(a) The notification shall include information as to the startup date, anticipated emission rates or pollutants released, changes to processes or control devices which will result in changes to emission rates, and any other conditions which may differ from the valid outstanding operation permit.

(b) If, due to an emergency, a startup date is not known 60 days prior thereto, the owner shall notify the Department as soon as possible after the date of such startup is ascertained.
[Rule 62-210.300(5), F.A.C.]

20. Emissions Unit Reclassification.
(a) Any emissions unit whose operation permit has been revoked as provided for in Chapter 62-4, F.A.C., shall be deemed permanently shut down for purposes of Rule 62-212.500, F.A.C. Any emissions unit whose permit to operate has expired without timely renewal or transfer may be deemed permanently shut down, provided, however, that no such emissions unit shall be deemed permanently shut down if, within 20 days after receipt of written notice from the Department, the emissions unit owner or operator demonstrates that the permit expiration resulted from inadvertent failure to comply with the requirements of Rule 62-4.090, F.A.C., and that the owner or operator intends to continue the emissions unit in operation, and either submits an application for an air operation permit or complies with permit transfer requirements, if applicable.
(b) If the owner or operator of an emissions unit which is so permanently shut down, applies to the Department for a permit to reactivate or operate such emissions unit, the emissions unit will be reviewed and permitted as a new emissions unit.
[Rule 62-210.300(6), F.A.C.]

21. Transfer of Air Permits.
(a) An air permit is transferable only after submission of an Application for Transfer of Air Permit (DEP Form 62-210.900(7)) and Department approval in accordance with Rule 62-4.120, F.A.C. For Title V permit transfers only, a complete application for transfer of air permit shall include the requirements of 40 CFR 70.7(d)(1)(iv), adopted and incorporated by reference at Rule 62-204.800, F.A.C. Within 30 days after approval of the transfer of permit, the Department shall update the permit by an administrative permit correction pursuant to Rule 62-210.360, F.A.C.
(b) For an air general permit, the provision of Rules 62-210.300(7)(a) and 62-4.120, F.A.C., do not apply. Thirty (30) days before using an air general permit, the new owner must submit an air general permit notification to the Department in accordance with Rule 62-210.300(4), F.A.C., or Rule 62-213.300(2)(b), F.A.C.
[Rule 62-210.300(7), F.A.C.]

22. Public Notice and Comment.
(1) Public Notice of Proposed Agency Action.
(a) A notice of proposed agency action on permit application, where the proposed agency action is to issue the permit, shall be published by any applicant for:
1. An air construction permit;
2. An air operation permit, permit renewal or permit revision subject to Rule 62-210.300(2)(b), F.A.C., (i.e., a FESOP), except as provided in Rule 62-210.300(2)(b)1.b., F.A.C.; or
3. An air operation permit, permit renewal, or permit revision subject to Chapter 62-213, F.A.C., except Title V air general permits or those permit revisions meeting the requirements of Rule 62-213.412(1), F.A.C.
(b) The notice required by Rule 62-210.350(1)(a), F.A.C., shall be published in accordance with all otherwise applicable provisions of Rule 62-110.106, F.A.C. A public notice under Rule 62-210.350(1)(a)1., F.A.C., for an air construction permit may be combined with any required public notice under Rule 62-210.350(1)(a)2. or 3., F.A.C., for air operation permits. If such notices are combined, the public notice must comply with the requirements for both notices.
(c) Except as otherwise provided at Rules 62-210.350(2) and (5), F.A.C., each notice of intent to issue an air construction permit shall provide a 14-day period for submittal of public comments.
(2) Additional Public Notice Requirements for Emissions Units Subject to Prevention of Significant Deterioration or Nonattainment - Area Preconstruction Review.
(a) Before taking final agency action on a construction permit application for any proposed new or modified facility or emissions unit subject to the preconstruction review requirements of Rule 62-212.400 or 62-212.500, F.A.C., the Department shall comply with all applicable provisions of Rule 62-110.106, F.A.C., and provide an opportunity for public comment which shall include as a minimum the following:
1. A complete file available for public inspection in at least one location in the district affected which includes the information submitted by the owner or operator, exclusive of confidential records under Section 403.111, F.S., and the Department's analysis of the effect of the proposed construction or modification on ambient air quality, including the Department's preliminary determination of whether the permit should be approved or disapproved;
2. A 30-day period for submittal of public comments; and,

3. A notice, by advertisement in a newspaper of general circulation in the county affected, specifying the nature and location of the proposed facility or emissions unit, whether BACT or LAER has been determined, the degree of PSD increment consumption expected, if applicable, and the location of the information specified in paragraph 1. above; and, notifying the public of the opportunity for submitting comments and requesting a public hearing.

(b) The notice provided for in Rule 62-210.350(2)(a)3., F.A.C., shall be prepared by the Department and published by the applicant in accordance with all applicable provisions of Rule 62-110.106, F.A.C., except that the applicant shall cause the notice to be published no later than thirty (30) days prior to final agency action.

(c) A copy of the notice provided for in Rule 62-210.350(2)(a)3., F.A.C., shall also be sent by the Department to the Regional Office of the U. S. Environmental Protection Agency and to all other state and local officials or agencies having cognizance over the location of such new or modified facility or emissions unit, including local air pollution control agencies, chief executives of city or county government, regional land use planning agencies, and any other state, Federal Land Manager, or Indian Governing Body whose lands may be affected by emissions from the new or modified facility or emissions unit.

(d) A copy of the notice provided for in Rule 62-210.350(2)(a)3., F.A.C., shall be displayed in the appropriate district, branch and local program offices.

(e) An opportunity for public hearing shall be provided in accordance with Chapter 120, F.S., and Rule 62-110.106, F.A.C.

(f) Any public comments received shall be made available for public inspection in the location where the information specified in Rule 62-210.350(2)(a)1., F.A.C., is available and shall be considered by the Department in making a final determination to approve or deny the permit.

(g) The final determination shall be made available for public inspection at the same location where the information specified in Rule 62-210.350(2)(a)1., F.A.C., was made available.

(h) For a proposed new or modified emissions unit which would be located within 100 kilometers of any Federal Class I area or whose emissions may affect any Federal Class I area, and which would be subject to the preconstruction review requirements of Rule 62-212.400, F.A.C., or Rule 62-212.500, F.A.C.:

1. The Department shall mail or transmit to the Administrator a copy of the initial application for an air construction permit and notice of every action related to the consideration of the permit application.

2. The Department shall mail or transmit to the Federal Land Manager of each affected Class I area a copy of any written notice of intent to apply for an air construction permit; the initial application for an air construction permit, including all required analyses and demonstrations; any subsequently submitted information related to the application; the preliminary determination and notice of proposed agency action on the permit application; and any petition for an administrative hearing regarding the application or the Department's proposed action. Each such document shall be mailed or transmitted to the Federal Land Manager within fourteen (14) days after its receipt by the Department.

(3) Additional Public Notice Requirements for Facilities Subject to Operation Permits for Title V Sources.

(a) Before taking final agency action to issue a new, renewed, or revised air operation permit subject to Chapter 62-213, F.A.C., the Department shall comply with all applicable provisions of Rule 62-110.106, F.A.C., and provide an opportunity for public comment which shall include as a minimum the following:

1. A complete file available for public inspection in at least one location in the district affected which includes the information submitted by the owner or operator, exclusive of confidential records under Section 403.111, F.S.; and,

2. A 30-day period for submittal of public comments.

(b) The notice provided for in Rule 62-210.350(3)(a), F.A.C., shall be prepared by the Department and published by the applicant in accordance with all applicable provisions of Rule 62-110.106, F.A.C., except that the applicant shall cause the notice to be published no later than thirty (30) days prior to final agency action. If written comments received during the 30-day comment period on a draft permit result in the Department's issuance of a revised draft permit in accordance with Rule 62-213.430(1), F.A.C., the Department shall require the applicant to publish another public notice in accordance with Rule 62-210.350(1)(a), F.A.C.

(c) The notice shall identify:

1. The facility;

2. The name and address of the office at which processing of the permit occurs;

3. The activity or activities involved in the permit action;

4. The emissions change involved in any permit revision;

5. The name, address, and telephone number of a Department representative from whom interested persons may obtain additional information, including copies of the permit draft, the application, and all relevant supporting materials, including any permit application, compliance plan, permit, monitoring report, and compliance statement required pursuant to Chapter 62-213, F.A.C. (except for information entitled to confidential treatment pursuant to Section 403.111, F.S.), and all other materials available to the Department that are relevant to the permit decision;

6. A brief description of the comment procedures required by Rule 62-210.350(3), F.A.C.;

7. The time and place of any hearing that may be held, including a statement of procedure to request a hearing (unless a hearing has already been scheduled); and,

8. The procedures by which persons may petition the Administrator to object to the issuance of the proposed permit after expiration of the Administrator's 45-day review period.

[Rule 62-210.350, F.A.C.]

23. Administrative Permit Corrections.

(1) A facility owner shall notify the Department by letter of minor corrections to information contained in a permit. Such notifications shall include:

(a) Typographical errors noted in the permit;

(b) Name, address or phone number change from that in the permit;

(c) A change requiring more frequent monitoring or reporting by the permittee;

(d) A change in ownership or operational control of a facility, subject to the following provisions:

1. The Department determines that no other change in the permit is necessary;

2. The permittee and proposed new permittee have submitted an Application for Transfer of Air Permit, and the Department has approved the transfer pursuant to Rule 62-210.300(7), F.A.C.; and

3. The new permittee has notified the Department of the effective date of sale or legal transfer.

(e) Changes listed at 40 CFR 72.83(a)(1), (2), (6), (9) and (10), adopted and incorporated by reference at Rule 62-204.800, F.A.C., and changes made pursuant to Rules 62-214.340(1) and (2), F.A.C., to Title V sources subject to emissions limitations or reductions pursuant to 42 USC ss. 7651-7651o;

(f) Changes listed at 40 CFR 72.83(a)(11) and (12), adopted and incorporated by reference at Rule 62-204.800, F.A.C., to Title V sources subject to emissions limitations or reductions pursuant to 42 USC ss. 7651-7651o, provided the notification is accompanied by a copy of any EPA determination concerning the similarity of the change to those listed at Rule 62-210.360(1)(e), F.A.C.; and,

(g) Any other similar minor administrative change at the source.

(2) Upon receipt of any such notification the Department shall within 60 days correct the permit and provide a corrected copy to the owner.

(3) After first notifying the owner, the Department shall correct any permit in which it discovers errors of the types listed at Rules 62-210.360(1)(a) and (b), F.A.C., and provide a corrected copy to the owner.

(4) For Title V source permits, other than general permits, a copy of the corrected permit shall be provided to EPA and any approved local air program in the county where the facility or any part of the facility is located.

(5) The Department shall incorporate requirements resulting from issuance of a new or revised construction permit into an existing Title V source permit, if the construction permit or permit revision incorporates requirements of federally enforceable preconstruction review, and if the applicant requests at the time of application that all of the requirements of Rule 62-213.430(1), F.A.C., be complied with in conjunction with the processing of the construction permit application.

[Rule 62-210.360, F.A.C.]

24. Reports.

(3) Annual Operating Report for Air Pollutant Emitting Facility.

(a) The Annual Operating Report for Air Pollutant Emitting Facility (DEP Form No. 62-210.900(5)) shall be completed each year.

(c) The annual operating report shall be submitted to the appropriate Department District or Department approved local air pollution control program office by March 1 of the following year unless otherwise indicated by permit condition or Department request.

[Rule 62-210.370(3), F.A.C.]

25. Circumvention. No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly.

[Rule 62-210.650, F.A.C.]

26. Forms and Instructions. The forms used by the Department in the stationary source control program are adopted and incorporated by reference in this section. The forms are listed by rule number, which is also the form number, with the subject, title and effective date. Forms 62-210.900(1),(3),(4) and (5), F.A.C., including instructions, are available from the Department as hard-copy documents or executable files on computer diskettes. Copies of forms (hard-copy or diskette) may be obtained by writing to the Department of Environmental Protection, Division of Air Resource Management, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Notwithstanding the requirement of Rule 62-4.050(2), F.A.C., to file application forms in quadruplicate, if an air permit application is submitted using the Department's electronic application form, only one copy of the diskette and signature pages is required to be submitted.

(1) Application for Air Permit - Title V Source, Form and Instructions (Effective 02/11/1999).
  (a) Acid Rain Part (Phase II), Form and Instructions (Effective 04/16/2001).
    1. Repowering Extension Plan, Form and Instructions (Effective 07/01/1995).
    2. New Unit Exemption, Form and Instructions (Effective 04/16/2001).
    3. Retired Unit Exemption, Form and Instructions (Effective 04/16/2001).
    4. Phase II NOx Compliance Plan, Form and Instructions (Effective 01/06/1998).
    5. Phase II NOx Averaging Plan, Form (Effective 01/06/1998).
  (b) Reserved.

(5) Annual Operating Report for Air Pollutant Emitting Facility, Form and Instructions (Effective 02/11/1999).

(7) Application for Transfer of Air Permit – Title V and Non-Title V Source, (Effective 04/16/2001).

[Rule 62-210.900, F.A.C.]

Chapter 62-213, F.A.C.

27. Annual Emissions Fee. Each Title V source permitted to operate in Florida must pay between January 15 and March 1 of each year, upon written notice from the Department, an annual emissions fee in an amount determined as set forth in Rule 62-213.205(1), F.A.C.

[Rules 62-213.205 and 62-213.900(1), F.A.C.]

28. Annual Emissions Fee. Failure to pay timely any required annual emissions fee, penalty, or interest constitutes grounds for permit revocation pursuant to Rule 62-4.100, F.A.C.

[Rule 62-213.205(1)(g), F.A.C.]

29. Annual Emissions Fee. Any documentation of actual hours of operation, actual material or heat input, actual production amount, or actual emissions used to calculate the annual emissions fee shall be retained by the owner for a minimum of five (5) years and shall be made available to the Department upon request.

[Rule 62-213.205(1)(i), F.A.C.]

30. Annual Emissions Fee. A completed DEP Form 62-213.900(1), F.A.C., "Major Air Pollution Source Annual Emissions Fee Form", must be submitted by the responsible official with the annual emissions fee.

[Rule 62-213.205(1)(j), F.A.C.]

31. Air Operation Permit Fees. No permit application processing fee, renewal fee, modification fee or amendment fee is required for an operation permit for a Title V source.

[Rule 62-213.205(4), F.A.C.]

32. Permits and Permit Revisions Required. All Title V sources are subject to the permit requirements of Chapter 62-213, F.A.C.

(1) No Title V source may operate except in compliance with Chapter 62-213, F.A.C.

(2) Except as provided in Rule 62-213.410, F.A.C., no source with a permit issued under the provisions of this chapter shall make any changes in its operation without first applying for and receiving a permit revision if the change meets any of the following:
  (a) Constitutes a modification;
  (b) Violates any applicable requirement;
  (c) Exceeds the allowable emissions of any air pollutant from any unit within the source;
  (d) Contravenes any permit term or condition for monitoring, testing, recordkeeping, reporting or of a compliance certification requirement;
  (e) Requires a case-by-case determination of an emission limitation or other standard or a source specific determination of ambient impacts, or a visibility or increment analysis under the provisions of Chapters 62-212 or 62-296, F.A.C.;
  (f) Violates a permit term or condition which the source has assumed for which there is no corresponding underlying applicable requirement to which the source would otherwise be subject;
  (g) Results in the trading of emissions among units within a source except as specifically authorized pursuant to Rule 62-213.415, F.A.C.;

(h) Results in the change of location of any relocatable facility identified as a Title V source pursuant to paragraph (a)-(e), (g) or (h) of the definition of "major source of air pollution" at Rule 62-210.200, F.A.C.;
(i) Constitutes a change at an Acid Rain Source under the provisions of 40 CFR 72.81(a)(1),(2),or (3),(b)(1) or (b)(3), hereby incorporated by reference;
(j) Constitutes a change in a repowering plan, nitrogen oxides averaging plan, or nitrogen oxides compliance deadline extension at an Acid Rain Source;
(k) Is a request for industrial-utility unit exemption pursuant to Rule 62-214.340, F.A.C.
[Rules 62-213.400(1) & (2), F.A.C.]

33. Changes Without Permit Revision. Title V sources having a valid permit issued pursuant to Chapter 62-213, F.A.C., may make the following changes without permit revision, provided that sources shall maintain source logs or records to verify periods of operation in each alternative method of operation:
(1) Permitted sources may change among those alternative methods of operation allowed by the source's permit as provided by the terms of the permit;
(2) Permitted sources may implement the terms or conditions of a new or revised construction permit if;
(a) The application for construction permit complied with the requirements of Rule 62-213.420(3) and (4), F.A.C.;
(b) The terms or conditions were subject to federally enforceable preconstruction review pursuant to Chapter 62-212, F.A.C.; and,
(c) The new or revised construction permit was issued after the Department and the applicant complied with all the requirements of Rule 62-213.430(1), F.A.C.;
(3) A permitted source may implement operating changes, as defined in Rule 62-210.200, F.A.C., after the source submits any forms required by any applicable requirement and provides the Department and EPA with at least 7 days written notice prior to implementation. The source and the Department shall attach each notice to the relevant permit;
(a) The written notice shall include the date on which the change will occur, and a description of the change within the permitted source, the pollutants emitted and any change in emissions, and any term or condition becoming applicable or no longer applicable as a result of the change;
(b) The permit shield described in Rule 62-213.460, F.A.C., shall not apply to such changes;
(4) Permitted sources may implement changes involving modes of operation only in accordance with Rule 62-213.415, F.A.C.
[Rule 62-213.410, F.A.C.]

34. Immediate Implementation Pending Revision Process.
(1) Those permitted Title V sources making any change that constitutes a modification pursuant to the definition of modification at Rule 62-210.200, F.A.C., but which would not constitute a modification pursuant to 42 USC 7412(a) or to 40 CFR 52.01, 60.2, or 61.15, adopted and incorporated by reference at Rule 62-204.800, F.A.C., may implement such change prior to final issuance of a permit revision in accordance with this section, provided the change:
(a) Does not violate any applicable requirement;
(b) Does not contravene any permit term or condition for monitoring, testing, recordkeeping or reporting, or any compliance certification requirement;
(c) Does not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination of ambient impacts, or a visibility or increment analysis under the provisions of Chapter 62-212 or 62-296, F.A.C.;
(d) Does not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and which the source has assumed to avoid an applicable requirement to which the source would otherwise be subject including any federally enforceable emissions cap or federally enforceable alternative emissions limit.
(2) A Title V source may immediately implement such changes after they have been incorporated into the terms and conditions of a new or revised construction permit issued pursuant to Chapter 62-212, F.A.C., and after the source provides to EPA, the Department, each affected state and any approved local air program having geographic jurisdiction over the source, a copy of the source's application for operation permit revision. The Title V source may conform its application for construction permit to include all information required by Rule 62-213.420, F.A.C., in lieu of submitting separate application forms.

(3) The Department shall process the application for operation permit revision in accordance with the provisions of Chapter 62-213, F.A.C., except that the Department shall issue a draft permit revision or a determination to deny the revision within 60 days of receipt of a complete application for operation permit revision or, if the Title V source has submitted a construction permit application conforming to the requirements of Rule 62-213.420, F.A.C., the Department shall issue a draft permit or a determination to deny the revision at the same time the Department issues its determination on issuance or denial of the construction permit application. The Department shall not take final action until all the requirements of Rules 62-213.430(1)(a), (c), (d), and (e), F.A.C., have been complied with.
(4) Pending final action on the operation permit revision application, the source shall implement the changes in accordance with the terms and conditions of the source's new or revised construction permit.
(5) The permit shield described in Rule 62-213.460, F.A.C., shall not apply to such changes until after the Department takes final action to issue the operation permit revision.
(6) If the Department denies the source's application for operation permit revision, the source shall cease implementation of the proposed changes.
[Rule 62-213.412, F.A.C.]

35. Permit Applications.
(1) Duty to Apply. For each Title V source, the owner or operator shall submit a timely and complete permit application in compliance with the requirements of Rules 62-213.420, F.A.C., and Rules 62-4.050(1) through (3), F.A.C.

(a) Timely Application.

3. For purposes of permit renewal, a timely application is one that is submitted in accordance with Rule 62-4.090, F.A.C.

(b) Complete Application.

1. Any applicant for a Title V permit, permit revision or permit renewal must submit an application on DEP Form No. 62-210.900(1), which must include all the information specified by Rule 62-213.420(3), F.A.C., except that an application for permit revision must contain only that information related to the proposed change. The applicant shall include information concerning fugitive emissions and stack emissions in the application. Each application for permit, permit revision or permit renewal shall be certified by a responsible official in accordance with Rule 62-213.420(4), F.A.C.
2. For those applicants submitting initial permit applications pursuant to Rule 62-213.420(1)(a)1., F.A.C., a complete application shall be an application that substantially addresses all the information required by the application form number 62-210.900(1), and such applications shall be deemed complete within sixty days of receipt of a signed and certified application unless the Department notifies the applicant of incompleteness within that time. For all other applicants, the applications shall be deemed complete sixty days after receipt, unless the Department, within sixty days after receipt of a signed application for permit, permit revision or permit renewal, requests additional documentation or information needed to process the application. An applicant making timely and complete application for permit, or timely application for permit renewal as described by Rule 62-4.090(1), F.A.C., shall continue to operate the source under the authority and provisions of any existing valid permit or Florida Electrical Power Plant Siting Certification, and in accordance with applicable requirements of the Acid Rain Program, until the conclusion of proceedings associated with its permit application or until the new permit becomes effective, whichever is later, provided the applicant complies with all the provisions of Rules 62-213.420(1)(b)3. and 4. F.A.C. Failure of the Department to request additional information within sixty days of receipt of a properly signed application shall not impair the Department's ability to request additional information pursuant to Rules 62-213.420(1)(b)3. and 4., F.A.C.
3. For those permit applications submitted pursuant to the provisions of Rule 62-213.420(1)(a)1., F.A.C., the Department shall notify the applicant if the Department becomes aware at any time during processing of the application that the application contains incorrect or incomplete information. The applicant shall submit the corrected or supplementary information to the Department within ninety days unless the applicant has requested and been granted additional time to submit the information. Failure of an applicant to submit corrected or supplementary information requested by the Department within ninety days or such additional time as requested and granted shall render the application incomplete.
4. For all applications other than those addressed at Rule 62-213.420(1)(b)3., F.A.C., should the Department become aware, during processing of any application that the application contains incorrect information, or should the Department become aware, as a result of comment from an affected State, an approved local air program, EPA, or the public that additional information is needed to evaluate the application, the Department shall notify the applicant within 30 days. When an applicant becomes aware that an application contains incorrect or incomplete information, the applicant shall submit the corrected or supplementary information to the Department. If the Department notifies an applicant that corrected or supplementary information is necessary to process the permit, and requests a response, the applicant shall provide the information to the Department within ninety days of the Department request unless the applicant has requested

and been granted additional time to submit the information or, the applicant shall, within ninety days, submit a written request that the Department process the application without the information. Failure of an applicant to submit corrected or supplementary information requested by the Department within ninety days, or such additional time as requested and granted, or to demand in writing within ninety days that the application be processed without the information shall render the application incomplete. Nothing in this section shall limit any other remedies available to the Department.

[Rules 62-213.420(1)(a)3. and 62-213.420(1)(b)1., 2., 3. & 4., F.A.C.]

36. Confidential Information. Whenever an applicant submits information under a claim of confidentiality pursuant to Section 403.111, F.S., the applicant shall also submit a copy of all such information and claim directly to EPA. **(also, see Condition No. 50.)**
[Rule 62-213.420(2), F.A.C.]

37. Standard Application Form and Required Information. Applications shall be submitted under Chapter 62-213, F.A.C., on forms provided by the Department and adopted by reference in Rule 62-210.900(1), F.A.C. The information as described in Rule 62-210.900(1), F.A.C., shall be included for the Title V source and each emissions unit. An application must include information sufficient to determine all applicable requirements for the Title V source and each emissions unit and to evaluate a fee amount pursuant to Rule 62-213.205, F.A.C.
[Rule 62-213.420(3), F.A.C.]

38. a. Permit Renewal and Expiration. Permits being renewed are subject to the same requirements that apply to permit issuance at the time of application for renewal. Permit renewal applications shall contain that information identified in Rules 62-210.900(1) and 62-213.420(3), F.A.C. Unless a Title V source submits a timely application for permit renewal in accordance with the requirements of Rule 62-4.090(1), F.A.C., the existing permit shall expire and the source's right to operate shall terminate. No Title V permit will be issued for a new term except through the renewal process.
b. Permit Revision Procedures. Permit revisions shall meet all requirements of Chapter 62-213, F.A.C., including those for content of applications, public participation, review by approved local programs and affected states, and review by EPA, as they apply to permit issuance and permit renewal, except that permit revisions for those activities implemented pursuant to Rule 62-213.412, F.A.C., need not meet the requirements of Rule 62-213.430(1)(b), F.A.C. The Department shall require permit revision in accordance with the provisions of Rule 62-4.080, F.A.C., and 40 CFR 70.7(f), whenever any source becomes subject to any condition listed at 40 CFR 70.7(f)(1), hereby adopted and incorporated by reference. The below requirements from 40 CFR 70.7(f) are adopted and incorporated by reference in Rule 62-213.430(4), F.A.C.:

o 40 CFR 70.7(f): Reopening for Cause. **(also, see Condition No. 4.)**

(1) This section contains provisions from 40 CFR 70.7(f) that specify the conditions under which a Title V permit shall be reopened prior to the expiration of the permit. A Title V permit shall be reopened and revised under any of the following circumstances:

(i) Additional applicable requirements under the Act become applicable to a major Part 70 source with a remaining permit term of 3 or more years. Such a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 40 CFR 70.4(b)(10)(i) or (ii).

(ii) Additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program. Upon approved by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.

(iii) The permitting authority or EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

(iv) The Administrator or the permitting authority determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

(2) Proceedings to reopen and issue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Such reopening shall be made as expeditiously as practicable.

(3) Reopenings under 40 CFR 70.7(f)(1) shall not be initiated before a notice of such intent is provided to the Part 70 source by the permitting authority at least 30 days in advance of the date that the permit is to be reopened, except that the permitting authority may provide a shorter time period in the case of an emergency.

[Rules 62-213.430(3) & (4), F.A.C.; and, 40 CFR 70.7(f)]

39. Insignificant Emissions Units or Pollutant-Emitting Activities.

(a) All requests for determination of insignificant emissions units or activities made pursuant to Rule 62-213.420(3)(m), F.A.C., shall be processed in conjunction with the permit, permit renewal or permit revision application submitted pursuant to Chapter 62-213, F.A.C. Insignificant emissions units or activities shall be approved by the Department consistent with the provisions of Rule 62-4.040(1)(b), F.A.C. Emissions units or activities which are added to a Title V source after issuance of a permit under Chapter 62-213, F.A.C., shall be incorporated into the permit at its next renewal, provided such emissions units or activities have been exempted from the requirement to obtain an air construction permit and also qualify as insignificant pursuant to Rule 62-213.430(6), F.A.C.

(b) An emissions unit or activity shall be considered insignificant if all of the following criteria are met:

1. Such unit or activity would be subject to no unit-specific applicable requirement;
2. Such unit or activity, in combination with other units or activities proposed as insignificant, would not cause the facility to exceed any major source threshold(s) as defined in Rule 62-213.420(3)(c)1., F.A.C., unless it is acknowledged in the permit application that such units or activities would cause the facility to exceed such threshold(s);
3. Such unit or activity would not emit or have the potential to emit:
    a. 500 pounds per year or more of lead and lead compounds expressed as lead;
    b. 1,000 pounds per year or more of any hazardous air pollutant;
    c. 2,500 pounds per year or more of total hazardous air pollutants; or
    d. 5.0 tons per year or more of any other regulated pollutant.

[Rule 62-213.430(6), F.A.C.]

40. Permit Duration. Permits for sources subject to the Federal Acid Rain Program shall be issued for terms of five years, provided that the initial Acid Rain Part may be issued for a term less than five years where necessary to coordinate the term of such part with the term of a Title V permit to be issued to the source. Operation permits for Title V sources may not be extended as provided in Rule 62-4.080(3), F.A.C., if such extension will result in a permit term greater than five years.
[Rule 62-213.440(1)(a), F.A.C.]

41. Monitoring Information. All records of monitoring information shall specify the date, place, and time of sampling or measurement and the operating conditions at the time of sampling or measurement, the date(s) analyses were performed, the company or entity that performed the analyses, the analytical techniques or methods used, and the results of such analyses.
[Rule 62-213.440(1)(b)2.a., F.A.C.]

42. Retention of Records. Retention of records of all monitoring data and support information shall be for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
[Rule 62-213.440(1)(b)2.b., F.A.C.]

43. Monitoring Reports. The permittee shall submit reports of any required monitoring at least every six (6) months. All instances of deviations from permit requirements must be clearly identified in such reports.
[Rule 62-213.440(1)(b)3.a., F.A.C.]

44. Deviation from Permit Requirements Reports. The permittee shall report in accordance with the requirements of Rules 62-210.700(6) and 62-4.130, F.A.C., deviations from permit requirements, including those attributable to upset conditions as defined in the permit. Reports shall include the probable cause of such deviations, and any corrective actions or preventive measures taken.
[Rule 62-213.440(1)(b)3.b., F.A.C.]

45. Reports. All reports shall be accompanied by a certification by a responsible official, pursuant to Rule 62-213.420(4), F.A.C.
[Rule 62-213.440(1)(b)3.c, F.A.C.]

46. If any portion of the final permit is invalidated, the remainder of the permit shall remain in effect.
[Rule 62-213.440(1)(d)1., F.A.C.]

47. It shall not be a defense for a permittee in an enforcement action that maintaining compliance with any permit condition would necessitate halting of or reduction of the source activity.
[Rule 62-213.440(1)(d)3., F.A.C.]

48. Any Title V source shall comply with all the terms and conditions of the existing permit until the Department has taken final action on any permit renewal or any requested permit revision, except as provided at Rule 62-213.412(2), F.A.C.
[Rule 62-213.440(1)(d)4., F.A.C.]

49. A situation arising from sudden and unforeseeable events beyond the control of the source which causes an exceedance of a technology-based emissions limitation because of unavoidable increases in emissions attributable to the situation and which requires immediate corrective action to restore normal operation, shall be an affirmative defense to an enforcement action in accordance with the provisions and requirements of 40 CFR 70.6(g)(2) and (3), hereby adopted and incorporated by reference.
[Rule 62-213.440(1)(d)5., F.A.C.]

50. Confidentiality Claims. Any permittee may claim confidentiality of any data or other information by complying with Rule 62-213.420(2), F.A.C. **(also, see Condition No. 36.).**
[Rule 62-213.440(1)(d)6., F.A.C.]

51. Statement of Compliance. (a)2. The permittee shall submit a Statement of Compliance with all terms and conditions of the permit using DEP Form No. 62-213.900(7). Such statement shall be accompanied by a certification in accordance with Rule 62-213.420(4), F.A.C. Such statements shall be submitted (postmarked) to the Department and EPA:

a. Annually, within 60 days after the end of each calendar year during which the Title V permit was effective, or more frequently if specified by Rule 62-213.440(2), F.A.C., or by any other applicable requirement; and

b. Within 60 days after submittal of a written agreement for transfer of responsibility as required pursuant to 40 CFR 70.7(d)(1)(iv), adopted and incorporated by reference at Rule 62-204.800, F.A.C., or within 60 days after permanent shutdown of a facility permitted under Chapter 62-213, F.A.C.; provided that, in either such case, the reporting period shall be the portion of the calendar year the permit was effective up to the date of transfer of responsibility or permanent facility shutdown, as applicable.

3. The statement of compliance status shall include all the provisions of 40 CFR 70.6(c)(5)(iii), incorporated by reference at Rule 62-204.800, F.A.C.

(b) The responsible official may treat compliance with all other applicable requirements as a surrogate for compliance with Rule 62-296.320(2), Objectionable Odor Prohibited.

[Rules 62-213.440(3)(a)2. & 3. and (b), F.A.C.]

52. Permit Shield. Except as provided in Chapter 62-213, F.A.C., compliance with the terms and conditions of a permit issued pursuant to Chapter 62-213, F.A.C., shall, as of the effective date of the permit, be deemed compliance with any applicable requirements in effect, provided that the source included such applicable requirements in the permit application. Nothing in Rule 62-213.460, F.A.C., or in any permit shall alter or affect the ability of EPA or the Department to deal with an emergency, the liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance, or the requirements of the Federal Acid Rain Program.
[Rule 62-213.460, F.A.C.]

53. Forms and Instructions. The forms used by the Department in the Title V source operation program are adopted and incorporated by reference in Rule 62-213.900, F.A.C. The form is listed by rule number, which is also the form number, and with the subject, title, and effective date. Copies of forms may be obtained by writing to the Department of Environmental Protection, Division of Air Resources Management, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, or by contacting the appropriate permitting authority.

(1) Major Air Pollution Source Annual Emissions Fee Form. (Effective 01/03/2001)

(7) Statement of Compliance Form. (Effective 01/03/2001)

[Rule 62-213.900, F.A.C.: Forms (1) and (7)]

Chapter 62-256, F.A.C.

54. **Not federally enforceable.** Open Burning. This permit does not authorize any open burning nor does it constitute any waiver of the requirements of Chapter 62-256, F.A.C. Source shall comply with Chapter 62-256, F.A.C., for any open burning at the source. [Chapter 62-256, F.A.C.]

Chapter 62-281, F.A.C.

55. Refrigerant Requirements. Any facility having refrigeration equipment, including air conditioning equipment, which uses a Class I or II substance (listed at 40 CFR 82, Subpart A, Appendices A and B), and any facility which maintains, services, or repairs motor vehicles using a Class I or Class II substance as refrigerant must comply with all requirements of 40 CFR 82, Subparts B and F, and with Rule 62-281.100, F.A.C. Those requirements include the following restrictions:
(1) Any facility having any refrigeration equipment normally containing 50 (fifty) pounds of refrigerant, or more, must keep servicing records documenting the date and type of all service and the quantity of any refrigerant added pursuant to 40 CFR 82.166;
(2) No person repairing or servicing a motor vehicle may perform any service on a motor vehicle air conditioner (MVAC) involving the refrigerant for such air conditioner unless the person has been properly trained and certified as provided at 40 CFR 82.34 and 40 CFR 82.40, and properly uses equipment approved pursuant to 40 CFR 82.36 and 40 CFR 82.38, and complies with 40 CFR 82.42;
(3) No person may sell or distribute, or offer for sale or distribution, any substance listed as a Class I or Class II substance at 40 CFR 82, Subpart A, Appendices A and B, except in compliance with Rule 62-281.100, F.A.C., and 40 CFR 82.34(b), 40 CFR 82.42, and/or 40 CFR 82.166;
(4) No person maintaining, servicing, repairing, or disposing of appliances may knowingly vent or otherwise release into the atmosphere any Class I or Class II substance used as a refrigerant in such equipment and no other person may open appliances (except MVACs as defined at 40 CFR 82.152) for service, maintenance or repair unless the person has been properly trained and certified pursuant to 40 CFR 82.161 and unless the person uses equipment certified for that type of appliance pursuant to 40 CFR 82.158 and unless the person observes the practices set forth at 40 CFR 82.156 and 40 CFR 82.166;
(5) No person may dispose of appliances (except small appliances, as defined at 40 CFR 82.152) without using equipment certified for that type of appliance pursuant to 40 CFR 82.158 and without observing the practices set forth at 40 CFR 82.156 and 40 CFR 82.166;
(6) No person may recover refrigerant from small appliances, MVACs and MVAC-like appliances (as defined at 40 CFR 82.152), except in compliance with the requirements of 40 CFR 82, Subpart F.
[40 CFR 82; and, Chapter 62-281, F.A.C. **(Chapter 62-281, F.A.C., is not federally enforceable)**]

Chapter 62-296, F.A.C.

56. Industrial, Commercial, and Municipal Open Burning Prohibited. Open burning in connection with industrial, commercial, or municipal operations is prohibited, except when:

(a) Open burning is determined by the Department to be the only feasible method of operation and is authorized by an air permit issued pursuant to Chapter 62-210 or 62-213, F.A.C.; or,

(b) An emergency exists which requires immediate action to protect human health and safety; or,

(c) A county or municipality would use a portable air curtain incinerator to burn yard trash generated by a hurricane, tornado, fire or other disaster and the air curtain incinerator would otherwise be operated in accordance with the permitting exemption criteria of Rule 62-210.300(3), F.A.C.

[Rule 62-296.320(3), F.A.C.]

57. Unconfined Emissions of Particulate Matter.
(4)(c)1. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction; alteration; demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions.

3. Reasonable precautions include the following:

a. Paving and maintenance of roads, parking areas and yards.

b. Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.

c. Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.

d. Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent reentrainment, and from buildings or work areas to prevent particulate from becoming airborne.

e. Landscaping or planting of vegetation.

f. Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.

g. Confining abrasive blasting where possible.

h. Enclosure or covering of conveyor systems.

4. In determining what constitutes reasonable precautions for a particular facility, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.
[Rules 62-296.320(4)(c)1., 3., & 4. F.A.C.]

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APPENDIX SS-1, STACK SAMPLING FACILITIES (version dated 10/07/96)

Stack Sampling Facilities Provided by the Owner of an Emissions Unit. This section describes the minimum requirements for stack sampling facilities that are necessary to sample point emissions units. Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. Emissions units must provide these facilities at their expense. All stack sampling facilities must meet any Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E.

(a) Permanent Test Facilities. The owner or operator of an emissions unit for which a compliance test, other than a visible emissions test, is required on at least an annual basis, shall install and maintain permanent stack sampling facilities.

(b) Temporary Test Facilities. The owner or operator of an emissions unit that is not required to conduct a compliance test on at least an annual basis may use permanent or temporary stack sampling facilities. If the owner chooses to use temporary sampling facilities on an emissions unit, and the Department elects to test the unit, such temporary facilities shall be installed on the emissions unit within 5 days of a request by the Department and remain on the emissions unit until the test is completed.

(c) Sampling Ports.

1. All sampling ports shall have a minimum inside diameter of 3 inches.
2. The ports shall be capable of being sealed when not in use.
3. The sampling ports shall be located in the stack at least 2 stack diameters or equivalent diameters downstream and at least 0.5 stack diameter or equivalent diameter upstream from any fan, bend, constriction or other flow disturbance.
4. For emissions units for which a complete application to construct has been filed prior to December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 15 feet or less. For stacks with a larger diameter, four sampling ports, each 90 degrees apart, shall be installed. For emissions units for which a complete application to construct is filed on or after December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 10 feet or less. For stacks with larger diameters, four sampling ports, each 90 degrees apart, shall be installed. On horizontal circular ducts, the ports shall be located so that the probe can enter the stack vertically, horizontally or at a 45 degree angle.
5. On rectangular ducts, the cross sectional area shall be divided into the number of equal areas in accordance with EPA Method 1. Sampling ports shall be provided which allow access to each sampling point. The ports shall be located so that the probe can be inserted perpendicular to the gas flow.

(d) Work Platforms.

1. Minimum size of the working platform shall be 24 square feet in area. Platforms shall be at least 3 feet wide.
2. On circular stacks with 2 sampling ports, the platform shall extend at least 110 degrees around the stack.
3. On circular stacks with more than two sampling ports, the work platform shall extend 360 degrees around the stack.
4. All platforms shall be equipped with an adequate safety rail (ropes are not acceptable), toeboard, and hinged floor-opening cover if ladder access is used to reach the platform. The safety rail directly in line with the sampling ports shall be removable so that no obstruction exists in an area 14 inches below each sample port and 6 inches on either side of the sampling port.

(e) Access to Work Platform.

1. Ladders to the work platform exceeding 15 feet in length shall have safety cages or fall arresters with a minimum of 3 compatible safety belts available for use by sampling personnel.

2. Walkways over free-fall areas shall be equipped with safety rails and toeboards.

(f) Electrical Power.

1. A minimum of two 120-volt AC, 20-amp outlets shall be provided at the sampling platform within 20 feet of each sampling port.

2. If extension cords are used to provide the electrical power, they shall be kept on the plant's property and be available immediately upon request by sampling personnel.

(g) Sampling Equipment Support.

1. A three-quarter inch eyebolt and an angle bracket shall be attached directly above each port on vertical stacks and above each row of sampling ports on the sides of horizontal ducts.

a. The bracket shall be a standard 3 inch x 3 inch x one-quarter inch equal-legs bracket which is 1 and one-half inches wide. A hole that is one-half inch in diameter shall be drilled through the exact center of the horizontal portion of the bracket. The horizontal portion of the bracket shall be located 14 inches above the centerline of the sampling port.

b. A three-eighth inch bolt which protrudes 2 inches from the stack may be substituted for the required bracket. The bolt shall be located 15 and one-half inches above the centerline of the sampling port.

c. The three-quarter inch eyebolt shall be capable of supporting a 500 pound working load. For stacks that are less than 12 feet in diameter, the eyebolt shall be located 48 inches above the horizontal portion of the angle bracket. For stacks that are greater than or equal to 12 feet in diameter, the eyebolt shall be located 60 inches above the horizontal portion of the angle bracket. If the eyebolt is more than 120 inches above the platform, a length of chain shall be attached to it to bring the free end of the chain to within safe reach from the platform.

2. A complete monorail or dualrail arrangement may be substituted for the eyebolt and bracket.

3. When the sample ports are located in the top of a horizontal duct, a frame shall be provided above the port to allow the sample probe to be secured during the test.

[Rule 62-297.310(6), F.A.C.]

TABLE 297.310-1 CALIBRATION SCHEDULE
(version dated 10/07/96)

[Note: This table is referenced in Rule 62-297.310, F.A.C.]

ITEM	MINIMUM CALIBRATION FREQUENCY	REFERENCE INSTRUMENT	TOLERANCE
Liquid in glass thermometer	Annually	ASTM Hg in glass ref. thermometer or equivalent, or thermometric points	+/-2%
Bimetallic thermometer	Quarterly	Calib. liq. in glass thermometer	5 degrees F
Thermocouple	Annually	ASTM Hg in glass ref. thermometer, NBS calibrated reference and potentiometer	5 degrees F
Barometer	Monthly	Hg barometer or NOAA station	+/-1% scale
Pitot Tube	When required or when damaged	By construction or measurements in wind tunnel D greater than 16" and standard pitot tube	See EPA Method 2, Fig. 2-2 & 2-3
Probe Nozzles	Before each test or when nicked, dented, or corroded	Micrometer	+/-0.001" mean of at least three readings Max. deviation between readings .004"
Dry Gas Meter and Orifice Meter	1. Full Scale: When received, When 5% change observed, Annually	Spirometer or calibrated wet test or dry gas test meter	2%
	2. One Point: Semiannually		
	3. Check after each test series	Comparison check	5%

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FIGURE 1--SUMMARY REPORT--GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE

[Note: This form is referenced in 40 CFR 60.7, Subpart A-General Provisions]

Pollutant *(Circle One)*: SO_2 NO_X TRS H_2S CO Opacity

Reporting period dates: From _____ to _____

Company: _____

Emission Limitation: _____

Address: _____

Monitor Manufacturer: _____

Model No.: _____

Date of Latest CMS Certification or Audit: _____

Process Unit(s) Description: _____

Total source operating time in reporting period [1]: _____

Emission data summary [1]	CMS performance summary [1]
1. Duration of excess emissions in reporting period due to:	1. CMS downtime in reporting period due to:
a. Startup/shutdown ..... ____	a. Monitor equipment malfunctions ..... ____
b. Control equipment problems ..... ____	b. Non-Monitor equipment malfunctions ..... ____
c. Process problems ..... ____	c. Quality assurance calibration ..... ____
d. Other known causes ..... ____	d. Other known causes ..... ____
e. Unknown causes ..... ____	e. Unknown causes ..... ____
2. Total duration of excess emissions ..... ____	2. Total CMS Downtime ..... ____
3. Total duration of excess emissions x (100) / [Total source operating time] ..... ____ % [2]	3. [Total CMS Downtime] x (100) / [Total source operating time] ..... ____ % [2]

[1] For opacity, record all times in minutes. For gases, record all times in hours.

[2] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 40 CFR 60.7(c) shall be submitted.

Note: On a separate page, describe any changes since last quarter in CMS, process or controls.

I certify that the information contained in this report is true, accurate, and complete.

Name: _____

Signature: _____ *Date*: _____

Title: _____

Attachment "40 CFR 60, Subpart A"

General Provisions

40 CFR 60.1 Applicability.

(a) Except as provided in 40 CFR 60 subparts B and C, the provisions of this part apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication in this part of any standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.
(b) Any new or revised standard of performance promulgated pursuant to section 111(b) of the Act shall apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced
after the date of publication in this part of such new or revised standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.
(c) In addition to complying with the provisions of this part, the owner or operator of an affected facility may be required to obtain an operating permit issued to stationary sources by an authorized State air pollution controlagency or by the Administrator of the U.S. Environmental Protection Agency (EPA) pursuant to Title V of the Clean Air Act (CAA) as amended November 15, 1990 (42 U.S.C. 7661).
[Rule 62-204.800, F.A.C.; and, 40 CFR 60.1(a), (b) and (c)]

40 CFR 60.2 Definitions.

(a) *Administrator* means the Administrator of the Environmental Protection Agency or the Secretary or the Secretary's designee.
[Rule 62-204.800(7)(a), F.A.C.; and, 40 CFR 60.2]

40 CFR 60.7 Notification and record keeping.

(a) The owner or operator subject to the provisions of this part shall furnish the Administrator written notification as follows:

(1) A notification of the date construction (or reconstruction as defined under 40 CFR 60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.

(2) A notification of the anticipated date of initial startup of an affected facility postmarked not more than 60 days nor less than 30 days prior to such date.

(3) A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.

(4) A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.

(5) A notification of the date upon which demonstration of the continuous monitoring system performance commences in accordance with 40 CFR 60.13(c). Notification shall be postmarked not less than 30 days prior to such date.

(6) A notification of the anticipated date for conducting the opacity observations required by 40 CFR 60.11(e)(1) of this part. The notification shall also include, if appropriate, a request for the Administrator to provide a visible emissions reader during a performance test. The notification shall be postmarked not less than 30 days prior to such date.

(7) A notification that continuous opacity monitoring system data results will be used to determine compliance with the applicable opacity standard during a performance test required by 40 CFR 60.8 in lieu of Method 9 observation data as allowed by 40 CFR 60.11(e)(5) of 40 CFR 60. This notification shall be postmarked not less than 30 days prior to the date of the performance test.

(b) The owner or operator subject to the provisions of this part shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

(c) The owner or operator required to install a continuous monitoring system (CMS) or monitoring device shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form (see 40 CFR 60.7(d) to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or the CMS data are to be used directly for compliance determination, in which case quarterly reports shall be submitted; or the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary
to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each calendar half (or quarter, as appropriate). Written reports of excess emissions shall include the following information:

(1) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.

(2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.

(3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

(4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

(d) The summary report form shall contain the information and be in the format shown in Figure 1 unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility.

(1) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in 40 CFR 60.7(c) need not be submitted unless requested by the Administrator.

(2) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in 40 CFR 60.7(c) shall both be submitted.

[See Attached Figure 1-Summary Report-Gaseous and Opacity Excess Emission and Monitoring System Performance]

(e) The owner or operator subject to the provisions of this part shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.
(f) If notification substantially similar to that in 40 CFR 60.7(a) is required by any other State or local agency, sending the Administrator a copy of that notification will satisfy the requirements of 40 CFR 60.7(a).
(g) Individual subparts of this part may include specific provisions which clarify or make inapplicable the provisions set forth in this section.
[Rule 62-204.800, F.A.C.; and, 40 CFR 60.7(a), (b), (c), (d), (e), (f) and (g)]

40 CFR 60.8 Performance tests.

(a) Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s).
(b) Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the Administrator (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (4) waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Administrator's satisfaction that the affected facility is in compliance with the standard, or (5) approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in 40 CFR 60.8 shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.
(c) Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.
(e) The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(1) Sampling ports adequate for test methods applicable to such facility. This includes (i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and (ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.
(2) Safe sampling platform(s).
(3) Safe access to sampling platform(s).
(4) Utilities for sampling and testing equipment.

(f) Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.
[Rule 62-204.800, F.A.C.; and, 40 CFR 60.8(a), (b)(1), (4) & (5), (c), (e) and (f)]

40 CFR 60.10 State authority.

The provisions of 40 CFR 60 shall not be construed in any manner to preclude any State or political subdivision thereof from:
(a) Adopting and enforcing any emission standard or limitation applicable to an affected facility, provided that such emission standard or limitation is not less stringent than the standard applicable to such facility.
(b) Requiring the owner or operator of an affected facility to obtain permits, licenses, or approvals prior to initiating construction, modification, or operation of such facility.
[Rule 62-204.800, F.A.C.; and, 40 CFR 60.10(a) and (b)].

40 CFR 60.11 Compliance with standards and maintenance requirements.

(a) Compliance with standards in this part, other than opacity standards, shall be determined by performance tests established by 40 CFR 60.8, unless otherwise specified in the applicable standard.
(b) Compliance with opacity standards in this part shall be determined by conducting observations in accordance with Reference Method 9 in appendix A of this part, any alternative method that is approved by the Administrator, or as provided in 40 CFR 60.11(e)(5). For purposes of determining initial compliance, the minimum total time of observations shall be 3 hours (30 6-minute averages) for the performance test or other set of observations (meaning those fugitive-type emission sources subject only to an opacity standard).
(c) The opacity standards set forth in this part shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard.
(d) At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
(e)(1) For the purpose of demonstrating initial compliance, opacity observations shall be conducted concurrently with the initial performance test required in 40 CFR 60.8 unless one of the following conditions apply. If no performance test under 40 CFR 60.8 is required, then opacity observations shall be conducted within 60 days after achieving the maximum production rate at which the affected facility will be operated but no later than 180 days after initial startup of the facility. If visibility or other conditions prevent the opacity observations from being conducted concurrently with the initial performance test required under 40 CFR 60.8, the source owner or operator shall reschedule the opacity observations as soon after the initial performance test as possible, but not later than 30 days thereafter, and shall advise the Administrator of the rescheduled date. In these cases, the 30-day prior notification to the Administrator required in 40 CFR 60.7(a)(6) shall be waived. The rescheduled opacity observations shall be conducted (to the extent possible) under the same operating conditions that existed during the initial performance test conducted under 40 CFR 60.8. The visible emissions observer shall determine whether visibility or other conditions prevent the opacity observations from being made concurrently with the initial performance test in accordance with procedures contained in Reference Method 9 of appendix B of this part. Opacity readings of portions of plumes which contain condensed, uncombined water vapor shall not be used for purposes of determining compliance with opacity standards. The owner or operator of an affected facility shall make available, upon request by the Administrator, such records as may be necessary to determine the conditions under which the visual observations were made and shall provide evidence indicating proof of current visible observer emission certification. Except as provided in 40 CFR 60.11(e)(5), the results of continuous monitoring by transmissometer which indicate that the opacity at the time visual observations were made was not in excess of the standard are probative but not conclusive evidence of the actual opacity of an emission, provided that the source shall meet the burden of proving that the instrument used meets (at the time of the alleged violation) Performance Specification 1 in appendix B of 40 CFR 60, has been properly maintained and (at the time of the alleged violation) that the resulting data have not been altered in any way.

(2) Except as provided in 40 CFR 60.11(e)(3), the owner or operator of an affected facility to which an opacity standard in this part applies shall conduct opacity observations in accordance with 40 CFR 60.11(b), shall record the-opacity of emissions, and shall report to the Administrator the opacity results along with the results of the initial performance test required under 40 CFR 60.8. The inability of an owner or operator to secure a visible emissions observer shall not be considered a reason for not conducting the opacity observations concurrent with the initial performance test.

(3) The owner or operator of an affected facility to which an opacity standard in this part applies may request the Administrator to determine and to record the opacity of emissions from the affected facility during the initial performance test and at such times as may be required. The owner or operator of the affected facility shall report the opacity results. Any request to the Administrator to determine and to record the opacity of emissions from an affected facility shall be included in the notification required in 40 CFR 60.7(a)(6). If, for some reason, the Administrator cannot determine and record the opacity of emissions from the affected facility during the performance test, then the provisions of 40 CFR 60.7(e)(1) shall apply.

(4) The owner or operator of an affected facility using a continuous opacity monitor (transmissometer) shall record the monitoring data produced during the initial performance test required by 40 CFR 60.8 and shall furnish the Administrator a written report of the monitoring results along with Method 9 and 40 CFR 60.8 performance test results.

(5) The owner or operator of an affected facility subject to an opacity standard may submit, for compliance purposes, continuous opacity monitoring system (COMS) data results produced during any performance test required under 40 CFR 60.8 in lieu of Method 9 observation data. If an owner or operator elects to submit COMS data for compliance with the opacity standard, he shall notify the Administrator of that decision, in writing, at least 30 days before any performance test required under 40 CFR 60.8 is conducted. Once the owner or operator of an affected facility has notified the Administrator to that effect, the COMS data results will be used to determine opacity compliance during subsequent tests required under 40 CFR 60.8 until the owner or operator notifies the Administrator, in writing, to the contrary. For the purpose of determining compliance with the opacity standard during a performance test required under 40 CFR 60.8 using COMS data, the minimum total time of COMS data collection shall be averages of all 6-minute continuous periods within the duration of the mass emission performance test. Results of the COMS opacity determinations shall be submitted along with the results of the performance test required under 60.8. The owner or operator of an affected facility using a COMS for compliance purposes is responsible for demonstrating that the COMS meets the requirements specified in 40 CFR 60.13(c), that the COMS has been properly maintained and operated, and that the resulting data have not been altered in any way. If COMS data results are submitted for compliance with the opacity standard for a period of time during which Method 9 data indicates noncompliance, the Method 9 data will be used to determine opacity compliance.

(6) Upon receipt from an owner or operator of the written reports of the results of the performance tests required by 40 CFR 60.8, the opacity observation results and observer certification required by 40 CFR 60.11(e)(1), and the COMS results, if applicable, the Administrator will make a finding concerning compliance with opacity and other applicable standards. If COMS data results are used to comply with an opacity standard, only those results are required to be submitted along with the performance test results required by 40 CFR 60.8. If the Administrator finds that an affected facility is in compliance with all applicable standards for which performance tests are conducted in accordance with 40 CFR 60.8 of this part but during the time such performance tests are being conducted fails to meet any applicable opacity standard, the shall notify the owner or operator and advise him that he may petition the Administrator within 10 days of receipt of notification to make appropriate adjustment to the opacity standard for the affected facility.

(7) The Administrator will grant such a petition upon a demonstration by the owner or operator that the affected facility and associated air pollution control equipment was operated and maintained in a manner to minimize the opacity of emissions during the performance tests; that the performance tests were performed under the conditions established by the Administrator; and that the affected facility and associated air pollution control equipment were incapable of being adjusted or operated to meet the applicable opacity standard.

STATEMENT OF BASIS

Seminole Electric Cooperative, Inc.
Seminole Generating Station
Facility ID No.: 1070025
Putnam County

Title V Air Operation Permit Renewal
FINAL Permit No.: 1070025-002-AV

This Title V air operation permit renewal is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213, and 62-214. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

This facility consists of two 714.6 megawatts, electric, coal fired steam electric generators; a coal handling and storage system; a limestone unloading, handling and storage system, and a flue gas desulfurization (FGD) sludge stabilization system.

Steam Electric Generator Nos. 1 and 2 are coal fired utility, dry bottom wall-fired boilers, each having a maximum generator rating of 714.6 megawatts, electric. The maximum heat input to each emissions unit is 7,172 million Btu per hour. Steam Electric Generator Nos. 1 and 2 are each equipped with an electrostatic precipitator (ESP) to control particulate matter, a wet limestone flue gas desulfurization (FGD) unit to control sulfur dioxide, and low NO_X burners and low excess-air firing to control nitrogen oxides. The emissions units are regulated under Acid Rain, Phase II and Phase I; NSPS - 40 CFR 60, Subpart Da, Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978, adopted and incorporated by reference in Rule 62-204.800(7), F.A.C.; Rule 212.400(5), F.A.C., Prevention of Significant Deterioration (PSD); and Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT) Determination, dated August 9, 1979. Steam Electric Generator No. 2 began commercial operation in 1984 and Steam Electric Generator No. 1 began commercial operation in 1985. These units are subject to a PM emission limit of 0.03 pound per million Btu heat input, which was established through BACT. The applicant has presented historical PM test results which show the average results of the annual tests for the past eleven years to be 0.0151 pound per million Btu for Unit #1 and 0.0146 pound per million Btu for Unit #2. The Department has determined that the appropriate test frequency is annual, as justified by the low emission rate documented in previous emissions tests. Units 1 and 2 are subject to CAM for monitoring controlled emissions of particulate matter. Units 1 and 2 are not subject to CAM for controlled emissions of SO2 because CEMS are used for continuous compliance. Units 1 and 2 are not subject to CAM for NO_X because there are no add-on control devices.

(8) The Administrator will establish an opacity standard for the affected facility meeting the above requirements at a level at which the source will be able, as indicated by the performance and opacity tests, to meet the opacity standard at all times during which the source is meeting the mass or concentration emission standard. The Administrator will promulgate the new opacity standard in the Federal Register.

(f) Special provisions set forth under an applicable subpart of 40 CFR 60 shall supersede any conflicting provisions of 40 CFR 60.11.

(g) For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in this part, nothing in this part shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

[Rule 62-204.800, F.A.C.; and, 40 CFR 60.11(a), (b), (c), (d), (e), (f) and (g)]

40 CFR 60.12 Circumvention.

No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

[Rule 62-204.800, F.A.C.; and, 40 CFR 60.12]

40 CFR 60.13 Monitoring requirements.

(a) For the purposes of this section, all continuous monitoring systems required under applicable subparts shall be subject to the provisions of this section upon promulgation of performance specifications for continuous monitoring systems under appendix B of 40 CFR 60 and, if the continuous monitoring system is used to demonstrate compliance with emission limits on a continuous basis, appendix F to 40 CFR 60, unless otherwise specified in an applicable subpart or by the Administrator. Appendix F is applicable December 4, 1987.

(b) All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests under 40 CFR 60.8. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device.

(c) If the owner or operator of an affected facility elects to submit continuos opacity monitoring system (COMS) data for compliance with the opacity standard as provided under 40 CFR 60.11(e)(5), he/she shall conduct a performance evaluation of the COMS as specified in Performance Specification 1, appendix B, of 40 CFR 60 before the performance test required under 40 CFR 60.8 is conducted. Otherwise, the owner or operator of an affected facility shall conduct a performance evaluation of the COMS or continuous emission monitoring system (CEMS) during any performance test required under 40 CFR 60.8 or within 30 days thereafter in accordance with the applicable performance specification in appendix B of 40 CFR 60. The owner or operator of an affected facility shall conduct COMS or CEMS performance evaluations at such other times as may be required by the Administrator under section 114 of the Act.

(1) The owner or operator of an affected facility using a COMS to determine opacity compliance during any performance test required under 40 CFR 60.8 and as described in 40 CFR 60.11(e)(5), shall furnish the Administrator two or, upon request, more copies of a written report of the results of the COMS performance evaluation described in 40 CFR 60.13(c) at least 10 days before the performance test required under 40 CFR 60.8 is conducted.

(2) Except as provided in 40 CFR 60.13(c)(1), the owner or operator of an affected facility shall furnish the Administrator within 60 days of completion two or, upon request, more copies of a written report of the results of the performance evaluation.

(d)(1) Owners and operators of all continuous emission monitoring systems installed in accordance with the provisions of this part shall check the zero (or low-level value between 0 and 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts at least once daily in accordance with a written procedure. The zero and span shall, as a minimum, be adjusted whenever the 24-hour zero drift or 24-hour span drift exceeds two times the limits of the applicable performance specifications in appendix B. The system must allow the amount of excess zero and span drift measured at the 24-hour interval checks to be recorded and quantified, whenever specified. For continuous monitoring systems measuring opacity of emissions, the optical surfaces exposed to the effluent gases shall be cleaned prior to performing the zero and span drift adjustments except that for systems using automatic zero adjustments. The optical surfaces shall be cleaned when the cumulative automatic zero compensation exceeds 4 percent opacity.

(2) Unless otherwise approved by the Administrator, the following procedures shall be followed for continuous monitoring systems measuring opacity of emissions. Minimum procedures shall include a method for producing a simulated zero opacity condition and an upscale (span) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. Such procedures shall provide a system check of the analyzer internal optical surfaces and all electronic circuitry including the lamp and photo detector assembly.

(e) Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under 40 CFR 60.13(d), all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:

(1) All continuous monitoring systems referenced by 40 CFR 60.13(c) for measuring opacity of emissions shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(2) All continuous monitoring systems referenced by 40 CFR 60.13(c) for measuring emissions, except opacity, shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(f) All continuous monitoring systems or monitoring devices shall be installed such that representative measurements of emissions or process parameters from the affected facility are obtained. Additional procedures for location of continuous monitoring systems contained in the applicable Performance Specifications of appendix B of 40 CFR 60 shall be used.

(g) When the effluents from a single affected facility or two or more affected facilities subject to the same emission standards are combined before being released to the atmosphere, the owner or operator may install applicable continuous monitoring systems on each effluent or on the combined effluent. When the affected facilities are not subject to the same emission standards, separate continuous monitoring systems shall be installed on each effluent. When the effluent from one affected facility is released to the atmosphere through more than one point, the owner or operator shall install an applicable continuous monitoring system on each separate effluent unless the installation of fewer systems is approved by the Administrator. When more than one continuous monitoring system is used to measure the emissions from one affected facility (e.g., multiple breechings, multiple outlets), the owner or operator shall report the results as required from each continuous monitoring system.

(h) Owners or operators of all continuous monitoring systems for measurement of opacity shall reduce all data to 6-minute averages and for continuous monitoring systems other than opacity to 1-hour averages for time periods as defined in 40 CFR 60.2. Six-minute opacity averages shall be calculated from 36 or more data points equally spaced over each 6-minute period. For continuous monitoring systems other than opacity, 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period. Data recorder during periods of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this paragraph. An arithmetic or integrated average of all data may be used. The data may be recorded in reduced or non reduced form (e.g., ppm pollutant and percent O2 or ng/J of pollutant). All excess emissions shall be converted into units of the standard using the applicable conversion procedures specified in subparts. After conversion into units of the standard, the data may be rounded to the same number of significant digits as used in the applicable subparts to specify the emission limit (e.g., rounded to the nearest 1 percent opacity).

(i) After receipt and consideration of written application, the Administrator may approve alternatives to any monitoring procedures or requirements of this part including, but not limited to the following:

(1) Alternative monitoring requirements when installation of a continuous monitoring system or monitoring device specified by this part would not provide accurate measurements due to liquid water or other interferences caused by substances with the effluent gases.

(2) Alternative monitoring requirements when the affected facility is infrequently operated.

(3) Alternative monitoring requirements to accommodate continuous monitoring systems that require additional measurements to correct for stack moisture conditions.

(4) Alternative locations for installing continuous monitoring systems or monitoring devices when the owner or operator can demonstrate that installation at alternate locations will enable accurate and representative measurements.

(5) Alternative methods of converting pollutant concentration measurements to units of the standards.

(6) Alternative procedures for performing daily checks of zero and span drift that do not involve use of span gases or test cells.

(7) Alternatives to the A.S.T.M. test methods or sampling procedures specified by any subpart.

(8) Alternative continuous monitoring systems that do not meet the design or performance requirements in Performance Specification 1, appendix B, but adequately demonstrate a definite and consistent relationship between its measurements and the measurements of opacity by a system complying with the requirements in Performance Specification 1. The Administrator may require that such demonstration be performed for each affected facility.

(9) Alternative monitoring requirements when the effluent from a single affected facility or the combined effluent from two or more affected facilities are released to the atmosphere through more than one point.

(j) An alternative to the relative accuracy test specified in Performance Specification 2 of appendix B may be requested as follows:

(1) An alternative to the reference method tests for determining relative accuracy is available for sources with emission rates demonstrated to be less than 50 percent of the applicable standard. A source owner or operator may petition the Administrator to waive the relative accuracy test in section 7 of Performance Specification 2 and substitute the procedures in section 10 if the results of a performance test conducted according to the requirements in 40 CFR 60.8 of this subpart or other tests performed following the criteria in 40 CFR 60.8 demonstrate that the emission rate of the pollutant of interest in the units of the applicable standard is less than 50 percent of the applicable standard. For sources subject to standards expressed as control efficiency levels, a source owner or operator may petition the Administrator to waive the relative accuracy test and substitute the procedures in section 10 of Performance Specification 2 if the control device exhaust emission rate is less than 50 percent of the level needed to meet the control efficiency requirement. The alternative procedures do not apply if the continuous emission monitoring system is used to determine compliance continuously with the applicable standard. The petition to waive the relative accuracy test shall include a detailed description of the procedures to be applied. Included shall be location and procedure for conducting the alternative, the concentration or response levels of the alternative RA materials, and the other equipment checks included in the alternative procedure. The Administrator will review the petition for completeness and applicability. The determination to grant a waiver will depend on the intended use of the CEMS data (e.g., data collection purposes other than NSPS) and may require specifications more stringent than in Performance Specification 2 (e.g., the applicable emission limit is more stringent than NSPS).

(2) The waiver of a CEMS relative accuracy test will be reviewed and may be rescinded at such time following successful completion of the alternative RA procedure that the CEMS data indicate the source emissions approaching the level of the applicable standard. The criterion for reviewing the waiver is the collection of CEMS data showing that emissions have exceeded 70 percent of the applicable standard for seven, consecutive, averaging periods as specified by the applicable regulation(s). For sources subject to standards expressed as control efficiency levels, the criterion for reviewing the waiver is the collection of CEMS data showing that exhaust emissions have exceeded 70 percent of the level needed to meet the control efficiency requirement for seven, consecutive, averaging periods as specified by the applicable regulation(s) [e.g., 40 CFR 60.45(g)(2) and 40 CFR 60.45(g)(3), 40 CFR 60.73(e), and 40 CFR 60.84(e)]. It is the

responsibility of the source operator to maintain records and determine the level of emissions relative to the criterion on the waiver of relative accuracy testing. If this criterion is exceeded, the owner or operator must notify the Administrator within 10 days of such occurrence and include a description of the nature and cause of the increasing emissions. The Administrator will review the notification and may rescind the waiver and require the owner or operator to conduct a relative accuracy test of the CEMS as specified in section 7 of Performance Specification 2.

[Rule 62-204.800, F.A.C.; and, 40 CFR 60.13(a) thru (j)].

40 CFR 60.14 Modification.

(a) Except as provided under 40 CFR 60.14(e) and 40 CFR 60.14(f), any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification within the meaning of section 111 of the Act. Upon modification, an existing facility shall become an affected facility for each pollutant to which a standard applies and for which there is an increase in the emission rate to the atmosphere.

(b) Emission rate shall be expressed as kg/hr (lbs/hour) of any pollutant discharged into the atmosphere for which a standard is applicable. The Administrator shall use the following to determine emission rate:

(1) Emission factors as specified in the latest issue of "Compilation of Air Pollutant Emission Factors", EPA Publication No. AP-42, or other emission factors determined by the Administrator to be superior to AP-42 emission factors, in cases where utilization of emission factors demonstrate that the emission level resulting from the physical or operational change will either clearly increase or clearly not increase.

(2) Material balances, continuous monitor data, or manual emission tests in cases where utilization of emission factors as referenced in 40 CFR 60.14(b)(1) does not demonstrate to the Administrator's satisfaction whether the emission level resulting from the physical or operational change will either clearly increase or clearly not increase, or where an owner or operator demonstrates to the Administrator's satisfaction that there are reasonable grounds to dispute the result obtained by the Administrator utilizing emission factors as referenced in 40 CFR 60.14(b)(1) . When the emission rate is based on results from manual emission tests or continuous monitoring systems, the procedures specified in 40 CFR 60 appendix C of 40 CFR 60 shall be used to determine whether an increase in emission rate has occurred. Tests shall be conducted under such conditions as the Administrator shall specify to the owner or operator based on representative performance of the facility. At least three valid test runs must be conducted before and at least three after the physical or operational change. All operating parameters which may affect emissions must be held constant to the maximum feasible degree for all test runs.

(c) The addition of an affected facility to a stationary source as an expansion to that source or as a replacement for an existing facility shall not by itself bring within the applicability of this part any other facility within that source.

(d) [Reserved]

(e) The following shall not, by themselves, be considered modifications under this part:

(1) Maintenance, repair, and replacement which the Administrator determines to be routine for a source category, subject to the provisions of 40 CFR 60.14(c) and 40 CFR 60.15.

(2) An increase in production rate of an existing facility, if that increase can be accomplished without a capital expenditure on that facility.

(3) An increase in the hours of operation.

(4) Use of an alternative fuel or raw material if, prior to the date any standard under this part becomes applicable to that source type, as provided by 40 CFR 60.1, the existing facility was designed to accommodate that alternative use. A facility shall be considered to be designed to accommodate an alternative fuel or raw material if that use could be accomplished under the facility's construction specifications as amended prior to the change. Conversion to coal required for energy considerations, as specified in section 111(a)(8) of the Act, shall not be considered a modification.

(5) The addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emission control system is removed or is replaced by a system which the Administrator determines to be less environmentally beneficial.

(6) The relocation or change in ownership of an existing facility.

(f) Special provisions set forth under an applicable subpart of this part shall supersede any conflicting provisions of this section.

(g) Within 180 days of the completion of any physical or operational change subject to the control measures specified in 40 CFR 60.14(a), compliance with all applicable standards must be achieved.

[Rule 62-204.800, F.A.C.; and, 40 CFR 60.14(a) thru (g)].

40 CFR 60.15 Reconstruction.

(a) An existing facility, upon reconstruction, becomes an affected facility, irrespective of any change in emission rate.

(b) "Reconstruction" means the replacement of components of an existing facility to such an extent that:

(1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, and

(2) It is technologically and economically feasible to meet the applicable standards set forth in this part.

(c) "Fixed capital cost"' means the capital needed to provide all the depreciable components.

(d) If an owner or operator of an existing facility proposes to replace components, and the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, he shall notify the Administrator of the proposed replacements. The notice must be postmarked 60 days (or as soon as practicable) before construction of the replacements is commenced and must include the following information:

(1) Name and address of the owner or operator.

(2) The location of the existing facility.

(3) A brief description of the existing facility and the components which are to be replaced.

(4) A description of the existing air pollution control equipment and the proposed air pollution control equipment.

(5) An estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new facility.

(6) The estimated life of the existing facility after the replacements.

(7) A discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the proposed replacements.

(e) The Administrator will determine, within 30 days of the receipt of the notice required by 40 CFR 60.15(d) and any additional information he may reasonably require, whether the proposed replacement constitutes reconstruction.

(f) The Administrator's determination under 40 CFR 60.15(e) shall be based on:

(1) The fixed capital cost of the replacements in comparison to the fixed capital cost that would be required to construct a comparable entirely new facility;

(2) The estimated life of the facility after the replacements compared to the life of a comparable entirely new facility;

(3) The extent to which the components being replaced cause or contribute to the emissions from the facility; and

(4) Any economic or technical limitations on compliance with applicable standards of performance which are inherent in the proposed replacements.

(g) Individual subparts of this part may include specific provisions which refine and delimit the concept of reconstruction set forth in this section.

[Rule 62-204.800, F.A.C.; and, 40 CFR 60.15(a) thru (g)].

Acid Rain Part Application

For more information, see instructions and refer to 40 CFR 72.30 and 72.31 and Chapter 62-214, F.A.C.

This submission is: ☐ New ☒ Revised

STEP 1
Identify the source by plant name, State, and ORIS code

Plant Name: Seminole Generating Station	State: FL	ORIS Code: 1360

STEP 2

Enter the unit ID# for every Acid Rain unit at the Acid Rain source in column "a." For new units, enter the requested information in columns "c" and "d."

a Unit ID#	b Unit will hold allowances in accordance with 40 CFR 72.9(c)(1)	c New Units Commence Operation Date	d New Units Monitor Certification Deadline
001	Yes		
002	Yes		
	Yes		
	Yes		
	Yes		
	Yes		
	Yes		
	Yes		
	Yes		
	Yes		
	Yes		
	Yes		

Plant Name (from Step 1) Seminole Generating Station

STEP 3
Read the standard requirements

Acid Rain Part Requirements

(1) The designated representative of each Acid Rain source and each Acid Rain unit at the source shall:
(i) Submit a complete Acid Rain part application (including a compliance plan) under 40 CFR part 72 and Rules 62-214.320 and 330, F.A.C., in accordance with the deadlines specified in Rule 62-214.320, F.A.C.; and
(ii) Submit in a timely manner any supplemental information that the Department determines is necessary in order to review an Acid Rain part application and issue or deny an Acid Rain part;
(2) The owners and operators of each Acid Rain source and each Acid Rain unit at the source shall:
(i) Operate the unit in compliance with a complete Acid Rain part application or a superseding Acid Rain part issued by the Department; and
(ii) Have an Acid Rain Part.

Monitoring Requirements

(1) The owners and operators and, to the extent applicable, designated representative of each Acid Rain source and each Acid Rain unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75, and Rule 62-214.420, F.A.C.
(2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
(3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

Sulfur Dioxide Requirements

(1) The owners and operators of each source and each Acid Rain unit at the source shall:
(i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)), or in the compliance subaccount of another Acid Rain unit at the same source to the extent provided in 40 CFR 73.35(b)(3), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and
(ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.
(2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.
(3) An Acid Rain unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
(i) Starting January 1, 2000, an Acid Rain unit under 40 CFR 72.6(a)(2); or
(ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an Acid Rain unit under 40 CFR 72.6(a)(3).
(4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
(5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
(6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain part application, the Acid Rain part, or an exemption under 40 CFR 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
(7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements The owners and operators of the source and each Acid Rain unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

Excess Emissions Requirements

(1) The designated representative of an Acid Rain unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.
(2) The owners and operators of an Acid Rain unit that has excess emissions in any calendar year shall:
(i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
(ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

Recordkeeping and Reporting Requirements.

