

C. Large #14
BCC

RESOLUTION #97-003040

A RESOLUTION APPROVING THE INCREMENTAL DEVELOPMENT ORDER FOR RIVERWOOD, A DEVELOPMENT OF REGIONAL IMPACT (INCREMENT TWO).

BE IT RESOLVED by the Board of County Commissioners of Charlotte County, Florida:

1. Pursuant to Section 380.06, Florida Statutes, the Board of County Commissioners of Charlotte County, Florida, has heard, at a public hearing convened on January 9, 1997, the application for development approval for Riverwood Development of Regional Impact, Increment Two, which consists of approximately 307 acres to be developed in the manner described in the application filed by Riverwood Land Development Company for said Development.

2. On November 25, 1996, the Planning and Zoning Board reviewed the report and recommendations of the Southwest Florida Regional Planning Council and recommended approval of the application with conditions.

3. The Board of County Commissioners of Charlotte County has considered the report and recommendations of the Southwest Florida Regional Planning Council, the Charlotte County Planning and Zoning Board and staff, the documents and comments upon the record made before the Board of County Commissioners of Charlotte County, and hereby makes the following Findings of Fact and Conclusions of Law:

I. FINDINGS OF FACT

A. The approximately 307 acre Increment Two (more particularly described in the attached Exhibit A legal description) as shown on Increment Two Development Plan, Map H, dated December 5, 1996, in Exhibit B attached, a copy of which was submitted with the application included and incorporated by reference herein will contain Residential, Open Space, Conservation and Recreational facilities.

The residential uses may contain up to 641 dwelling units including single family and multi-family units. Ancillary recreational and related uses may also take place in some residential tracts.

January 9, 1997

IMAGED
SG

#75
★
Minutes

FILED: 1997 JAN 15 15:16:07
RECORDED: 1/31/97 15:16:07
BARBARA T. SCOTT, CLERK OF THE CIRCUIT COURT - CHARLOTTE COUNTY

Recorded By: Carolyn Atwell D.C.

The Open Space and Recreational areas will include wetland and upland reserves and lakes.

B. The proposed development is not in an area designated as an Area of Critical State Concern pursuant to the provisions of Section 380.05, Florida Statutes.

C. The development does not unreasonably interfere with the achievement of the objectives of any adopted state land development plan applicable to the area.

D. Upon meeting the conditions contained herein, the development is consistent with the Charlotte County Comprehensive Plan and land development regulations.

E. The development is consistent with the report and recommendations of the Southwest Florida Regional Planning Council submitted pursuant to Subsection 380.06(11), Florida Statutes.

F. The development is consistent with the State Comprehensive Plan.

II. CONCLUSIONS OF LAW

The Development of Regional Impact Application for Incremental Development Approval (Increment Two) submitted by Riverwood Land Development Company is hereby ordered Approved subject to the following conditions, restrictions, and limitations [The term "applicant" or "Applicant" as used herein shall include any successor or management entity hereinafter assigned or succeeding to the rights or obligations under this development order]:

A. CONDITIONS

1. STORMWATER MANAGEMENT (DRAINAGE) WATER QUALITY

- a. As necessary, the Riverwood Increment Two will obtain an NPDES permit for construction activities and Southwest Florida Water Management District (SWFWMD) permits for the conceptual approval and/or construction and operation of the surface water management system.
- b. All water retention/detention areas must meet SWFWMD criteria. Any areas which do not meet this criteria may not be used in the calculation of water quality or quantity volumes unless otherwise permitted under the appropriate SWFWMD regulations.
- c. The applicant shall confirm, to the satisfaction of the SWFWMD and the applicable federal, state and local permitting agencies that the proposed water management system will not significantly adversely impact habitats of any

January 9, 1997

species of special concern, threatened or endangered species occurring on-site, or that such impacts will be mitigated as deemed appropriate during the permitting process.

- d. If drain-down time frames set for the dry retention areas are of such duration that they result in mosquito breeding detrimental to the health, welfare, safety and quality of life of Riverwood and surrounding residents, as per Florida Statutes Chapter 380.021, or constitute a nuisance injurious to health, as per Florida Statutes Chapter 386.041(e), then those retention areas should be modified in a way which will abate the nuisance, or detrimental conditions consistent with SWFWMD regulations.
- e. All drainage swales and spreader-swales shall be finish-graded to levels such that no isolated pool of water will stand in any swale for more than 72 hours after a ten-year storm event.
- f. In order to assure unimpaired tidal flushing, no spoil pile or berm shall be constructed, and no existing spoil pile, berm or excavation shall be allowed to remain within the wetland reserve or buffer areas, which spoil pile, berm or excavation detains or impounds water for more than 72 hours after high tide or a 10-year storm.
- g. At least once annually, the applicant, or the entity responsible for maintenance of the surface water management system, shall remove trash and eradicate from all lakes, buffer areas, dry retention areas, swales and spreader swales, plant species listed in the "Florida Prohibited Aquatic Plants" list published by the Florida Department of Natural Resources, Bureau of Aquatic Plant Management.
- h. Provisions for the drainage of off-site areas and outparcels that presently drain through Increment Two site must be provided at the time of SWFWMD permit application.
- i. The applicant shall undertake a regularly scheduled vacuum sweeping of all paved common areas, parking facilities, and internal roads to be incorporated as a best management practice (BMP).
- j. The operation of the Riverwood Surface Water Management System is dependent on the Myakka River for an outlet. Therefore, the water management plan shall demonstrate that the system is designed in accordance with existing SWFWMD permit design parameters for the adjacent portions of the Myakka River.

January 9, 1997

- k. The applicant shall cooperate with any on-going or future efforts by Charlotte County to establish a County-wide Watershed Basin Management Plan.
- l. Best Management Practices (BMP's) and monitoring and maintenance of the stormwater management system shall be implemented by the applicant in accordance with SWFWMD guidelines.
- m. The applicant shall designate a specific entity to manage and maintain the surface water management system. This entity may be a utility company, a community development district, a homeowner's association or similar entity, or one of the entities described in the AMDA. Residents will be encouraged not to eat fish caught in the stormwater treatment facilities.

2. HURRICANE EVACUATION/FLOODPLAINS

- a. Mitigation for hurricane shelter impacts shall consist of funding by December 31, 1997 for hurricane panels at the Charlotte County public shelter designated by the Charlotte County Emergency Management Official. The amount of the funding shall be \$3,500.
- b. Mitigation for hurricane evacuation route impacts shall be implementation of one of the following provisions ("a Riverwood Hurricane Awareness Guide" has been sent to Charlotte County for processing to comply with #1 below):
 - 1. Provision for the establishment and maintenance of a public information program within an existing homeowners association for the purpose of educating the development's residents regarding the potential hurricane threat; the need for timely evacuation in the event of an impending hurricane; the availability and location of hurricane shelters; and the identification of steps to minimize property damage and to protect human life. In order to use this mitigation option, the developer must develop a continuing hurricane awareness program and a hurricane evacuation plan. The hurricane evacuation plan shall address and include, at a minimum, the following items: operational procedures for the warning and notification of all residents and visitors prior to and during a hurricane watch and warning period; a public awareness program which addresses vulnerability, hurricane evacuation, hurricane shelter alternatives including hotels, friends residences and public hurricane shelter locations, and other protective actions which may be specific to the development; identification of who is responsible for implementing the plan; and other items as deemed appropriate. The plan shall be developed in coordination

January 9, 1997

with local emergency management officials. In order to use this mitigation option, the final plan must be found sufficient by SWFRPC, DCA and Charlotte County and must address the recommendations provided by the reviewing agencies; or

2. Provision of roadway capacity improvements committed to by the developer above and beyond the improvements required by Rule 9J-2.0245, Florida Administrative Code; or
3. Provision of funds to be used for the purpose of procuring communications equipment which would upgrade the existing warning and notification capability of local emergency management officials. In order to use this mitigation option, the developer must provide reasonable assurance from local emergency management officials regarding the provision's ability to reduce the development's hurricane evacuation impacts.

3. TRANSPORTATION

- a. In addition to the other obligations specified in the Development order, the Applicant, or his successor shall be required to construct, at no cost to Charlotte County, all site-related improvements deemed necessary by Charlotte County and the Florida Department of Transportation. Site-related improvements shall be those improvements deemed site-related under criteria or standards applicable to all other developments in Charlotte County by the county development review process prior to construction. The Applicant's obligation shall include but not be limited to the full cost of design and engineering, drainage and utility relocation, dedication of right-of-way under the Applicant's ownership, construction of turn lanes, acceleration and deceleration lanes, construction inspection, contract administration, testing and signalization (as needed and warranted). The alignment, design, signalization, and construction schedule shall be approved by either the County Engineer and/or the Florida DOT, as appropriate.
- b. The Applicant or his successor shall submit an annual traffic monitoring report. The monitoring report shall be designed in cooperation with Charlotte County, the Southwest Florida Regional Planning Council and the Florida Department of Transportation. The annual monitoring report shall contain PM peak-hour, peak season turning movements counts and roadway segment counts and mutually agreed upon professionally acceptable level of service analyses (including a projection of the LOS for impacted roadways for the

January 9, 1997

next year) at all project access points onto the roadway network and at the following significantly impacted regional intersections:

REGIONAL INTERSECTIONS

US 41

- Murdock Circle South
- Toledo Blade Boulevard South
- Midway
- Forrest Nelson

SR 776

- Cornelius Boulevard
- Jacobs Street
- Project Entrance (East)
- Project Entrance (West)
- David Boulevard
- Oceanspray Boulevard
- Collingswood
- Flamingo
- Biscayne

In addition, peak season peak hour counts and level of service calculations shall be submitted as part of the annual monitoring report for all of the foregoing significantly impacted regional intersections and for all of the significantly impacted regional roadway links listed below:

REGIONAL ROADWAY SEGMENTS

US 41

- Murdock Circle South to Toledo Blade Boulevard South
- Toledo Blade Boulevard South to Forest Nelson Boulevard
- Forest Nelson Boulevard to Midway Boulevard
- Midway Boulevard to Harbor Boulevard

SR 776

- Project Entrance (West) to Gillot Street
- Gillot Street to CR 771
- San Casa to Pine Street

Also, the annual monitoring report shall indicate the status of those road improvements from the County's Capital Improvement Program and the FDOT Five Year Work Program that were assumed to be committed for this analysis.

January 9, 1997

Riverwood shall submit the annual monitoring report to Charlotte County, the Southwest Florida Regional Planning Council, FDOT, and the Florida Department of Community Affairs for review. The first report shall be submitted on or before the anniversary of the effective date of the MDO and may be done jointly with the MDO and Increment One report. Reports shall then be submitted annually until project buildout. The purpose of the annual monitoring program is to:

- Assist Charlotte County and FDOT in determining the proper timing of necessary roadway improvements; and
- Determine the existing and projected levels of service on regional facilities.

It is recognized and understood that traffic counts may be obtained from original machine and manual peak hour counts, County traffic volume reports, Florida Department of Transportation, other ADA's and DRI's with similar monitoring requirements, and other generally acceptable sources. However, all counts must be no older than one (1) year.

- c. Based on the RPC staff transportation assessment of significant project impacts, construction of the following transportation improvements will be needed prior to, or coincident with, development of Riverwood Increment Two, if adopted level of service conditions are to be maintained through buildout on regional road segments and intersections. The adopted level of service determination shall be made by Charlotte County.

REGIONAL ROADWAY SEGMENTS

US 41:	Lanes:
➤ Murdock Circle S. To Toledo Blade Boulevard S.	8*
➤ Midway Boulevard to Harbor Boulevard	8*
SR 776	
➤ Project Entrance (W) to Gillot Street	4
➤ San Casa to Pine Street	6

*Or restricted access to improve a parallel facility.

LOCAL ROADWAY SEGMENTS

➤ Toledo Blade Boulevard S.:	
Pellam Boulevard to Lakeview Boulevard	4

January 9, 1997

REGIONAL INTERSECTIONS

- US 41 at Murdock Circle S.
- US 41 at Toledo Blade Boulevard S.
- SR 776 at Collingswood Boulevard
- SR 776 at Flamingo Boulevard
- SR 776 at Biscayne Boulevard
- SR 776 at Cornelius Boulevard
- SR 776 at Jacobs Street
- SR 776 at Project Entrance (E)
- SR 776 at Project Entrance (W)
- SR 776 at David Boulevard
- SR 776 at Oceanspray Boulevard

For Regional Intersections, based on the annual monitoring report if Charlotte County determines that there are improvements required due to the impacts of Increment Two, and if those improvements are not part of the Charlotte County Capital Improvement Plan which is funded in part by Roads Impact Fees, then the Applicant and Charlotte County (with input from FDOT) shall mutually agree upon any additional payment from the Applicant for its fair share of such improvements. If not mutually agreed upon within nine (9) months from the County's determination, then issuance of building permits submitted after nine (9) months shall cease until agreement is reached.

- d. In order to mitigate the transportation impacts on the regionally and locally significant roads as identified in Exhibit C for this increment and meet comprehensive plan concurrency requirements, the applicant shall pay its proportionate share of offsite regionally and locally significant roadway and intersection improvements coincident with the impacts of the Increment Two traffic. The proportionate share necessary to mitigate the impacts of Increment Two has been identified in Exhibit D and is \$1,016,346. If the proportionate share amount is less than or equivalent to the road impact fees in the Charlotte County Impact Fee Ordinance, then the Applicant shall comply with the provisions of that ordinance. If the proportionate share exceeds the amount of road impact fees, the Applicant may make a lump sum payment equivalent to the difference between proportionate share and the total of impact fees, and proceed by complying with the provisions of the Charlotte County Impact Fee Ordinance. If the proportionate share amount exceeds the amount of road impact fees and the Applicant chooses to pay the balance of the proportionate share payment in a lump sum, then upon such payment Charlotte County will expeditiously pursue capital improvements related to the road segments significantly impacted by this development. Upon provision of the financial assurances for the identified proportionate

January 9, 1997

share, the Applicant shall have satisfied the obligations of the development order and shall be subject to the adopted Charlotte County concurrency management ordinance for the Increment Two transportation impacts.

- e. Charlotte County will address the need for the improvements to the regionally and locally significant roadway network in the Capital Improvements Element of the Comprehensive Plan, as amended from time to time.
- f. During the planning and permitting stages of development, the developer will reserve an easement that could connect a road in the development to Prentice Avenue that would provide a future access should the residents of Riverwood, through the Riverwood Community Development District or its successor, choose to fund construction of the road and ancillary structures.

4. VEGETATION AND WILDLIFE

- a. Construction and land clearing activity shall be permitted pursuant to the Increment Two Master Development Plan (Map H as revised and dated December 5, 1996), subject to compliance with the management plans for scrub jays, bald eagle and gopher tortoises which will be finalized through receipt of the appropriate permit from USFWS (for bald eagle and scrub jays) and FGFWFC (for gopher tortoises) and which are substantially consistent with the management plans as revised December 5, 1996 with December 26, 1996 and January 8, 1997 Revision Pages (for bald eagle and scrub jays), and October 30, 1996 (for gopher tortoises), respectively, and submitted to SWFRPC in the review process, as contained herein and attached hereto as Exhibits E, F, & G. Copies of the approved permits will be provided to Charlotte County. There will be no construction activity in Increment II until issuance of all necessary permits from the US Army Corps of Engineers, and the Southwest Florida Water Management District, or until final approval of the management plans for the bald eagle, scrub jay, and gopher tortoise preserve areas which will be established and maintained within this Increment.
- b. The USFWS Standard Construction Precautions for the Eastern Indigo Snake shall be followed except that a biologist need not be onsite during all construction except for purposes of actually relocating an Eastern Indigo Snake.
- c. To the extent allowed by and acceptable to the appropriate permitting agencies, the Applicant shall be permitted to use any permanently preserved

January 9, 1997

(through a conservation easement or other acceptable method) and managed scrub jay habitat as mitigation for scrub jay impacts related to the FDOT construction of SR 776.

- d. To address long term bald eagle habitat, except for clearing within the footprint of residential structures, and within six feet (6') of the footprint of such structures, the removal of any native pine with a diameter measured at breast height (54" above the natural ground level) of ten inches (10") or greater shall be prohibited within fifty feet (50') of the jurisdictional line of wetlands along the Myakka River. The removal of such pines for residential structures as specified above may be negotiated on a case-by-case basis at the time of application for building permits. Clearing within upland buffer zones which are required by jurisdictional permitting agencies shall be limited to the minimum amount necessary to accommodate the construction of private, non-commercial docking facilities, and to accomplish activities specified as allowed in the jurisdictional agencies permits.
- e. The "Gopher Tortoise Habitat" identified on Map H shall be a preserve area and will be shown as such as part of the FGFWFC Gopher Tortoise permit.
- f. Florida Department of Community Affairs is designated as a party with the right to enforce the management plans' provisions to ensure protection of the preservation lands subject to the Gopher Tortoise, Bald Eagle and Scrub Jay Management Plans, and will be allowed access to the site upon request, and may rely upon Section 380.11, F.S., or other proceedings to enforce the requirements of the development order.
- g. The status of maintenance and management of the areas subject to the management plans shall be included annually in the DRI annual status report required by Section 380.06 (18), F.S.

5. WASTEWATER MANAGEMENT/WATER SUPPLY

- a. The Applicant has committed to the gradual phasing out of the use of potable water for non-potable (primarily irrigation) purposes, and the replacement of potable water by reclaimed water from the onsite wastewater treatment plant. The Applicant has also committed to the construction of dual water piping, within Increment Two, to enable the project to utilize such reclaimed water. The use of the project's potable water (to meet non-potable demands) shall be discontinued at the earliest possible date, and the use of reclaimed water for non-potable demands shall be initiated. The applicant is encouraged to

January 9, 1997

incorporate stormwater into the wastewater reuse system to help reduce the need for potable irrigation water.

- b. The applicant shall establish (or designate) a responsible entity for the non-potable water supply and distribution system.
- c. Prior to construction of buildings, the applicant should show verification, acceptable to the Southwest Florida Water Management District and Charlotte County, that adequate potable water capacity is available to serve Riverwood Increment Two.
- d. The applicant shall acquire, as required by SWFWMD, a water use permit for withdrawals from groundwater, project lakes and/or other surface water bodies for irrigation or potable uses and for dewatering activities associated with the construction of project lakes, and/or road or building foundations.
- e. In areas of Increment Two employing treated wastewater for irrigation purposes, the applicant shall ensure that onsite lakes and wetlands, and the Myakka River, are adequately protected from possible effluent contamination, as required by the appropriate regulatory agencies.
- f. Water shall not be used for the purpose of cleaning parking lots, streets or paved common areas. Such areas shall be cleaned through a regular vacuum sweeping program.
- g. Water conservation measures and practices should be utilized in Riverwood Increment Two such as low water use plumbing fixtures, self-closing and/or metered water faucets, and other water conserving devices. Unless spray effluent is utilized for irrigation, landscape irrigation should be restricted to the hours of between 5:00 p.m. and 9:00 a.m. after the establishment of landscaping.
- h. Riverwood Increment Two shall utilize xeriscape principles in the design and maintenance of the project's landscaping.
- i. All construction plans, technical specifications, and proposed plats, if applicable, for the Riverwood Increment Two Water Distribution System, shall be reviewed and approved by Charlotte County prior to commencement of construction.
- j. Temporary septic tanks may be used for residential models, construction and sales offices. Any residential model utilizing septic tanks shall be properly

January 9, 1997

connected to a central sewer system prior to permanent residential use. Septic tanks shall not be allowed within 900 feet of the Myakka River. The purpose of this condition is to protect the water quality of the Myakka River from potential wastewater contamination.

- k. The applicant shall provide assurances that needed wastewater treatment plant capacity shall be in place by buildout of Riverwood Increment Two to service the Increment.
- l. The applicant shall provide assurance, for Riverwood Increment Two, that non-domestic wastewater will be treated separately from domestic wastewater and handled in accordance with FDEP criteria.

6. WETLANDS

Construction and land clearing activity within any wetland areas shall be prohibited until the appropriate permits have been obtained for such areas following an opportunity for review and comment by the SWFRPC and Charlotte County. Appropriate mitigation for all wetland impacts (4 acres estimated) shall be provided to permit agencies which can include credit for upland preservation associated with the eagle/tortoise/scrub jay preserve. The applicant will cooperate with Charlotte County Mosquito Control to provide access for necessary mosquito control activities.

7. ENERGY

The applicant is encouraged to incorporate the following energy conservation features where appropriate, into final site plans and architecture. These features may be implemented through appropriate deed restrictions and covenants in order to mitigate further energy impacts of the project. To the extent practicable the following shall be undertaken or incorporated into development plans:

- a. Provision of a bicycle/pedestrian system along Riverwood Drive and other collector roads within the project connecting Increment Two with Increment One and to the Charlotte County bicycle/pedestrian system.
- b. Provision of bicycle racks or storage facilities in recreational, commercial and multi-family residential areas.
- c. Cooperation in the locating of bus stops, shelters, and other passenger and system accommodations for a transit system to serve the project area.

January 9, 1997

- d. Use of energy-efficient features in window design (e.g., tinting and exterior shading).
- e. Use of operable windows and ceiling fans.
- f. Installation of energy-efficient appliances and equipment.
- g. Prohibition of deed restrictions or covenants that would prevent or unnecessarily hamper energy conservation efforts (e.g., building orientation, clotheslines, and solar water heating systems).
- h. Reduced coverage by asphalt, concrete, rock, and similar substances in streets, parking lots, and other areas to reduce local air temperatures and reflected light and heat.
- i. Installation of energy-efficient lighting for streets, parking areas, recreation areas, and other interior and exterior public areas.
- j. Selection of native plants, trees, and other vegetation and landscape design features that reduce requirements for water, fertilizer, maintenance, and other needs.
- k. Preservation and planting of native shade trees to provide reasonable shade for all recreation areas, streets, and parking areas.
- l. Preservation and placement of trees to provide needed shade in the warmer months while not overly reducing the benefits of sunlight in the cooler months.
- m. Orientation of structures, as possible, to reduce solar heat gain by walls and to utilize the natural cooling effects of the wind.
- n. Provision for structural shading (e.g., trellises, awnings, and roof overhangs) wherever practical when natural shading cannot be used effectively.
- o. Inclusion of porch/patio areas in residential units.
- p. Consideration by the project architectural review committee(s) of energy conservation measures (both those noted here and others) to assist builders and residents in their efforts to achieve greater energy efficiency in the development.

January 9, 1997

8. HISTORICAL/ARCHAEOLOGICAL SITES

Pursuant to the AMDA containing an archaeological study and report identifying various historical or archaeological sites:

- a. Shell midden A is not eligible for listing in the National Register of Historic Places, nor otherwise has any national, state, regional, or local significance, therefore, no further archaeological consideration is necessary for this site.
- b. Preservation of shell midden B shall occur if it is determined to be a site eligible for inclusion on the National Register of Historic Places. Such determination shall be based on an archaeological test excavation conducted prior to local development permitting to provide sufficient data to make a final determination concerning its possible regional significance. The resultant project report must be forwarded to the State Division of Historical Resources to complete the process of reviewing the impact of this project on significant archaeological resources.
- c. If preservation of shell midden B is chosen as an option it shall be stabilized through use of native vegetation, rip-rap, or similar barrier.
- d. Preservation of the burial mound shall occur if reasonably feasible, and if not, prior to local development permitting, heavy equipment shall be used to remove the overburden covering the mound to determine if burials are present. This work shall be monitored by a professional archaeologist. If human burials are encountered, all work within the burial mound area shall cease pending compliance with the provisions of Section 872.05, Florida Statutes.
- e. If preservation of the burial mound is chosen as an option it shall be recontoured, capped and planted with native vegetation.

9. GENERAL CONSIDERATIONS

- a. All commitments and impact mitigating actions provided by the applicant within the Application for Incremental Development Approval (and supplementary sufficiency documents) that are not in conflict with specific conditions for project approval outlined above are incorporated herein and officially adopted as conditions for approval.
- b. This Increment Two is a single five (5) year phase buildout, as adjusted to the effective date of development order (i.e., after expiration of any appeal or

January 9, 1997

appeal period). If development order conditions and applicant commitments incorporated within the development order to mitigate regional impacts are not carried out as indicated to the extent or in accord with the timing schedules specified within the development order and this phasing schedule, then this shall be presumed to be a substantial deviation for the affected regional issue.

- c. Pursuant to Chapter 380.06, the applicant may be subject to credit for contributions, construction, expansion, or acquisition of public facilities, if the developer is also subject by local ordinances to impact fees or exactions to meet the same needs. The local government and the developer may enter into a capital contribution front-ending agreement to reimburse the developer for voluntary contributions in excess of his fair share.
- d. Certain outparcels within the outside perimeter of Riverwood Increment Two considered during review of the Riverwood Increment Two project are not owned by the applicant. Therefore, the applicant shall either obtain the development rights to the parcels or indicate them as "outparcels" to the project. Because the entire area within the perimeter of the Riverwood boundary has already been extensively reviewed and inspected, subsequent acquisition of the "outparcels" shall not create a substantial deviation pursuant to Chapter 380, Florida Statutes. Upon being acquired by the Applicant, these outparcels shall be subject to Map H and all conditions of the Development Order.
- e. The applicant will comply with all applicable local codes, ordinances and regulations of Charlotte County to the extent not inconsistent with this D.O.

BE IT FURTHER RESOLVED, by the Board of County Commissioners of Charlotte County, Florida, that:

1. The County Administrator shall be the local officer responsible for assuring compliance with this Development Order.
2. Wherever the term "applicant" or "Applicant" is used herein to refer to a condition or requirement which must be completed, the term shall include any successors or assigns or a management entity hereinafter succeeding to the rights or obligations under this development order.
3. This Incremental Development Order shall remain in effect for a period of ten (10) years from the date of its rendition. In the event that significant physical development has not commenced within this time period, development approval will terminate and this development order shall no longer be effective. For purposes of this requirement, "significant physical

January 9, 1997

development" does not include roads, drainage or landscaping but does include construction of buildings or installation of utilities and facilities such as sewer and water lines.

4. Pursuant to Section 380.06(15)(c)3, Charlotte County agrees that the Riverwood Increment Two Development Order shall not be subject to downzoning, unit density reduction or intensity reduction for a period of ten (10) years unless it can demonstrate that substantial changes have occurred in the conditions underlying the approval of this development order or that the development order was based on substantially inaccurate information provided by the developer or that the change is clearly established by Charlotte County to be essential to the public health, safety, or welfare.

5. The applicant or its successor(s) in title to the subject property shall submit a report annually, commencing one year from the effective date (i.e., after expiration of any appeal or appeal period) of this development order) to Charlotte County, the Southwest Florida Regional Planning Council, and the Department of Community Affairs. This report will contain the information required in Section 9J-2.025, Florida Administrative Code. Failure to submit the annual report shall be governed by Subsection 380.06(18), Florida Statutes.

6. Subsequent requests for development permits shall not require further review pursuant to Section 380.06, Florida Statutes, unless it is found by Charlotte County, after due notice and hearing, that one or more of the following is present:

a. A substantial deviation from the terms or conditions of this development order, or other changes to the approved development plans which create a reasonable likelihood of adverse regional impacts or other regional impacts which were not evaluated in the review by the Southwest Florida Regional Planning Council, in which case Charlotte County shall take the appropriate action which may include ordering that an amendment to the DRI be filed before any further development may continue; or

b. An expiration of the period of effectiveness of this development order as provided herein, in which case Charlotte County shall order a termination of all development activity until such time as a new DRI Application for Development Approval has been submitted, reviewed and approved in accordance with Section 380.06, Florida Statutes.

7. The approval granted by this Development Order is limited. Such approval shall not be construed to obviate the duty of the applicant to comply with all other applicable local or state permitting procedures.

8. This resolution shall become effective immediately upon its adoption.

9. The Clerk of Circuit Court is hereby directed to forward a certified copy of this resolution and its attachments to Mr. Tom Beck, Bureau Chief, Florida Department of Community

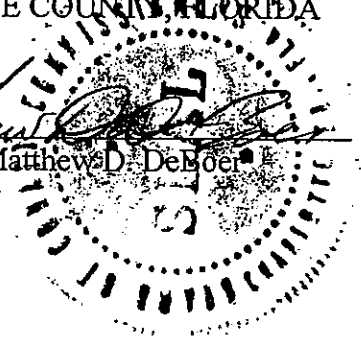
January 9, 1997

Affairs, 2555 Shumard Oak Boulevard, Tallahassee, Florida 32399-2100, and to Mr. Wayne E. Daltry, Executive Director, Southwest Florida Regional Planning Council, 4980 Bayline Drive, 4th Floor, North Fort Myers, Florida 33918-3909.

PASSED AND DULY ADOPTED this 9th day of January, 1997.

BOARD OF COUNTY COMMISSIONERS
OF CHARLOTTE COUNTY, FLORIDA

BY: *Matthew D. DeBoer*
Chairman, Matthew D. DeBoer



ATTEST:

Barbara T. Scott, Clerk of Circuit Court and Ex-Officio
Clerk to the Board of County Commissioners

By: *Heather J. Rice*
Deputy Clerk

APPROVED AS TO FORM
AND LEGAL SUFFICIENCY:

BY: *Renee Francis Lee*
County Attorney, Renee Francis Lee
RFL

C:\OFFICE\WPWIN\WPDOCS\RIV2DO.J8

January 9, 1997

IMAGING MEMO
THE WRITING/TYPING & PRINTING
WAS UNSATISFACTORY FOR
REPRODUCTION AT THE TIME
OF IMAGING.



WILSON, MILLER, BARTON & PEEK, INC.

Engineers, Planners, Surveyors, Landscape Architects & Environmental Consultants
4571 Colonial Boulevard, Suite 200, Fort Myers, Florida 33912 • (941) 939-1020 Fax (941) 939-7479

DESCRIPTION RIVERWOOD INCREMENT TWO NORTH PARCEL

All that part of section 17, Township 40 South, Range 21 East, Charlotte County, Florida, being more particularly described as follows;

COMMENCING at the northwest corner of the northeast quarter of said Section 17;
thence along the west line of said northeast quarter of Section 17, said line also being the west limit of the Plat of Port Charlotte Subdivision, Section 61, according to the Plat thereof as recorded in Plat Book-5, pages 75A through 75C, Public records of Charlotte County, Florida, S.00°47'30"W. 172.00 feet to the POINT OF BEGINNING of the parcel herein described;

thence continue along said west line of the northeast quarter of Section 17, said line also being the west limit of said Port Charlotte Subdivision, Section 61, S.00°47'30"W. 1163.11 feet to the southwest corner of the northwest quarter of the northeast quarter of said Section 17;

thence along the south line of said northwest quarter of the northeast quarter of Section 17, said line also being the west limit of said Port Charlotte Subdivision, Section 61, S.89°40'23"E. 1323.43 feet to the southeast corner of the northwest quarter of the northeast quarter of said Section 17;

thence along the west line of the southeast quarter of the northeast quarter of said section 17, said line also being the west limit of said Port Charlotte Subdivision, Section 61, S.00°23'14"W. 1314.80 feet to the southwest corner of the southeast quarter of the northeast quarter of said Section 17;

thence along the west line of the east half of the southeast quarter of said Section 17, said line also being the west limit of said Port Charlotte Subdivision, Section 61, S.00°52'20"W. 1198.90 feet;

thence leaving said line S.22°57'15"W. 346.67 feet;

thence S.41°49'59"W. 873.07 feet;

thence S.06°03'17"W. 330.70 feet;

thence S.63°30'41"W. 231.71 feet;

thence S.40°16'27"W. 192.88 feet;

thence S.12°10'31"W. 278.92 feet;

thence S.09°35'37"E. 179.19 feet more or less to the waters of the Myakka River;

thence along said waters, being approximated by the following twelve (12) described courses;

1) N.74°05'08"W. 805.31 feet;

2) N.61°48'52"W. 720.18 feet;

3) N.04°26'36"W. 560.34 feet;

4) N.04°28'41"E. 474.50 feet;

5) N.16°24'21"W. 943.02 feet;

6) N.34°22'37"W. 357.57 feet;

7) N.16°37'36"W. 302.41 feet;

8) N.05°57'53"E. 141.57 feet;

9) N.36°33'02"W. 211.83 feet;

10) N.06°03'41"W. 474.99 feet;

11) N.07°43'01"W. 865.14 feet;

EXHIBIT A

IMAGING MEMO
THE WRITING/TYPING & PRINTING
WAS UNSATISFACTORY FOR
REPRODUCTION AT THE TIME
OF IMAGING.

WILSON - MILLER - BARTON & PEEK, INC

OR BOOK 1510 PAGE 1288

DESCRIPTION

RIVERWOOD INCREMENT TWO, NORTH PARCEL
BEING A PART OF SECTION 17, TOWNSHIP 40 SOUTH, RANGE 21 EAST,
CHARLOTTE COUNTY, FLORIDA.

12) N.50°28'29"W. 190.43 feet more or less to a point on the centerline of a creek;
thence meander along the centerline of said creek N.41°27'35"E. 1100.00 feet;
thence continue to meander along the centerline of said creek N.89°27'35"E. 1500.00 feet to a
point on the west line of the northeast quarter of said Section 17, said line also being the west
limit of said Port Charlotte Subdivision, Section 61, and the POINT OF BEGINNING of the
parcel herein described;

Parcel contains 309.08 acres, more or less;

LESS AND EXCEPT

Lots 617, 618 and 719, according to the Plat of Plan of ward 4, City of El Jobe-an, Florida,
recorded in Plat Book 1, page 60 of the Public Records of Charlotte County, Florida;

ALSO LESS AND EXCEPT

Lots 555, 676, 677, 1248, 1249 and 1743, according to the Plat of Plan of ward 6, City of El
Jobe-an, Florida, recorded in Plat Book 1, page 61 of the Public Records of Charlotte County,
Florida

Subject to easements, restrictions, reservations and rights-of-way of record;
Bearings are assumed and based on the west line of the northeast quarter of Section 17 being
S.00°47'30"W.

Prepared by:

WILSON, MILLER, BARTON & PEEK, INC.

Marcus L. Berman
Marcus L. Berman, Professional Surveyor & Mapper
Florida Registration No. 5086

7-9-96
Date

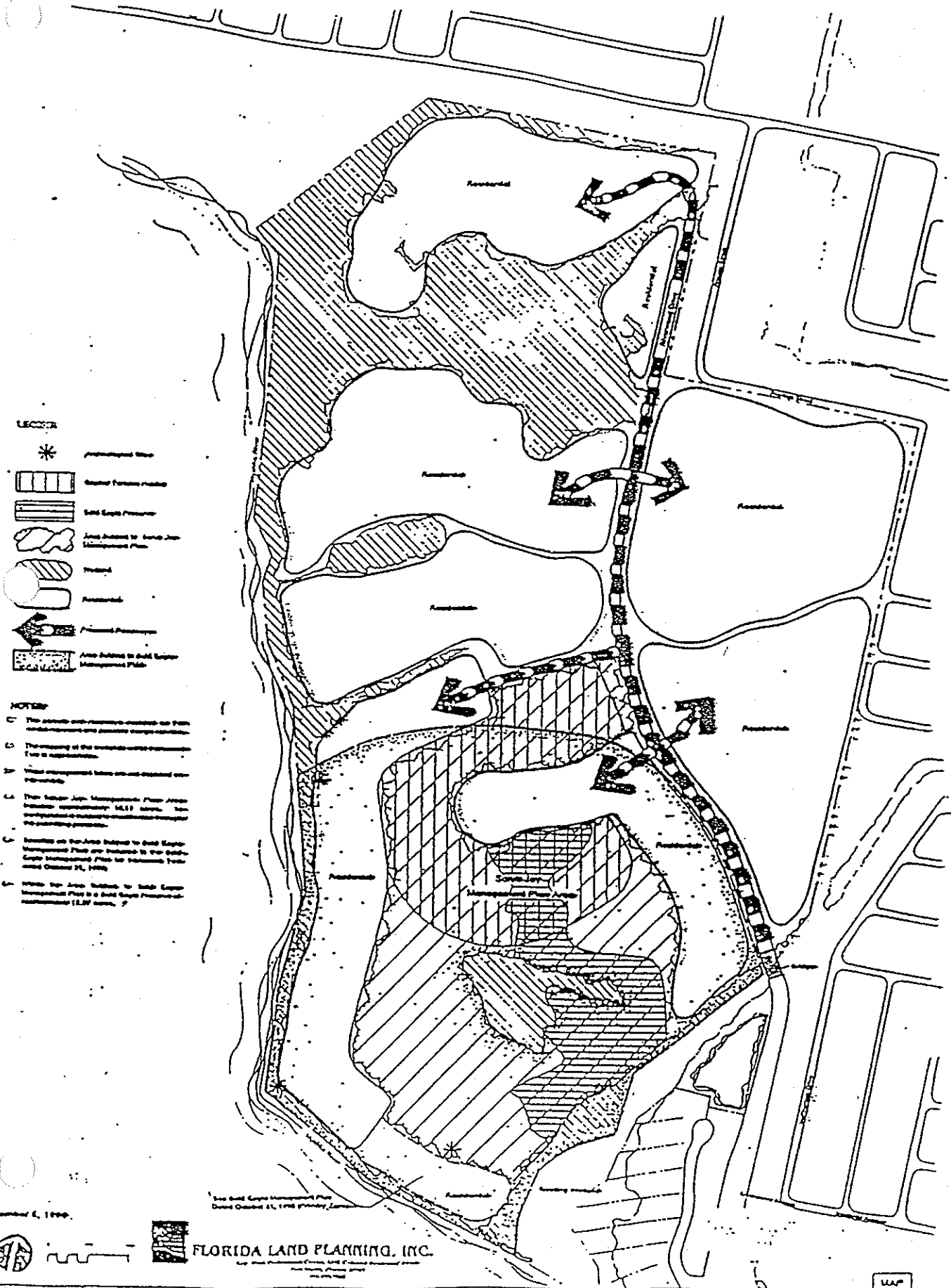
Not valid unless embossed with the Professional's seal.