(1) Unless otherwise provided, the owners and operators of the source and each Acid Rain unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the EPA or the Department:
(i) The certificate of representation for the designated representative for the source and each Acid Rain unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with Rule 62-214.350, F.A.C.; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
(ii) All emissions monitoring information, in accordance with 40 CFR part 75, provided that to the extent that 40 CFR part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply;
(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,

Plant Name (from Step 1) Seminole Generating Station

STEP 3, Cont'd.

Recordkeeping and Reporting Requirements (cont)

(iv) Copies of all documents used to complete an Acid Rain part application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.

(2) The designated representative of an Acid Rain source and each Acid Rain unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

Liability.

(1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain part application, an Acid Rain part, or an exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
(2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
(3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
(4) Each Acid Rain source and each Acid Rain unit shall meet the requirements of the Acid Rain Program.
(5) Any provision of the Acid Rain Program that applies to an Acid Rain source (including a provision applicable to the designated representative of an Acid Rain source) shall also apply to the owners and operators of such source and of the Acid Rain units at the source.
(6) Any provision of the Acid Rain Program that applies to an Acid Rain unit (including a provision applicable to the designated representative of an Acid Rain unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR 72.44 (Phase II repowering extension plans) and 40 CFR 76.11 (NO_x averaging plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR part 75 (including 40 CFR 75.16, 75.17, and 75.18), the owners and operators and the designated representative of one Acid Rain unit shall not be liable for any violation by any other Acid Rain unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative.
(7) Each violation of a provision of 40 CFR parts 72, 73, 75, 76, 77, and 78 by an Acid Rain source or Acid Rain unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Effect on Other Authorities.

No provision of the Acid Rain Program, an Acid Rain part application, an Acid Rain part, or an exemption under 40 CFR 72.7or 72.8 shall be construed as:
(1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an Acid Rain source or Acid Rain unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;
(2) Limiting the number of allowances a unit can hold; *provided*, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the Act;
(3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;
(4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
(5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

STEP 4

Read the certification statement, sign, and date

Certification

I am authorized to make this submission on behalf of the owners and operators of the Acid Rain source or Acid Rain units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name Michael P. Opalinski	
Signature M.P. Opalinski	Date 6/8/04

Florida Department of Environmental Protection

Phase II NO_X Compliance Plan

For more information, see instructions and refer to 40 CFR 76.9

This submission is: ☐ New X Revised

STEP 1 Indicate plant name, state, and ORIS code from NADB, if applicable.	Seminole Generating Station Plant Name	FL State	000136 ORIS Code
STEP 2	Identify each affected Group 1 and Group 2 boiler using the boiler ID# from NADB, if applicable. Indicate boiler type: "CB" for cell burner, "CY" for cyclone, "DBW" for dry bottom wall-fired, "T" for tangentially fired, "V" for vertically fired, and "WB" for wet bottom. Indicate the compliance option selected for each unit.		

	ID# U01	ID# U02	ID#	ID#	ID#	ID#
	Type DBW	Type DBW	Type	Type	Type	Type
(a) Standard annual average emission limitation of 0.50 lb/mmBtu (for Phase I dry bottom wall-fired boilers)	X	X	☐	☐	☐	☐
(b) Standard annual average emission limitation of 0.45 lb/mmBtu (for Phase I tangentially fired boilers)	☐	☐	☐	☐	☐	☐
(c) EPA-approved early election plan under 40 CFR 76.8 through 12/31/07 (also indicate above emission limit specified in plan)	X	X	☐	☐	☐	☐
(d) Standard annual average emission limitation of 0.46 lb/mmBtu (for Phase II dry bottom wall-fired boilers)	☐	☐	☐	☐	☐	☐
(e) Standard annual average emission limitation of 0.40 lb/mmBtu (for Phase II tangentially fired boilers)	☐	☐	☐	☐	☐	☐
(f) Standard annual average emission limitation of 0.68 lb/mmBtu (for cell burner boilers)	☐	☐	☐	☐	☐	☐
(g) Standard annual average emission limitation of 0.86 lb/mmBtu (for cyclone boilers)	☐	☐	☐	☐	☐	☐
(h) Standard annual average emission limitation of 0.80 lb/mmBtu (for vertically fired boilers)	☐	☐	☐	☐	☐	☐
(i) Standard annual average emission limitation of 0.84 lb/mmBtu (for wet bottom boilers)	☐	☐	☐	☐	☐	☐
(j) NO_x Averaging Plan (include NO_x Averaging form)	☐	☐	☐	☐	☐	☐
(k) Common stack pursuant to 40 CFR 75.17(a)(2)(i)(A) (check the standard emission limitation box above for most stringent limitation applicable to any unit utilizing stack)	☐	☐	☐	☐	☐	☐

Seminole Generating Station Plant Name (from Step 1)

STEP 2, cont'd.

	ID# U01	ID# U02	ID#	ID#	ID#	ID#
	Type DBW	Type DBW	Type	Type	Type	Type
(l) Common stack pursuant to 40 CFR 75.17(a)(2)(i)(B) with NO_x Averaging (check the NO_x Averaging Plan box and include NO_x Averaging Form)	☐	☐	☐	☐	☐	☐
(m) EPA-approved common stack apportionment method pursuant to 40 CFR 75.17 (a)(2)(i)(C), (a)(2)(iii)(B), or (b)(2)	☐	☐	☐	☐	☐	☐
(n) AEL (include Phase II AEL Demonstration Period, Final AEL Petition, or AEL Renewal form as appropriate)	☐	☐	☐	☐	☐	☐
(o) Petition for AEL demonstration period or final AEL under review by U.S. EPA or demonstration period ongoing	☐	☐	☐	☐	☐	☐
(p) Repowering extension plan approved or under review	☐	☐	☐	☐	☐	☐

STEP 3
Read the standard requirements and certification, enter the name of the designated representative, sign and date.

Standard Requirements

General. This source is subject to the standard requirements in 40 CFR 72.9 (consistent with 40 CFR 76.8(e)(1)(i)). These requirements are listed in this source's Acid Rain Part of its Title V permit.

Special Provisions for Early Election Units

Nitrogen Oxides. A unit that is governed by an approved early election plan shall be subject to an emissions limitation for NO_x as provided under 40 CFR 76.8(a)(2) except as provided under 40 CFR 76.8(e)(3)(iii).

Liability. The owners and operators of a unit governed by an approved early election plan shall be liable for any violation of the plan or 40 CFR 76.8 at that unit. The owners and operators shall be liable, beginning January 1, 2000, for fulfilling the obligations specified in 40 CFR Part 77.

Termination. An approved early election plan shall be in effect only until the earlier of January 1, 2008 or January 1 of the calendar year for which a termination of the plan takes effect. If the designated representative of the unit under an approved early election plan fails to demonstrate compliance with the applicable emissions limitation under 40 CFR 76.5 for any year during the period beginning January 1 of the first year the early election takes effect and ending December 31, 2007, the permitting authority will terminate the plan. The termination will take effect beginning January 1 of the year after the year for which there is a failure to demonstrate compliance, and the designated representative may not submit a new early election plan. The designated representative of the unit under an approved early election plan may terminate the plan any year prior to 2008 but may not submit a new early election plan. In order to terminate the plan, the designated representative must submit a notice under 40 CFR 72.40(d) by January 1 of the year for which the termination is to take effect. If an early election plan is terminated any year prior to 2000, the unit shall meet, beginning January 1, 2000, the applicable emissions limitation for NO_x for Phase II units with Group 1 boilers under 40 CFR 76.7. If an early election plan is terminated on or after 2000, the unit shall meet, beginning on the effective date of the termination, the applicable emissions limitation for NO_x for Phase II units with Group 1 boilers under 40 CFR 76.7.

STEP 3, cont'd.

Certification

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name Michael P. Opalinski	
Signature M. P. Opalinski	Date 6/29/04

Table 1-1, Summary of Air Pollutant Standards and Terms

Seminole Electric Cooperative, Inc.
Seminole Generating Station

FINAL Permit No.: 1070025-002-AV
Facility ID No.: 1070025

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

E.U. ID No.	Brief Description
[-001]	Steam Electric Generator No. 1
[-002]	Steam Electric Generator No. 2

			Allowable Emissions			Equivalent Emissions*			
Pollutant Name	Fuel(s)	Hours/Year	Standard(s)	lbs./hour	TPY	lbs./hour	TPY	Regulatory Citation(s)	See permit condition(s)
PM	coal or oil	8,760	0.03 lb/MMBtu			215.16	942	40 CFR 60.42a(a)	A.5.
PM	coal & petcoke	8,760	0.03 lb/MMBtu			215.16	942	PSD-FL-018(A)	A.6.
VE	all		20% except 27% one 6 min/hr					40 CFR 60.42a(b)	A.7.
SO2	coal	8,760	1.20 lb/MMBtu			8,606.4	37,696	40 CFR 60.43a(a)(1) & (2)	A.8.
SO2	liquid	8,760	0.80 lb/MMBtu			5,737.6	25,131	40 CFR 60.43a(b)(1) & (2)	A.9.
SO2	coal & liquid	8,760	X(340) + Y(520)/100					PSD-FL-018	A.11.
SO2	coal & petcoke	8,760	Permit Condition **A.12.**			7,538.3 / 7,491.8	33,018 / 32,814	PSD-FL-018(A)	A.12.
SO2	petcoke	8,760	7.0% sulfur by weight, dry basis					PSD-FL-018(A)	A.13.
NOX	coal	8,760	0.60 lb/MMBtu			4,303.2	18,848	40 CFR 60.44a(a)(1) & (2)	A.14.
NOX	liquid	8,760	0.30 lb/MMBtu			2,151.6	9,424	40 CFR 60.44a(a)(1) & (2)	A.14.
NOX	coal & liquid	8,760	X(130) + Y(260)/100					PSD-FL-018	A.15.
NOX	coal & petcoke	8,760	0.50 lb/MMBtu			3,586.0	15,707	PSD-FL-018(A)	A.16.
CO	coal & petcoke	8,760	No significant increase compared to coal					Rule 62-210.200(12)(d), FAC	A.69.
H2SO4 Mist	coal & petcoke	8,760	No significant increase compared to coal					Rule 62-210.200(12)(d), FAC	A.70.

Notes:
* The "Equivalent Emissions" listed are for informational purposes only.

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Table 1-1, Summary of Air Pollutant Standards and Terms

Seminole Electric Cooperative, Inc.
Seminole Generating Station

FINAL Permit No.: 1070025-002-AV
Facility ID No.: 1070025

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

E.U. ID No.	Brief Description
[-004]	Coal Storage Yard

			Allowable Emissions			Equivalent Emissions*			
Pollutant Name	Fuel(s)	Hours/Year	Standard(s)	lbs./hour	TPY	lbs./hour	TPY	Regulatory Citation(s)	See permit condition(s)
VE		8,760	<20%					40 CFR 60.252(c)	C.4.

Notes:
* The "Equivalent Emissions" listed are for informational purposes only.

[electronic file name: 10700251.xls]

Table 1-1, Summary of Air Pollutant Standards and Terms

Seminole Electric Cooperative, Inc.
Seminole Generating Station

FINAL Permit No.: 1070025-002-AV
Facility ID No.: 1070025

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

E.U. ID No.	Brief Description
[-005]	Limestone and FGD Sludge Handling and Storage

			Allowable Emissions			Equivalent Emissions*			
Pollutant Name	Fuel(s)	Hours/Year	Standard(s)	lbs./hour	TPY	lbs./hour	TPY	Regulatory Citation(s)	See permit condition(s)
VE		8,760	20%					PSD-FL-018	D.4.

Notes:
* The "Equivalent Emissions" listed are for informational purposes only.

[electronic file name: 10700251.xls]

Table 2-1, Summary of Compliance Requirements

Seminole Electric Cooperative, Inc.
Seminole Generating Station

FINAL Permit No.: 1070025-002-AV
Facility ID No.: 1070025

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

E.U. ID No.	Brief Description
[-001]	Steam Electric Generator No. 1
[-002]	Steam Electric Generator No. 2

Pollutant Name or Parameter	Fuel(s)	Compliance Method	Testing Time Frequency	Frequency Base Date*	Min. Compliance Test Duration	CMS**	See permit condition(s)
PM	All	EPA Method 19 & 5 or 5B	Annual	2/8/1987	120 minutes		A.41.
VE	All	EPA Method 9 and CMS***	Annual & Continuous	2/8/1987	1 hour	Yes	A.30., A.40.
SO2	All	EPA Method 19 and CMS	Annual & Continuous	2/8/1987	1 hour	Yes	A.31., A.42.
NOX	All	EPA Method 19 and CMS	Annual & Continuous	2/8/1987	1 hour	Yes	A.32., A.43.
CO	coal & petcoke	EPA Method 10	Annual	2/8/1987	1 hour		A.69.
H2SO4 Mist	coal & petcoke	EPA Method 8	Annual	2/8/1987	1 hour		A.70.

Notes:
* The frequency base date is established for planning purposes only; see Rule 62-297.310, F.A.C.
**CMS [=] continuous monitoring system
*** Annual compliance may be shown using continuous opacity monitors in lieu of EPA Method 9

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Table 2-1, Summary of Compliance Requirements

Seminole Electric Cooperative, Inc.
Seminole Generating Station

FINAL Permit No.: 1070025-002-AV
Facility ID No.: 1070025

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

E.U. ID No.	Brief Description
[-004]	Coal Storage Yard

Pollutant Name or Parameter	Fuel(s)	Compliance Method	Testing Time Frequency	Frequency Base Date *	Min. Compliance Test Duration	CMS**	See permit condition(s)
VE		EPA Method 9	Annual	2/8/1987	30 minutes		C.6.

Notes:
* The frequency base date is established for planning purposes only; see Rule 62-297.310, F.A.C.
**CMS [=] continuous monitoring system

[electronic file name: 10700252.xls]

Table 2-1, Summary of Compliance Requirements

Seminole Electric Cooperative, Inc.
Seminole Generating Station

FINAL Permit No.: 1070025-002-AV
Facility ID No.: 1070025

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

E.U. ID No.	Brief Description
[-005]	Limestone and FGD Sludge Handling and Storage

Pollutant Name or Parameter	Fuel(s)	Compliance Method	Testing Time Frequency	Frequency Base Date *	Min. Compliance Test Duration	CMS**	See permit condition(s)
VE		EPA Method 9	Annual	2/8/1987	30 minutes		D.6.

Notes:
* The frequency base date is established for planning purposes only; see Rule 62-297.310, F.A.C.
**CMS [=] continuous monitoring system

[electronic file name: 10700252.xls]

Appendix H-1, Permit History/ID Number Changes

Seminole Electric Cooperative, Inc.

FINAL Permit No.: 1070025-002-AV
Facility ID No.: 1070025

Permit History (for tracking purposes):

E.U. ID No	Description	Permit No.	Issue Date	Expiration Date	Extended Date	Revised Date(s)
-001	#1 Unit, W/ESP AND FGD	PA78-10 & PSD-FL-018	09/18/79 & 09/09/79			10/12/88, 8/10/89, 3/26/91, 10/14/92, 11/25/92, 3/2/95, 4/25/97 & 2/7/97
-002	#2 Unit, W/ESP AND FGD	PA78-10 & PSD-FL-018	09/18/79 & 09/09/79			10/12/88, 8/10/89, 3/26/91, 10/14/92, 11/25/92, 3/2/95, 4/25/97 & 2/7/97
-003	Rail Car Maintenance	PA78-10 & PSD-FL-018	09/18/79 & 09/09/79			10/12/88, 8/10/89, 3/26/91, 10/14/92, 11/25/92, 3/2/95, 4/25/97 & 2/7/97
-004	Coal Storage Yard	PA78-10 & PSD-FL-018	09/18/79 & 09/09/79			10/12/88, 8/10/89, 3/26/91, 10/14/92, 11/25/92, 3/2/95, 4/25/97 & 2/7/97
-005	Limestone & FGD Sludge Handling and Storage	PSD-FL-018	09/09/79			
ALL	Title V Renewal	1070025-002-AV	01/01/05	12/31/09		

Notes:
1 - AO permit(s) automatic extension(s) in Rule 62-210.300(2)(a)3.a., F.A.C., effective 03/21/96.
2 - AC permit(s) automatic extension(s) in Rule 62-213.420(1)(a)4., F.A.C., effective 03/20/96.
{Rule 62-213.420(1)(b)2., F.A.C., effective 03/20/96, allows Title V Sources to operate under existing valid permits}

Appendix I-1, List of Insignificant Emissions Units and/or Activities.

Seminole Electric Cooperative, Inc. **FINAL Permit No.:** 1070025-002-AV
Seminole Generating Station **Facility ID No.:** 1070025

The facilities, emissions units, or pollutant-emitting activities listed in Rule 62-210.300(3)(a), F.A.C., Categorical Exemptions, are exempt from the permitting requirements of Chapters 62-210 and 62-4, F.A.C.; provided, however, that exempt emissions units shall be subject to any applicable emission limiting standards and the emissions from exempt emissions units or activities shall be considered in determining the potential emissions of the facility containing such emissions units. Emissions units and pollutant-emitting activities exempt from permitting under Rule 62-210.300(3)(a), F.A.C., shall not be exempt from the permitting requirements of Chapter 62-213, F.A.C., if they are contained within a Title V source; however, such emissions units and activities shall be considered insignificant for Title V purposes provided they also meet the criteria of Rule 62-213.430(6)(b), F.A.C. No emissions unit shall be entitled to an exemption from permitting under Rule 62.210.300(3)(a), F.A.C., if its emissions, in combination with the emissions of other units and activities at the facility, would cause the facility to emit or have the potential to emit any pollutant in such amount as to make the facility a Title V source.

The below listed emissions units and/or activities are considered insignificant pursuant to Rule 62-213.430(6), F.A.C.

Brief Description of Emissions Units and/or Activities

1. Brazing, soldering and welding
2. Parts cleaning and degreasing stations
3. Storage tanks <550 gallons
4. Inorganic substance storage tanks >550 gallons
5. No. 2 fuel oil storage tanks >550 gallons
6. Laboratory equipment used exclusively for chemical or physical analysis
7. Fire and safety equipment
8. Turbine vapor extractor
9. Sand blasting and abrasive blasting where temporary total enclosures are used to contain particulate
10. Equipment used for steam cleaning
11. Belt conveyors not subject to 40 CFR 60, Subpart Y
12. Vehicle refueling operations
13. Vacuum pumps in laboratory operations
14. Equipment used exclusively for space heating, excluding boilers
15. Surface coating operations utilizing 6.0 gallons per day, or less, averaged monthly, of coatings
16. Degreasing units using heavier than air vapors exclusively, except any unit using or emitting any substance classified as a hazardous air pollutant.
17. Surface coating operations utilizing only coatings containing 5.0 percent or less VOCs, by volume.
18. Lime transfer associated with water pretreatment.
19. Purge water treatment lime silo.
20. Periodic abrasive blasting in permanent enclosure (old railcar maintenance building)

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APPENDIX CAM

Compliance Assurance Monitoring Requirements

Compliance Assurance Monitoring Requirements

Pursuant to Rule 62-213.440(1)(b)1.a., F.A.C., the CAM plans that are included in this appendix contain the monitoring requirements necessary to satisfy 40 CFR 64. Conditions 1. – 17. are generic conditions applicable to all emissions units that are subject to the CAM requirements. Specific requirements related to each emissions unit are contained in the attached tables, as submitted by the applicant and approved by the Department.

40 CFR 64.6 Approval of Monitoring.

1. The attached CAM plan(s), as submitted by the applicant, is/are approved for the purposes of satisfying the requirements of 40 CFR 64.3.
[40 CFR 64.6(a)]

2. The attached CAM plan(s) include the following information:
(i) The indicator(s) to be monitored (such as temperature, pressure drop, emissions, or similar parameter);
(ii) The means or device to be used to measure the indicator(s) (such as temperature measurement device, visual observation, or CEMS); and
(iii) The performance requirements established to satisfy 40 CFR 64.3(b) or (d), as applicable.
[40 CFR 64.6(c)(1)]

3. The attached CAM plan(s) describe the means by which the owner or operator will define an exceedance of the permitted limits or an excursion from the stated indicator ranges and averaging periods for purposes of responding to (see **CAM Conditions 5. - 9.)** and reporting exceedances or excursions (see **CAM Conditions 10. – 14.**).
[40 CFR 64.6(c)(2)]

4. The permittee is required to conduct the monitoring specified in the attached CAM plan(s) and shall fulfill the obligations specified in the conditions below (see **CAM Conditions 5. - 17.**).
[40 CFR 64.6(c)(3)]

40 CFR 64.7 Operation of Approved Monitoring.

5. Commencement of operation. The owner or operator shall conduct the monitoring required under this appendix upon the effective date of this Title V permit.
[40 CFR 64.7(a)]

6. Proper maintenance. At all times, the owner or operator shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.
[40 CFR 64.7(b)]

7. Continued operation. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the

operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.
[40 CFR 64.7(c)]

8. Response to excursions or exceedances.

a. Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions, if allowed by this permit). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

b. Determination of whether the owner or operator has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

[40 CFR 64.7(d)(1) & (2)]

9. Documentation of need for improved monitoring. If the owner or operator identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the owner or operator shall promptly notify the permitting authority and, if necessary, submit a proposed modification to the Title V permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.
[40 CFR 64.7(e)]

40 CFR 64.8 Quality Improvement Plan (QIP) Requirements.

10. Based on the results of a determination made under **CAM Condition 8.a.**, above, the permitting authority may require the owner or operator to develop and implement a QIP. Consistent with **CAM Condition 4.**, an accumulation of exceedances or excursions exceeding 5 percent duration of a pollutant-specific emissions unit's operating time for a reporting period, may require the implementation of a QIP. The threshold may be set at a higher or lower percent or may rely on other criteria for purposes of indicating whether a pollutant-specific emissions unit is being maintained and operated in a manner consistent with good air pollution control practices.
[40 CFR 64.8(a)]

11. Elements of a QIP:

a. The owner or operator shall maintain a written QIP, if required, and have it available for inspection.

b. The plan initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the owner or operator shall modify the plan to include procedures for conducting one or more of the following actions, as appropriate:

(i) Improved preventive maintenance practices.
(ii) Process operation changes.
(iii) Appropriate improvements to control methods.
(iv) Other steps appropriate to correct control performance.
(v) More frequent or improved monitoring (only in conjunction with one or more steps under **CAM Condition 11.b(i)** through **(iv)**, above).

[40 CFR 64.8(b)]

12. If a QIP is required, the owner or operator shall develop and implement a QIP as expeditiously as practicable and shall notify the permitting authority if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.

[40 CFR 64.8(c)]

13. Following implementation of a QIP, upon any subsequent determination pursuant to **CAM Condition 8.b.**, the permitting authority may require that an owner or operator make reasonable changes to the QIP if the QIP is found to have:

a. Failed to address the cause of the control device performance problems; or
b. Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

[40 CFR 64.8(d)]

14. Implementation of a QIP shall not excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.

[40 CFR 64.8(e)]

<u>40 CFR 64.9 Reporting And Recordkeeping Requirements.</u>

15. <u>General reporting requirements.</u>

a. On and after the date specified in **CAM Condition 5.** by which the owner or operator must use monitoring that meets the requirements of this appendix, the owner or operator shall submit monitoring reports semi-annually to the permitting authority in accordance with Rule 62-213.440(1)(b)3.a., F.A.C.
b. A report for monitoring under this part shall include, at a minimum, the information required under Rule 62-213.440(1)(b)3.a., F.A.C., and the following information, as applicable:
   (i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
   (ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and
   (iii) A description of the actions taken to implement a QIP during the reporting period as specified in **CAM Conditions 10.** through **14.** Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 CFR 64.9(a)]

16. <u>General recordkeeping requirements.</u>

a. The owner or operator shall comply with the recordkeeping requirements specified in Rule 62-213.440(1)(b)2., F.A.C. The owner or operator shall maintain records of monitoring data,

monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to **CAM Conditions 10.** through **14.**, and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this part (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

b. Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

[40 CFR 64.9(b)]

40 CFR 64.10 Savings Provisions.

17. It should be noted that nothing in this appendix shall:

a. Excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act. The requirements of this appendix shall not be used to justify the approval of monitoring less stringent than the monitoring which is required under separate legal authority and are not intended to establish minimum requirements for the purpose of determining the monitoring to be imposed under separate authority under the Act, including monitoring in permits issued pursuant to title I of the Act. The purpose of this part is to require, as part of the issuance of a permit under Title V of the Act, improved or new monitoring at those emissions units where monitoring requirements do not exist or are inadequate to meet the requirements of this part.

b. Restrict or abrogate the authority of the Administrator or the permitting authority to impose additional or more stringent monitoring, recordkeeping, testing, or reporting requirements on any owner or operator of a source under any provision of the Act, including but not limited to sections 114(a)(1) and 504(b), or state law, as applicable.

c. Restrict or abrogate the authority of the Administrator or permitting authority to take any enforcement action under the Act for any violation of an applicable requirement or of any person to take action under section 304 of the Act.

[40 CFR 64.10]

Emissions Units -001 & -002

2 - 7,172 MMBtu/Hr Coal, Petroleum Coke and Oil-Fired Boilers
Particulate Matter Emissions Controlled By ESPs

Monitoring Approach

	Indicator No. 1	Indicator No. 2
I. Indicator	Duct opacity	Scrubber operation following existing procedures.
Measurement Approach	The opacity is measured using a Continuous Opacity Monitoring System (COMS) in the duct of each boiler downstream of the ESP.	Scrubber interference is measured by operating parameter evaluation.
II. Indicator Range	An excursion is defined as measured duct opacity greater than 6.5 percent for ten consecutive six minute readings or any 6-minute opacity reading greater than 12%, excluding those events defined as startup/shutdown and malfunctions. Corrective action must be conducted to restore opacity below the excursion threshold and assist in preventing future ESP malfunctions from occurring.	An excursion is defined as not adhering to the established operating parameters and practices described in the company's Support Systems Operation manual.
III. Performance Criteria		
A. Data Representativeness	Opacity is related to the size and concentration of particles in the flue gas. As particulate mass emissions increase, it can be reasonably expected that stack opacity will also increase. Each boiler discharges to a single, dedicated stack. Each duct is equipped with a COMS that meets the installation and minimum acceptable accuracy requirements of 40 CFR Part 60, Performance Specification 1. The COMS is located downstream of the ESP and, therefore, reflects the performance of the primary particulate control device.	The wet flue gas desulfurization (FGD) system for control of SO_2 emissions is monitored and operated according to the operating parameters and practices which have been established during annual particulate matter compliance testing to minimize scrubber carryover. (These operating parameters and practices are described in the "Plant Section" of the company's Support Systems Operation manual, which is attached to the permit for convenience purposes only).
B. Verification of Operational Status	Not applicable. Monitoring approach uses existing equipment and procedures.	Not Applicable.
C. QA/QC Practices and Criteria	Daily zero and calibration drift check, periodic cleaning of optical surfaces and other periodic QA/QC checks as specified in the applicable version of Performance Specification 1.	Support System Operators (SSO) are adequately trained and report directly to the Support Systems Shift Supervisor.
D. Monitoring Frequency	Continuous.	Continuous.
E. Data Collection Procedures	The COMS collects a data point every 10 seconds and the data logger reduces the data to six minute block averages.	SSO evaluate and manually record the pertinent scrubber data according to procedure.
F. Averaging Period	The averaging period for opacity observations is a 6-minute block average.	Continuous observation of scrubber operation.

Seminole Electric Cooperative, Inc.
Seminole Generating Station
Facility ID No.: 1070025
Putnam County

Title V Air Operation Permit Renewal

FINAL Permit Project No.: 1070025-002-AV

Permitting Authority:
State of Florida
Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation
Permitting North Section
Mail Station #5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Telephone: 850/488-0114
Fax: 850/922-6979

Compliance Authority:
Department of Environmental Protection
Northeast District Office
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256-7590
Telephone: 904/807-3300
Fax: 904/448-4319

Title V Air Operation Permit Renewal

Table of Contents

10.4.6 Sovereign Land Easement 7899

The following pages contain the easement which authorizes the use of sovereignty land adjacent to the SGS.

OFFICIAL RECORDS

BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND

EASEMENT
AMENDMENT TO EASEMENT 2899

NO. 25957(2899-54)-B CORRECTIVE

WHEREAS, pursuant to application made by the Seminole Electric Cooperative, for a right of way easement over certain lands held by the Board of Trustees of the Internal Improvement Trust Fund, the Board of Trustees of the Internal Improvement Trust Fund on September 18, 1979, did agree to the granting of said easement.

THIS INDENTURE, made and entered into by and between the Board of Trustees of the Internal Improvement Trust Fund, as grantor, and the Seminole Electric Cooperative, as grantee,

WITNESSETH: the Board of Trustees of the Internal Improvement Trust Fund does hereby grant unto the said Seminole Electric Cooperative, its successors and assigns, a right of way easement for utilities construction purposes, subject to the conditions hereinafter set forth, in and to the following described land in Putnam County, Florida, to-wit:

A parcel of sovereignty land in the St. Johns River abutting Section 18, Township 9 South, Range 27 East, Putnam County, being more particularly described as follows:

Commencing at a C.M. at the apparent S.W. corner of Government Lot 2 of Section 18, Township 9 South, Range 27 East; run thence S 00°05'02" E, 1354.97 feet to the South r/w of SR 209, as now layed out and in use; thence S 89°39'25" W, 194.63 feet along the South r/w of SR 209 to a concrete monument; thence S 00°51'00" E, 948.60 feet to a found concrete monument on the water's edge of the St. Johns River and the Point of Beginning of the herein described easement; thence continue S 00°51'00" E, 347.60 feet from the Point of Beginning; thence S 35°19'53" E, 611.07 feet, S 54°40'07" W, 50.00 feet; thence N 35°19'53" W, 487.17 feet; thence S 88°59'07" W, 224.70 feet; thence N 01°00'53" W, 400.00 feet to a found concrete monument on the water's edge of the St. Johns River; thence Northeasterly along the St. Johns River, 212.06 feet to a found concrete monument and the Point of Beginning; containing 2.7 acres, more or less.

This Easement is granted subject to the following provisions, viz:

1. The rights hereby conferred shall be subject to (a) any and all prior rights of the United States; and (b) any and all prior grants by the Board of Trustees of the Internal Improvement Trust Fund in and to submerged lands situated within the limits of the right of way hereinabove described.

2. That no title to said land is conferred by this instrument.

3. That the above described parcel of land shall be used solely as right of way for the construction, maintenance and use of pipeline and intake and discharge structures. In the event the land herein described shall cease to be used for said purposes then the Easement hereby granted covering said land shall revert to the Board of Trustees of the Internal Improvement Trust Fund.

4. That the grantee herein will not, in the construction and maintenance of said utilities, damage or unduly interfere with public or private rights therein.

5. That the grantee herein shall save and protect the Board of Trustees of the Internal Improvement Trust Fund from all damages and claims arising out of the construction, use and/or maintenance of said utilities.

6. That the grantee by acceptance of this agreement binds itself, its successors and assigns, to abide by the provisions and conditions herein set forth, and said provisions and conditions shall be deemed covenants of the grantee, its successors and assigns.

TO HAVE AND TO HOLD said Easement unto said grantee, its successors and assigns, for the purposes therein set forth.

This Easement corrects and supersedes a former Easement numbered 25957(2899-54)-A, dated January 24, 1980, between the Trustees of the Internal Improvement Trust Fund, as grantors, and Seminole Electric Cooperative, as grantee, wherein an incorrect metes and bounds description did not provide for a Point of Beginning for the legal description of the Easement granted for a parcel of submerged sovereignty land. The description has been corrected to include an appropriate Point of Beginning.

IN TESTIMONY WHEREOF, the legally designated agent of the State of Florida Board of Trustees of the Internal Improvement Trust Fund has hereunto subscribed his name and has caused the official seal of the State of Florida Board of Trustees of the Internal Improvement Trust Fund to be hereunto affixed, in the City of Tallahassee, Florida, on this the 3 day of December, A.D., 1984.

(SEAL)
Trustees of the Internal Improvement Trust Fund of the State of Florida

Elton J. Gissendanner
Executive Director of the State of Florida Department of Natural Resources, Agent for the Trustees of the Internal Improvement Trust Fund of the State of Florida and authorized to execute this instrument for and on its behalf pursuant to Florida Statutes 253.431 and by its action as recorded in its minutes of June 29, 1971.

APPROVED AS TO
FORM AND LEGALITY
Lee Rohe
SUB ATTORNEY

031393

FILED AND RECORDED IN PUBLIC
RECORDS OF PUTNAM COUNTY, FL
1984 DEC -4 PM 2:00

10.4.7 FDOT Driveway Permit No. 5S-79-35

The following pages contain the original FDOT permit which authorized the construction of the plant access road off of U.S. Highway 17

FORM 3/2-01

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

DRIVEWAY PERMIT

COMMERCIAL

Permit No. 5S-79-35

0131-5.6
620-5.7
orig.

I, Seminole Electric Cooperative, Inc.

REC'D MAY 4 1979

(Name of Applicant)

of 2410 E. Busch Blvd., Tampa, Florida 33612

(Address)

hereinafter termed the applicant, requests permission for the construction of a driveway(s) on Department of Transportation right of way at the following location:

State Road No. 15 (US 17) Section No. 76030 County Putnam

~~XXXXXXXXXXXXXXXXXX~~ Mi. Post ~~XXXX~~ No. 6.667

in the following manner: A 526' Bypass lane with 250' tapers at each end and a 213' stacking lane for southbound traffic; ~~a 633' Bypass lane with 250' tapers at each end~~ a 200' deceleration lane and a 633' acceleration lane for northbound traffic to be constructed of 3" asphaltic concrete, 2" leveling course (lime rock) and 6" base course (lime rock) as per the Florida Department of Transportation Standard Specifications for Roads and Bridges. The driveway will have one 12' exit lane from Route 17 and 2 - 12' entrance lanes onto Route 17. A 36"ø corrugated metal pipe will be installed for drainage. All pavement to be constructed over 12" of stabilized earth subgrade (L.B.R. 40). All disturbed areas must be restored and seeded & mulched or sodded as required by the Maint. Engineer. All excavation within 10' of the travelled way must be backfilled within 24 hours. The applicant must notify the St. Augustine Maintenance office when construction is to begin. Phone 829-5697.

as shown on the attached sketch. SC 058 and SC 059

The driveway(s) will be constructed in accordance with resolution adopted by the Department of Transportation and covered in its "Driveway Regulations Covering Private Entrances and Exits for State Maintained Roads."

The applicant will save and keep the State of Florida harmless from any and all damages, claims, or injuries that may occur by reason of this construction of said facility.

The applicant binds and obligates himself to conform to the above description and attached sketch and to abide by the driveway regulations stated above.

Signed T. E. Crumlish

T. E. Crumlish (Applicant) Project Director

2410 E. Busch Blvd., Tampa, Fla. 33612

(Applicant's Address)

The above request has been reviewed and has been found to meet the regulations as prescribed and is hereby approved.

Signed J. A. Crookshank Jr.

Maintenance Engineer

(Title)

Date of Approval May 2, 1979

(See reverse side)

Instructions for Handling Permit

1. Permit shall be prepared in quadruplicate including four copies of sketch and after approval copies to the following:

   a. Original to applicant.

   b. One copy to the State Maintenance Engineer.

   c. One copy to District Engineer.

   d. One copy to Maintenance Engineer.

2. The maintenance office shall advise and assist the applicant in preparing the forms as necessary and shall thoroughly acquaint the applicant with the driveway regulations.

3. The permit shall be approved by either the Maintenance Engineer, District Maintenance Engineer, or District Engineer.

Pertinent Information Which Should be Shown on Sketch:

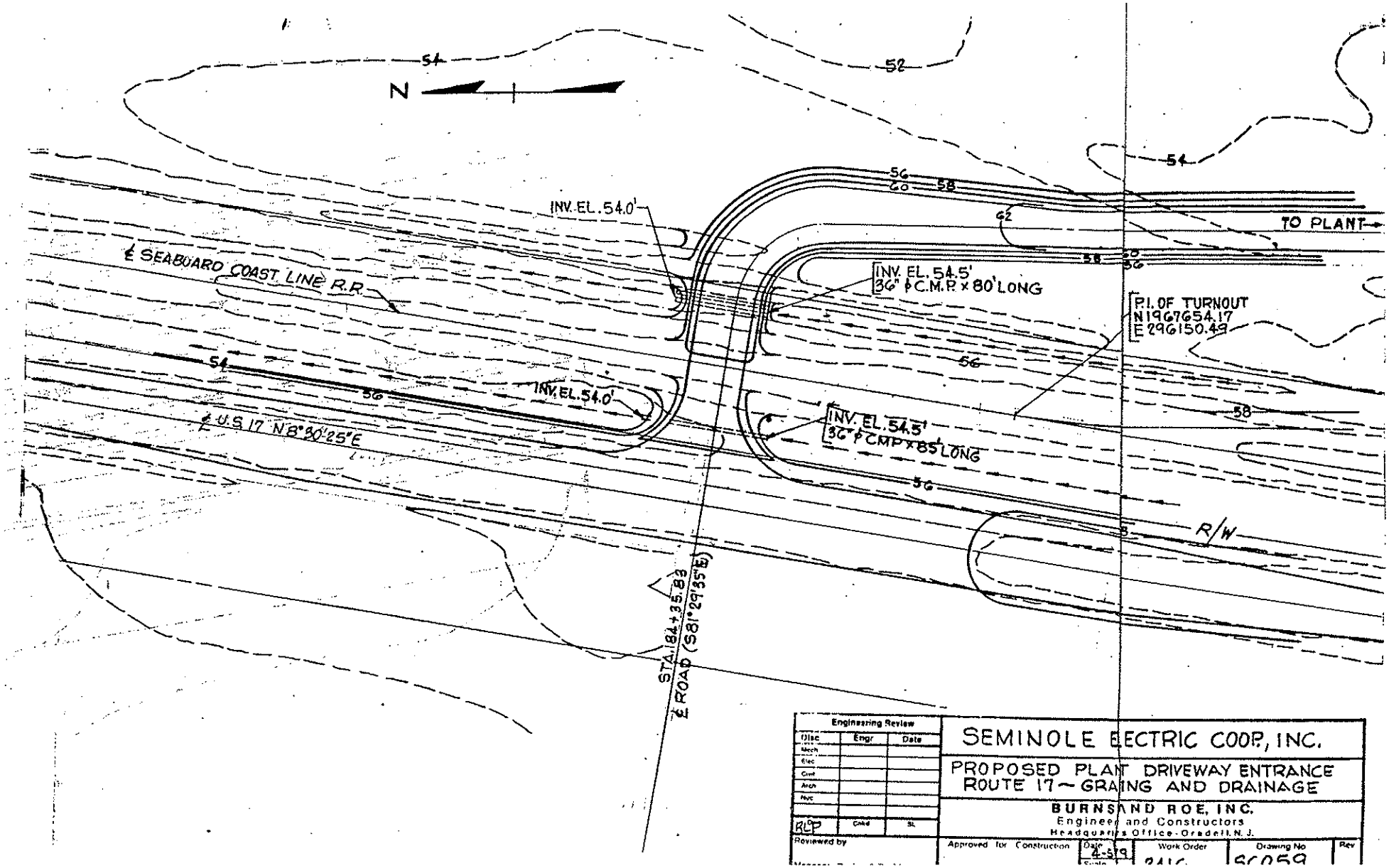
1. Right of way limits.

2. Physical location of the driveway, such as: street name, intersection, state road number, mile post or station number.

3. Pertinent drainage requirements.

4. Type of construction, such as graded earth driveway or type of paving.

NOTE: Sketch shall be made on letter size paper, if possible.



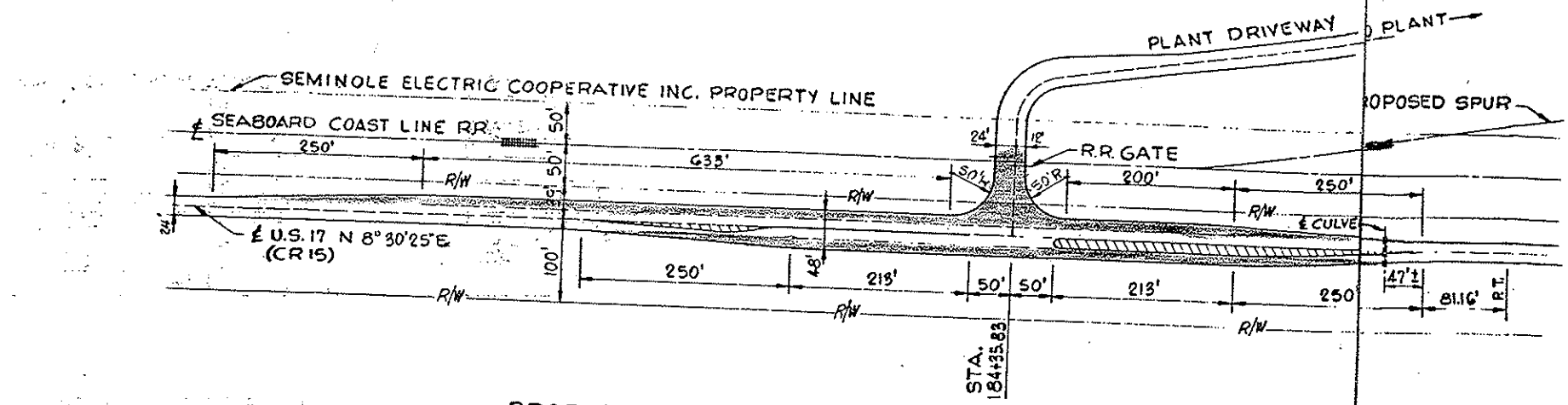
Engineering Review		
Disc	Engr	Date
Mech		
Elec		
Civil		
Arch		
Nuc		
RLP	Cmd	SL
Reviewed by		

SEMINOLE ELECTRIC COOP., INC.

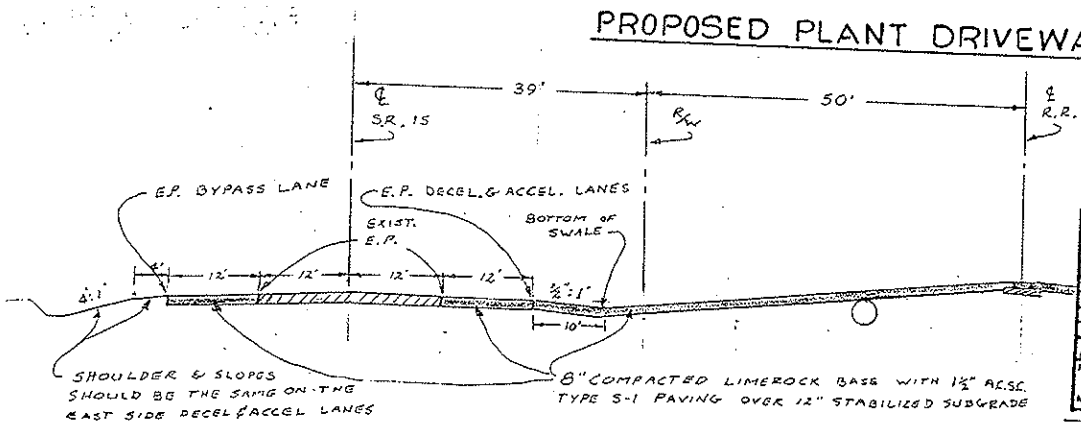
PROPOSED PLANT DRIVEWAY ENTRANCE
ROUTE 17 — GRADING AND DRAINAGE

BURNS AND ROE, INC.
Engineers and Constructors
Headquarters Office - Oradell, N. J.

Approved for Construction	Date	Work Order	Drawing No	Rev
	4-5-79	8416	6C059	



PROPOSED PLANT DRIVEWAY ENTRANCE ~ ROUTE 17



Engineering Revisn.		
Disc	Engr.	Dsl.
Mech		
Elec		
Civil		
Arch		
Struc		
RJS	Chief	EL

Reviewed by

Manager - Design & Drafting

SEMINOLE ELECTRIC COOP, INC.

PROPOSED PLANT DRIVEWAY ENTRANCE ~ ROUTE 17

BURNS AND ROE, INC.
Engineers and Constructors
Headquarters Office - Oradell, N.J.

Approved for Construction

Chief Engineer

Date 3-26-79

Scale

Work Order 3416

Drawing No SC058

Rev

10.4.8 Army Corps of Engineers Permit No. 78Q-1370

The following pages contain the USACE Permit which authorized the installation of the intake and discharge structures for SGS Units 1 and 2.

Application No. 78Q-1370

Name of Applicant SEMINOLE ELECTRIC COOPERATIVE, INC.

Effective Date OCT 29 1979

Expiration Date (If applicable) OCT 29 1982

DEPARTMENT OF THE ARMY
PERMIT

Referring to written request dated 7 September 1978 for a permit to:

(X) Perform work in or affecting navigable waters of the United States, upon the recommendation of the Chief of Engineers, pursuant to Section 10 of the Rivers and Harbors Act of March 3, 1899 (33 U.S.C. 403);

(X) Discharge dredged or fill material into waters of the United States upon the issuance of a permit from the Secretary of the Army acting through the Chief of Engineers pursuant to Section 404 of the Federal Water Pollution Control Act (86 Stat. 816, P.L. 92-500);

( ) Transport dredged material for the purpose of dumping it into ocean waters upon the issuance of a permit from the Secretary of the Army acting through the Chief of Engineers pursuant to Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (86 Stat. 1052; P.L. 92-532);

Seminole Electric Cooperative, Inc.
2410 East Busch Boulevard
Tampa, Florida 33612

is hereby authorized by the Secretary of the Army:

to

install intake and discharge structures by dredging and backfilling, construct a pier, and place riprap

in

the St. Johns River

at

Section 18, Township 9 South, Range 27 East, 1.2 miles east of U. S. 17, on State Road 209, Putnam County, Palatka, Florida

in accordance with the plans and drawings attached hereto which are incorporated in and made a part of this permit (on drawings: give file number or other definite identification marks.)

78Q-1370, three sheets, revised 13 April 1979

subject to the following conditions:

I. General Conditions:

a. That all activities identified and authorized herein shall be consistent with the terms and conditions of this permit; and that any activities not specifically identified and authorized herein shall constitute a violation of the terms and conditions of this permit which may result in the modification, suspension or revocation of this permit, in whole or in part, as set forth more specifically in General Conditions j or k hereto, and in the institution of such legal proceedings as the United States Government may consider appropriate, whether or not this permit has been previously modified, suspended or revoked in whole or in part.

b. That all activities authorized herein shall, if they involve, during their construction or operation, any discharge of pollutants into waters of the United States or ocean waters, be at all times consistent with applicable water quality standards, effluent limitations and standards of performance, prohibitions, pretreatment standards and management practices established pursuant to the Federal Water Pollution Control Act of 1972 (P.L. 92-500; 86 Stat. 816), the Marine Protection, Research and Sanctuaries Act of 1972 (P.L. 92-532, 86 Stat. 1052), or pursuant to applicable State and local law.

c. That when the activity authorized herein involves a discharge during its construction or operation, of any pollutant (includint dredged or fill material), into waters of the United States, the authorized activity shall, if applicable water quality standards are revised or modified during the term of this permit, be modified, if necessary, to conform with such revised or modified water quality standards within 6 months of the effective date of any revision or modification of water quality standards, or as directed by an implementat on plan contained in such revised or modified standards, or within such longer period of time as the District Engineer, in consultation with the Regional Administrator of the Environmental Protection Agency, may determine to be reasonable under the circumstances.

d. That the discharge will not destroy a threatened or endangered species as identified under the Endangered Species Act, or endanger the critical habitat of such species.

e. That the permittee agrees to make every reasonable effort to prosecute the construction or operation of the work authorized herein in a manner so as to minimize any adverse impact on fish, wildlife, and natural environmental values.

f. That the permittee agrees that he will prosecute the construction or work authorized herein in a manner so as to minimize any degradation of water quality.

g. That the permittee shall permit the District Engineer or his authorized representative(s) or designee(s) to make periodic inspections at any time deemed necessary in order to assure that the activity being performed under authority of this permit is in accordance with the terms and conditions prescribed herein.

h. That the permittee shall maintain the structure or work authorized herein in good condition and in accordance with the plans and drawings attached hereto.

i. That this permit does not convey any property rights, either in real estate or material, or any exclusive privileges; and that it does not authorize any injury to property or invasion of rights or any infringement of Federal, State, or local laws or regulations nor does it obviate the requirement to obtain State or local assent required by law for the activity authorized herein.

j. That this permit may be summarily suspended, in whole or in part, upon a finding by the District Engineer that immediate suspension of the activity authorized herein would be in the general public interest. Such suspension shall be effective upon receipt by the permittee of a written notice thereof which shall indicate (1) the extent of the suspension, (2) the reasons for this action, and (3) any corrective or preventative measures to be taken by the permittee which are deemed necessary by the District Engineer to abate imminent hazards to the general public interest. The permittee shall take immediate action to comply with the provisions of this notice. Within ten days following receipt of this notice of suspension, the permittee may request a hearing in order to present information relevant to a decision as to whether his permit should be reinstated, modified or revoked. If a hearing is requested, it shall be conducted pursuant to procedures prescribed by the Chief of Engineers. After completion of the hearing, or within a reasonable time after issuance of the suspension notice to the permittee if no hearing is requested, the permit will either be reinstated, modified or revoked.

k. That this permit may be either modified, suspended or revoked in whole or in part if the Secretary of the Army or his authorized representative determines that there has been a violation of any of the terms or conditions of this permit or that such action would otherwise be in the public interest. Any such modification, suspension, or revocation shall become effective 30 days after receipt by the permittee of written notice of such action which shall specify the facts or conduct warranting same unless (1) within the 30-day period the permittee is able to satisfactorily demonstrate that (a) the alleged violation of the terms and the conditions of this permit did not, in fact, occur or (b) the alleged violation was accidental, and the permittee has been operating in compliance with the terms and conditions of the permit and is able to provide satisfactory assurances that future operations shall be in full compliance with the terms and conditions of this permit; or (2) within the aforesaid 30-day period, the permittee requests that a public hearing be held to present oral and written evidence concerning the proposed modification, suspension or revocation. The conduct of this hearing and the procedures for making a final decision either to modify, suspend or revoke this permit in whole or in part shall be pursuant to procedures prescribed by the Chief of Engineers.

l. That in issuing this permit, the Government has relied on the information and data which the permittee has provided in connection with his permit application. If, subsequent to the issuance of this permit, such information and data prove to be false, incomplete or inaccurate, this permit may be modified, suspended or revoked, in whole or in part, and/or the Government may, in addition, institute appropriate legal proceedings.

m. That any modification, suspension, or revocation of this permit shall not be the basis for any claim for damages against the United States.

n. That the permittee shall notify the District Engineer at what time the activity authorized herein will be commenced, as far in advance of the time of commencement as the District Engineer may specify, and of any suspension of work, if for a period of more than one week, resumption of work and its completion.

o. That if the activity authorized herr ; not started on or before _____da _____, 19 _____, (one year from the date of issuance of th. ,ermit unless otherwise specified) and is not complete ,n or before _____ day of _____, 19 _____, (three years from the date of issuance of this permit unless otherwise specified) this permit, if not previously revoked or specifically extended, shall automatically expire.

p. That this permit does not authorize or approve the construction of particular structures, the authorization or approval of which may require authorization by the Congress or other agencies of the Federal Government.

q. That if and when the permittee desires to abandon the activity authorized herein, unless such abandonment is part of a transfer procedure by which the permittee is transferring his interests herein to a third party pursuant to General Condition t hereof, he must restore the area to a condition satisfactory to the District Engineer.

r. That if the recording of this permit is possible under applicable State or local law, the permittee shall take such action as may be necessary to record this permit with the Register of Deeds or other appropriate official charged with the responsibility for maintaining records of title to and interests in real property.

s. That there shall be no unreasonable interference with navigation by the existence or use of the activity authorized herein.

t. That this permit may not be transferred to a third party without prior written notice to the District Engineer, either by the transferee's written agreement to comply with all terms and conditions of this permit or by the transferee subscribing to this permit in the space provided below and thereby agreeing to comply with all terms and conditions of this permit. In addition, if the permittee transfers the interests authorized herein by conveyance of realty, the deed shall reference this permit and the terms and conditions specified herein and this permit shall be recorded along with the deed with the Register of Deeds or other appropriate official.

II. **Special Conditions:** (Here list conditions relating specifically to the proposed structure or work authorized by this permit):

The following Special Conditions will be applicable when appropriate:

STRUCTURES IN OR AFFECTING NAVIGABLE WATERS OF THE UNITED STATES:

a. That this permit does not authorize the interference with any existing or proposed Federal project and that the permittee shall not be entitled to compensation for damage or injury to the structures or work authorized herein which may be caused by or result from existing or future operations undertaken by the United States in the public interest.

b. That no attempt shall be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the activity authorized by this permit.

c. That if the display of lights and signals on any structure or work authorized herein is not otherwise provided for by law, such lights and signals as may be prescribed by the United States Coast Guard shall be installed and maintained by and at the expense of the permittee.

d. That the permittee, upon receipt of a notice of revocation of this permit or upon its expiration before completion of the authorized structure or work, shall, without expense to the United States and in such time and manner as the Secretary of the Army or his authorized representative may direct, restore the waterway to its former conditions. If the permittee fails to comply with the direction of the Secretary of the Army or his authorized representative, the Secretary or his designee may restore the waterway to its former condition, by contract or otherwise, and recover the cost thereof from the permittee.

e. Structures for Small Boats: That permittee hereby recognizes the possibility that the structure permitted herein may be subject to damage by wave wash from passing vessels. The issuance of this permit does not relieve the permittee from taking all proper steps to insure the integrity of the structure permitted herein and the safety of boats moored thereto from damage by wave wash and the permittee shall not hold the United States liable for any such damage.

MAINTENANCE DREDGING:

a. That when the work authorized herein includes periodic maintenance dredging, it may be performed under this permit for _____years from the date of issuance of this permit (ten years unless otherwise indicated);

b. That the permittee will advise the District Engineer in writing at least two weeks before he intends to undertake any maintenance dredging.

DISCHARGES OF DREDGED OR FILL MATERIAL INTO WATERS OF THE UNITED STATES:

a. That the discharge will be carried out in conformity with the goals and objectives of the EPA Guidelines established pursuant to Section 404(b) of the FWPCA and published in 40 CFR 230;

b. That the discharge will consist of suitable material free from toxic pollutants in other than trace quantities;

c. That the fill created by the discharge will be properly maintained to prevent erosion and other non-point sources of pollution; and

d. That the discharge will not occur in a component of the National Wild and Scenic River System or in a component of a State wild and scenic river system.

DUMPING OF DREDGED MATERIAL INTO OCEAN WATERS:

a. That the dumping will be carried out in conformity with the goals, objectives, and requirements of the EPA criteria established pursuant to Section 102 of the Marine Protection, Research and Sanctuaries Act of 1972, published in 40 CFR 220-228.

b. That the permittee shall place a copy of this permit in a conspicuous place in the vessel to be used for the transportation and/or dumping of the dredged material as authorized herein.

This permit shall become effective on the date of the District Engineer's signature.

Permittee hereby accepts and agrees to comply with the terms and conditions of this permit.

Harry W. Wright

PERMITTEE

DATE

BY AUTHORITY OF THE SECRETARY OF THE ARMY:

OCT 29 1979

JAMES W. R. ADAMS
Colonel, Corps of Engineers

DATE

DISTRICT ENGINEER,
U.S. ARMY, CORPS OF ENGINEERS

Transferee hereby agrees to comply with the terms and conditions of this permit.

TRANSFEREE

DATE

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
P. O. BOX 4970
JACKSONVILLE, FLORIDA 32201

REC'D OCT 29 1979

SAJOD-RP -N

29 October 1979

78Q-1370

Seminole Electric Cooperative, Inc.
2410 East Busch Boulevard
Tampa, Florida 33612

Gentlemen:

We are pleased to inclose your Department of the Army Permit and a Notice of Authorization which should be displayed at the construction site. Work may begin immediately but you must notify the appropriate Area Engineer as representative of the District Engineer, of:

(1) The date of commencement of the work (mail attached card),
(2) The dates of work suspensions and resumptions if work is suspended over a week, and,
(3) The date of final completion.

Area Engineer addresses and telephone numbers are shown on the attached map. The Area Engineer is responsible for inspections to determine that permit conditions are strictly adhered to.

IT IS NOT LAWFUL TO DEVIATE FROM
THE APPROVED PLANS ATTACHED.

Sincerely yours,

GAIL G. GREN
Chief, Operations Division

4 Incl
1. Permit w/plans
2. Notice of Authorization
3. Commencement Card
4. Area Office Map

SAJ FL 25
1 Jul 76

DEPARTMENT OF THE ARMY

CORPS OF ENGINEERS

NOTICE OF AUTHORIZATION

29 OCTOBER 1979

A PERMIT TO INSTALL INTAKE AND DISCHARGE STRUCTURES BY DREDGING AND BACK-FILLING , CONSTRUCT A PIER, AND PLACE RIPRAP

AT SECTION 18, TOWNSHIP 9 SOUTH, RANGE 27 EAST, 1.2 MILES EAST OF U.S. 17, ON STATE ROAD 209, PUTNAM COUNTY, PALATKA, FLORIDA

HAS BEEN ISSUED TO SEMINOLE ELECTRIC COOPERATIVE, INC. ON 29 OCTOBER 19 79

ADDRESS OF PERMITTEE 2410 EAST BUSCH BOULEVARD
TAMPA, FLORIDA 33612

PERMIT NUMBER 78Q-1370

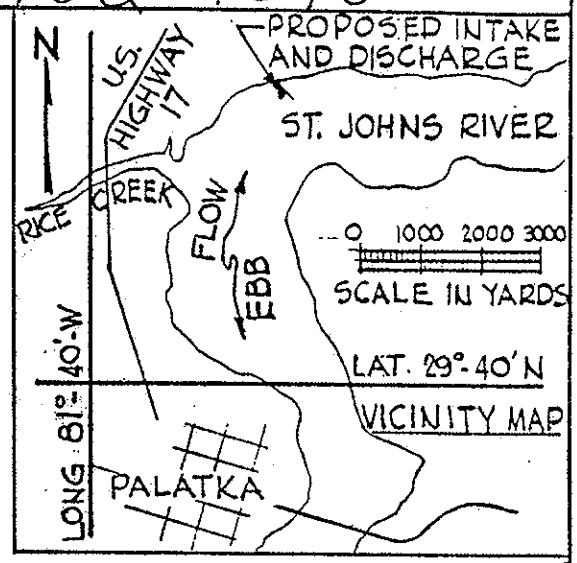
JAMES W. R. ADAMS, COL, CE
District Engineer

ENG Form 4336
Jul 70

THIS NOTICE MUST BE CONSPICUOUSLY DISPLAYED AT THE SITE OF WORK.

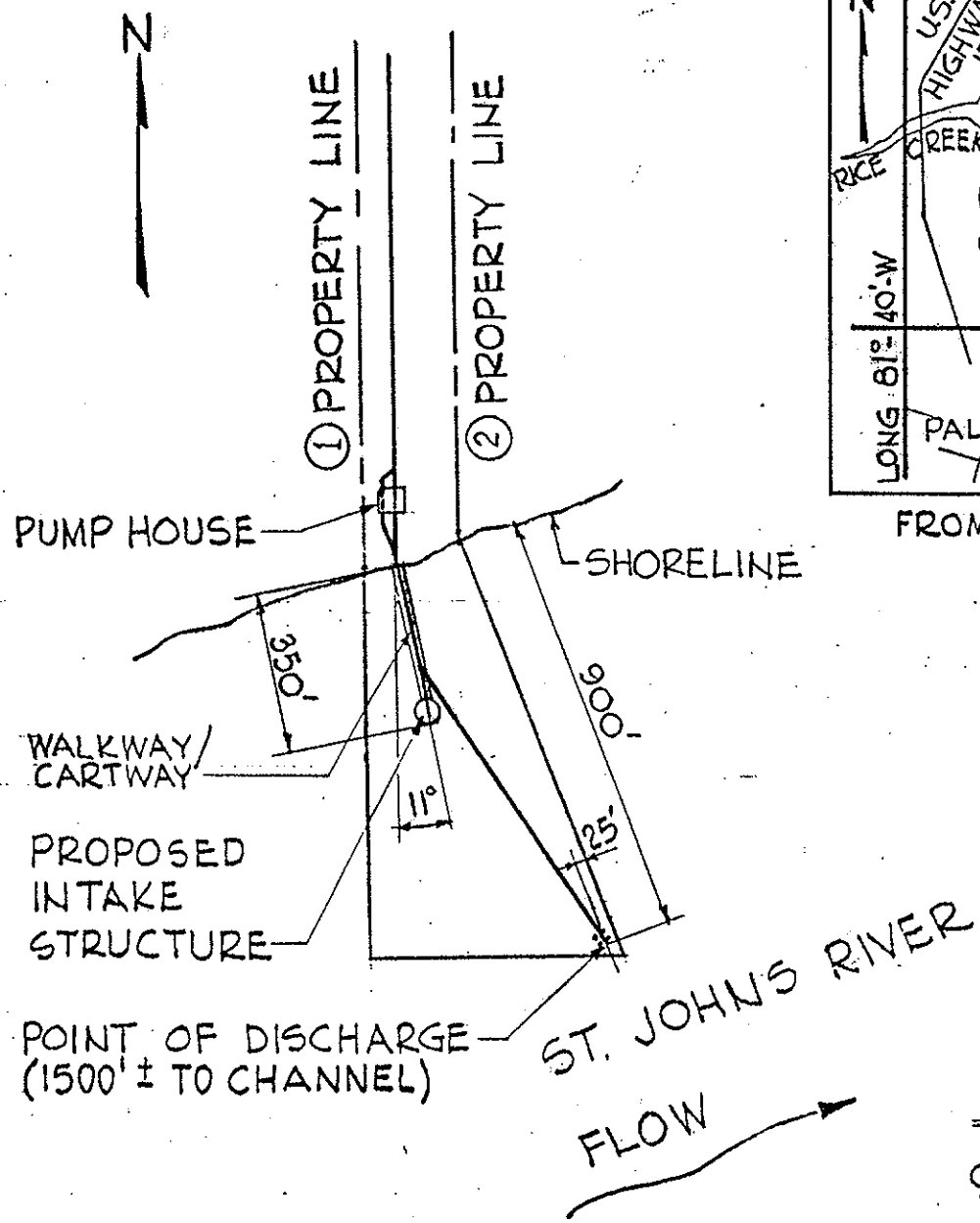
*GPO: 1977 232-984

78Q-1370



VICINITY MAP

FROM: NOAA CHART 11492



PLAN

0 200 400

SCALE IN FT.

PURPOSE: POWER PLANT MAKE-UP & DISCHARGE

DATUM: MEAN SEA LEVEL

ADJACENT PROPERTY OWNERS:

① DANIEL & RUEY HODAPP

② ROBERT A. WARNER

PROPOSED PUMP INTAKE & DISCHARGE PIPE IN ST. JOHNS RIVER AT PALATKA (4 MILES NORTH)

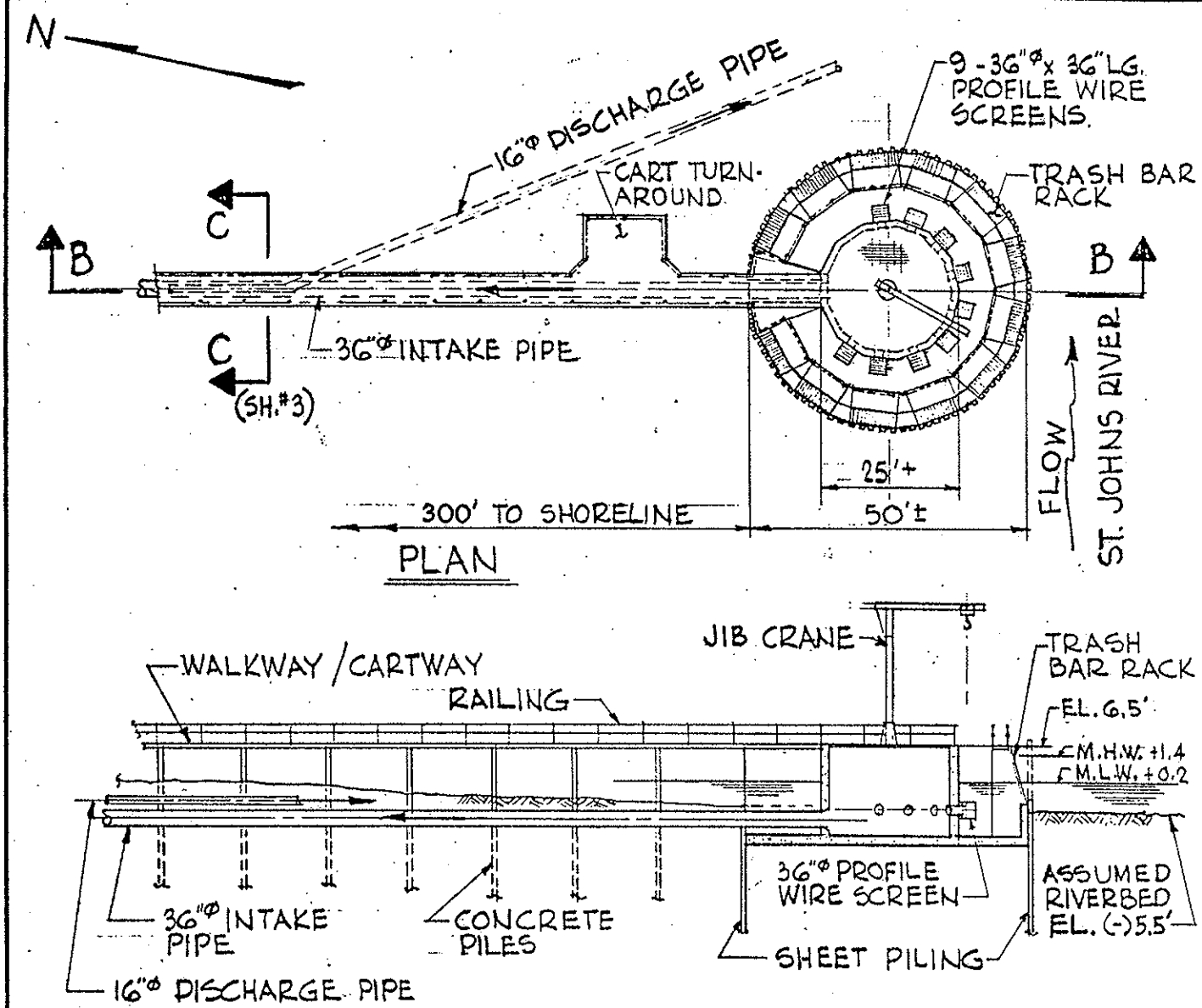
COUNTY OF PUTNAM STATE FLORIDA

APPLICATION BY SEMINOLE ELECTRIC COOPERATIVE, INC.

SHEET 1 OF 3 DATE REV. 4/13/79

FIGURE A

78Q-1370



RIVER INTAKE STRUCTURE

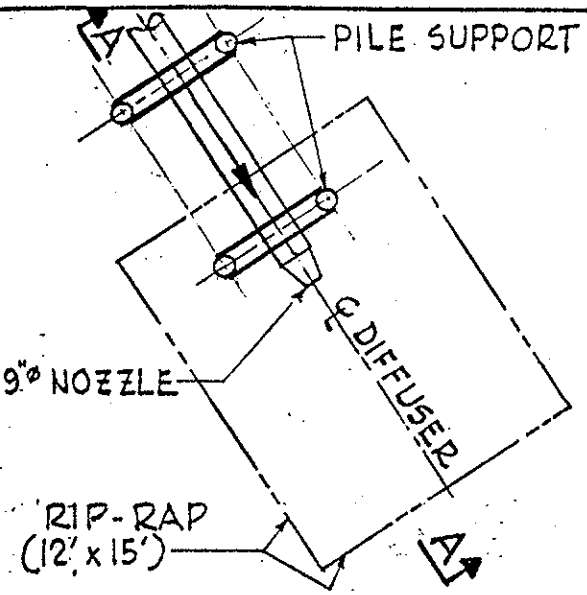
PURPOSE: POWER PLANT MAKE-UP & DISCHARGE

DATUM: MEAN SEA LEVEL

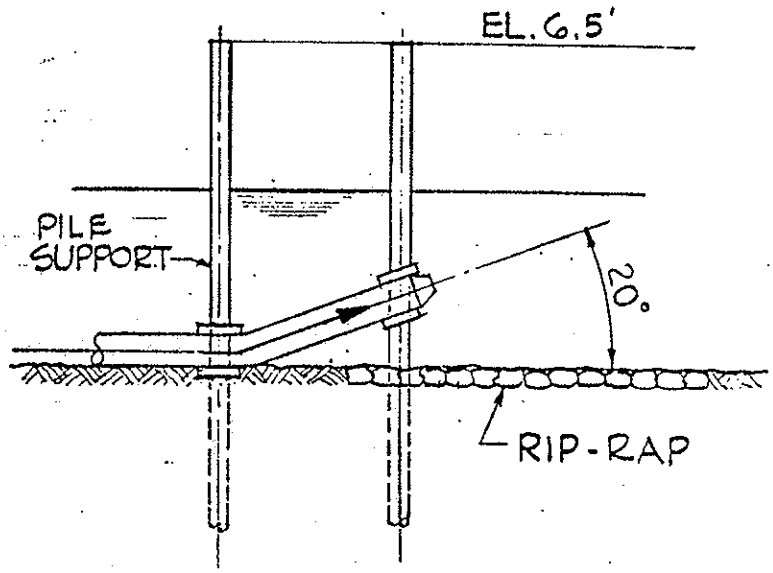
PROPOSED PUMP INTAKE & DISCHARGE PIPE
IN: ST. JOHNS RIVER
AT: PALATKA (4 MILES NORTH)
COUNTY OF PUTNAM STATE FLORIDA
APPLICATION BY SEMINOLE ELECTRIC COOPERATIVE, INC.
SHEET 2 OF 3 DATE REV. 4/13/79

FIGURE B

78Q-1370



PLAN OF DIFFUSER



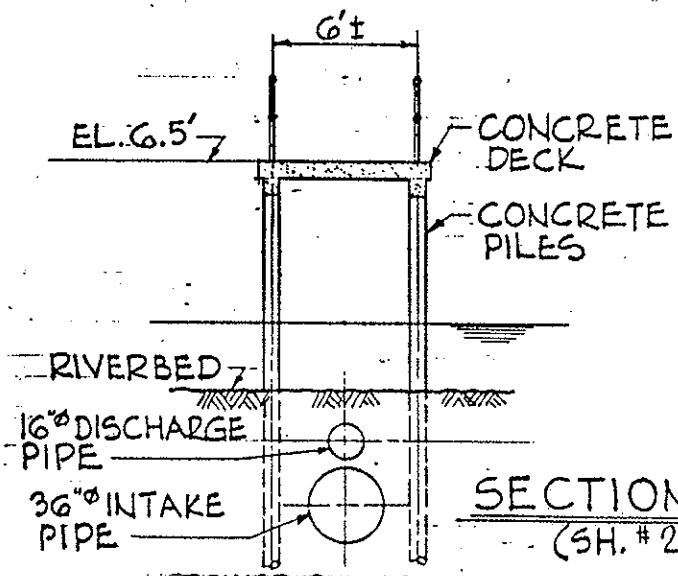
SECTION A-A

0 1 5

SCALE IN FT.