W.O.: 4877
REF.: D-0300-231
DATE: July 9, 1996

EXHIBIT A

IMAGING MEMO
THE WRITING/TYPING & PRINTING
WAS UNSATISFACTORY FOR
REPRODUCTION AT THE TIME
OF IMAGING.

Exhibit B



- NOTE**
- 1. The accuracy and reliability of this map are not guaranteed.
 - 2. The mapping of the boundaries shown is to be approximate.
 - 3. The map is not intended to be used as a legal document.
 - 4. This Belt System Flood Protection Plan Area includes approximately 5,512 acres. The map is not intended to be used as a legal document.
 - 5. Details on the Flood Protection Plan Area are included in the Belt System Flood Protection Plan for the Belt System Flood Protection Plan, dated October 24, 1999.
 - 6. This Belt System Flood Protection Plan Area includes approximately 5,512 acres. The map is not intended to be used as a legal document.


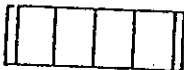
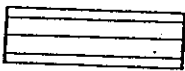

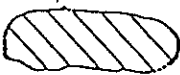
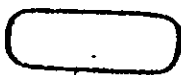


The Belt System Flood Protection Plan
dated October 24, 1999 (primary)

November 8, 1999.

MAP
H

Exhibit B, (cont.)

LEGEND:

-  Archeological Sites
-  Gopher Tortoise Habitat
-  Bald Eagle Preserve
-  Area Subject to Scrub Jay Management Plan
-  Wetland
-  Residential
-  Proposed Roadways
-  Area Subject to Bald Eagle Management Plan

NOTES:

1. The parcels and roadways depicted on this exhibit represent one possible design solution.
2. The mapping of the wetlands within Increment Two is approximate.
3. Water management lakes are not depicted on this exhibit.
4. The Scrub Jay Management Plan Area includes approximately 58.11 acres. Its configuration is subject to modification through the permitting process, *plan dated October 31, 1996, revised Dec. 5, 1996, and Jan. 8, 1997.*
5. Specifics on the Area Subject to Bald Eagle Management Plan are included in the Bald Eagle Management Plan for Increment Two dated October 31, 1996, *revised Dec. 5 and 26, 1996.*
6. Within the Area Subject to Bald Eagle Management Plan is a Bald Eagle Preserve of approximately 12.37 acres.

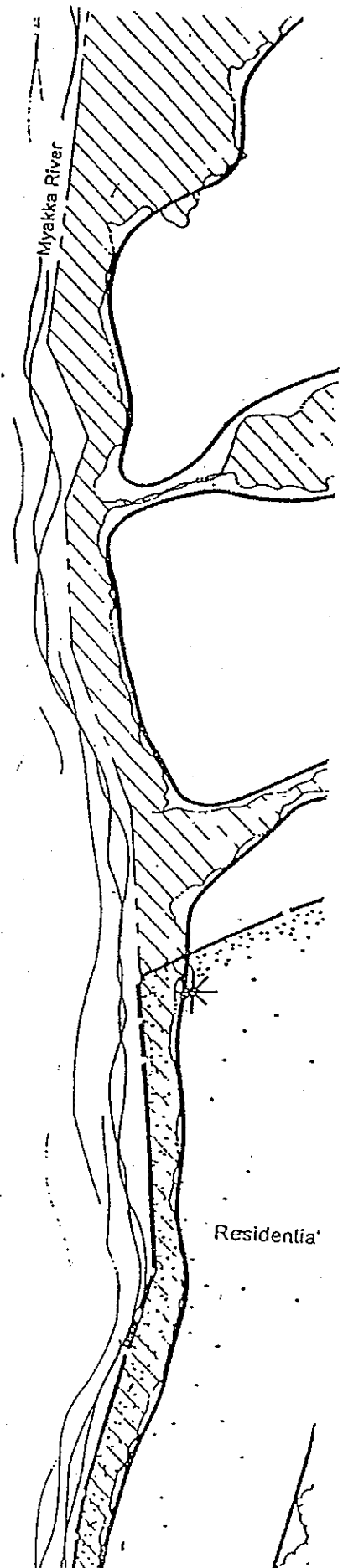


EXHIBIT C
RIVERWOOD INCREMENT TWO
REGIONAL AND LOCALLY SIGNIFICANT ROADS

Regional Roadway Segments

US 41:

- Murdock Circle S. To Toledo Blade Boulevard S.
- Midway Boulevard to Harbor Boulevard

SR 776:

- Project Entrance (W) to Gillot Street
- San Casa to Pine Street

Local Roadway Segments

Toledo Blade Boulevard S.:

- Pellam Boulevard to Lakeview Boulevard

Exhibit D - County												
Riverwood II Proportionate Share Calculation - Prepared by Charlotte County												
Segment	Road Name	From	TO	TRIPS INCR.	TRIPS INCR. II	TOTAL TRIPS	Change Serv. Vol.	Length	Cumulative Approach - Combined Urban and Rural Costs		Incr. I Cost Rural Section	Incr. II Cost Urban Section
									Cost/Mile Rural Section	Cost/Mile Urban Section		
T-9	Tamiami Trail (US41)	Murdock Cir	Toledo Blade	274	110	384	1120	0.612	\$1,293,000	\$1,732,000	\$193,590	\$104,106
T-10	Tamiami Trail (US41)	Toledo Blade	Forrest Nelson	242	92	334	1120	0	\$1,293,000	\$1,732,000	\$0	\$0
T-11	Tamiami Trail (US41)	Forrest Nelson	Midway	227	75	302	1120	0	\$1,293,000	\$1,732,000	\$0	\$0
T-12	Tamiami Trail (US41)	Midway	Harbor	149	60	209	970	1.5	\$1,293,000	\$1,732,000	\$297,923	\$160,701
J-10	El Jobean (SR776)	Project Entrance	Gillot	326	131	457	3140	1.929			added below	added below
J-16	El Jobean (SR776)	San Casa	Pine Street	81	33	114	1680	1.562	\$1,145,000	\$1,490,000	\$86,231	\$45,716
TB-4	Toledo Blade	Pellam	Lakeview	31	12	43	1530	0.2	\$1,594,000	\$1,594,000	\$6,459	\$2,500
									Imp. Cost		\$584,203	\$313,023
		\$2,050,000							Imp. Cost		\$897,227	
		9.36%							Bridge Sect.		\$2,360,999	
		\$2,241,880							Total Imprmt		\$3,258,226	
									Incr. I Paid		\$2,241,880	
									Incr. II Share		\$1,016,346	
									Impact Fees		\$998,041	
									Prop Share Due		\$18,305	

Exhibit E

SCRUB JAY PLAN

**Riverwood DRI Increment Two
Charlotte County, Florida**

Prepared for:

**Riverwood Land Company, L.P.
4100 Riverwood Drive
Port Charlotte, Florida 33953**

by:

**Florida Land Planning, Inc.
1342 Colonial Boulevard, Suite 60
Fort Myers, Florida 33907**

**Wilson Miller Barton & Peek, Inc.
3200 Bailey Lane, Suite 200
Naples, Florida 33942**

With input from:

**Bill Pranty
5572 Country Road 64 East
Avon Park, Florida 33825**

*October 31, 1996
revised December 05, 1996
and January 8, 1997*

*Exhibit E. Scrub Jay Plan
January 8, 1997 Revision Pages*

Section I. Introduction, the end of the third paragraph, page 1:

...the revised Master Concept Plan for Riverwood Increment Two (AIDA Map H) is attached hereto. If Riverwood DRI property outside of Increment I and Increment II is determined to be utilized by scrub jays, the Applicant will address this issue as provided in Non-Game Wildlife Program Technical Report No. 8, Ecology and Development-Related Habitat Requirements of the Florida Scrub Jay.

Section III. Scrub Jay Area, second sentence of the second paragraph, page 3:

Neither the small area of jurisdictional wetlands located within the envelope of the Scrub Jay Area, nor the proposed two-acre water management area to be located within the envelope of the Scrub Jay Area, ~~is not~~ are included within the total acreage calculations.

Section IV. Habitat Management, opening paragraph, page 3:

To ensure the maintenance of habitat suitable for Florida scrub jays, ~~F~~ the scrub habitat set aside for protection will be restored and managed under the direction of a qualified management entity as described in Section V, below.

Section IV. Habitat Management, Management Activities, middle of the paragraph, page 5:

...If the quadrant scheduled for management does not contain an active nest, or an active nest is located within 200 feet of the quadrant perimeter, then, when fire is selected as the management tool, management will be performed subject to correct wind conditions to prevent smoke toward any adjacent active nests; if site specific conditions render fire inappropriate, other management techniques will be utilized to ensure that management occurs on a timely basis as necessary to maintain the viability of the scrub habitat. Should an active nest be found in or within 200 feet of a quadrant scheduled for management activities, the management activity will be delayed until the following year the end of the nesting season.

Section IV. Habitat Management, Management Schedule, page 5:

1. Pine Flatwoods

- Prescribed burns will be conducted at 3 to 6 year intervals or as determined by the management entity if feasible and as necessary to achieve

management goals.

- Bush hogging and/or mowing at 3 year intervals if judged necessary by the qualified management entity to maintain a minimum of 30% total ground area clear of shrubs.

2. Scrubby Flatwoods and Pine/Oak Disturbed

- Prescribed burns at 8 to 10 year intervals as determined by the management entity if feasible and as necessary to achieve management goals.
- Bush hogging and/or mowing at 5 year intervals if judged necessary by the qualified management entity to maintain a minimum of 25% total ground area clear of shrubs.
- Hand trim shrub layer to one to two meter heights at 5 year intervals.
- Selective had clearing of shrub layer to maintain minimum of 25% open area at 5 year intervals.

Section V. Management Entity, page 6:

The property owner, or qualified management entity hereinafter assigned or succeeding to the rights or obligations under the development order, will be responsible for the implementation of this Plan. All management activities undertaken per this plan shall be undertaken by, or under the direction of, a qualified management entity mutually agreeable to the Applicant, Charlotte County, the USFWS and FGFWFC. This entity, which may be an agency, person, or firm, will possess requisite knowledge of Florida habitats, flora and fauna, and will be certified by the Florida Division of Forestry to conduct prescribed burns. The property owner may, with the approval of the USFWS and FGFWFC, undertake management activities described herein provided all such activities are supervised by an entity with the qualifications described above.

Add Section VIII. Public Information, page 6:

Within any part of Increment Two affected by this Plan, each lot purchaser and tract developer of Riverwood will be provided with a brochure designed to provide Riverwood residents with information regarding the scrub jay nests, their nesting habits, restrictions, and this Plan. This brochure will be submitted to FGFWFC for review and appropriate input prior to distribution.

PART ONE
SCRUB JAY MANAGEMENT PLAN

I. INTRODUCTION

The property known as Riverwood Increment Two was platted in the 1950's. Today that approved subdivision is considered an antiquated, substandard subdivision. The property owner's intention is to abandon the old plats and create a viable community which is sensitive to environmental issues. Riverwood Increment Two will continue Riverwood Increment One's level of excellence.

Two Florida scrub jay clans, with a total of five jays between them, have been documented on the Increment Two property (See the report by Bill Pranty included as Part Two of this Plan). The existing habitat is overgrown scrub oak and scrubby flatwoods. Input from representatives of Charlotte County, the Florida Game and Freshwater Fish Commission, and the U.S. Fish and Wildlife Service, as well as the observations in the Pranty report and previous Florida scrub jay studies of the property, form the basis of this Scrub Jay Plan. In developing this Scrub Jay Plan close attention has been given to the provisions of the Bald Eagle Management Plan for Increment Two.

The Scrub Jay Plan for Increment Two addresses only that part of the Riverwood property within Increment Two. Adjustments to the proposed Increment Two Master Concept Plan submitted with the Application for Incremental Development Approval (AIDA) have been made as a result of this proposed Scrub Jay Plan. A copy of the revised Master Concept Plan for Riverwood Increment Two (AIDA Map H) is attached hereto.









II. SCRUB JAY PLAN OBJECTIVES

The objectives of the Riverwood Scrub Jay Plan for Increment Two are:

- Recognize that protection of the Florida scrub jay on the Riverwood property is necessary.
- Define an area for the scrub jay clans within the Riverwood property where significant scrub habitat is protected.
- Develop guidelines for activities within the Scrub Jay Area.
- Develop habitat management techniques appropriate for the subject property.

IMAGING MEMO
 WRITING/TYPING & PRINTING
 IS SATISFACTORY FOR
 REPRODUCTION AT THE TIME
 OF IMAGING.

LEGEND:

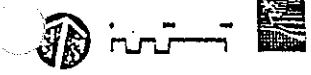
-  Archeological Sites
-  Gopher Tortoise Habitat
-  Bald Eagle Preserve
-  Area Subject to Scrub Jay Management Plan
-  Wetland
-  Residential
-  Proposed Roadways
-  Area Subject to Bald Eagle Management Plan

NOTES:

1. The parcels and roadways depicted on this exhibit represent one possible design solution.
2. The mapping of the wetlands within Inherent Two is approximate.
3. Water management lakes are not depicted on this exhibit.
4. The Scrub Jay Management Plan Area includes approximately 58.15 acres. Its configuration is subject to modification through the permitting process.
5. Specifics on the Area Subject to Bald Eagle Management Plan are included in the Bald Eagle Management Plan for Inherent Two dated October 31, 1998.
6. Within the Area Subject to Bald Eagle Management Plan is a Bald Eagle Preserve of approximately 12.57 acres.

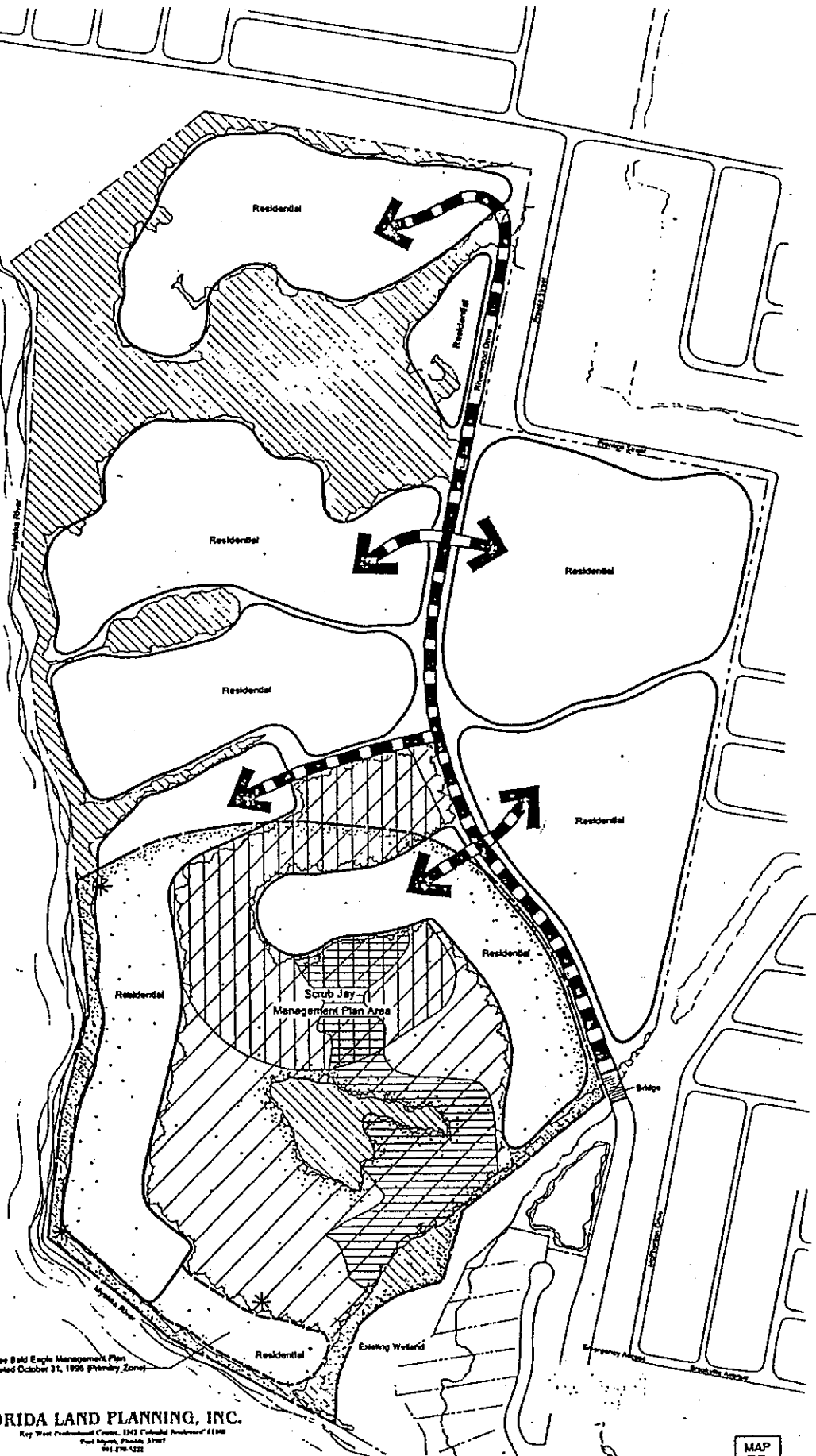
See Bald Eagle Management Plan, Dated October 31, 1998 (Inherent Zone)

December 8, 1998



FLORIDA LAND PLANNING, INC.
 Key West Professional Center, 1343 Cabalud Boulevard #1100
 Fort Myers, Florida 33907
 941-276-0222

MAP
H



III. SCRUB JAY AREA

A Scrub Jay Area of approximately 58.11 acres has been provided within Increment Two of the Riverwood property to address the two clans of Florida scrub jays on-site. It has been designed to be compact and limit the amount of the edge. This area is not bisected by roads.