1. APPROX. 1800 C.Y. OF SOIL WILL BE DREDGED & PLACED IN A DIKED AREA ON THE MAIN PLANT SITE.

2. APPROX. 1000 C.Y. OF CLEAN FILL FROM THE MAIN PLANT SITE WILL BE BACKFILLED IN THE PIPE TRENCH.



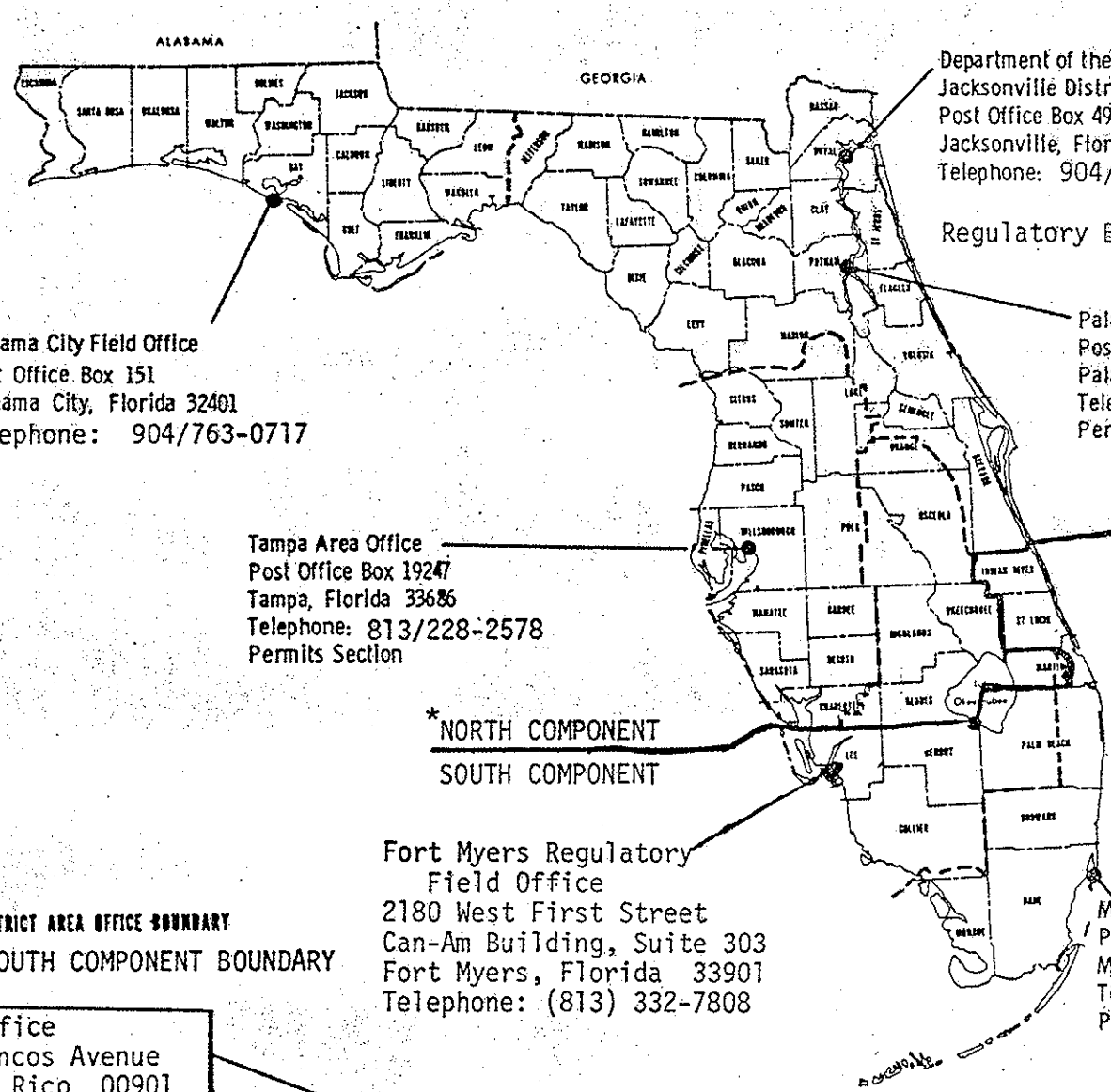
SECTION C-C
(SH. #2)

PURPOSE: POWER PLANT MAKE-UP & DISCHARGE

DATUM: MEAN SEA LEVEL

PROPOSED PUMP INTAKE & DISCHARGE PIPE
IN ST. JOHNS RIVER
AT: PALATKA (4 MILES NORTH)
COUNTY OF PUTNAM STATE FLORIDA
APPLICATION BY SEMINOLE ELECTRIC COOPERATIVE, INC.
SHEET 3 OF 3 DATE REV. 4/13/79

FIGURE C



Department of the Army
Jacksonville District, Corps of Engineers
Post Office Box 4970
Jacksonville, Florida 32201
Telephone: 904/791-2502* North Component
791-2211 South Component
Regulatory Branch

Panama City Field Office
Post Office Box 151
Panama City, Florida 32401
Telephone: 904/763-0717

Palatka Area Office
Post Office Box 1317
Palatka, Florida 32077
Telephone: 0904/325-2028
Permits Section

*NORTH COMPONENT
SOUTH COMPONENT

Tampa Area Office
Post Office Box 19247
Tampa, Florida 33686
Telephone: 813/228-2578
Permits Section

*NORTH COMPONENT
SOUTH COMPONENT

Fort Myers Regulatory
Field Office
2180 West First Street
Can-Am Building, Suite 303
Fort Myers, Florida 33901
Telephone: (813) 332-7808

Miami Beach Area Office
Post Office Drawer 59
Miami Beach, Florida 33139
Telephone: 305/672-7718
Permits Section

LEGEND:

- - - - JACKSONVILLE DISTRICT AREA OFFICE BOUNDARY
——— *NORTH & SOUTH COMPONENT BOUNDARY

San Juan Area Office
400 Fernandez Juncos Avenue
San Juan, Puerto Rico 00901

CORPS OF ENGINEERS REGULATORY OFFICES

10.5 Monitoring Programs

Monitoring data to support the NPDES permit modification application is provided in Section 10.1.2.

10.5.1 Noise Monitoring Equipment Calibration Certificates

The following pages contain the calibration certificates for the noise monitoring equipment used a the Project Site.

Certificate of Calibration and Conformance

Certificate Number 2005-66231

Instrument Model 824, Serial Number 3106, was calibrated on 02-21-2005. The instrument meets factory specifications per Procedure D0001.8046, IEC 61672-1:2002 Class 1; IEC 60651-2001, 60804-2000 and ANSI S1.4-1983 Type 1 1/3, 1/1 Oct. Filters; S1.11-1986 Type 1C; IEC61260-am1-2001 Class 1 .

New Instrument
Date Calibrated: 02-21-2005
Calibration due: 04-21-2006

Calibration Standards Used

MANUFACTURER	MODEL	SERIAL NUMBER	INTERVAL	CAL. DUE	TRACEABILITY NO.
Larson Davis	LDSigGn/2209	0445 / 0111	12 Months	11/09/2005	2004-63494

Reference Standards are traceable to the National Institute of Standards and Technology (NIST)

Calibration Environmental Conditions

Temperature: 23 ° Centigrade

Relative Humidity: 30 %

Affirmations

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the U.S. National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at Corporate Headquarters. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

This calibration complies with the requirements of ISO 17025 and ANSI Z540. The collective uncertainty of the Measurement Standard used does not exceed 25% of the applicable tolerance for each characteristic calibrated unless otherwise noted.

The results documented in this certificate relate only to the item(s) calibrated or tested. A one year calibration is recommended, however calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of the issuer.

Tested with PRM902 S/N 3275

Signed:
Technician: Sean Childs

Larson Davis A PCB GROUP CO.

Larson Davis, Inc. is an ISO 9001-2000 Registered Company

1681 West 820 North • Provo, UT 84601 U.S.A. • 801.375.0177 • Fax: 801.375.0182 • www.larsondavis.com

Certificate of Calibration and Conformance

Certificate Number 2005-66582

Microphone Model 2560, Serial Number 3424, was calibrated on 03-02-2005. The microphone meets current factory specifications per Test Procedure D0001.8167.

New Instrument
Date Calibrated: 03-02-2005
Calibration due: 05-02-2006

Calibration Standards Used

MANUFACTURER	MODEL	SERIAL NUMBER	INTERVAL	CAL. DUE	TRACEABILITY NO.
Larson Davis	CAL250	0102	12 Months	05/25/2005	2004-59407
Larson Davis	2900	0575	12 Months	06/25/2005	2004-60057
Larson Davis	2559	3026	12 Months	08/10/2005	12604-1
Larson Davis	PRM902	0529	12 Months	09/13/2005	2004-61796
Larson Davis	PRM902	0528	12 Months	09/13/2005	2004-61794
Larson Davis	MTS1000 / 2201	1000 / 0100	12 Months	09/16/2005	09162-2004
Larson Davis	2559	3034LE	12 Months	09/16/2005	2004-61919
Larson Davis	PRM915	0102	12 Months	11/05/2005	2004-63367
Larson Davis	PRM902	0206	12 Months	11/05/2005	2004-63365
Larson Davis	PRM916	0102	12 Months	11/05/2005	2004-63369
Hewlett Packard	34401A	3146A62099	12 Months	11/10/2005	275384

Reference Standards are traceable to the National Institute of Standards and Technology (NIST)

Calibration Environmental Conditions

Environmental test conditions as printed on microphone calibration chart.

Affirmations

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the U.S. National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at Corporate Headquarters. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

This calibration complies with the requirements of ISO 17025 and ANSI Z540. The collective uncertainty of the Measurement Standard used does not exceed 25% of the applicable tolerance for each characteristic calibrated unless otherwise noted.

The results documented in this certificate relate only to the item(s) calibrated or tested. A one year calibration is recommended, however calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of the issuer.

Signed: Abraham Ortega
Technician: Abraham Ortega

Larson Davis A PCB GROUP CO.

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Certificate of Calibration and Conformance

Certificate Number 2005-65329

Instrument Model CAL200, Serial Number 4318, was calibrated on 01-14-2005. The instrument meets factory specifications per Procedure D0001.8190.

New Instrument
Date Calibrated: 01-14-2005
Calibration due: 03-14-2006

Calibration Standards Used

MANUFACTURER	MODEL	SERIAL NUMBER	INTERVAL	CAL. DUE	TRACEABILITY NO
Hewlett Packard	34401A	US36033460	16 Months	01/25/2005	261441
Schaevitz	P3061-15PSIA	4987	12 Months	02/14/2005	266108
Larson Davis	2900	0661	12 Months	04/05/2005	2004-58183
Larson Davis	2559	2504	12 Months	05/19/2005	12354-1
Hewlett Packard	34401A	3146A10352	12 Months	06/22/2005	269758
Larson Davis	PRM915	0112	12 Months	09/14/2005	2004-61841
Larson Davis	PRM902	0480	12 Months	09/14/2005	2004-61840
Larson Davis	MTS1000/2201	0111	12 Months	09/16/2005	09161-2004

Reference Standards are traceable to the National Institute of Standards and Technology (NIST)

Calibration Environmental Conditions

Environmental test conditions as shown on calibration report.

Affirmations

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the U.S. National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at Corporate Headquarters. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

This calibration complies with the requirements of ISO 17025 and ANSI Z540. The collective uncertainty of the Measurement Standard used does not exceed 25% of the applicable tolerance for each characteristic calibrated unless otherwise noted.

The results documented in this certificate relate only to the item(s) calibrated or tested. A one year calibration is recommended, however calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of the issuer.

Signed: Scott Montgomery
Technician: Scott Montgomery

Larson Davis A PCB GROUP CO.

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10.6 Additional Information

10.6.1 Site Photographs

The following pages contain site photographs.

Photo 1. Improved pasture (FLUCFCS 211).

Photo 2. Slash pine flatwoods (FLUCFCS 411).

Golder Associates

Photo 3. Live oak hammock (FLUCFCS 427).

Photo 4. Upland-cut ditch (FLUCFCS 511).

Golder Associates

10.6.2 Florida Naturals Areas Inventory Report

The following pages contain a Florida Natural Areas Inventory Report.

FLORIDA
Natural Areas
INVENTORY

1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
850-224-8207
fax 850-681-9364
www.fnai.org

December 15, 2005

Karl Bullock
Golder & Associates
6241 NW 23rd Street, Suite 500
Gainesville, FL 32653-1500

Dear Mr. Bullock:

Thank you for your request for information from the Florida Natural Areas Inventory (FNAI). We have compiled the following information for your project area.

Project:	39736
Date Received:	November 18, 2005
Location:	Township 9 S, Range 27 E, Sections 5-8, 17 & 18 Putnam County

Element Occurrences

A search of our maps and database indicates that currently we have no Element Occurrences mapped within the vicinity of the study area (see enclosed map and element occurrence table). Please be advised that a lack of element occurrences in the FNAI database is not a sufficient indication of the absence of rare or endangered species on a site.

The Element Occurrences data layer includes occurrences of rare species and natural communities. The map legend indicates that some element occurrences occur in the general vicinity of the label point. This may be due to lack of precision of the source data, or an element that occurs over an extended area (such as a wide ranging species or large natural community). For animals and plants, Element Occurrences generally refer to more than a casual sighting; they usually indicate a viable population of the species. Note that some element occurrences represent historically documented observations which may no longer be extant.

Likely and Potential Rare Species

In addition to documented occurrences, other rare species and natural communities may be identified on or near the site based on habitat models and species range models (see enclosed Biodiversity Matrix Report). These species should be taken into consideration in field surveys, land management, and impact avoidance and mitigation.

FNAI habitat models indicate areas, which based on landcover type, offer suitable habitat for one or more rare species that is known to occur in the vicinity. Habitat models have been developed for approximately 300 of the most rare species tracked by the Inventory, including all federally listed species.

Florida Resources
and Environmental
Analysis Center

Institute of Science
and Public Affairs

The Florida State University

FNAI species range models indicate areas that are within the known or predicted range of a species, based on climate variables, soils, vegetation, and/or slope. Species range models have been developed for approximately 340 species, including all federally listed species.

The FNAI Biodiversity Matrix Geodatabase compiles Documented, Likely, and Potential species and natural communities for each square mile Matrix Unit statewide.

The Inventory always recommends that professionals familiar with Florida's flora and fauna should conduct a site-specific survey to determine the current presence or absence of rare, threatened, or endangered species.

Please visit www.fnai.org/data.cfm for county or statewide element occurrence distributions and links to more element information.

The database maintained by the Florida Natural Areas Inventory is the single most comprehensive source of information available on the locations of rare species and other significant ecological resources. However, the data are not always based on comprehensive or site-specific field surveys. Therefore, this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. Inventory data are designed for the purposes of conservation planning and scientific research, and are not intended for use as the primary criteria for regulatory decisions.

Information provided by this database may not be published without prior written notification to the Florida Natural Areas Inventory, and the Inventory must be credited as an information source in these publications. FNAI data may not be resold for profit.

Thank you for your use of FNAI services. If I can be of further assistance, please give me a call at (850) 224-8207.

Sincerely,

Jason A. Griffin

Jason A. Griffin
Data Services Coordinator

encl

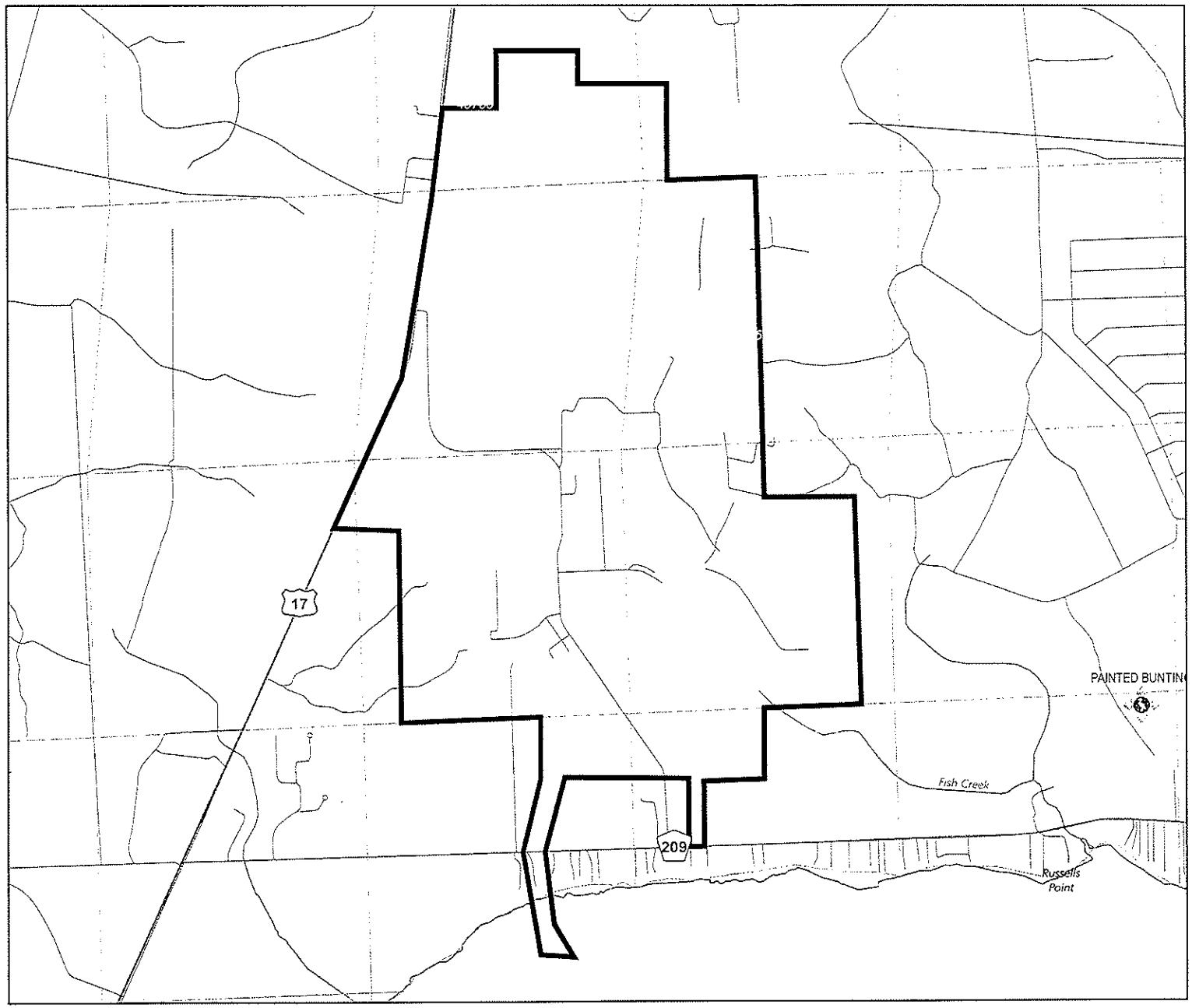
1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
850-224-8207
fax 850-681-9364
www.fnai.org

FLORIDA Natural Areas INVENTORY

39736

Site boundaries are appoximate.

Putnam County



Element Occurrences

- Animals
- Plants
- Communities
- Other
- Point Indicates General Vicinity of Element
- U.S. Fish & Wildlife Service Scrub Jay Survey 1992-96
- FL Fish & Wildlife Cons. Comm. Breeding Bird Atlas Project 1986-91 center point of 10 sq mi survey block

Conservation Lands

- Federal
- State
- Local
- Private
- State Aquatic Preserves

Land Acquisition Projects

- Florida Forever Board of Trustees Projects

- FNAI Rare Species Habitat
- FNAI Biodiversity Matrix Square Mile Units

- County Boundary
- Interstate
- Turnpike
- Major Highway
- Local Road
- Water

N W E S

Map produced by JAG
Map Date: 15 Dec 2005

NOTE
Map should not be interpreted without accompanying documents.

0 0.5 1 Miles

1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
850-224-8207
850-681-9364 fax
www.fnai.org

Florida Natural Areas Inventory

Biodiversity Matrix Report

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
FNAI Biodiversity Matrix Unit ID: 40783					
Likely					
Acipenser brevirostrum	Shortnose Sturgeon	G3	S1	LE	LE
Trichechus manatus	Manatee	G2	S2	LE	LE
Potential					
Acipenser brevirostrum	Shortnose Sturgeon	G3	S1	LE	LE
Acipenser oxyrinchus oxyrinchus	Atlantic Sturgeon	G3T3	S1	C	LS
Aimophila aestivalis	Bachman's Sparrow	G3	S3	N	N
Arnoglossum diversifolium	Variable-leaved Indian-plantain	G2	S2	N	LT
Asplenium heteroresiliens	Wagner's Spleenwort	G2	S1	N	N
Balduina atropurpurea	Purple Honeycomb-head	G2	S1	N	LE
Calydorea coelestina	Bartram's Ixia	G2	S2	N	LE
Carex chapmanii	Chapman's Sedge	G3	S3	N	LE
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	G3G4	S2	N	N
Ctenium floridanum	Florida toothache-grass	G2	S2	N	LE
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	LT
Gopherus polyphemus	Gopher Tortoise	G3	S3	N	LS
Gymnopogon chapmanianus	Chapman's Skeletongrass	G3	S3	N	N
Hartwrightia floridana	Hartwrightia	G2	S2	N	LT
Helianthus carnosus	Lake-side Sunflower	G1G2	S1S2	N	LE
Illicium parviflorum	Star Anise	G2	S2	N	LE
Litsea aestivalis	Pondspice	G3	S2	N	LE
Lythrum curtissii	Curtis's Loosestrife	G1	S1	N	LE
Matelea floridana	Florida Spiny-pod	G2	S2	N	LE
Monotropsis reynoldsiae	Pigmy Pipes	G1Q	S1	N	LE
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3	S3	N	N
Nemastylis floridana	Celestial Lily	G2	S2	N	LE
Neofiber alleni	Round-tailed Muskrat	G3	S3	N	N
Nolina atopocarpa	Florida Beargrass	G3	S3	N	LT
Notophthalmus perstriatus	Striped Newt	G2G3	S2S3	N	N
Orbexilum virgatum	Pineland Scurfpea	G1	S1	N	PE
Picoides borealis	Red-cockaded Woodpecker	G3	S2	LE	LS
Podomys floridanus	Florida Mouse	G3	S3	N	LS
Pteroglossaspis ecristata	Giant Orchid	G2G3	S2	N	LT
Pycnanthemum floridanum	Florida Mountain-mint	G3	S3	N	LT
Rana capito	Gopher Frog	G3	S3	N	LS
Rhynchospora thornei	Thorne's Beakrush	G3	S1S2	N	N
Rudbeckia nitida	St. John's Black-eyed-susan	G3	S2	N	LE
Salix floridana	Florida Willow	G2	S2	N	LE
Sciurus niger shermani	Sherman's Fox Squirrel	G5T3	S3	N	LS
Trichechus manatus	Manatee	G2	S2	LE	LE
Ursus americanus floridanus	Florida Black Bear	G5T2	S2	N	LT*
FNAI Biodiversity Matrix Unit ID: 40784					
Potential					
Agrimonia incisa	Incised Groove-bur	G3	S2	N	LE
Aimophila aestivalis	Bachman's Sparrow	G3	S3	N	N
Andropogon arctatus	Pine-woods Bluestem	G3	S3	N	LT
Asplenium heteroresiliens	Wagner's Spleenwort	G2	S1	N	N
Asplenium x curtissii	Curtiss' Spleenwort	G1	S1	N	N

1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
850-224-8207
850-681-9364 fax
www.fnai.org

Florida Natural Areas Inventory

Biodiversity Matrix Report

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Balduina atropurpurea	Purple Honeycomb-head	G2	S1	N	LE
Calydorea coelestina	Bartram's Ixia	G2	S2	N	LE
Carex chapmanii	Chapman's Sedge	G3	S3	N	LE
Ctenium floridanum	Florida toothache-grass	G2	S2	N	LE
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	LT
Gopherus polyphemus	Gopher Tortoise	G3	S3	N	LS
Grus canadensis pratensis	Florida Sandhill Crane	G5T2T3	S2S3	N	LT
Gymnopogon chapmanianus	Chapman's Skeletongrass	G3	S3	N	N
Hartwrightia floridana	Hartwrightia	G2	S2	N	LT
Heterodon simus	Southern Hognose Snake	G2	S2	N	N
Litsea aestivalis	Pondspice	G3	S2	N	LE
Lythrum curtissii	Curtis's Loosestrife	G1	S1	N	LE
Matelea floridana	Florida Spiny-pod	G2	S2	N	LE
Monotropsis reynoldsiae	Pigmy Pipes	G1Q	S1	N	LE
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3	S3	N	N
Nemastylis floridana	Celestial Lily	G2	S2	N	LE
Neofiber alleni	Round-tailed Muskrat	G3	S3	N	N
Nolina atopocarpa	Florida Beargrass	G3	S3	N	LT
Notophthalmus perstriatus	Striped Newt	G2G3	S2S3	N	N
Orbexilum virgatum	Pineland Scurfpea	G1	S1	N	PE
Picoides borealis	Red-cockaded Woodpecker	G3	S2	LE	LS
Podomys floridanus	Florida Mouse	G3	S3	N	LS
Pteroglossaspis ecristata	Giant Orchid	G2G3	S2	N	LT
Pycnanthemum floridanum	Florida Mountain-mint	G3	S3	N	LT
Rana capito	Gopher Frog	G3	S3	N	LS
Rhynchospora thornei	Thorne's Beakrush	G3	S1S2	N	N
Rudbeckia nitida	St. John's Black-eyed-susan	G3	S2	N	LE
Salix floridana	Florida Willow	G2	S2	N	LE
Sciurus niger shermani	Sherman's Fox Squirrel	G5T3	S3	N	LS
Ursus americanus floridanus	Florida Black Bear	G5T2	S2	N	LT*

FNAI Biodiversity Matrix Unit ID: 40785

Potential

Agrimonia incisa	Incised Groove-bur	G3	S2	N	LE
Andropogon arctatus	Pine-woods Bluestem	G3	S3	N	LT
Arnoglossum diversifolium	Variable-leaved Indian-plantain	G2	S2	N	LT
Asplenium heteroresiliens	Wagner's Spleenwort	G2	S1	N	N
Asplenium x curtissii	Curtiss' Spleenwort	G1	S1	N	N
Balduina atropurpurea	Purple Honeycomb-head	G2	S1	N	LE
Calydorea coelestina	Bartram's Ixia	G2	S2	N	LE
Carex chapmanii	Chapman's Sedge	G3	S3	N	LE
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	G3G4	S2	N	N
Ctenium floridanum	Florida toothache-grass	G2	S2	N	LE
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	LT
Gopherus polyphemus	Gopher Tortoise	G3	S3	N	LS
Grus canadensis pratensis	Florida Sandhill Crane	G5T2T3	S2S3	N	LT
Gymnopogon chapmanianus	Chapman's Skeletongrass	G3	S3	N	N
Hartwrightia floridana	Hartwrightia	G2	S2	N	LT
Heterodon simus	Southern Hognose Snake	G2	S2	N	N
Litsea aestivalis	Pondspice	G3	S2	N	LE
Lythrum curtissii	Curtis's Loosestrife	G1	S1	N	LE

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Matelea floridana	Florida Spiny-pod	G2	S2	N	LE
Monotropsis reynoldsiae	Pigmy Pipes	G1Q	S1	N	LE
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3	S3	N	N
Nemastylis floridana	Celestial Lily	G2	S2	N	LE
Neofiber alleni	Round-tailed Muskrat	G3	S3	N	N
Notophthalmus perstriatus	Striped Newt	G2G3	S2S3	N	N
Orbexilum virgatum	Pineland Scurfpea	G1	S1	N	PE
Picoides borealis	Red-cockaded Woodpecker	G3	S2	LE	LS
Podomys floridanus	Florida Mouse	G3	S3	N	LS
Pteroglossaspis ecristata	Giant Orchid	G2G3	S2	N	LT
Pycnanthemum floridanum	Florida Mountain-mint	G3	S3	N	LT
Rana capito	Gopher Frog	G3	S3	N	LS
Rhynchospora thornei	Thorne's Beakrush	G3	S1S2	N	N
Rudbeckia nitida	St. John's Black-eyed-susan	G3	S2	N	LE
Salix floridana	Florida Willow	G2	S2	N	LE
Sciurus niger shermani	Sherman's Fox Squirrel	G5T3	S3	N	LS
Ursus americanus floridanus	Florida Black Bear	G5T2	S2	N	LT*

FNAI Biodiversity Matrix Unit ID: 40786

Potential

Arnoglossum diversifolium	Variable-leaved Indian-plantain	G2	S2	N	LT
Asclepias viridula	Southern Milkweed	G2	S2	N	LT
Asplenium heteroresiliens	Wagner's Spleenwort	G2	S1	N	N
Balduina atropurpurea	Purple Honeycomb-head	G2	S1	N	LE
Calydorea coelestina	Bartram's Ixia	G2	S2	N	LE
Carex chapmanii	Chapman's Sedge	G3	S3	N	LE
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	G3G4	S2	N	N
Ctenium floridanum	Florida toothache-grass	G2	S2	N	LE
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	LT
Gopherus polyphemus	Gopher Tortoise	G3	S3	N	LS
Grus canadensis pratensis	Florida Sandhill Crane	G5T2T3	S2S3	N	LT
Gymnopogon chapmanianus	Chapman's Skeletongrass	G3	S3	N	N
Hartwrightia floridana	Hartwrightia	G2	S2	N	LT
Litsea aestivalis	Pondspice	G3	S2	N	LE
Lythrum curtissii	Curtis's Loosestrife	G1	S1	N	LE
Matelea floridana	Florida Spiny-pod	G2	S2	N	LE
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3	S3	N	N
Nemastylis floridana	Celestial Lily	G2	S2	N	LE
Neofiber alleni	Round-tailed Muskrat	G3	S3	N	N
Notophthalmus perstriatus	Striped Newt	G2G3	S2S3	N	N
Orbexilum virgatum	Pineland Scurfpea	G1	S1	N	PE
Picoides borealis	Red-cockaded Woodpecker	G3	S2	LE	LS
Podomys floridanus	Florida Mouse	G3	S3	N	LS
Pycnanthemum floridanum	Florida Mountain-mint	G3	S3	N	LT
Rana capito	Gopher Frog	G3	S3	N	LS
Rhynchospora thornei	Thorne's Beakrush	G3	S1S2	N	N
Rudbeckia nitida	St. John's Black-eyed-susan	G3	S2	N	LE
Salix floridana	Florida Willow	G2	S2	N	LE
Sciurus niger shermani	Sherman's Fox Squirrel	G5T3	S3	N	LS
Ursus americanus floridanus	Florida Black Bear	G5T2	S2	N	LT*

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Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
FNAI Biodiversity Matrix Unit ID: 41153					
Likely					
Acipenser brevirostrum	Shortnose Sturgeon	G3	S1	LE	LE
Trichechus manatus	Manatee	G2	S2	LE	LE
Potential					
Acipenser brevirostrum	Shortnose Sturgeon	G3	S1	LE	LE
Acipenser oxyrinchus oxyrinchus	Atlantic Sturgeon	G3T3	S1	C	LS
Aimophila aestivalis	Bachman's Sparrow	G3	S3	N	N
Arnoglossum diversifolium	Variable-leaved Indian-plantain	G2	S2	N	LT
Asplenium heteroresiliens	Wagner's Spleenwort	G2	S1	N	N
Balduina atropurpurea	Purple Honeycomb-head	G2	S1	N	LE
Calydorea coelestina	Bartram's Ixia	G2	S2	N	LE
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	G3G4	S2	N	N
Ctenium floridanum	Florida toothache-grass	G2	S2	N	LE
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	LT
Gopherus polyphemus	Gopher Tortoise	G3	S3	N	LS
Hartwrightia floridana	Hartwrightia	G2	S2	N	LT
Helianthus carnosus	Lake-side Sunflower	G1G2	S1S2	N	LE
Illicium parviflorum	Star Anise	G2	S2	N	LE
Litsea aestivalis	Pondspice	G3	S2	N	LE
Lythrum curtissii	Curtis's Loosestrife	G1	S1	N	LE
Matelea floridana	Florida Spiny-pod	G2	S2	N	LE
Monotropsis reynoldsiae	Pigmy Pipes	G1Q	S1	N	LE
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3	S3	N	N
Nemastylis floridana	Celestial Lily	G2	S2	N	LE
Neofiber alleni	Round-tailed Muskrat	G3	S3	N	N
Notophthalmus perstriatus	Striped Newt	G2G3	S2S3	N	N
Orbexilum virgatum	Pineland Scurfpea	G1	S1	N	PE
Podomys floridanus	Florida Mouse	G3	S3	N	LS
Pteroglossaspis ecristata	Giant Orchid	G2G3	S2	N	LT
Pycnanthemum floridanum	Florida Mountain-mint	G3	S3	N	LT
Rana capito	Gopher Frog	G3	S3	N	LS
Rudbeckia nitida	St. John's Black-eyed-susan	G3	S2	N	LE
Salix floridana	Florida Willow	G2	S2	N	LE
Sciurus niger shermani	Sherman's Fox Squirrel	G5T3	S3	N	LS
Trichechus manatus	Manatee	G2	S2	LE	LE
FNAI Biodiversity Matrix Unit ID: 41154					
Likely					
Acipenser brevirostrum	Shortnose Sturgeon	G3	S1	LE	LE
Potential					
Agrimonia incisa	Incised Groove-bur	G3	S2	N	LE
Aimophila aestivalis	Bachman's Sparrow	G3	S3	N	N
Andropogon arctatus	Pine-woods Bluestem	G3	S3	N	LT
Arnoglossum diversifolium	Variable-leaved Indian-plantain	G2	S2	N	LT
Asplenium heteroresiliens	Wagner's Spleenwort	G2	S1	N	N
Asplenium x curtissii	Curtiss' Spleenwort	G1	S1	N	N
Balduina atropurpurea	Purple Honeycomb-head	G2	S1	N	LE
Calydorea coelestina	Bartram's Ixia	G2	S2	N	LE
Carex chapmanii	Chapman's Sedge	G3	S3	N	LE
Centrosema arenicola	Sand Butterfly Pea	G2Q	S2	N	LE
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	G3G4	S2	N	N
Ctenium floridanum	Florida toothache-grass	G2	S2	N	LE

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Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	LT
Gopherus polyphemus	Gopher Tortoise	G3	S3	N	LS
Gymnopogon chapmanianus	Chapman's Skeletongrass	G3	S3	N	N
Hartwrightia floridana	Hartwrightia	G2	S2	N	LT
Helianthus carnosus	Lake-side Sunflower	G1G2	S1S2	N	LE
Litsea aestivalis	Pondspice	G3	S2	N	LE
Lythrum curtissii	Curtis's Loosestrife	G1	S1	N	LE
Matelea floridana	Florida Spiny-pod	G2	S2	N	LE
Monotropsis reynoldsiae	Pigmy Pipes	G1Q	S1	N	LE
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3	S3	N	N
Nemastylis floridana	Celestial Lily	G2	S2	N	LE
Neofiber alleni	Round-tailed Muskrat	G3	S3	N	N
Nolina atopocarpa	Florida Beargrass	G3	S3	N	LT
Notophthalmus perstriatus	Striped Newt	G2G3	S2S3	N	N
Orbexilum virgatum	Pineland Scurfpea	G1	S1	N	PE
Picoides borealis	Red-cockaded Woodpecker	G3	S2	LE	LS
Podomys floridanus	Florida Mouse	G3	S3	N	LS
Pteroglossaspis ecristata	Giant Orchid	G2G3	S2	N	LT
Pycnanthemum floridanum	Florida Mountain-mint	G3	S3	N	LT
Rana capito	Gopher Frog	G3	S3	N	LS
Rhynchospora thornei	Thorne's Beakrush	G3	S1S2	N	N
Rudbeckia nitida	St. John's Black-eyed-susan	G3	S2	N	LE
Salix floridana	Florida Willow	G2	S2	N	LE
Sciurus niger shermani	Sherman's Fox Squirrel	G5T3	S3	N	LS
Ursus americanus floridanus	Florida Black Bear	G5T2	S2	N	LT*
Verbesina heterophylla	Variable-leaf Crownbeard	G2	S2	N	N

FNAI Biodiversity Matrix Unit ID: 41155

Potential

Agrimonia incisa	Incised Groove-bur	G3	S2	N	LE
Andropogon arctatus	Pine-woods Bluestem	G3	S3	N	LT
Arnoglossum diversifolium	Variable-leaved Indian-plantain	G2	S2	N	LT
Asplenium heteroresiliens	Wagner's Spleenwort	G2	S1	N	N
Asplenium x curtissii	Curtiss' Spleenwort	G1	S1	N	N
Balduina atropurpurea	Purple Honeycomb-head	G2	S1	N	LE
Calydorea coelestina	Bartram's Ixia	G2	S2	N	LE
Carex chapmanii	Chapman's Sedge	G3	S3	N	LE
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	G3G4	S2	N	N
Ctenium floridanum	Florida toothache-grass	G2	S2	N	LE
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	LT
Gopherus polyphemus	Gopher Tortoise	G3	S3	N	LS
Grus canadensis pratensis	Florida Sandhill Crane	G5T2T3	S2S3	N	LT
Gymnopogon chapmanianus	Chapman's Skeletongrass	G3	S3	N	N
Hartwrightia floridana	Hartwrightia	G2	S2	N	LT
Litsea aestivalis	Pondspice	G3	S2	N	LE
Lythrum curtissii	Curtis's Loosestrife	G1	S1	N	LE
Matelea floridana	Florida Spiny-pod	G2	S2	N	LE
Monotropsis reynoldsiae	Pigmy Pipes	G1Q	S1	N	LE
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3	S3	N	N
Nemastylis floridana	Celestial Lily	G2	S2	N	LE
Neofiber alleni	Round-tailed Muskrat	G3	S3	N	N

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Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Nolina atopocarpa	Florida Beargrass	G3	S3	N	LT
Notophthalmus perstriatus	Striped Newt	G2G3	S2S3	N	N
Orbexilum virgatum	Pineland Scurfpea	G1	S1	N	PE
Picoides borealis	Red-cockaded Woodpecker	G3	S2	LE	LS
Podomys floridanus	Florida Mouse	G3	S3	N	LS
Pteroglossaspis ecristata	Giant Orchid	G2G3	S2	N	LT
Pycnanthemum floridanum	Florida Mountain-mint	G3	S3	N	LT
Rana capito	Gopher Frog	G3	S3	N	LS
Rhynchospora thornei	Thorne's Beakrush	G3	S1S2	N	N
Rudbeckia nitida	St. John's Black-eyed-susan	G3	S2	N	LE
Salix floridana	Florida Willow	G2	S2	N	LE
Sciurus niger shermani	Sherman's Fox Squirrel	G5T3	S3	N	LS

FNAI Biodiversity Matrix Unit ID: 41156

Potential

Arnoglossum diversifolium	Variable-leaved Indian-plantain	G2	S2	N	LT
Asclepias viridula	Southern Milkweed	G2	S2	N	LT
Asplenium heteroresiliens	Wagner's Spleenwort	G2	S1	N	N
Balduina atropurpurea	Purple Honeycomb-head	G2	S1	N	LE
Calydorea coelestina	Bartram's Ixia	G2	S2	N	LE
Carex chapmanii	Chapman's Sedge	G3	S3	N	LE
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	G3G4	S2	N	N
Ctenium floridanum	Florida toothache-grass	G2	S2	N	LE
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	LT
Gopherus polyphemus	Gopher Tortoise	G3	S3	N	LS
Grus canadensis pratensis	Florida Sandhill Crane	G5T2T3	S2S3	N	LT
Gymnopogon chapmanianus	Chapman's Skeletongrass	G3	S3	N	N
Hartwrightia floridana	Hartwrightia	G2	S2	N	LT
Litsea aestivalis	Pondspice	G3	S2	N	LE
Lythrum curtissii	Curtis's Loosestrife	G1	S1	N	LE
Matelea floridana	Florida Spiny-pod	G2	S2	N	LE
Monotropsis reynoldsiae	Pigmy Pipes	G1Q	S1	N	LE
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3	S3	N	N
Nemastylis floridana	Celestial Lily	G2	S2	N	LE
Neofiber alleni	Round-tailed Muskrat	G3	S3	N	N
Nolina atopocarpa	Florida Beargrass	G3	S3	N	LT
Notophthalmus perstriatus	Striped Newt	G2G3	S2S3	N	N
Orbexilum virgatum	Pineland Scurfpea	G1	S1	N	PE
Picoides borealis	Red-cockaded Woodpecker	G3	S2	LE	LS
Podomys floridanus	Florida Mouse	G3	S3	N	LS
Pycnanthemum floridanum	Florida Mountain-mint	G3	S3	N	LT
Rana capito	Gopher Frog	G3	S3	N	LS
Rhynchospora thornei	Thorne's Beakrush	G3	S1S2	N	N
Rudbeckia nitida	St. John's Black-eyed-susan	G3	S2	N	LE
Salix floridana	Florida Willow	G2	S2	N	LE
Sciurus niger shermani	Sherman's Fox Squirrel	G5T3	S3	N	LS

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DEFINITIONS:
DOCUMENTED - Rare species and natural communities documented on or near this site.
DOCUMENTED-HISTORIC - Rare species and natural communities documented, but not observed/reported within the last twenty years.
LIKELY - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.
POTENTIAL - This site lies within the known or predicted range of the species listed.

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FLORIDA
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GLOBAL AND STATE RANKS

Florida Natural Areas Inventory (FNAI) defines an **element** as any rare or exemplary component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave, or other ecological feature. FNAI assigns two ranks to each element found in Florida: the **global rank**, which is based on an element's worldwide status, and the **state rank**, which is based on the status of the element within Florida. Element ranks are based on many factors, including estimated number of occurrences, estimated abundance (for species and populations) or area (for natural communities), estimated number of adequately protected occurrences, range, threats, and ecological fragility.

GLOBAL RANK DEFINITIONS

G1	Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
G2	Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
G3	Either very rare and local throughout its range (21-100 occurrences or less than 10,0000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
G4	Apparently secure globally (may be rare in parts of range).
G5	Demonstrably secure globally.
G#?	Tentative rank (e.g., G2?)
G#G#	Range of rank; insufficient data to assign specific global rank (e.g., G2G3)
G#T#	Rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1)
G#Q	Rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q)
G#T#Q	Same as above, but validity as subspecies or variety is questioned.
GH	Of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker)
GNA	Ranking is not applicable because element is not a suitable target for conservation (e.g. as for hybrid species)
GNR	Not yet ranked (temporary)
GNRTNR	Neither the full species nor the taxonomic subgroup has yet been ranked (temporary)
GX	Believed to be extinct throughout range
GXC	Extirpated from the wild but still known from captivity/cultivation
GU	Unrankable. Due to lack of information, no rank or range can be assigned (e.g., GUT2).

STATE RANK DEFINITIONS

Definition parallels global element rank: substitute "S" for "G" in above global ranks, and "in Florida" for "globally" in above global rank definitions.

FEDERAL AND STATE LEGAL STATUSES PROVIDED BY FNAI FOR INFORMATION ONLY.

For official definitions and lists of protected species, consult the relevant state or federal agency.

FEDERAL LEGAL STATUS

Definitions derived from U.S. Endangered Species Act of 1973, Sec. 3. Note that the federal status given by FNAI refers only to Florida populations and that federal status may differ elsewhere.

LE Listed as Endangered Species in the List of Endangered and Threatened Wildlife and Plants under the provisions of the Endangered Species Act. Defined as any species which is in danger of extinction throughout all or a significant portion of its range.

LE,XN An experimental population of a species otherwise Listed as an Endangered Species in the List of Endangered and Threatened Wildlife and Plants.

PE Proposed for addition to the List of Endangered and Threatened Wildlife and Plants as Endangered Species.

LT Listed as Threatened Species. Defined as any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

LT,PDL Species currently listed threatened but has been proposed for delisting.

PT Proposed for listing as Threatened Species.

C Candidate Species for addition to the list of Endangered and Threatened Wildlife and Plants, Category 1. Taxa for which the USFWS currently has substantial information on hand or in possession to support the biological appropriateness of proposing to list the species as endangered or threatened.

PS Partial listing status (species is listed for only a portion of its geographic range).

SAT Threatened due to similarity of appearance to a threatened species.

SC Species of concern. Species is not currently listed but is of management concern to USFWS.

N Not currently listed, nor currently being considered for addition to the List of endangered and Threatened Wildlife and Plants.

FLORIDA LEGAL STATUSES

Animals: Definitions derived from "Florida's Endangered Species and Species of Special Concern, Official Lists" published by Florida Fish and Wildlife Conservation Commission, 1 August 1997, and subsequent updates.

Animals (Florida Fish and Wildlife Concervation Commission- FFWCC)

LE Listed as Endangered Species by the FGFWFC. Defined as a species, subspecies, or isolated population which is so rare or depleted in number or so restricted in range of habitat due to any man-made or natural factors that it is in immediate danger of extinction or extirpation from the state, or which may attain such a status within the immediate future.

LT Listed as Threatened Species by the FGFWFC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future. LT* (for Florida black bear) indicates that LT status does not apply in Baker and Columbia counties and in the Apalachicola National Forest.

LS Listed as Species of Special Concern by the FGFWFC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species. LS* indicates that a species has LS status only in selected portions of its range in Florida.

N Not currently listed, nor currently being considered for listing.

Plants: Definitions derived from Sections 581.011 and 581.185(2), Florida Statutes, and the Preservation of Native Flora of Florida Act, 5B-40.001. FNAI does not track all state-regulated plant species; for a complete list of state-regulated plant species, call Florida Division of Plant Industry, 352-372-3505.

LE Listed as Endangered Plants in the Preservation of Native Flora of Florida Act. Defined as species of plants native to the state that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue, and includes all species determined to be endangered or threatened pursuant to the Federal Endangered Species Act of 1973, as amended.

PE Proposed by the FDACS for listing as Endangered Plants.

LT Listed as Threatened Plants in the Preservation of Native Flora of Florida Act. Defined as species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in such number as to cause them to be endangered. LT* indicates that a species has LT status only in selected portions of its range in Florida.

PT Proposed by the FDACS for listing as Threatened Plants.

CE Listed as a Commercially Exploited Plant in the Preservation of Native Flora of Florida Act. Defined as species native to state which are subject to being removed in significant numbers from native habitats in the state and sold or transported for sale.

PC Proposed by the FDACS for listing as Commercially Exploited Plants.

(LT) Listed threatened as a member of a larger group but not specifically listed by species name.

N Not currently listed, nor currently being considered for listing.

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10.6.3 USFWS Correspondence

The following pages contain correspondence from USFWS regarding Threatened and Endangered Species Review.

Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL 32653-1500
Telephone (352) 336-5600
Fax (352) 336-6603

Golder Associates

November 16, 2005

FWS Log No 4140-2006-TA-0171
Putnam-Seminole Electric Coop

The proposed action is not likely to adversely affect resources protected by the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.). This finding fulfills the requirements of the Act. provided the standard protection measures for eastern indigo snake are incorporated in the project design.

David L. Hankla
Field Supervisor

12/16/2005
Date

Mr. David Hankla, Field Supervisor
North Florida Field Office
United States Fish and Wildlife Service
6620 Southpoint Drive South, Suite 310
Jacksonville, FL 32216-0958

RE: Threatened and Endangered Species Review
Seminole Electric Cooperative Inc. Unit 3 Expansion Project
Putnam County, Florida

Dear Mr. Hankla,

On behalf of Seminole Electric Cooperative Inc. (SECI), I am requesting an environmental review and analysis of potential impacts to threatened and endangered species resulting from the proposed expansion of the existing electric generation facility located 6 miles north of Palatka, east of US 17, and north of the St. Johns River (see enclosed Site Location map). The SECI property incorporates portions of Sections 5, 6, 7, 8, 12, 17, and 18, Township 9 South, Range 27 East, as illustrated on the Palatka and Hastings USGS Quadrangle maps. The facility currently consists of two coal-fired units capable of generating 1,300 megawatts. The proposed expansion (Unit 3) will consist of an additional 650 MW pulverized coal unit located adjacent to the existing units within a previously-cleared area maintained as an open grass lawn (see enclosed Site Layout). Some areas of upland pine flatwoods will be utilized for construction laydown and parking, as well as siting new cooling tower structures.

Listed species observed at the site are limited to the gopher tortoise (*Gopherus polyphemus*), found within undisturbed dry pine flatwoods habitat to the northeast of the existing cooling towers. A portion of this habitat is proposed to be utilized for locating additional cooling towers. Gopher tortoise burrow surveys will be conducted within the area proposed for new cooling towers, the results of which will be used to aid in avoidance and/or minimization of impacts to the gopher tortoise.

Golder Associates respectfully requests a review of the site by the USFWS to identify potential impacts to rare species at this early stage of the planning process. Through this review, possible adverse impacts may be avoided in order to ensure that project activities do not jeopardize the continued existence of listed species. Included are the following maps and drawings:

1. A copy of the USGS Quadrangle with the project site identified;
2. An aerial photo with a conceptual site plan overlain.

10.6.4 Environmental Justice Analysis

The following section contains the Environmental Justice Analysis

Introduction

Consistent with the provisions of Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, an assessment has been made of the Seminole Generating Station (SGS) Unit 3 Project's potential disproportionate adverse environmental impacts on minority and low-income populations. The Executive Order directs federal agencies reviewing the Project to promote and support equitable environmental protection to people and communities regardless of their race, ethnicity, or economic status. A brief presentation of poverty-level population characteristics is also provided.

Baseline Information

This assessment involved a review of 2000 Federal Census data to identify the location of both racial minority population concentrations and low-income population concentrations. Data was compiled for the State of Florida, for Putnam County, and for the individual Census Tracts and Block Groups within 2.5-mile (4 kilometer) radius of the Seminole SGS site boundary (see Figure 1). This distance was based on the fact that computer model generated "worst case" concentrations of various air quality parameters occurred within a 4 kilometer distance of proposed SGS Unit 3.

The data collected for this assessment included: 1) total population enumeration; 2) minority non-white population components (percentage); 3) race (White, Black, American Indian, Asian, Hispanic, and "Other"); 4) median values (dollars) of income for both household and family, and 5) 1999 population below poverty level. These census data were tabulated and compared (see Table 10.6.4-1).

For baseline comparisons, the State of Florida had a minority population of 28.2 percent, with a median income of $45,625 for families and $38,819 for households. Within Putnam County, the percentage minority population was the same as the State's (28.2 percent), and the County's median family and household incomes were lower ($34,499 and $28,180, respectively). Within the County, there is a significant difference in population density. The largest city in Putnam County is Palatka.

Palatka is located approximately five miles from the SGS Unit 3 project boundary and therefore situated outside of the study area.

Demographic Assessment

The Unit 3 Project's commitment to install Best Available Control Technology (BACT) level air emission controls, equipment, the zero liquid discharge system proposed for non-cooling tower process wastewater discharges from Unit 3 as well as existing Units 1 and 2, the air emission reduction from Units 1 and 2 to offset Unit 3 increases in sulfur dioxide, nitrogen dioxide, and mercury, and the colocation of the proposed unit with existing infrastructure (including rail line, transmission lines, and water/wastewater service systems) were also considered in determining the geographic extent of environmental effects associated with the Unit 3 Project. In light of these factors, the environmental justice assessment focused primarily on demographic and economic characteristics of residents located within a 2.5-mile radius of the SGS property boundary. This "study area" was deemed appropriate for the assessment because essentially any potential environmental consequences would occur within this radius.

Population

The proposed SGS Unit 3 Project is wholly located within Census Tract 950100, Block Group 3 (see Figure 1). The population within Census Tract 950100, Block Group 3, was 1,236. The minority population was six percent compared to the minority population of five percent for Census Tract 950100 as a whole. Block Groups 1 and 2 are also within the 950100 Census Tract. Both Block Group 1, located to the north, and Block Group 2, located to the west of the SGS property boundary, have a minority population of four percent. The overall population of Block Group 1 is 1,169 and Block Group 2 is 1,233. The majority of the population within the 2.5-mile radius resides along the banks of the St. Johns River or in Bostwick.

In addition to Census Tract 650100, portions of Census Tracts 950600, Block Group 1, Census Tract 950700, Block Group 1, and Census Tract 9510000, Block Group 2 are within the 2.5-mile radius of the property. A small portion of Census Tract 950600, Block Group 1 is located to the southwest of the SGS property boundary. The overall population of Census Tract ___Block Group 1 is 2,627, and 59 percent are minority populations. However, almost all of these residents live outside of the study area citing the 2.5-mile radius from the proposed SGS Unit 3. A small portion of Census Tract 950700, Block Group 1 is located south of the SGS property boundary, but there is no resident

population within the portion of the Block Group that is located in the study area. A portion of Census Tract 951000, Block Group 2 is located south of the St. Johns River southeast of the SGS property boundary. Census Tract 951000, Block Group 2, has an overall population of 1,484 and a 15 percent minority population.

Collectively, within the 2.5 miles of the proposed power block, the total minority population (based on Census Tract 950100, Block Groups 1, 2 and 3 and Census Tract 951000 Block Group 2 was 372. This represented only 7 percent of the total 5,122 persons. This percentage is significantly lower than Putnam County and the State of Florida overall.

Income

The median household income for Census Tract 950100 Block 3 is $38,250 which exceeds Putnam County ($28,180) and is only $569 less than the State of Florida ($38,819). The median household income for Census Tract 950100 Block 1 and 2 is $28,938 and $42,796 respectively. The median household income for Census Tract 951000, Block Group 2, is 36,524. Overall, all of the Census Tract Block Groups with population residing in the study area have a higher median household income than Putnam County overall.

Within 2.5 mile of the SGS project boundary, the median family income for Census Tract 950100 Block 3 is $43,214 which exceeds Putnam County ($34,499) and is only $2,411 less than the State of Florida ($45,625). The median family income for Census Tract 950100 Block 1 and 2 is $32,232 and $44,539 respectively. The median family income for Census Tract 951000 Block Groups 2 is $37,625. Overall, three of four Census Tract Block Groups with population residing in the study area have a higher median family income than Putnam County overall.

Poverty Level Population

Poverty characteristics of the study area are available for 1999 and show that 13.8 percent of the overall population in the study area is below the federal poverty level. This level of poverty compares with a county-wide poverty level of 20.1 percent, suggesting that fewer people living in the study area are below poverty level than overall county percentages. The percentage of poverty level in the study area compares to the statewide percentage of population in poverty level, 12.5 percent.

Summary

Proposed SGS Unit 3 is to be located within the existing SGS Units 1 and 2 site boundary, and is adjacent to existing electrical infrastructure. The Project was sited at its proposed location because the SGS Site is exceptionally well suited for the proposed additional power block and minimizes offsite impacts. The SGS Site has few quality wetlands or other environmentally sensitive features, thus minimizing the potential for adverse environmental impacts to natural resources. The SGS Site has the proper zoning and future land use designations demonstrating compliance with the Putnam County Comprehensive Plan.

SGS Unit 3 will meet all applicable federal and state air quality requirements. Combined with the air pollution control upgrades to Units 1 and 2, the SGS Site with Unit 3 will actually have lower facility wide air emissions of sulfur dioxide, nitrogen dioxide, and mercury. There is no evidence that minority or low-income populations (or any population) will be disproportionately subjected to adverse environmental impacts.

No wastewater discharge will occur in or through any residential areas regardless of race or income characteristics, and overall water quality of the discharge will be improved due to the zero liquid discharge system proposed for SGS Unit 3. There is no evidence that minority or low income populations are utilizing fish and/or wildlife from the SGS Site or immediate vicinity for subsistence. Nor are there any indications of adverse consequences if there were such populations. Similarly, stormwater from the SGS Site is routed via existing off site drainage systems through undeveloped areas or near a few high income residences prior to discharge to the St. Johns River.

Public Outreach activities were conducted by Seminole throughout the initial stages of the licensing program as described in the Public Scoping Summary document. Issues raised by the public and regulatory agencies addressed a variety of topics based on air, land and water resource considerations. There was no public comment during the various outreach activities on race or income characteristics of the area surrounding SGS.

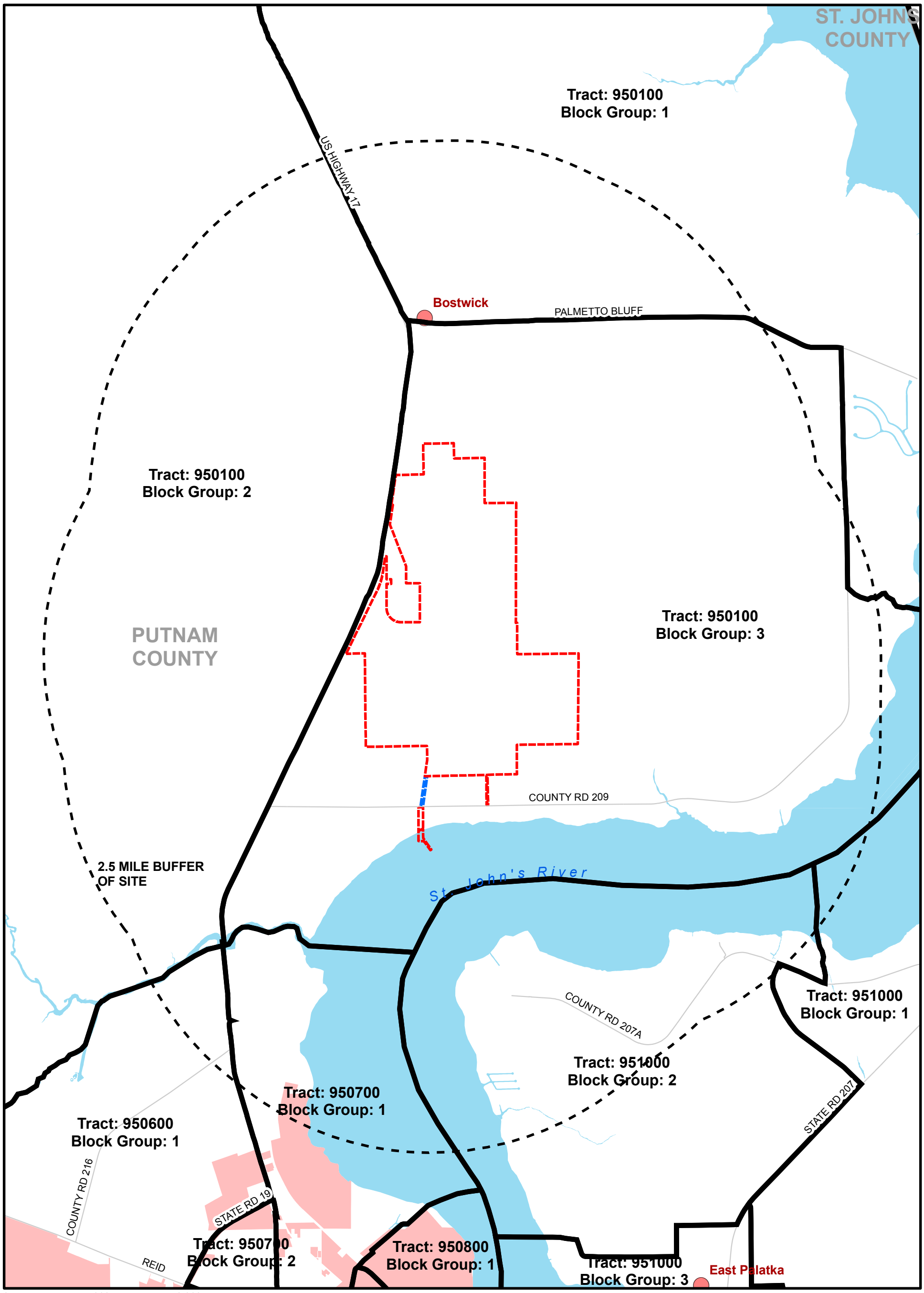
Given all these environmental features, and public comment generated as part of the Public Outreach efforts of Seminole, the Site was selected because it was determined that the proposed Unit 3 Project could be built and operated in full compliance with all applicable federal, state, and local environmental and land use laws and regulations. Furthermore, the Unit 3 Project is not expected to

have adverse impacts on any human populations, regardless of their racial, ethnic, or economic characteristics. The airborne emissions from Unit 3 will not cause, nor contribute to, any violations of ambient air quality standards, which are designed to protect human health and the human welfare.

The results of the assessment of potential environmental impacts associated with construction and operation of the project demonstrate compliance with Executive Order 12898. The Unit 3 Project will not cause adverse human health or environmental impacts affecting racial minority populations, low-income populations, or poverty-level populations in the vicinity of the Project.

TABLE 10.6.4-1
Race and Income Characteristics for the Study Area

	Florida	Putnam County, Florida	Cenus Tract 9501, Putnam County, Florida	Block Group 1, Census Tract 9501, Putnam County, Florida	Block Group 2, Census Tract 9501, Putnam County, Florida	Block Group 3, Census Tract 9501, Putnam County, Florida	Block Group 2, Census Tract 9510, Putnam County, Florida
POPULATION							
Total:	15,982,378	70,423	3,638	1,169	1,233	1,236	1,484
White alone	12,463,302	54,894	3,464	1,117	1,185	1,162	1,291
Black or African American alone	2,312,105	11,757	95	52	0	43	178
American Indian and Alaska Native alone	54,428	378	0	0	0	0	0
Asian alone	264,377	291	8	0	0	8	0
Native Hawaiian and Other Pacific Islander alone	6,812	14	0	0	0	0	0
Some other race alone	472,333	1,975	0	0	0	0	0
Two or more races	409,021	1,114	71	0	48	23	15
1999 Median household income ($)	38,819	28,180	36,386	28,938	42,796	38,250	36,524
1999 Median family income ($)	45,625	34,499	41,027	32,232	44,539	43,214	37,625
Total 1999 population	15,605,367	69,225	3,638	1,169	1,233	1,236	1,461
Population in 1999 below poverty level:	1,952,629	14,449	515	258	129	128	177



LEGEND

- Cities, Towns, and Communities
- Municipalities
- County Boundary
- Easment
- Property Boundary
- Major Water
- US Census Block Group
- 2.5-mile Buffer of Site

N

REFERENCE

1.) Census Block Groups, ESRI Media Kit, US Census Bureau
2.) Roads, major water, and municipality boundaries, Putnam County 2005

PROJECT SEMINOLE ELECTRIC COOPERATIVE INC.
SGS UNIT 3
PUTNUM COUNTY, FL

TITLE **US CENSUS BLOCK GROUPS WITHIN 2.5 MILE BUFFER**

Golder Associates
Tampa, Florida

PROJECT No. 053-9540			SCALE AS SHOWN	REV. 0
DESIGN	JWT	11/28/2005	**Figure 1**	
GIS	JWT	2/21/2006		
CHECK	MM	2/20/2006		
REVIEW	RAZ	2/20/2006		

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10.7 SGS Unit 3 Traffic Study

The following section contains the Traffic Study that was conducted to support the construction and operation of SGS Unit 3.

SEMINOLE GENERATING STATION UNIT THREE TRAFFIC STUDY

Submitted To:
Putnam County

Prepared For:
Seminole Electric Cooperative, Inc.
16313 N. Dale Mabry Highway
Tampa, FL 33618

Submitted Through:
Golder Associates, Inc.
5100 West Lemon Street, Suite 114
Tampa, Florida 33609

Prepared By:
Florida Design Consultants, Inc.
3030 Starkey Boulevard
New Port Richey, Florida 34655
(727) 849-7588

Date: February 21, 2006

1.0 INTRODUCTION

Seminole Electric Cooperative, Inc. (SECI) intends to construct and operate a new coal fired unit (Unit 3) at the Seminole Generating Station (SGS) located north of Palatka, Florida. The existing facility (Units 1 and 2) is located on the east side of U.S. 17 north of County Road (C.R.) 209 (See Figure 1 - Project Location Map). SECI plans to add additional capacity in order to provide a reliable, affordable supply of energy for their customers. This study has been prepared to evaluate the expected impact on the transportation network during the peak construction phase of the project and during normal plant operations following construction of Unit 3. The study area will consist of U.S. 17 from the main plant entrance located on U.S. 17 north of C.R. 209, south through the U.S. 17 at C.R. 209 intersection. The analysis along U.S. 17 will include operation of the highway links and intersections to include the U.S. 17 intersections at the project entrance and at C.R. 209. The plant is expected to have two conditions that will affect traffic:

1. Peak Construction Period expected in the year 2010 and
2. Normal Plant Operations that will be in full operation by the year 2013.

The following traffic study reviews the expected worse case scenarios for the peak construction period and normal plant operations.

2.0 EXISTING ROADWAYS

Within the study limits, U.S. 17 is a four lane divided state road under the jurisdiction of the Florida Department of Transportation (FDOT). C.R. 209 is a two lane undivided road under the jurisdiction of Putnam County. North and south of the project entrance, the posted speed limit on U.S. 17 is 60 miles per hour (MPH). North and south of C.R. 209 the speed limit is posted at 50 MPH on U.S. 17, while C.R. 209 is posted at 45 MPH.

3.0 EXISTING OPERATION

The main entrance to the facility on U.S. 17 serves as a joint entrance to allow plant employees of both the SGS and Lafarge Gypsum Corporation to enter the project site and for access to the Lafarge Gypsum Corporation facility. Turning movement traffic counts were taken on September 20, 2005 on U.S. 17 at the project entrance driveway and on September 22, 2005 for the U.S. 17 at C.R. 209 intersection. The counts were taken from 7:00 to 9:00 a.m. and from 4:00 to 6:00 p.m. Four consecutive 15-minute periods with the highest total volume were taken as the a.m. and p.m. peak hours. Copies of the traffic counts are provided in the appendix. As part of the traffic count program, counts were taken to separate the SGS and Lafarge Plant traffic at the project entrance.

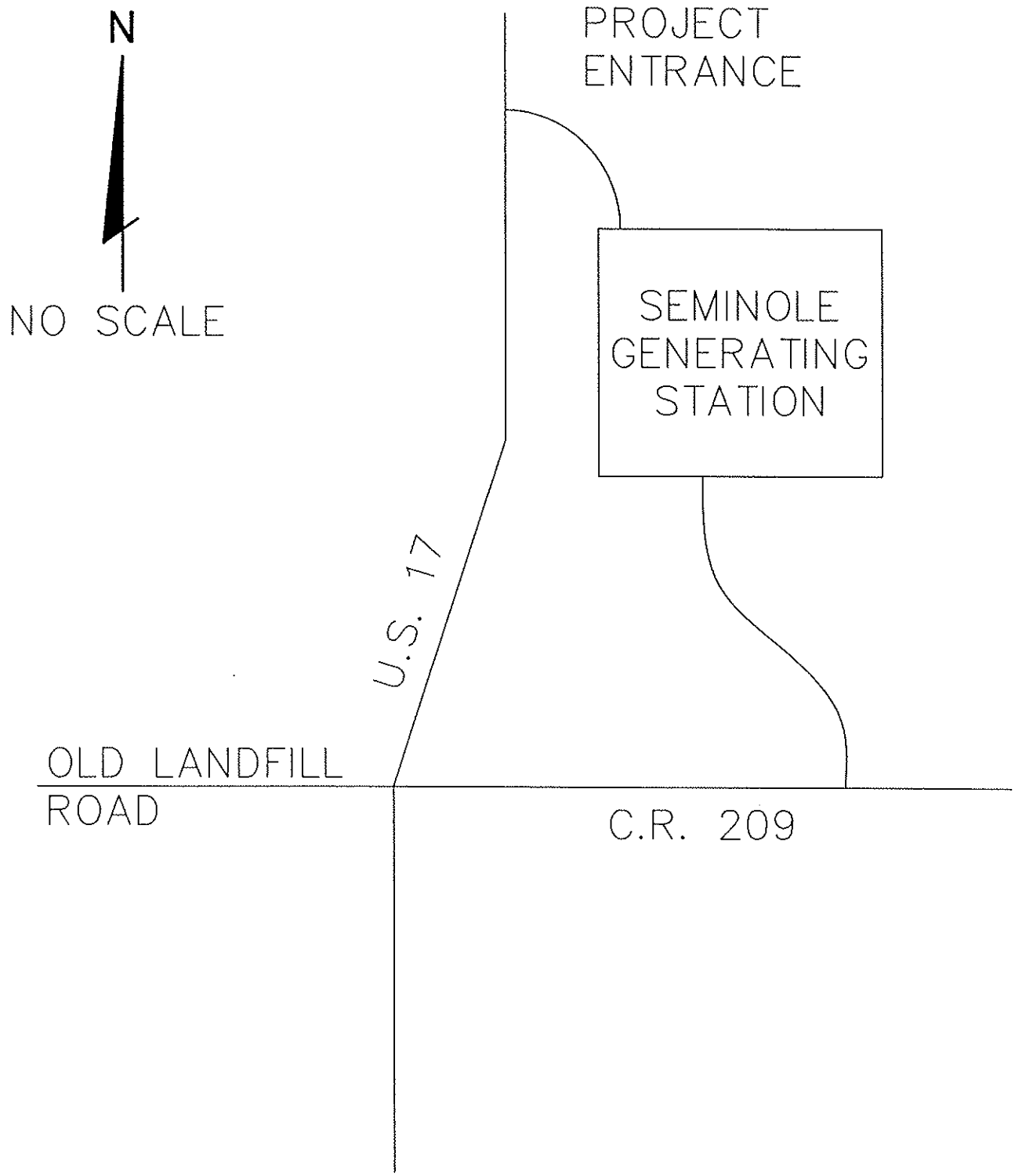

FIGURE: 1	DESCRIPTION: PROJECT LOCATION MAP		
FLORIDA DESIGN CONSULTANTS, INC. ENGINEERS, ENVIRONMENTALISTS, SURVEYORS & PLANNERS 3030 Starkey Blvd, New Port Richey FL 34655 Tel. (727) 849-7588 - Fax: (727) 848-3648		DATE: 2-15-06	PROJECT No. 2005-0054
		DRAWN BY: KY	EPN:

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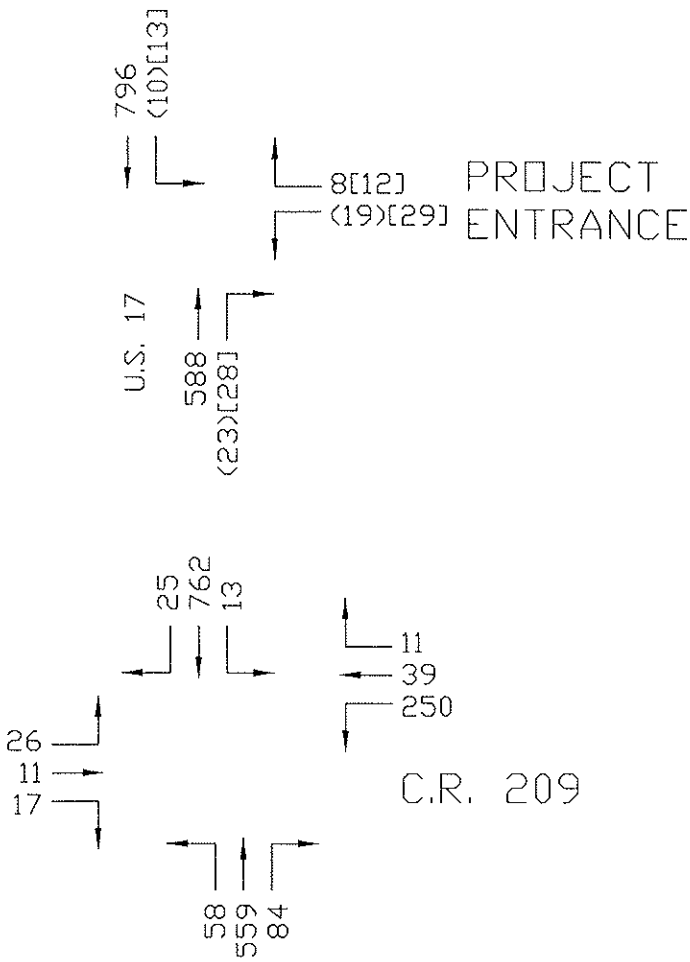
Analysis has been completed using the Highway Capacity Software (HCS) to identify the operation of the existing roadway links and intersections in the study area. Acceptable operation for U.S. 17 is Level of Service (LOS) B and that for C.R. 209 is LOS D. The traffic counts were adjusted to peak season volumes using the adjustment factor identified in the FDOT 2004 Traffic Information CD for Putnam County, see copy in the Appendix. Total Traffic Determination Sheets are provided in the Appendix to document the calculation of peak hour peak season traffic volumes. Figure 2 identifies the existing a.m. and p.m. peak hour turning movements at the two intersections included in the study area. The results of the HCS intersection analysis are that the unsignalized intersection of U.S. 17 at the project entrance currently operates at LOS F in the a.m. peak hour and LOS E in the p.m. peak hour. The signalized intersection of U.S. 17 at C.R. 209 currently operates at LOS B in the a.m. and p.m. peak hours.

The existing highway links have been reviewed using information from FDOT's Quality/Level of Service Manual, 2002. Generalized link maximum service volumes were used to review the existing traffic volumes assuming that the area is transitioning into an urban condition. The results of that analysis are presented in Table 1 for the a.m. peak hour and in Table 2 for the p.m. peak hour. Listed in these tables are the acceptable LOS for the road segments, the maximum service volume (Max SV) for the acceptable level of service, the existing peak hour volume for the direction indicated, and the existing level of service on the segment under review. As is indicated, both U.S. 17 and C.R. 209 currently operate at acceptable Levels of Service.

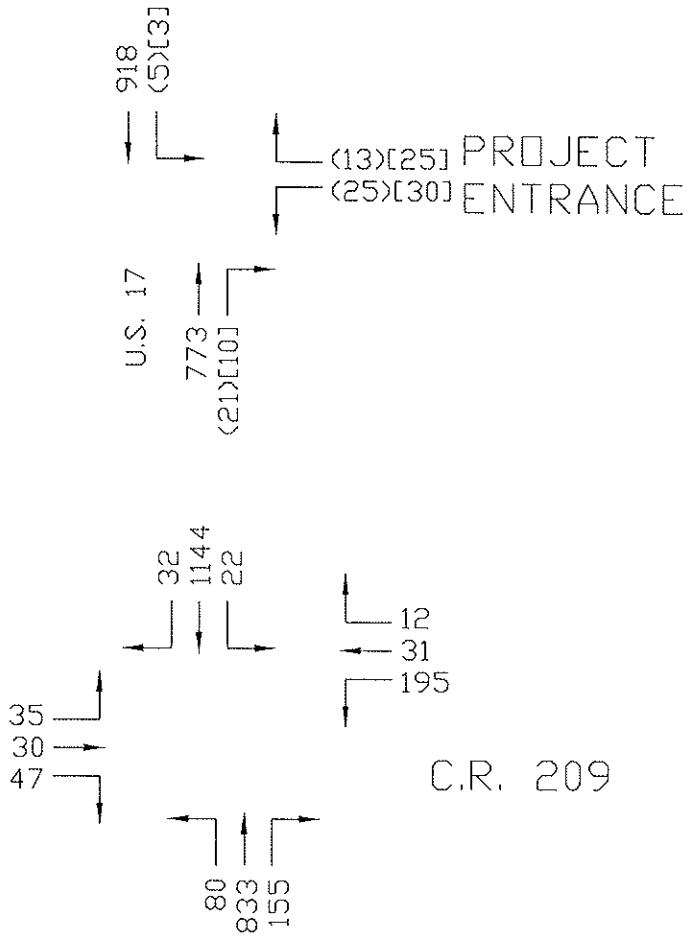
Table 1. Existing Link Operation for the A.M. Peak Hour

Road	Limits	Dir	Accept LOS	Max SV	Exist Vol	LOS
U.S. 17	N of Proj Ent	NB	B	1,470	608	B
		SB	B	1,470	819	B
	Proj Ent to C.R. 209	NB	B	1,470	639	B
		SB	B	1,470	844	B
	S of C.R. 209	NB	B	1,470	701	B
		SB	B	1,470	1029	B
C.R. 209	W of U.S. 17	EB	D	720	54	C
		WB	D	720	122	C
	E of U.S. 17	EB	D	720	108	C
		WB	D	720	300	C

2005 AM PEAK HOUR TRAFFIC



2005 PM PEAK HOUR TRAFFIC



LEGEND:
XX - BACKGROUND TRAFFIC
(XX) - LEFARGE TRAFFIC
[XX] - PROJECT TRAFFIC

FIGURE: 2

DESCRIPTION: 2005 PEAK SEASON PEAK HOUR TRAFFIC

FLORIDA DESIGN CONSULTANTS, INC.
ENGINEERS, ENVIRONMENTALISTS, SURVEYORS & PLANNERS
3030 Starkey Blvd, New Port Richey FL 34655
Tel: (727) 849-7588 - Fax: (727) 848-3648

DATE:	PROJECT No.
2-15-06	2005-0054
DRAWN BY: KY	EPN:

Table 2. Existing Link Operation for the P.M. Peak Hour

Road	Limits	Dir	Accept LOS	Max SV	Exist Vol	LOS
U.S. 17	N of Proj Ent	NB	B	1,470	811	B
		SB	B	1,470	926	B
	Proj Ent to C.R. 209	NB	B	1,470	764	B
		SB	B	1,470	973	B
	S of C.R. 209	NB	B	1,470	1068	B
		SB	B	1,470	1386	B
C.R. 209	W of U.S. 17	EB	D	720	112	B
		WB	D	720	143	B
	E of U.S. 17	EB	D	720	207	B
		WB	D	720	236	B

4.0 FUTURE PROJECT TRAFFIC

The analysis for this project has been based on the worst-case (peak) period during construction of Unit 3 and for normal operations of Unit 3 once construction is complete and the facility is in full operation. Project traffic has been estimated based on the projected construction activities for the proposed unit. Information for these projected conditions was obtained from Seminole Electric.

Construction activity is scheduled to begin in 2008 and continue for four years to 2012. Average construction employment in 2008 is expected to be approximately 600 workers with peak construction employment in 2010 reaching 1,500 people per day. Construction activities will take place between the hours of 7:00 a.m. and 5:00 p.m. The worst-case impact for construction traffic will occur when the maximum employment is reached at the site in the year 2010. The construction employees are expected to arrive by automobile or light truck at an average auto occupancy of 1.2 persons per vehicle. This will result in 1,250 inbound automobiles in the a.m. peak hour and 1,250 outbound automobiles in the p.m. peak hour. Truck deliveries are expected to be approximately 40 trucks per day from 7:00 a.m. to 3:00 p.m. This will result in an average of five inbound trucks in the a.m. peak hour and no trucks in the p.m. peak hour. The trip distribution for the construction traffic is 35 percent to the north and 65 percent to the south.

The normal full employment operation will occur in 2013. Seminole Electric is expected to increase its employment by 50 persons over existing levels and the Lafarge Plant is expected to retain its current operations employment. To estimate future traffic increases, the 50 additional people are expected to be split into 25 additional day shift, 13 additional afternoon shift, and 12 additional evening shift personnel. These new employees will enter the project through a driveway to C.R. 209. This new employee traffic is expected to have 10% headed north on U.S. 17 with the remainder headed south. The shift changes are expected to occur during the a.m. and p.m. peak hours and auto occupancy for these new employees is expected to be one person per vehicle.

Train travel to the site is provided by the CSX Railroad via tracks located parallel and just east of U.S. 17. All train traffic to the site comes from the north and all return trips from the site return to the north. Train traffic will increase during construction to bring materials to the site and will also increase during the operating period following construction to provide coal for the additional power unit. The existing rail traffic is 11 to 14 trains per day, which includes 4 Amtrak passenger trains.

Project trip distribution for construction and operation has been estimated based on the location of the project in Putnam County and the distribution exhibited by the existing traffic counts. The calculations of the future turning movements at the intersections in the study area are documented in the Total Traffic Determination Sheets contained in the Appendix. Figure 3 identifies the projected turning traffic in the a.m. and p.m. peak hours for the peak construction traffic in the year 2010 . Figure 4 identifies the projected project and background traffic in during normal operation in 2013 with full operation of the new unit at Seminole Generating Station.

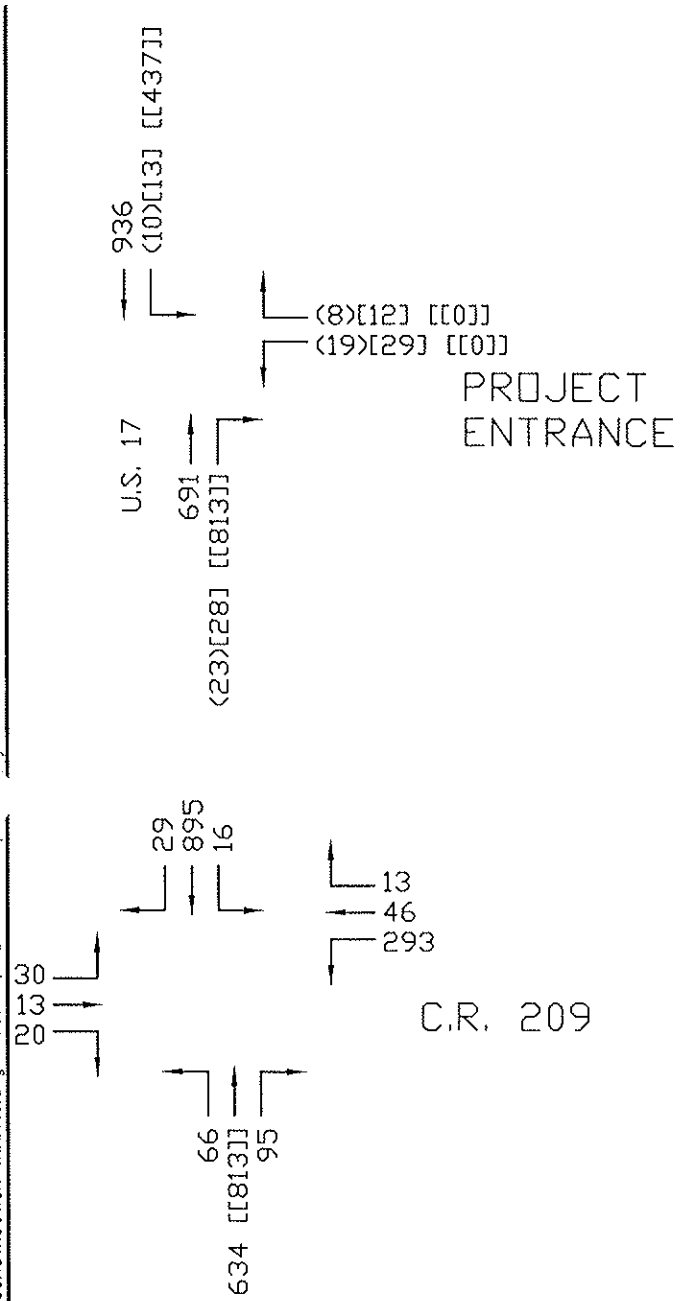
5.0 FUTURE BACKGROUND TRAFFIC

The increase in background traffic was estimated using information from the FDOT Traffic Information CD. The 2004 AADT Forecast sheet for U.S. 17, 1000 feet north of C.R. 209 was used for the growth rates on C.R. 209 and for U.S. 17 north of C.R. 209. Information from the Forecast sheet for U.S. 17, 3.3 miles north of S.R. 100 was used for U.S. 17 south of C.R. 209. Copies of these sheets are provided in the Appendix. The AADT Forecast sheets identify the expected daily traffic on the segments of U.S. 17 each year from 2005 to 2014. This information was used to determine growth rates for the background traffic. For U.S. 17 south of C.R. 209, a growth rate of 2.7% per year was calculated from 2005 to 2010 and a rate of 2.8% per year was calculated from 2005 to 2013. For the remainder of the study area, a growth rate of 3.5% per year was calculated for both 2010 and 2013. These growth rates were applied to background traffic to determine the number of background trips to be included in the future year analysis, see the Total Traffic Determination Sheets in the Appendix for documentation on each turning movement increase and Figures 3 and 4 for the turning movements at the intersections in the study area.

6.0 TOTAL TRAFFIC

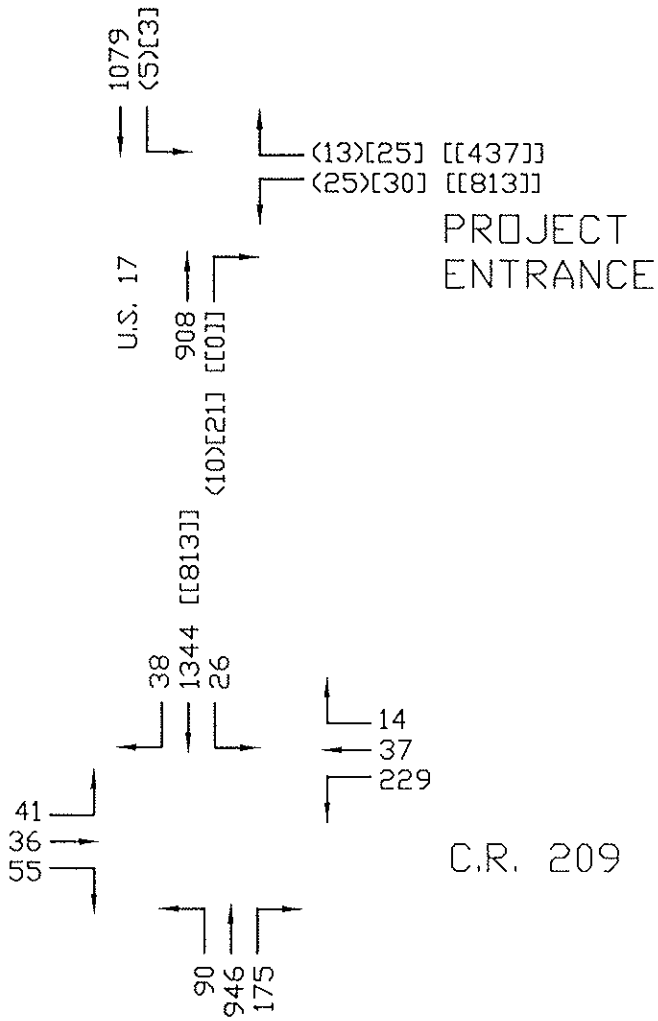
Total traffic is a combination of existing volumes projected to 2010 for the peak construction period and 2013 for the normal plant operations and assignment of project traffic during the a.m. and p.m. peak hours. The calculation of total traffic

2010 AM PEAK HOUR TRAFFIC



NOTE:
EXISTING PROJECT TRAFFIC IS ONLY SHOWN AT THE PROJECT ENTRANCE

2010 PM PEAK HOUR TRAFFIC



LEGEND

XX - BACKGROUND TRAFFIC
(XX) - LEFARGE TRAFFIC
[XX] - EXISTING PROJECT TRAFFIC
[[XX]] - CONSTRUCTION PROJECT TRAFFIC

FIGURE: 3	DESCRIPTION: 2010 PEAK CONSTRUCTION TRAFFIC		
FLORIDA DESIGN CONSULTANTS, INC. ENGINEERS, ENVIRONMENTALISTS, SURVEYORS & PLANNERS 3030 Starkey Blvd, New Port Richey FL 34655 Tel. (727) 849-7588 - Fax. (727) 848-3648	DATE: 2-15-06	PROJECT No. 2005-0054	
	DRAWN BY: KY	EPN:	

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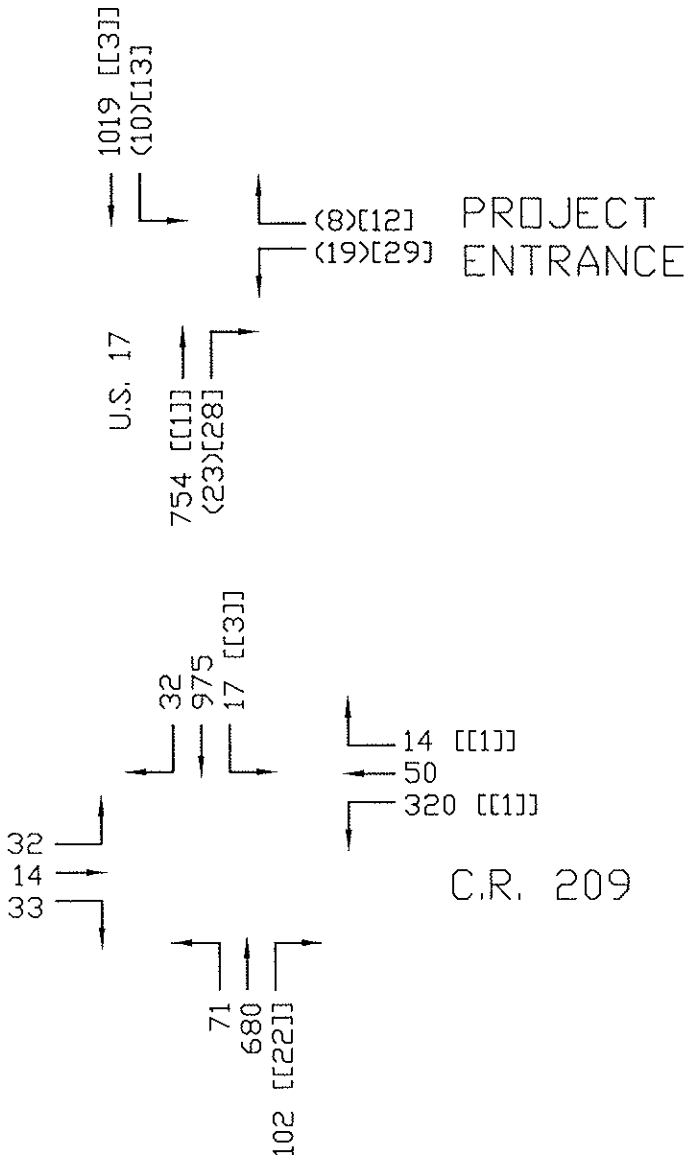
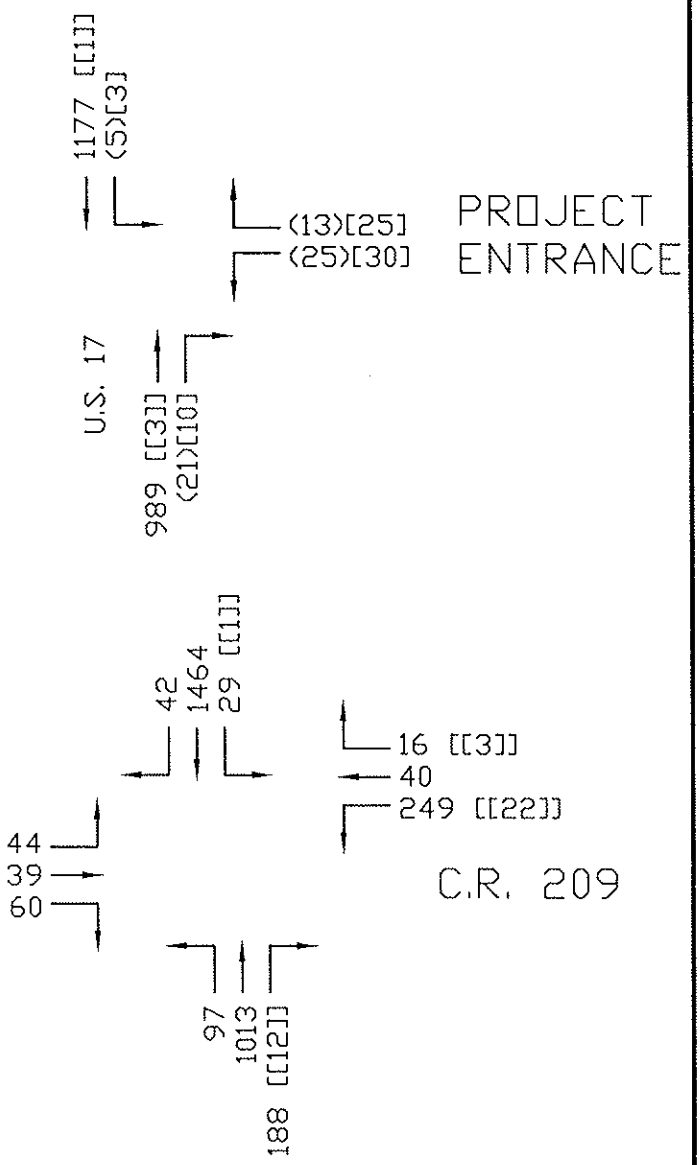
2013 AM PEAK HOUR TRAFFIC



NOTE:
EXISTING PROJECT TRAFFIC IS ONLY SHOWN AT THE PROJECT ENTRANCE

2013 PM PEAK HOUR TRAFFIC



LEGEND

XX - BACKGROUND TRAFFIC
(XX) - LEFARGE TRAFFIC
[XX] - EXISTING PROJECT TRAFFIC
[[XX]] - NEW EMPLOYEE TRAFFIC

FIGURE: 4	DESCRIPTION: 2013 NORMAL OPERATION TRAFFIC		
FLORIDA DESIGN CONSULTANTS, INC. ENGINEERS, ENVIRONMENTALISTS, SURVEYORS & PLANNERS 3030 Starkey Blvd, New Port Richey FL 34655 Tel: (727) 849-7588 - Fax: (727) 848-3648		DATE: 2-16-06	PROJECT No. 2005-0054
		DRAWN BY: KY	EPN:

for these conditions is indicated in the Total Traffic Determination Sheets contained in the Appendix.

7.0 FUTURE YEAR TRAFFIC ANALYSIS

The intersections in the study area were analyzed to determine future year operating conditions. First the intersections were analyzed during the peak construction activity in 2010 using the HCS software, with the results indicated in Table 3. The unsignalized intersection of U.S. 17 at the project entrance would not operate at an acceptable level of service with the projected total traffic. In order to achieve acceptable operation this intersection needs to be signalized and the project drive needs to be widened to provide two approach lanes. The U.S. 17 at C.R. 209 intersection is projected to operate at LOS E in the p.m. peak hour during peak construction activity. This condition is expected to last for only a short time. During normal operation in 2013, it is projected that acceptable operating conditions would be provided, see Table 4. Copies of the HCS computer runs are provided in the Appendix.

Table 3. Intersection Operation During Peak Construction (2010)

Intersection	Peak Hour LOS AM/PM	LOS after Improve AM/PM	Improvement
U.S. 17 at Project Entrance	F/F	C/D	Signalize when warranted by MUTCD, provide second SB left turn lane, and WB left and right turn lanes
U.S. 17 at C.R. 209	C/E	NA	

Table 4. Intersection Operation During Normal Operation (2013)

Intersection	Peak Hour LOS AM/PM	LOS after Improve AM/PM	Improvement
U.S. 17 at Project Entrance	A/C	NA	
U.S. 17 at C.R. 209	B/D	NA	

Highway link operation has been reviewed using generalized peak hour volumes from the FDOT 2002 Quality/Level of Service Handbook. Table 4-8 from that document (See the Appendix for a copy), identifies directional peak hour maximum volumes for various types of roadways transitioning into urban areas. Tables 5 and 6 summarize the link operating conditions for the peak construction activity in 2010 for the a.m. and p.m. peak hours respectively. The southbound direction of U.S. 17 from the project entrance to south of C.R. 209 is not projected to operate at an acceptable LOS in the a.m. and p.m. peak hours, while all other road segments in the morning and afternoon peak periods are projected to operate acceptably. This analysis has reviewed the worst-case traffic impacts during construction of Unit 3. The analysis has assumed that all exiting project workers would leave the facility in the same hour, although their exit may be staggered over several hours.

Tables 7 and 8 summarize the link operating conditions for the normal plant operations in 2013 for the a.m. and p.m. peak hours. Listed in these two tables are the roadway links reviewed, the acceptable level of service, and maximum service volume (SV) for the acceptable level of service indicated in the FDOT Table 4-8. Also indicated in these tables are the total traffic on each link by direction and the projected level of service. U.S. 17 south of C.R. 209 is not projected to operate at an acceptable level of service in the southbound direction in the p.m. peak hour. This is due primarily to the growth in background traffic. All other highway segments are projected to operate at acceptable levels of service.

Table 5. A.M. Link Operation During Peak Construction (2010)

Road	Limits	Dir	Accept LOS	Max SV	2010 Vol	LOS
U.S. 17	N of Proj Ent	NB	B	1,470	711	B
		SB	B	1,470	1396	B
	Proj Ent to C.R. 209	NB	B	1,470	1555	C
		SB	B	1,470	984	B
	S of C.R. 209	NB	B	1,470	1608	C
		SB	B	1,470	1208	B
C.R. 209	W of U.S. 17	EB	D	720	63	C
		WB	D	720	141	C
	E of U.S. 17	EB	D	720	124	C
		WB	D	720	352	C

Table 6. P.M. Link Operation During Peak Construction (2010)

Road	Limits	Dir	Accept LOS	Max SV	2010 Vol	LOS
U.S. 17	N of Proj Ent	NB	B	1,470	1383	B
		SB	B	1,470	1087	B
	Proj Ent to C.R. 209	NB	B	1,470	939	B
		SB	B	1,470	1947	E
	S of C.R. 209	NB	B	1,470	1211	B
		SB	B	1,470	2441	E
C.R. 209	W of U.S. 17	EB	D	720	132	C
		WB	D	720	165	C
	E of U.S. 17	EB	D	720	237	C
		WB	D	720	280	C

Table 7. A.M. Link Operation During Normal Operation (2013)

Road	Limits	Dir	Accept LOS	Max SV	2013 Vol	LOS
U.S. 17	N of Proj Ent	NB	B	1,470	774	B
		SB	B	1,470	1045	B
	Proj Ent to C.R. 209	NB	B	1,470	805	B
		SB	B	1,470	1070	B
	S of C.R. 209	NB	B	1,470	875	B
		SB	B	1,470	1328	B
C.R. 209	W of U.S. 17	EB	D	720	69	C
		WB	D	720	153	C
	E of U.S. 17	EB	D	720	158	C
		WB	D	720	396	D

Table 8. P.M. Link Operation During Normal Operation (2013)

Road	Limits	Dir	Accept LOS	Max SV	2013 Vol	LOS
U.S. 17	N of Proj Ent	NB	B	1,470	1030	B
		SB	B	1,470	1185	B
	Proj Ent to C.R. 209	NB	B	1,470	1023	B
		SB	B	1,470	1232	B
	S of C.R. 209	NB	B	1,470	1310	B
		SB	B	1,470	1795	D
C.R. 209	W of U.S. 17	EB	D	720	143	C
		WB	D	720	179	C
	E of U.S. 17	EB	D	720	269	C
		WB	D	720	330	C

8.0 AFFECT OF TRAIN OPERATIONS

As was indicated earlier, it is expected that trains will be used to deliver some of the operating equipment during the construction phase and will deliver fuel to the power plant during normal plant operations. It is not expected that the train operation to the SGS will result in a significant delay to area motorists.

9.0 CONCLUSION

Based on the above review, it is concluded that the proposed development of the SGS Unit 3 project can occur and allow the roadway network to operate at reasonable Levels of Service. Site related improvements include the installation of a traffic signal on U.S. 17 at the project entrance prior to maximum construction employment. Additionally, the project entrance drive will need to be widened to provide two exit lanes, one for right turns and the other for left turns.

During the construction period, segments of U.S. 17 are projected to operate at unacceptable levels of service during the a.m. and p.m. peak hours, while the remaining road segments would operate at acceptable levels in the a.m. and p.m. peak hours.

For the normal plant operations, traffic volumes to the project will drop resulting in better operating conditions on area roadways.

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APPENDIX

TABLE 4 – 8

GENERALIZED **PEAK HOUR DIRECTIONAL** VOLUMES FOR FLORIDA'S **AREAS TRANSITIONING INTO URBANIZED AREAS** OR **AREAS OVER 5,000 NOT IN URBANIZED AREAS***

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Divided	Level of Service A	B	C	D	E
1	Undivided	100	330	620	870	1,200
2	Divided	980	1,590	2,300	2,980	3,390
3	Divided	1,470	2,390	3,460	4,470	5,080

STATE TWO-WAY ARTERIALS

Class I (>0.00 to 1.99 signalized intersections per mile)

Lanes	Divided	Level of Service A	B	C	D	E
1	Undivided	**	210	690	820	860
2	Divided	240	1,470	1,730	1,810	***
3	Divided	370	2,260	2,600	2,710	***

Class II (2.00 to 4.50 signalized intersections per mile)

Lanes	Divided	Level of Service A	B	C	D	E
1	Undivided	**	**	560	760	810
2	Divided	**	200	1,290	1,620	1,700
3	Divided	**	320	2,000	2,430	2,560

Class III (more than 4.5 signalized intersections per mile)

Lanes	Divided	Level of Service A	B	C	D	E
1	Undivided	**	**	260	620	770
2	Divided	**	**	620	1,440	1,630
3	Divided	**	**	970	2,220	2,450

NON-STATE ROADWAYS

Major City/County Roadways

Lanes	Divided	Level of Service A	B	C	D	E
1	Undivided	**	**	370	720	770
2	Divided	**	**	870	1,550	1,630
3	Divided	**	**	1,360	2,330	2,450

Other Signalized Roadways
(signalized intersection analysis)

Lanes	Divided	Level of Service A	B	C	D	E
1	Undivided	**	**	230	490	630
2	Divided	**	**	540	1,070	1,270

Source: Florida Department of Transportation 02/22/02
Systems Planning Office
605 Suwannee Street, MS 19
Tallahassee, FL 32399-0450
http://www11.myflorida.com/planning/systems/sm/los/default.htm

FREEWAYS

Lanes	Level of Service A	B	C	D	E
2	1,290	2,130	2,890	3,420	3,800
3	2,000	3,290	4,460	5,280	5,870
4	2,700	4,450	6,030	7,140	7,940
5	3,400	5,600	7,610	9,010	10,010

BICYCLE MODE

(Note: Level of service for the bicycle mode in this table is based on roadway geometrics at 40 mph posted speed and traffic conditions, not number of bicyclists using the facility.) (Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine maximum service volumes.)

Paved Shoulder/ Bicycle Lane Coverage	Level of Service A	B	C	D	E
0-49%	**	100	170	720	>720
50-84%	**	130	210	>210	***
85-100%	170	380	>380	***	***

PEDESTRIAN MODE

(Note: Level of service for the pedestrian mode in this table is based on roadway geometric at 40 mph posted speed and traffic conditions, not number of pedestrians using the facility.) (Multiply motorized vehicle volumes shown by number of directional roadway lanes to determine maximum service volumes.)

Sidewalk Coverage	Level of Service A	B	C	D	E
0-49%	**	**	**	330	810
50-84%	**	**	**	520	990
85-100%	**	120	590	>590	***

ARTERIAL/NON-STATE ROADWAY ADJUSTMENTS
DIVIDED/UNDIVIDED

Lanes	Median	Left Turn Lanes	Adjustment Factors
1	Divided	Yes	+5%
1	Undivided	No	-20%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

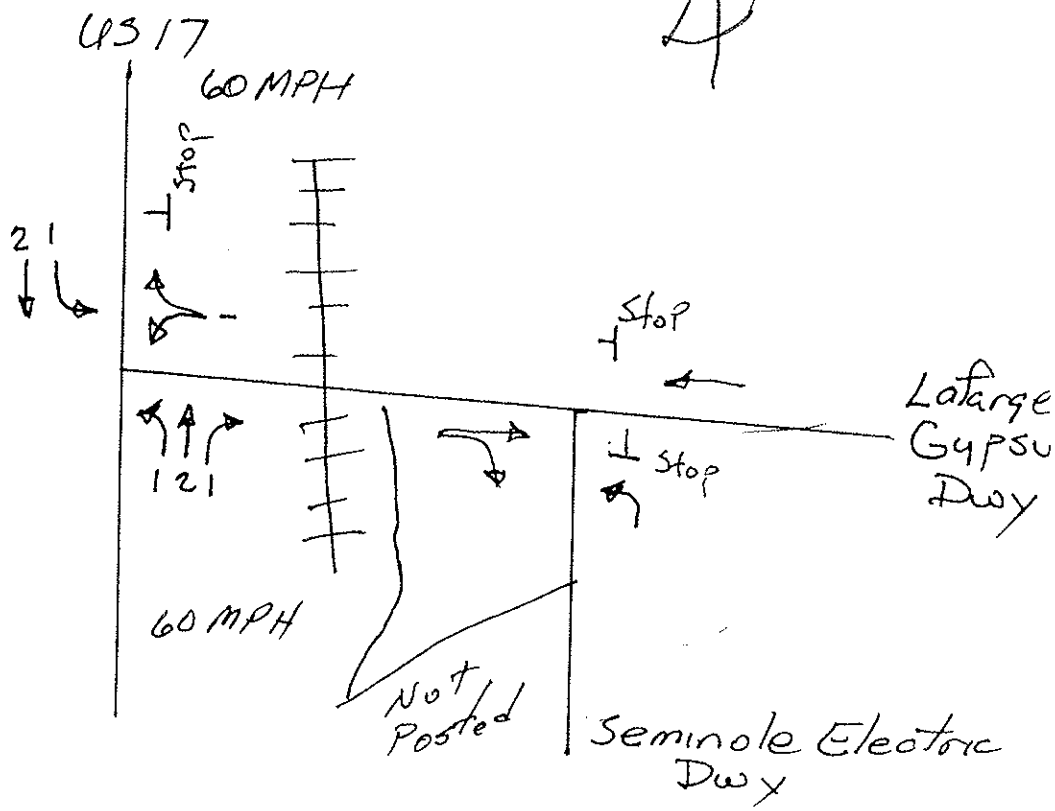
ONE-WAY FACILITIES

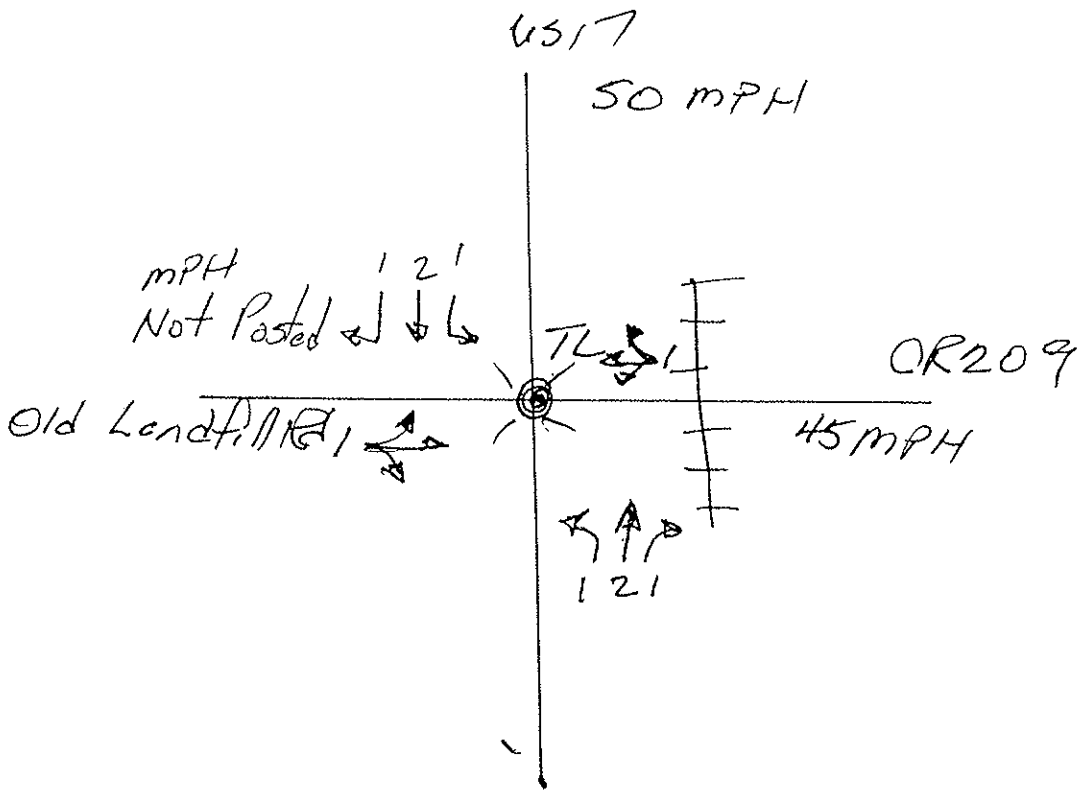
Increase corresponding volume 20%.

*This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Values shown are hourly two-way volumes for levels of service and are for the automobile/truck modes unless specifically stated. Level of service letter grade thresholds are probably not comparable across modes and, therefore, cross modal comparisons should be made with caution. Furthermore, combining levels of service of different modes into one overall roadway level of service is not recommended. The table's input value defaults and level of service criteria appear on the following page. Calculations are based on planning applications of the Highway Capacity Manual, Bicycle LOS Model and Pedestrian LOS Model, respectively for the automobile/truck, bicycle and pedestrian modes.
**Cannot be achieved using table input value defaults.
***Not applicable for the level of service letter grade. For automobile/truck modes, volumes greater than level of service D become F because intersection capacities have been reached. For bicycle and pedestrian modes, the level of service letter grade (including F) is not achievable, because there is no maximum vehicle volume threshold using table input value defaults.

A-1

4


US 17
60 MPH
Stop
2 1
Stop
Lafarge Gypsu Dwy
1 2 1
Stop
60 MPH
Not Posted
Seminole Electric Dwy

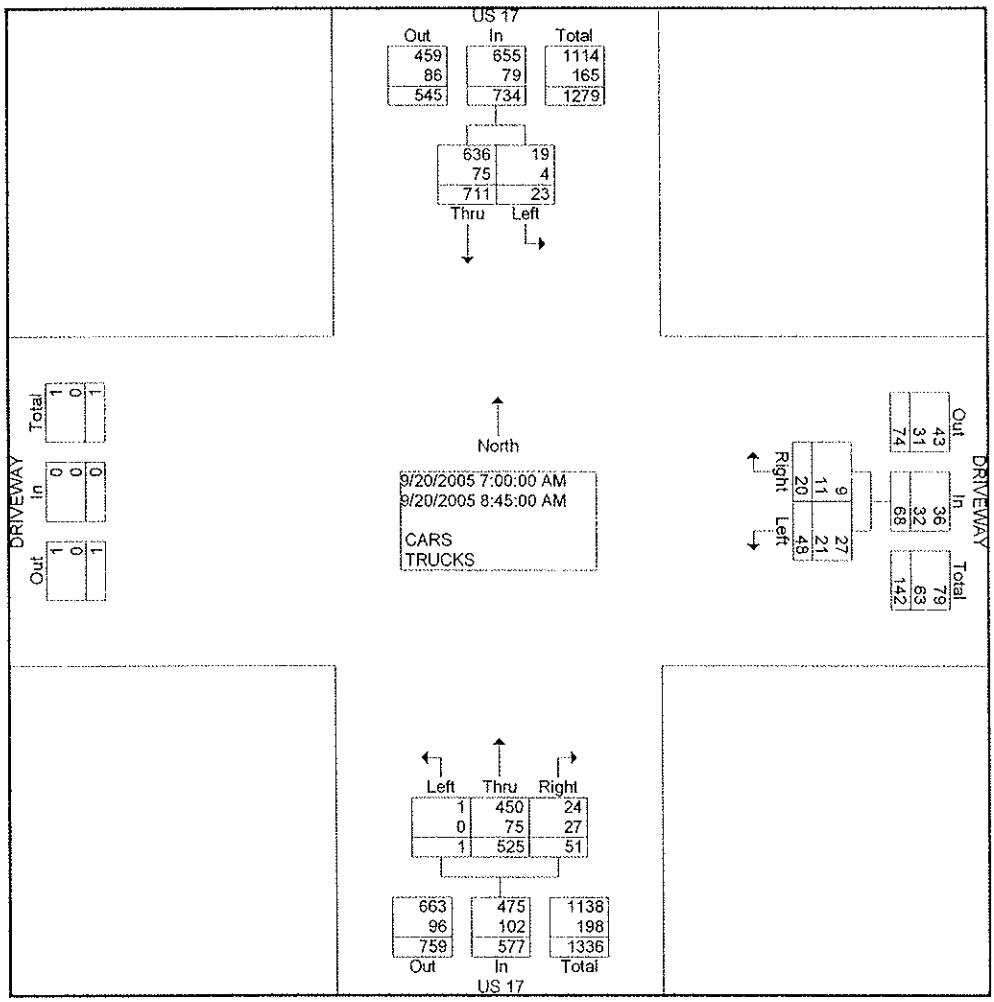

US 17
50 MPH
mPH
Not Posted
1 2 1
TL
OR209
Old Landfill Rd
45 MPH
1 2 1

TURNING MOVEMENT

File Name : US17D\
Site Code : 000000
Start Date : 9/20/20
Page No : 1

Groups Printed- CARS - TRUCKS

	US 17 From North			DRIVEWAY From East			US 17 From South				
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Left	Thru	Right	App. Total	Int. To
Factor	1.0	1.0		1.0	1.0		1.0	1.0	1.0		
07:00 AM	2	95	97	10	2	12	0	74	4	78	1
07:15 AM	5	81	86	13	2	15	1	64	8	73	1
07:30 AM	3	120	123	5	3	8	0	64	10	74	2
07:45 AM	4	103	107	3	3	6	0	77	7	84	1
Total	14	399	413	31	10	41	1	279	29	309	7
08:00 AM	3	76	79	8	1	9	0	70	9	79	1
08:15 AM	4	85	89	7	2	9	0	57	9	66	1
08:30 AM	1	81	82	1	3	4	0	52	1	53	1
08:45 AM	1	70	71	1	4	5	0	67	3	70	1
Total	9	312	321	17	10	27	0	246	22	268	6
Grand Total	23	711	734	48	20	68	1	525	51	577	13
Apprch %	3.1	96.9		70.6	29.4		0.2	91.0	8.8		
Total %	1.7	51.6	53.2	3.5	1.5	4.9	0.1	38.1	3.7	41.8	



A-3

TURNING MOVEMENT

File Name : US17D\
Site Code : 000000
Start Date : 9/20/20
Page No : 1

Groups Printed- CARS

	US 17 From North			DRIVEWAY From East			US 17 From South				
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Left	Thru	Right	App. Total	Int. To
Factor	1.0	1.0		1.0	1.0		1.0	1.0	1.0		
07:00 AM	1	88	89	9	2	11	0	64	2	66	1
07:15 AM	5	71	76	12	2	14	1	61	5	67	1
07:30 AM	3	111	114	1	2	3	0	53	5	58	1
07:45 AM	4	90	94	2	1	3	0	67	3	70	1
Total	13	360	373	24	7	31	1	245	15	261	6
08:00 AM	2	69	71	2	1	3	0	56	0	56	1
08:15 AM	2	81	83	1	0	1	0	46	7	53	1
08:30 AM	1	67	68	0	1	1	0	42	0	42	1
08:45 AM	1	59	60	0	0	0	0	61	2	63	1
Total	6	276	282	3	2	5	0	205	9	214	5
Grand Total	19	636	655	27	9	36	1	450	24	475	11
Apprch %	2.9	97.1		75.0	25.0		0.2	94.7	5.1		
Total %	1.6	54.5	56.2	2.3	0.8	3.1	0.1	38.6	2.1	40.7	

A-4

TURNING MOVEMENT

File Name : US17D\
Site Code : 000000
Start Date : 9/20/20
Page No : 1

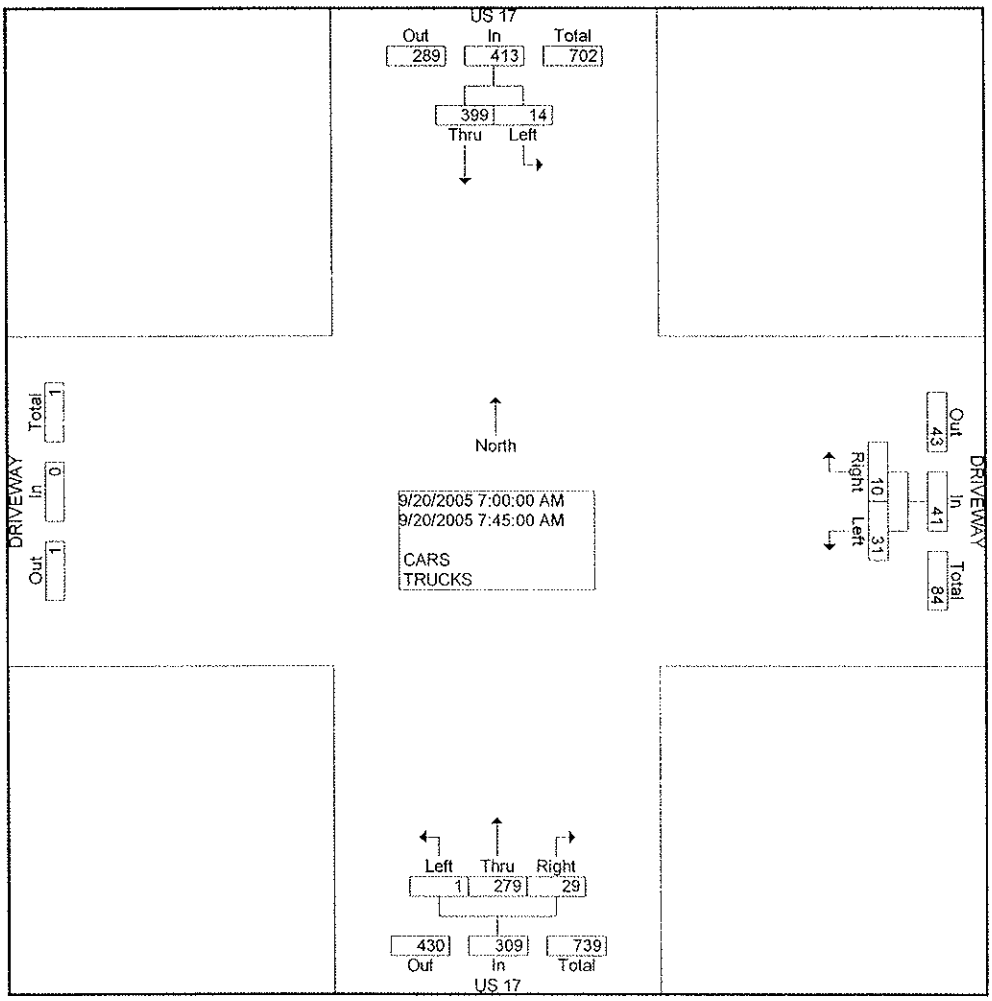
Groups Printed- TRUCKS

	US 17 From North			DRIVEWAY From East			US 17 From South				
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Left	Thru	Right	App. Total	Int. To
Factor	1.0	1.0		1.0	1.0		1.0	1.0	1.0		
07:00 AM	1	7	8	1	0	1	0	10	2	12	
07:15 AM	0	10	10	1	0	1	0	3	3	6	
07:30 AM	0	9	9	4	1	5	0	11	5	16	
07:45 AM	0	13	13	1	2	3	0	10	4	14	
Total	1	39	40	7	3	10	0	34	14	48	
08:00 AM	1	7	8	6	0	6	0	14	9	23	
08:15 AM	2	4	6	6	2	8	0	11	2	13	
08:30 AM	0	14	14	1	2	3	0	10	1	11	
08:45 AM	0	11	11	1	4	5	0	6	1	7	
Total	3	36	39	14	8	22	0	41	13	54	1
Grand Total	4	75	79	21	11	32	0	75	27	102	2
Apprch %	5.1	94.9		65.6	34.4		0.0	73.5	26.5		
Total %	1.9	35.2	37.1	9.9	5.2	15.0	0.0	35.2	12.7	47.9	

TURNING MOVEMENT

File Name : US17D\
Site Code : 000000
Start Date : 9/20/20
Page No : 2

	US 17 From North			DRIVEWAY From East			US 17 From South				
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Left	Thru	Right	App. Total	Int. To
Hour From 07:00 AM to 08:45 AM - Peak 1 of 1											
Intersection	07:00 AM										
Volume	14	399	413	31	10	41	1	279	29	309	7
Percent	3.4	96.6		75.6	24.4		0.3	90.3	9.4		
07:30 Volume	3	120	123	5	3	8	0	64	10	74	2
Peak Factor											0.930
High Int.	07:30 AM			07:15 AM			07:45 AM				
Volume	3	120	123	13	2	15	0	77	7	84	
Peak Factor			0.839			0.683				0.920	



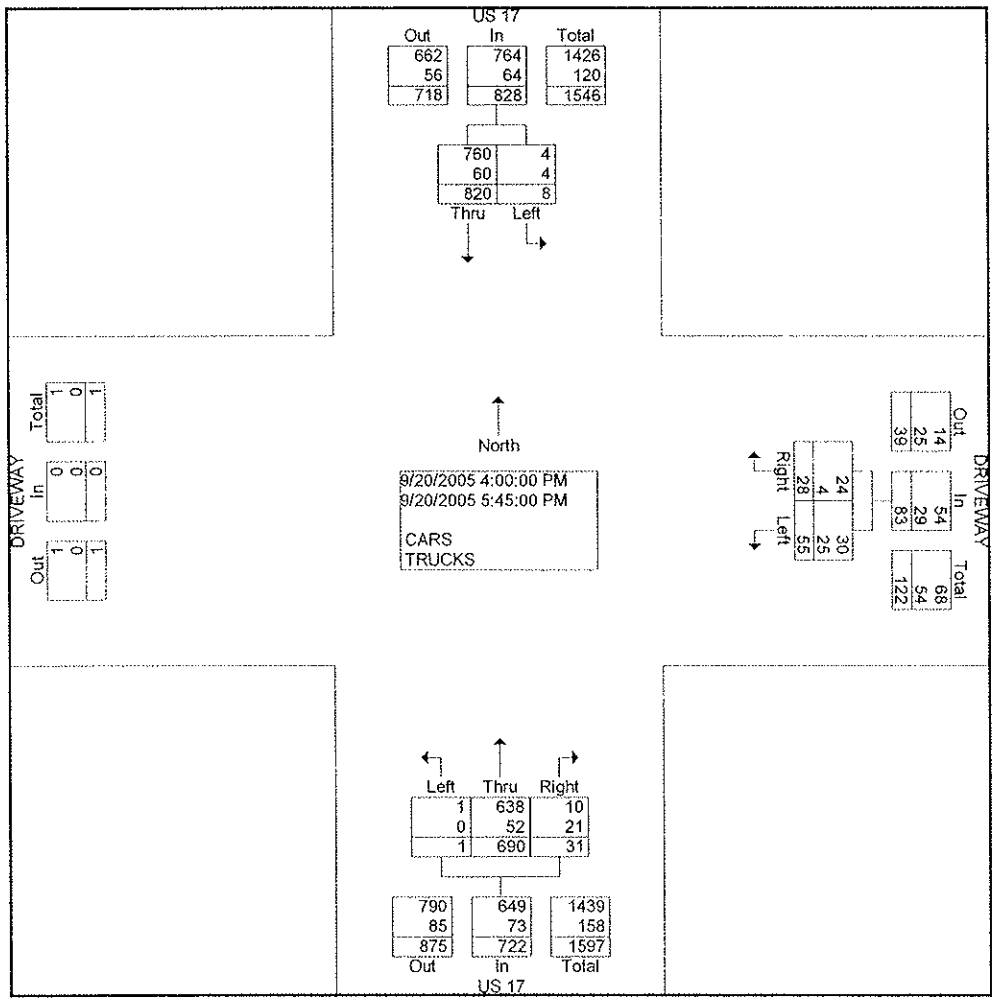
A-6

TURNING MOVEMENT

File Name : us17dwy
Site Code : 0000000
Start Date : 9/20/200
Page No : 1

Groups Printed- CARS - TRUCKS

	US 17 From North			DRIVEWAY From East			US 17 From South				
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Left	Thru	Right	App. Total	Int. To
Factor	1.0	1.0		1.0	1.0		1.0	1.0	1.0		
04:00 PM	2	123	125	7	4	11	0	91	5	96	2
04:15 PM	1	85	86	10	5	15	0	85	0	85	1
04:30 PM	1	100	101	13	2	15	1	83	4	88	2
04:45 PM	0	82	82	2	2	4	0	94	8	102	1
Total	4	390	394	32	13	45	1	353	17	371	8
05:00 PM	0	101	101	4	5	9	0	93	4	97	2
05:15 PM	0	118	118	10	4	14	0	92	3	95	2
05:30 PM	2	111	113	4	2	6	0	75	4	79	1
05:45 PM	2	100	102	5	4	9	0	77	3	80	1
Total	4	430	434	23	15	38	0	337	14	351	8
Grand Total	8	820	828	55	28	83	1	690	31	722	16
Apprch %	1.0	99.0		66.3	33.7		0.1	95.6	4.3		
Total %	0.5	50.2	50.7	3.4	1.7	5.1	0.1	42.3	1.9	44.2	



A-7

TURNING MOVEMENT

File Name : us17dwy
Site Code : 0000000
Start Date : 9/20/200
Page No : 1

Groups Printed- CARS

	US 17 From North			DRIVEWAY From East			US 17 From South				
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Left	Thru	Right	App. Total	Int. To
Factor	1.0	1.0		1.0	1.0		1.0	1.0	1.0		
04:00 PM	1	111	112	4	4	8	0	77	1	78	1
04:15 PM	0	75	75	5	5	10	0	75	0	75	1
04:30 PM	0	89	89	5	1	6	1	78	0	79	1
04:45 PM	0	78	78	0	1	1	0	88	1	89	1
Total	1	353	354	14	11	25	1	318	2	321	7
05:00 PM	0	99	99	2	4	6	0	90	0	90	1
05:15 PM	0	110	110	6	3	9	0	88	1	89	2
05:30 PM	2	105	107	3	2	5	0	68	4	72	1
05:45 PM	1	93	94	5	4	9	0	74	3	77	1
Total	3	407	410	16	13	29	0	320	8	328	7
Grand Total	4	760	764	30	24	54	1	638	10	649	14
Apprch %	0.5	99.5		55.6	44.4		0.2	98.3	1.5		
Total %	0.3	51.8	52.1	2.0	1.6	3.7	0.1	43.5	0.7	44.2	

TURNING MOVEMENT

File Name : us17dwy
Site Code : 0000000
Start Date : 9/20/200
Page No : 1

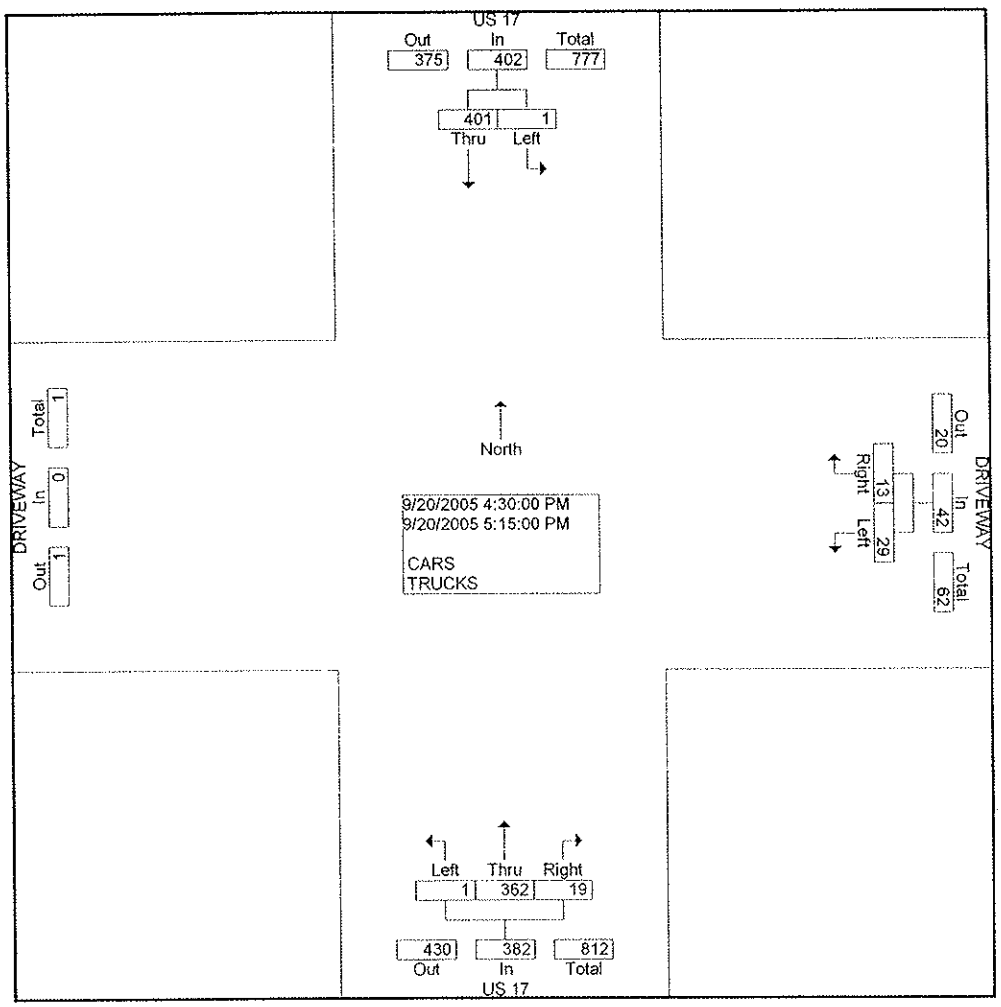
Groups Printed- TRUCKS

	US 17 From North			DRIVEWAY From East			US 17 From South				
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Left	Thru	Right	App. Total	Int. To
Factor	1.0	1.0		1.0	1.0		1.0	1.0	1.0		
04:00 PM	1	12	13	3	0	3	0	14	4	18	
04:15 PM	1	10	11	5	0	5	0	10	0	10	
04:30 PM	1	11	12	8	1	9	0	5	4	9	
04:45 PM	0	4	4	2	1	3	0	6	7	13	
Total	3	37	40	18	2	20	0	35	15	50	1
05:00 PM	0	2	2	2	1	3	0	3	4	7	
05:15 PM	0	8	8	4	1	5	0	4	2	6	
05:30 PM	0	6	6	1	0	1	0	7	0	7	
05:45 PM	1	7	8	0	0	0	0	3	0	3	
Total	1	23	24	7	2	9	0	17	6	23	
Grand Total	4	60	64	25	4	29	0	52	21	73	1
Apprch %	6.2	93.8		86.2	13.8		0.0	71.2	28.8		
Total %	2.4	36.1	38.6	15.1	2.4	17.5	0.0	31.3	12.7	44.0	

TURNING MOVEMENT

File Name : us17dwy
Site Code : 0000000
Start Date : 9/20/200
Page No : 2

	US 17 From North			DRIVEWAY From East			US 17 From South				
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Left	Thru	Right	App. Total	Int. To
. Hour From 04:00 PM to 05:45 PM - Peak 1 of 1											
Intersection	04:30 PM										
Volume	1	401	402	29	13	42	1	362	19	382	8
Percent	0.2	99.8		69.0	31.0		0.3	94.8	5.0		
05:15 Volume	0	118	118	10	4	14	0	92	3	95	2
Peak Factor											0.910
High Int.	05:15 PM			04:30 PM			04:45 PM				
Volume	0	118	118	13	2	15	0	94	8	102	
Peak Factor			0.852			0.700				0.936	



A-10

TURNING MOVEMENT

File Name : SELGA
Site Code : 00000(
Start Date : 9/20/2(
Page No : 1

Groups Printed- CARS

	LAFARGE GYPSUN From East		SEMINOLE ELECTRIC From South		LAFARGE GYPSUN From West			
Start Time	Thru	App. Total	Left	App. Total	Thru	Right	App. Total	Int. T(
Factor	1.0		1.0		1.0	1.0		
07:00 AM	5	5	0	0	2	1	3	
07:15 AM	12	12	0	0	5	5	10	
07:30 AM	1	1	0	0	4	4	8	
07:45 AM	2	2	0	0	3	4	7	
Total	20	20	0	0	14	14	28	
08:00 AM	2	2	0	0	1	1	2	
08:15 AM	0	0	0	0	5	4	9	
08:30 AM	1	1	0	0	1	0	1	
08:45 AM	0	0	0	0	0	3	3	
Total	3	3	0	0	7	8	15	
Grand Total	23	23	0	0	21	22	43	
Apprch %	100.0		0.0		48.8	51.2		
Total %	34.8	34.8	0.0	0.0	31.8	33.3	65.2	

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TURNING MOVEMENT

File Name : SELGA
Site Code : 00000(
Start Date : 9/20/2(
Page No : 1

Groups Printed- TRUCKS

	LAFARGE GYPSUN From East		SEMINOLE ELECTRIC From South		LAFARGE GYPSUN From West			
Start Time	Thru	App. Total	Left	App. Total	Thru	Right	App. Total	Int. To
Factor	1.0		1.0		1.0	1.0		
07:00 AM	0	0	0	0	2	1	3	
07:15 AM	1	1	0	0	2	1	3	
07:30 AM	4	4	0	0	1	4	5	
07:45 AM	2	2	0	0	0	4	4	
Total	7	7	0	0	5	10	15	
08:00 AM	1	1	0	0	3	7	10	
08:15 AM	3	3	0	0	2	4	6	
08:30 AM	4	4	0	0	1	0	1	
08:45 AM	5	5	0	0	0	1	1	
Total	13	13	0	0	6	12	18	
Grand Total	20	20	0	0	11	22	33	
Apprch %	100.0		0.0		33.3	66.7		
Total %	37.7	37.7	0.0	0.0	20.8	41.5	62.3	

A-12

TURNING MOVEMENT

File Name : SELGF
Site Code : 00000(
Start Date : 9/20/2(
Page No : 1

Groups Printed- CARS

	LAFARGE GYPSUN From East		SEMINOLE ELECTRIC From South		LAFARGE GYPSUN From West			
Start Time	Thru	App. Total	Left	App. Total	Thru	Right	App. Total	Int. To
Factor	1.0		1.0		1.0	1.0		
04:00 PM	8	8	0	0	2	0	2	
04:15 PM	8	8	0	0	0	0	0	
04:30 PM	6	6	0	0	0	0	0	
04:45 PM	1	1	0	0	0	1	1	
Total	23	23	0	0	2	1	3	
05:00 PM	3	3	0	0	0	0	0	
05:15 PM	6	6	0	0	0	1	1	
05:30 PM	1	1	0	0	1	5	6	
05:45 PM	2	2	0	0	0	4	4	
Total	12	12	0	0	1	10	11	
Grand Total	35	35	0	0	3	11	14	
Apprch %	100.0		0.0		21.4	78.6		
Total %	71.4	71.4	0.0	0.0	6.1	22.4	28.6	

A-13

TURNING MOVEMENT

File Name : SELGF
Site Code : 00000(
Start Date : 9/20/2(
Page No : 1

Groups Printed- TRUCKS

	LAFARGE GYPSUN From East		SEMINOLE ELECTRIC From South		LAFARGE GYPSUN From West			
Start Time	Thru	App. Total	Left	App. Total	Thru	Right	App. Total	Int. T(
Factor	1.0		1.0		1.0	1.0		
04:00 PM	1	1	0	0	3	2	5	
04:15 PM	6	6	0	0	1	0	1	
04:30 PM	6	6	0	0	1	4	5	
04:45 PM	2	2	0	0	7	0	7	
Total	15	15	0	0	12	6	18	
05:00 PM	3	3	0	0	1	3	4	
05:15 PM	2	2	0	0	2	0	2	
05:30 PM	1	1	0	0	0	0	0	
05:45 PM	0	0	0	0	1	0	1	
Total	6	6	0	0	4	3	7	
Grand Total	21	21	0	0	16	9	25	
Apprch %	100.0		0.0		64.0	36.0		
Total %	45.7	45.7	0.0	0.0	34.8	19.6	54.3	

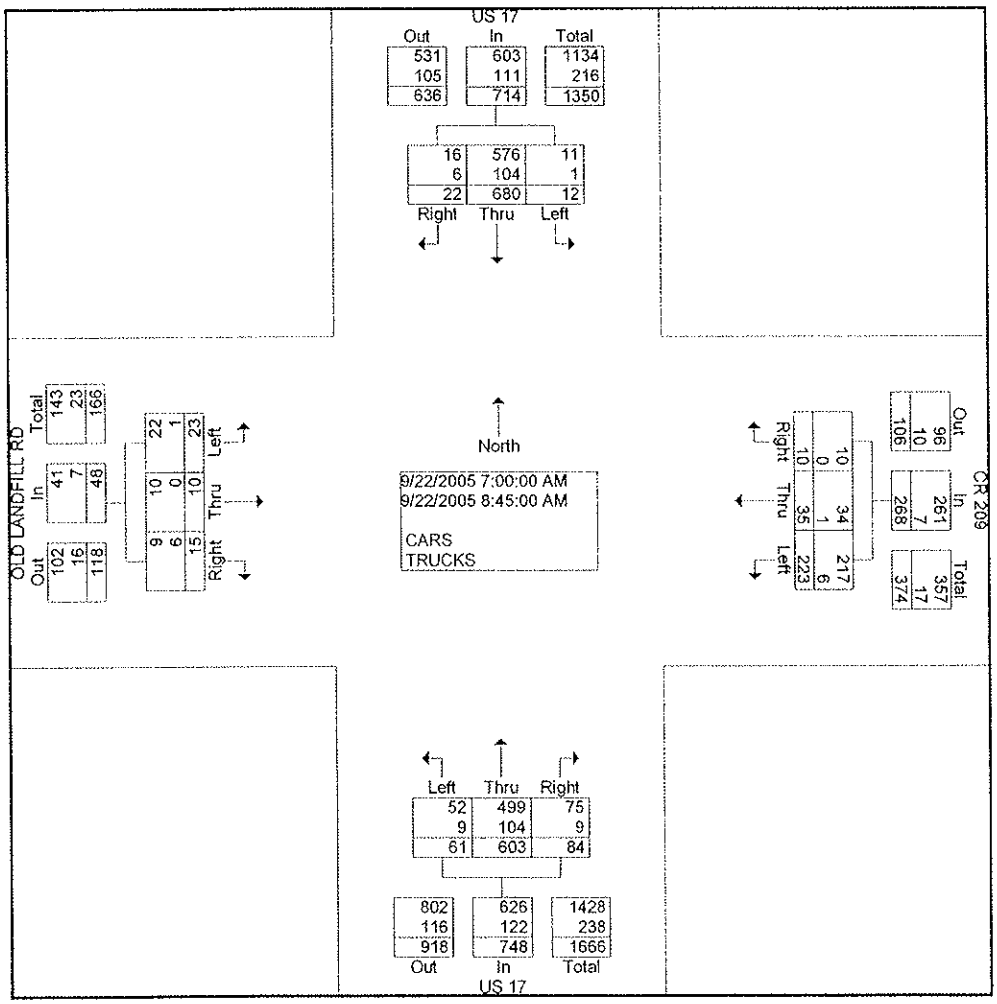
A-14

TURNING MOVEMENT

File Name : 17209a
Site Code : 00000(
Start Date : 9/22/2(
Page No : 1

Groups Printed- CARS - TRUCKS

	US 17 From North				CR 209 From East				US 17 From South				OLD LANDFILL RD From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	I To
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	1	79	2	82	21	5	1	27	7	98	24	129	3	2	2	7	2
07:15 AM	2	60	2	64	37	7	5	49	8	65	8	81	3	2	1	6	2
07:30 AM	3	92	4	99	33	4	1	38	5	86	11	102	2	0	2	4	2
07:45 AM	1	102	4	107	29	6	1	36	4	86	3	93	6	2	1	9	2
Total	7	333	12	352	120	22	8	150	24	335	46	405	14	6	6	26	9
08:00 AM	0	87	3	90	25	4	1	30	10	68	4	82	2	0	1	3	2
08:15 AM	1	89	1	91	29	3	1	33	6	60	10	76	0	1	1	2	2
08:30 AM	1	91	1	93	21	1	0	22	12	65	12	89	2	1	3	6	2
08:45 AM	3	80	5	88	28	5	0	33	9	75	12	96	5	2	4	11	2
Total	5	347	10	362	103	13	2	118	37	268	38	343	9	4	9	22	8
Grand Total	12	680	22	714	223	35	10	268	61	603	84	748	23	10	15	48	17
Apprch %	1.7	95.2	3.1		83.2	13.1	3.7		8.2	80.6	11.2		47.9	20.8	31.2		
Total %	0.7	38.2	1.2	40.2	12.5	2.0	0.6	15.1	3.4	33.9	4.7	42.1	1.3	0.6	0.8	2.7	



A-15

TURNING MOVEMENT

File Name : 17209a
Site Code : 000000
Start Date : 9/22/20
Page No : 1

Groups Printed- CARS

	US 17 From North				CR 209 From East				US 17 From South				OLD LANDFILL RD From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	In To
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	1	67	2	70	21	5	1	27	6	89	24	119	3	2	2	7	2
07:15 AM	2	50	1	53	36	7	5	48	7	48	8	63	2	2	0	4	1
07:30 AM	3	77	4	84	31	3	1	35	5	72	7	84	2	0	1	3	2
07:45 AM	1	90	2	93	29	6	1	36	4	75	3	82	6	2	1	9	2
Total	7	284	9	300	117	21	8	146	22	284	42	348	13	6	4	23	8
08:00 AM	0	75	1	76	25	4	1	30	7	54	4	65	2	0	1	3	1
08:15 AM	1	78	1	80	26	3	1	30	6	48	9	63	0	1	1	2	1
08:30 AM	1	78	1	80	21	1	0	22	9	47	8	64	2	1	1	4	1
08:45 AM	2	61	4	67	28	5	0	33	8	66	12	86	5	2	2	9	1
Total	4	292	7	303	100	13	2	115	30	215	33	278	9	4	5	18	7
Grand Total	11	576	16	603	217	34	10	261	52	499	75	626	22	10	9	41	15
Apprch %	1.8	95.5	2.7		83.1	13.0	3.8		8.3	79.7	12.0		53.7	24.4	22.0		
Total %	0.7	37.6	1.0	39.4	14.2	2.2	0.7	17.0	3.4	32.6	4.9	40.9	1.4	0.7	0.6	2.7	

TURNING MOVEMENT

File Name : 17209
Site Code : 00000(
Start Date : 9/22/2(
Page No : 1

Groups Printed- TRUCKS

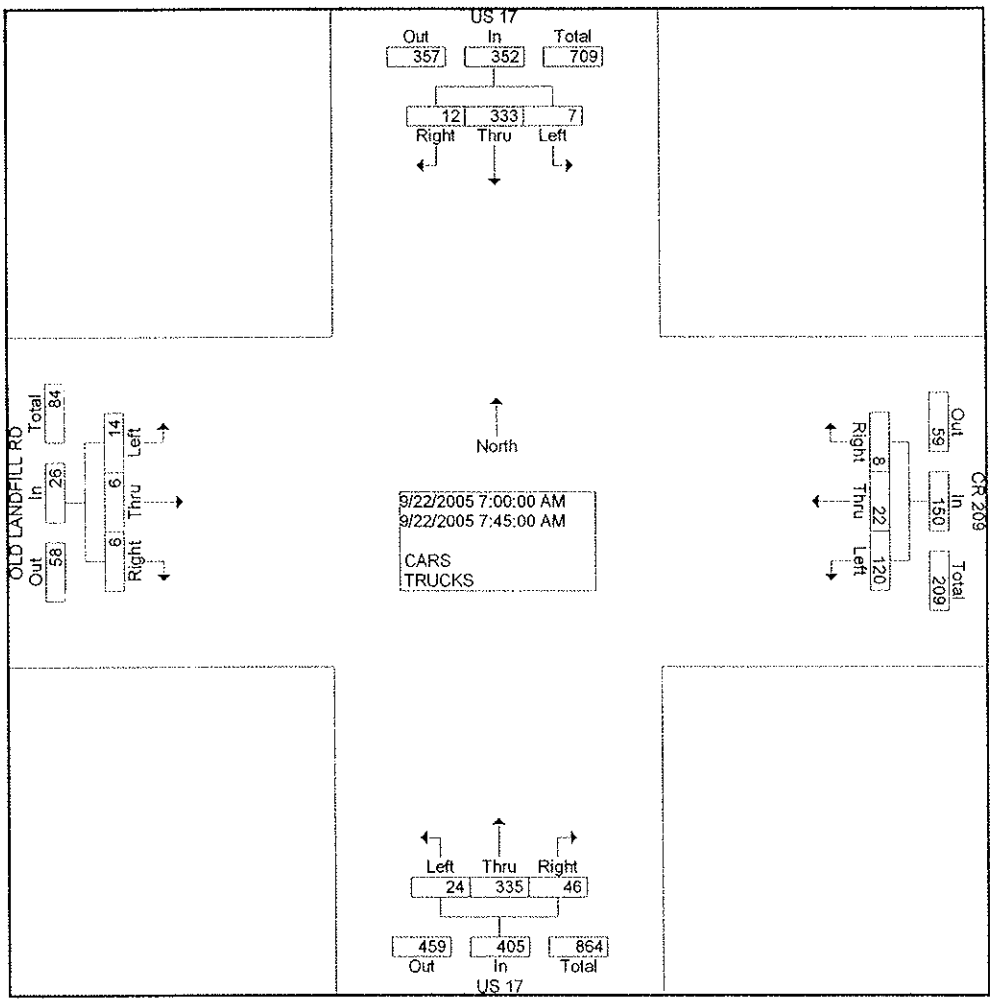
	US 17 From North				CR 209 From East				US 17 From South				OLD LANDFILL RD From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	To
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	0	12	0	12	0	0	0	0	1	9	0	10	0	0	0	0	
07:15 AM	0	10	1	11	1	0	0	1	1	17	0	18	1	0	1	2	
07:30 AM	0	15	0	15	2	1	0	3	0	14	4	18	0	0	1	1	
07:45 AM	0	12	2	14	0	0	0	0	0	11	0	11	0	0	0	0	
Total	0	49	3	52	3	1	0	4	2	51	4	57	1	0	2	3	1
08:00 AM	0	12	2	14	0	0	0	0	3	14	0	17	0	0	0	0	
08:15 AM	0	11	0	11	3	0	0	3	0	12	1	13	0	0	0	0	
08:30 AM	0	13	0	13	0	0	0	0	3	18	4	25	0	0	2	2	
08:45 AM	1	19	1	21	0	0	0	0	1	9	0	10	0	0	2	2	
Total	1	55	3	59	3	0	0	3	7	53	5	65	0	0	4	4	1
rand Total	1	104	6	111	6	1	0	7	9	104	9	122	1	0	6	7	2
Apprch %	0.9	93.7	5.4		85.7	14.3	0.0		7.4	85.2	7.4		14.3	0.0	85.7		
Total %	0.4	42.1	2.4	44.9	2.4	0.4	0.0	2.8	3.6	42.1	3.6	49.4	0.4	0.0	2.4	2.8	

A-17

TURNING MOVEMENT

File Name : 17209a
Site Code : 00000(
Start Date : 9/22/2(
Page No : 2

	US 17 From North				CR 209 From East				US 17 From South				OLD LANDFILL RD From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	To
: Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																	
ntersection	07:00 AM																
Volume	7	333	12	352	120	22	8	150	24	335	46	405	14	6	6	26	9
Percent	2.0	94.6	3.4		80.0	14.7	5.3		5.9	82.7	11.4		53.8	23.1	23.1		
45 Volume	1	102	4	107	29	6	1	36	4	86	3	93	6	2	1	9	2
eak Factor																	0.9
High Int.	07:45 AM				07:15 AM				07:00 AM				07:45 AM				
Volume	1	102	4	107	37	7	5	49	7	98	24	129	6	2	1	9	
eak Factor				0.822				0.765				0.785				0.722	