The Scrub Jay Area includes the portions of the highest quality scrub on-site and it includes portions of the habitat occupied by both existing Florida scrub jay groups. Neither the small area of jurisdictional wetlands located within the envelope of the Scrub Jay Area, nor the proposed two-acre water management area to be located within the envelope of the Scrub Jay Area, is not included within the total acreage calculations.

The acreage within the Scrub Jay Area contains approximately the following FLUCCS totals:

FLUCCS CODE	DESCRIPTION	ACREAGE
325	Scrub Oak	20.00 ac
411	Pine Flatwoods	3.97 ac
415	Scrubby Flatwoods	31.64 ac
4231D	Pine/Oak Disturbed	4.50 ac
[641]	Freshwater Marsh	[3.90 ac]
TOTAL		60.11 ac
	Less Proposed Water Management	- 2.00 ac
TOTAL		58.11 ac

The Scrub Jay Area is depicted on the Increment Two Master Concept Plan (AIDA Map H). It should be noted that the final configuration of this area is subject to modification through the permitting process.

IV. HABITAT MANAGEMENT

The scrub habitat set aside for protection will be restored and managed, under the direction of a qualified management entity, to provide suitable habitat for Florida scrub jays. A significant portion of the protected area is severely overgrown and in intensive initial management program will be implemented followed by periodic and ongoing maintenance as outlined below. Any maintenance activity will be consistent with coincident management plans for eagles and/or gopher tortoises.

Habitat Management Goals

The goals of the scrub jay habitat management activities are:

1. Pine Flatwoods - Maintain pine tree densities at existing levels and maintain a minimum of 30% of total ground area clear of shrubs.
2. Scrub Oak - Maintain a shrub layer approximately one to two meters tall covering 50% to 75% of a substrate with scrub oak comprising at least 50% of the shrub layer and at least 25% of a substrate to be exposed or only sparsely vegetated to allow caching, open areas to be well distributed. Canopy cover will not exceed 20% coverage.
3. Scrubby Flatwoods & Pine/Oak Disturbed - Maintain pine canopy densities at existing levels. Maintain a shrub layer approximately one to two meters tall covering 50% to 75% of a substrate with scrub oak comprising at least 30% of the shrub layer. At least 25% of the substrate to be exposed or only sparsely vegetated to allow caching. Open areas to be well distributed.

Initial Management Activities

Prior to initial management activities, a map of the preserve with proposed fire trails to segment the preserve for future phased management will be prepared and submitted to USFWS. The location and extent of the fire trails will be determined based on consultation with USFWS and staff experienced with scrub jay habitat management at Oscar Scherer State Park and/or Archibald Biological Station. At the time of initial management, all occupied habitat and active scrub jay nests will be mapped by a qualified biologist. Those areas within the proposed scrub jay protection area which are not mapped as occupied will be burned subject to the following condition:

1. Wind direction and conditions will not cause smoke drift toward mapped active scrub jay nest locations.
2. No burning will occur during eagle nesting season (October 1 through May 15).
3. Burns will be conducted by a person certified for prescribed burning.
4. Mature pine trees will be protected by appropriate reduction of a fuel load around and near trees prior to burnings.

- Selective hand clearing of a shrub layer to maintain minimum of 25% open area at 5 year intervals.

V. MANAGEMENT ENTITY

The property owner, or a qualified management entity hereinafter assigned or succeeding to the rights or obligations under the development order, will be responsible for the implementation of this Plan.

VI. ACTIVITIES

The Scrub Jay Area allows resource-based recreational and educational activities including picnic areas, benches, biking/jogging trails, a vita course, viewing blinds/platforms, interpretive facilities; removal of exotic vegetation and vegetative planting. No paths or trails will be paved, hardened or made impermeable. Recreational off-road vehicles will be prohibited within the Area. A small water management lake, and associated pipes or swales, will be constructed within this Area. Said lake will be located outside scrub oak areas and will be constructed outside scrub jay nesting season.

VII. MONITORING REPORT

Each two years, until Increment Two buildout, Riverwood shall prepare a Florida scrub jay census of the Scrub Jay Area. The census, if practicable, will be done in late June or July. It will document the number of Florida scrub jays as well as the number and location of jay territories. The progress and status of habitat restoration will also be addressed. Copies of this report will be submitted to Charlotte County, the Southwest Florida Regional Planning Council, the Florida Game and Fresh Water Fish Commission, and Office of Environmental Services, for review and comment.

Monitoring shall continue, not just until buildout of Increment Two, but in perpetuity. However, the applicant shall have the right to request a reduction in monitoring events, or abandonment of monitoring, when long-term management goals have been accomplished on the site, and if approved by the Game and Fresh Water Fish commission and the U. S. Fish and Wildlife Service.

Initial burning activity may take place in several stages depending on wind, weather conditions, and existing fuel loading. As part of the initial management, fire trails will be constructed to divide the scrub jay area into four quadrants to delineate subsequent management phases.

Management Activities

Following initial management activities, a scheduled program of periodic management will be implemented. Methods of management, in descending order of preference, will be; prescribed burns, mechanical mowing/brush hogging and roller chopping. Prior to scheduled maintenance activities within a given quadrant, the entire scrub jay preserve will be surveyed to identify and locate any existing active nests. If the quadrant scheduled for management does not contain an active nest, or an active nest within 200 feet of the quadrant perimeter, then management will be performed subject to correct wind conditions to prevent smoke drift toward any adjacent active nests. Should an active nest be found in or within 200 feet of a quadrant scheduled for management activities, the management activity will be delayed until the following year.

Management Schedule

Following initial management activities, periodic management will occur on a rotating basis through the preserve quadrants with no more than one quadrant managed within any given year. Specific scheduling of management activities will be based on periodic monitoring report recommendations (see below) and as necessary to achieve habitat management goals. Generally, the following management schedule will be followed.

1. Pine Flatwoods
 - Prescribed burns will be conducted at 3 to 6 year intervals if feasible and necessary to achieve management goals.
 - Bush hogging and/or mowing at 3 year intervals if judged necessary to maintain a minimum of 30% total ground area clear of shrubs.

2. Scrubby Flatwoods and Pine/Oak Disturbed
 - Prescribed burns at 8 to 10 year intervals if feasible and necessary to achieve management goals.
 - Bush hogging and/or mowing at 5 year intervals if judged necessary to maintain minimum of 25% total ground area clear of shrubs.
 - Bush hogging and/or mowing at 5 year intervals if judged necessary to maintain minimum of 25% total ground area clear of shrubs.
 - Hand trim shrub layer to one to two meter heights at 5 year intervals.

PART TWO
BILL PRANTY REPORT

FINAL REPORT

1996 SURVEY FOR FLORIDA SCRUB-JAYS
on the
RIVERWOOD D.R.I. INCREMENT TWO PROJECT SITE,
CHARLOTTE COUNTY, FLORIDA

Prepared for

Pavese, Garner, Haverfield, Dalton, Harrison, and Jensen
1833 Hendry Street
Fort Myers, Florida 33901

Prepared by

Bill Pranty
5572 County Road 64 East
Avon Park, Florida 33825
941-453-9728

15 July 1996

INTRODUCTION

Bill Pranty (BP) was hired to conduct Florida Scrub-Jay (FSJ, *Aphelocoma coerulescens*) surveys on the Riverwood Increment Two project site in April 1996. BP formerly was the Ornithology Research Assistant at Archbold Biological Station in Lake Placid, Florida, and had surveyed the site previously, in April and July 1994. The Riverwood Increment Two site is located in northwestern Charlotte County, west of County Road 776 and northwest of El Jobean, in Section 17, Township 40 South, Range 21 East. It is bordered on the east by Proude Street, Prentice Avenue, and McLeod Street, on the southeast by a narrow channel, and on the south and west by the Myakka River. The northern boundary is just south of Eleanor Avenue.

Previous FSJ surveys on the Riverwood Increment Two site documented two groups of jays in the patch of xeric oak scrub and adjacent scrubby flatwoods in the central portion of the site (Churchill and Cutlip 1989, Pranty and Bowman 1994). On 20 September 1995, Mr. Brian Toland of the U.S. Fish and Wildlife Service visited the project site and located two FSJ groups in a territorial dispute east of the Bald Eagle nest, an area where jays were not present in April and July 1994. The primary purpose of the April 1996 surveys was to determine whether one or both of the existing FSJ groups had shifted their territory boundaries, or whether an additional FSJ group had established a new territory in the southern portion of the project site.

DESCRIPTION OF ON-SITE HABITATS

The Riverwood Increment Two project site encompasses approximately 320 acres. About 20% of the site consists of wetlands; the remaining approximately 256 acres are composed of uplands. Much of the uplands in the northern half of the site consists of stands of cabbage palms (*Sabal palmetto*) or slash pine (*Pinus elliottii*) flatwoods with a dense ground cover of saw palmettos (*Serenoa repens*), forbs, and grasses. Wax myrtles (*Myrica cerifera*) occur sporadically in the flatwoods and are most numerous bordering some of the wetlands. Brazilian peppers (*Schinus terebinthifolius*) have invaded some of the flatwoods and occur in dense, tall stands along the northeastern border of the site.

In the southern half of the project site, habitats are more varied. A large patch of xeric oak scrub totaling about 85 acres (Pranty and Bowman 1994) occurs here, and is bisected by two sand roads. The first road (referred to as the "E/W road") heads west from near the southern end of McLeod Street and leads to the Myakka River. The second sand road (the "N/S road") heads south from the E/W road and ends at the southern boundary of the site. Much of the scrub bordering these roads is extremely dense and overgrown due to a long period of fire exclusion. No naturally occurring open sandy areas remain in the scrub, and most of the ground is covered by a dense layer of leaf litter. Myrtle oak (*Quercus myrtifolia*) is the most common oak species, with lesser amounts of Chapman's oak (*Q. chapmanii*) and sand live oak (*Q. geminata*).

East of the N/S road, the scrub is bordered by a dense slash pine forest and a small (approximately 5 acres) *Spartina* wetland. East of this, open scrubby flatwoods occur, grading to flatwoods to the south and cabbage palms to the east. These flatwoods burned around 1989 (Craig Schmittler in Pranty and Bowman 1994) and are characterized by large, scattered pines

with a dense but low cover of saw palmettos, grasses, occasional wax myrtles, and scattered patches of myrtle oaks. These scrub oak patches are 1-2 meters tall and surrounded by open palmetto and grass flats. This recently burned area is the most suitable FSJ habitat on the Riverwood Increment Two site at present.

METHODS

All FSJ surveys were conducted by BP 15-18 April 1996. Mr. Tom Trettis of Wilson, Miller, Barton, and Peek, Inc. joined me on the morning of 17 April, and kindly shared information obtained during FSJ surveys conducted in March 1996 by him and others. Six surveys (four during morning and two during late afternoon) were conducted by BP. Surveying began around 0800 each morning and concluded between 1118 and 1215 (except for the 18 April survey, which concluded around 1000). Afternoon surveys began at 1709 and 1711, and concluded at 1843 and 1839, respectively. An attempted survey the afternoon of 15 April was aborted due to an approaching storm. Weather for the surveys was generally cool and humid with little wind in the early mornings, becoming hot by noon. Afternoon surveys were warm to hot, with variable winds. Overall, surveys were conducted during acceptable to optimal weather conditions.

Transects were not used on the Riverwood site because of the relatively small size of the scrub patch. Rather, the observer(s) walked slowly along the two sand roads, and around and through the scrub while continuously broadcasting recorded FSJ vocalizations from a portable tape player playing at full volume. The tape recording used was produced by Archbold Biological Station and includes territorial scold calls and the female-exclusive "hiccup" call. Response to the tape by FSJs varied, usually according to the weather, but was satisfactory during most of the survey periods. FSJs usually responded to the tape by flying toward it, perching conspicuously, and oftentimes by vocalizing.

Following Fitzpatrick et al. (1991:3), all Type I and Type II habitats on-site were surveyed. Open Type III habitats bordering the scrub and scrubby flatwoods were also surveyed. Dense Type III habitats (e.g., cabbage palm hammocks or Brazilian pepper stands) were not surveyed specifically, but the tape recording was probably audible over many of these portions nonetheless.

FSJ surveys exceeded survey techniques recommended by Fitzpatrick et al. (1991:13-14), and I am confident the recording was effectively broadcast over all Type I and Type II habitats within the survey boundaries. With one exception, all scrub areas were surveyed multiple times before concluding FSJs were absent. The single exception involves the small (approximately 10 acres) area north of the west end of the E/W road. This area of extremely dense and overgrown scrub with a dense canopy of tall pines was surveyed only once in April 1996, but was surveyed previously in March 1996 and April 1994, without locating any FSJs. The scrub here is so dense it no longer resembles suitable FSJ habitat.

RESULTS

Two groups of FSJs were located in the southern half of the Riverwood Increment Two project site in April 1996. Both groups contained the breeding pair of jays and one group contained an additional non-breeding "helper." Active nests for both groups were found by BP. Descriptions of the jay groups follow.

Group A consists of three birds (the breeding pair plus a "hiccuping" female helper) found most commonly along the eastern half of the E/W road. Birds often were seen foraging in the sand road. The territory extends north of the E/W road, roughly mirroring the 1994 boundary, but extends a bit farther south into the scrubby flatwoods than was shown previously. Birds were found along the E/W road west of the dense pine stand, and in March 1996, they were located a bit south of where a second, less-used road intersects it (T. Trettis pers. comm.). Scrub in this part of the territory is dense and heavily overgrown, but bisected by the two sand roads. Scrub in the east portion of the territory was part of the ca. 1989 burn, and is mostly in prime condition for FSJ occupancy. Territory size as mapped in April 1996 is approximately 26 acres.

The nest of Group A was located about 400 feet west of McLeod Street and about 15 feet north of the E/W road, in a myrtle oak. When discovered on 16 April, the nest contained two eggs. The nest was checked again on 17 April and 18 April, and still contained two eggs, so this is the complete clutch.

Group B consists of at least two birds that were found mostly in the scrubby flatwoods south of Group A. This territory has moved eastward significantly since the 1994 surveys, and agrees with Brian Toland's observations on 20 September 1995. Formerly, Group B was believed to be entirely confined to the scrub bisected by the N/S road (and at least one jay was occasionally observed in that area in April 1996), but most current sightings (and the nest) were located east of the dense pine stand that contains the Bald Eagle nest. A shift in the territorial boundary is the most logical explanation for the difficulty of finding the birds within their 1994 territory (i.e., 6 surveys along the entire N/S road totaling more than 3½ hours of continuous tape-playing, resulting in only 4 observations of a single jay). FSJs were observed in marginal scrub on all sides of the small *Spartina* wetland between the N/S road and the open scrubby flatwoods to the east. Much of the extreme southern and southeastern parts of the project site consist of Type III habitats (i.e., pine flatwoods with or without wax myrtles) that the jays used to travel among the scattered patches of scrub in the area. The inclusion of this more-or-less non-occupiable FSJ habitat probably accounts for the larger size of this territory: approximately 37 acres as mapped in April 1996.

As noted above, Group B formerly was believed to be restricted to the scrub patch surrounding the N/S road. Much of this area seems to have been abandoned by the jays in favor of the much more open habitats to the east. Given the extreme overgrowth of most of the scrub along the N/S road, this is expected. Similarly overgrown scrub at Archbold Biological Station was also abandoned by the jays resident there, as the scrub increased in height and density after 50 years of fire exclusion (Woolfenden and Fitzpatrick 1984:40-43, Fitzpatrick et al. 1991:29-30). (Since the late 1980s, Archbold biologists have reinstated a more natural fire regime to this scrub,

and FSJs are returning to it [pers. obs.]).

On only four occasions were FSJs seen near the N/S road in April 1996, always a single individual. Twice, the bird was observed on sentinel in the same tall pine snag about 300 feet east of the road and about half the distance south of the E/W road. During one of these occasions, the bird made a long flight south-southwest and could not be located. During the other observation, the bird was on sentinel for at least 36 minutes, then flew west to forage in open (recently burned) scrub west of the N/S road. Another observation of a single FSJ was made on the west side of the *Spartina* wetland of a bird on sentinel, which later dropped down into cabbage palms to forage. The final FSJ observation along the N/S road involved a bird that flew west toward the tape, perched briefly while calling, then flew back east. This occurred about 100 feet south of the bend in the road. FSJs were not located in, nor could they be attracted to, scrub in the northern and southern extremes of their 1994 territory. Scrub in these areas is extremely overgrown, especially in the southern portion.

The nest of Group B was discovered on 18 April in a myrtle oak in the open scrubby flatwoods northeast of the Bald Eagle nest. The lack of distinctive landmarks (i.e., large pines or trails) near the nest made it difficult to map, but it was about 350-500 feet south of the E/W road. When found, the nest contained three warm eggs (the nest was located by seeing the incubating female leave the oak clump in which it was located). As it was discovered shortly before I completed the final survey, the nest could not be checked again.

ON-SITE PROTECTION OF FSJ HABITAT

Development of scrub occupied by FSJs requires mitigation to offset the loss of jay groups caused by the development. The two primary types of mitigation and their definitions are:

- *On-site Protection*: Preservation of FSJ-occupied scrub within the development (i.e., on-site) by setting aside a portion of the property as a preserve in perpetuity.
- *Off-site Compensation*: Preservation of FSJ-occupied habitats outside the development (i.e., off-site) by purchasing privately owned scrub and putting it under permanent protection.