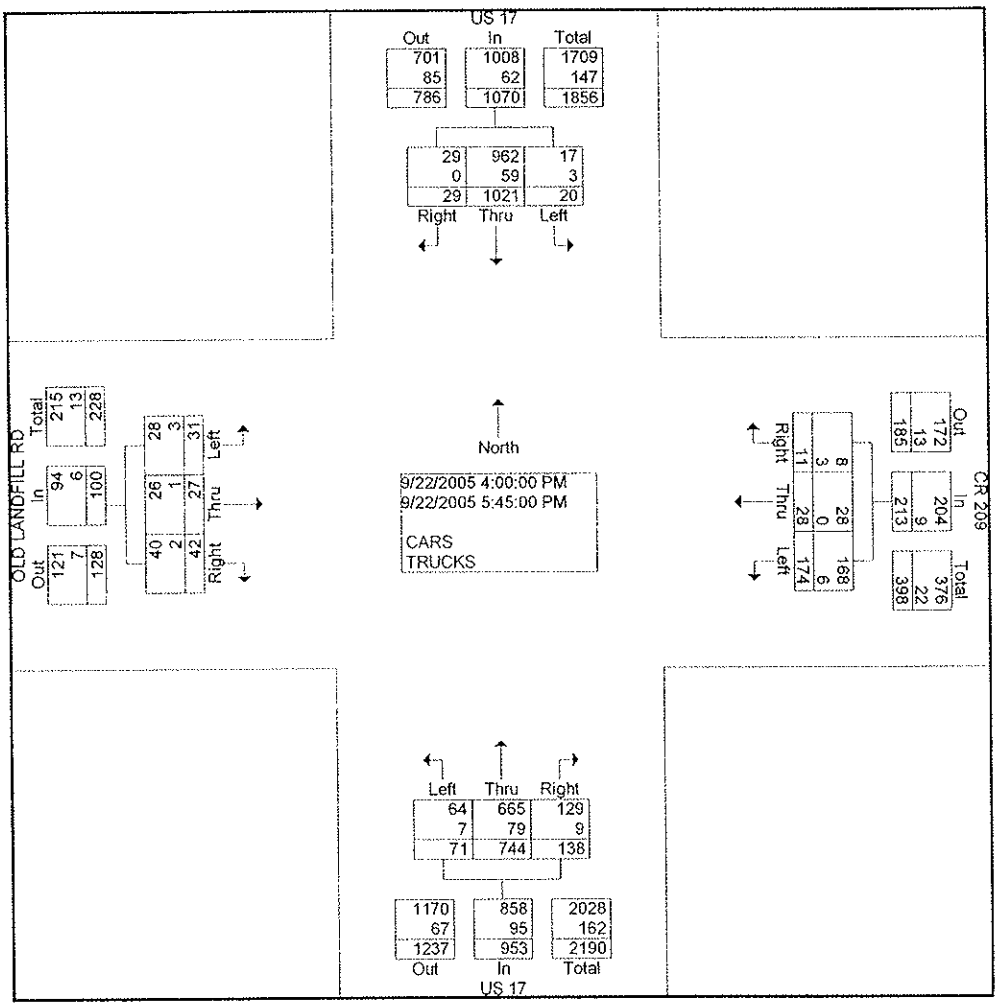
A-18

TURNING MOVEMENT

File Name : US17209
Site Code : 0000000(
Start Date : 9/22/2005
Page No : 1

Groups Printed- CARS - TRUCKS

	US 17 From North				CR 209 From East				US 17 From South				OLD LANDFILL RD From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	To
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
04:00 PM	3	136	7	146	13	2	3	18	10	115	14	139	2	4	8	14	3
04:15 PM	2	107	2	111	25	5	0	30	12	95	10	117	8	8	7	23	2
04:30 PM	3	128	1	132	8	3	2	13	9	62	5	76	5	2	3	10	2
04:45 PM	4	114	3	121	17	4	1	22	9	77	13	99	1	0	4	5	2
Total	12	485	13	510	63	14	6	83	40	349	42	431	16	14	22	52	10
05:00 PM	2	104	0	106	10	2	0	12	5	110	25	140	1	1	8	10	2
05:15 PM	3	148	6	157	22	2	2	26	9	101	34	144	3	3	4	10	3
05:30 PM	1	143	7	151	38	7	1	46	8	93	19	120	6	6	5	17	3
05:45 PM	2	141	3	146	41	3	2	46	9	91	18	118	5	3	3	11	3
Total	8	536	16	560	111	14	5	130	31	395	96	522	15	13	20	48	12
Grand Total	20	1021	29	1070	174	28	11	213	71	744	138	953	31	27	42	100	23
Apprch %	1.9	95.4	2.7		81.7	13.1	5.2		7.5	78.1	14.5		31.0	27.0	42.0		
Total %	0.9	43.7	1.2	45.8	7.4	1.2	0.5	9.1	3.0	31.8	5.9	40.8	1.3	1.2	1.8	4.3	



A-19

TURNING MOVEMENT

File Name : us17209
Site Code : 0000000
Start Date : 9/22/200
Page No : 1

Groups Printed- CARS

	US 17 From North				CR 209 From East				US 17 From South				OLD LANDFILL RD From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Ii To
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
04:00 PM	2	119	7	128	12	2	2	16	8	90	14	112	2	4	8	14	2
04:15 PM	2	98	2	102	24	5	0	29	12	84	9	105	8	7	6	21	2
04:30 PM	3	119	1	123	7	3	0	10	7	55	4	66	4	2	3	9	2
04:45 PM	4	109	3	116	16	4	1	21	7	70	12	89	1	0	3	4	2
Total	11	445	13	469	59	14	3	76	34	299	39	372	15	13	20	48	9
05:00 PM	2	99	0	101	10	2	0	12	4	100	24	128	0	1	8	9	2
05:15 PM	2	140	6	148	21	2	2	25	9	88	29	126	2	3	4	9	3
05:30 PM	0	137	7	144	37	7	1	45	8	87	19	114	6	6	5	17	3
05:45 PM	2	141	3	146	41	3	2	46	9	91	18	118	5	3	3	11	3
Total	6	517	16	539	109	14	5	128	30	366	90	486	13	13	20	46	11
rand Total	17	962	29	1008	168	28	8	204	64	665	129	858	28	26	40	94	21
Apprch %	1.7	95.4	2.9		82.4	13.7	3.9		7.5	77.5	15.0		29.8	27.7	42.6		
Total %	0.8	44.5	1.3	46.6	7.8	1.3	0.4	9.4	3.0	30.7	6.0	39.6	1.3	1.2	1.8	4.3	

TURNING MOVEMENT

File Name : us17209
Site Code : 0000000
Start Date : 9/22/200
Page No : 1

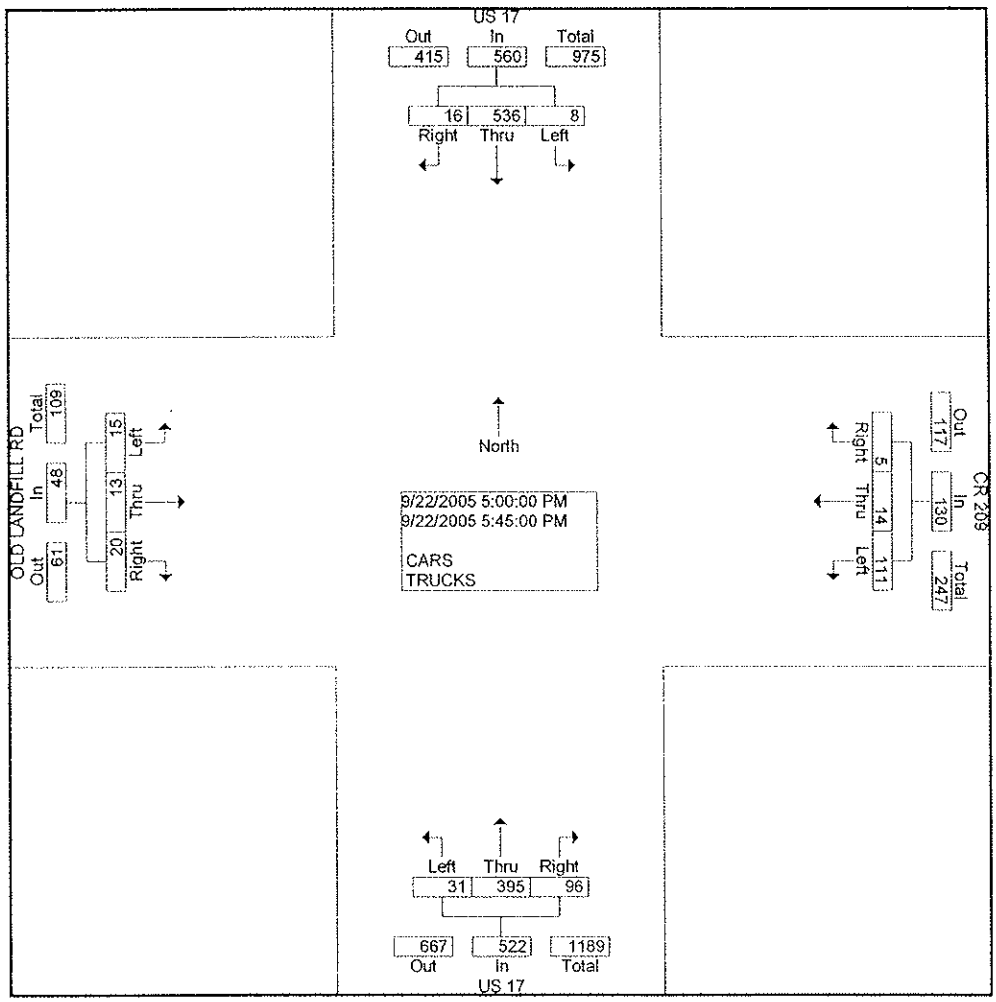
Groups Printed- TRUCKS

	US 17 From North				CR 209 From East				US 17 From South				OLD LANDFILL RD From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	I To
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
04:00 PM	1	17	0	18	1	0	1	2	2	25	0	27	0	0	0	0	
04:15 PM	0	9	0	9	1	0	0	1	0	11	1	12	0	1	1	2	
04:30 PM	0	9	0	9	1	0	2	3	2	7	1	10	1	0	0	1	
04:45 PM	0	5	0	5	1	0	0	1	2	7	1	10	0	0	1	1	
Total	1	40	0	41	4	0	3	7	6	50	3	59	1	1	2	4	1
05:00 PM	0	5	0	5	0	0	0	0	1	10	1	12	1	0	0	1	
05:15 PM	1	8	0	9	1	0	0	1	0	13	5	18	1	0	0	1	
05:30 PM	1	6	0	7	1	0	0	1	0	6	0	6	0	0	0	0	
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	2	19	0	21	2	0	0	2	1	29	6	36	2	0	0	2	
rand Total	3	59	0	62	6	0	3	9	7	79	9	95	3	1	2	6	1
Apprch %	4.8	95.2	0.0		66.7	0.0	33.3		7.4	83.2	9.5		50.0	16.7	33.3		
Total %	1.7	34.3	0.0	36.0	3.5	0.0	1.7	5.2	4.1	45.9	5.2	55.2	1.7	0.6	1.2	3.5	

TURNING MOVEMENT

File Name : US17209
Site Code : 0000000(
Start Date : 9/22/200!
Page No : 2

	US 17 From North				CR 209 From East				US 17 From South				OLD LANDFILL RD From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	To
. Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																	
ntersection 05:00 PM																	
Volume	8	536	16	560	111	14	5	130	31	395	96	522	15	13	20	48	12
Percent	1.4	95.7	2.9		85.4	10.8	3.8		5.9	75.7	18.4		31.2	27.1	41.7		
15 Volume	3	148	6	157	22	2	2	26	9	101	34	144	3	3	4	10	3
eak Factor																	0.9
High Int.	05:15 PM				05:30 PM				05:15 PM				05:30 PM				
Volume	3	148	6	157	38	7	1	46	9	101	34	144	6	6	5	17	
eak Factor				0.892				0.707				0.906				0.706	



A.22

2010 Total Traffic Determination (AM Peak Hour)

Intersection		Southbound			Westbound			Northbound			Eastbound			Count Date	Percent Trucks
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
U.S. 17 at Project Driveway (AM)	Count		711					1	525					9/20/2005	15.5%
	LaFarge	10			19		8			23					
	Project	13			29		12			28					
	2005 Pk Season	23	796		48		20	1	588	51					
	Growth to 2010		18%					18%	18%						
	2010 Background		936					1	691						
	LaFarge	10			19		8			23					
	Exist Project	13			29		12			28					
	Constn Project	437								813					
	2010 Total	460	936		48		20	1	691	864					
U.S. 17 at CR 209/Old Landfill Road (AM)	Count	12	680	22	223	35	10	52	499	75	23	10	15	9/22/2005	13.0%
	2005 Pk Season	13	762	25	250	39	11	58	559	84	26	11	17		
	Growth to 2010	18%	18%	18%	18%	18%	18%	14%	14%	14%	18%	18%	18%		
	2010 Background	16	895	29	293	46	13	66	634	95	30	13	20		
	Project								813						
	2010 Total	16	895	29	293	46	13	66	1447	95	30	13	20		

Date: 11/8/05
T:\2005-0054\[Traffic Count.xls]Total Traffic AM 2010

A-23

2010 Total Traffic Determination (PM Peak Hour)

Intersection		Southbound			Westbound			Northbound			Eastbound			Count Date	Percent Trucks
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
U.S. 17 at Project Driveway (PM)	Count		820					1	690					9/20/2005	10.2%
	LaFarge	5			25		13			21					
	Project	3			30		25			10					
	2005 Pk Season	8	918		55		38	1	773	31					
	Growth to 2010		18%					18%	18%	18%					
	2010 Background		1079					1	908						
	LaFarge	5			25		13			21					
	Exist Project	3			30		25			10					
	Constn Project				813		437								
	2010 Total	8	1079		868		475	1	908	31					
U.S. 17 at CR 209/Old Landfill Road (PM)	Count	20	1021	29	174	28	11	71	744	138	31	27	42	9/22/2005	7.4%
	2005 Pk Season	22	1144	32	195	31	12	80	833	155	35	30	47		
	Growth to 2010	18%	18%	18%	18%	18%	18%	14%	14%	14%	18%	18%	18%		
	2010 Background	26	1344	38	229	37	14	90	946	175	41	36	55		
	Project		813												
	2010 Total	26	2157	38	229	37	14	90	946	175	41	36	55		

Date: 10/17/05
T:\2005-0054\[Traffic Count.xls]Total Traffic PM 2010

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2013 Total Traffic Determination (AM Peak Hour)

Intersection		Southbound			Westbound			Northbound			Eastbound			Count	Percent
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Date	Trucks
U.S. 17 at Project Driveway (AM)	Count		711					1	525					9/20/2005	15.5%
	LaFarge	10			19		8			23					
	Project	13			29		12			28					
	2005 Pk Season	23	796		48		20	1	588	51					
	Growth to 2013		28%					28%	28%						
	2013 Background		1019					1	753						
	LaFarge	10			19		8			23					
	Exist Project	13			29		12			28					
	New Empl Project		3						1						
	2013 Total	23	1022		48		20	1	754	51					
U.S. 17 at CR 209/Old Landfill Road (AM)	Count	12	680	22	223	35	10	52	499	75	23	10	15	9/22/2005	13.0%
	2005 Pk Season	13	762	25	250	39	11	58	559	84	26	11	17		
	Growth to 2013	28%	28%	28%	28%	28%	28%	22%	22%	22%	28%	28%	28%		
	2013 Background	17	975	32	320	50	14	71	680	102	33	14	22		
	New Empl Project	3			11		1			22					
	2013 Total	20	975	32	331	50	15	71	680	124	33	14	22		

Date: 10/17/05
T:\2005-0054\[Traffic Count.xls]Total Traffic AM 2013

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2013 Total Traffic Determination (PM Peak Hour)

Intersection		Southbound			Westbound			Northbound			Eastbound			Count Date	Percent Trucks
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
U.S. 17 at Project Driveway (PM)	Count		820					1	690					9/20/2005	10.2%
	LaFarge	5			25		13			21					
	Project	3			30		25			10					
	2005 Pk Season	8	918		55		38	1	773	31					
	Growth to 2013		28%					28%	28%	28%					
	2013 Background		1176					1	989						
	LaFarge	5			25		13			21					
	Exist Project	3			30		25			10					
	New Empl Project		1						3						
	2013 Total	8	1177		55		38	1	992	31					
U.S. 17 at CR 209/Old Landfill Road (PM)	Count	20	1021	29	174	28	11	71	744	138	31	27	42	9/22/2005	7.4%
	2005 Pk Season	22	1144	32	195	31	12	80	833	155	35	30	47		
	Growth to 2013	28%	28%	28%	28%	28%	28%	22%	22%	22%	28%	28%	28%		
	2013 Background	29	1464	42	249	40	16	97	1013	188	44	39	60		
	New Empl Project	1			22		3			12					
	2013 Total	30	1464	42	271	40	19	97	1013	200	44	39	60		

Date: 10/17/05
T:\2005-0054\[Traffic Count.xls]Total Traffic PM 2013

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Florida Department of Transportation
Transportation Statistics Office

2004 Peak Season Factor Category Report

PUTNAM COUNTYWIDE MOCF = 0.95

Category: 7600

	Week	Dates	SF	PSCF
	1	01/01/2004 - 01/03/2004	1.03	1.08
	2	01/04/2004 - 01/10/2004	1.03	1.08
	3	01/11/2004 - 01/17/2004	1.04	1.09
	4	01/18/2004 - 01/24/2004	1.03	1.08
	5	01/25/2004 - 01/31/2004	1.01	1.06
	6	02/01/2004 - 02/07/2004	1.00	1.05
	7	02/08/2004 - 02/14/2004	0.98	1.03
*	8	02/15/2004 - 02/21/2004	0.97	1.02
*	9	02/22/2004 - 02/28/2004	0.96	1.01
*	10	02/29/2004 - 03/06/2004	0.95	1.00
*	11	03/07/2004 - 03/13/2004	0.93	0.98
*	12	03/14/2004 - 03/20/2004	0.92	0.97
*	13	03/21/2004 - 03/27/2004	0.93	0.98
*	14	03/28/2004 - 04/03/2004	0.93	0.98
*	15	04/04/2004 - 04/10/2004	0.94	0.99
*	16	04/11/2004 - 04/17/2004	0.94	0.99
*	17	04/18/2004 - 04/24/2004	0.95	1.00
*	18	04/25/2004 - 05/01/2004	0.96	1.01
*	19	05/02/2004 - 05/08/2004	0.96	1.01
*	20	05/09/2004 - 05/15/2004	0.97	1.02
	21	05/16/2004 - 05/22/2004	0.98	1.03
	22	05/23/2004 - 05/29/2004	0.99	1.04
	23	05/30/2004 - 06/05/2004	1.00	1.05
	24	06/06/2004 - 06/12/2004	1.01	1.06
	25	06/13/2004 - 06/19/2004	1.02	1.07
	26	06/20/2004 - 06/26/2004	1.02	1.07
	27	06/27/2004 - 07/03/2004	1.02	1.07
	28	07/04/2004 - 07/10/2004	1.03	1.08
	29	07/11/2004 - 07/17/2004	1.03	1.08
	30	07/18/2004 - 07/24/2004	1.03	1.08
	31	07/25/2004 - 07/31/2004	1.03	1.08
	32	08/01/2004 - 08/07/2004	1.04	1.09
	33	08/08/2004 - 08/14/2004	1.04	1.09
	34	08/15/2004 - 08/21/2004	1.04	1.09
	35	08/22/2004 - 08/28/2004	1.05	1.11
	36	08/29/2004 - 09/04/2004	1.06	1.12
	37	09/05/2004 - 09/11/2004	1.07	1.13
	38	09/12/2004 - 09/18/2004	1.08	1.14
	39	09/19/2004 - 09/25/2004	1.06	1.12
	40	09/26/2004 - 10/02/2004	1.04	1.09
	41	10/03/2004 - 10/09/2004	1.01	1.06
	42	10/10/2004 - 10/16/2004	0.99	1.04
	43	10/17/2004 - 10/23/2004	0.99	1.04
	44	10/24/2004 - 10/30/2004	0.99	1.04
	45	10/31/2004 - 11/06/2004	1.00	1.05
	46	11/07/2004 - 11/13/2004	1.00	1.05
	47	11/14/2004 - 11/20/2004	1.00	1.05
	48	11/21/2004 - 11/27/2004	1.01	1.06
	49	11/28/2004 - 12/04/2004	1.01	1.06
	50	12/05/2004 - 12/11/2004	1.02	1.07
	51	12/12/2004 - 12/18/2004	1.03	1.08
	52	12/19/2004 - 12/25/2004	1.03	1.08
	53	12/26/2004 - 12/31/2004	1.04	1.09

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Note: "*" indicates peak season week

Print Date: Oc · 14, 2005

Florida Department of Transportation
Transportation S tics Office

2004 AADT Forecast

COUNTY: 76 -- PUTNAM

SITE	DESCRIPTION	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
0086	SR 15 (US17) 1000 FT NORTH OF C-209	12,100	12,500	13,000	13,400	13,800	14,200	14,600	15,000	15,500	15,900

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This report estimates the future AADT for a site based upon that site's historical AADT. These estimates should only be used as a first guess; more detailed analysis is required for planning purposes.

Future year AADT estimates are straight-line projections between 1991-1993 average and the 2001-2003 average. Future AADT estimates will only be projected for a time period commensurate with the amount of history available. This means, for example, if there is only 5 years of history available at a site, the AADT will only be projected for 3 years.

Projected AADT estimates are rounded to the nearest thousand vehicles.

Print Date: Oc[illegible] [illegible]r 14, 2005

Florida Department of Transportation
Transportation [illegible]tics Office

2004 AADT Forecast

COUNTY: 76 -- PUTNAM

SITE	DESCRIPTION	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
0012	SR 15 (US17) 3.3 MI N OF SR 100 .	16,200	16,600	17,100	17,500	18,000	18,400	18,900	19,400	19,800	20,300

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This report estimates the future AADT for a site based upon that site's historical AADT. These estimates should only be used as a first guess; more detailed analysis is required for planning purposes.

Future year AADT estimates are straight-line projections between 1991-1993 average and the 2001-2003 average. Future AADT estimates will only be projected for a time period commensurate with the amount of history available. This means, for example, if there is only 5 years of history available at a site, the AADT will only be projected for 3 years.

Projected AADT estimates are rounded to the nearest thousand vehicles.

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*REC*	Intersection	*US 17 at Project Entrance*
Agency/Co.	*FDC*	Jurisdiction	
Date Performed	*2/15/2006*	Analysis Year	*2005*
Analysis Time Period	*AM Peak Hour*		

Project Description *Seminole Electric*	
East/West Street: *Project Entrance*	North/South Street: *US 17*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*0*	*588*	*51*	*796*	*23*	*0*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR	*0*	*618*	*53*	*837*	*24*	*0*
Percent Heavy Vehicles	*0*	--	--	*16*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*1*	*1*	*2*	*0*
Configuration		*T*	*R*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*48*	*0*	*20*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR	*50*	*0*	*21*	*0*	*0*	*0*
Percent Heavy Vehicles	*16*	*0*	*16*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*		*LR*				
v (vph)		*837*		*71*				
C (m) (vph)		*827*		*0*				
v/c		*1.01*						
95% queue length		*18.35*						
Control Delay		*56.7*						
LOS		*F*		*F*				
Approach Delay	--	--						
Approach LOS	--	--						

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Figure 3 Rucks Parcels Aerial Photograph

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*REC*	Intersection	*US 17 at Project Entrance*
Agency/Co.	*FDC*	Jurisdiction	
Date Performed	*2/15/2006*	Analysis Year	*2005*
Analysis Time Period	*PM Peak Hour*		

Project Description	*Seminole Electric*
East/West Street: *Project Entrance*	North/South Street: *US 17*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	773	31	8	918	0
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR	0	813	32	8	966	0
Percent Heavy Vehicles	0	--	--	10	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	1	1	2	0
Configuration		T	R	L	T	
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	55	0	38	0	0	0
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR	57	0	40	0	0	0
Percent Heavy Vehicles	10	0	10	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L		LR				
v (vph)		8		97				
C (m) (vph)		738		201				
v/c		0.01		0.48				
95% queue length		0.03		2.37				
Control Delay		9.9		38.6				
LOS		A		E				
Approach Delay	--	--	38.6					
Approach LOS	--	--	E					

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Figure 3. Rucks Parcels Aerial Photograph

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	REC	Intersection	US 17 at CR 209
Agency or Co.	FDC	Area Type	All other areas
Date Performed	2/15/2006	Jurisdiction	
Time Period	AM Peak Hour	Analysis Year	2005
		Project ID	Seminole Electric

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	1	0	0	1	0	1	2	1	1	2	1
Lane group		LTR			LTR		L	T	R	L	T	R
Volume, V (vph)	35	30	47	195	31	12	80	833	155	22	773	32
% Heavy vehicles, %HV	13	13	13	13	13	13	13	13	13	13	13	13
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Pretimed (P) or actuated (A)	A	A	A	A	A	A	A	A	A	A	A	A
Start-up lost time, l_1		2.0			2.0		2.0	2.0	2.0	2.0	2.0	2.0
Extension of effective green, e		2.0			2.0		2.0	2.0	2.0	2.0	2.0	2.0
Arrival type, AT		3			3		3	3	3	3	3	3
Unit extension, UE		3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Filtering/metering, I		1.000			1.000		1.000	1.000	1.000	1.000	1.000	1.000
Initial unmet demand, Q_b		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Ped / Bike / RTOR volumes	0		0	0		0	0		0	0		0
Lane width		12.0			12.0		12.0	12.0	12.0	12.0	12.0	12.0
Parking / Grade / Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking maneuvers, N_m												
Buses stopping, N_B		0			0		0	0	0	0	0	0
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = 13.0	G =	G =	G =	G = 25.0	G =	G =	G =
	Y = 6	Y =	Y =	Y =	Y = 6	Y =	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 50.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		118			251		84	877	163	23	814	34
Lane group capacity, c		352			298		270	1601	715	245	1601	715
v/c ratio, X		0.34			0.84		0.31	0.55	0.23	0.09	0.51	0.05
Total green ratio, g/C		0.26			0.26		0.50	0.50	0.50	0.50	0.50	0.50
Uniform delay, d_1		15.0			17.5		7.4	8.6	7.1	6.6	8.4	6.4
Progression factor, PF		1.000			1.000		1.000	1.000	1.000	1.000	1.000	1.000
Delay calibration, k		0.11			0.38		0.11	0.15	0.11	0.11	0.12	0.11
Incremental delay, d_2		0.6			19.2		0.7	0.4	0.2	0.2	0.3	0.0
Initial queue delay, d_3												

Figure 3. Rucks Parcels Aerial Photograph

Control delay		15.6			36.7		8.1	9.0	7.2	6.7	8.7	6.4
Lane group LOS		B			D		A	A	A	A	A	A
Approach delay	15.6			36.7			8.7			8.5		
Approach LOS	B			D			A			A		
Intersection delay	11.9			$X_c = 0.65$			Intersection LOS			B		

HCS2000™ Version 4.1c

Figure 3. Rucks Parcels Aerial Photograph

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	REC	Intersection	US 17 at CR 209
Agency or Co.	FDC	Area Type	All other areas
Date Performed	2/15/2006	Jurisdiction	
Time Period	PM Peak Hour	Analysis Year	2005
		Project ID	Seminole Electric

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	1	0	0	1	0	1	2	1	1	2	1
Lane group		LTR			LTR		L	T	R	L	T	R
Volume, V (vph)	35	30	47	195	31	12	80	833	155	22	1144	32
% Heavy vehicles, %HV	7	7	7	7	7	7	7	7	7	7	7	7
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Pretimed (P) or actuated (A)	A	A	A	A	A	A	A	A	A	A	A	A
Start-up lost time, l_1		2.0			2.0		2.0	2.0	2.0	2.0	2.0	2.0
Extension of effective green, e		2.0			2.0		2.0	2.0	2.0	2.0	2.0	2.0
Arrival type, AT		3			3		3	3	3	3	3	3
Unit extension, UE		3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Filtering/metering, I		1.000			1.000		1.000	1.000	1.000	1.000	1.000	1.000
Initial unmet demand, Q_b		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Ped / Bike / RTOR volumes	0		0	0		0	0		0	0		0
Lane width		12.0			12.0		12.0	12.0	12.0	12.0	12.0	12.0
Parking / Grade / Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking maneuvers, N_m												
Buses stopping, N_B		0			0		0	0	0	0	0	0
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = 13.0	G =	G =	G =	G = 20.0	G =	G =	G =
	Y = 6	Y =	Y =	Y =	Y = 6	Y =	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 45.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		118			251		84	877	163	23	1204	34
Lane group capacity, c		404			350		160	1503	671	223	1503	671
v/c ratio, X		0.29			0.72		0.52	0.58	0.24	0.10	0.80	0.05
Total green ratio, g/C		0.29			0.29		0.44	0.44	0.44	0.44	0.44	0.44
Uniform delay, d_1		12.4			14.4		9.1	9.4	7.8	7.3	10.8	7.1
Progression factor, PF		1.000			1.000		1.000	1.000	1.000	1.000	1.000	1.000
Delay calibration, k		0.11			0.28		0.13	0.18	0.11	0.11	0.34	0.11
Incremental delay, d_2		0.4			6.9		3.2	0.6	0.2	0.2	3.2	0.0
Initial queue delay, d_3												

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Figure 3. Rucks Parcels Aerial Photograph

Control delay		12.8			21.3		12.2	10.0	8.0	7.5	14.0	7.1
Lane group LOS		B			C		B	A	A	A	B	A
Approach delay	12.8			21.3			9.8			13.7		
Approach LOS	B			C			A			B		
Intersection delay	12.8			$X_c = 0.77$			Intersection LOS			B		

Figure 3. Rucks Parcels Aerial Photograph

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*REC*	Intersection	*US 17 at Project Entrance*
Agency/Co.	*FDC*	Jurisdiction	
Date Performed	*2/15/2006*	Analysis Year	*2010*
Analysis Time Period	*AM Peak Hour*		

Project Description *Seminole Electric*

East/West Street: *Project Entrance*	North/South Street: *US 17*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*0*	*691*	*864*	*460*	*936*	*0*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR	*0*	*727*	*909*	*484*	*985*	*0*
Percent Heavy Vehicles	*0*	--	--	*16*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*1*	*1*	*2*	*0*
Configuration		*T*	*R*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*48*	*0*	*20*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR	*50*	*0*	*21*	*0*	*0*	*0*
Percent Heavy Vehicles	*16*	*0*	*16*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*		*LR*				
v (vph)		*484*		*71*				
C (m) (vph)		*334*		*0*				
v/c		*1.45*						
95% queue length		*25.79*						
Control Delay		*248.1*						
LOS		*F*		*F*				
Approach Delay	--	--						
Approach LOS	--	--						

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Figure 2. Bucks Parcels Aerial Photograph

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*REC*	Intersection	*US 17 at Project Entrance*
Agency/Co.	*FDC*	Jurisdiction	
Date Performed	*2/15/0006*	Analysis Year	*2010*
Analysis Time Period	*PM Peak Hour*		

Project Description	*Seminole Electric*
East/West Street: *Project Entrance*	North/South Street: *US 17*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*0*	*908*	*31*	*8*	*1079*	*0*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR	*0*	*955*	*32*	*8*	*1135*	*0*
Percent Heavy Vehicles	*0*	--	--	*10*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*1*	*1*	*2*	*0*
Configuration		*T*	*R*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*868*	*0*	*475*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR	*913*	*0*	*500*	*0*	*0*	*0*
Percent Heavy Vehicles	*10*	*0*	*10*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*		*LR*				
v (vph)		*8*		*1413*				
C (m) (vph)		*649*		*136*				
v/c		*0.01*		*10.39*				
95% queue length		*0.04*		*162.88*				
Control Delay		*10.6*		*4286*				
LOS		*B*		*F*				
Approach Delay	--	--	*4286*					
Approach LOS	--	--	*F*					

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Figure 2. Bucks Parcels Aerial Photograph

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	REC	Intersection	US 17 and Project Entrance
Agency or Co.	FDC	Area Type	All other areas
Date Performed	2/17/2006	Jurisdiction	
Time Period	AM Peak Hour	Analysis Year	2010
		Project ID	Seminole Electric

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	0	0	1	0	1	0	2	1	2	2	0
Lane group				L		R		T	R	L	T	
Volume, V (vph)				48		20		691	864	460	936	
% Heavy vehicles, %HV				16		16		16	16	16	16	
Peak-hour factor, PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Pretimed (P) or actuated (A)				A		A		A	A	A	A	
Start-up lost time, l_1				2.0		2.0		2.0	2.0	2.0	2.0	
Extension of effective green, e				2.0		2.0		2.0	2.0	2.0	2.0	
Arrival type, AT				3		3		3	3	3	3	
Unit extension, UE				3.0		3.0		3.0	3.0	3.0	3.0	
Filtering/metering, I				1.000	1.000	1.000		1.000	1.000	1.000	1.000	
Initial unmet demand, Q_b				0.0		0.0		0.0	0.0	0.0	0.0	
Ped / Bike / RTOR volumes	0			0		11	0		185			
Lane width				12.0		12.0		12.0	12.0	12.0	12.0	
Parking / Grade / Parking	N		N	N	0	N	N	0	N	N	0	N
Parking maneuvers, N_m												
Buses stopping, N_B				0		0		0	0	0	0	
Min. time for pedestrians, G_p	3.2			3.2			3.2					

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 10.0	G =	G =	G =	G = 15.0	G = 40.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 4	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 77.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v				51		9		727	715	484	985	
Lane group capacity, c				202		181		1620	723	589	1620	
v/c ratio, X				0.25		0.05		0.45	0.99	0.82	0.61	
Total green ratio, g/C				0.13		0.13		0.52	0.52	0.19	0.52	
Uniform delay, d_1				30.1		29.3		11.6	18.3	29.7	13.0	
Progression factor, PF				1.000		1.000		1.000	1.000	1.000	1.000	
Delay calibration, k				0.11		0.11		0.11	0.49	0.36	0.19	
Incremental delay, d_2				0.7		0.1		0.2	30.6	9.1	0.7	
Initial queue delay, d_3												

Figure 3. Rucks Parcels Aerial Photograph

Control delay				30.8		29.5		11.8	48.9	38.8	13.7	
Lane group LOS				C		C		B	D	D	B	
Approach delay				30.6			30.2			22.0		
Approach LOS				C			C			C		
Intersection delay	26.1			$X_c = 0.84$			Intersection LOS			C		

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Figure 3. Rucks Parcels Aerial Photograph

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	REC	Intersection	U.S. 17 and Project Entrance
Agency or Co.	FDC	Area Type	All other areas
Date Performed	2/17/2006	Jurisdiction	
Time Period	PM Peak Hour	Analysis Year	2010
		Project ID	Seminole Electric

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	0	0	1	0	1	0	2	1	2	2	0
Lane group				L		R		T	R	L	T	
Volume, V (vph)				868		475		908	31	8	1079	
% Heavy vehicles, %HV				10		10		10	10	10	10	
Peak-hour factor, PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Pretimed (P) or actuated (A)				A		A		A	A	A	A	
Start-up lost time, l_1				2.0		2.0		2.0	2.0	2.0	2.0	
Extension of effective green, e				2.0		2.0		2.0	2.0	2.0	2.0	
Arrival type, AT				3		3		3	3	3	3	
Unit extension, UE				3.0		3.0		3.0	3.0	3.0	3.0	
Filtering/metering, I				1.000	1.000	1.000		1.000	1.000	1.000	1.000	
Initial unmet demand, Q_b				0.0		0.0		0.0	0.0	0.0	0.0	
Ped / Bike / RTOR volumes	0			0		38	0		19			
Lane width				12.0		12.0		12.0	12.0	12.0	12.0	
Parking / Grade / Parking	N		N	N	0	N	N	0	N	N	0	N
Parking maneuvers, N_m												
Buses stopping, N_B				0		0		0	0	0	0	
Min. time for pedestrians, G_p	3.2			3.2			3.2					

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 40.0	G =	G =	G =	G = 5.0	G = 24.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 4	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 81.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v				914		460		956	13	8	1136	
Lane group capacity, c				810		725		975	435	197	1340	
v/c ratio, X				1.13		0.63		0.98	0.03	0.04	0.85	
Total green ratio, g/C				0.49		0.49		0.30	0.30	0.06	0.41	
Uniform delay, d_1				20.5		15.1		28.3	20.2	35.7	21.7	
Progression factor, PF				1.000		1.000		1.000	1.000	1.000	1.000	
Delay calibration, k				0.50		0.21		0.48	0.11	0.11	0.38	
Incremental delay, d_2				73.2		1.8		24.1	0.0	0.1	5.3	
Initial queue delay, d_3												

Figure 3. Rucks Parcels Aerial Photograph

Control delay				93.7		16.9		52.3	20.3	35.8	27.0	
Lane group LOS				F		B		D	C	D	C	
Approach delay				68.0			51.9			27.1		
Approach LOS				E			D			C		
Intersection delay	50.1			X_c = 1.00			Intersection LOS			D		

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Figure 3. Rucks Parcels Aerial Photograph

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	REC	Intersection	US 17 at CR 209
Agency or Co.	FDC	Area Type	All other areas
Date Performed	2/15/2006	Jurisdiction	
Time Period	AM Peak Hour	Analysis Year	2010
		Project ID	Seminole Electric

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	1	0	0	1	0	1	2	1	1	2	1
Lane group		LTR			LTR		L	T	R	L	T	R
Volume, V (vph)	30	13	20	293	46	13	66	1447	95	16	895	29
% Heavy vehicles, %HV	13	13	13	13	13	13	13	13	13	13	13	13
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Pretimed (P) or actuated (A)	A	A	A	A	A	A	A	A	A	A	A	A
Start-up lost time, l_1		2.0			2.0		2.0	2.0	2.0	2.0	2.0	2.0
Extension of effective green, e		2.0			2.0		2.0	2.0	2.0	2.0	2.0	2.0
Arrival type, AT		3			3		3	3	3	3	3	3
Unit extension, UE		3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Filtering/metering, I		1.000			1.000		1.000	1.000	1.000	1.000	1.000	1.000
Initial unmet demand, Q_b		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Ped / Bike / RTOR volumes	0		0	0		0	0		0	0		0
Lane width		12.0			12.0		12.0	12.0	12.0	12.0	12.0	12.0
Parking / Grade / Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking maneuvers, N_m												
Buses stopping, N_B		0			0		0	0	0	0	0	0
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	WB Only	EW Perm	03	04	NS Perm	06	07	08
Timing	G = 5.0	G = 13.0	G =	G =	G = 37.0	G =	G =	G =
	Y = 6	Y = 6	Y =	Y =	Y = 6	Y =	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 73.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		67			370		69	1523	100	17	942	31
Lane group capacity, c		198			406		206	1622	724	99	1622	724
v/c ratio, X		0.34			0.91		0.33	0.94	0.14	0.17	0.58	0.04
Total green ratio, g/C		0.18			0.33		0.51	0.51	0.51	0.51	0.51	0.51
Uniform delay, d_1		26.2			23.5		10.7	16.9	9.5	9.7	12.6	9.1
Progression factor, PF		1.000			1.000		1.000	1.000	1.000	1.000	1.000	1.000
Delay calibration, k		0.11			0.43		0.11	0.45	0.11	0.11	0.17	0.11
Incremental delay, d_2		1.0			24.4		1.0	11.0	0.1	0.8	0.5	0.0
Initial queue delay, d_3												

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Figure 2. Rosalia Parcels Aerial Photograph

Control delay		27.3			47.9		11.7	28.0	9.6	10.6	13.1	9.1
Lane group LOS		C			D		B	C	A	B	B	A
Approach delay	27.3			47.9			26.2			12.9		
Approach LOS	C			D			C			B		
Intersection delay	24.6			$X_c = 0.93$			Intersection LOS			C		

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Figure 3. Bucks Parcels Aerial Photograph

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	REC	Intersection	US 17 at CR 209
Agency or Co.	FDC	Area Type	All other areas
Date Performed	2/15/2006	Jurisdiction	
Time Period	PM Peak Hour	Analysis Year	2010
		Project ID	Seminole Electric

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	1	0	0	1	0	1	2	1	1	2	1
Lane group		LTR			LTR		L	T	R	L	T	R
Volume, V (vph)	41	36	55	229	37	14	90	946	175	26	2157	38
% Heavy vehicles, %HV	7	7	7	7	7	7	7	7	7	7	7	7
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Pretimed (P) or actuated (A)	A	A	A	A	A	A	A	A	A	A	A	A
Start-up lost time, l_1		2.0			2.0		2.0	2.0	2.0	2.0	2.0	2.0
Extension of effective green, e		2.0			2.0		2.0	2.0	2.0	2.0	2.0	2.0
Arrival type, AT		3			3		3	3	3	3	3	3
Unit extension, UE		3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Filtering/metering, I		1.000			1.000		1.000	1.000	1.000	1.000	1.000	1.000
Initial unmet demand, Q_b		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Ped / Bike / RTOR volumes	0		0	0		0	0		0	0		0
Lane width		12.0			12.0		12.0	12.0	12.0	12.0	12.0	12.0
Parking / Grade / Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking maneuvers, N_m												
Buses stopping, N_B		0			0		0	0	0	0	0	0
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	WB Only	EW Perm	03	04	Excl. Left	NS Perm	07	08
Timing	G = 11.0	G = 18.0	G =	G =	G = 5.0	G = 112.0	G =	G =
	Y = 6	Y = 6	Y =	Y =	Y = 6	Y = 6	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 170.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		139			295		95	996	184	27	2271	40
Lane group capacity, c		148			219		92	2227	994	334	2227	994
v/c ratio, X		0.94			1.35		1.03	0.45	0.19	0.08	1.02	0.04
Total green ratio, g/C		0.11			0.21		0.72	0.66	0.66	0.72	0.66	0.66
Uniform delay, d_1		75.5			67.5		59.2	14.0	11.3	8.4	29.0	10.2
Progression factor, PF		1.000			1.000		1.000	1.000	1.000	1.000	1.000	1.000
Delay calibration, k		0.45			0.50		0.50	0.11	0.11	0.11	0.50	0.11
Incremental delay, d_2		55.9			183.3		103.0	0.1	0.1	0.1	24.2	0.0
Initial queue delay, d_3												

Figure 3. Bucks Parcels Aerial Photograph

Control delay		131.3			250.8		162.2	14.2	11.4	8.5	53.2	10.2
Lane group LOS		F			F		F	B	B	A	D	B
Approach delay	131.3			250.8			24.8			52.0		
Approach LOS	F			F			C			D		
Intersection delay	60.6			X_c = 1.17			Intersection LOS			E		

Figure 2. Rusche Parcels Aerial Photograph

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	REC	Intersection	US 17 and Project Entrance
Agency or Co.	FDC	Area Type	All other areas
Date Performed	2/17/2006	Jurisdiction	
Time Period	AM Peak Hour	Analysis Year	2013
		Project ID	Seminole Electric

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	0	0	1	0	1	0	2	1	2	2	0
Lane group				L		R		T	R	L	T	
Volume, V (vph)				48		20		754	51	23	1022	
% Heavy vehicles, %HV				16		16		16	16	16	16	
Peak-hour factor, PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Pretimed (P) or actuated (A)				A		A		A	A	A	A	
Start-up lost time, l_1				2.0		2.0		2.0	2.0	2.0	2.0	
Extension of effective green, e				2.0		2.0		2.0	2.0	2.0	2.0	
Arrival type, AT				3		3		3	3	3	3	
Unit extension, UE				3.0		3.0		3.0	3.0	3.0	3.0	
Filtering/metering, I				1.000	1.000	1.000		1.000	1.000	1.000	1.000	
Initial unmet demand, Q_b				0.0		0.0		0.0	0.0	0.0	0.0	
Ped / Bike / RTOR volumes	0			0		11	0		0			
Lane width				12.0		12.0		12.0	12.0	12.0	12.0	
Parking / Grade / Parking	N		N	N	0	N	N	0	N	N	0	N
Parking maneuvers, N_m												
Buses stopping, N_B				0		0		0	0	0	0	
Min. time for pedestrians, G_p	3.2			3.2			3.2					

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 5.0	G =	G =	G =	G = 5.0	G = 40.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 4	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 62.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v				51		9		794	54	24	1076	
Lane group capacity, c				125		112		2012	898	244	2465	
v/c ratio, X				0.41		0.08		0.39	0.06	0.10	0.44	
Total green ratio, g/C				0.08		0.08		0.65	0.65	0.08	0.79	
Uniform delay, d_1				27.1		26.4		5.2	4.1	26.4	2.1	
Progression factor, PF				1.000		1.000		1.000	1.000	1.000	1.000	
Delay calibration, k				0.11		0.11		0.11	0.11	0.11	0.11	
Incremental delay, d_2				2.2		0.3		0.1	0.0	0.2	0.1	
Initial queue delay, d_3												

Figure 3. Rucks Parcels Aerial Photograph

Control delay				29.3		26.7		5.4	4.1	26.6	2.2	
Lane group LOS				C		C		A	A	C	A	
Approach delay				28.9			5.3			2.7		
Approach LOS				C			A			A		
Intersection delay	4.6			X_c = 0.43			Intersection LOS			A		

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Figure 3. Rucks Parcels Aerial Photograph

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	REC	Intersection	U.S. 17 and Project Entrance
Agency or Co.	FDC	Area Type	All other areas
Date Performed	2/17/2006	Jurisdiction	
Time Period	PM Peak Hour	Analysis Year	2013
		Project ID	Seminole Electric

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	0	0	1	0	1	0	2	1	2	2	0
Lane group				L		R		T	R	L	T	
Volume, V (vph)				55		38		992	31	8	1177	
% Heavy vehicles, %HV				10		10		10	10	10	10	
Peak-hour factor, PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Pretimed (P) or actuated (A)				A		A		A	A	A	A	
Start-up lost time, l_1				2.0		2.0		2.0	2.0	2.0	2.0	
Extension of effective green, e				2.0		2.0		2.0	2.0	2.0	2.0	
Arrival type, AT				3		3		3	3	3	3	
Unit extension, UE				3.0		3.0		3.0	3.0	3.0	3.0	
Filtering/metering, I				1.000	1.000	1.000		1.000	1.000	1.000	1.000	
Initial unmet demand, Q_b				0.0		0.0		0.0	0.0	0.0	0.0	
Ped / Bike / RTOR volumes	0			0		0	0		19			
Lane width				12.0		12.0		12.0	12.0	12.0	12.0	
Parking / Grade / Parking	N		N	N	0	N	N	0	N	N	0	N
Parking maneuvers, N_m												
Buses stopping, N_B				0		0		0	0	0	0	
Min. time for pedestrians, G_p	3.2			3.2			3.2					

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 34.7	G =	G =	G =	G = 7.0	G = 40.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 4	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 93.7		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v				58		40		1044	13	8	1239	
Lane group capacity, c				608		544		1404	627	238	1790	
v/c ratio, X				0.10		0.07		0.74	0.02	0.03	0.69	
Total green ratio, g/C				0.37		0.37		0.43	0.43	0.07	0.54	
Uniform delay, d_1				19.3		19.1		22.5	15.5	40.2	15.6	
Progression factor, PF				1.000		1.000		1.000	1.000	1.000	1.000	
Delay calibration, k				0.11		0.11		0.30	0.11	0.11	0.26	
Incremental delay, d_2				0.1		0.1		2.2	0.0	0.1	1.2	
Initial queue delay, d_3												

Figure 3. Rucks Parcels Aerial Photograph

Control delay				19.3		19.2		24.7	15.5	40.3	16.8	
Lane group LOS				B		B		C	B	D	B	
Approach delay				19.3			24.6			16.9		
Approach LOS				B			C			B		
Intersection delay	20.4			X_c = 0.45			Intersection LOS			C		

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Figure 3. Rucks Parcels Aerial Photograph

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	REC	Intersection	US 17 at CR 209
Agency or Co.	FDC	Area Type	All other areas
Date Performed	2/15/2006	Jurisdiction	
Time Period	AM Peak Hour	Analysis Year	2013
		Project ID	Seminole Electric

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	1	0	0	1	0	1	2	1	1	2	1
Lane group		LTR			LTR		L	T	R	L	T	R
Volume, V (vph)	33	14	22	331	50	15	71	680	124	20	975	32
% Heavy vehicles, %HV	13	13	13	13	13	13	13	13	13	13	13	13
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Pretimed (P) or actuated (A)	A	A	A	A	A	A	A	A	A	A	A	A
Start-up lost time, l_1		2.0			2.0		2.0	2.0	2.0	2.0	2.0	2.0
Extension of effective green, e		2.0			2.0		2.0	2.0	2.0	2.0	2.0	2.0
Arrival type, AT		3			3		3	3	3	3	3	3
Unit extension, UE		3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Filtering/metering, I		1.000			1.000		1.000	1.000	1.000	1.000	1.000	1.000
Initial unmet demand, Q_b		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Ped / Bike / RTOR volumes	0		0	0		0	0		0	0		0
Lane width		12.0			12.0		12.0	12.0	12.0	12.0	12.0	12.0
Parking / Grade / Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking maneuvers, N_m												
Buses stopping, N_B		0			0		0	0	0	0	0	0
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	WB Only	EW Perm	03	04	NS Perm	06	07	08
Timing	G = 10.0	G = 10.0	G =	G =	G = 30.0	G =	G =	G =
	Y = 6	Y = 6	Y =	Y =	Y = 6	Y =	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 68.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		73			417		75	716	131	21	1026	34
Lane group capacity, c		154			500		137	1412	630	244	1412	630
v/c ratio, X		0.47			0.83		0.55	0.51	0.21	0.09	0.73	0.05
Total green ratio, g/C		0.15			0.38		0.44	0.44	0.44	0.44	0.44	0.44
Uniform delay, d_1		26.6			19.0		14.0	13.7	11.7	11.0	15.6	10.9
Progression factor, PF		1.000			1.000		1.000	1.000	1.000	1.000	1.000	1.000
Delay calibration, k		0.11			0.37		0.15	0.12	0.11	0.11	0.29	0.11
Incremental delay, d_2		2.3			11.6		4.6	0.3	0.2	0.2	1.9	0.0
Initial queue delay, d_3												

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Figure 2. Brooks Parcels Aerial Photograph

Control delay		28.9			30.6		18.6	14.0	11.9	11.2	17.5	10.9
Lane group LOS		C			C		B	B	B	B	B	B
Approach delay	28.9			30.6			14.1			17.2		
Approach LOS	C			C			B			B		
Intersection delay	18.6			$X_c = 0.76$			Intersection LOS			B		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	REC	Intersection	US 17 at CR 209
Agency or Co.	FDC	Area Type	All other areas
Date Performed	2/15/2006	Jurisdiction	
Time Period	PM Peak Hour	Analysis Year	2013
		Project ID	Seminole Electric

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	1	0	0	1	0	1	2	1	1	2	1
Lane group		LTR			LTR		L	T	R	L	T	R
Volume, V (vph)	44	39	60	271	40	19	97	1013	200	30	1464	42
% Heavy vehicles, %HV	7	7	7	7	7	7	7	7	7	7	7	7
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Pretimed (P) or actuated (A)	A	A	A	A	A	A	A	A	A	A	A	A
Start-up lost time, l_1		2.0			2.0		2.0	2.0	2.0	2.0	2.0	2.0
Extension of effective green, e		2.0			2.0		2.0	2.0	2.0	2.0	2.0	2.0
Arrival type, AT		3			3		3	3	3	3	3	3
Unit extension, UE		3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Filtering/metering, I		1.000			1.000		1.000	1.000	1.000	1.000	1.000	1.000
Initial unmet demand, Q_b		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Ped / Bike / RTOR volumes	0		0	0		0	0		0	0		0
Lane width		12.0			12.0		12.0	12.0	12.0	12.0	12.0	12.0
Parking / Grade / Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking maneuvers, N_m												
Buses stopping, N_B		0			0		0	0	0	0	0	0
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	WB Only	EW Perm	03	04	Excl. Left	NS Perm	07	08
Timing	G = 11.0	G = 16.0	G =	G =	G = 5.0	G = 49.0	G =	G =
	Y = 6	Y = 6	Y =	Y =	Y = 6	Y = 6	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 105.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		150			347		102	1066	211	32	1541	44
Lane group capacity, c		197			362		149	1578	704	215	1578	704
v/c ratio, X		0.76			0.96		0.68	0.68	0.30	0.15	0.98	0.06
Total green ratio, g/C		0.15			0.31		0.57	0.47	0.47	0.57	0.47	0.47
Uniform delay, d_1		42.7			35.3		21.8	21.8	17.4	13.1	27.4	15.4
Progression factor, PF		1.000			1.000		1.000	1.000	1.000	1.000	1.000	1.000
Delay calibration, k		0.31			0.47		0.25	0.25	0.11	0.11	0.48	0.11
Incremental delay, d_2		15.9			36.4		12.3	1.2	0.2	0.3	17.3	0.0
Initial queue delay, d_3												

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Figure 2. Bucks Parcels Aerial Photograph

Control delay		58.6			71.8		34.0	23.0	17.6	13.4	44.8	15.4
Lane group LOS		E			E		C	C	B	B	D	B
Approach delay	58.6			71.8			23.0			43.3		
Approach LOS	E			E			C			D		
Intersection delay	38.8			$X_c = 0.97$			Intersection LOS			D		

10.8 Water Supply Alternatives Analysis

SGS Unit 3 will utilize water from the St. Johns River and the Floridan aquifer as water supply sources for plant operations. Surface water from the St. Johns River will be used for miscellaneous plant uses and primarily to provide makeup for the SGS Unit 3 heat dissipation system, to replace water lost to evaporation, drift, and blowdown. Ground water will be used for air heater washes, fire water supply, miscellaneous plant uses, potable water and an alternate source of makeup to the demineralizers. A detailed water-use diagram is provided in Section 3.5 of this SCA. It is noteworthy that Seminole has minimized consumptive use needs by maximizing reuse of SGS stormwater, industrial wastewater, and sanitary wastewater.

10.8.1 Water Supply Alternatives

The Unit 3 project will not require additional groundwater usage that is greater than the existing consumptive use limitations in the current SGS Conditions of Certification. A detailed water supply alternatives analysis is therefore not required by the SJRWMD. However, in order to determine whether preferable options are available, alternative water supply sources were evaluated to determine whether the most feasible supply of water to support the SGS Unit 3 project is surface water from the St. Johns River (instantaneous maximum of 48.7 MGD) and groundwater from the Upper Floridan Aquifer (annual average of 0.55 MGD). Seminole is proposing an increase in consumptive use from the St. Johns River for Unit 3. The following alternatives were evaluated: 1) groundwater resources, 2) surface water resources, 3) reclaimed water supply, 4) industrial reuse and 5) municipal water supply.

10.8.1.1 Groundwater

The project site is underlain by three principal hydrogeologic units: 1) the Surficial Aquifer System, 2) the Intermediate Aquifer System, 3) and the Floridan Aquifer System. Confining layers that restrict vertical movement of groundwater separate the aquifer systems. Groundwater flow in the vicinity of the site is from west to east.

Surficial Aquifer System

The uppermost part of the Surficial Aquifer System (SAS) is primarily composed of unconsolidated quartz sand, with localized lenses of shell and clay. Sediments forming the SAS are undifferentiated

sediments, Cypresshead and Nashua Formations, Caloosahatchee Formation-equivalent shell beds, and the Coosawhatchie Formation of the Hawthorne Group (FGS, 1992). The SAS in the Project Area is about 100 ft thick. This aquifer produces potable drinking water throughout the St. John's River Water Management District (SJRWMD).

The SAS is not considered feasible for industrial uses. Although a dependable water supply, additional withdrawals to meet SGS Unit 3 cooling tower make-up and plant process needs likely would adversely impact neighboring wetlands, lakes, and existing legal users.

Intermediate Aquifer System

The Intermediate Confining Unit and the Intermediate Aquifer System are present throughout the County and consist of interbedded siliciclastic and carbonate sediments of the Hawthorn Group and clay and limestone of the undifferentiated Hawthorne Group (FGS, 1992). Very little data for the intermediate aquifer system in the project area are available. In portions of the area, the Intermediate Aquifer System turns into a confining unit and does not appear to be a dependable source of water in the project area; withdrawals to meet SGS Unit 3 needs likely would adversely impact neighboring wetlands, lakes, and existing legal users.

Floridan Aquifer System

The Floridan Aquifer System within the project area consists of the Upper Floridan Aquifer, middle confining unit, and Lower Floridan aquifer. Included at its top is Ocala Limestone, with the majority of the aquifer comprised of the Avon Park and Oldsmar Formations (FGS, 1992). Thickness of this aquifer is approximately 1,700 ft (FGS, 1991). The sub-Floridan confining unit occurs within the Cedar-Keys Unit.

Upper Floridan Aquifer System (UFA)

Seminole is currently authorized to withdraw an annual average of 0.55 MGD and a peak daily withdrawal of 3.9 MGD from the UFA. Two UFA production wells are operational and permitted to withdraw the permitted quantities.

Water quality of the UFA is usually more mineralized than water from the SAS and IAS; however, the major ions are generally within FDEP potable standards. Large additional withdrawals from the

UFA to meet SGS Unit 3 needs would have the potential to adversely affect streamflow indirectly by increasing the potential for downward leakage from the IAS and SAS, which would reduce the amount of water available to recharge streamflow. Recharge to the Floridan aquifer in the vicinity of the site is moderate (0-8 inches) to discharge.

The UFA is the predominant source of groundwater used for industrial purposes in the vicinity of the project (NFRPC, 1997). In general, water in the UFA in the vicinity of the project meets the FDEP Drinking Water Standards and the UFA is capable of yielding in excess of the groundwater required for the Unit 3 project.

Lower Floridan Aquifer System (LFA)

The LFA system is a dependable water source. However, in order to utilize the highly mineralized (brackish) water from the LFA, expensive pretreatment of the brackish water would be required. Disposal of the rejected brackish water from the treatment process would also be an issue of potential environmental concern and expense.

LFA water would require expensive pretreatment prior to use. Engineering requirements for well installation and the groundwater pumping presently have not been quantified in the area of Putnam County, but anticipated to be expensive. There is currently one existing Consumptive Use Permit for withdrawal from the LFA in the vicinity of the project.

10.8.2 Feasibility of Groundwater Use

The consumptive use of groundwater resources in this area is generally constrained to providing reasonable assurances to the SJRWMD that the requested withdrawal will not adversely impact to natural systems, springs, and existing and permitted users (e.g., private wells). Seminole is not requesting authorization for additional groundwater use beyond the 0.55 MGD of groundwater currently authorized for withdrawal from the UFA. The Final EIS concluded that projected drawdowns and impact to off-site potentiometric levels was minor and would not cause an adverse impact to offsite users. Continued annual average withdrawal not exceeding 0.55 MGD will not increase drawdown impacts or cause adverse impact to offsite users.

10.8.3 Surface Water Resources

The Site is located approximately 1.2 miles north of the St. Johns River and approximately 20 miles west of the Atlantic Ocean. A major tributary to the St. John's River, Rice Creek, is also in the project area. A stream or river generally may be considered a potentially viable surface water supply option if the withdrawal, combined with other withdrawals, does not reduce the rate of daily flow by more than 10 percent at any point in the drainage system at the time of withdrawal. Streamflow data from the St. Johns River at Palatka and Buffalo Bluffs and from Rice Creek about a half mile upstream from the confluence is available from USGS gauging stations.

10.8.3.1 St. Johns River

St. Johns River originates in St. Lucie County and flows in a northeasterly direction, emptying into the Atlantic Ocean near Jacksonville. The average flow with nine years of data (1995-2003) for the Buffalo Bluffs station upstream of Palatka is 5,000 cubic feet per second (cfs). The average flow for nine years of data (1968-1976) for the Palatka gauging station is 7,913 cfs. The maximum flow at Buffalo Bluffs was 23,400 cfs and at Palatka was 31,311 cfs.

St. Johns River flow data for USGS location #02244040 (Buffalo Bluffs located approximately 9 miles from the SGS site) has been recorded since February 1993. As shown in Table 2.3-4, the St. John's River mean monthly streamflow varies from a low of 1,300 MGD (2,027 cfs) in May to a high of 4,500 MGD (6,899 cfs) in November. The average yearly streamflow at this site is 3,200 MGD (5,000 cfs). During the period of record, the lowest recorded monthly average streamflow was 146 MGD (227 cfs) in November 1993. At this site an estimated withdrawal of ten percent of total flow would amount to approximately 320 MGD on an annual average basis (Table 2.3-4), with no months below 130 MGD. One CUP for surface water has been issued for an industrial facility located approximately 4.4 miles from the SGS site. The permit authorizes the withdrawal of an annual average of 27 MGD [9,825 million gallons per year (mgy)].

Water quality for the St. Johns River downstream and upstream of the Seminole facility is listed on Table 10.6.1-2. Water Quality in the river upstream has elevated metals and has some pH variances. Downstream water quality improves with metal concentrations dropping and pH variances reducing to within standards.

10.8.3.2 Rice Creek

Rice Creek is tributary to the St. Johns River with the confluence approximately 3.5 miles upstream of the facility site. Rice Creek flow data for USGS location #02245200 (1/2 miles upstream from confluence) has been recorded from June 1995 to April 1997. As shown in Table 2.3-6, the Rice Creek mean monthly streamflow varies from a low of 145 MGD (225 cfs) in February to a high of 593 MGD (918 cfs) in October. The average yearly streamflow at this site is 279 MGD (432 cfs). During the period of record the lowest recorded monthly average streamflow was 120 MGD (187 cfs) in February 1996. At this site an estimated withdrawal of ten percent of total flow has the potential to produce approximately 27.9 MGD on an annual average basis (Table 10.6.1-3), with no months below 12 MGD, less than the water supply requirement of 48.7 MGD.

10.8.4 Feasibility of Surface Water Use

The St. Johns River has the potential to provide sufficient water to meet the needs of the SGS Unit 3 project. Other surface water sources are vulnerable to drought conditions as well as severe permitting requirements in this area. Compared to other surface water sources, the water quality parameters are within the ranges of suitable use for at the SGS and adequate water supply is available.

Section 373.223, F.S., provides a three-prong test for evaluating a proposed water use. The three criteria are: 1) the use is reasonable and beneficial; 2) the use is in the public interest; and 3) the use will not interfere with any existing legal use of water. Additionally, the SJRWMD Consumptive Use Permit Applicant's Handbook provides performance standards for determining whether a surface water withdrawal meets the conditions for issuance of a permit based on established minimum flows and levels in Chapter 40C-8, F.A.C. The nearest minimum flow and level for St. John's River is in Deland, Florida. Any single or combined withdrawals must not cause flow rates to deviate from their normal rate and range of fluctuation such that there are adverse impacts to water quality, vegetation, animal populations, recreational use, or aesthetic qualities. A proposed withdrawal will typically be unacceptable to the SJRWMD if it reduces the rate of daily flow in the stream or river by more than 10 percent at any point in the drainage system at the time of the withdrawal. As previously stated, an estimated withdrawal of ten percent of total flow would amount to approximately 320 MGD on an annual average basis with no months below 130 MGD. The current surface withdrawal combined with the requested withdrawal for SGS Units 1, 2 and 3 (48.7 MGD) is approximately two percent of the river flow, significantly less than the recommended ten percent limitation.

10.8.5 Reclaimed Water Supply

Reclaimed water is defined by the FDEP as water that is beneficially reused after treatment to at least secondary wastewater treatment standards (20 mg/L $CBOD_5$ and 20 mg/L total suspended solids (TSS) by a domestic wastewater treatment plant (WWTP). The SJRWMD highly encourages the use of reclaimed water for industrial use. The use of reclaimed water can decrease the reliance on potable water supplies and reduces the discharge of reclaimed water to area surface waters. WWTP flows utilized via reclaimed water systems vary by utility and utilization is generally limited by seasonal supply and storage. The key to increasing the utilization of reclaimed water is the development of seasonal storage to capture and store reclaimed water that is available during the wet season when demand is low, for use to augment the daily reclaimed water flows to meet peak demand in the dry season. An inventory of the WWTPs located (or proposed) in Putnam and surrounding counties in the vicinity of the project area is provided in Table 10.8.1-1.

10.8.5.1 St. Augustine WWTP

St. Augustine WWTP is located approximately 23 miles east of the project site. Currently the plant has a capacity for 5.0 MGD. Current reuse at the plant is limited to 3,000-4,000 gpd within the plant. The distance and elevation difference between the plant and the site makes this option cost prohibitive based on the available water supply.

10.8.5.2 East Palatka WWTP

This is a proposed plant which will be built eight miles southeast of the site across the St. John's River. The capacity and reuse potential of the site is unknown at this time.

10.8.5.3 Palatka WWTP

Palatka WWTP is located seven miles south of the SGS Site. Currently the plant has a capacity of 3.0 MGD. Reuse at the plant is 1.0 MGD and was established in the last two months.

10.8.6 Feasibility of Reclaimed Water Use

Compared to other sources, reclaimed water typically is characterized by elevated levels of dissolved solids. Expensive pretreatment of the water will be required to meet SGS Unit 3 intake water quality requirements. Disposal of the rejected wastewater from the treatment process would also be an issue

of concern and expense. While potentially feasible, this option is projected as being extremely expensive due to transportation and treatment costs. Moreover, there is not an adequate supply of reclaimed water to meet the needs of SGS Unit 3.

10.8.7 Industrial Reuse

Georgia-Pacific is the nearest industrial facility in the vicinity of the SGS Site. The facility is located 3.5 miles southwest of the site. It has its own wastewater treatment facility and has industrial waste ponds. It is assumed that effluent quality from this facility is not suitable for reuse.

10.8.8 Stormwater

Stormwater capture from adjacent and disturbed lands provides for the collection of surface runoff that may be used in plant operations. Water capture is seasonal and does not yield a continuous water supply source and is only available in response to rainfall events sufficiently large enough to produce surface water runoff. In addition, very large tracts of land would be needed to obtain the required water volumes.

10.8.9 Feasibility of Industrial/Stormwater Use

The existing coal pile and landfill area provide over 180 acres of area that are incorporated into the water balance for SGS Unit 1 and 2. Runoff is collected and recycled in the FGD scrubber system as appropriate. Seminole has maximized the reuse of stormwater within the SGS Site and additional areas for stormwater capture and reuse are limited at the SGS Site.

10.8.10 Aquifer Storage and Recovery

The process of storing water in an aquifer when water supply exceeds demand and subsequently withdrawing the water when supplies are low and/or demands are high is known as aquifer storage and recovery (ASR). The ASR process involves withdrawing, treating and storing excess flows from a river or reservoir. Excess water must be treated to an appropriate water quality and then pumped into an aquifer through wells for storage within the aquifer. When water is needed, the wells are used to withdraw the water from the aquifer from the same well. The water can be treated, if necessary, and used for potable or industrial processes. Reclaimed water or process water ASR may also provide opportunities for water disposal as well as water supply.

10.8.11 Feasibility of Aquifer Storage and Recovery

An ASR offers the opportunity to store large volumes of water at a relatively low cost with minimal environmental impact and conservation of water by eliminating evaporative losses. This alternative is generally only considered if other water supply sources are not available and should not seriously be considered for the SGS Unit 3 project.

10.8.12 Municipal Water Supply

Municipal water is essentially treated; potable groundwater from the UFA purchased from a city, county, or private utility. Several small municipal water supply facilities are located in the vicinity of the project including: 1) the City of Palatka, located six miles southwest of the SGS Site; 2) the City of Bostwick located three miles north of the site; and 3) the City of Hastings located five miles east of the SGS Site across the St. Johns River.

10.8.13 Feasibility of Municipal Water Supply

FDEP and SJRWMD policy generally dictates that municipal water supply be reserved (with some exceptions) for local commercial and residential development and therefore limited quantities would be available for the SGS Unit 3 project.

10.9 Stormwater Management Calculations

This section contains the conceptual design notes and calculations for the stormwater management system for the SGS Unit 3 project.

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This section contains the conceptual design notes and calculations for the stormwater management system for the SGS Unit 3 project.

10.9.1 Stormwater Management and Calculations

This appendix contains a brief description of the SGS Unit 3 storm water management system, and the supporting calculations used to size the system components and show compliance with SJRWMD design requirements. Eight drainage basins, five storm water ponds, and six swales are shown on Figure 10.9.0-1. Two of these areas, the area within the coal pile railroad loop (shown in light yellow) and the area of the landfill/FGD effluent processing area (shown in dark green) are not included within the Unit 3 storm water management system because runoff from various portions of these basins which are impacted by the construction or operation of Unit 3 are reused. Characteristics of the remaining six drainage areas are presented in Table 10.9.0-1.

Drainage Basin 1 (shown in light orange) includes the Unit 1 plant area and includes the area surrounding the new 200,000 gallon fuel oil tank. It is served by Storm Water Pond 1, shown in blue at the northeast corner of the drainage basin. Storm Water Pond 1 is a wet detention pond that is currently being added as part of the Unit 1 and 2 upgrades.

Drainage Basin 2 (shown in violet) will include all of the new Unit 3 plant facilities, such as the power block and the mechanical draft cooling towers, as well as construction parking and trailers. It is served by Storm Water Pond 2, shown in blue at the north central edge of the drainage basin. Storm Water Pond 2 is a wet detention pond that is currently being added as part of the Unit 1 and 2 upgrades.

Drainage Basin 3 (shown in dark gray) will be the west construction laydown area. It is served by Storm Water Pond 3, shown in blue at the southern edge of the drainage basin. Storm Water Pond 3 is a wet detention facility being added specifically for Unit 3.

Drainage Basin 4 (shown in light green) will be the east construction laydown area. It is served by Storm Water Pond 4, shown in blue at the southeast edge of the drainage basin. Storm Water Pond 4 is a wet detention facility being added specifically for Unit 3.

Drainage Basin 5 (shown in purple) is a borrow area. During construction of Unit 3, soil will be obtained as necessary to level the ground underneath new structures. During operation, Seminole Electric intends to continue using this area to obtain cover material for the landfill. Basin 5 is served

by Storm Water Pond 5, shown in blue at the southeast edge of the basin. Storm Water Pond 5 is a retention facility being added specifically for Unit 3.

The Swale System drainage area (shown in red) includes that portion of the entrance road which will be modified from two lanes to four lanes to accommodate the additional traffic requirements for construction and operation of the SGS Unit 3 Project. This area is served by a linear set of swales (shown in blue within the drainage area) designed to percolate 80% of the runoff from the 3-year 1-hour storm (2.6 inches/hour intensity). However, the swale system has been designed as a dry detention facility by routing the individual swale discharges through 12-inch diameter culverts to the existing west ditch. The characteristics of the individual swales, and the overall characteristics of the swale system are presented in Table 10.9.0-1.

The colorized drainage areas have been superimposed onto the USGS quad sheet for the plant vicinity in order to show the storm water management system release points relative to nearby surface water features. The result is Figure 10.9.0-2. The releases from Pond 1 and the Swale System appear to drain into an isolated "wooded marsh or swamp" to the north of the landfill area. Similarly, releases from Pond 2 appear to drain into an isolated "wooded marsh or swamp" to the northeast of Drainage Basin 2. Pond 3 releases appear to drain eventually to the St. Johns River. Pond 4 releases appear to drain to an isolated "wooded marsh or swamp" to the south-southeast of Drainage Basin 4.

Table 10.9.0-1
Seminole Generating Station Unit 3 Storm Water Management System

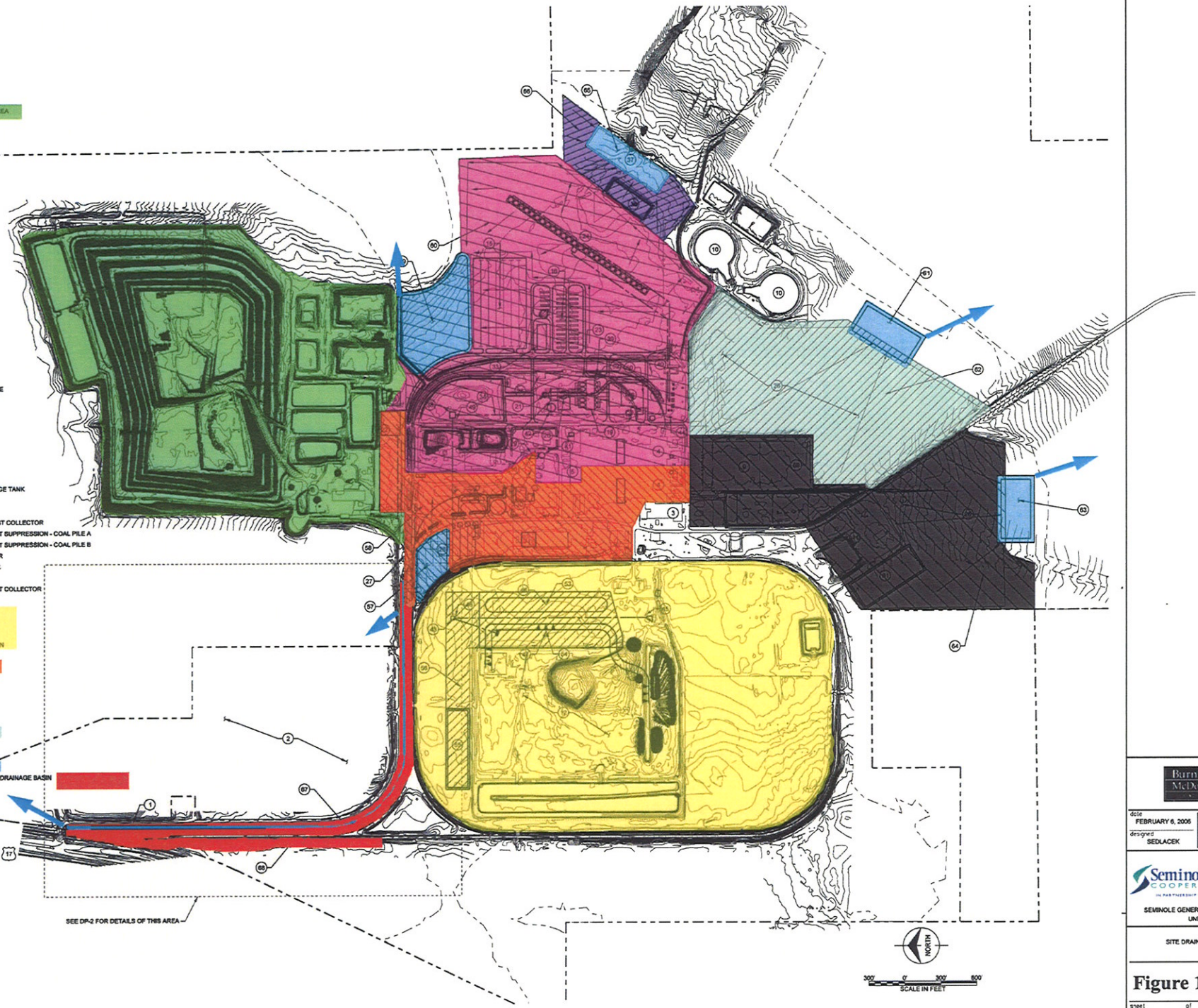
	Basin 1	Basin 2	Basin 3	Basin 4	Basin 5	Swale System
description	Unit 1 drainage area	Unit 2 and 3 drainage area	East laydown area	West laydown area	Borrow Area	Entrance Road
25-year design storm 24-hour precipitation (inches)	8	8	8	8	10	8
25-year pre-construction peak discharge (cfs)	403.55	725.61	88.57	139.46		18.55
pre-construction % impervious	0.85	0.65	0.15	0.15		15%
pre-construction runoff volume (acre-feet)	28.51	49.8	22.39	34.08		3.53
treatment volume (cubic feet)	255,534	457,095	464,022	517,923	45,657	20851
permanent pool volume			628,946	702,004	343339	
25-year post-construction peak discharge (cfs)	379.0	327.1	85.6	129.9	257048.0	18.15
post-construction % impervious	0.85	0.77	0.9	0.9	11	0.55
post-construction runoff volume (acre-feet)	23.08	35.61	25.26	28.98	5.9	4.00
pervious area (sq mi)	0.0106	0.0471	0.0089	0.010	0.017	0.00328
impervious area (sq mi)	0.0598	0.0874	0.0799	0.089	0.002	0.00408
total area (sq miles)	0.0704	0.1345	0.0888	0.099	0.020	0.00736
pervious area (acres)	6.8	30.1	5.68	6.34	11.17	2.10
impervious area (acres)	38.3	55.9	51.13	57.07	1.41	2.61
total area (acres)	45.1	86.1	56.81	63.41	12.58	4.71
SCS curve number post-construction	82	80	85	85	80	68

Table 10.9.0-2
Entrance Road Swale System Characteristics

	Entrance Road						
description	Total	Swale #1	Swale #2	Swale # 3	Swale # 4	Swale # 5	Swale # 6
25-year design storm 24-hour precipitation (inches)	8	8	8	8	8	8	8
25-year pre-construction peak discharge (cfs)	18.55						
pre-construction % impervious	15%	15%	15%	15%	15%	15%	15%
pre-construction runoff volume (acre-feet)	3.53						
treatment volume (cubic feet)	20851	4954	2218	1843	1814	4752	5270
permanent pool volume							
25-year post-construction peak discharge (cfs)	18.15	1.72	0.77	0.64	0.63	1.65	1.83
post-construction % impervious	0.55	55%	55%	55%	55%	55%	55%
post-construction runoff volume (acre-feet)	4.00						
pervious area (sq mi)	0.00328	0.00078	0.00034	0.00030	0.00028	0.00075	0.00083
impervious area (sq mi)	0.00408	0.00097	0.00044	0.00036	0.00036	0.00092	0.00103
total area (sq miles)	0.00736	0.00175	0.00078	0.00066	0.00064	0.00167	0.00186
pervious area (acres)	2.10	0.50	0.22	0.19	0.18	0.48	0.53
impervious area (acres)	2.61	0.62	0.28	0.23	0.23	0.59	0.66
total area (acres)	4.71	1.12	0.50	0.42	0.41	1.07	1.19
SCS curve number post-construction	68	68	68	68	68	68	68

KEY NOTES:

1. PLANT ENTRANCE ROAD
2. LAFARGE PROPERTY
3. EXISTING SERVICE BLDG.
4. EXISTING TURBINE BLDG.
5. EXISTING STACK
6. EXISTING LIMESTONE PREP.
7. EXISTING LIMESTONE STORAGE PILE
8. EXISTING FGD EFFLUENT PROCESSING AREA
9. EXISTING SWITCHYARD
10. EXISTING COOLING TOWER
11. EXISTING WASTE TREATMENT AREA
12. ~~EXISTING COAL YARD~~
13. EXISTING LANDFILL
14. EXISTING RAILCAR REPAIR
15. CONSTRUCTION PARKING
16. CONSTRUCTION OFFICE TRAILER AREA
17. UNIT 3 TURBINE BLDG.
18. UNIT 3 BOILER
19. UNIT 3 PRECIPITATOR
20. UNIT 3 WET FGD
21. UNIT 3 STACK
22. UNIT 3 EFFLUENT PROCESSING
23. UNIT 3 HOUSE SPUR
24. UNIT 3 COOLING TOWER
25. UNIT 3 LIMESTONE PILE EXPANSION
26. UNIT 3 CONSTRUCTION LAYDOWN
27. EXISTING GUARD HOUSE
28. AMMONIA STORAGE
29. UNIT 3 LIMESTONE PREPARATION
30. UNIT 3 FUEL OIL STORAGE TANK
31. WASTE WATER SURGE POND
32. PERCOLATION POND
33. TEMPORARY CONSTRUCTION WAREHOUSE
34. COAL CONVEYOR
35. UNIT 3 WET ESP
36. ZERO LIQUID DISCHARGE SYSTEM
37. NOT USED
38. UNIT 3 CRUSHER HOUSE
39. FLY ASH SILO
40. CONDENSATE STORAGE TANK
41. LIMESTONE SLURRY TANK
42. LIMESTONE SLURRY EMERGENCY STORAGE TANK
43. COAL TRANSFER TOWER
44. EMERGENCY DIESEL GENERATOR
45. EXISTING TRANSFER SAMPLE TOWER DUST COLLECTOR
46. NEW STACKER RECLAIMER W/SPRAY DUST SUPPRESSION - COAL PILE A
47. NEW STACKER RECLAIMER W/SPRAY DUST SUPPRESSION - COAL PILE B
48. NEW TRANSFER TOWER DUST COLLECTOR
49. NEW CRUSHER TOWER DUST COLLECTOR.
50. UNIT FEED SYSTEM DUST COLLECTOR
51. LIMESTONE TRANSFER TO BALL MILL DUST COLLECTOR
52. FLY ASH SILO BIN VENT
53. COAL PILE A
54. COAL PILE B
55. COAL PILE RUNOFF POND
56. COAL PILE RUNOFF POND DRAINAGE BASIN
57. STORMWATER POND 1
58. STORMWATER POND 1 DRAINAGE BASIN
59. STORMWATER POND 2
60. STORMWATER POND 2 DRAINAGE BASIN
61. STORMWATER POND 3
62. STORMWATER POND 3 DRAINAGE BASIN
63. STORMWATER POND 4
64. STORMWATER POND 4 DRAINAGE BASIN
65. STORMWATER POND 5
66. STORMWATER POND 5 DRAINAGE BASIN
67. ENTRANCE ROAD STORMWATER SWALES
68. ENTRANCE ROAD STORMWATER SWALES DRAINAGE BASIN
69. SWITCHYARD EXPANSION



Burns & McDonnell

date FEBRUARY 6, 2006	detailed
designed SEDLACEK	checked

Seminole Electric COOPERATIVE, INC.
IN PARTNERSHIP WITH THOSE WE SERVE

SEMINOLE GENERATING STATION
UNIT 3

SITE DRAINAGE PLAN

Figure 10.9.0-1

sheet of sheets

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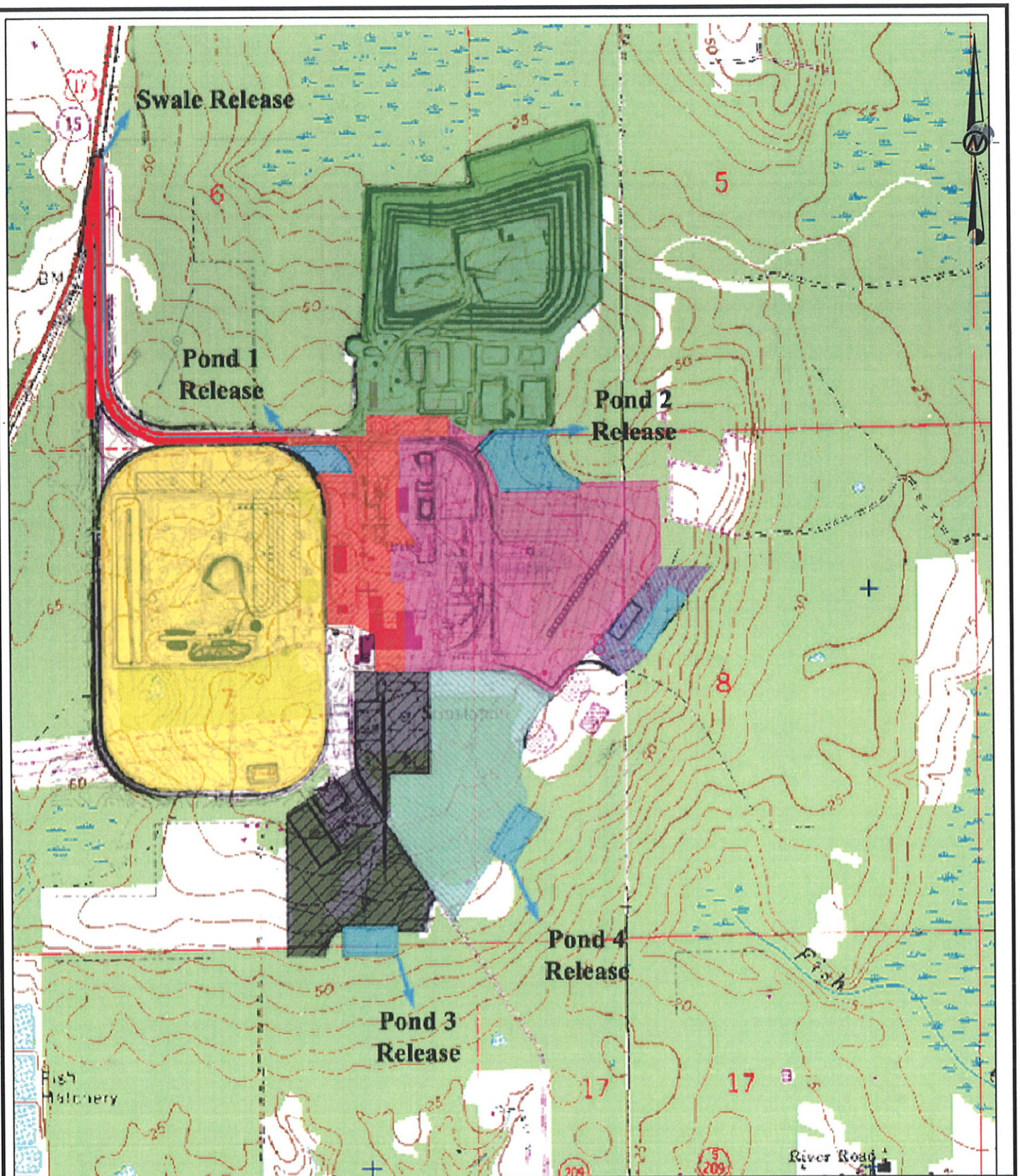


PROJECT
SEMINOLE ELECTRIC COOPERATIVE, INC.
SGS UNIT 3
PUTNAM COUNTY, FLORIDA

TITLE
STORMWATER RELEASE POINTS

Golder Associates

PROJECT No.		053-9540	FILE No.	
DESIGN	HF	03/06/06	SCALE AS SHOWN	REV. 0
CADD	MEF	03/06/06		
CHECK	MM	03/06/06	FIGURE 10.9.0-2	
REVIEW	MM	03/07/06		

Drawing file: F:\PROJECTS\2005 PROJ\053-9540\0539540b033.dwg Mar 07, 2006 - 12:47pm

Seminole Electric Cooperative, Inc.
Seminole Generation Station - Unit 1, 2, and 3
B&McD Project No. 41262
Wet Detention Pond Design Notes and Calculations

INDEX

9400 Ward Parkway

Kansas City, MO 64114

Phone: (816) 333-9400

Seminole Electric – Wet Detention Pond #1 - Design Summary

Using HEC-HMS (Hydraulic Modeling Software) the 25 year storm was modeled for pre and post-construction conditions. For basin 1, located on the western portion of the affected area (see attached site drainage plan), the pre-construction conditions were determined to be 75% impervious and post-construction conditions were determined to be 85% impervious. A wet detention pond was designed for post construction conditions for the 25 year 24 hour rain event. Storm water is carried to the pond through ditches. For the 25 year event, the post-construction peak outflow was less than the pre-construction peak outflow.

The invert elevation of the bleeddown orifice was set at an approximate elevation of 73 to provide the permanent pool volume of 11 acre-feet. The overflow weir was set at an approximate elevation of 76 to provide the required treatment volume of 346,986 cubic feet. The 6" diameter bleeddown orifice will be used to drain half of the treatment volume in 48 hours as required by the SJRWMD. Below is a summary of pre and post-construction results.

	Pre-Construction	Post-Construction
Storm Return Period	25 year	25 year
Storm Duration	24 hours	24 hours
% Impervious	75	85
Peak Discharge (ft^3/s)	100.06	3.00
Volume of Runoff (acre-ft)	27.02	2.37

Required Treatment Volume	346,986 ft^3 – Half of this volume will be drained by a 6" diameter orifice in 48 hours as required by the SJRWMD.
Required Permanent Pool Volume	477,743 ft^3

Industrial Development Drainage Area		1,959,449	SF
		44.98	Acres
Impervious Area	85%	1,665,532	SF
		38.24	Acres
Offsite Drainage Area		0	Acres

Assumptions:

Wet Detention
Time of Concentration is approx 2 hrs

Basin Bottom Elevation =	69	ft
Seasonal High Ground Water Elevation =	74	ft
Average Ground Water Elevation (approx) =	73	ft
Irregular Detention Basin, Bottom Area =	105,946	SF
Average Basin Length =	435	ft
Average Basin Width =	251	ft

Detention Pond Stage-Storage Table

Elevation	Area (SF)	Storage (CF)
69	105,946	0
69.5	107,639	53,396
70	109,812	107,759
70.5	111,994	163,211
71	114,186	219,756
71.5	116,388	277,399
72	118,599	336,146
72.5	120,820	396,001
73	123,051	456,968
73.5	125,291	519,054
74	127,542	582,262
74.5	129,801	646,598
75	132,071	712,066
75.5	134,350	778,671
76	136,639	846,418
76.5	138,938	915,313
77	141,247	985,359

Step 1: Determine Required Treatment Volume:

For wet detention, the rule requires detention of 1" of runoff or 2.5" from the impervious area, whichever is larger

1) 1" of runoff from the development area = 163,287 CF

2) 2.5" of runoff from the impervious area = 346,986 CF

Treatment Volume = **346,986 CF**

Step 2: Calculate the minimum permanent pool volume that will provide the required residence time

For non-littoral zone option, the permanent pool must be sized to provide a residence time (RT) of at least 21 days during the wet season (June-October)

Length of wet season (WS) = 153 days

From Figure 29-1, the wet season rainfall depth (R) for Palatka = 31 inches

The runoff coefficient (C) for the drainage area to the wet detention pond is:

From Table 24-1, based on a flat slope, the following land uses, sandy soils, and a 25-year storm, the runoff coefficient falls between:

Land Use	Max	Min		
Commercial/Industrial	1	0.55	→	0.78
Pasture, grass, farmland	0.17	0.22	→	0.19

Weighted runoff coefficient, based on:
85% Impervious → 0.69

Equation 29-4 gives the Permanent Pool Volume (PPV):

$$PPV = \frac{((Area)(C)(R)(RT))}{\left((WS)\left(12\frac{in}{ft}\right)\right)}$$

PPV = 10.97 acre - ft = 477,743 CF

Step 3: Determine the height of the permanent pool volume and the treatment volume:

Interpolate from the stage-storage table

Permanent Pool Volume =	477,743	→	Elevation	**73.17**
Treatment Volume + PPV =	824,728	→	Elevation	**75.84**

Place the bleeddown orifice at the top of the PPV, EL = 73.17
Place the overflow at the top of the treatment volume, EL = 75.84

Step 4: Size a the bleeddown orifice to recover one half of the treatment volume in 48 hours

Since the size of the orifice has yet to be determined, use the invert elevation of the orifice as an approximation of the flow line (center) of the orifice. After calculating the orifice size, adjust the flow line elevation and calculate the orifice size again.

Treatment Volume depth (h_1)=	2.67	ft
Half of treatment volume =	173,493	CF
Stage at half the treatment volume =	74.50	ft
Half the treatment volume depth (h_2) =	1.34	ft

The average flow rate required to draw down half of the treatment volume in 48 hours is:

Q = 1.00 cfs

The area of a circular orifice is determined by:

$$A = Q / 0.6(\sqrt{2gh})$$

Trial #1:

$h = (h_1 + h_2) / 2 =$ 2.00 ft
A = 0.15 SF
Orifice Diameter = $\sqrt{(4A/\pi)}$ = 0.43 ft

Trial #2:

Adjusted flow line = 73.17 + 1/2 (0.43 ft) = 73.38
h_1 = height of treatment volume - adjusted flow line = 2.46
h_2 = half of treatment volume - adjusted flow line = 1.12
$h = (h_1 + h_2) / 2 =$ 1.79 ft
A = 0.16 SF
Orifice Diameter = $\sqrt{(4A/\pi)}$ = 0.45 ft

Adjusted flow line = 73.17 + 1/2 (0.45 ft) = 73.39

Use orifice diameter of 6" with an invert elevation of 73.17'

HEC-HMS Palatka Area Meteorological Model

25 year - 24 hour storm

Exceedance Probability	4% (25 year)
Max Intensity Duration	5 min
Storm Distribution	24 hour
Peak Center	50%

Duration min	Duration hr	Depth * inches	Intensity Inches/Hr
5	0.08	1	12.00
15	0.25	2	8.00
60	1.00	3.4	3.40
120	2.00	4.3	2.15
180	3.00	5	1.67
360	6.00	6	1.00
720	12.00	7.2	0.60
1440	24.00	8	0.33

* Source TP-40

HEC-HMS Seminole Pre-Construction Input
Wet Detention Pond #1

	Existing Impervious Area	Remaining Area	Total Area
Method			SCS Curve No.
Area (sq. mi.)	0.0527	0.0176	0.0703
Initial Loss (in)			0.99
% Impervious	100	0	75
SCS Curve No.	85	65	80
SCS Lag (min)			72
			No Baseflow

HEC-HMS Seminole Post-Construction Input
Wet Detention Pond #1

Method	SCS Curve No.
Area (sq. mi.)	0.0703
Initial Loss (in)	0.5
% Impervious	85
SCS Curve No.	82
SCS Lag (min)	72
No Baseflow	

HEC-HMS Seminole Post-Construction Input

Wet Detention Pond #1 - Stage Area Discharge Table

Initial Pond Elevation set at = 73.17 (Top of Permanent Pool Volume)

Stage	Area	Incremental Volume	Total Volume	Area acres	Discharge
ft	ft2	ft3	ft3		cfs
69.00	377,998			**8.678**	**0.00**
69.50	382,004	190,001	190,001	**8.770**	**0.00**
70.00	386,024	192,007	382,008	**8.862**	**0.00**
70.50	390,057	194,020	576,028	**8.954**	**0.00**
71.00	394,105	196,041	772,068	**9.047**	**0.00**
71.50	398,167	198,068	970,136	**9.141**	**0.00**
72.00	402,243	200,103	1,170,239	**9.234**	**0.00**
72.50	406,333	202,144	1,372,383	**9.328**	**0.00**
73.00	410,438	204,193	1,576,576	**9.422**	**0.00**
73.50	414,556	206,249	1,782,824	**9.517**	**0.27**
74.00	418,689	208,311	1,991,135	**9.612**	**0.72**
74.50	422,836	210,381	2,201,517	**9.707**	**0.98**
75.00	426,997	212,458	2,413,975	**9.803**	**1.19**
75.50	431,172	214,542	2,628,517	**9.898**	**1.36**
76.00	435,361	216,633	2,845,150	**9.995**	**3.65**
76.50	439,565	218,732	3,063,882	**10.091**	**19.52**
77.00	443,782	220,837	3,284,719	**10.188**	**43.40**

See the bleeddown pipe and broad-crested weir calculations for the discharge amounts

Bleeddown Pipe Orifice Calculations
Wet Detention Pond #1

Place Invert Elevation of Bleeddown Pipe @ 73.17

Flow through pipe =	Q		
Orifice discharge coefficient =	C	C =	0.6
Bleeddown Pipe Diameter =	D	D =	6 in
Bleeddown Pipe Area =	A	A =	0.20 ft^2
Headwater height above centroid =	H		

$Q = (C)(A)(2gH)^{1/2}$

Stage (ft)	Discharge (cfs)
73.17	**0.00**
73.50	**0.27**
74.00	**0.72**
74.50	**0.98**
75.00	**1.19**
75.50	**1.36**
76.00	**1.52**
76.50	**1.66**
77.00	**1.79**

Broad-crested Weir Calculations
Wet Detention Pond #1

Place Invert Elevation of Weir @ 75.84

Flow over the weir =	Q		
Width of weir =	b	b =	10
Height of water flowing over the weir =		H	

$Q = C_s(b)(H)^{3/2}$ $C_s = 3.33\ ft^{0.5}/s$

Stage (ft)	Discharge (cfs)
75.84	**0.00**
76.00	**2.13**
76.50	**17.86**
77.00	**41.61**

SeminolePre

HMS * Summary of Results for Seminole_Pre

Project : Seminole_Pond_1 Run Name : 25 yr Pre

Start of Run	: 01Jan07 0800	Basin Model	: Seminole_Pre_Const
End of Run	: 02Jan07 0800	Met. Model	: 25 Year
Execution Time	: 10Feb06 1128	Control Specs	: 24 Hour

Computed Results

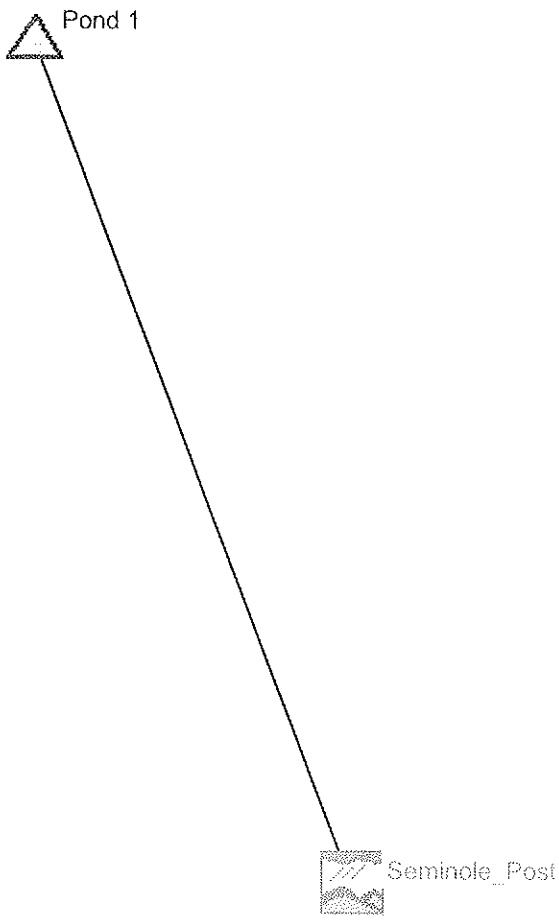
Peak Discharge	: 100.06 (cfs)	Date/Time of Peak Discharge	: 01 Jan 07 2115
Total Precipitation	: 8.00 (in)	Total Direct Runoff	: 7.21 (in)
Total Loss	: 0.71 (in)	Total Baseflow	: 0.00 (in)
Total Excess	: 7.29 (in)	Total Discharge	: 7.21 (in)

HMS * Summary of Results

Project : Seminole_Pond_1 Run Name : 25 yr Pre

Start of Run : 01Jan07 0800 Basin Model : Seminole_Pre_Const
End of Run : 02Jan07 0800 Met. Model : 25 Year
Execution Time : 10Feb06 1128 Control Specs : 24 Hour

Hydrologic Element	Discharge Peak (cfs)	Time of Peak	Volume (ac ft)	Drainage Area (sq mi)
Seminole_Pre	100.06	01 Jan 07 2115	27.023	0.070


Pond 1
Seminole_Post

HMS * Summary of Results for Pond 1

Project : Seminole_Pond_1 Run Name : 25 yr Post

Start of Run : 01Jan07 0800 Basin Model : Seminole_Post_Const

End of Run : 02Jan07 0800 Met. Model : 25 Year

Execution Time : 10Feb06 1131 Control Specs : 24 Hour

Computed Results

Peak Inflow : 103.1 (cfs) Date/Time of Peak Inflow : 01 Jan 07 2115

Peak Outflow : 3.0004 (cfs) Date/Time of Peak Outflow: 02 Jan 07 0624

Total Inflow : 7.59(in) Peak Storage : 63.05(acft)

Total Outflow: 0.63 (in) Peak Elevation : 75.858(ft)

HMS * Summary of Results for Seminole_Post

Project : Seminole_Pond_1 Run Name : 25 yr Post

Start of Run	: 01Jan07 0800	Basin Model	: Seminole_Post_Const
End of Run	: 02Jan07 0800	Met. Model	: 25 Year
Execution Time	: 10Feb06 1131	Control Specs	: 24 Hour

Computed Results

Peak Discharge	: 103.91 (cfs)	Date/Time of Peak Discharge	: 01 Jan 07 2115
Total Precipitation	: 8.00 (in)	Total Direct Runoff	: 7.59 (in)
Total Loss	: 0.33 (in)	Total Baseflow	: 0.00 (in)
Total Excess	: 7.67 (in)	Total Discharge	: 7.59 (in)

HMS * Summary of Results

Project : Seminole_Pond_1 Run Name : 25 yr Post

Start of Run : 01Jan07 0800 Basin Model : Seminole_Post_Const
End of Run : 02Jan07 0800 Met. Model : 25 Year
Execution Time : 10Feb06 1131 Control Specs : 24 Hour

Hydrologic Element	Discharge Peak (cfs)	Time of Peak	Volume (ac ft)	Drainage Area (sq mi)
Seminole_Post	103.1	01 Jan 07 2115	28.439	0.070
Pond 1	3.0004	02 Jan 07 0624	2.3662	0.070

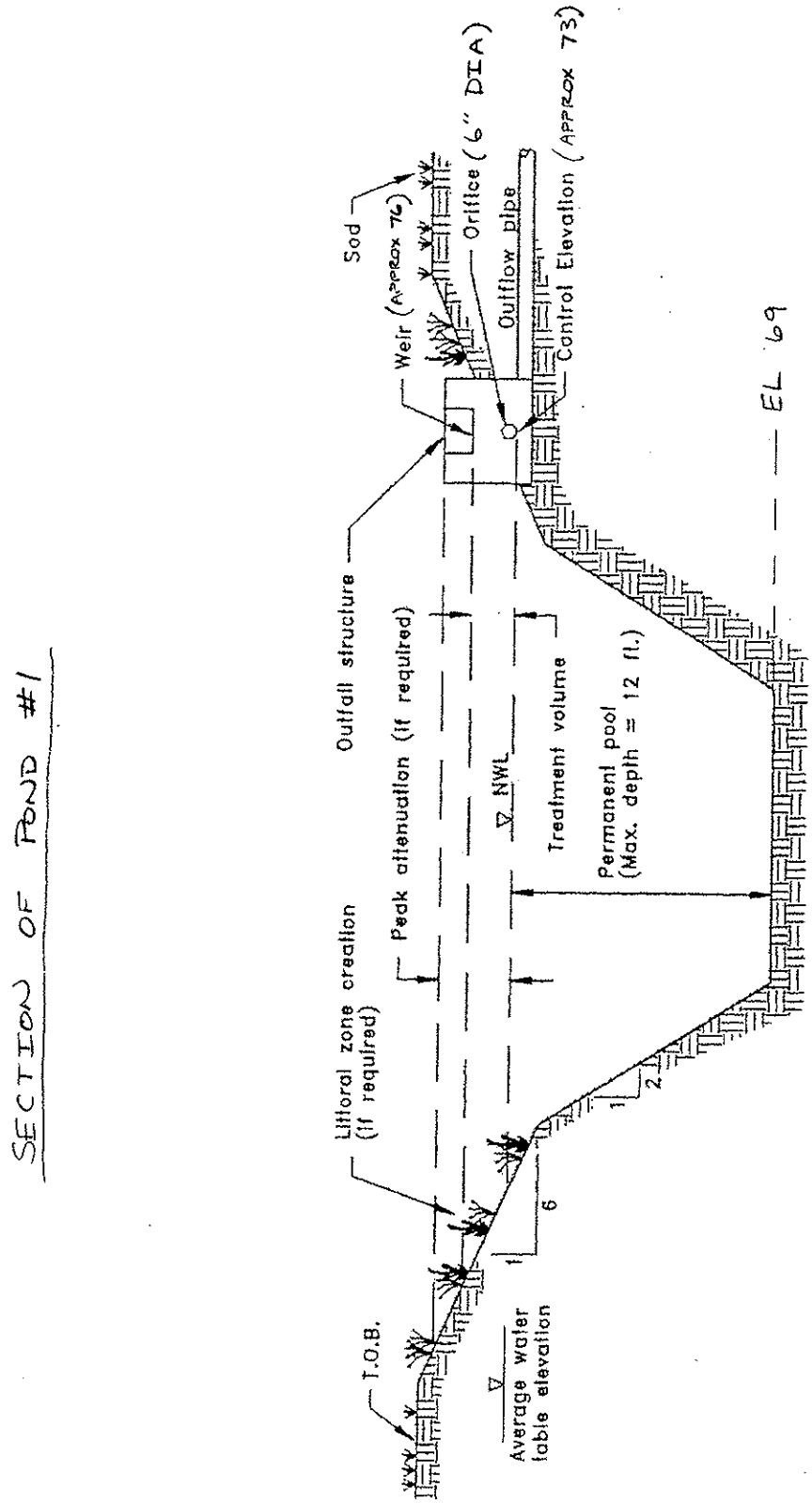


Figure 14-1. Wet detention (N.T.S.)

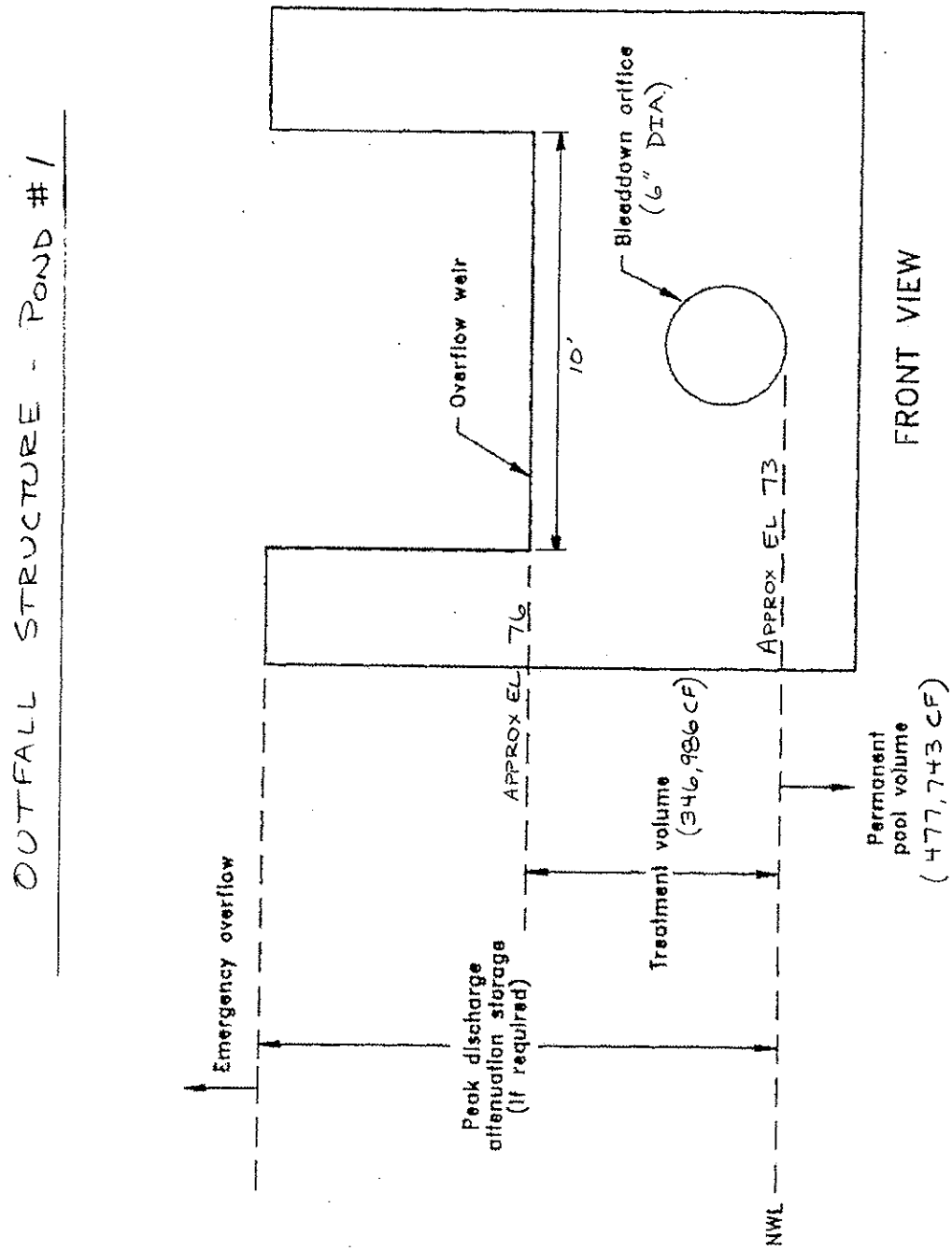


Figure 14-2. Typical wet detention outfall structure (N.T.S.)

OUTFALL DETAIL - POND #1

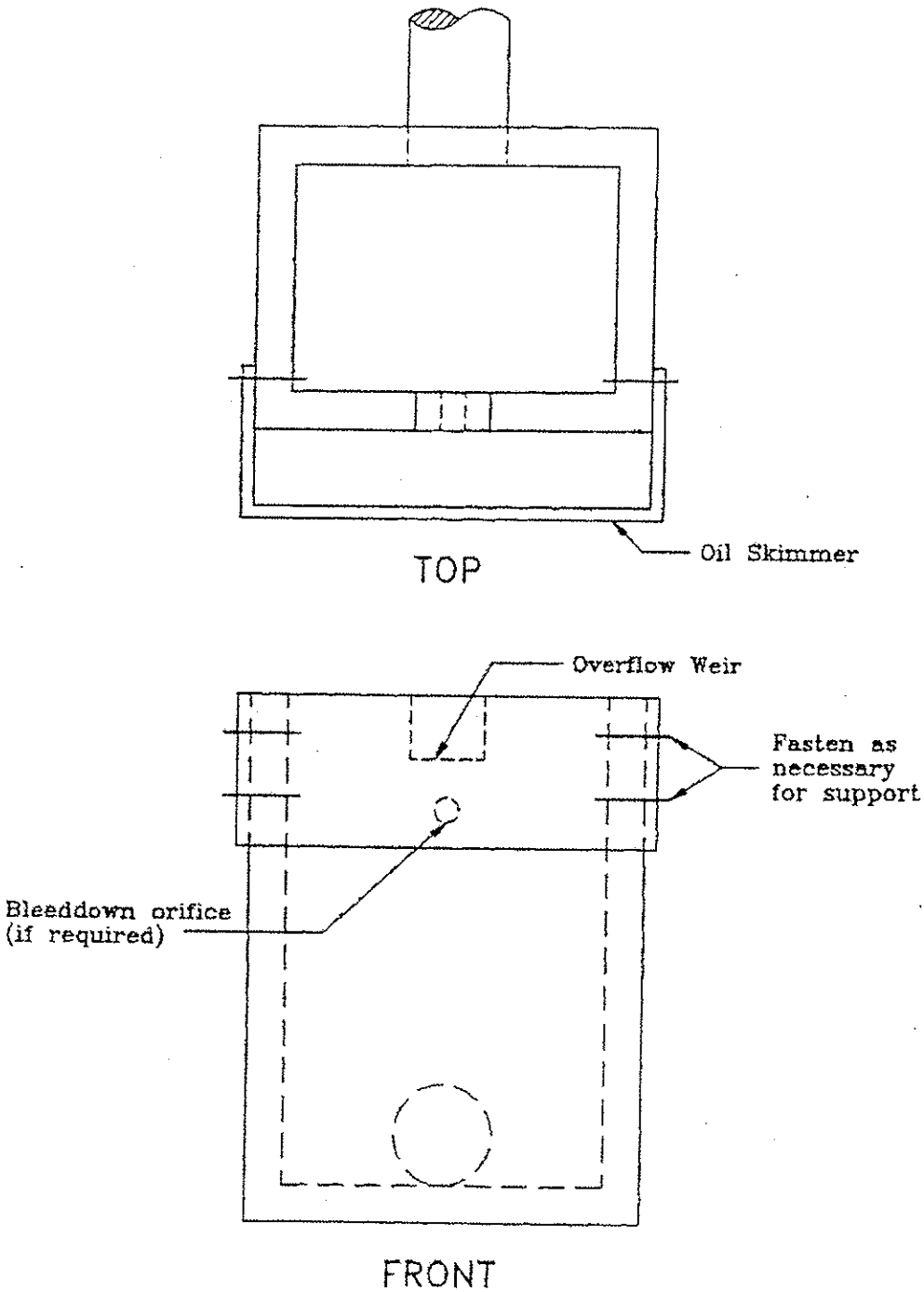


Figure 9-1. Oil skimmer detail for a typical outfall structure (N.T.S.)

Table 24-1. Runoff Coefficients (*C*) for a Design Storm Return Period of Ten Years or Less[1]

Slope	Land Use	Sandy Soils Min.	Sandy Soils Max.	Clay Soils Min.	Clay Soils Max.
Flat (0-2%)	Lawns	0.05	0.10	0.13	0.17
	Rooftops and pavement	0.95	0.95	0.95	0.95
	Pervious pavements[2]	0.75	0.95	0.90	0.95
	Woodlands	0.10	0.15	0.15	0.20
	Pasture, grass, and farmland[3]	0.15	0.20	0.20	0.25
	Residential				
	SFR: 1/2 acre lots and larger	0.30	0.35	0.35	0.45
	SFR: smaller lots and duplexes	0.35	0.45	0.40	0.50
	MFR: apartments, condominiums	0.45	0.60	0.50	0.70
	Commercial and Industrial	0.50	0.95	0.50	0.95
Rolling (2-7%)	Lawns	0.10	0.15	0.18	0.22
	Rooftops and pavements	0.95	0.95	0.95	0.95
	Pervious pavements[2]	0.80	0.95	0.90	0.95
	Woodlands	0.15	0.20	0.20	0.25
	Pasture, grass, and farmland[3]	0.20	0.25	0.25	0.30
	Residential				
	SFR: 1/2 acre lots and larger	0.35	0.50	0.40	0.55
	SFR: smaller lots and duplexes	0.40	0.55	0.45	0.60
	MFR: apartments, condominiums	0.50	0.70	0.60	0.80
	Commercial and Industrial	0.50	0.95	0.60	0.95
Steep (>7%)	Lawns	0.15	0.20	0.25	0.35
	Rooftops and pavements	0.95	0.95	0.95	0.95
	Pervious pavements[2]	0.85	0.95	0.90	0.95
	Woodlands	0.20	0.25	0.25	0.30
	Pasture, grass, and farmland[3]	0.25	0.35	0.30	0.40
	Residential				
	SFR: 1/2 acre lots and larger	0.40	0.55	0.50	0.65
	SFR: smaller lots and duplexes	0.45	0.60	0.55	0.70
	MFR: apartments, condominiums	0.60	0.75	0.65	0.85
	Commercial and Industrial	0.60	0.95	0.65	0.95

Sources: Florida Department of Transportation, 1987; Wanielista, 1990

[1]For 25- to 100-yr recurrence intervals, multiply coefficient by 1.1 and 1.25, respectively, and the product cannot exceed 1.0.
[2]Coefficients assume good ground cover and conservation treatment.
[3]Depends on depth and degree of permeability of underlying strata.
Note: SFR = Single Family Residential;
MFR = Multi-Family Residential

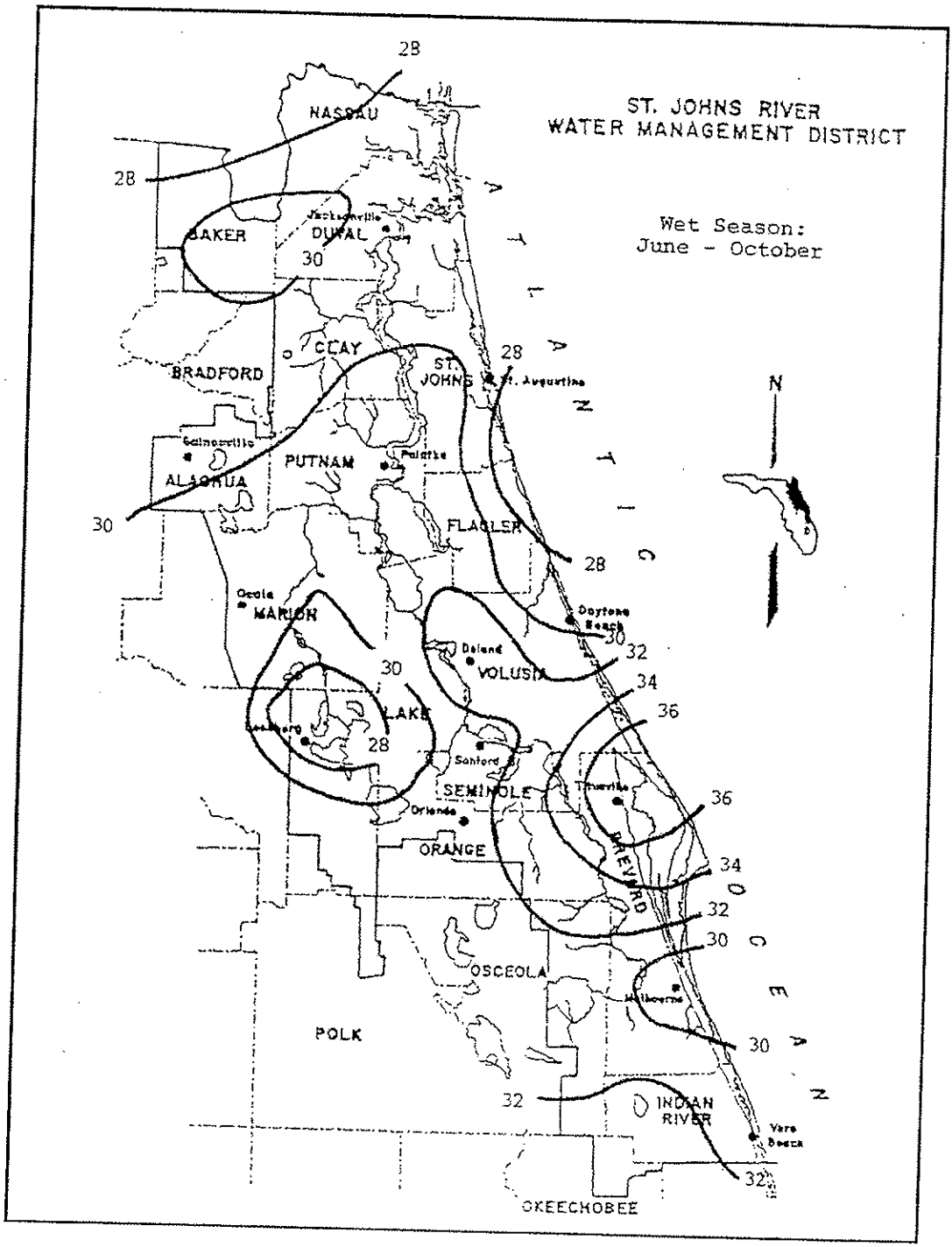


Figure 29-1. Wet Season Normal Rainfall, inches (Source: Rao, et al., 1990)

Seminole Electric – Wet Detention Pond #2 - Design Summary

Using HEC-HMS (Hydraulic Modeling Software) the 25 year storm was modeled for pre and post-construction conditions. For basin 2, located on the eastern portion of the affected area (see attached site drainage plan), the pre-construction conditions were determined to be 30% impervious and post-construction conditions were determined to be 70% impervious. A wet detention pond was designed for post construction conditions for the 25 year 24 hour rain event. Storm water is carried to the pond through ditches. For the 25 year event, the post-construction peak outflow was less than the pre-construction peak outflow.

The invert elevation of the bleeddown orifice was set at an approximate elevation of 72 to provide a permanent pool volume of 26.7 acre-feet. The overflow weir was set at an approximate elevation of 74 to provide the required treatment volume of 796,352 cubic feet. The 10" diameter bleeddown orifice will be used to drain half of the treatment volume in 48 hours as required by the SJRWMD. Below is a summary of pre and post-construction results.

	Pre-Construction	Post-Construction
Storm Return Period	25 year	25 year
Storm Duration	24 hours	24 hours
% Impervious	30	70
Peak Discharge (ft^3/s)	219.89	124.67
Volume of Runoff (acre-ft)	56.65	52.23

Required Treatment Volume	796,352 ft^3 – Half of this volume will be drained by a 10" diameter orifice in 48 hours as required by the SJRWMD.
Required Permanent Pool Volume	1,162,220 ft^3

Burns & McDonnell SINCE 1898

Seminole - Wet Detention Pond #2

JCE
3/2/2006

Industrial Development Drainage Area		5,460,696	SF
		125.36	Acres
Impervious Area	70%	3,822,487	SF
		87.75	Acres
Offsite Drainage Area		0	Acres

Assumptions:

Wet Detention

Time of Concentration is approx 2 hrs

Basin Bottom Elevation =	69	ft
Seasonal High Ground Water Elevation =	73	ft
Average Ground Water Elevation (approx) =	72	ft
Irregular Detention Basin, Bottom Area =	377,998	SF
Average Basin Length =	613	ft
Average Basin Width =	575	ft

Detention Pond Stage-Storage Table

Elevation	Area (SF)	Storage (CF)
69	377,998	0
69.5	382,004	190,001
70	386,024	382,008
70.5	390,057	576,028
71	394,105	772,068
71.5	398,167	970,136
72	402,243	1,170,239
72.5	406,333	1,372,383
73	410,438	1,576,576
73.5	414,556	1,782,824
74	418,689	1,991,135
74.5	422,836	2,201,517
75	426,997	2,413,975
75.5	431,172	2,628,517
76	435,361	2,845,150
76.5	439,565	3,063,882
77	443,782	3,284,719

Step 1: Determine Required Treatment Volume:

For wet detention, the rule requires detention of 1" of runoff or 2.5" from the impervious area, whichever is larger

1) 1" of runoff from the development area = 455,058 CF

2) 2.5" of runoff from the impervious area = 796,352 CF

Treatment Volume = **796,352 CF**

Step 2: Calculate the minimum permanent pool volume that will provide the required residence time

For non-littoral zone option, the permanent pool must be sized to provide a residence time (RT) of at least 21 days during the wet season (June-October)

Length of wet season (WS) = 153 days

From Figure 29-1, the wet season rainfall depth (R) for Palatka = 31 inches

The runoff coefficient (C) for the drainage area to the wet detention pond is:

From Table 24-1, based on a flat slope, the following land uses, sandy soils, and a 25-year storm, the runoff coefficient falls between:

Land Use	Max	Min		
Commercial/Industrial	1	0.55	→	0.78
Pasture, grass, farmland	0.17	0.22	→	0.19

Weighted runoff coefficient, based on:
70% Impervious → 0.60

Equation 29-4 gives the Permanent Pool Volume (PPV):

$$PPV = \frac{((Area)(C)(R)(RT))}{\left((WS)\left(12\frac{in}{ft}\right)\right)}$$

PPV = 26.68 acre - ft = 1,162,220 CF

Step 3: Determine the height of the permanent pool volume and the treatment volume:

Interpolate from the stage-storage table

Permanent Pool Volume =	1,162,220	→	Elevation	**71.98**
Treatment Volume + PPV =	1,958,572	→	Elevation	**73.92**

Place the bleeddown orifice at the top of the PPV, EL = 71.98
Place the overflow at the top of the treatment volume, EL = 73.92

Step 4: Size a the bleeddown orifice to recover one half of the treatment volume in 48 hours

Since the size of the orifice has yet to be determined, use the invert elevation of the orifice as an approximation of the flow line (center) of the orifice. After calculating the orifice size, adjust the flow line elevation and calculate the orifice size again.

Treatment Volume depth (h_1)=	1.94	ft
Half of treatment volume =	398,176	CF
Stage at half the treatment volume =	72.95	ft
Half the treatment volume depth (h_2) =	0.97	ft

The average flow rate required to draw down half of the treatment volume in 48 hours is:

Q = 2.30 cfs

The area of a circular orifice is determined by:

$$A = Q / 0.6(\sqrt{2gh})$$

Trial #1:

$h = (h_1 + h_2) / 2 =$ 1.46 ft

A = 0.40 SF

Orifice Diameter = $\sqrt{(4A/\pi)}$ = 0.71 ft

Trial #2:

Adjusted flow line = 71.98 + 1/2 (0.71 ft) = 72.34

h_1 = height of treatment volume - adjusted flow line = 1.59

h_2 = half of treatment volume - adjusted flow line = 0.62

$h = (h_1 + h_2) / 2 =$ 1.10 ft

A = 0.46 SF

Orifice Diameter = $\sqrt{(4A/\pi)}$ = 0.76 ft

Adjusted flow line = 71.98 + 1/2 (0.76 ft) = 72.36

Use orifice diameter of 10" with an invert elevation of 71.98'

HEC-HMS Palatka Area Meteorological Model

25 year - 24 hour storm

Exceedance Probability	4% (25 year)
Max Intensity Duration	5 min
Storm Distribution	24 hour
Peak Center	50%

Duration min	Duration hr	Depth * inches	Intensity Inches/Hr
5	0.08	1	12.00
15	0.25	2	8.00
60	1.00	3.4	3.40
120	2.00	4.3	2.15
180	3.00	5	1.67
360	6.00	6	1.00
720	12.00	7.2	0.60
1440	24.00	8	0.33

* Source TP-40

HEC-HMS Seminole Pre-Construction Input
Wet Detention Pond #2

	Existing Impervious Area	Remaining Area	Total Area
Method			SCS Curve No.
Area (sq. mi.)	0.0588	0.1371	0.1959
Initial Loss (in)			0.99
% Impervious	100	0	30
SCS Curve No.	85	65	71
SCS Lag (min)			72
			No Baseflow

HEC-HMS Seminole Post-Construction Input
Wet Detention Pond #2

Method	SCS Curve No.
Area (sq. mi.)	0.1959
Initial Loss (in)	0.5
% Impervious	70
SCS Curve No.	79
SCS Lag (min)	72
No Baseflow	

HEC-HMS Seminole Post-Construction Input

Wet Detention Pond #2 - Stage Area Discharge Table

Initial Pond Elevation set at = 71.98 (Top of Permanent Pool Volume)

Stage	Area	Incremental Volume	Total Volume	Area acres	Discharge
ft	ft2	ft3	ft3		cfs
69.00	377,998			**8.678**	**0.00**
69.50	382,004	190,001	190,001	**8.770**	**0.00**
70.00	386,024	192,007	382,008	**8.862**	**0.00**
70.50	390,057	194,020	576,028	**8.954**	**0.00**
71.00	394,105	196,041	772,068	**9.047**	**0.00**
71.50	398,167	198,068	970,136	**9.141**	**0.00**
72.00	402,243	200,103	1,170,239	**9.234**	**0.00**
72.50	406,333	202,144	1,372,383	**9.328**	**0.84**
73.00	410,438	204,193	1,576,576	**9.422**	**2.04**
73.50	414,556	206,249	1,782,824	**9.517**	**2.76**
74.00	418,689	208,311	1,991,135	**9.612**	**4.05**
74.50	422,836	210,381	2,201,517	**9.707**	**18.45**
75.00	426,997	212,458	2,413,975	**9.803**	**41.52**
75.50	431,172	214,542	2,628,517	**9.898**	**70.65**
76.00	435,361	216,633	2,845,150	**9.995**	**104.75**
76.50	439,565	218,732	3,063,882	**10.091**	**143.17**
77.00	443,782	220,837	3,284,719	**10.188**	**185.47**

See the bleeddown pipe and broad-crested weir calculations for the discharge amounts

Bleeddown Pipe Orifice Calculations
Wet Detention Pond #2

Place Invert Elevation of Bleeddown Pipe @ 71.98

Flow through pipe =	Q		
Orifice discharge coefficient =	C	C =	0.6
Bleeddown Pipe Diameter =	D	D =	10 in
Bleeddown Pipe Area =	A	A =	0.55 ft^2
Headwater height above centroid =	H		

$Q = (C)(A)(2gH)^{1/2}$

Stage (ft)	Discharge (cfs)
71.98	**0.00**
72.00	**0.00**
72.50	**0.84**
73.00	**2.04**
73.50	**2.76**
74.00	**3.33**
74.50	**3.81**
75.00	**4.24**
75.50	**4.63**
76.00	**4.99**
76.50	**5.32**
77.00	**5.63**

Broad-crested Weir Calculations
Wet Detention Pond #2

Place Invert Elevation of Weir @ 73.92

Flow over the weir =	Q		
Width of weir =	b	b =	10
Height of water flowing over the weir =		H	

$Q = C_s(b)(H)^{3/2}$ $C_s = 3.33\ ft^{0.5}/s$

Stage (ft)	Discharge (cfs)
73.92	**0.00**
74.00	**0.73**
74.50	**14.64**
75.00	**37.28**
75.50	**66.02**
76.00	**99.76**
76.50	**137.85**
77.00	**179.84**

Seminole_Pre

HMS * Summary of Results for Seminole_Pre

Project : Seminole_Pond_2 Run Name : 25 yr Pre

Start of Run	: 01Jan07 0800	Basin Model	: Seminole_Pre_Const
End of Run	: 02Jan07 0800	Met. Model	: 25 Year
Execution Time	: 10Feb06 1149	Control Specs	: 24 Hours

Computed Results

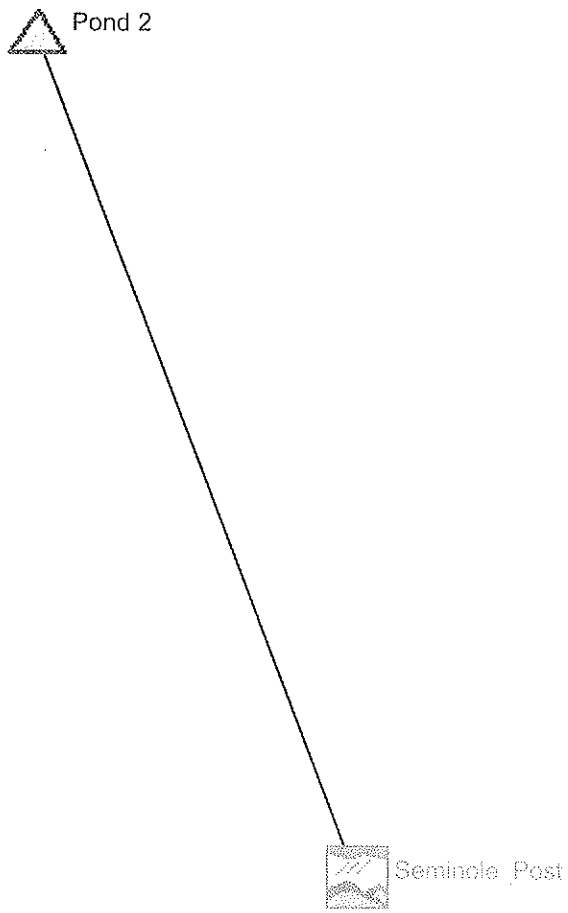
Peak Discharge	: 219.89 (cfs)	Date/Time of Peak Discharge	: 01 Jan 07 2118
Total Precipitation	: 8.00 (in)	Total Direct Runoff	: 5.42 (in)
Total Loss	: 2.50 (in)	Total Baseflow	: 0.00 (in)
Total Excess	: 5.50 (in)	Total Discharge	: 5.42 (in)

HMS * Summary of Results

Project : Seminole_Pond_2 Run Name : 25 yr Pre

Start of Run : 01Jan07 0800 Basin Model : Seminole_Pre_Const
End of Run : 02Jan07 0800 Met. Model : 25 Year
Execution Time : 10Feb06 1149 Control Specs : 24 Hours

Hydrologic Element	Discharge Peak (cfs)	Time of Peak	Volume (ac ft)	Drainage Area (sqmi)
Seminole_Pre	219.89	01 Jan 07 2118	56.645	0.196


Pond 2
Seminole_Post

HMS * Summary of Results for Pond 2

Project : Seminole_Pond_2 Run Name : 25 yr Post

Start of Run	: 01Jan07 0800	Basin Model	: Seminole_Post_Const
End of Run	: 02Jan07 0800	Met. Model	: 25 Year
Execution Time	: 10Feb06 1152	Control Specs	: 24 Hours

Computed Results

Peak Inflow	: 277.87 (cfs)	Date/Time of Peak Inflow	: 01 Jan 07 2115
Peak Outflow	: 124.67 (cfs)	Date/Time of Peak Outflow	: 01 Jan 07 2235
Total Inflow	: 7.18 (in)	Peak Storage	: 67.920(acft)
Total Outflow	: 5.00 (in)	Peak Elevation	: 76.259(ft)

HMS * Summary of Results for Seminole_Post

Project : Seminole_Pond_2 Run Name : 25 yr Post

Start of Run	: 01Jan07 0800	Basin Model	: Seminole_Post_Const
End of Run	: 02Jan07 0800	Met. Model	: 25 Year
Execution Time	: 10Feb06 1152	Control Specs	: 24 Hours

Computed Results

Peak Discharge	: 277.87 (cfs)	Date/Time of Peak Discharge	: 01 Jan 07 2115
Total Precipitation	: 8.00 (in)	Total Direct Runoff	: 7.18 (in)
Total Loss	: 0.74 (in)	Total Baseflow	: 0.00 (in)
Total Excess	: 7.26 (in)	Total Discharge	: 7.18 (in)

HMS * Summary of Results

Project : Seminole_Pond_2 Run Name : 25 yr Post

Start of Run : 01Jan07 0800 Basin Model : Seminole_Post_Const

End of Run : 02Jan07 0800 Met. Model : 25 Year

Execution Time : 10Feb06 1152 Control Specs : 24 Hours

Hydrologic Element	Discharge Peak (cfs)	Time of Peak	Volume (ac ft)	Drainage Area (sqmi)
Seminole_Post	277.87	01 Jan 07 2115	74.973	0.196
Pond 2	124.67	01 Jan 07 2215	52.228	0.196

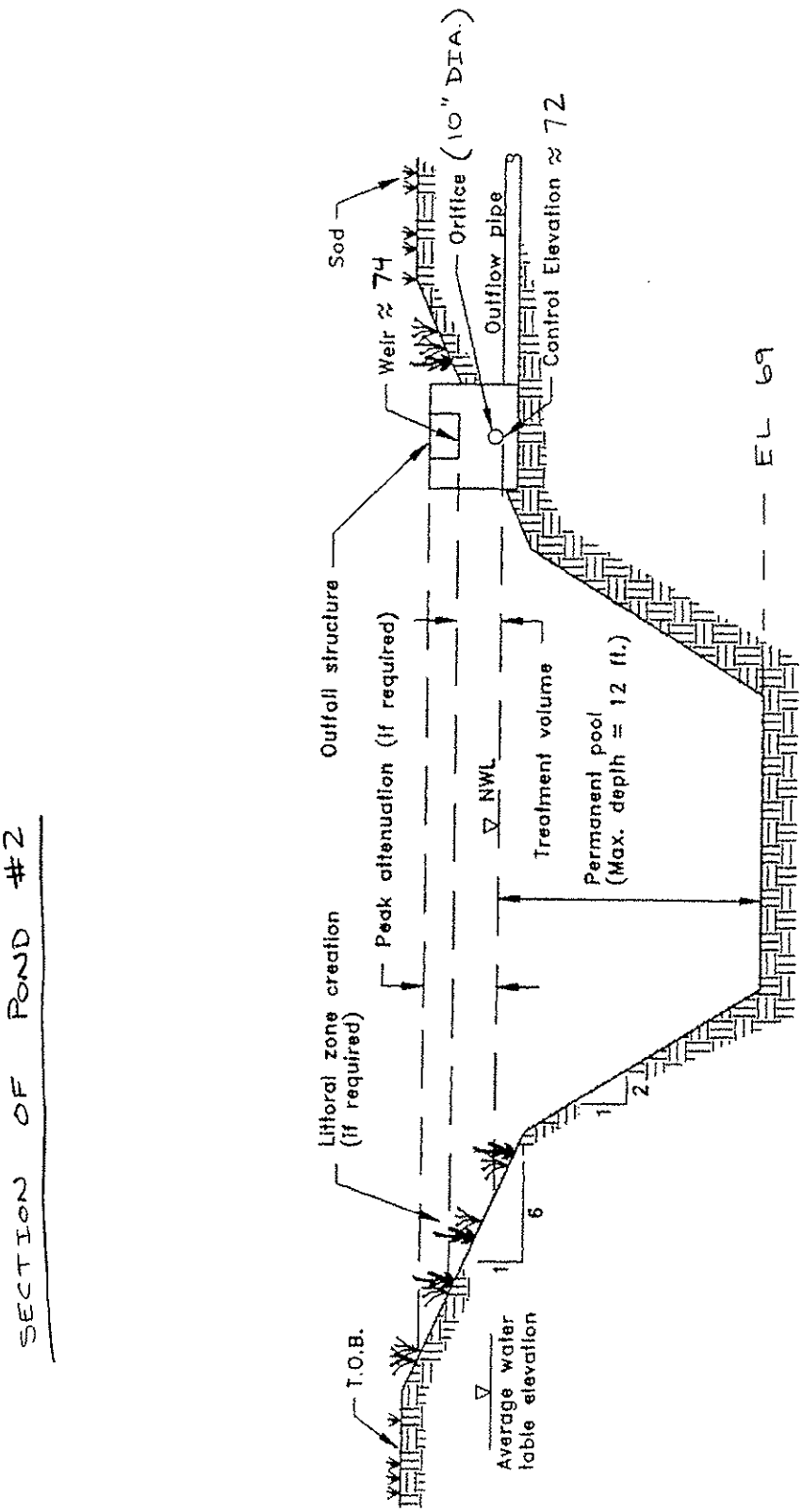


Figure 14-1. Wet detention (N.T.S.)

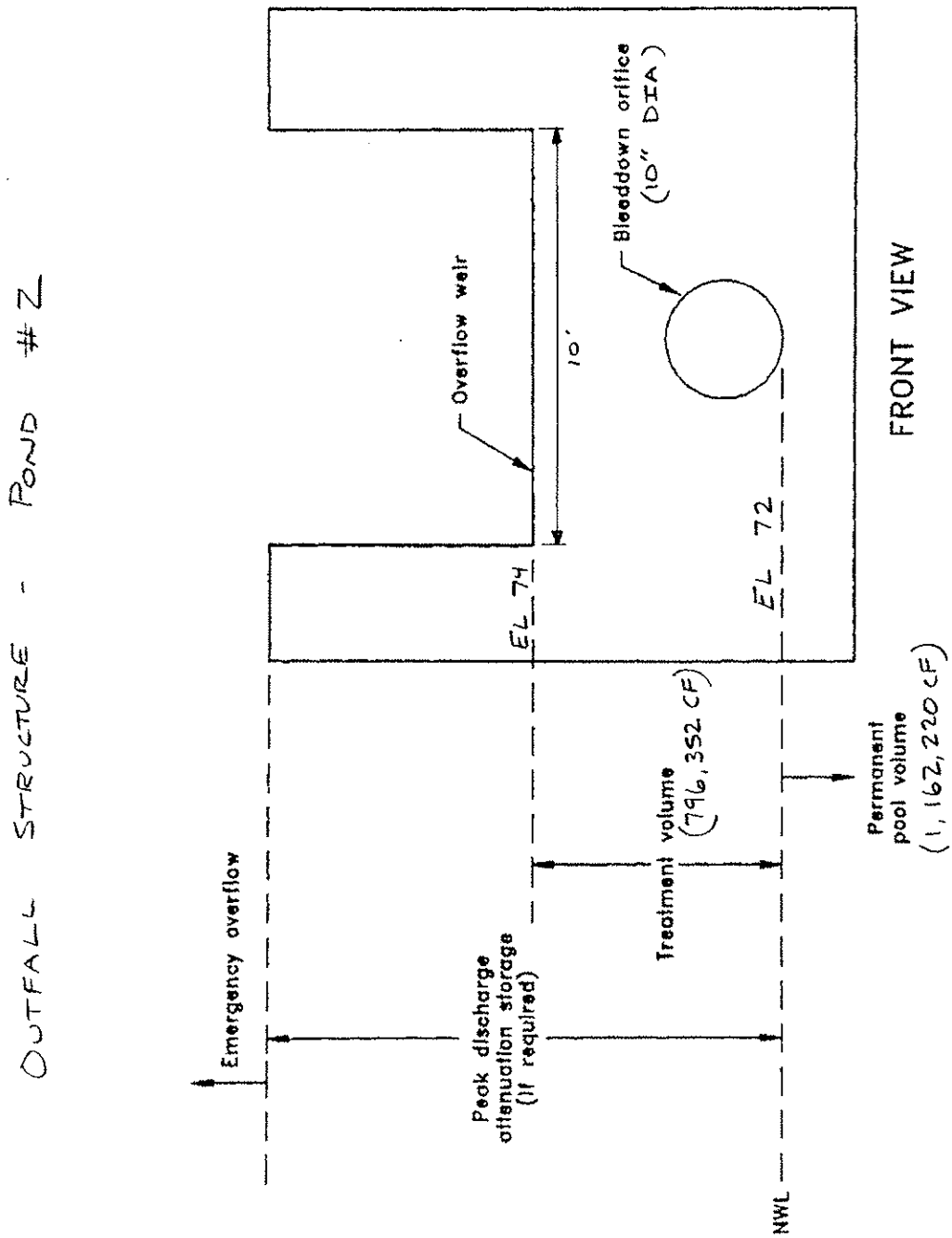


Figure 14-2. Typical wet detention outfall structure (N.T.S.)

OUTFALL DETAIL - POND #2

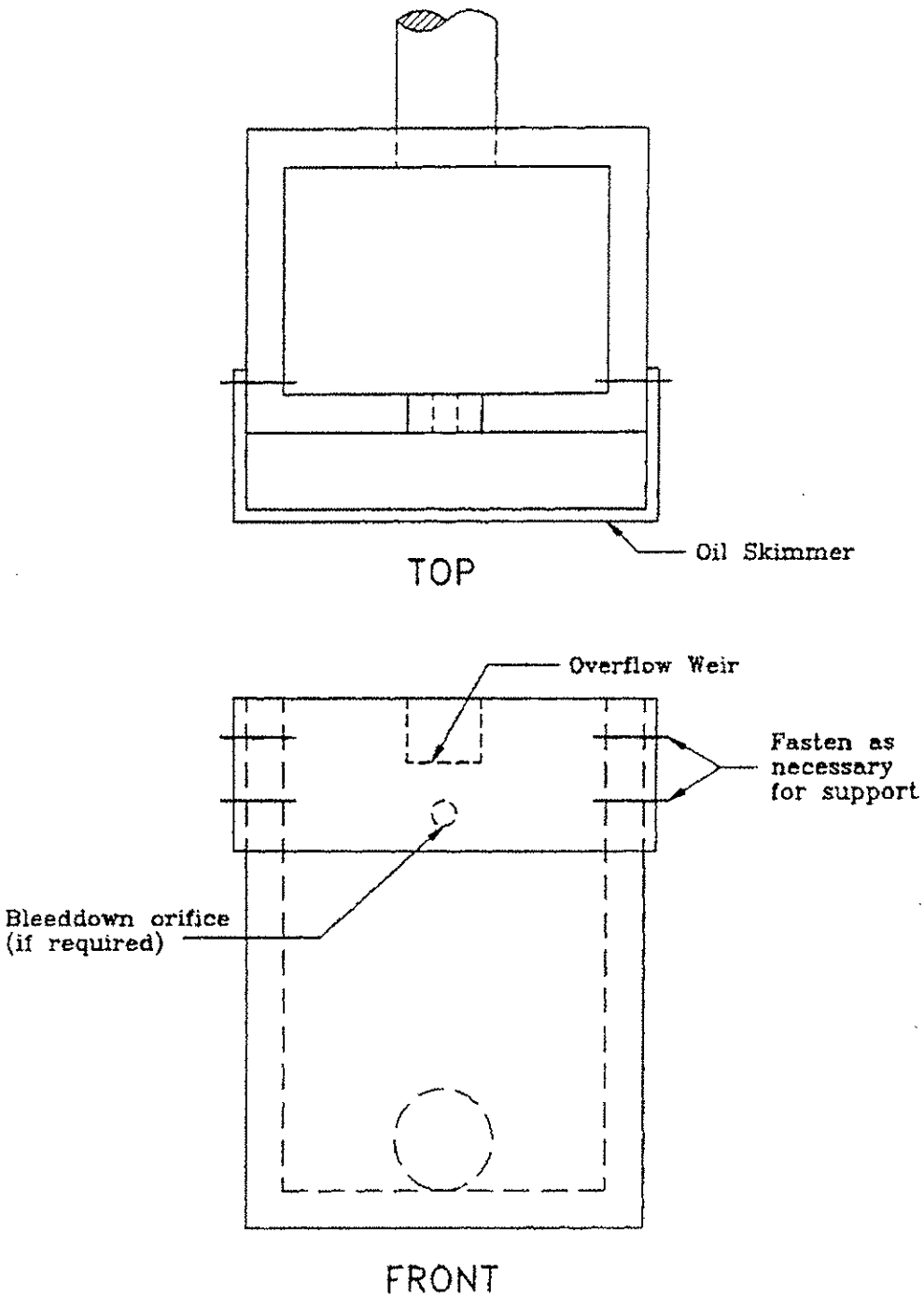


Figure 9-1. Oil skimmer detail for a typical outfall structure (N.T.S.)

Table 24-1. Runoff Coefficients (*C*) for a Design Storm Return Period of Ten Years or Less[1]

Slope	Land Use	Sandy Soils Min.	Sandy Soils Max.	Clay Soils Min.	Clay Soils Max.
Flat (0-2%)	Lawns	0.05	0.10	0.13	0.17
	Rooftops and pavement	0.95	0.95	0.95	0.95
	Pervious pavements[2]	0.75	0.95	0.90	0.95
	Woodlands	0.10	0.15	0.15	0.20
	Pasture, grass, and farmland[3]	0.15	0.20	0.20	0.25
	Residential				
	SFR: 1/2 acre lots and larger	0.30	0.35	0.35	0.45
	SFR: smaller lots and duplexes	0.35	0.45	0.40	0.50
	MFR: apartments, condominiums	0.45	0.60	0.50	0.70
	Commercial and Industrial	0.50	0.95	0.50	0.95
Rolling (2-7%)	Lawns	0.10	0.15	0.18	0.22
	Rooftops and pavements	0.95	0.95	0.95	0.95
	Pervious pavements[2]	0.80	0.95	0.90	0.95
	Woodlands	0.15	0.20	0.20	0.25
	Pasture, grass, and farmland[3]	0.20	0.25	0.25	0.30
	Residential				
	SFR: 1/2 acre lots and larger	0.35	0.50	0.40	0.55
	SFR: smaller lots and duplexes	0.40	0.55	0.45	0.60
	MFR: apartments, condominiums	0.50	0.70	0.60	0.80
	Commercial and Industrial	0.50	0.95	0.60	0.95
Steep (>7%)	Lawns	0.15	0.20	0.25	0.35
	Rooftops and pavements	0.95	0.95	0.95	0.95
	Pervious pavements[2]	0.85	0.95	0.90	0.95
	Woodlands	0.20	0.25	0.25	0.30
	Pasture, grass, and farmland[3]	0.25	0.35	0.30	0.40
	Residential				
	SFR: 1/2 acre lots and larger	0.40	0.55	0.50	0.65
	SFR: smaller lots and duplexes	0.45	0.60	0.55	0.70
	MFR: apartments, condominiums	0.60	0.75	0.65	0.85
	Commercial and Industrial	0.60	0.95	0.65	0.95

Sources: Florida Department of Transportation, 1987; Wanielista, 1990

[1]For 25- to 100-yr recurrence intervals, multiply coefficient by 1.1 and 1.25, respectively, and the product cannot exceed 1.0.
[2]Coefficients assume good ground cover and conservation treatment.
[3]Depends on depth and degree of permeability of underlying strata.
Note: SFR = Single Family Residential;
MFR = Multi-Family Residential

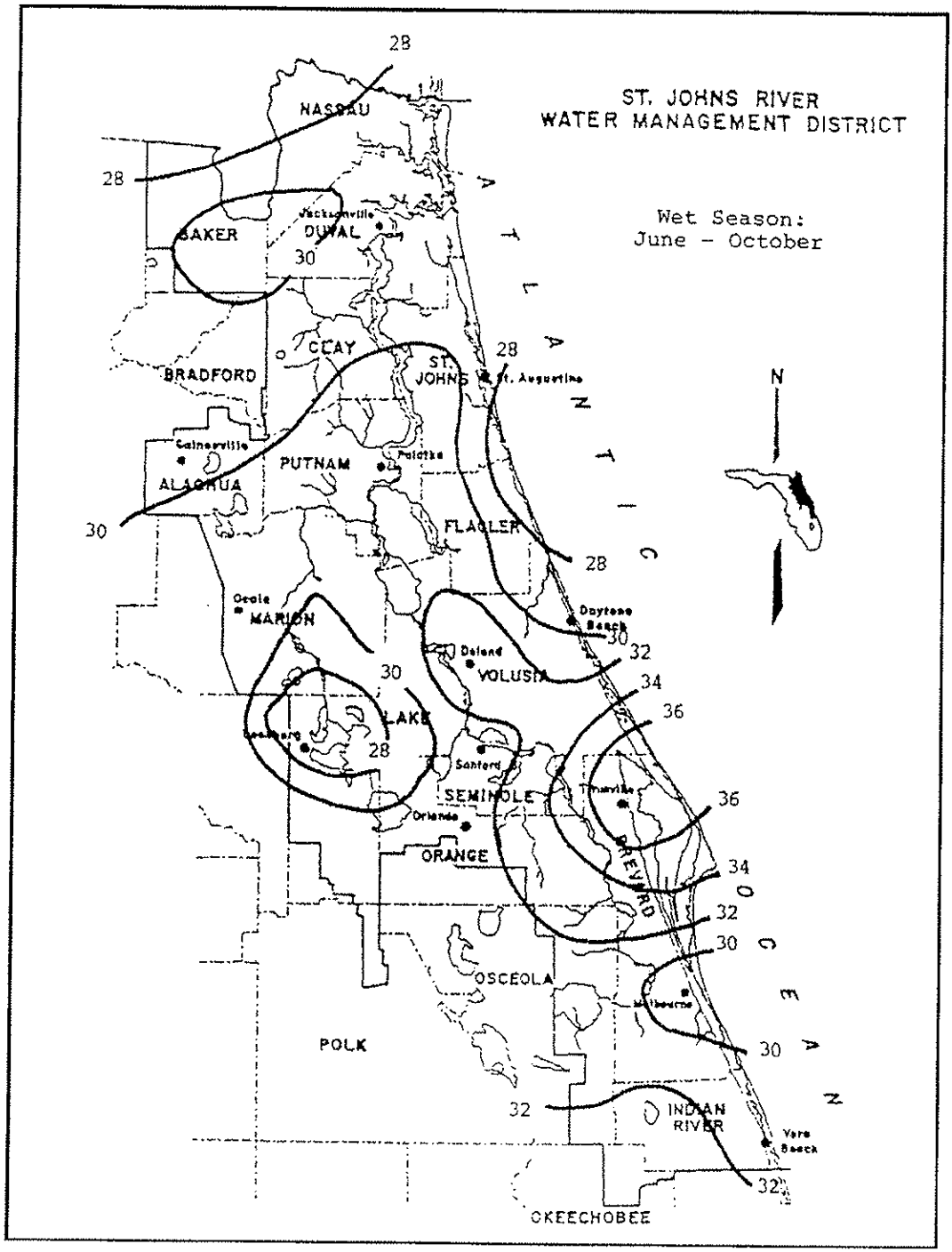


Figure 29-1. Wet Season Normal Rainfall, inches (Source: Rao, et al., 1990)

Seminole Electric Cooperative, Inc.
Seminole Generation Station - Unit 3
B&McD Project No. 39736
Wet Detention Pond Design Notes and Calculations

INDEX

9400 Ward Parkway

Burns & McDonnell

Kansas City, MO 64114

Phone: (816) 333-9400

Seminole Electric – Pond #3 - Design Summary

Using HEC-HMS (Hydraulic Modeling Software) the 25 year storm was modeled for pre and post-construction conditions. For basin 3, located on the eastern portion of the affected area (see attached site drainage plan), the pre-construction conditions were determined to be 15% impervious and post-construction conditions were determined to be 90% impervious. A wet detention pond was designed for post construction conditions for the 25 year 24 hour rain event. Storm water is carried to the pond through ditches. For the 25 year event, the post-construction peak outflow was less than the pre-construction peak outflow.