Fitzpatrick et al. (1991:16) recommend that an FSJ preserve be established on-site when FSJs occur on-site or within 5 miles of any Type I habitat on-site. The amount of scrub preserved on-site is calculated by multiplying the number of FSJ groups to be preserved by 25 acres. For the Riverwood Increment Two project site, on-site protection for both FSJ groups is recommended. The amount of scrub preserved on-site in territory refuges is 2 groups x 25 acres = 50 acres.

Preserve Design

Fitzpatrick et al. (1991:17-19) make numerous recommendations regarding the size, shape, and placement of FSJ preserves. Some of the most important factors to consider for the

Riverwood Increment Two FSJ preserve are:

1. The preserve should consist of one contiguous patch of scrub roughly circular, square, or oval in shape to minimize the amount of edge;
2. The preserve should not be bisected roads, and should further be surrounded by houses rather than roads to minimize FSJ mortality caused by collisions with vehicles;
3. The preserve should include the highest quality scrub on-site; and
4. The preserve should include existing portions of both FSJ groups.

Preserve Management

Fitzpatrick et al. (1991:19) also make numerous recommendations regarding the management of the FSJ preserve. Important ones to consider include the following:

1. A specific management plan, preferably one that includes prescribed burning a portion of the preserve every 5-20 years, should be implemented. In the absence of fire, mechanical mowing or roller-chopping may be suitable. No more than 25% of the occupied FSJ habitat should be burned or chopped at any one time. (Because much of the scrub on the Riverwood Increment Two project site is extremely overgrown, an intense fire or extensive roller-chopping application may be required initially).
The management plan should also include a map of the preserve with fire breaks and residential areas that may be impacted by the effects of a prescribed fire (i.e., drifting smoke), a schedule of proposed burns and/or roller-chopping treatments, and the identification of the party or parties responsible for managing the preserve. Most management plans also include periodic monitoring of the FSJ population.
2. Prohibit pets and off-road vehicles in the preserve. Additionally, it may be prudent to require that house cats be kept indoors rather than being allowed to roam freely through the development.
3. Develop a program to educate the residents of Riverwood about the xeric oak scrub community, the plight of the FSJ, and the importance of periodic fires in the habitats. A self-guided nature trail along fire breaks in the preserve is an excellent means of educating the public.

LITERATURE CITED

Churchill, Jeff, and C.G. Cutlip, Jr. 1989. An assessment of the Florida Scrub Jay (*Aphelocoma coerulescens coerulescens*) on the Riverwood site. Prepared for Map Land Trust.

Fitzpatrick, John W., Glen E. Woolfenden, and Mark T. Kopeny. 1991. Ecology and development-related habitat requirements of the Florida Scrub Jay (*Aphelocoma coerulescens coerulescens*). Florida Nongame Wildlife Program Technical Report Number 8. Tallahassee, FL.

Pranty, Bill, and Reed Bowman. 1994. Survey for Florida Scrub Jays on the Riverwood project, Charlotte County, Florida. Final report to Wilson, Miller, Barton, and Peek, Inc. Archbold Biological Station. Lake Placid, FL.

Exhibit F

BALD EAGLE MANAGEMENT PLAN

Riverwood DRI Increment Two
Charlotte County, Florida

Prepared for:

Riverwood Land Company, L.P.
4100 Riverwood Drive
Port Charlotte, Florida 33953

by:

Florida Land Planning, Inc.
1342 Colonial Boulevard, Suite 60
Fort Myers, Florida 33907

Wilson, Miller, Barton, & Peek, Inc.
3200 Bailey Lane, Suite 200
Naples, Florida 33942

January 30, 1996

revised September 18, 1996

revised October 31, 1996

revised December 5, 1996

revised December 26, 1996

*Exhibit F. Bald Eagle Management Plan
December 26, 1996 Revision Pages*

Section III., B., Development Guidelines/Secondary Zone, the third paragraph, page 5:

No construction is allowed in the Secondary Zones during the nesting season. For the purposes of this plan, construction is defined as roadway ~~construction~~ development, vertical construction of the residential units, ~~(i.e., that or any part of the development process which involves heavy construction equipment).~~ During the nesting season, finishing work may progress on rResidential units begun during the non-nesting season which are "dried in" (i.e., with their its roof and exterior walls in place). Except in emergency situations such as wildfire, flood, or other events which threaten life and safety, heavy equipment shall not be used in the Secondary Zones during nesting season.

Note: for clarity's sake, this version does not show some of the existing language which has been stricken.

Section III., B., Development Guidelines/Secondary Zone, the fourth paragraph, page 6:

- Surveying and staking the roadways, wetlands, lakes, individual lots and similar preliminary activities, including the limited manual\non-mechanical clearing necessary for said surveying.

Section IV. Nesting Season, middle of the paragraph, page 5:

...to determine the actual end of the nesting season for any eagle pair within Increment II. In the spring, should the biologist observe that the young have fledged earlier than expected, and the developer wishes to undertake development activities allowed within the Secondary Zone during the non-nesting season as provided for within this plan, the developer may notify Charlotte County, and the USFWS, and the FGFWFC that the nesting season has ended and development activities allowed within the Secondary Zone "during the non-nesting season" may commence.

Section V. Habitat Management, and Section VI. Management Entity, page 6:

The order of these sections is reversed.

Section VI. Management Entity, shall be stricken and re-written as follows:

~~The property owner, or a qualified management entity hereinafter assigned or~~

~~succeeding to the rights or obligations under the development order, will be responsible for the implementation of this Plan.~~ All management activities undertaken per this plan shall be undertaken by, or under the direction of, a qualified management entity mutually agreeable to the Applicant, Charlotte County, the USFWS and FGFWFC. This entity, which may be an agency, person, or firm, will possess requisite knowledge of Florida habitats, flora and fauna, and will be certified by the Florida Division of Forestry to conduct prescribed burns. The property owner may, with the approval of the USFWS and FGFWFC, undertake management activities described herein provided all such activities are supervised by an entity with the qualifications described above.

Section VI. Habitat Management, first paragraph, page 6:

...These techniques include prescribed burns, mechanical mowing, or bush hogging. In order to avoid damage to the nest tree, its roots, or compaction of the soil around the nest tree, under no circumstances shall bush hogging, mechanical mowing, or roller chopping be allowed within 10 feet of the dripline of the nest tree.

Section VI. Habitat Management, middle of the second paragraph, page 6:

...one-quarter of all fire-base habitats within the Primary Zone on the property will be burned, bush hogged, or chopped each time. (At the property owner's option, and following written notification to USFWS and FGFWFC, a more extensive area may be managed initially.)...

BALD EAGLE MANAGEMENT PLAN

Riverwood DRI Increment Two
Charlotte County, Florida

Prepared for:

Riverwood Land Company, L.P.
4100 Riverwood Drive
Port Charlotte, Florida 33953

by:

Florida Land Planning, Inc.
1342 Colonial Boulevard, Suite 60
Fort Myers, Florida 33907

Wilson Miller Barton & Peek, Inc.
3200 Bailey Lane, Suite 200
Naples, Florida 33942

September 28, 1995
revised September 18, 1996
revised October 31, 1996
revised December 05, 1996

TABLE OF CONTENTS

PART ONE Bald Eagle Management Plan
Prepared by: Florida Land Planning, Inc.
 Wilson, Miller, Barton, & Peek, Inc.
September 28, 1995
revised September 18, 1996
revised October 31, 1996
revised December 5, 1996

PART TWO Bald Eagle Report
Prepared by: Wilson, Miller, Barton, & Peek, Inc.
June 1995
revised July 17, 1996

TABLE OF CONTENTS

	Page
I. INTRODUCTION	1
II. BALD EAGLE MANAGEMENT PLAN OBJECTIVES	1
III. DEVELOPMENT GUIDELINES	3
IV. NESTING SEASON	5
V. HABITAT MANAGEMENT	6
VI. MANAGEMENT ENTITY	6
VII. MOSQUITO CONTROL	6
VIII. ABANDONED AND/OR LOST NESTS OR NEST TREES	6
IX. BALD EAGLE HABITAT	7
X. PUBLIC INFORMATION	7
 <u>EXHIBITS</u>	
Map H Increment Two Development Plan	2
Exhibit 1 Increment Two Eagle Management Area	4

I. INTRODUCTION

The property known as Riverwood Increment Two was platted in the 1950's. Today that approved subdivision is considered to be an antiquated, sub-standard subdivision. The property owner's intention is to abandon the old plats and create a viable community which is sensitive to environmental issues. Riverwood Increment Two will continue Riverwood Increment One's level of excellence.

An Eagle Management Plan for the overall Riverwood development was adopted by Charlotte County in 1992. This Plan, required because of two active eagle nests on site, the "Lake Nest" and the "River Nest", prescribed development parameters for that part of the Riverwood property affected by the two nests. That Plan is not in any way modified by this Eagle Management Plan for Increment Two.

An additional eagle nest was first observed during the 1993/94 nesting season. This nest is located within that part of the Riverwood property included in Increment Two. A study of the active bald eagle nest within the Increment Two area of the Riverwood site was conducted by Wilson Miller Barton and Peek between October 1994 and June 1995. A copy of the Wilson Miller report is submitted with this plan.

The observations and recommendations in the Wilson Miller report, meetings on-site between the project team and representatives of Charlotte County, the Florida Game and Freshwater Fish Commission and the U.S. Fish and Wildlife Service, form the basis for this Bald Eagle Management Plan for Increment Two. In developing this Bald Eagle Management Plan for Increment Two, close attention has been given to the provisions of the Scrub Jay Plan for Increment Two.

The Bald Eagle Management Plan for Increment Two follows the format and approach of the adopted Bald Eagle Management Plan for Increment One, but addresses only that part of the property within Increment Two. Adjustments to the Increment Two Master Concept Plan have been made as a result of this proposed Eagle Management Plan. A copy of the revised plan (AIDA Map H) is included in this Plan.

II. BALD EAGLE MANAGEMENT PLAN OBJECTIVES

The objectives of the Riverwood Bald Eagle Management Plan for Increment Two are:

- Protect the integrity of the active bald eagle nest on the property.
- Develop density, design and performance standards for development in areas in proximity to the bald eagle nest, recognizing the protection necessary during the nesting season.

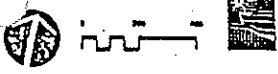
IMAGING MEMO
 WITH G/Typing & PRINTING
 UNSATISFACTORY FOR
 PRODUCTION AT THE TIME
 OF IMAGING.

- LEGEND:**
- * Archeological Sites
 - [Hatched Box] Ophryotrocha Habitat
 - [Hatched Box] Bald Eagle Preserve
 - [Dotted Box] Area Subject to Scrub Jay Management Plan
 - [Diagonal Lines Box] Wetland
 - [White Box] Residential
 - [Arrow] Proposed Roadways
 - [Hatched Box] Area Subject to Bald Eagle Management Plan

- NOTES:**
1. The parcels and roadways depicted on this exhibit represent one possible design solution.
 2. The mapping of the wetlands within Increment Two is approximate.
 3. Water management lakes are not depicted on this exhibit.
 4. The Scrub Jay Management Plan Area includes approximately 68.11 acres. Its configuration is subject to modification through the permitting process.
 5. Specifics on the Area Subject to Bald Eagle Management Plan are included in the Bald Eagle Management Plan for Increment Two dated October 31, 1996.
 6. Within the Area Subject to Bald Eagle Management Plan is a Bald Eagle Preserve of approximately 12.37 acres.

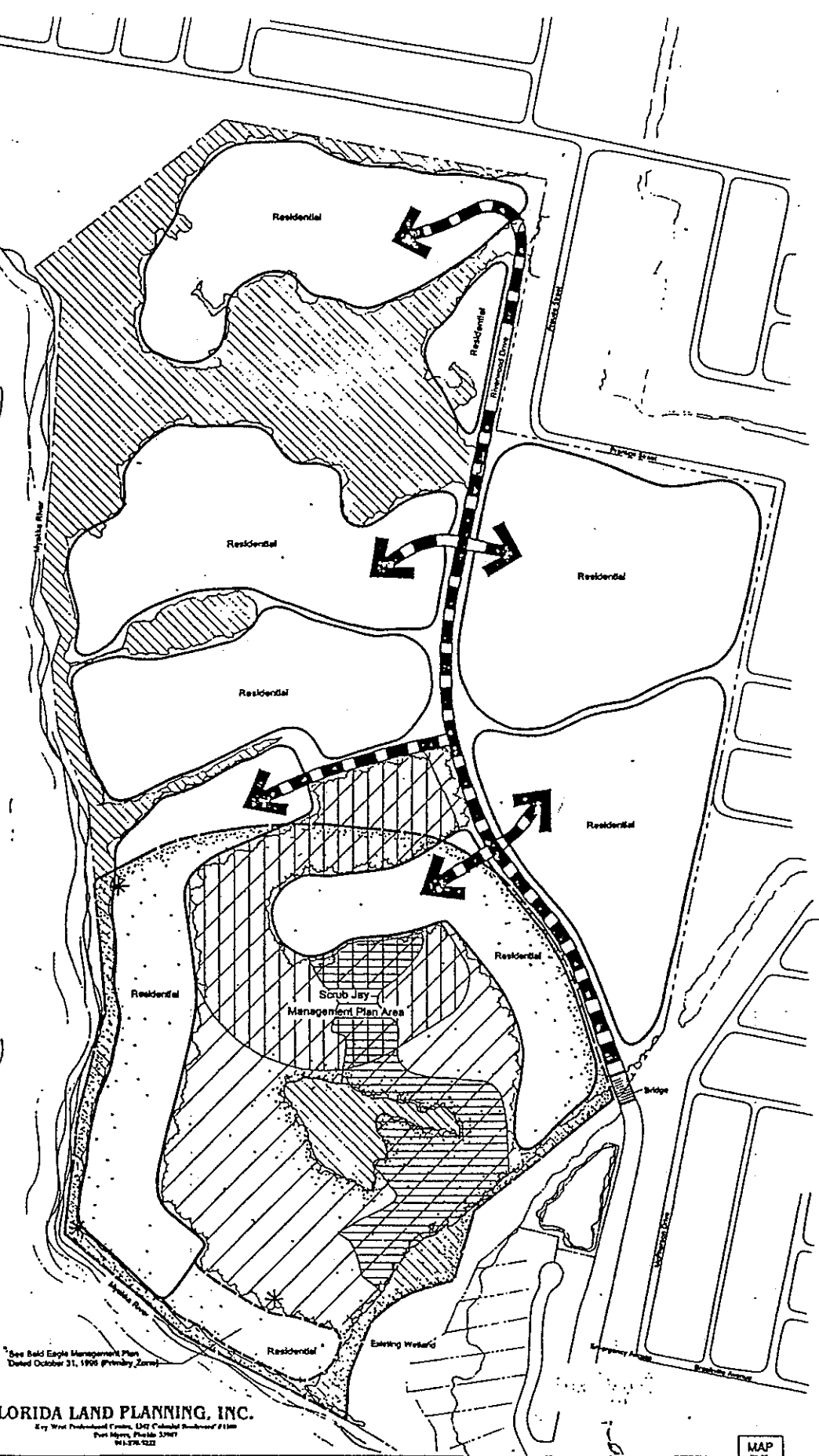
See Bald Eagle Management Plan Dated October 31, 1996 (Private Zone)

October 5, 1996



FLORIDA LAND PLANNING, INC.
 877 West Professional Center, 1242 Columbia Boulevard #1100
 Fort Myers, Florida 33907
 941-736-5222

MAP H



- Minimize detrimental human related impacts on the bald eagles, particularly during the nesting season.

These objectives are consistent with the guidelines issued by the U.S. Fish and Wildlife Service, Southeast Region.

III. DEVELOPMENT GUIDELINES

The Bald Eagle Management Plan for the Riverwood Increment Two property includes a Primary Zone, and a Secondary Zone. These are mapped on Exhibit 1. A reduced copy of Exhibit 1 follows. A full-size exhibit is included at the end of this plan. It should be noted that the configuration of the Zones is subject to modification through the permitting process.

Specific development-criteria for each of the sub-zones follows:

A. Primary Zone

The Primary Zone established for the eagle nest within the Riverwood Increment Two site is designed to protect the active bald eagle nest by providing a viable buffer, both spatial and visual, between the nest and development activity.

Water management lake(s) and utility lines may be constructed in the Primary Zone during the non-nesting season provided that existing mature pine trees are not removed, existing tree cover is not significantly decreased and the lake is located a minimum of 500 feet from the nest. That minimum distance should be increased wherever practicable. Residents' use of any lake(s) within the Primary Zone will be prohibited by Homeowners Association rules and regulations during the nesting season (October 1 to May 15).

The Primary Zone area allows only very limited use which make these areas available for resource-based recreational activities, enjoyment of nature, and educational enrichment outside the nesting season and as approved by USFWS. Such activities include picnic areas, benches, biking/jogging trails, vita course, viewing blinds/platforms, interpretive facilities; removal of exotic vegetation and vegetative planting. No paths or trails will be paved, hardened or made impermeable. Recreational off-road vehicles will be prohibited within the Primary Zone.

All work or other human activity in the Primary Zone will proceed only during the non-nesting season (generally from May 16-Sept. 30¹). During the nesting

¹ See Section IV of this Plan.

Eagle Management Area






FLORIDA LAND PLANNING, INC.

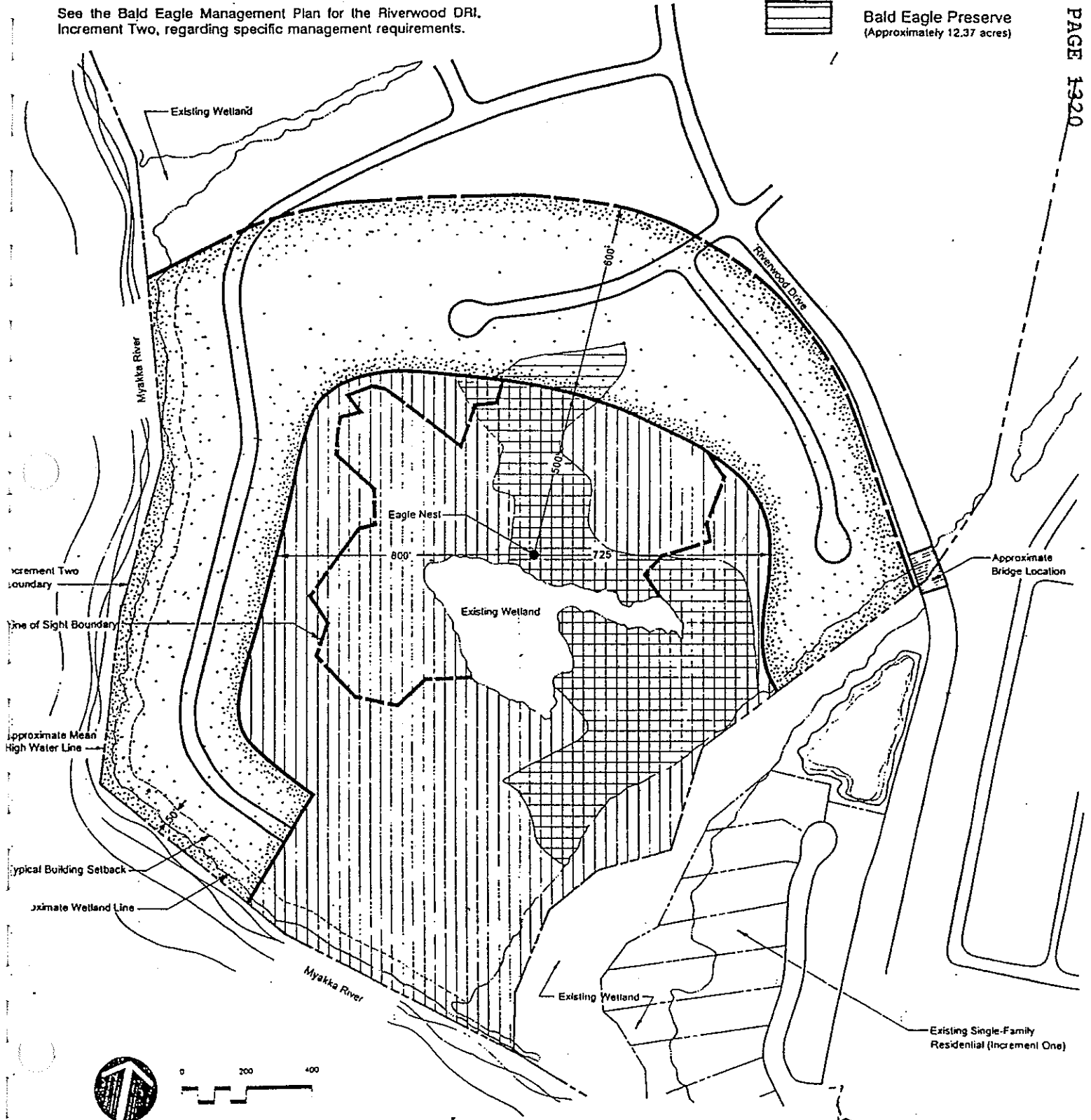
November 1, 1996

This Plan is subject to approval by the appropriate public agencies. Proposed lakes, lots and roadways will be located and sized to maximize amenity views and minimize eagle/residential adjacencies.

See the Bald Eagle Management Plan for the Riverwood DRI, Increment Two, regarding specific management requirements.

IMAGING MEMO
THE WRITING, TYPING & PRINTING
WAS UNSATISFACTORY FOR
REPRODUCTION AT THE TIME
OF IMAGING.
LEGEND:

-  Primary Zone
-  Secondary Zone
-  Bald Eagle Preserve
(Approximately 12.37 acres)



season, pedestrian trails or other human use will be restricted, in accordance with USFWS approval. Any path or trail will be barricaded off by a cable.

B. Secondary Zone

A Secondary Zone associated with the bald eagle nest presents the opportunity for development but under stringent guidelines.

Only single story, low and medium density residential uses and their associated accessory uses are allowed within the Secondary Zone. These uses include but are not limited to single family and multiple family uses, residential clubhouses and recreation facilities and residential boat docks.

No construction is allowed in the Secondary Zones during the nesting season. For the purposes of this plan construction is defined as roadway construction or vertical construction of the residential units, (i.e. that part of the development process which involves heavy construction equipment.) Once a residential unit is "dried in" with its roof and exterior walls in place, finishing work can progress on a residential unit in the Secondary Zone during the nesting season.

In the Secondary Zones, the following limited pre-construction activities will be allowed during the nesting season except during the first twelve weeks of eagle occupation and a period which includes the two weeks prior to fledgling:

- Surveying and staking the roadways, wetlands, lakes, individual lots and similar preliminary activities, including the limited clearing necessary for said surveying.
- Trash removal by equipment no larger than a small pickup truck.
- Lot sales activities conducted on foot or electric golf cart along areas, so as not to disturb the nesting activities.
- Resource-based recreation activities such as hiking, bird watching, fishing, camping, and picnicking are permitted in the Secondary Zones at any time.

IV. NESTING SEASON

In the southeast United States the bald eagle nesting season is usually from October 1 to May 15 but the actual nesting period may be different. At the developer's option, he may choose to have a biologist observe the eagle pair to determine the actual end of the nesting season for any eagle pair within Increment Two. In the spring should the biologist observe that the young have fledged earlier than expected, the developer may notify Charlotte County and the USFWS that the nesting season

has ended and development activities allowed within the Secondary Zone "during the non-nesting season" may commence.

V. HABITAT MANAGEMENT

Management techniques that mimic burns that historically have been caused by lightning strikes will be employed as a permitted activity within the Primary Zone during the non-nesting season. These techniques include prescribed burns, mechanical mowing or bush hogging.

Whenever any of these habitat management techniques are deemed to be necessary, feasible and consistent with coincident management plans for gopher tortoise and/or scrub jay habitat, they may be undertaken under the direction of a qualified management entity. To the extent practicable, one-quarter of all firebase habitats within the Primary Zone on the property will be burned, bush hogged or chopped each time. (At the property owner's option, a more extensive area may be managed initially.) If any technique other than prescribed burns is used, care will be taken not to impact on gopher tortoises, their burrows, or other listed species. No management activity will take place in the Primary Zone during the nesting season or when scrub jay nest(s) are in or within 200 feet of a given management area. Exotic vegetation will be removed from the Primary Zone in perpetuity.

VI. MANAGEMENT ENTITY

The property owner, or a qualified management entity hereinafter assigned or succeeding to the rights or obligations under the development order, will be responsible for the implementation of this Plan.

VII. MOSQUITO CONTROL

Annually, prior to October 1 and as soon as an on-site nest becomes active, the applicant will notify the Charlotte County Mosquito Control District of the location of any potentially active eagle nests, the length of the bald eagle nesting season (October 1 to May 15), as well as the recommended aircraft buffer (500 feet vertical distance or 1,000 feet horizontal distance).

VIII. ABANDONED AND/OR LOST NESTS OR NEST TREES

This plan remains in effect until the eagle nest identified in this plan is abandoned or lost (as defined by the U.S. Fish and Wildlife Service "Habitat Management Guidelines for the Bald Eagle in the Southeast Region"), the appropriate time period has passed, and the following steps are undertaken:

- Notification to the Florida Game and Fresh Water Fish Commission, Office of Environmental Services, by the Applicant and

- Notification to the Southwest Florida Regional Planning Council and Charlotte County.

IX. BALD EAGLE HABITAT

Notwithstanding the provisions of Section VIII of this Plan, a total of approximately 12.37 acres of Bald Eagle Habitat will be subject to a conservation easement. See the revised Increment Two Development Plan (AIDA Map H).

X. PUBLIC INFORMATION

Within any part of Increment Two affected by this Plan, each lot purchaser and tract developer Riverwood will be provided with a brochure designed to provide the Riverwood residents with information regarding the eagle nests, nesting behavior, restrictions and this Plan. This brochure will be submitted to FGFWFC for review and appropriate input prior to distribution.

Eagle Management Area



FLORIDA LAND PLANNING, INC.

November 1, 1996

This Plan is subject to approval by the appropriate public agencies. Proposed lakes, lots and roadways will be located and sized to maximize amenity views and minimize eagle/residential adjacencies.

See the Bald Eagle Management Plan for the Riverwood DRI, Increment Two, regarding specific management requirements.

IMAGING MEMO
THE WRITING/TYPING & PRINTING
WAS UNSATISFACTORY FOR
REPRODUCTION AT THE TIME
OF IMAGING.

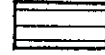
LEGEND:



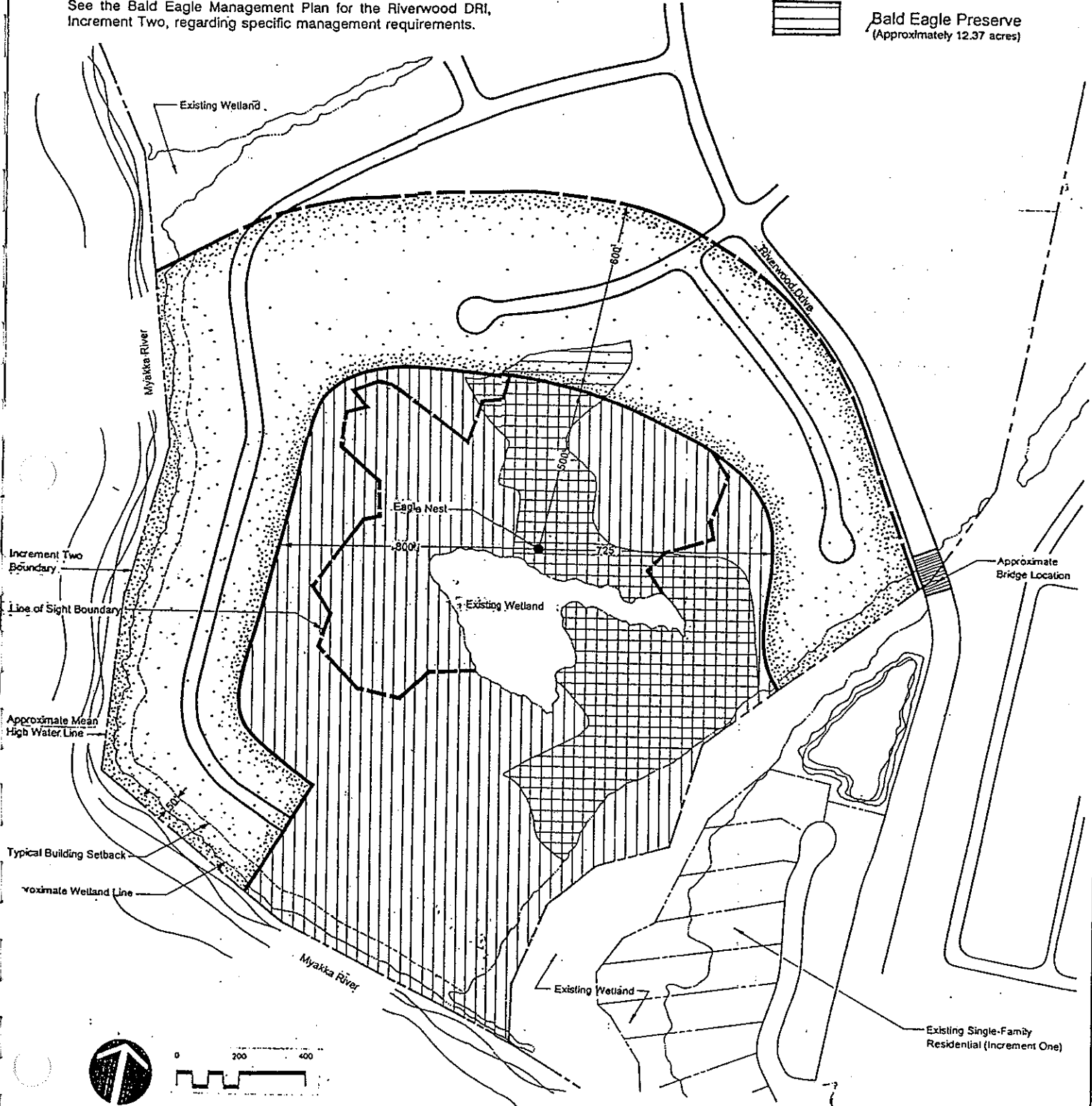
Primary Zone



Secondary Zone



Bald Eagle Preserve
(Approximately 12.37 acres)



BALD EAGLE REPORT

**Riverwood DRI
Charlotte County, Florida**

Prepared for:

**RIVERWOOD LAND COMPANY, L.P.
4100 Riverwood Drive
Port Charlotte, FL 33953
(941) 624-0448**

Prepared by:

**Wilson, Miller, Barton, & Peek, Inc.
4571 Colonial Boulevard, Suite 200
Fort Myers, FL 33912**

**June 1995
revised July 17, 1996**

Prepared by: Bruce Layman & Dorothea Zysko
Reviewed by: Dorothea Zysko

WMBP Project No. 0300
Work Order No. 3905

TABLE OF CONTENTS

	Page
I. INTRODUCTION	1
II. MANAGEMENT CONSIDERATIONS	5
III. SURVEY METHODOLOGY	6
IV. SURVEY RESULTS	8
V. REFERENCES	9

LIST OF EXHIBITS

Map A.2	Increment Two Site Location (reduced)
Map G	Increment Two Transect Locations (reduced)
Map D/F.1	Existing Land Use & Vegetative Associations (1"=200')
Exhibit 2	Observed Flights and Line of Sight (1"=200')

I. INTRODUCTION

Riverwood is a 1265 acre Development of Regional Impact (DRI) located in Charlotte County, Florida. The original Application for Master Development Approval (AMDA) for the Riverwood DRI was filed in 1990. The Development Order issued by Charlotte County on November 13, 1990 requires that an Application for Incremental Development Approval (AIDA) for future increments be submitted. The AIDA for Increment Two was submitted to the Southwest Florida Regional Planning Council on May 24, 1995. Increment Two encompasses approximately 320 acres (see attached Map A.2).

In order to prepare a Bald Eagle Management Plan for an active eagle nest located in Increment Two, a field survey of the bald eagle pair was conducted by Wilson, Miller, Barton & Peek, Inc. between October 1994 and June 1995. The eagle nest is recognized by Florida Game and Fresh Water Fish Commission (FGFWFC) as nest CH-36. The study included observations of the eagle nest and eagle activity during that period.

Location and Existing Land Use

The Myakka River borders the Increment Two property to the southwest, west and northwest. The platted but undeveloped gridwork of roads of El Jobean borders the property to the north and northeast. The approved Increment One area borders Increment Two to the east and southeast. See Map A.2

The approximate location of the Increment Two eagle nest is indicated on Map G. The area immediately adjacent to the nest is native habitat composed of a freshwater marsh, pine flatwoods, scrub oak and scrubby flatwoods. Historic factors which have impacted the site include logging, surface water drainage, fire breaks and fire suppression.

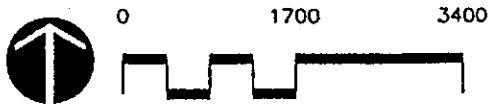
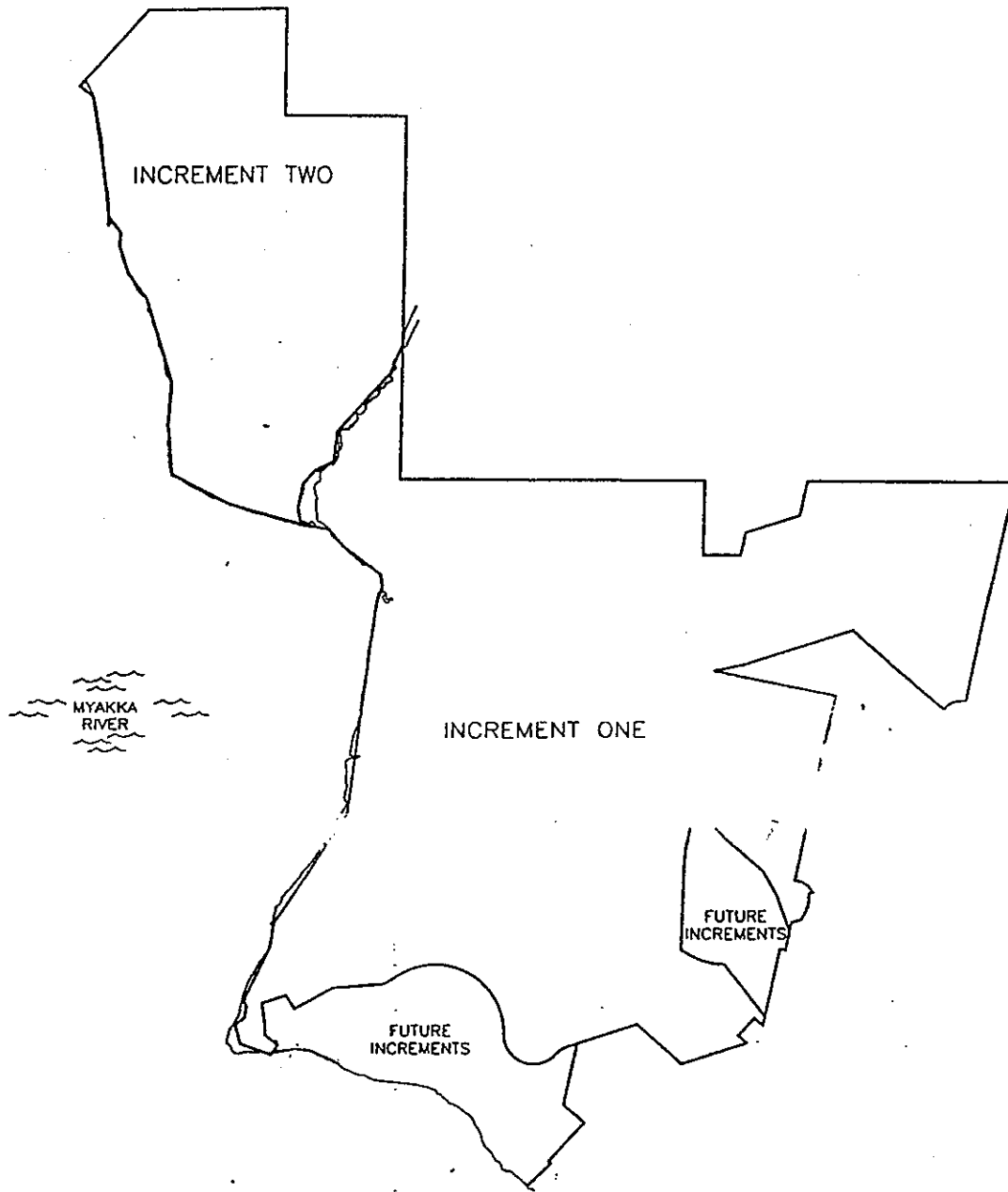
A reduced copy of the Florida Land Use, Cover and Forms Classification (FLUCCS) Map D/F.1 for Increment Two follows.