The invert elevation of the bleeddown orifice was set at an approximate elevation of 63.5 to provide the permanent pool volume of 14.5 acre-feet. The overflow weir was set at an approximate elevation of 66.5 to provide the required treatment volume of 464,022 cubic feet. The 6" diameter bleeddown orifice will be used to drain half of the treatment volume in 48 hours as required by the SJRWMD. Below is a summary of pre and post-construction results.

	Pre-Construction	Post-Construction
Storm Return Period	25 year	25 year
Storm Duration	24 hours	24 hours
% Impervious	15	90
Peak Discharge (ft^3/s)	88.57	85.64
Volume of Runoff (acre-ft)	22.39	25.26

Required Treatment Volume	464,022 ft^3 – Half of this volume will be drained by a 6" diameter orifice in 48 hours as required by the SJRWMD.
Required Permanent Pool Volume	628,946 ft^3

Industrial Development Drainage Area		2,474,785	SF
		56.81	Acres
Impervious Area	90%	2,227,307	SF
		51.13	Acres
Offsite Drainage Area		0	Acres

Assumptions:
Wet Detention
Time of Concentration is approx 1.2 hrs

Basin Bottom Elevation =	59	ft
Seasonal High Ground Water Elevation =	64.3	ft
Average Ground Water Elevation (approx) =	63.3	ft
Rectangular Detention Basin, Bottom Area =	131,250	SF
Average Basin Length =	525	ft
Average Basin Width =	250	ft

Detention Pond Stage-Storage Table

Elevation	Area (SF)	Storage (CF)
59	131,250	0
59.5	133,584	66,209
60	135,936	133,589
60.5	138,306	202,149
61	140,694	271,899
61.5	143,100	342,848
62	145,524	415,004
62.5	147,966	488,376
63	150,426	562,974
63.5	152,904	638,807
64	155,400	715,883
64.5	157,914	794,211
65	160,446	873,801
65.5	162,996	954,662
66	165,564	1,036,802
66.5	168,150	1,120,230
67	170,754	1,204,956
67.5	173,376	1,290,989
68	176,016	1,378,337
68.5	178,674	1,467,009
69	181,350	1,557,015

Step 1: Determine Required Treatment Volume:

For wet detention, the rule requires detention of 1" of runoff or 2.5" from the impervious area, whichever is larger

1) 1" of runoff from the development area = 206,232 CF

2) 2.5" of runoff from the impervious area = 464,022 CF

Treatment Volume = **464,022 CF**

Step 2: Calculate the minimum permanent pool volume that will provide the required residence time

For non-littoral zone option, the permanent pool must be sized to provide a residence time (RT) of at least 21 days during the wet season (June-October)

Length of wet season (WS) = 153 days

From Figure 29-1, the wet season rainfall depth (R) for Palatka = 31 inches

The runoff coefficient (C) for the drainage area to the wet detention pond is:

From Table 24-1, based on a flat slope, the following land uses, sandy soils, and a 25-year storm, the runoff coefficient falls between:

Land Use	Max	Min		
Commercial/Industrial	1	0.55	→	0.78
Pasture, grass, farmland	0.17	0.22	→	0.19

Weighted runoff coefficient, based on:
90% Impervious → 0.72

Equation 29-4 gives the Permanent Pool Volume (PPV):

$$PPV = \frac{((Area)(C)(R)(RT))}{\left((WS)\left(12\frac{in}{ft}\right)\right)}$$

PPV = 14.44 acre - ft = 628,946 CF

Step 3: Determine the height of the permanent pool volume and the treatment volume:

Interpolate from the stage-storage table

Permanent Pool Volume =	628,946	→	Elevation	**63.43**
Treatment Volume + PPV =	1,092,968	→	Elevation	**66.34**

Place the bleeddown orifice at the top of the PPV, EL = 63.43
Place the overflow at the top of the treatment volume, EL = 66.34

Step 4: Size a the bleeddown orifice to recover one half of the treatment volume in 48 hours

Since the size of the orifice has yet to be determined, use the invert elevation of the orifice as an approximation of the flow line (center) of the orifice. After calculating the orifice size, adjust the flow line elevation and calculate the orifice size again.

Treatment Volume depth (h_1)=	2.90	ft
Half of treatment volume =	232,011	CF
Stage at half the treatment volume =	64.89	ft
Half the treatment volume depth (h_2) =	1.45	ft

The average flow rate required to draw down half of the treatment volume in 48 hours is:

Q = 1.34 cfs

The area of a circular orifice is determined by:

$$A = Q / 0.6(\sqrt{2gh})$$

Trial #1:

$h = (h_1 + h_2) / 2 =$ 2.18 ft
A = 0.19 SF
Orifice Diameter = $\sqrt{(4A/\pi)}$ = 0.49 ft

Trial #2:

Adjusted flow line = 63.43 + 1/2 (0.49 ft) = 63.68
h_1 = height of treatment volume - adjusted flow line = 2.66
h_2 = half of treatment volume - adjusted flow line = 1.21
$h = (h_1 + h_2) / 2 =$ 1.93 ft
A = 0.20 SF
Orifice Diameter = $\sqrt{(4A/\pi)}$ = 0.51 ft

Adjusted flow line = 63.43 + 1/2 (0.51 ft) = 63.69

Use an orifice diameter of 6" with an invert elevation of 63.43'

Bleeddown Pipe Orifice Calculations
Pond #3

Place Invert Elevation of Bleeddown Pipe @ 63.43

Flow through pipe =	Q		
Orifice discharge coefficient =	C	C =	0.6
Bleeddown Pipe Diameter =	D	D =	6 in
Bleeddown Pipe Area =	A	A =	0.20 ft^2
Headwater height above centroid =	H		

$Q = (C)(A)(2gH)^{1/2}$

Broad-crested Weir Calculations
Pond #3

Place Invert Elevation of Weir @ 66.34

Flow over the weir =	Q		
Width of weir =	b	b =	7
Height of water flowing over the weir =		H	

$Q = C_s(b)(H)^{3/2}$ $C_s = 3.33\ ft^{0.5}/s$

Overall Pond Stage-Discharge Table
Pond #3

Stage (ft)	Orifice Discharge (cfs)	Weir Discharge (cfs)	Total Discharge (cfs)
59.00	0.00	0.00	0.00
59.50	0.00	0.00	0.00
60.00	0.00	0.00	0.00
60.50	0.00	0.00	0.00
61.00	0.00	0.00	0.00
61.50	0.00	0.00	0.00
62.00	0.00	0.00	0.00
62.50	0.00	0.00	0.00
63.00	0.00	0.00	0.00
63.50	0.00	0.00	0.00
64.00	0.53	0.00	0.53
64.50	0.85	0.00	0.85
65.00	1.08	0.00	1.08
65.50	1.27	0.00	1.27
66.00	1.44	0.00	1.44
66.50	1.59	1.54	3.13
67.00	1.72	12.59	14.32
67.50	1.85	29.25	31.10
68.00	1.96	50.01	51.97
68.50	2.07	74.17	76.25
69.00	2.18	101.32	103.50

HEC-HMS Palatka Area Meteorological Model

25 year - 24 hour storm

Exceedance Probability	4% (25 year)
Max Intensity Duration	5 min
Storm Distribution	24 hour
Peak Center	50%

Duration min	Duration hr	Depth * inches	Intensity Inches/Hr
5	0.08	1	12.00
15	0.25	2	8.00
60	1.00	3.4	3.40
120	2.00	4.3	2.15
180	3.00	5	1.67
360	6.00	6	1.00
720	12.00	7.2	0.60
1440	24.00	8	0.33

* Source TP-40

HEC-HMS Seminole Pre-Construction Input
Pond #3

	Existing Impervious Area	Remaining Area	Total Area
Method			SCS Curve No.
Area (sq. mi.)	0.0133	0.0755	0.0888
Initial Loss (in)			0.94
% Impervious	100	0	15
SCS Curve No.	85	65	68
SCS Lag (min)			72
			No Baseflow

HEC-HMS Seminole Post-Construction Input
Pond #3

Method	SCS Curve No.
Area (sq. mi.)	0.0888
Initial Loss (in)	0.4
% Impervious	90
SCS Curve No.	85
SCS Lag (min)	42
No Baseflow	

HEC-HMS Seminole Post-Construction Input

Pond #3 - Stage Area Discharge Table

Initial Pond Elevation set at = 63.43 (Top of Permanent Pool Volume)

Stage	Area	Incremental Volume	Total Volume	Area acres	Discharge
ft	ft2	ft3	ft3		cfs
59.00	131,250			**3.013**	**0.00**
59.50	133,584	66,209	66,209	**3.067**	**0.00**
60.00	135,936	67,380	133,589	**3.121**	**0.00**
60.50	138,306	68,561	202,149	**3.175**	**0.00**
61.00	140,694	69,750	271,899	**3.230**	**0.00**
61.50	143,100	70,949	342,848	**3.285**	**0.00**
62.00	145,524	72,156	415,004	**3.341**	**0.00**
62.50	147,966	73,373	488,376	**3.397**	**0.00**
63.00	150,426	74,598	562,974	**3.453**	**0.00**
63.50	152,904	75,833	638,807	**3.510**	**0.00**
64.00	155,400	77,076	715,883	**3.567**	**0.53**
64.50	157,914	78,329	794,211	**3.625**	**0.85**
65.00	160,446	79,590	873,801	**3.683**	**1.08**
65.50	162,996	80,861	954,662	**3.742**	**1.27**
66.00	165,564	82,140	1,036,802	**3.801**	**1.44**
66.50	168,150	83,429	1,120,230	**3.860**	**3.13**
67.00	170,754	84,726	1,204,956	**3.920**	**14.32**
67.50	173,376	86,033	1,290,989	**3.980**	**31.10**
68.00	176,016	87,348	1,378,337	**4.041**	**51.97**
68.50	178,674	88,673	1,467,009	**4.102**	**76.25**
69.00	181,350	90,006	1,557,015	**4.163**	**103.50**

See the bleeddown pipe and broad-crested weir calculations for the discharge amounts


Laydown_East_Pre

HMS * Summary of Results for

Laydown_East_Pre

Project : Seminole_Pond_3 Run Name : 25 yr Pre

Start of Run	: 01Jan07 0800	Basin Model	: Laydown_East_Pre
End of Run	: 02Jan07 0800	Met. Model	: 25 Year
Execution Time	: 24Feb06 1522	Control Specs	: Control 1

Computed Results

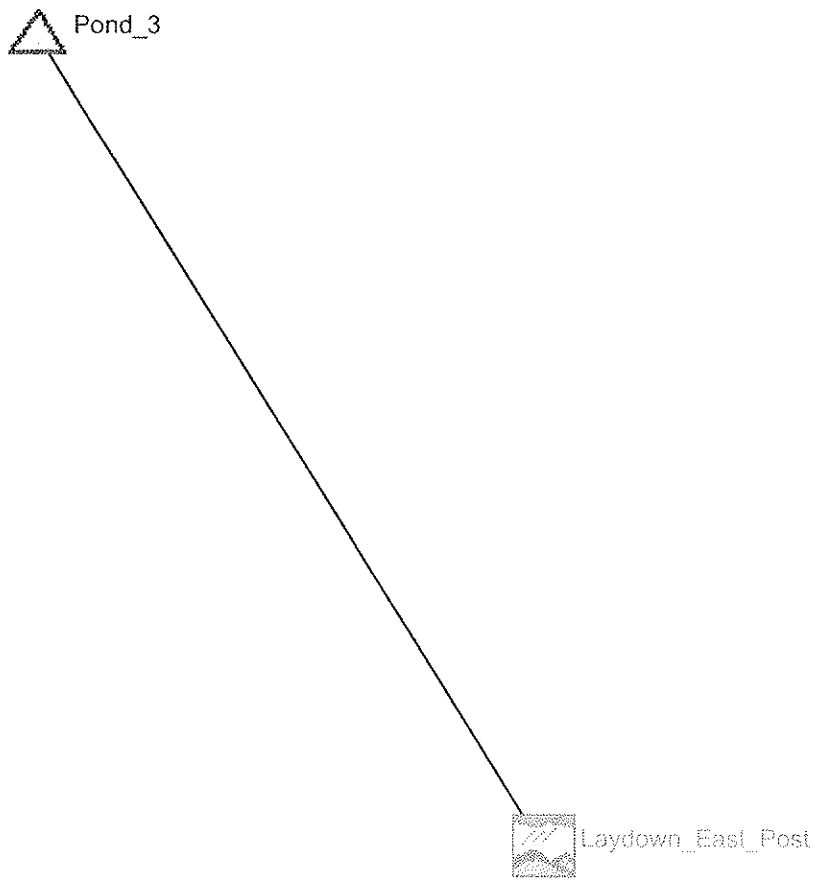
Peak Discharge	: 88.568 (cfs)	Date/Time of Peak Discharge	: 01 Jan 07 2119
Total Precipitation	: 8.00 (in)	Total Direct Runoff	: 4.73 (in)
Total Loss	: 3.20 (in)	Total Baseflow	: 0.00 (in)
Total Excess	: 4.80 (in)	Total Discharge	: 4.73 (in)

HMS * Summary of Results

Project : Seminole_Pond_3 Run Name : 25 yr Pre

Start of Run : 01Jan07 0800 Basin Model : Laydown_East_Pre
End of Run : 02Jan07 0800 Met. Model : 25 Year
Execution Time : 24Feb06 1522 Control Specs : Control 1

Hydrologic Element	Discharge Peak (cfs)	Time of Peak	Volume (ac ft)	Drainage Area (sqmi)
Laydown_East_Pre	88.568	01 Jan 07 2119	22.385	0.089


Pond_3
Laydown_East_Post

HMS * Summary of Results for

Laydown_East_Post

Project : Seminole_Pond_3 Run Name : 25 yr Post

Start of Run	: 01Jan07 0800	Basin Model	: Laydown_East_Post
End of Run	: 02Jan07 0800	Met. Model	: 25 Year
Execution Time	: 24Feb06 1554	Control Specs	: Control 1

Computed Results

Peak Discharge	: 188.80 (cfs)	Date/Time of Peak Discharge	: 01 Jan 07 2044
Total Precipitation	: 8.00 (in)	Total Direct Runoff	: 7.77 (in)
Total Loss	: 0.18 (in)	Total Baseflow	: 0.00 (in)
Total Excess	: 7.82 (in)	Total Discharge	: 7.77 (in)

HMS * Summary of Results for Pond_3

Project : Seminole_Pond_3 Run Name : 25 yr Post

Start of Run : 01Jan07 0800 Basin Model : Laydown_East_Post

End of Run : 02Jan07 0800 Met. Model : 25 Year

Execution Time : 24Feb06 1554 Control Specs : Control 1

Computed Results

Peak Inflow : 188.80 (cfs) Date/Time of Peak Inflow : 01 Jan 07 2044

Peak Outflow : 85.642 (cfs) Date/Time of Peak Outflow : 01 Jan 07 2131

Total Inflow : 7.77 (in) Peak Storage : 34.390(acft)

Total Outflow : 5.33 (in) Peak Elevation : 68.672(ft)

HMS * Summary of Results

Project : Seminole_Pond_3 Run Name : 25 yr Post

Start of Run : 01Jan07 0800 Basin Model : Laydown_East_Post
End of Run : 02Jan07 0800 Met. Model : 25 Year
Execution Time : 24Feb06 1554 Control Specs : Control 1

Hydrologic Element	Discharge Peak (cfs)	Time of Peak	Volume (ac ft)	Drainage Area (sq mi)
Laydown_East_Post	188.80	01 Jan 07 2044	36.789	0.089
Pond_3	85.642	01 Jan 07 2131	25.257	0.089

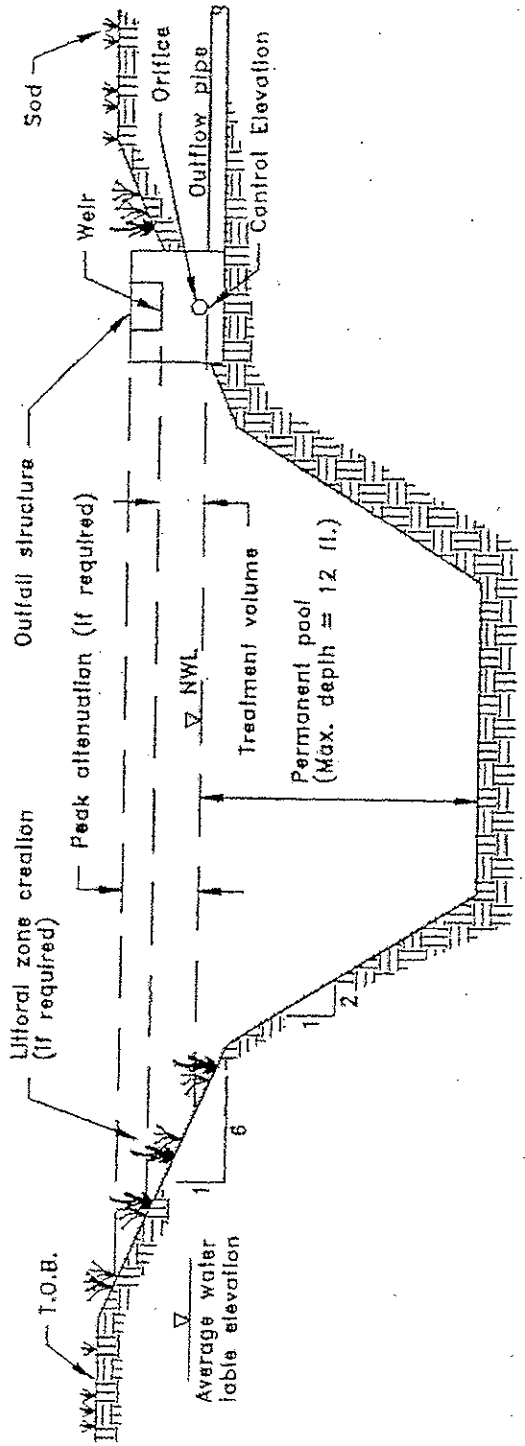


Figure 14-1. Wet detention (N.T.S.)

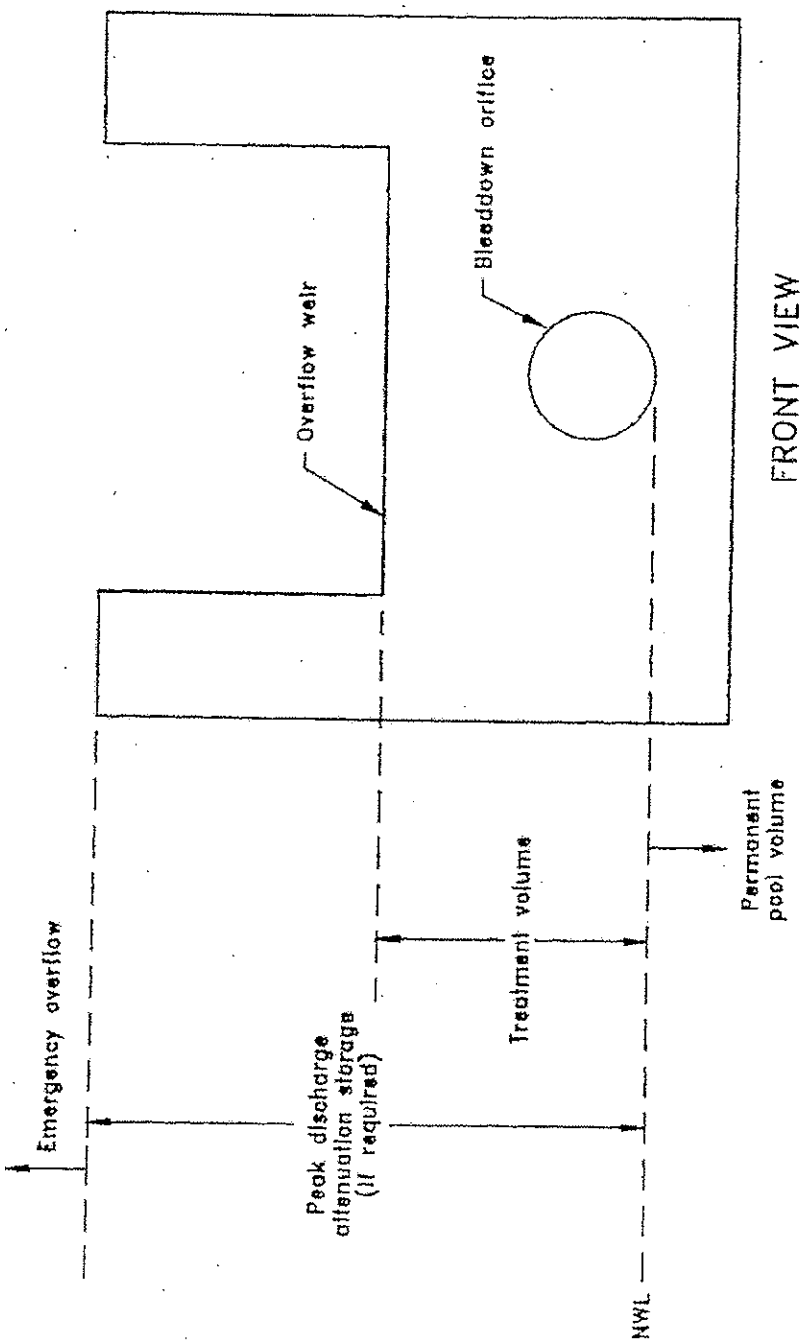


Figure 14-2. Typical wet detention outfall structure (N.T.S.)

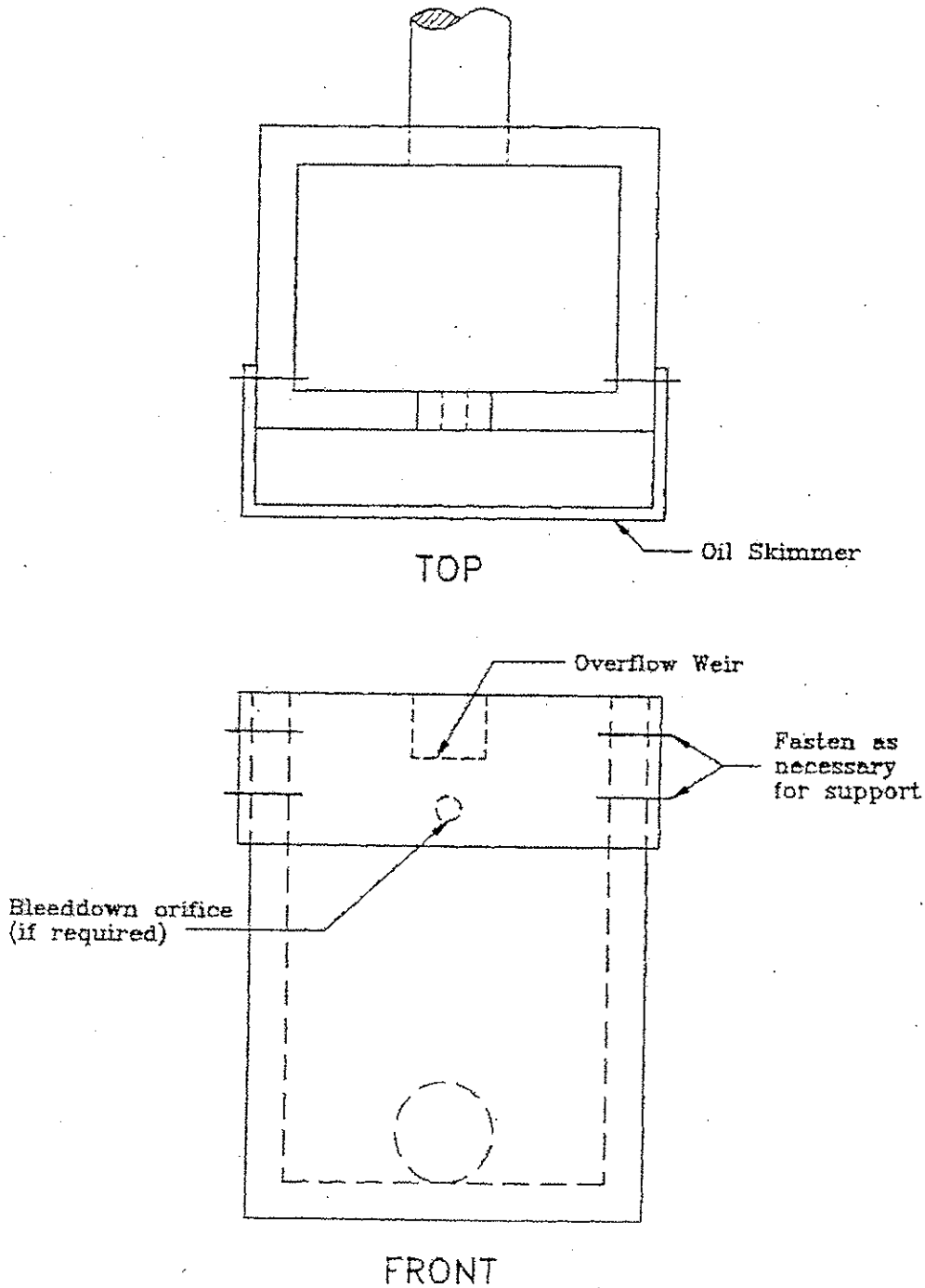


Figure 9-1. Oil skimmer detail for a typical outfall structure (N.T.S.)

Table 24-1. Runoff Coefficients (*C*) for a Design Storm Return Period of Ten Years or Less[1]

Slope	Land Use	Sandy Soils Min.	Sandy Soils Max.	Clay Soils Min.	Clay Soils Max.
Flat (0-2%)	Lawns	0.05	0.10	0.13	0.17
	Rooftops and pavement	0.95	0.95	0.95	0.95
	Pervious pavements[2]	0.75	0.95	0.90	0.95
	Woodlands	0.10	0.15	0.15	0.20
	Pasture, grass, and farmland[3]	0.15	0.20	0.20	0.25
	Residential				
	SFR: 1/2 acre lots and larger	0.30	0.35	0.35	0.45
	SFR: smaller lots and duplexes	0.35	0.45	0.40	0.50
	MFR: apartments, condominiums	0.45	0.60	0.50	0.70
	Commercial and Industrial	0.50	0.95	0.50	0.95
Rolling (2-7%)	Lawns	0.10	0.15	0.18	0.22
	Rooftops and pavements	0.95	0.95	0.95	0.95
	Pervious pavements[2]	0.80	0.95	0.90	0.95
	Woodlands	0.15	0.20	0.20	0.25
	Pasture, grass, and farmland[3]	0.20	0.25	0.25	0.30
	Residential				
	SFR: 1/2 acre lots and larger	0.35	0.50	0.40	0.55
	SFR: smaller lots and duplexes	0.40	0.55	0.45	0.60
	MFR: apartments, condominiums	0.50	0.70	0.60	0.80
	Commercial and Industrial	0.50	0.95	0.60	0.95
Steep (>7%)	Lawns	0.15	0.20	0.25	0.35
	Rooftops and pavements	0.95	0.95	0.95	0.95
	Pervious pavements[2]	0.85	0.95	0.90	0.95
	Woodlands	0.20	0.25	0.25	0.30
	Pasture, grass, and farmland[3]	0.25	0.35	0.30	0.40
	Residential				
	SFR: 1/2 acre lots and larger	0.40	0.55	0.50	0.65
	SFR: smaller lots and duplexes	0.45	0.60	0.55	0.70
	MFR: apartments, condominiums	0.60	0.75	0.65	0.85
	Commercial and Industrial	0.60	0.95	0.65	0.95

Sources: Florida Department of Transportation, 1987; Wanielista, 1990

[1]For 25- to 100-yr recurrence intervals, multiply coefficient by 1.1 and 1.25, respectively, and the product cannot exceed 1.0.
[2]Coefficients assume good ground cover and conservation treatment.
[3]Depends on depth and degree of permeability of underlying strata.
Note: SFR = Single Family Residential;
MFR = Multi-Family Residential

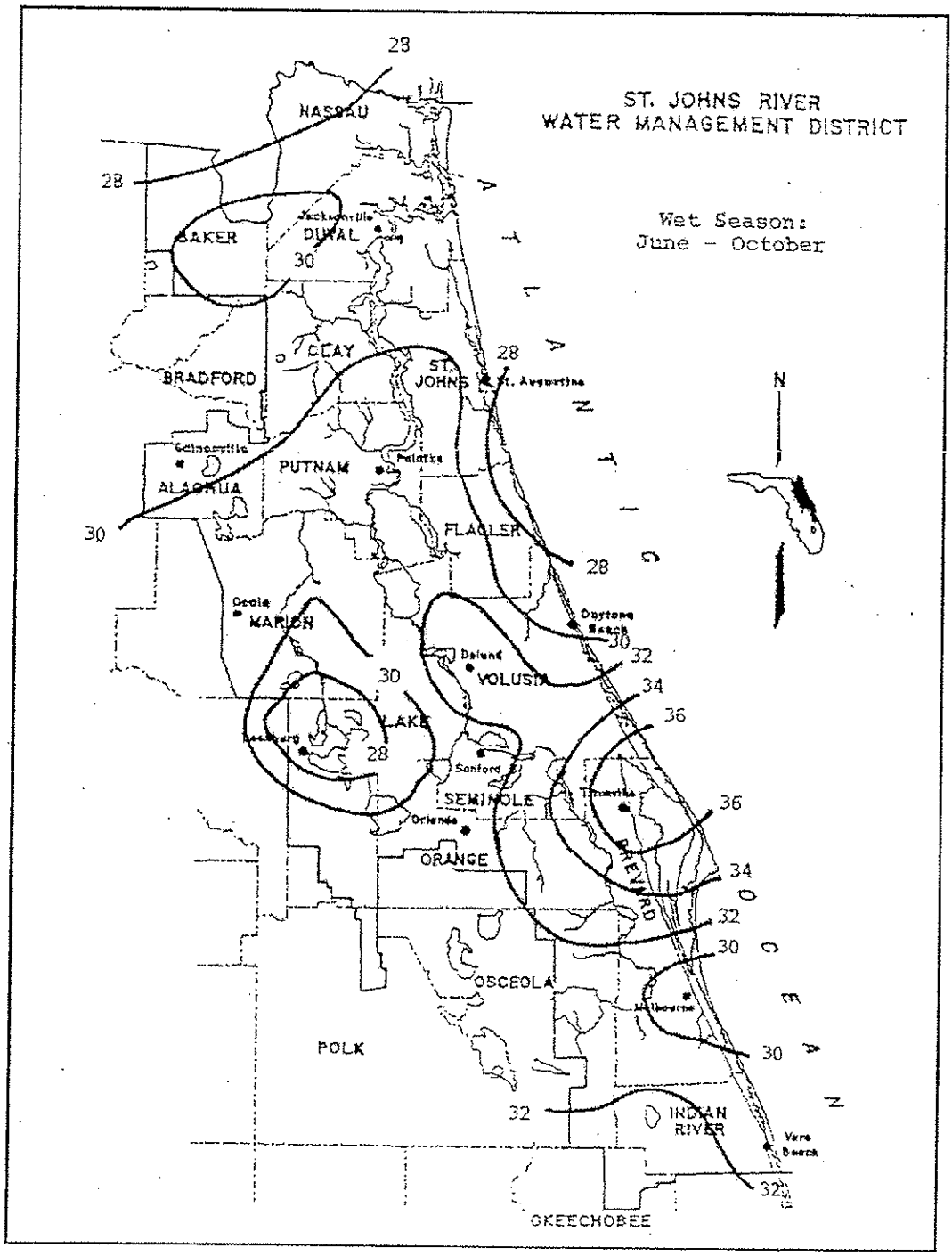


Figure 29-1. Wet Season Normal Rainfall, inches (Source: Rao, et al., 1990)

Seminole Electric – Pond #4 - Design Summary

Using HEC-HMS (Hydraulic Modeling Software) the 25 year storm was modeled for pre and post-construction conditions. For basin 4, located on the western portion of the affected area (see attached site drainage plan), the pre-construction conditions were determined to be 50% impervious and post-construction conditions were determined to be 90% impervious. A wet detention pond was designed for post construction conditions for the 25 year 24 hour rain event. Storm water is carried to the pond through ditches. For the 25 year event, the post-construction peak outflow was less than the pre-construction peak outflow.

The invert elevation of the bleeddown orifice was set at an approximate elevation of 54.75 to provide the permanent pool volume of 16 acre-feet. The overflow weir was set at an approximate elevation of 58 to provide the required treatment volume of 517,923 cubic feet. The 6" diameter bleeddown orifice will be used to drain half of the treatment volume in 48 hours as required by the SJRWMD. Below is a summary of pre and post-construction results.

	Pre-Construction	Post-Construction
Storm Return Period	25 year	25 year
Storm Duration	24 hours	24 hours
% Impervious	15	90
Peak Discharge (ft^3/s)	139.46	129.90
Volume of Runoff (acre-ft)	34.08	28.98

Required Treatment Volume	517,923 ft^3 – Half of this volume will be drained by a 6" diameter orifice in 48 hours as required by the SJRWMD.
Required Permanent Pool Volume	702,004 ft^3

Industrial Development Drainage Area		2,762,254	SF
		63.41	Acres
Impervious Area	90%	2,486,029	SF
		57.07	Acres
Offsite Drainage Area		0	Acres

Assumptions:

Wet Detention

Time of Concentration is approx 1.33 hrs

Basin Bottom Elevation =	49.5	ft
Seasonal High Ground Water Elevation =	55.7	ft
Average Ground Water Elevation (approx) =	54.7	ft
Rectangular Detention Basin, Bottom Area =	122,759	SF
Average Basin Length =	497	ft
Average Basin Width =	247	ft

Detention Pond Stage-Storage Table

Elevation	Area (SF)	Storage (CF)
49.5	122,759	0
50	125,000	61,940
50.5	127,259	125,005
51	129,536	189,203
51.5	131,831	254,545
52	134,144	321,039
52.5	136,475	388,694
53	138,824	457,518
53.5	141,191	527,522
54	143,576	598,714
54.5	145,979	671,103
55	148,400	744,697
55.5	150,839	819,507
56	153,296	895,541
56.5	155,771	972,808
57	158,264	1,051,316
57.5	160,775	1,131,076
58	163,304	1,212,096
58.5	165,851	1,294,385
59	168,416	1,377,951
59.5	170,999	1,462,805
60	173,600	1,548,955

Step 1: Determine Required Treatment Volume:

For wet detention, the rule requires detention of 1" of runoff or 2.5" from the impervious area, whichever is larger

1) 1" of runoff from the development area = 230,188 CF

2) 2.5" of runoff from the impervious area = 517,923 CF

Treatment Volume = **517,923 CF**

Step 2: Calculate the minimum permanent pool volume that will provide the required residence time

For non-littoral zone option, the permanent pool must be sized to provide a residence time (RT) of at least 21 days during the wet season (June-October)

Length of wet season (WS) = 153 days

From Figure 29-1, the wet season rainfall depth (R) for Palatka = 31 inches

The runoff coefficient (C) for the drainage area to the wet detention pond is:

From Table 24-1, based on a flat slope, the following land uses, sandy soils, and a 25-year storm, the runoff coefficient falls between:

Land Use	Max	Min		
Commercial/Industrial	1	0.55	→	0.78
Pasture, grass, farmland	0.17	0.22	→	0.19

Weighted runoff coefficient, based on:
90% Impervious → 0.72

Equation 29-4 gives the Permanent Pool Volume (PPV):

$$PPV = \frac{((Area)(C)(R)(RT))}{\left((WS)\left(12\frac{in}{ft}\right)\right)}$$

PPV = 16.12 acre - ft = 702,004 CF

Step 3: Determine the height of the permanent pool volume and the treatment volume:

Interpolate from the stage-storage table

Permanent Pool Volume =	702,004	→	Elevation	**54.71**
Treatment Volume + PPV =	1,219,927	→	Elevation	**58.05**

Place the bleeddown orifice at the top of the PPV, EL = 54.71
Place the overflow at the top of the treatment volume, EL = 58.05

Step 4: Size a the bleeddown orifice to recover one half of the treatment volume in 48 hours

Since the size of the orifice has yet to be determined, use the invert elevation of the orifice as an approximation of the flow line (center) of the orifice. After calculating the orifice size, adjust the flow line elevation and calculate the orifice size again.

Treatment Volume depth (h_1)=	3.34	ft
Half of treatment volume =	258,961	CF
Stage at half the treatment volume =	56.38	ft
Half the treatment volume depth (h_2) =	1.67	ft

The average flow rate required to draw down half of the treatment volume in 48 hours is:

Q = 1.50 cfs

The area of a circular orifice is determined by:

$$A = Q / 0.6(\sqrt{2gh})$$

Trial #1:

$h = (h_1 + h_2) / 2 =$ 2.50 ft
A = 0.20 SF
Orifice Diameter = $\sqrt{(4A/\pi)}$ = 0.50 ft

Trial #2:

Adjusted flow line = 54.71 + 1/2 (0.50 ft) = 54.96
h_1 = height of treatment volume - adjusted flow line = 3.09
h_2 = half of treatment volume - adjusted flow line = 1.42
$h = (h_1 + h_2) / 2 =$ 2.25 ft
A = 0.21 SF
Orifice Diameter = $\sqrt{(4A/\pi)}$ = 0.51 ft

Adjusted flow line = 54.71 + 1/2 (0.51 ft) = 54.97

Use an orifice diameter of 6" with an invert elevation of 57.71'

Bleeddown Pipe Orifice Calculations
Pond #4

Place Invert Elevation of Bleeddown Pipe @ 54.71

Flow through pipe =	Q		
Orifice discharge coefficient =	C	C =	0.6
Bleeddown Pipe Diameter =	D	D =	6 in
Bleeddown Pipe Area =	A	A =	0.20 ft^2
Headwater height above centroid =	H		

$Q = (C)(A)(2gH)^{1/2}$

Broad-crested Weir Calculations
Pond #4

Place Invert Elevation of Weir @ 58.05

Flow over the weir =	Q		
Width of weir =	b	b =	15
Height of water flowing over the weir =		H	

$Q = C_s(b)(H)^{3/2}$ $C_s = 3.33\ ft^{0.5}/s$

Overall Pond Stage-Discharge Table
Pond #4

Stage (ft)	Orifice Discharge (cfs)	Weir Discharge (cfs)	Total Discharge (cfs)
49.50	0.00	0.00	0.00
50.00	0.00	0.00	0.00
50.50	0.00	0.00	0.00
51.00	0.00	0.00	0.00
51.50	0.00	0.00	0.00
52.00	0.00	0.00	0.00
52.50	0.00	0.00	0.00
53.00	0.00	0.00	0.00
53.50	0.00	0.00	0.00
54.00	0.00	0.00	0.00
54.50	0.00	0.00	0.00
55.00	0.19	0.00	0.19
55.50	0.69	0.00	0.69
56.00	0.96	0.00	0.96
56.50	1.17	0.00	1.17
57.00	1.35	0.00	1.35
57.50	1.51	0.00	1.51
58.00	1.65	0.00	1.65
58.50	1.78	15.20	16.98
59.00	1.90	46.43	48.33
59.50	2.01	87.43	89.45
60.00	2.12	136.27	138.39

HEC-HMS Palatka Area Meteorological Model

25 year - 24 hour storm

Exceedance Probability	4% (25 year)
Max Intensity Duration	5 min
Storm Distribution	24 hour
Peak Center	50%

Duration min	Duration hr	Depth * inches	Intensity Inches/Hr
5	0.08	1	12.00
15	0.25	2	8.00
60	1.00	3.4	3.40
120	2.00	4.3	2.15
180	3.00	5	1.67
360	6.00	6	1.00
720	12.00	7.2	0.60
1440	24.00	8	0.33

* Source TP-40

HEC-HMS Seminole Pre-Construction Input
Pond #4

	Existing Impervious Area	Remaining Area	Total Area
Method			SCS Curve No.
Area (sq. mi.)	0.0496	0.0496	0.0991
Initial Loss (in)			0.67
% Impervious	100	0	50
SCS Curve No.	85	65	75
SCS Lag (min)			64
			No Baseflow

HEC-HMS Seminole Post-Construction Input
Pond #4

Method	SCS Curve No.
Area (sq. mi.)	0.0991
Initial Loss (in)	0.4
% Impervious	90
SCS Curve No.	85
SCS Lag (min)	48

No Baseflow

HEC-HMS Seminole Post-Construction Input

Pond #4 - Stage Area Discharge Table

Initial Pond Elevation set at = 54.71 (Top of Permanent Pool Volume)

Stage	Area	Incremental Volume	Total Volume	Area acres	Discharge
ft	ft2	ft3	ft3		cfs
49.50	122,759			**2.818**	**0.00**
50.00	125,000	61,940	61,940	**2.870**	**0.00**
50.50	127,259	63,065	125,005	**2.921**	**0.00**
51.00	129,536	64,199	189,203	**2.974**	**0.00**
51.50	131,831	65,342	254,545	**3.026**	**0.00**
52.00	134,144	66,494	321,039	**3.080**	**0.00**
52.50	136,475	67,655	388,694	**3.133**	**0.00**
53.00	138,824	68,825	457,518	**3.187**	**0.00**
53.50	141,191	70,004	527,522	**3.241**	**0.00**
54.00	143,576	71,192	598,714	**3.296**	**0.00**
54.50	145,979	72,389	671,103	**3.351**	**0.00**
55.00	148,400	73,595	744,697	**3.407**	**0.19**
55.50	150,839	74,810	819,507	**3.463**	**0.69**
56.00	153,296	76,034	895,541	**3.519**	**0.96**
56.50	155,771	77,267	972,808	**3.576**	**1.17**
57.00	158,264	78,509	1,051,316	**3.633**	**1.35**
57.50	160,775	79,760	1,131,076	**3.691**	**1.51**
58.00	163,304	81,020	1,212,096	**3.749**	**1.65**
58.50	165,851	82,289	1,294,385	**3.807**	**16.98**
59.00	168,416	83,567	1,377,951	**3.866**	**48.33**
59.50	170,999	84,854	1,462,805	**3.926**	**89.45**
60.00	173,600	86,150	1,548,955	**3.985**	**138.39**

See the bleeddown pipe and broad-crested weir calculations for the discharge amounts


Laydown_West_Pre

HMS * Summary of Results for

Laydown_West_Pre

Project : Seminole_Pond_4 Run Name : 25 yr Pre

Start of Run	: 01Jan07 0800	Basin Model	: Laydown_West_Pre
End of Run	: 02Jan07 0800	Met. Model	: 25 Year
Execution Time	: 24Feb06 1655	Control Specs	: Control 1

Computed Results

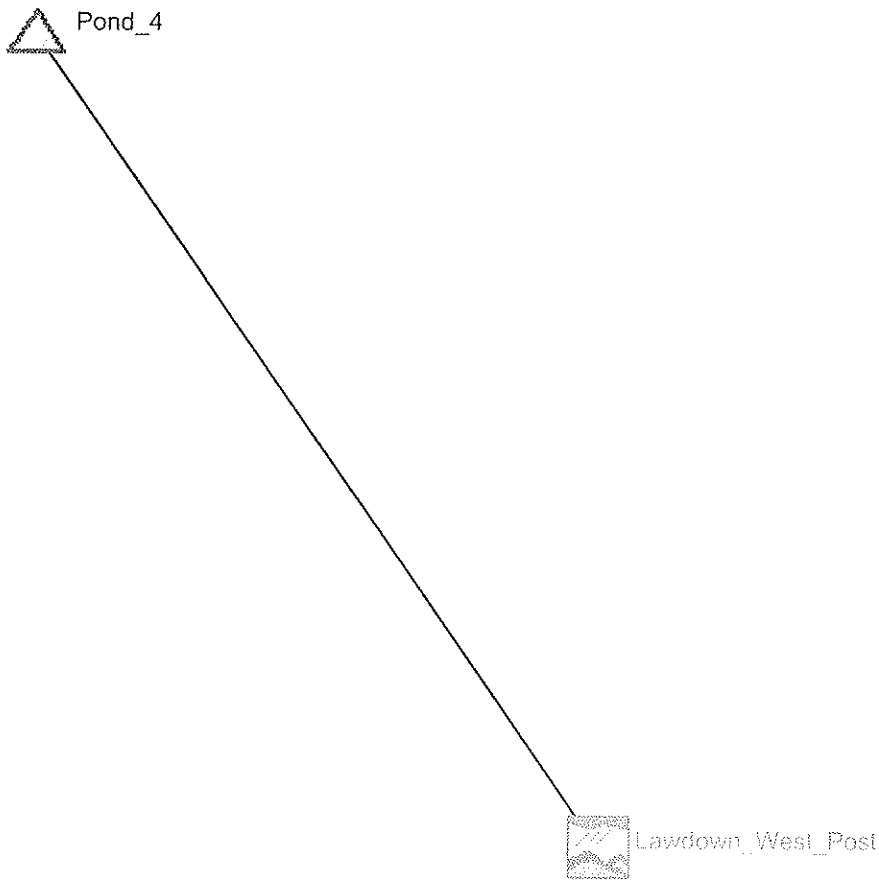
Peak Discharge	: 139.46 (cfs)	Date/Time of Peak Discharge	: 01 Jan 07 2108
Total Precipitation	: 8.00 (in)	Total Direct Runoff	: 6.45 (in)
Total Loss	: 1.48 (in)	Total Baseflow	: 0.00 (in)
Total Excess	: 6.52 (in)	Total Discharge	: 6.45 (in)

HMS * Summary of Results

Project : Seminole_Pond_4 Run Name : 25 yr Pre

Start of Run : 01Jan07 0800 Basin Model : Laydown_West_Pre
End of Run : 02Jan07 0800 Met. Model : 25 Year
Execution Time : 24Feb06 1655 Control Specs : Control 1

Hydrologic Element	Discharge Peak (cfs)	Time of Peak	Volume (ac ft)	Drainage Area (sq mi)
Laydown_West_Pre	139.46	01 Jan 07 2108	34.075	0.099


Pond_4
Lawdown_West_Post

HMS * Summary of Results for

Lawdown_West_Post

Project : Seminole_Pond_4 Run Name : 25 yr Post

Start of Run	: 01Jan07 0800	Basin Model	: Laydown_West_Post
End of Run	: 02Jan07 0800	Met. Model	: 25 Year
Execution Time	: 24Feb06 1658	Control Specs	: Control 1

Computed Results

Peak Discharge	: 193.42 (cfs)	Date/Time of Peak Discharge	: 01 Jan 07 2050
Total Precipitation	: 8.00 (in)	Total Direct Runoff	: 7.76 (in)
Total Loss	: 0.18 (in)	Total Baseflow	: 0.00 (in)
Total Excess	: 7.82 (in)	Total Discharge	: 7.76 (in)

HMS * Summary of Results for Pond_4

Project : Seminole_Pond_4 Run Name : 25 yr Post

Start of Run	: 01Jan07 0800	Basin Model	: Laydown_West_Post
End of Run	: 02Jan07 0800	Met. Model	: 25 Year
Execution Time	: 24Feb06 1658	Control Specs	: Control 1

Computed Results

Peak Inflow	: 193.42 (cfs)	Date/Time of Peak Inflow	: 01 Jan 07 2050
Peak Outflow	: 129.90 (cfs)	Date/Time of Peak Outflow	: 01 Jan 07 2121
Total Inflow	: 7.76 (in)	Peak Storage	: 35.215(acft)
Total Outflow	: 5.48 (in)	Peak Elevation	: 59.913(ft)

HMS * Summary of Results

Project : Seminole_Pond_4 Run Name : 25 yr Post

Start of Run : 01Jan07 0800 Basin Model : Laydown_West_Post

End of Run : 02Jan07 0800 Met. Model : 25 Year

Execution Time : 24Feb06 1658 Control Specs : Control 1

Hydrologic Element	Discharge Peak (cfs)	Time of Peak	Volume (ac ft)	Drainage Area (sq mi)
Lawdown_West_Post	193.42	01 Jan 07 2050	41.018	0.099
Pond_4	129.90	01 Jan 07 2121	28.984	0.099

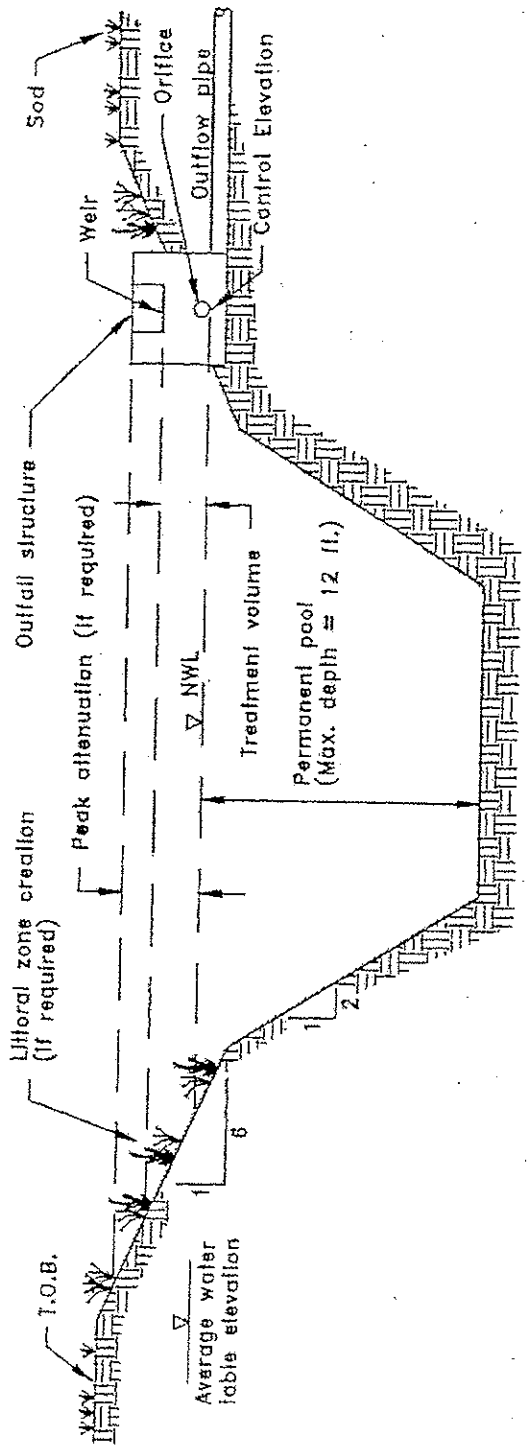


Figure 14-1. Wet detention (N.T.S.)

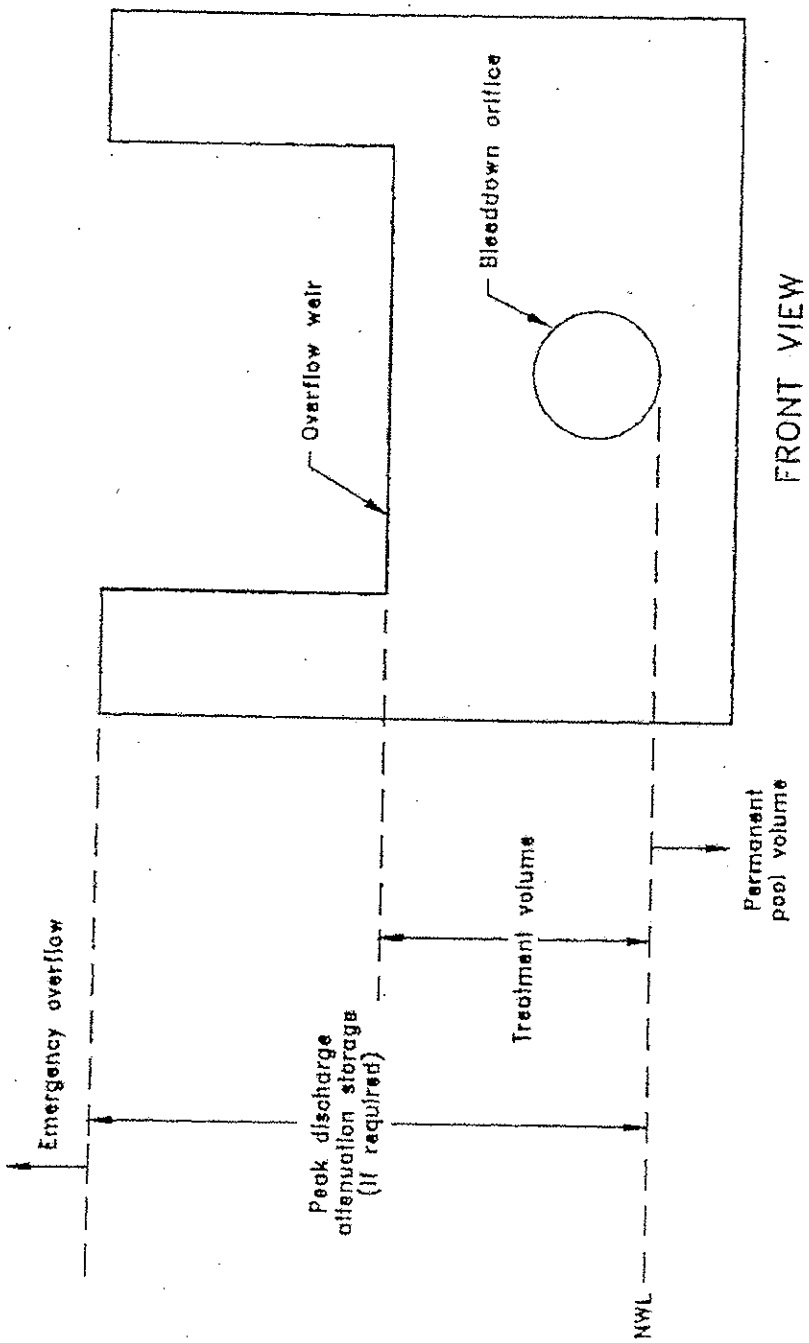


Figure 14-2. Typical wet detention outfall structure (N.T.S.)

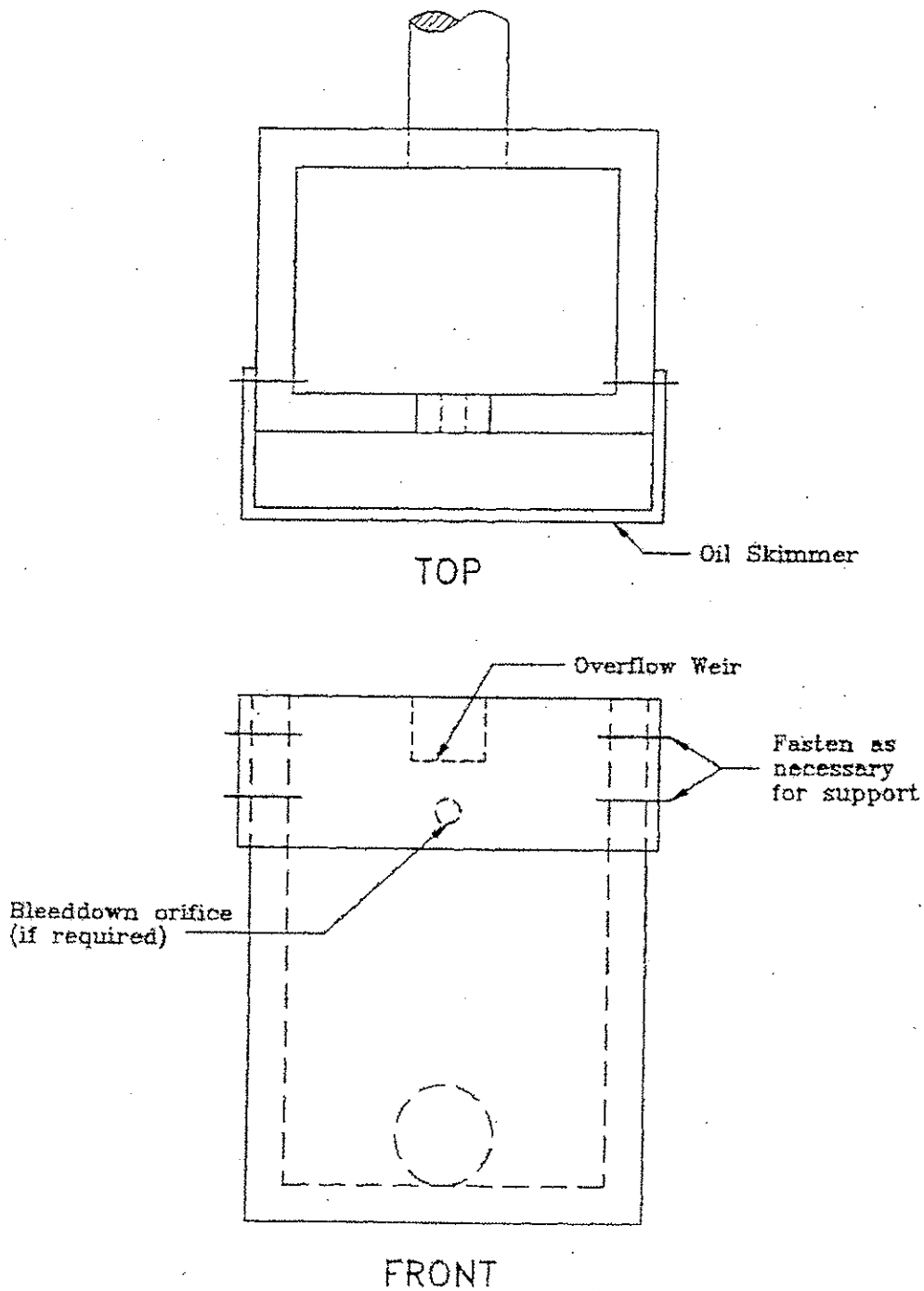


Figure 9-1. Oil skimmer detail for a typical outfall structure (N.T.S.)

Table 24-1. Runoff Coefficients (*C*) for a Design Storm Return Period of Ten Years or Less[1]

Slope	Land Use	Sandy Soils Min.	Sandy Soils Max.	Clay Soils Min.	Clay Soils Max.
Flat (0-2%)	Lawns	0.05	0.10	0.13	0.17
	Rooftops and pavement	0.95	0.95	0.95	0.95
	Pervious pavements[2]	0.75	0.95	0.90	0.95
	Woodlands	0.10	0.15	0.15	0.20
	Pasture, grass, and farmland[3]	0.15	0.20	0.20	0.25
	Residential				
	SFR: 1/2 acre lots and larger	0.30	0.35	0.35	0.45
	SFR: smaller lots and duplexes	0.35	0.45	0.40	0.50
	MFR: apartments, condominiums	0.45	0.60	0.50	0.70
	Commercial and Industrial	0.50	0.95	0.50	0.95
Rolling (2-7%)	Lawns	0.10	0.15	0.18	0.22
	Rooftops and pavements	0.95	0.95	0.95	0.95
	Pervious pavements[2]	0.80	0.95	0.90	0.95
	Woodlands	0.15	0.20	0.20	0.25
	Pasture, grass, and farmland[3]	0.20	0.25	0.25	0.30
	Residential				
	SFR: 1/2 acre lots and larger	0.35	0.50	0.40	0.55
	SFR: smaller lots and duplexes	0.40	0.55	0.45	0.60
	MFR: apartments, condominiums	0.50	0.70	0.60	0.80
	Commercial and Industrial	0.50	0.95	0.60	0.95
Steep (>7%)	Lawns	0.15	0.20	0.25	0.35
	Rooftops and pavements	0.95	0.95	0.95	0.95
	Pervious pavements[2]	0.85	0.95	0.90	0.95
	Woodlands	0.20	0.25	0.25	0.30
	Pasture, grass, and farmland[3]	0.25	0.35	0.30	0.40
	Residential				
	SFR: 1/2 acre lots and larger	0.40	0.55	0.50	0.65
	SFR: smaller lots and duplexes	0.45	0.60	0.55	0.70
	MFR: apartments, condominiums	0.60	0.75	0.65	0.85
	Commercial and Industrial	0.60	0.95	0.65	0.95

Sources: Florida Department of Transportation, 1987; Wanielista, 1990

[1]For 25- to 100-yr recurrence intervals, multiply coefficient by 1.1 and 1.25, respectively, and the product cannot exceed 1.0.
[2]Coefficients assume good ground cover and conservation treatment.
[3]Depends on depth and degree of permeability of underlying strata.
Note: SFR = Single Family Residential;
MFR = Multi-Family Residential

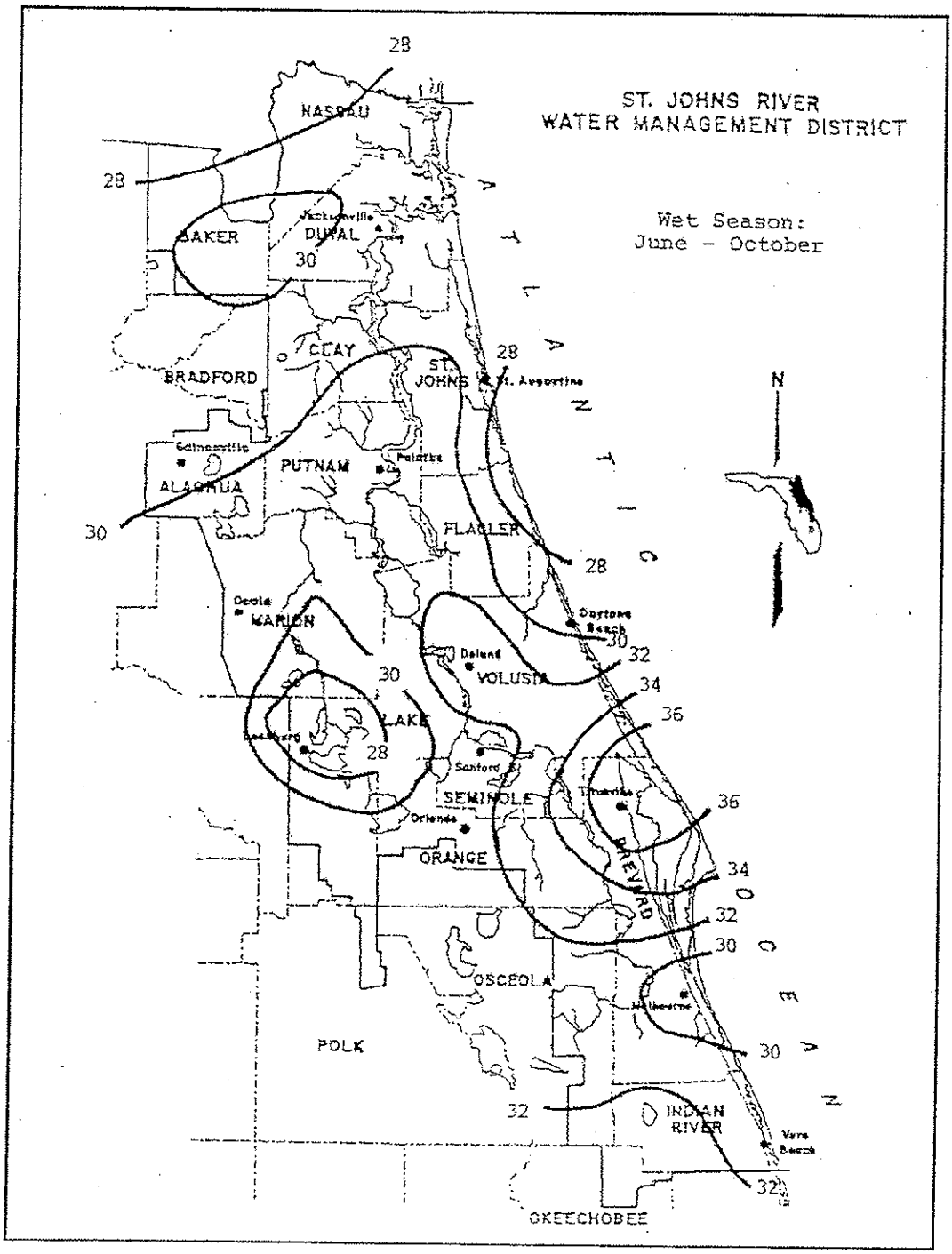


Figure 29-1. Wet Season Normal Rainfall, inches (Source: Rao, et al., 1990)

Seminole Electric Cooperative, Inc.
Seminole Generation Station - Unit 3
B&McD Project No. 39736
Stormwater Pond #5 Design Notes and Calculations

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Seminole Electric – Stormwater Pond 5 - Design Summary

The attached calculations show that the design for the Unit 3 borrow pit's retention pond will provide storage for the runoff from a 100-year, 24-hour storm. The area that contributes to the pond is approximately 12 acres and the only impervious surface will be that of the pond. The attached calculations show this volume can be stored in the pond and will percolate through the pond bottom in approximately 55 days. Below is a summary of the runoff amount and percolation rate.

	Volume of Runoff	Percolation Time
Runoff from the 100-year, 24-hour Storm	343,339 CF	54.8 days

Industrial Development Drainage Area		547,881	SF
		12.58	Acres
Impervious Area	22% (Pond)	122,500	SF
		2.81	Acres
Offsite Drainage Area		0	Acres

Assumptions:

On-line treatment

CN =	80			
f =	0.3			
k_{vs} =	50 ft/day			
k_h =	12 ft/day			
F.S. =	2			
Basin Bottom Elevation =		72	ft	
Seasonal High Ground Water Elevation =		71	ft	(4' below existing grade)
Impervious Layer Elevation =		33	ft	(40' below existing grade)
Rectangular Retention Basin, Bottom Area =		122,500	SF	
Side Slopes (XH:1V) =		3		
Average Basin Length =		700	ft	
Average Basin Width =		175	ft	
h_b =	1 ft			

Retention Pond Stage-Storage Table

Elevation	Area (SF)	Storage (CF)
72	122,500	0
72.5	125,134	61,909
73	127,786	125,139
73.5	130,456	189,699
74	133,144	255,599
74.5	135,850	322,848
75	138,574	391,454

Step 1: Determine the amount of runoff from the 100-year, 24-hour storm:

Precip = 10 inches (based on TP-40)
Q= 7.52 inches (based on SCS runoff equation)
V = 343,339 CF*
*This volume must be stored in the pond

Step 2: Determine the height of the storage volume in the retention pond:

Interpolate from the stage-storage table

$h =$ **74.65**

Step 3: Determine if saturated lateral flow will occur:

Depth of runoff = h_v = 2.65 ft

Height of water to saturate the soil:

$h_u = f(h_b)$

$h_u = 0.3$

$h_v > h_u$ → **saturated lateral flow will occur**

Step 4: Determine the volume of water infiltrated in unsaturated vertical (stage 1) flow and the time to infiltrate this volume

Bottom of Pond Area = 122,500 SF

Volume infiltrated (V_u) during unsaturated vertical (stage 1) flow is:

$V_u = A_b(h_b)(f)$

$V_u =$ **36,750 CF**

Unsaturated vertical hydraulic conductivity (k_{vu}) is:

$k_{vu} = 2/3\ k_{vs}$

$k_{vu} =$ 33.33 ft/day

Design Infiltration Rate (I_d) is:

$I_d = k_{vu} / (F.S.)$

$I_d =$ 16.67 ft/day

Time to saturate soil (t_{sat}) is:

$t_{sat} = f(h_b) / (I_d)$

$t_{sat} =$ **0.02 days**

Step 5: Determine the volume of water infiltrated in saturated lateral (stage 2) flow and the time to infiltrate this volume:

Runoff from the 100-year storm	343,339 CF	
Volume infiltrated (stage 1):	36,750 CF	
Remaining Volume =	306,589 CF	(to be recovered under stage 2 flow)

Elevation of the remaining volume = 74.38 ft (Interpolated)

Determine F_y and F_x:

h_c = h_b = 1.00

The height of the water in the pond at the start of saturated lateral flow (h_2) is:

h_2 = 2.38 ft

$H_T = h_b + h_2$ = 3.38 ft

$F_y = h_c / H_T$

F_y = 0.30

When the water level is at the pond bottom, the average length (L) is 700 ft and the average width (w) is 175 ft

L / w = 4.00

F_x can be determined from Figure 26-7 using

f =	0.3
L / w =	4.00
F_y =	0.30

F_x = 0.55

Determine time to recover the remaining storage volume under saturated lateral (stage 2) flow:

H = 71 - 33 = 38 ft

$D = H + 0.5\, h_c$ = 38.5 ft

$t = w^2 / 4(k_h)(D)(F_x^2)$

t = **54.8 days**

Step 6: Determine the total time to recover the runoff from the 100-year, 24-hour storm:

t = **54.8 days**

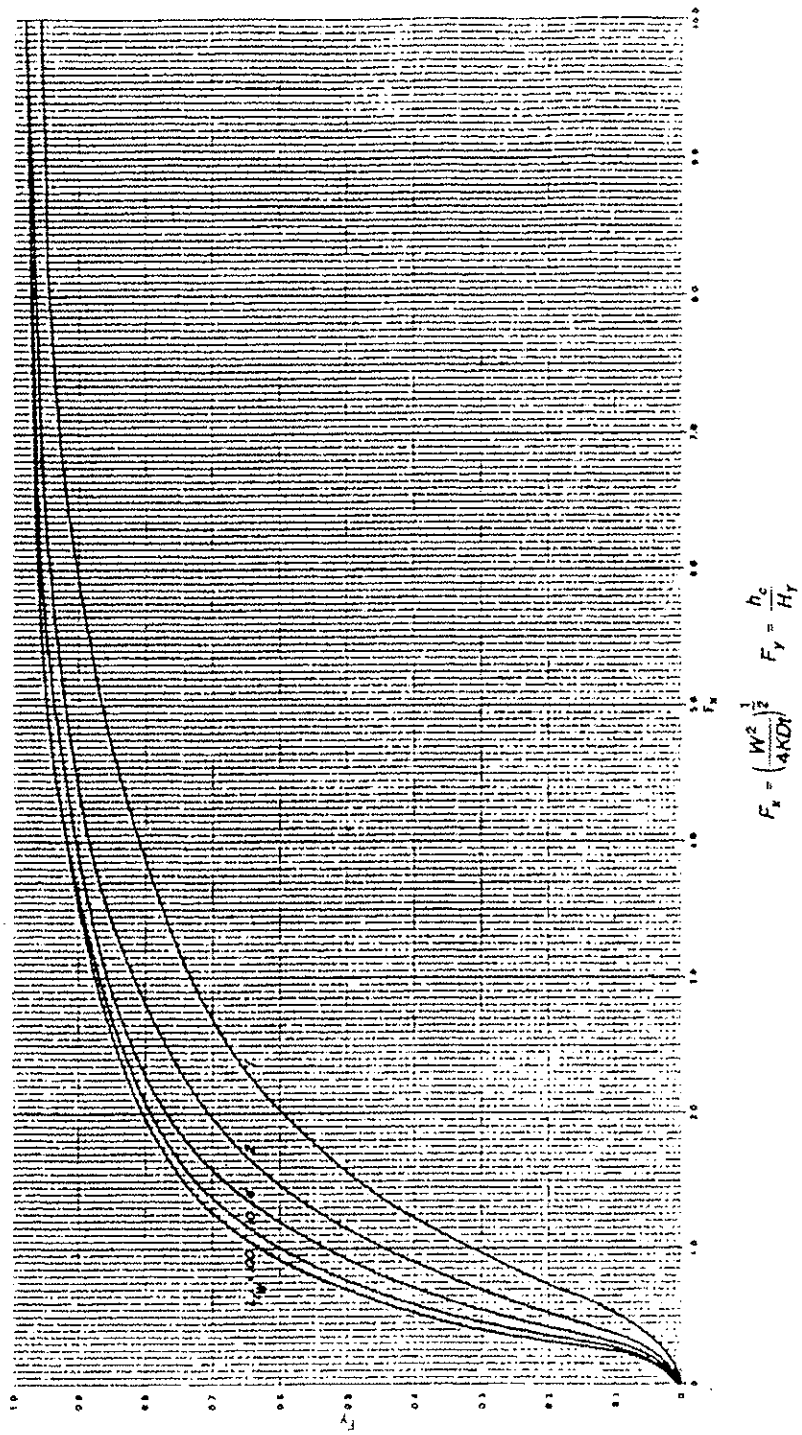

Figure 26-7. Dimensionless Curves Relating Basin Design Parameters to Basin Water Level in a Rectangular Retention Basin Over an Unconfined Aquifer ($f = 0.3$) (Source: Andreyev and Wiseman, 1989).