History of Nest

The CH-36 nest was first observed by WMBP biologists during the 1993/1994 nesting season. The nest was subsequently documented by the FGFWFC staff (Paul Schulz, pers. comm.) on March 3, 1994 during the second of two flyovers of the FGFWFC annual census. According to FGFWFC staff, the pair fledged one eaglet that season. One adult and the juvenile were observed by FGFWFC staff on that date. FGFWFC has been monitoring the nest since that time. On December 6, 1994, FGFWFC staff noted an upgraded nest but did not observe any eagles. During the 1994/95 census on March 6, 1995, FGFWFC staff documented that the pair again fledged an eaglet. Again one adult and one juvenile were observed by FGFWFC staff.

IMAGING MEMO
THE WRITING/TYPING & PRINTING
WAS UNSATISFACTORY FOR
REPRODUCTION AT THE TIME
OF IMAGING.

ON BOOK 1310 PAGE 132B



INCREMENT TWO
SITE
LOCATION



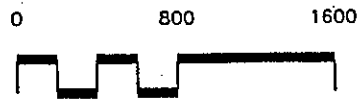
RIVERWOOD LAND COMPANY, LP.
Jul 18, 1996 - 16:11:01 D:\JON\0300\179\0300H908.dwg

Prepared by: Bruce Layman & Dorothea Zysko
Reviewed by: Dorothea Zysko

WMBP Project No. 0300
Work Order No. 3905



LEGEND	
○	= ACTIVE GOPHER TORTOISE BORROW
●	= INACTIVE GOPHER TORTOISE BORROW
Ⓢ	= EAGLE NEST
∇	= COONTIE LOCATION
△	= SCRUB JAY SIGHTINGS
—	= TRANSECT PEDESTRIAN LOCATIONS



INCREMENT TWO
TRANSECT
LOCATIONS



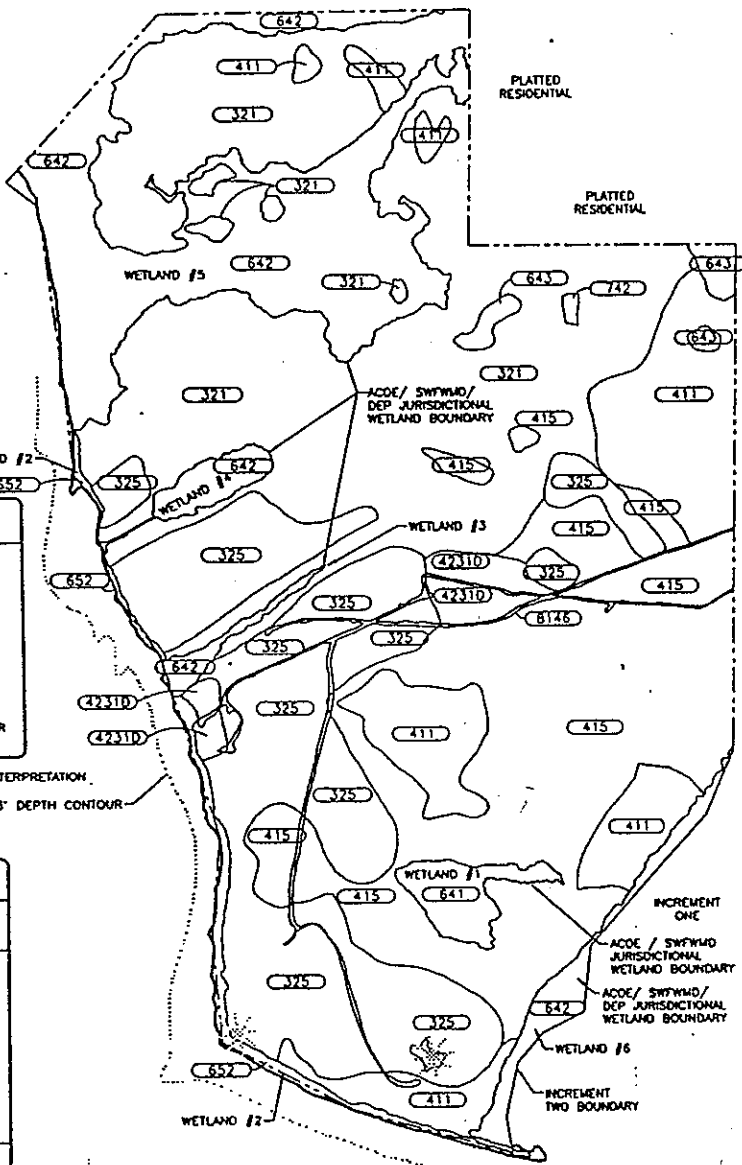
MAP
G

RIVERWOOD LAND COMPANY, LP.
Jul 18, 1994 - 16:12:26 D:_DK\0300\179\0300H904.dwg

Prepared by: Bruce Layman & Dorothea Zysko
Reviewed by: Dorothea Zysko

WMBP Project No. 0300
Work Order No. 3905
3

PLATTED RESIDENTIAL



LEGEND

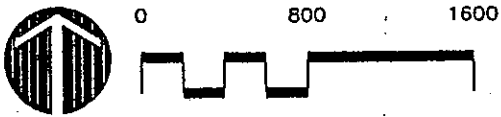
- FLUCCS CODE DESIGNATION
- FLUCCS BOUNDARIES
- ARCHAEOLOGICAL SITES
- INCREMENT TWO BOUNDARY
- 3' CONTOUR AT MEAN LOW WATER

NOTE: WETLAND LINES ARE UNSURVEYED AND ARE BASED ON AERIAL INTERPRETATION.
3' DEPTH CONTOUR

FLUCCS LEGEND

FLUCCS CODE	DESCRIPTION	ACREAGE
321	PALMETTO PRAIRIE	97 AC
325	SCRUB OAK	56 AC
411	PINE FLATWOODS	33 AC
415	SCRUBBY FLATWOODS	63 AC
4231D	PINE/OAK - DISTURBED	5 AC
641	FRESHWATER MARSH	4 AC
642	SALT MARSH	43 AC
643	WET PRAIRIE	2 AC
652	SHORELINE	5 AC
742	BORROW AREA	<1 AC
8146	OFF-ROAD VEHICLE TRAIL	3 AC
TOTAL		312 AC

NOTE: ACREAGE TOTALS DO NOT EQUAL LEGAL DESCRIPTION TOTALS DUE TO DIFFERENCE IN FLUCCS BOUNDARY LINES.



INCREMENT TWO EXISTING LAND USE AND VEGETATIVE ASSOCIATIONS

RIVERWOOD LAND COMPANY, L.P.



Jul 18, 1996 - 14:39:35 D:\jok\0300\179\0300H902.dwg

Prepared by: Bruce Layman & Dorothea Zysko
Reviewed by: Dorothea Zysko

WMBP Project No. 0300
Work Order No. 3905

II. MANAGEMENT PLAN CONSIDERATIONS

In addition to the USFWS Guidelines, there are both biological and development-related considerations associated with management plan development.

Biological

The biological considerations are as follows:

- Human activities and the alteration of habitat may affect the reproductive success of nesting bald eagles. When considering short-term disturbance, the following aspects are important: the nature of the activity; when the activity occurs in the nesting cycle (nesting season generally spans October 1 to May 15, with birds being most sensitive during the first 12 weeks of the nesting cycle), and; past exposure of the nesting birds to similar disturbances.
- As indicated by the USFWS Bald Eagle Management Guidelines (Guidelines), "Some bald eagles will tolerate human presence or disturbance until it reaches a critical point or threshold level. The effects of human presence and activity on bald eagles is not fully known. These birds exhibit considerable variation in response to human activity depending upon the type, frequency, and duration of activity, time in the birds' reproductive cycle, and an individual bird's accommodation to disturbance."
- Bald eagles will often build multiple nests, sometimes not using individual nests for several years. The nests are generally located in the same vicinity, often within 0.5 miles of one another.
- Partially as a the result of the above behavior, the FGFWFC has adopted the guideline that bald eagle nest receive the full protection of state laws unless it has been "inactive" for at least five consecutive breeding seasons. A review of the computer printouts from the FGFWFC statewide aerial surveys indicates that a nest is considered active if one or more birds are present and/or the nest is maintained by eagles. If a nest is blown down, the location is considered abandoned if no new nests are built over the subsequent two nesting seasons.
- Finally, consideration must be given to induced and natural long-term habitat changes (i.e. succession), especially as they relate to the bald eagles and their continuing requirements for nest trees, perches and their prey base (primarily fish).

III. SURVEY METHODOLOGY

The Increment Two nest was monitored two times a day for two weeks from October 1994 through April 1995, in accordance with methodologies established and agreed upon by Don Wood, Endangered Species Coordinator with the FGFWFC. See attached WMBP memo dated September 26, 1994. One biologist was stationed in sight of the nest with binoculars and blue-line aerials to record flight paths.

The following table indicates the Wilson, Miller, Barton & Peek, Inc. (Wilson Miller) personnel, dates and times of the bald eagle observations for Increment Two. Approximately 142 hours were spent observing the bald eagle. Generally, times of observations indicated in the table as AM were initiated between 8:00 and 9:00 am; those indicated as PM were initiated between 2:00 and 3:00 pm; those indicated AM/PM were all day observations (break during mid-day).







RIVERWOOD INCREMENT TWO FIELD SURVEY INFORMATION		
Chris Pearce	January 9, 1995	AM/PM 10.5
	January 23-24, 1995	PM/AM 11.5
	February 6-7, 1995	PM/AM 13.0
	February 27-28, 1995	PM/AM 11.0
	March 6-7, 1995	PM/AM 10.0
	March 20-21, 1995	PM/AM 5.0
	April 3-4, 1995	PM/AM 5.0
Bruce Layman	October 2, 1995	AM/PM 6.0
	November 18, 1994	AM/PM 6.0
	December 15, 1994	AM/PM 8.5
	January 9, 1995	AM/PM 9.0
	January 23-24, 1995	PM/AM 8.5
	February 6-7, 1995	PM/AM 11.5
	February 27-28, 1995	PM/AM 9.0
	March 6-7, 1995	PM/AM 8.0
	March 20-21, 1995	PM/AM 5.0
	April 3-4, 1995	PM/AM 5.0

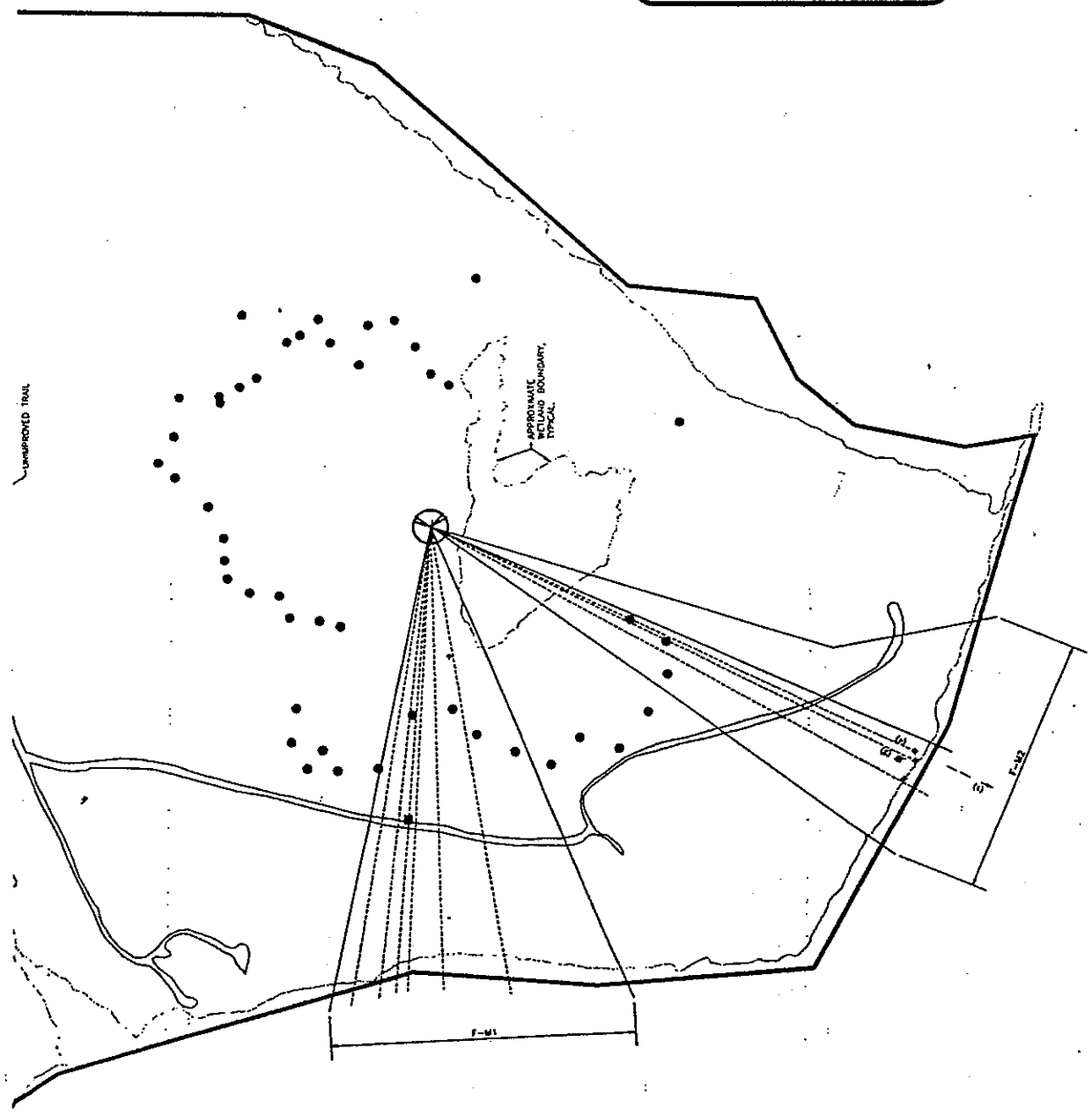
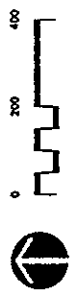


PRINTED
JUL 28 1996
WILSON HELLER, P.E.
& PECK, U.S.A.

INCREMENT TWO OBSERVED FLIGHTS AND LINE OF SIGHT

LEGEND

-  BALD EAGLE NEST
-  MAIN OBSERVATION POINT
-  PERCH TREE
-  NO LINE OF SIGHT
-  OBSERVED FLIGHTS AWAY FROM NEST TREE
-  OBSERVED FLIGHTS INTO NEST TREE



IV. SURVEY RESULTS

Flight Corridors

Eighteen (18) flight pathways extend in two directions radiating from the nest. See attached full-sized Observed Flights and Line of Sight exhibit.

The first path (F-M1) extending to the west represents the shortest route to the Myakka River. There were no perch trees in this pathway. Seven flights, both to and from the nest, were observed in this flyway.

The second flight pathway (F-M2), consisting of nine flights, extended to the southwest to the Myakka River. Pines at the river's edge were used on six occasions as perch trees. Fish remains at the bases of these and adjacent trees attest to their use as perch trees. Ospreys were observed fishing in the river, however, none were observed perching in these trees during the eagle observations.

Feeding

Feeding appeared to be exclusively within the Myakka, specifically upstream (north) of the nest. On one occasion, an eagle was observed returning to the nest with a catfish. The fresh water marsh adjacent to the nest did not contain fishes of sufficient size to be considered a food source.

Perch Trees

Perch trees were identified in flyway F-M2. These trees appeared to be stopping points on the way to or on the way back from the Myakka River. As previously mentioned, fish remains were found under trees adjacent to the two identified (observed) perches. However, the source of the fish remains is unverified.

Three perch trees were identified in the immediate vicinity of the nest within ± 50 feet of the nest and one snag ± 300 feet southeast of the nest. These perch trees are directly tied to the nesting region.

Line of Sight

Aerial photographs and on-site observations were used to approximate the line of sight potentially experienced by nesting birds. On July 12, 1995, two Wilson Miller employees walked the periphery of the eagle nest to determine the line of sight. They carried a GPS backpack unit with a plus or minus one meter accuracy (Trimble Pro XL Receiver, Pro Beacon Radio Receiver).

Using an aerial photograph as a guide they determined locations where stands of large pines (not individual pine trees) and/or wax myrtle blocked their view of the nest. The "line-of-sight" line depicted on the Observed Flights and Line of Sight exhibit.

Apparent irregularity in past logging practices has created a disjunct distribution of the remaining larger slash pines. These trees form a formidable buffer to the north and northwest of the nest such that line-of-sight in that direction may approximate 400 feet. Likewise pines west and southeast from the nest preclude sight beyond 500 to 600 feet.

The habitats which exist around the remainder of the nest consist of medium to high density scrub oaks with interspersed saw palmetto and slash pine. While not providing long distance sight impediments, this habitat forms a formidable boundary into which human access would be very difficult. Thus, a comfort zone for a nesting eagle may be derived by a combined line-of-sight impediment and relatively impenetrable surrounding habitat.

Other Observations

This pair of eagles appeared tolerant of the observing biologist's presence around the nest during the survey period. Access to and from the observation point was via a relatively cleared 4x4 jeep trail. Both driving on the trail, and loading/unloading at the observation point did not appear to disturb the eagles. No blind was necessary. Thus the birds appeared tolerant of discreet human activity. FM-1 passes directly over the observation point.

Use of the jeep trail during the project's wetland and vegetation mapping and agency site inspection did not elicit changes in this pair's behavior. Neither personnel on foot or in a jeep seemed to cause a disturbance.

Riverside, a single family subdivision in Increment One was under construction before this eagle nest was discovered. (See Map G) Areas within Riverside have an unobstructed line of site to the eagle nest. Eagles have been observed at the man-made lake within Riverside and in the area of the second hole of the golf course.

V. REFERENCES

Florida Department of Transportation. 1985. Florida Land Use, Cover and Forms Classification System. Procedure No. 550-010-001-a. Second Edition.