SEMINOLE SOIL INVESTIGATION

3.7.2 Geologic Structure (Cont'd)

The structural feature of local significance is a fault immediately west of the site. The approximate age of the fault may be interpreted as post Eocene (approximately 58 million years ago) but probably earlier than about mid-Miocene (approximately 30 million years ago). It has been concluded, based upon the available literature, that this local fault is not active.

3.8 SOIL CONDITIONS

The following is a generalized description of the subsurface soil conditions based upon data from 35 test borings and 6 auger holes drilled at the site betweed June 1977 and September 1978 and limited data on soil properties based upon laboratory tests performed on soil samples obtained from some of these borings. The borings and auger holes penetrated to maximum depths of 257 feet and 8 feet, respectively.

The generalized profile consists of approximately 200 feet of unconsolidated sediments (over the highter areas of the site property) underlain by considerable thickness of limestones. This overburden layer showed a "draped" effect over the area sampled, so that although the surface elevation of borings differed by some 30 feet, the thicknesses of the upper sediment layers intersected remained essentially constant. This would, in all probability, not extend as such into the low-lying areas of the site, and the depressed (ground surface at elevation +25 feet MSL) northern extension of the property may be expected to be underlain by a somewhat less thickness of sand.

Over the area sampled, the overburden shows three broad geotechnically distinquishable and horizontally continuous layers: a clean medium surface; a transitional zone of increasing fines consisting of interbedded silty or clayey sand, clay soils, and clayey sand with shells between 40 to 90 feet below surface; and finally, a very dense or very stiff or hard, relatively impervious layer, the Hawthorn Formation, between 90 to 210 feet below surface. These three layers correspond to Stratigraphic Units f, e and d, respectively, previously described in Section 3.7.1. The geotechnical characteristics of these layers are briefly described below:

3.8.1

IMPERVIOUS LAYER ≈ 40' BELOW EXISTING GRADE

Layer 1 is a "medium to fine (+) SAND, trace Silt" which extends anywhere from 40 to 70 feet deep. Based upon Standard Penetration Test (SPT) N Values, most of Layer 1 is "compact" or "very compact". However, the near surface soils, to depths ranging from 5 to 12 feet, are in a "loose" condition; below this thin loose zone, Layer 1 is in a "medium compact" condition to depths of about 15 to 20 feet.

Sieve analyses on samples of the Layer 1 sands indicate that the silt content (soil finer than a No. 200 mesh sieve) ranges from about 1 to 10 percent. Although the laboratory permiability tests on samples of Layer 1 have not been completed, field pumping tests by others have indicated that the coefficient of permeability may be as high as 2×10^{-2} cm/sec. ≈ 57 ft/day

The natural moisture content of samples tested ranged from about 14 percent to 25 percent (with corresponding natural dry densities of 121 and 99 pcf). Laboratory direct shear tests on samples taken from 11 feet and 22 feet below surface in one of the borings showed shear strengths of 900 to 1550

Seminole Electric Cooperative, Inc.
Seminole Generation Station - Unit 3
B&McD Project No. 39736
Entrance Road Swales - Design Notes and Calculations

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Seminole Electric – Entrance Road Swales - Design Summary

Six new swales are being added between the two sections of the entrance road (see the attached site drainage plan). The eastern two lanes of the road are existing and the western two lanes will be added to support the additional traffic from Unit 3. Currently, the stormwater from the centerline of the existing road and west to the railroad tracks contributes to the existing ditch system. There is also an area west of that railroad track that contributes; however, no modifications are being made in that area. After the two new lanes are constructed, the stormwater between the existing and new lanes will be routed through the new swales. The swales will have 12" culverts that will drain into the existing ditch system west of the entrance road, where it will be combined with the runoff from the remaining area. The ditch discharges into the wetlands north of the intersection with US Hwy 17.

Based on the attached calculations, the six new swales provide sufficient treatment of the runoff after the modifications are made along the plant entrance road. Per the St. Johns River Water Management District (SJRWMD) Regulations, the swales must provide percolation of at least 80% of the runoff from the 3-year 1-hour storm.

Using HEC-HMS (Hydraulic Modeling Software), the 25 year storm was modeled for pre and post-construction conditions. For the pre-construction condition, the impervious area of the east ditch was determined to be 15%. For the post-construction condition, the impervious area was determined to be 25% for the area contributing to the existing ditch and 55% for the area contributing to the new swales. The model shows that for the 25 year event, the post-construction peak outflow is less than the pre-construction peak outflow.

	Required Percolation Volume	Volume of Water Infiltrated
Swale #1	4,954 ft^3	7,547 ft^3
Swale #2	2,218 ft^3	3,195 ft^3
Swale #3	1,843 ft^3	2,846 ft^3
Swale #4	1,814 ft^3	2,805 ft^3
Swale #5	4,752 ft^3	7,994 ft^3
Swale #6	5,270 ft^3	7,980 ft^3

	Pre-Construction	Post-Construction
Storm Return Period	25 year	25 year
Storm Duration	24 hours	24 hours
Peak Discharge (ft^3/s)	18.55	18.15
Volume of Runoff (acre-ft)	3.53	4.00

Industrial Development Drainage Area		48,769	SF
		1.12	Acres
Impervious Area	55%	26,823	SF
		0.62	Acres
Offsite Drainage Area		0	Acres

Assumptions:

C = 0.59 (Table 24-1)

T_C = 9 min based on CN = 68 S = 0.6% L = 944

New trapezoidal swale with:

3:1 Side slopes 8' Flat Bottom

f = 0.3

k_{vs} = 50 ft/day

F.S. = 2

Swale Bottom Elevation = 68 ft

Seasonal High Ground Water Elevation = 66 ft

h_b = 2 ft

Step 1: Determine Q_P and V_R

For swales discharging to Class III waters, the rule requires percolation of 80% of the runoff from the 3-year, 1-hour storm

From the FDOT IDF Curve, for Zone 5 (Palatka), the average intensity for the 3-year 1-hour storm is: 2.6 in/hr

The sustained peak runoff rate is determined from Eqn 30-2:

$Q_P = C(I_D)(A) =$ 1.72 cfs

The volume of runoff is found by utilizing Eqn 30-4:

$V_R = Q_P{*}D =$ 6,192 CF

Step 2: Determine the swale dimensions:

From Figure 30-2 and based on the assumptions above:

Z = 3
b = 8

Use Figures 30-3 and Table 30-2 to determine Manning's n:

Based on an mowed stand of Bermuda (6") → Retardance class C
Using approx. VR = 0.2
n = 0.27

To solve for normal depth, d, rearrange Eqn 30-14 to give:

$R^{2/3}A = Qn/1.49S^{1/2}$

$R^{2/3}A =$ 4.02

Trial #1: d = 1

A = 11 SF
R = 0.77 ft
$R^{2/3}A =$ 9.24

Trial #2: d = 0.5

A = 4.75 SF
R = 0.43 ft
$R^{2/3}A =$ 2.71

Trial #3: d = 0.63

A = 6.23 SF
R = 0.52 ft
$R^{2/3}A =$ 4.03

Determine the wetted perimeter (P) and total infiltration area (A_b):
d = 0.63 → P = 12 ft

$A_b = L*P =$ 11,328 SF

Step 3: Check for lateral saturated infiltration:

Volume infiltrated (V_u) during unsaturated vertical flow is determined using Eqn 26-3:

$V_u = A_b(f)(h_b) =$ 6,797 CF

$V_u > V_R$ → Infiltration will occur entirely under vertical unsaturated flow conditions; therefore, analysis of lateral saturated infiltration is not required

Step 4: Calculate the peak infiltration flow rate (Qi_P):

The unsaturated vertical conductivity (K_{vu}) is found using Eqn 26-11:

$K_{vu} = 2*K_{vs}/3 =$ 16.67 in/hr

From Eqn 30-5, the design infiltration rate (I_d) is:

$I_d = K_{vu} / FS =$ 8.33 in/hr

The peak infiltration rate is determined by Eqn 30-7:

$Qi_P = I_d*A_b =$ 131.11 CF/min
$=$ 2.19 cfs

Step 5: Calculate the volume of water infiltrated (V_I) and compare to the required infiltration volume:

From Eqn 30-12, the volume of water infiltrated is:

$V_I =$ 7,547 CF

$0.8*V_R =$ 4,954 CF

$V_I > 0.8*V_R$ → **Design is adequate**

Step 6: Calculate the velocity in the swale and compare with permissible values:

From Eqn 30-13, the velocity in the swale is:

$V = 1.49/n*R^{2/3}*S^{1/2}$

$V =$ 0.28 fps

From Table 30-1, the maximum permissible velocity for the swale is approximately 6 fps; therefore, the velocity in the swale will be non-erosive

Industrial Development Drainage Area		21,908	SF
		0.50	Acres
Impervious Area	55%	12,049	SF
		0.28	Acres
Offsite Drainage Area		0	Acres

Assumptions:

C = 0.59 (Table 24-1)

T_C = 8 min based on CN = 68 S = 0.2% L = 410

New trapezoidal swale with:

3:1 Side slopes

8' Flat bottom

f = 0.3

k_{vs} = 50 ft/day

F.S. = 2

Swale Bottom Elevation = 67 ft

Seasonal High Ground Water Elevation = 65 ft

h_b = 2 ft

Step 1: Determine Q_P and V_R

For swales discharging to Class III waters, the rule requires percolation of 80% of the runoff from the 3-year, 1-hour storm

From the FDOT IDF Curve, for Zone 5 (Palatka), the average intensity for the 3-year 1-hour storm is: 2.6 in/hr

The sustained peak runoff rate is determined from Eqn 30-2:

$Q_P = C(I_D)(A) =$ 0.77 cfs

The volume of runoff is found by utilizing Eqn 30-4:

$V_R = Q_P{*}D =$ 2,772 CF

Step 2: Determine the swale dimensions:

From Figure 30-2 and based on the assumptions above:

Z = 3
b = 8

Use Figures 30-3 and Table 30-2 to determine Manning's n:

Based on an mowed stand of Bermuda (6") → Retardance class C
Using approx. VR = 0.2
n = 0.27

To solve for normal depth, d, rearrange Eqn 30-14 to give:

$R^{2/3}A = Qn/1.49S^{1/2}$

$R^{2/3}A =$ 3.12

Trial #1: d = 1

A = 11 SF
R = 0.77 ft
$R^{2/3}A =$ 9.24

Trial #2: d = 0.5

A = 4.75 SF
R = 0.43 ft
$R^{2/3}A =$ 2.71

Trial #3: d = 0.55

A = 5.31 SF
R = 0.46 ft
$R^{2/3}A =$ 3.16

Determine the wetted perimeter (P) and total infiltration area (A_b):

d = 0.55 → P = 11.5 ft

$A_b = L*P =$ 4,715 SF

Step 3: Check for lateral saturated infiltration:

Volume infiltrated (V_u) during unsaturated vertical flow is determined using Eqn 26-3:

$V_u = A_b(f)(h_b) =$ 2,829 CF

$V_u > V_R$ → Infiltration will occur entirely under vertical unsaturated flow conditions; therefore, analysis of lateral saturated infiltration is not required

Step 4: Calculate the peak infiltration flow rate (Qi_P):

The unsaturated vertical conductivity (K_{vu}) is found using Eqn 26-11:

$K_{vu} = 2*K_{vs}/3 =$ 16.67 in/hr

From Eqn 30-5, the design infiltration rate (I_d) is:

$I_d = K_{vu} / FS =$ 8.33 in/hr

The peak infiltration rate is determined by Eqn 30-7:

$Qi_P = I_d*A_b =$ 54.57 CF/min
$=$ 0.91 cfs

Step 5: Calculate the volume of water infiltrated (V_I) and compare to the required infiltration volume:

From Eqn 30-12, the volume of water infiltrated is:

$V_I =$ 3,195 CF

$0.8*V_R =$ 2,218 CF

$V_I > 0.8*V_R$ → **Design is adequate**

Step 6: Calculate the velocity in the swale and compare with permissible values:

From Eqn 30-13, the velocity in the swale is:

$V = 1.49/n*R^{2/3}*S^{1/2}$

$V =$ 0.15 fps

From Table 30-1, the maximum permissible velocity for the swale is approximately 6 fps; therefore, the velocity in the swale will be non-erosive

Industrial Development Drainage Area		18,102	SF
		0.42	Acres
Impervious Area	55%	9,956	SF
		0.23	Acres
Offsite Drainage Area		0	Acres

Assumptions:

C = 0.59 (Table 24-1)

T_C = 6 min based on CN = 68 S = 0.3% L = 390

New trapezoidal swale with:

3:1 Side slopes 8' Flat Bottom

f = 0.3

k_{vs} = 50 ft/day

F.S. = 2

Swale Bottom Elevation = 67 ft

Seasonal High Ground Water Elevation = 63 ft

h_b = 4 ft

Step 1: Determine Q_P and V_R

For swales discharging to Class III waters, the rule requires percolation of 80% of the runoff from the 3-year, 1-hour storm

From the FDOT IDF Curve, for Zone 5 (Palatka), the average intensity for the 3-year 1-hour storm is: 2.6 in/hr

The sustained peak runoff rate is determined from Eqn 30-2:

$Q_P = C(I_D)(A) =$ 0.64 cfs

The volume of runoff is found by utilizing Eqn 30-4:

$V_R = Q_P{*}D =$ 2,304 CF

Step 2: Determine the swale dimensions:

From Figure 30-2 and based on the assumptions above:

Z = 3
b = 8

Use Figures 30-3 and Table 30-2 to determine Manning's n:

Based on an mowed stand of Bermuda (6") → Retardance class C
Using approx. VR = 0.2
n = 0.27

To solve for normal depth, d, rearrange Eqn 30-14 to give:

$R^{2/3}A = Qn/1.49S^{1/2}$

$R^{2/3}A = 2.12$

Trial #1: d = 1

A = 11 SF
R = 0.77 ft
$R^{2/3}A$ = 9.24

Trial #2: d = 0.5

A = 4.75 SF
R = 0.43 ft
$R^{2/3}A$ = 2.71

Trial #3: d = 0.44

A = 4.1 SF
R = 0.38 ft
$R^{2/3}A$ = 2.15

Determine the wetted perimeter (P) and total infiltration area (A_b):

d = 0.44 → P = 10.8 ft

$A_b = L*P$ = 4,212 SF

Step 3: Check for lateral saturated infiltration:

Volume infiltrated (V_u) during unsaturated vertical flow is determined using Eqn 26-3:

$V_u = A_b(f)(h_b) =$ 5,054 CF

$V_u > V_R$ → Infiltration will occur entirely under vertical unsaturated flow conditions; therefore, analysis of lateral saturated infiltration is not required

Step 4: Calculate the peak infiltration flow rate (Qi_P):

The unsaturated vertical conductivity (K_{vu}) is found using Eqn 26-11:

$K_{vu} = 2*K_{vs}/3 =$ 16.67 in/hr

From Eqn 30-5, the design infiltration rate (I_d) is:

$I_d = K_{vu} / FS =$ 8.33 in/hr

The peak infiltration rate is determined by Eqn 30-7:

$Qi_P = I_d*A_b =$ 48.75 CF/min
$=$ 0.81 cfs

Step 5: Calculate the volume of water infiltrated (V_I) and compare to the required infiltration volume:

From Eqn 30-12, the volume of water infiltrated is:

$V_I =$ 2,846 CF

$0.8*V_R =$ 1,843 CF

$V_I > 0.8*V_R$ → **Design is adequate**

Step 6: Calculate the velocity in the swale and compare with permissible values:

From Eqn 30-13, the velocity in the swale is:

$V = 1.49/n*R^{2/3}*S^{1/2}$

$V =$ 0.16 fps

From Table 30-1, the maximum permissible velocity for the swale is approximately 6 fps; therefore, the velocity in the swale will be non-erosive

Industrial Development Drainage Area		17,964	SF
		0.41	Acres
Impervious Area	55%	9,880	SF
		0.23	Acres
Offsite Drainage Area		0	Acres

Assumptions:

C = 0.59 (Table 24-1)

T_C = 6 min based on CN = 68 S = 0.3% L = 388

New trapezoidal swale with:

3:1 Side slopes 8' Flat Bottom

f = 0.3

k_{vs} = 50 ft/day

F.S. = 2

Swale Bottom Elevation = 66 ft

Seasonal High Ground Water Elevation = 62 ft

h_b = 4 ft

Step 1: Determine Q_P and V_R

For swales discharging to Class III waters, the rule requires percolation of 80% of the runoff from the 3-year, 1-hour storm

From the FDOT IDF Curve, for Zone 5 (Palatka), the average intensity for the 3-year 1-hour storm is: 2.6 in/hr

The sustained peak runoff rate is determined from Eqn 30-2:

$Q_P = C(I_D)(A) =$ 0.63 cfs

The volume of runoff is found by utilizing Eqn 30-4:

$V_R = Q_P{*}D =$ 2,268 CF

Step 2: Determine the swale dimensions:

From Figure 30-2 and based on the assumptions above:

Z = 3
b = 8

Use Figures 30-3 and Table 30-2 to determine Manning's n:

Based on an mowed stand of Bermuda (6") → Retardance class C
Using approx. VR = 0.2
n = 0.27

To solve for normal depth, d, rearrange Eqn 30-14 to give:

$R^{2/3}A = Qn/1.49S^{1/2}$

$R^{2/3}A =$ 2.08

Trial #1: d = 1

A = 11 SF
R = 0.77 ft
$R^{2/3}A =$ 9.24

Trial #2: d = 0.5

A = 4.75 SF
R = 0.43 ft
$R^{2/3}A =$ 2.71

Trial #3: d = 0.43

A = 3.99 SF
R = 0.37 ft
$R^{2/3}A =$ 2.06

Determine the wetted perimeter (P) and total infiltration area (A_b):

d = 0.43 → P = 10.7 ft

$A_b = L*P =$ 4,152 SF

Step 3: Check for lateral saturated infiltration:

Volume infiltrated (V_u) during unsaturated vertical flow is determined using Eqn 26-3:

$V_u = A_b(f)(h_b) =$ 4,982 CF

$V_u > V_R$ → Infiltration will occur entirely under vertical unsaturated flow conditions; therefore, analysis of lateral saturated infiltration is not required

Step 4: Calculate the peak infiltration flow rate (Qi_P):

The unsaturated vertical conductivity (K_{vu}) is found using Eqn 26-11:

$K_{vu} = 2*K_{vs}/3 =$ 16.67 in/hr

From Eqn 30-5, the design infiltration rate (I_d) is:

$I_d = K_{vu} / FS =$ 8.33 in/hr

The peak infiltration rate is determined by Eqn 30-7:

$Qi_P = I_d*A_b =$ 48.05 CF/min
$=$ 0.8 cfs

Step 5: Calculate the volume of water infiltrated (V_I) and compare to the required infiltration volume:

From Eqn 30-12, the volume of water infiltrated is:

$V_I =$ 2,805 CF

$0.8*V_R =$ 1,814 CF

$V_I > 0.8*V_R$ → **Design is adequate**

Step 6: Calculate the velocity in the swale and compare with permissible values:

From Eqn 30-13, the velocity in the swale is:

$V = 1.49/n*R^{2/3}*S^{1/2}$

$V =$ 0.16 fps

From Table 30-1, the maximum permissible velocity for the swale is approximately 6 fps; therefore, the velocity in the swale will be non-erosive

Industrial Development Drainage Area		46,737	SF
		1.07	Acres
Impervious Area	55%	25,705	SF
		0.59	Acres
Offsite Drainage Area		0	Acres

Assumptions:

C = 0.59 (Table 24-1)

T_C = 12 min based on CN = 68 S = 0.4% L = 1030

New trapezoidal swale with:

3:1 Side slopes 8' Flat Bottom

f = 0.3

k_{vs} = 50 ft/day

F.S. = 2

Swale Bottom Elevation = 64 ft

Seasonal High Ground Water Elevation = 61 ft

h_b = 3 ft

Step 1: Determine Q_P and V_R

For swales discharging to Class III waters, the rule requires percolation of 80% of the runoff from the 3-year, 1-hour storm

From the FDOT IDF Curve, for Zone 5 (Palatka), the average intensity for the 3-year 1-hour storm is: 2.6 in/hr

The sustained peak runoff rate is determined from Eqn 30-2:

$Q_P = C(I_D)(A) =$ 1.65 cfs

The volume of runoff is found by utilizing Eqn 30-4:

$V_R = Q_P{*}D =$ 5,940 CF

Step 2: Determine the swale dimensions:

From Figure 30-2 and based on the assumptions above:

Z = 3
b = 8

Use Figures 30-3 and Table 30-2 to determine Manning's n:

Based on an mowed stand of Bermuda (6") → Retardance class C
Using approx. VR = 0.2
n = 0.27

To solve for normal depth, d, rearrange Eqn 30-14 to give:

$R^{2/3}A = Qn/1.49S^{1/2}$

$R^{2/3}A =$ 4.73

Trial #1: d = 1

A = 11 SF
R = 0.77 ft
$R^{2/3}A =$ 9.24

Trial #2: d = 0.5

A = 4.75 SF
R = 0.43 ft
$R^{2/3}A =$ 2.71

Trial #3: d = 0.69

A = 6.95 SF
R = 0.56 ft
$R^{2/3}A =$ 4.72

Determine the wetted perimeter (P) and total infiltration area (A_b):

d = 0.69 → P = 12.4 ft

$A_b = L*P =$ 12,772 SF

Step 3: Check for lateral saturated infiltration:

Volume infiltrated (V_u) during unsaturated vertical flow is determined using Eqn 26-3:

$V_u = A_b(f)(h_b) =$ 11,495 CF

$V_u > V_R$ → Infiltration will occur entirely under vertical unsaturated flow conditions; therefore, analysis of lateral saturated infiltration is not required

Step 4: Calculate the peak infiltration flow rate (Qi_P):

The unsaturated vertical conductivity (K_{vu}) is found using Eqn 26-11:

$K_{vu} = 2*K_{vs}/3 =$ 16.67 in/hr

From Eqn 30-5, the design infiltration rate (I_d) is:

$I_d = K_{vu} / FS =$ 8.33 in/hr

The peak infiltration rate is determined by Eqn 30-7:

$Qi_P = I_d*A_b =$ 147.82 CF/min
$=$ 2.46 cfs

Step 5: Calculate the volume of water infiltrated (V_I) and compare to the required infiltration volume:

From Eqn 30-12, the volume of water infiltrated is:

$V_I =$ 7,994 CF

$0.8*V_R =$ 4,752 CF

$V_I > 0.8*V_R$ → **Design is adequate**

Step 6: Calculate the velocity in the swale and compare with permissible values:

From Eqn 30-13, the velocity in the swale is:

$V = 1.49/n*R^{2/3}*S^{1/2}$

$V =$ 0.24 fps

From Table 30-1, the maximum permissible velocity for the swale is approximately 6 fps; therefore, the velocity in the swale will be non-erosive

Industrial Development Drainage Area		52,043	SF
		1.19	Acres
Impervious Area	55%	28,624	SF
		0.66	Acres
Offsite Drainage Area		0	Acres

Assumptions:

C = 0.59 (Table 24-1)

T_C = 10 min based on CN = 68 S = 0.5% L = 970

New trapezoidal swale with:

3:1 Side slopes 8' Flat Bottom

f = 0.3

k_{vs} = 50 ft/day

F.S. = 2

Swale Bottom Elevation = 59 ft

Seasonal High Ground Water Elevation = 56 ft

h_b = 3 ft

Step 1: Determine Q_P and V_R

For swales discharging to Class III waters, the rule requires percolation of 80% of the runoff from the 3-year, 1-hour storm

From the FDOT IDF Curve, for Zone 5 (Palatka), the average intensity for the 3-year 1-hour storm is: 2.6 in/hr

The sustained peak runoff rate is determined from Eqn 30-2:

$Q_P = C(I_D)(A) =$ 1.83 cfs

The volume of runoff is found by utilizing Eqn 30-4:

$V_R = Q_P{*}D =$ 6,588 CF

Step 2: Determine the swale dimensions:

From Figure 30-2 and based on the assumptions above:

Z = 3
b = 8

Use Figures 30-3 and Table 30-2 to determine Manning's n:

Based on an mowed stand of Bermuda (6") → Retardance class C
Using approx. VR = 0.2
n = 0.27

To solve for normal depth, d, rearrange Eqn 30-14 to give:

$R^{2/3}A = Qn/1.49S^{1/2}$

$R^{2/3}A =$ 4.69

Trial #1: d = 1

A = 11 SF
R = 0.77 ft
$R^{2/3}A =$ 9.24

Trial #2: d = 0.5

A = 4.75 SF
R = 0.43 ft
$R^{2/3}A =$ 2.71

Trial #3: d = 0.69

A = 6.95 SF
R = 0.56 ft
$R^{2/3}A =$ 4.72

Determine the wetted perimeter (P) and total infiltration area (A_b):

d = 0.69 → P = 12.4 ft

$A_b = L*P =$ 12,028 SF

Step 3: Check for lateral saturated infiltration:

Volume infiltrated (V_u) during unsaturated vertical flow is determined using Eqn 26-3:

$V_u = A_b(f)(h_b) =$ 10,825 CF

$V_u > V_R$ → Infiltration will occur entirely under vertical unsaturated flow conditions; therefore, analysis of lateral saturated infiltration is not required

Step 4: Calculate the peak infiltration flow rate (Qi_P):

The unsaturated vertical conductivity (K_{vu}) is found using Eqn 26-11:

$K_{vu} = 2*K_{vs}/3 =$ 16.67 in/hr

From Eqn 30-5, the design infiltration rate (I_d) is:

$I_d = K_{vu} / FS =$ 8.33 in/hr

The peak infiltration rate is determined by Eqn 30-7:

$Qi_P = I_d*A_b =$ 139.21 CF/min
$=$ 2.32 cfs

Step 5: Calculate the volume of water infiltrated (V_I) and compare to the required infiltration volume:

From Eqn 30-12, the volume of water infiltrated is:

$V_I =$ 7,980 CF

$0.8*V_R =$ 5,270 CF

$V_I > 0.8*V_R$ → **Design is adequate**

Step 6: Calculate the velocity in the swale and compare with permissible values:

From Eqn 30-13, the velocity in the swale is:

$V = 1.49/n*R^{2/3}*S^{1/2}$

$V =$ 0.27 fps

From Table 30-1, the maximum permissible velocity for the swale is approximately 6 fps; therefore, the velocity in the swale will be non-erosive

Table 24-1. Runoff Coefficients (*C*) for a Design Storm Return Period of Ten Years or Less[1]

Slope	Land Use	Sandy Soils Min.	Sandy Soils Max.	Clay Soils Min.	Clay Soils Max.
Flat (0-2%)	Lawns	0.05	0.10	0.13	0.17
	Rooftops and pavement - 55%	0.95	0.95	0.95	0.95
	Pervious pavements[2]	0.75	0.95	0.90	0.95
	Woodlands	0.10	0.15	0.15	0.20
	Pasture, grass, and farmland[3] - 45 %	0.15	0.20	0.20	0.25
	Residential				
	SFR: 1/2 acre lots and larger	0.30	0.35	0.35	0.45
	SFR: smaller lots and duplexes	0.35	0.45	0.40	0.50
	MFR: apartments, condominiums	0.45	0.60	0.50	0.70
	Commercial and Industrial	0.50	0.95	0.50	0.95
Rolling (2-7%)	Lawns	0.10	0.15	0.18	0.22
	Rooftops and pavements	0.95	0.95	0.95	0.95
	Pervious pavements[2]	0.80	0.95	0.90	0.95
	Woodlands	0.15	0.20	0.20	0.25
	Pasture, grass, and farmland[3]	0.20	0.25	0.25	0.30
	Residential				
	SFR: 1/2 acre lots and larger	0.35	0.50	0.40	0.55
	SFR: smaller lots and duplexes	0.40	0.55	0.45	0.60
	MFR: apartments, condominiums	0.50	0.70	0.60	0.80
	Commercial and Industrial	0.50	0.95	0.60	0.95
Steep (>7%)	Lawns	0.15	0.20	0.25	0.35
	Rooftops and pavements	0.95	0.95	0.95	0.95
	Pervious pavements[2]	0.85	0.95	0.90	0.95
	Woodlands	0.20	0.25	0.25	0.30
	Pasture, grass, and farmland[3]	0.25	0.35	0.30	0.40
	Residential				
	SFR: 1/2 acre lots and larger	0.40	0.55	0.50	0.65
	SFR: smaller lots and duplexes	0.45	0.60	0.55	0.70
	MFR: apartments, condominiums	0.60	0.75	0.65	0.85
	Commercial and Industrial	0.60	0.95	0.65	0.95

Sources: Florida Department of Transportation, 1987; Wanielista, 1990

[1]For 25- to 100-yr recurrence intervals, multiply coefficient by 1.1 and 1.25, respectively, and the product cannot exceed 1.0.
[2]Coefficients assume good ground cover and conservation treatment.
[3]Depends on depth and degree of permeability of underlying strata.
Note: SFR = Single Family Residential;
MFR = Multi-Family Residential

where: V = Average velocity in the channel (*ft/sec*)
n = Manning's roughness coefficient, based on the lining of the channel
R = Hydraulic radius (*ft*)
S = Slope of the channel (*ft/ft*)

The maximum permissible velocity for various channel slopes and types of vegetative cover is given in Table 30-1. The velocity of flow in the swale (calculated using the Manning's equation) will be non-erosive if it is less than the maximum permissible velocity given in Table 30-1.

The hydraulic radius (R) is dependent on the geometry of the swale. Equations for the hydraulic radius for three common swale shapes are given in Figure 30-2.

Manning's roughness coefficient (n) can be determined from Table 30-2 and Figure 30-3. In utilizing Table 30-2, mowed conditions are recommended for analysis of the swale infiltration capacity. The retardance class under mowed conditions result in lower n values, shallower flow depths, and less wetted perimeter for infiltration. Unmowed conditions may be more appropriate for swale analysis under flood flow conditions. The retardance class under unmowed conditions result in higher n values. This will yield more conservative flow depths which may be more appropriate for establishing floodwater elevations in the swale.

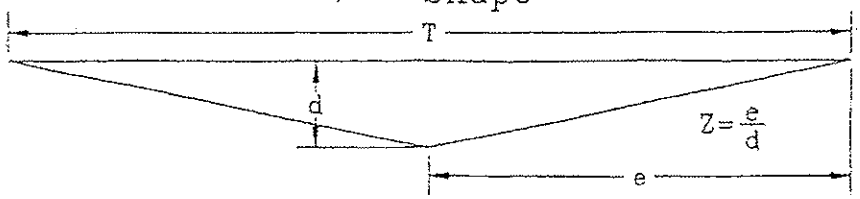
Table 30-1. Permissible Velocities for Grass-Lined Channels

Channel Slope	Lining	Permissible Velocity (ft/sec)
0 – 5%	Bermuda grass	6.0
	Bahia	5.0
	Bluestem (broomsedges)	5.0
	Grass-legume mixture	4.0
	Sericea lespedeza	2.5
	Annual lespedeza	2.5
	Small grains (temporary)	2.5
5 – 10%	Bermuda grass	5.0
	Bahia	4.0
	Bluestem (broomsedges)	4.0
	Grass-legume mixture	4.0

Source: Livingston et al. 1988

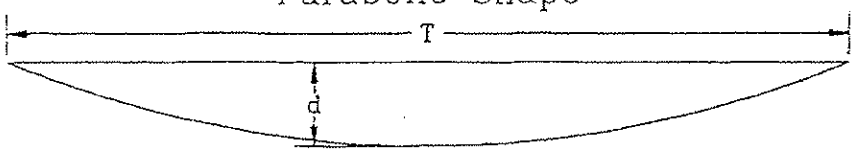
CHANNEL GEOMETRY

V – Shape



Cross-Sectional Area (A) = Zd^2
Top Width (T) = $2dZ$
Hydraulic Radius (R) = $\frac{Zd}{2\sqrt{Z^2+1}}$
Wetted Perimeter (P) = $2d\sqrt{Z^2+1}$

Parabolic Shape



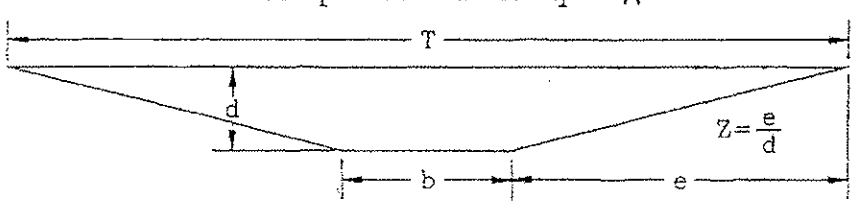
Cross-Sectional Area (A) = $\frac{2}{3}Td$

Top Width (T) = $\frac{1.5A}{d}$

Hydraulic Radius (R) = $\frac{T^2d}{1.5T^2+4d^2}$

Wetted Perimeter (P) = $T + \frac{8d^2}{3T}$

Trapezoidal Shape ✳



Cross-Sectional Area (A) = Zd^2+bd
Top Width (T) = $b+2dZ$
Hydraulic Radius = $\frac{Zd^2+bd}{b+2d\sqrt{Z^2+1}}$
Wetted Perimeter (P) = $b+2d\sqrt{Z^2+1}$

USE 3:1 slopes
Approx width = 8'

Figure 30-2. Typical Waterway Shapes and Mathematical Expressions for Calculating Cross-sectional Area, Top Width, Hydraulic Radius and Wetted Perimeter
Source: Livingston et al. 1988

Table 30-2. Classification of Vegetation Cover as to Degree of Retardance

Retardance Class	Cover	Condition
A	Bluestem (broomsedges)	Excellent stand, tall (average 36")
B	Bermuda or Bahia	Good stand, tall (average 12")
	Native Grass mixture (bluestem, vasey grass, and other long and short wet prairie grasses)	Good stand, unmowed
	Lespedeza sericea	Good stand, not woody tall (average 19')
C	Bahia	Good stand, uncut (6-8")
	Bermuda grass	Good stand, mowed (average 6")
	Centipede grass or St. Augustine	Very dense (average 6")
D	Bermuda or Bahia	Good stand, cut to 2.5" height Cut to 2" height
	Lespedeza sericea	Very good stand before cutting
E	Centipede grass or St. Augustine	Good stand, cut to 1.5" height

Source: Livingston et al. 1988

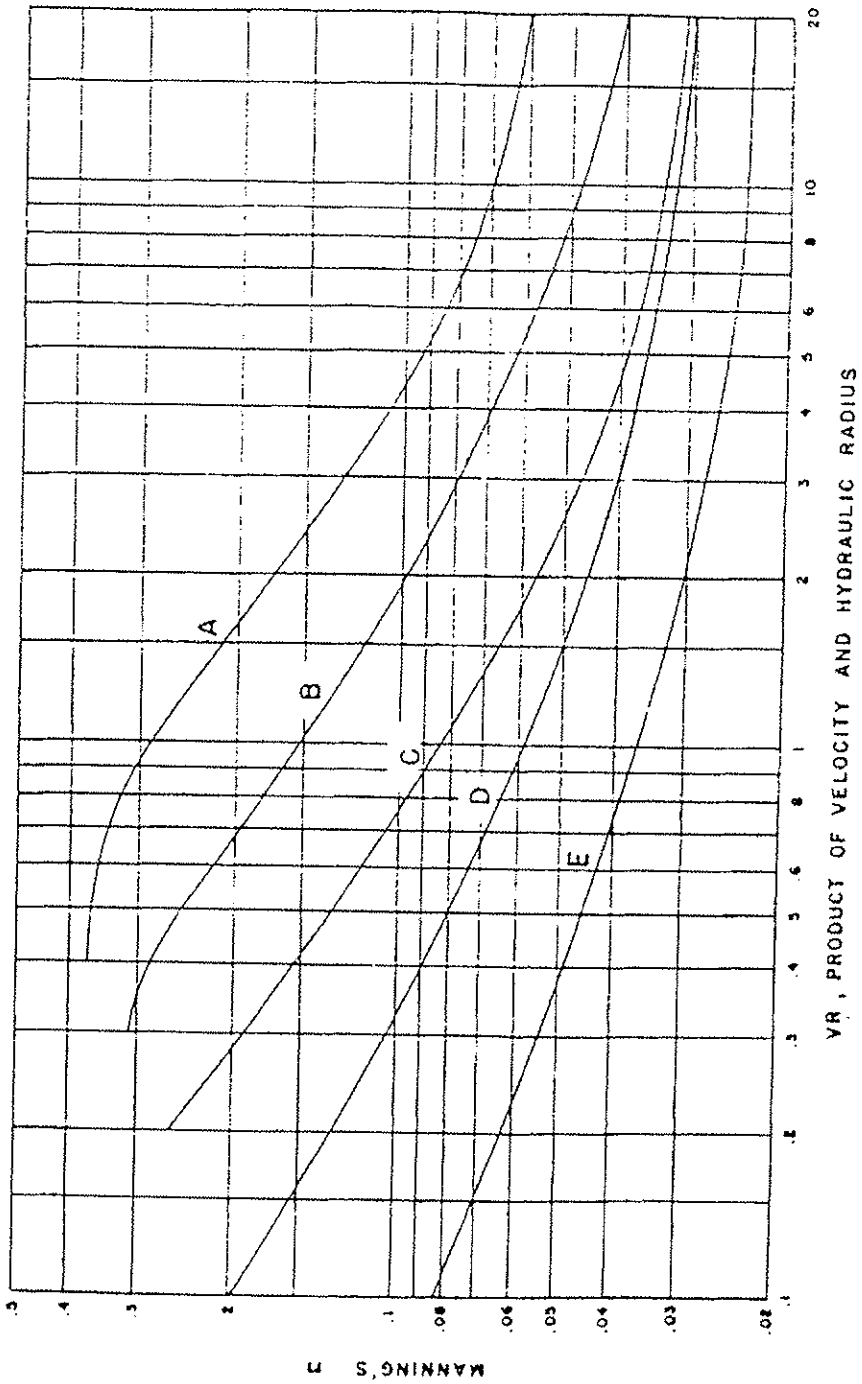


Figure 30-3. Manning's "n" Related to Velocity, Hydraulic Radius and Vegetal Retardance
Source: Livingston et al. 1988

3.7.2 Geologic Structure (Cont'd)

The structural feature of local significance is a fault immediately west of the site. The approximate age of the fault may be interpreted as post Eocene (approximately 58 million years ago) but probably earlier than about mid-Miocene (approximately 30 million years ago). It has been concluded, based upon the available literature, that this local fault is not active.

3.8 SOIL CONDITIONS

The following is a generalized description of the subsurface soil conditions based upon data from 35 test borings and 6 auger holes drilled at the site betweed June 1977 and September 1978 and limited data on soil properties based upon laboratory tests performed on soil samples obtained from some of these borings. The borings and auger holes penetrated to maximum depths of 257 feet and 8 feet, respectively.

The generalized profile consists of approximately 200 feet of unconsolidated sediments (over the highter areas of the site property) underlain by considerable thickness of limestones. This overburden layer showed a "draped" effect over the area sampled, so that although the surface elevation of borings differed by some 30 feet, the thicknesses of the upper sediment layers intersected remained essentially constant. This would, in all probability, not extend as such into the low-lying areas of the site, and the depressed (ground surface at elevation +25 feet MSL) northern extension of the property may be expected to be underlain by a somewhat less thickness of sand.

Over the area sampled, the overburden shows three broad geotechnically distinquishable and horizontally continuous layers: a clean medium surface; a transitional zone of increasing fines consisting of interbedded silty or clayey sand, clay soils, and clayey sand with shells between 40 to 90 feet below surface; and finally, a very dense or very stiff or hard, relatively impervious layer, the Hawthorn Formation, between 90 to 210 feet below surface. These three layers correspond to Stratigraphic Units f, e and d, respectively, previously described in Section 3.7.1. The geotechnical characteristics of these layers are briefly described below:

3.8.1

Layer 1 is a "medium to fine (+) SAND, trace Silt" which extends anywhere from 40 to 70 feet deep. Based upon Standard Penetration Test (SPT) N Values, most of Layer 1 is "compact" or "very compact". However, the near surface soils, to depths ranging from 5 to 12 feet, are in a "loose" condition; below this thin loose zone, Layer 1 is in a "medium compact" condition to depths of about 15 to 20 feet.

Sieve analyses on samples of the Layer 1 sands indicate that the silt content (soil finer than a No. 200 mesh sieve) ranges from about 1 to 10 percent. Although the laboratory permiability tests on samples of Layer 1 have not been completed, field pumping tests by others have indicated that the coefficient of permeability may be as high as 2×10^{-2} cm/sec. ≈ 57 ft/day

The natural moisture content of samples tested ranged from about 14 percent to 25 percent (with corresponding natural dry densities of 121 and 99 pcf). Laboratory direct shear tests on samples taken from 11 feet and 22 feet below surface in one of the borings showed shear strengths of 900 to 1550

Use 50'/day to be conservative

HEC-HMS Palatka Area Meteorological Model

25 year - 24 hour storm

Exceedance Probability	4% (25 year)
Max Intensity Duration	5 min
Storm Distribution	24 hour
Peak Center	50%

Duration min	Duration hr	Depth * inches	Intensity Inches/Hr
5	0.08	1	12.00
15	0.25	2	8.00
60	1.00	3.4	3.40
120	2.00	4.3	2.15
180	3.00	5	1.67
360	6.00	6	1.00
720	12.00	7.2	0.60
1440	24.00	8	0.33

* Source TP-40

HEC-HMS Seminole Pre-Construction Input
Existing Ditch System

Western Ditch

	Impervious Area	Remaining Area	Total Area			
Method			SCS Curve No.			
Area (sq. mi.)	0.0009	0.0053	0.0062			
Initial Loss (in)			2.21			
% Impervious	100	0	15			
SCS Curve No.	90	40	48		Drop	Length
SCS Lag (min)			23	based on	5	1825
			No Baseflow			

Eastern Ditch

	Impervious Area	Remaining Area	Total Area			
Method			SCS Curve No.			
Area (sq. mi.)	0.0025	0.0143	0.0168			
Initial Loss (in)			2.21			
% Impervious	100	0	15			
SCS Curve No.	90	40	48		Drop	Length
SCS Lag (min)			44	based on	18	4885
			No Baseflow			

HEC-HMS Seminole Post-Construction Input
Existing Ditch System

West Ditch

	Impervious Area	Remaining Area	Total Area			
Method			SCS Curve No.			
Area (sq. mi.)	0.0009	0.0053	0.0062			
Initial Loss (in)			2.21			
% Impervious	100	0	15			
SCS Curve No.	90	40	48		Drop	Length
SCS Lag (min)			23	based on	5	1825
			No Baseflow			

East Ditch

	Impervious Area	Remaining Area	Total Area			
Method			SCS Curve No.			
Area (sq. mi.)	0.0024	0.0071	0.0095			
Initial Loss (in)			1.81			
% Impervious	100	0	25			
SCS Curve No.	90	40	53		Drop	Length
SCS Lag (min)			39	based on	18	4885
			No Baseflow			

New Swale #6

	Impervious Area	Remaining Area	Total Area			
Method			SCS Curve No.			
Area (sq. mi.)	0.0010	0.0009	0.0019			
Initial Loss (in)			0.96			
% Impervious	100	0	55			
SCS Curve No.	90	40	68		Drop	Length
SCS Lag (min)			7	based on	4	970
			No Baseflow			

HEC-HMS Seminole Post-Construction Input
Existing Ditch System

New Swale #5

	Impervious Area	Remaining Area	Total Area			
Method			SCS Curve No.			
Area (sq. mi.)	0.0009	0.0008	0.0017			
Initial Loss (in)			0.96			
% Impervious	100	0	55			
SCS Curve No.	90	40	68		Drop	Length
SCS Lag (min)			7	based on	4	1030
			No Baseflow			

New Swale #4

	Impervious Area	Remaining Area	Total Area			
Method			SCS Curve No.			
Area (sq. mi.)	0.0003	0.0003	0.0006			
Initial Loss (in)			0.96			
% Impervious	100	0	55			
SCS Curve No.	90	40	68		Drop	Length
SCS Lag (min)			4	based on	1	400
			No Baseflow			

New Swale #3

	Impervious Area	Remaining Area	Total Area			
Method			SCS Curve No.			
Area (sq. mi.)	0.0003	0.0003	0.0006			
Initial Loss (in)			0.96			
% Impervious	100	0	55			
SCS Curve No.	90	40	68		Drop	Length
SCS Lag (min)			4	based on	1	400
			No Baseflow			

HEC-HMS Seminole Post-Construction Input
Existing Ditch System

New Swale #2

	Impervious Area	Remaining Area	Total Area			
Method			SCS Curve No.			
Area (sq. mi.)	0.0004	0.0004	0.0008			
Initial Loss (in)			0.96			
% Impervious	100	0	55			
SCS Curve No.	90	40	68		Drop	Length
SCS Lag (min)			4	based on	1	400
			No Baseflow			

New Swale #1

	Impervious Area	Remaining Area	Total Area			
Method			SCS Curve No.			
Area (sq. mi.)	0.0009	0.0008	0.0017			
Initial Loss (in)			0.96			
% Impervious	100	0	55			
SCS Curve No.	90	40	68		Drop	Length
SCS Lag (min)			5	based on	6	950
			No Baseflow			

HEC-HMS Seminole Post-Construction Input
Stage-Discharge Tables and Percolation Rates
New Swales

Infiltration Rate 8.33 in/hr
Z = 3
b= 8

Place Invert Elevation of Bleeddown Pipe @ 0.00

Flow through pipe = Q
Orifice discharge coefficient = C C = 0.6
Bleeddown Pipe Diameter = D D = 12 in
Bleeddown Pipe Area = A A = 0.79 ft^2
Headwater height above centroid = H

$Q = (C)(A)(2gH)^{1/2}$

Overall Stage-Discharge Table
Swale #6

L = 970

Stage (ft)	Area (SF)	Area (Acres)	Discharge (cfs)	WP	Perc. Rate (cfs)
0.00	350	0.008	**0.00**	8	0
0.40	768	0.018	**1.96**	10.5	1.96
1.40	3609	0.083	**5.92**	16.9	2.33
2.40	8387	0.193	**7.54**	23.2	2.33

Overall Stage-Discharge Table
Swale #5

L = 1030

Stage (ft)	Area (SF)	Area (Acres)	Discharge (cfs)	WP	Perc. Rate (cfs)
0.00	1000	0.023	**0.00**	8	0
0.60	1950	0.045	**3.54**	11.8	2.34
1.60	6300	0.145	**6.31**	18.1	2.46
2.60	10850	0.249	**7.83**	24.4	2.46

HEC-HMS Seminole Post-Construction Input
Stage-Discharge Tables and Percolation Rates
New Swales

Overall Stage-Discharge Table
Swale #4

L = 388

Stage (ft)	Area (SF)	Area (Acres)	Discharge (cfs)	WP	Perc. Rate (cfs)
0.00	3112	0.071	**0.00**	8	0
1.00	4350	0.1	**3.47**	14.3	0.80
2.00	6803	0.156	**5.43**	20.6	0.80

Overall Stage-Discharge Table
Swale #3

L = 390

Stage (ft)	Area (SF)	Area (Acres)	Discharge (cfs)	WP	Perc. Rate (cfs)
0.00	3112	0.071	**0.00**	8	0
1.00	4350	0.1	**3.48**	14.3	0.81
2.00	6803	0.156	**5.44**	20.6	0.81

Overall Stage-Discharge Table
Swale #2

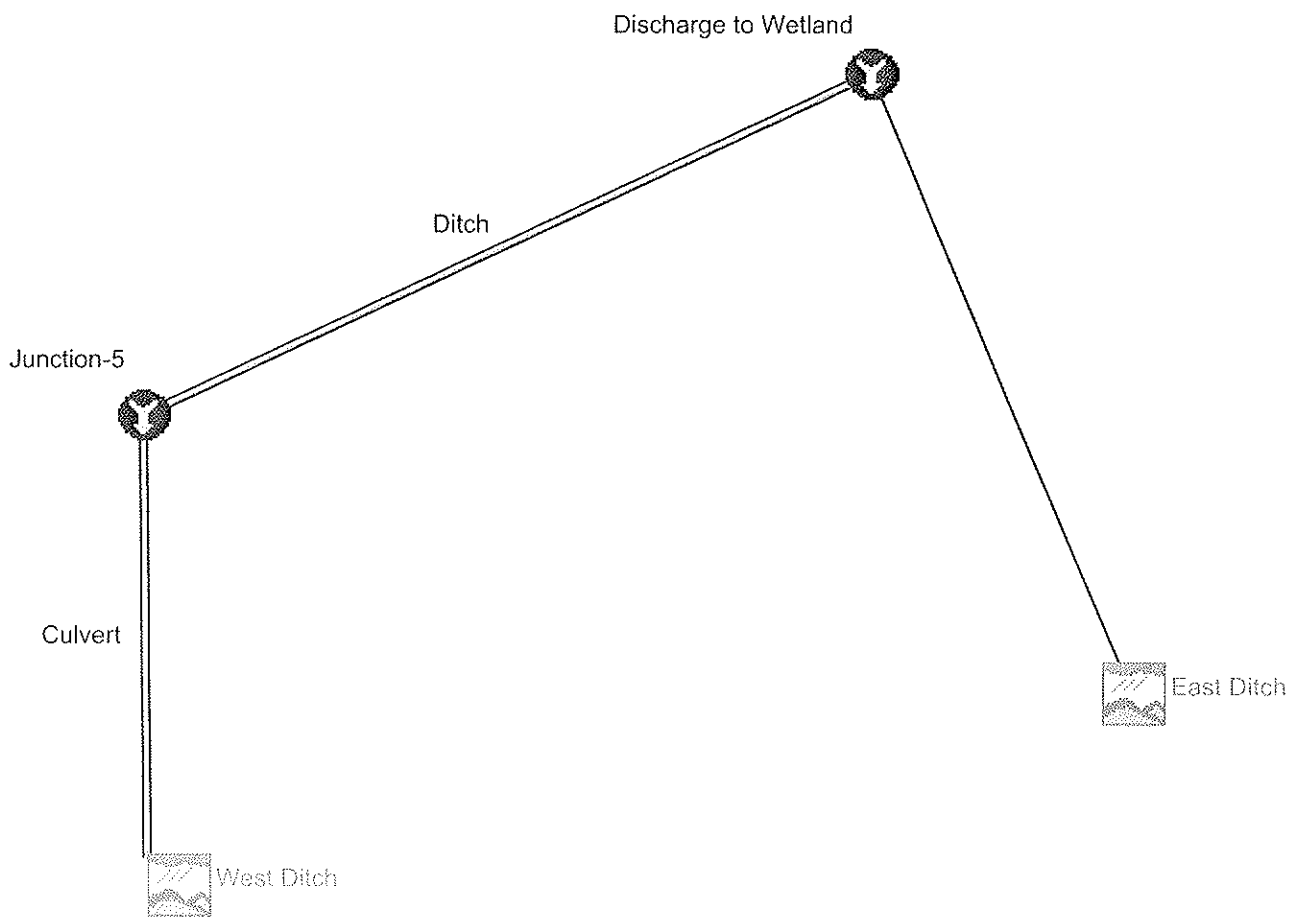
L = 410

Stage (ft)	Area (SF)	Area (Acres)	Discharge (cfs)	WP	Perc. Rate (cfs)
0.00	3200	0.073	**0.00**	8	0
1.00	4441	0.102	**3.58**	14.3	0.91
2.00	7358	0.169	**5.54**	20.6	0.91

Overall Stage-Discharge Table
Swale #1

L = 944

Stage (ft)	Area (SF)	Area (Acres)	Discharge (cfs)	WP	Perc. Rate (cfs)
0.00	900	0.021	**0.00**	8	0
1.00	1875	0.043	**4.86**	14.3	2.19
2.00	4790	0.11	**6.82**	20.6	2.19


Discharge to Wetland
Ditch
Junction-5
Culvert
East Ditch
West Ditch

HMS * Summary of Results

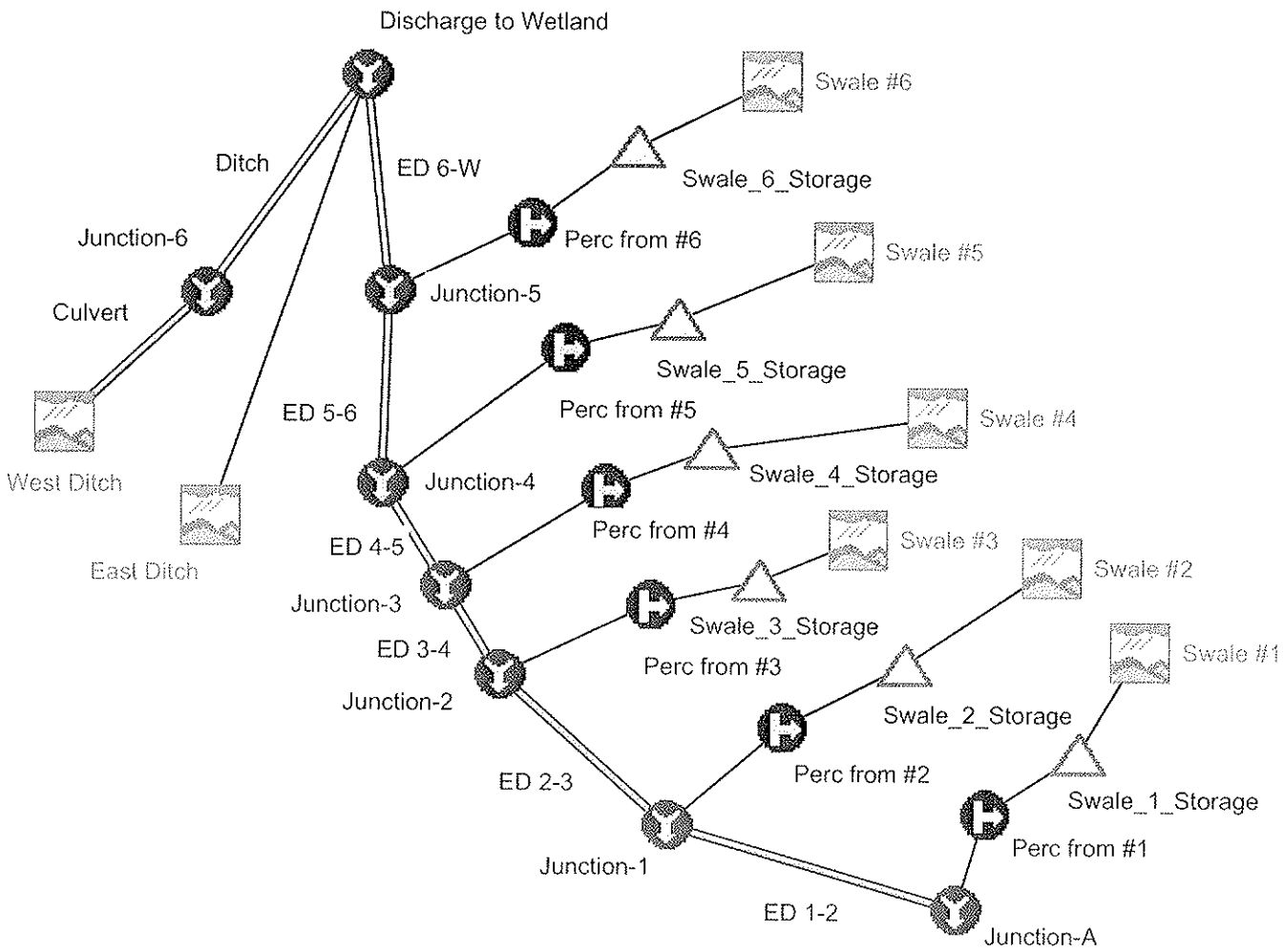
Project : Seminole_Swales_3 Run Name : 25 yr Pre

Start of Run : 01Jan07 0800 Basin Model : Entrance Road_Pre

End of Run : 02Jan07 0800 Met. Model : 25 YR

Execution Time : 02Mar06 1049 Control Specs : 24 HR

Hydrologic Element	Discharge Peak (cfs)	Time of Peak	Volume (ac ft)	Drainage Area (sq mi)
West Ditch	7.0294	01 Jan 07 2027	0.95812	0.006
Culvert	7.0290	01 Jan 07 2027	0.95812	0.006
Junction-5	7.0290	01 Jan 07 2027	0.95812	0.006
Ditch	5.9472	01 Jan 07 2049	0.94487	0.006
East Ditch	12.608	01 Jan 07 2051	2.5822	0.017
Discharge to Wetlanc	18.550	01 Jan 07 2050	3.5271	0.023


Discharge to Wetland
Swale #6
Ditch
ED 6-W
Swale_6_Storage
Junction-6
Perc from #6
Swale #5
Junction-5
Culvert
Swale_5_Storage
ED 5-6
Perc from #5
Swale #4
West Ditch
Junction-4
Swale_4_Storage
Perc from #4
Swale #3
East Ditch
ED 4-5
Swale #2
Junction-3
Swale_3_Storage
ED 3-4
Perc from #3
Swale #1
Junction-2
Swale_2_Storage
Perc from #2
ED 2-3
Swale_1_Storage
Perc from #1
Junction-1
ED 1-2
Junction-A

HMS * Summary of Results

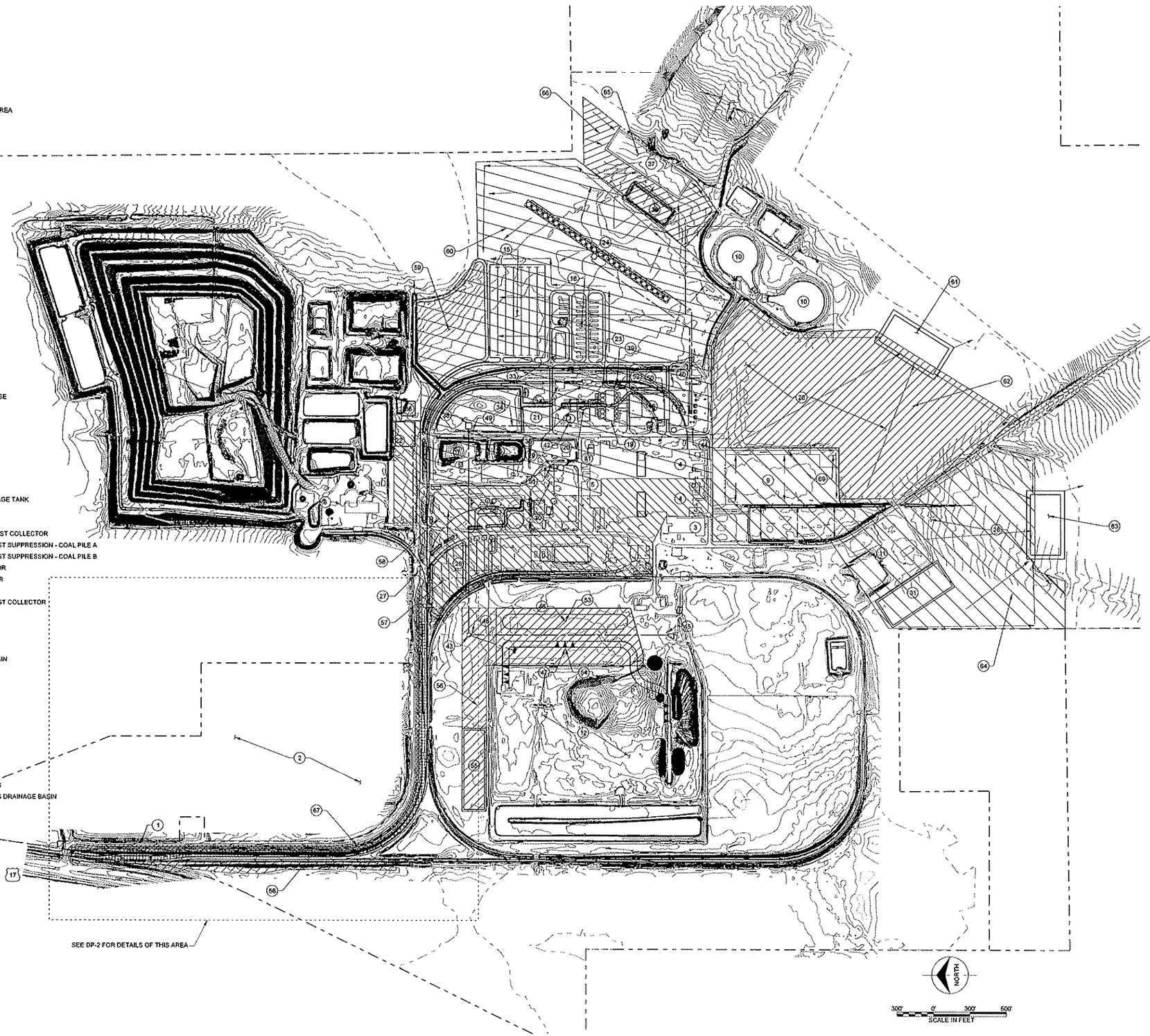
Project : Seminole_Swales_3 Run Name : 25 yr Post

Start of Run : 01Jan07 0800 Basin Model : Entrance Road_Post
End of Run : 02Jan07 0800 Met. Model : 25 YR
Execution Time : 02Mar06 1053 Control Specs : 24 HR

Hydrologic Element	Discharge Peak (cfs)	Time of Peak	Volume (ac ft)	Drainage Area (sq mi)
West Ditch	7.0294	01 Jan 07 2027	0.95812	0.006
Culvert	7.0290	01 Jan 07 2027	0.95812	0.006
Junction-6	7.0290	01 Jan 07 2027	0.95812	0.006
Ditch	5.9472	01 Jan 07 2049	0.94487	0.006
Swale #3	3.3199	01 Jan 07 2005	0.20142	0.001
Swale_3_Storage	1.6202	01 Jan 07 2012	0.20096	0.001
Perc from #3	1.2431	01 Jan 07 2012	0.15419	0.001
Swale #2	4.4265	01 Jan 07 2005	0.26856	0.001
Swale_2_Storage	2.1656	01 Jan 07 2012	0.26795	0.001
Perc from #2	1.6151	01 Jan 07 2012	0.19984	0.001
Swale #1	8.8406	01 Jan 07 2006	0.57060	0.002
Swale_1_Storage	5.5884	01 Jan 07 2012	0.57026	0.002
Perc from #1	3.3984	01 Jan 07 2012	0.31851	0.002
Junction-A	3.3984	01 Jan 07 2012	0.31851	0.002
ED 1-2	2.9625	01 Jan 07 2033	0.31481	0.002
Junction-1	3.9504	01 Jan 07 2031	0.51465	0.003
ED 2-3	3.5539	01 Jan 07 2048	0.51119	0.003
Junction-2	4.0281	01 Jan 07 2047	0.66538	0.003
ED 3-4	3.8530	01 Jan 07 2102	0.66284	0.003
Swale #4	3.3199	01 Jan 07 2005	0.20142	0.001
Swale_4_Storage	1.6179	01 Jan 07 2012	0.20096	0.001
Perc from #4	1.2449	01 Jan 07 2012	0.15463	0.001
Junction-3	4.1959	01 Jan 07 2101	0.81747	0.004
ED 4-5	3.6116	01 Jan 07 2141	0.80594	0.004
Swale #5	7.8790	01 Jan 07 2008	0.57041	0.002
Swale_5_Storage	4.8346	01 Jan 07 2016	0.57011	0.002
Perc from #5	2.4385	01 Jan 07 2016	0.21287	0.002
Junction-4	3.8072	01 Jan 07 2139	1.0188	0.005
ED 5-6	3.0418	01 Jan 07 2230	0.99353	0.005
Swale #6	8.8060	01 Jan 07 2008	0.63752	0.002
Swale_6_Storage	5.8307	01 Jan 07 2015	0.63722	0.002
Perc from #6	3.5090	01 Jan 07 2015	0.11369	0.002
Junction-5	3.9198	01 Jan 07 2015	1.1072	0.007
ED 6-W	2.9524	01 Jan 07 2242	1.0960	0.007
East Ditch	10.741	01 Jan 07 2043	1.9635	0.009
Discharge to Wetlanc	18.152	01 Jan 07 2045	4.0044	0.023

KEY NOTES:

1. PLANT ENTRANCE ROAD
2. LAFARGE PROPERTY
3. EXISTING SERVICE BLDG.
4. EXISTING TURBINE BLDG.
5. EXISTING STACK
6. EXISTING LIMESTONE PREP.
7. EXISTING LIMESTONE STORAGE PILE
8. EXISTING FGD EFFLUENT PROCESSING AREA
9. EXISTING SWITCHYARD
10. EXISTING COOLING TOWER
11. EXISTING WASTE TREATMENT AREA
12. ~~EXISTING COAL YARD~~
13. EXISTING LANDFILL
14. EXISTING RAILCAR REPAIR
15. CONSTRUCTION PARKING
16. CONSTRUCTION OFFICE TRAILER AREA
17. UNIT 3 TURBINE BLDG.
18. UNIT 3 BOILER
19. UNIT 3 PRECIPITATOR
20. UNIT 3 WET FGD
21. UNIT 3 STACK
22. UNIT 3 EFFLUENT PROCESSING
23. UNIT 3 HOUSE SPUR
24. UNIT 3 COOLING TOWER
25. UNIT 3 LIMESTONE PILE EXPANSION
26. UNIT 3 CONSTRUCTION LAYDOWN
27. EXISTING GUARD HOUSE
28. AMMONIA STORAGE
29. UNIT 3 LIMESTONE PREPARATION
30. UNIT 3 FUEL OIL STORAGE TANK
31. WASTE WATER SURGE POND
32. PERCOLATION POND
33. TEMPORARY CONSTRUCTION WAREHOUSE
34. COAL CONVEYOR
35. UNIT 3 WET ESP
36. ZERO LIQUID DISCHARGE SYSTEM
37. NOT USED
38. UNIT 3 CRUSHER HOUSE
39. FLY ASH SILO
40. CONDENSATE STORAGE TANK
41. LIMESTONE SLURRY TANK
42. LIMESTONE SLURRY EMERGENCY STORAGE TANK
43. COAL TRANSFER TOWER
44. EMERGENCY DIESEL GENERATOR
45. EXISTING TRANSFER SAMPLE TOWER DUST COLLECTOR
46. NEW STACKER RECLAIMER W/SPRAY DUST SUPPRESSION - COAL PILE A
47. NEW STACKER RECLAIMER W/SPRAY DUST SUPPRESSION - COAL PILE B
48. NEW TRANSFER TOWER DUST COLLECTOR
49. NEW CRUSHER TOWER DUST COLLECTOR
50. UNIT FEED SYSTEM DUST COLLECTOR
51. LIMESTONE TRANSFER TO BALL MILL DUST COLLECTOR
52. FLY ASH SILO BIN VENT
53. COAL PILE A
54. COAL PILE B
55. COAL PILE RUNOFF POND
56. COAL PILE RUNOFF POND DRAINAGE BASIN
57. STORMWATER POND 1
58. STORMWATER POND 1 DRAINAGE BASIN
59. STORMWATER POND 2
60. STORMWATER POND 2 DRAINAGE BASIN
61. STORMWATER POND 3
62. STORMWATER POND 3 DRAINAGE BASIN
63. STORMWATER POND 4
64. STORMWATER POND 4 DRAINAGE BASIN
65. STORMWATER POND 5
66. STORMWATER POND 5 DRAINAGE BASIN
67. ENTRANCE ROAD STORMWATER SWALES
68. ENTRANCE ROAD STORMWATER SWALES DRAINAGE BASIN
69. SWITCHYARD EXPANSION



Burns & McDonnell
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date FEBRUARY 6, 2006	detailed
designed SEDLACEK	checked

Seminole Electric COOPERATIVE, INC.
IN PARTNERSHIP WITH THOSE WE SERVE

SEMINOLE GENERATING STATION
UNIT 3

SITE DRAINAGE PLAN

project 39736	contract
drawing DP1	rev. 1
sheet of	sheets

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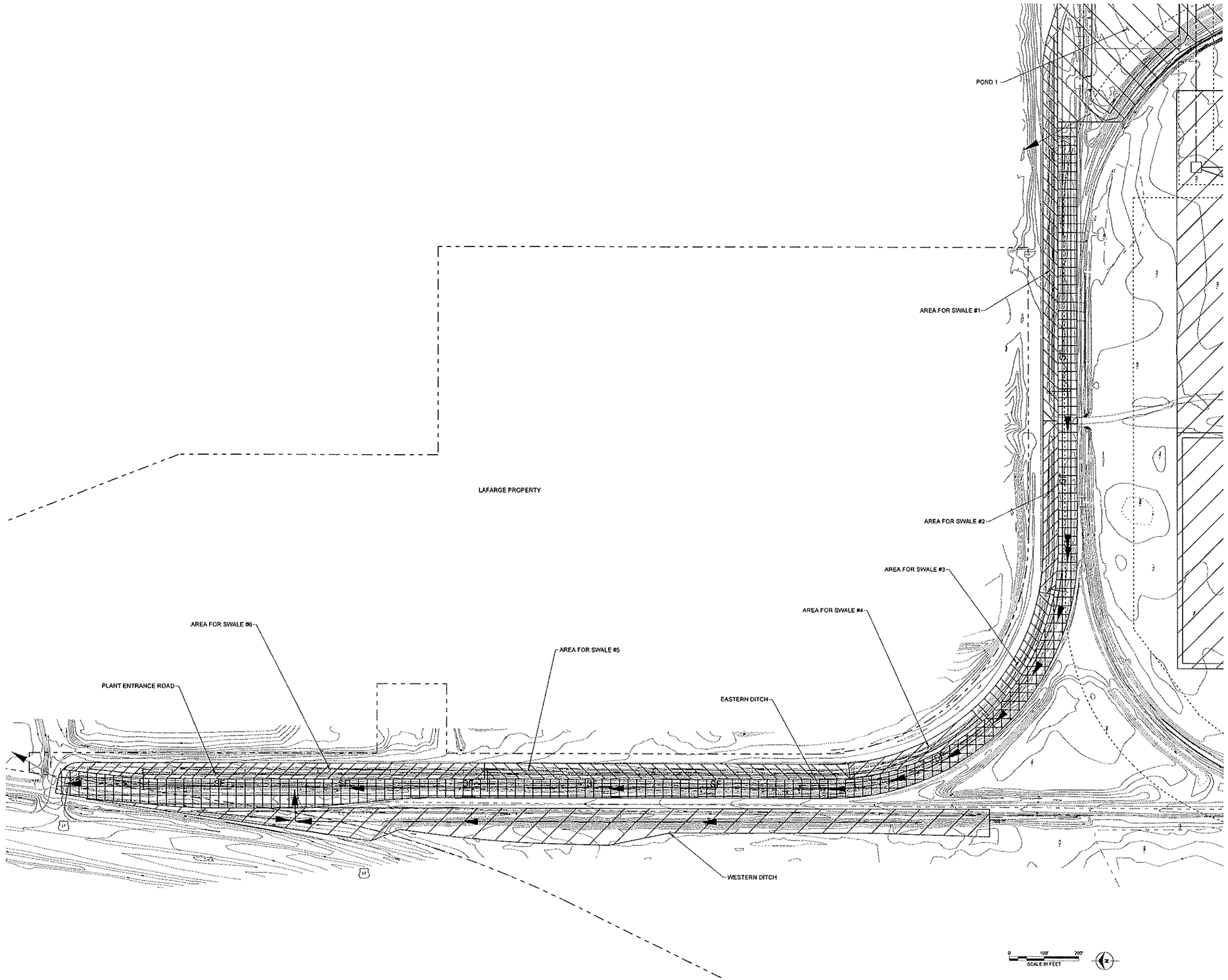

Burns & McDonnell
SINCE 1898

date MARCH 2, 2006	detailed
designed SEDLACEK	checked

Seminole Electric COOPERATIVE, INC
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SEMINOLE GENERATING STATION
UNIT 3

PLANT ENTRANCE ROAD

project 39736	contract
drawing DP2 –	rev. 1
sheet of	sheets

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