U.S. Fish and Wildlife Service. 1987. Habitat Management Guidelines for the Bald Eagle in the Southeastern Region. U.S. Department of the Interior. 9 pp.

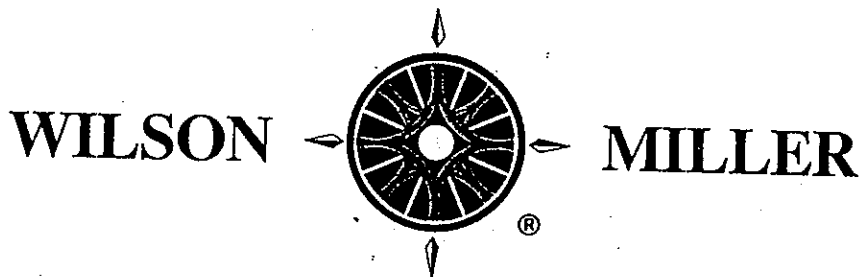
Schulz, Paul. 1995. Florida Game and Fresh Water Fish Commission. Personal telephone communications.

Exhibit G

**GOPHER TORTOISE POPULATION STUDY,
TAKE PERMIT APPLICATION AND
PRESERVE MANAGEMENT PLAN**

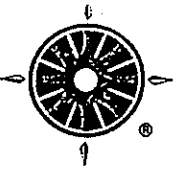
FOR

RIVERWOOD D.R.I. INCREMENTS I & II



Wilson, Miller, Barton & Peek, Inc.

**ENGINEERS PLANNERS SURVEYORS LANDSCAPE ARCHITECTS
ENVIRONMENTAL CONSULTANTS
4571 Colonial Boulevard, Suite 200
Fort Myers, Florida 33912 (941) 939-1020**



WILSON, MILLER, BARTON & PEEK, INC.

Engineers, Planners, Surveyors, Landscape Architects & Environmental Consultants
Wilson Professional Center, Suite 200, 3200 Bailey Lane at Airport Road, Naples, Florida 34105 • (941) 649-4040 Fax (941) 643-5716

OR BOOK 1510
PAGE 1337

GOPHER TORTOISE POPULATION STUDY, TAKE PERMIT APPLICATION AND PRESERVE MANAGEMENT PLAN

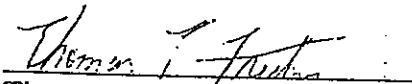
FOR


RIVERWOOD D.R.I. INCREMENTS I & II

PREPARED FOR
RIVERWOOD LAND COMPANY, L.P.
4100 RIVERWOOD DRIVE
PORT CHARLOTTE, FLORIDA 33953

PREPARED BY
WILSON, MILLER, BARTON & PEEK, INC.
3200 BAILEY LANE
NAPLES, FLORIDA 34105

AUGUST 7, 1996
REVISED OCTOBER 30, 1996


Thomas T. Trettis
Biologist


Timothy P. Durham
Director of Environmental Services

WMBP W.O. #3907
WMBP PROJECT # 0227-05-0

11/01/96-W-02270006.TLM
1-0227-05-00-VRPT

Naples
(941) 649-4040
Fax (941) 643-5716

Fort Myers
(941) 939-1020
Fax (941) 939-7479

Sarasota
(941) 371-3690
Fax (941) 377-9852

Page 1 of 11

INTRODUCTION

Staff biologists from Wilson, Miller, Barton & Peek, Inc. (Wilson Miller) have been involved with site assessments, gopher tortoise studies and gopher tortoise relocation efforts at Riverwood D.R.I. since 1988. Relocation of gopher tortoises out of Increment I occurred in 1989 and 1990 as described below under project history. In 1995, extensive field work was performed to evaluate habitat and existing gopher tortoise populations within Increment II. The study of Increment II consists of several phases:

1. Mapping and classifying existing vegetation communities.
2. Pedestrian transects to locate existing tortoise burrows.
3. Calculation of estimated gopher tortoise population.

The study area can be generally described as 312 acres in Section 17 of Township 40 South, Range 21 East, Charlotte County, Florida

PROJECT HISTORY

Riverwood D.R.I. was approved under a master development order with specific approvals for construction of Increment I. Subsequent increments are to be reviewed for specific approvals under the master development order. A significant portion of Increment I has been constructed with the initial phases occurring within a pine flatwoods area which contained gopher tortoises. Under a generic relocation permit (WR89055), Wilson Miller relocated six gopher tortoises out of proposed Increment I road right-of-ways into existing Increment II habitat on March 14, 1989. A subsequent relocation permit from GFC (WR90173) resulted in ten tortoises being relocated out of the balance of Increment I into Increment II during December of 1990. The total number of tortoises relocated out of Increment I and into Increment II was, therefore, 16. Said tortoises were found widely distributed within an Increment I pine flatwood area approximately 175 acres in size (see Exhibit A, attached). Dense palmetto and high wet season water levels accounted for the relatively low tortoise density (0.09 tortoise/acre) within Increment I. In 1995, a study was initiated to evaluate habitat and tortoise populations in Increment II as detailed below.

EXISTING HABITAT/LAND USE

Based on aerial photography and extensive ground truthing, the existing vegetative communities and land uses have been mapped and classified using the Florida Land Use, Cover, and Forms Classification System (FLUCCS). Following is a list of the different habitat and land use types identified with a brief description of each.

FLUCCS: Description:

- 321 Palmetto Prairie - Areas void of canopy strata and predominant ground cover vegetation is saw palmetto (*Serenoa repens*).
- 325 Scrub Oak - Areas generally dominated by sand live oak (*Quercus geminata*) with several other species of scrub oak occurring in the midstory strata.
- 411 Pine Flatwoods - Areas dominated by a slash pine (*Pinus elliotti*) canopy with ground cover predominantly saw palmetto.
- 415 Scrubby Flatwoods - Areas with open canopy containing widely scattered slash pine and an understory dominated by saw palmetto. Midstory species include myrtle oak (*Quercus myrtifolia*), live oak (*Quercus virginiana*), runner oak (*Quercus pumila*) and similar 411 species.
- 4271 D Pine/Oak-Disturbed - Areas containing a slash pine canopy and dominated by live oak and cabbage palm. Off road trails, camping and fire cuts have disturbed this habitat.
- 641 Freshwater Marsh - This freshwater herbaceous marsh is predominantly composed of sand cordgrass (*Spartina bakeri*), black rush (*Juncus roemerianus*) and cattails (*Typha* spp.).
- 642 Salt Marsh - Areas along the Myakka River and its tributaries. Near shore the dominant vegetation consists of mangroves, black rush, glassworts (*Salicornia virginica*). Further inland these marsh areas are commonly dominated by sand cordgrass, saltbush (*Baccharis halmifolia*) and black rush.
- 643 Wet Prairie - Common vegetation includes wiregrass (*Aristida spiciformis*), sand cordgrass, St. John's wort (*Hypericum* spp.), yellow-eyed grasses (*Xyris* spp.) and marsh fleabane (*Pluchea rosea*).
- 652 Shoreline - Sandy shoreline along the Myakka River approximately ten feet wide and extending approximately 1,750 feet.
- 742 Borrow Area - Small scrape down area that contains a monotypic stand of cattail.

A total of 10 different vegetative communities/associations were identified on this property. Only five (5) were considered to be suitable habitat for gopher tortoises. These include: palmetto prairies, scrub oak, pine flatwoods, scrubby flatwoods and pine/oak disturbed areas. Approximately 250 acres of the 312 acres of property on-site fall within these five (5) habitat types.

SURVEY METHODOLOGIES

Once the vegetative communities were identified and mapped, an extensive field survey was conducted in the five (5) communities identified as suitable for gopher tortoises throughout the Riverwood Increment II site. Wetlands and the Myakka River shoreline were eliminated from this survey effort although observations were made in these habitats as part of other project efforts (i.e., wetland determinations and surveys for other wildlife species).

The biologists conducting this survey, Tom Trettis, Bruce Layman and Chris Pearce are experienced observers with extensive backgrounds in this type of work. The gopher tortoise survey was conducted using sensitive methodologies to achieve thorough coverage of the project site. All methodologies meet or exceed the recommended standards for the Florida Game and Freshwater Fish Commission (GFC).

Temporary pedestrian transects were performed through each of the habitats identified as potential tortoise habitat. Using existing roads, trails, wetland margins, and other features as landmarks, each habitat type was methodically surveyed to locate tortoise burrows. Biologists walked these transects recording the number of active and inactive burrows and identifying their approximate location on aerial photographs. Upon completion of one transect line, the biologists would begin the next transect at a given distance from the previous line established parallel to the previous line. This process was repeated until the area bounded by the predetermined landmarks had been surveyed. Distance between transects varied from 50 feet in dense vegetation to 100 feet in open scrub habitat. The distance or spacing used between parallel transect lines was based on the biologist's assessment of the quality of the habitat and visibility limits. A minimum of 70% of each habitat was observed. Exhibit B, attached, depicts locations of active and inactive burrows.

Tortoise survey field work was conducted from March 20, 1995 to March 24, 1995 and April 3, 1995 to April 4, 1995. A total of 97 burrows, 56 considered active and 41 inactive, were located on the project site as a result of these surveys. Based on an estimate of 70% habitat coverages, the projected burrow count is 138. Refer to Table 1 for the total number of active and inactive burrows in each suitable habitat type.

BURROW OCCUPANCY FACTOR

Traditionally, a burrow occupancy factor of 0.614 has been used to estimate the actual population of tortoises in relationship to the total number of active plus inactive burrows. Wilson Miller's extensive experience with gopher tortoise relocation has consistently shown this factor to be too high for southwest Florida. Based on recently approved tortoise studies and personal communication with Ms. Kim Dryden of FGC, a factor of 0.40 was used as the burrow occupancy for calculation in this study and calculation of habitat protection acreage requirements.

GOPHER TORTOISE POPULATION

Data from habitat mapping and the pedestrian transect survey, and the burrow occupancy factor was used to calculate the estimated number of gopher tortoises (the population) present within the project. In making this calculation, first an estimate of the actual number of active and inactive burrows present in each of the five suitable habitat types was made. The formula used for this calculation was:

$$\text{Estimated On-Site Burrows} = \frac{\text{Number of active \& inactive burrows recorded during transect survey}}{70\% \text{ (Percentage of habitat observed during transect survey)}}$$

Next, an estimate of the actual number of tortoises present in each of the five (5) suitable habitat types was made by applying the site-specific burrow occupancy conversion factor to the results of the above equation. The formula used for this calculation was:

$$\text{Estimated Tortoise Population} = \text{Estimated on site burrows} \times \text{occupancy factor (0.4)}$$

Finally, the gopher tortoise population density, i.e., the estimated number of gopher tortoises per acre of habitat, was calculated for each of the five (5) habitats based on the results of the preceding calculation and the total acreage of each habitat type determined from the Gopher Tortoise Burrow Location Map, Exhibit B. The formula used for this calculation was:

$$\text{Tortoise density} = \text{Tortoise population} \div \text{habitat acreage}$$

The results of the gopher tortoise population and population density calculations are provided in Table 1. Increment I habitat (175 acres of pine flatwoods) has been included in the table. The sixteen tortoises relocated from Increment I into Increment II have been subtracted from the Increment II estimated population and assigned to the Increment I estimated population on Table 1. (Note: The use of 175 acres as the amount of Increment I habitat yields a conservative gopher tortoise density and consequently a conservative (high) Habitat Protection Acreage in Table 2)

In summary, the total estimated population for Increment I and II is 56 gopher tortoises with the highest density occurring in scrub oak and scrubby flatwood areas of Increment II.

HABITAT PROTECTION AREA

A portion of the development activity proposed for Increment II will occur in areas currently utilized by gopher tortoises. Riverwood Land Company, L.P., proposes to obtain a Gopher Tortoise Incidental Take permit from GFC and establish a 25 acre gopher tortoise preserve on site.

Table 2, Gopher Tortoise Habitat Protection Acreage Calculation, presents the analysis of onsite preserve area required per GFC guideline for large projects. Areas of gopher tortoise habitat impacted by Increment I development are accounted for on the table as are areas proposed for impact in Increment II. The resulting requirement for 16.4 acres of protected habitat will be met by the establishment and active management of a 25 acre onsite gopher tortoise preserve to be located in pine flatwood, scrub oak and scrubby flatwood areas as indicated on Exhibit C. Portions of the proposed preserve includes areas not currently utilized by tortoises due to vegetation density. Initial phases of management of the preserve will reduce shrub and mid canopy vegetation to re-establish habitat value. The 25 acre preserve size meets GFC recommendations and will allow essentially full accommodation of the estimated onsite gopher tortoise population.

HABITAT MANAGEMENT

The gopher tortoise preserve will be actively managed to enhance and subsequently maintain the three types of vegetative communities for long term gopher tortoise population viability. Maintenance activities will be consistent with coincident management plans for eagles and/or scrub jays.

The following components comprise the tortoise protection area maintenance and monitoring plan:

1. Construction related intrusions into the proposed gopher tortoise protection area will be prohibited during clearing and construction operations. Contractors will be provided a copy of WMB&P Exhibit C and instructed regarding habitat protection. Areas proposed for habitat protection will be flagged, staked, barricaded or otherwise delineated in the field prior to construction.
2. Recreational activities will be restricted to specific pedestrian trails. No designated picnic areas, biking trails, horse trails or interpretive facilities (other than approved signs, vista trails, and bird viewing blinds) will be allowed. The trails will not be paved, hardened or made impermeable. The location and design of all facilities will be reviewed and approved prior to construction by the FGFWFC. Educational signage may be placed along the trails.
3. Human access will be restricted, by appropriate signage in the vicinity of any eagle nest during nesting season. During the nesting season, pedestrian trails or other human use, will be restricted to a minimum of 500' from an active eagle's nest. The trail will be barricaded off by a cable across the path.
4. Mulch along the interface between the designated Habitat Protection Area and developed areas will not extend further than one foot into protection areas.

Exotic vegetation will be removed by hand from protection areas as part of ongoing management activities.

5. Maintenance activities will involve a combination of mechanical treatment, selective hand clearing, and/or prescribed burning. Mechanical treatment methods would include mowing and bush hogging which would be conducted when daytime temperatures are below 70 degrees F (periods of reduced tortoise mobility). Hand pruning or clearing of midstory vegetation could occur as necessary to control overgrowth. Removal of all or parts of larger trees may be performed in order to increase or maintain sunlight penetration to ground level. No maintenance activities will be conducted within the primary zone of an active eagle's nest during the nesting season.

A specific indication of preferred maintenance practices per habitat type is as follows:

A. Scrubby Flatwoods/Scrub Oak

- i. Hand-trim to a height of 6-9 feet at 5 year intervals or as deemed necessary.
- ii. Excessive layers of shrubby growth will be removed by hand at 3 year intervals if necessary.
- iii. Prescribed burns may be conducted at 8 year intervals if judged feasible and necessary. Appropriate steps will be taken to protect eagle nest and perch trees, such as the removal of fuel from the vicinity of nest and perch trees.
- iv. No mowing or raking will be performed in xeric scrub areas.
- v. Any burning during the eagle nesting season, will take place only at distances established by the FGFWFC or the USFWS.

B. Pine Flatwood

- i. Bush hogging and/or mowing at 3 to 6 year intervals if judged necessary to maintain a minimum of 30% total ground area clear of saw palmetto or other shrubs.
- ii. Prescribed burns may be conducted at 3 to 6 year intervals if feasible and necessary.

If deemed necessary by GFC, native plant species of value to gopher tortoises will be used to supplement existing vegetation. Species used would include, but not be limited to, dwarf live oak, gopher apple, buckthorn, lyonia, gallberry, tarflower, and prickly pear cactus.

Prior to scheduled maintenance activities a site walk and habitat evaluation will be performed by a qualified biologist to determine maintenance requirements. Potential need for supplemental foraging plant material plantings will also be evaluated.

A report on maintenance/management activities undertaken will be prepared and submitted to GFC every two years with copies supplied to Charlotte County and SWFRPC. The GFC will review and suggest modifications, if necessary, to improve management of the site.

Brochures containing information on gopher tortoise habitat, behavior and protection measures will be developed and provided to residents adjacent to the gopher tortoise preserve.

GOPHER TORTOISE MANAGEMENT DURING CONSTRUCTION

Prior to construction related clearing activity in potential gopher tortoise habitat in Increment II, the boundaries of the tortoise preserve will be established and containment fencing erected along the perimeter. The containment fencing will be wire fence extended at least 2 feet above ground, angled inward, staked tightly to discourage scaling by tortoises, and buried a minimum of 1 foot below ground. A qualified biologist with gopher tortoise relocation experience will supervise removal of gopher tortoises from potential gopher tortoise habitat prior to clearing of development areas. Removal will be accomplished by excavation and/or bucket trapping. All tortoises removed will be examined for evidence of respiratory disease, and any exhibiting symptoms will be isolated pending instructions from GFC staff. All other removed tortoises will be placed into the fenced preserve and randomly distributed.

SUPPLEMENTAL DISCUSSION - PRESCRIBED BURNING

Fire plays a major role in native communities such as xeric oak and pineland habitats. In the absence of fire, the xeric oak scrub vegetation continually increases in height and cover, eventually eliminating all open spaces, causing a decrease in wildlife species dependent on scrub. Burning stimulates an increase in the quantity and quality of many herbaceous plants that are important wildlife foods and creates openings in the canopy that will allow sunlight to penetrate to the ground.

The natural succession in pinelands is toward hardwood species. Fire is the dominant controlling agent of succession and has historically kept pinelands in a sub-climax successional stage which is relatively stable. Controlled burns are conducted in pineland and rangeland by forest and land managers to prevent the buildup of ground fuel, which reduces the chance of catastrophic wildfires, and to release the nutrients bound in the organic material. Fire controls the hardwoods, allowing for regeneration of the pineland communities. Fire also controls saw palmetto, opening the canopy and allowing an increase in herbaceous species. Saw palmetto, particularly, can cover scrub and brushland habitats to the exclusion of other species if not controlled.

Historically, summer fires initiated by lightning strikes during thunderstorms were more common than winter fires. It should be noted, however, that summer fires tend to kill many more deciduous shrubs and small trees than winter fires. For this reason, winter burning is perhaps more consistent with habitat management objectives.

Prescribed burning, if deemed feasible, will be effected prior to start of construction on any specific development phase. Any burning will be conducted by an experienced control-burn contractor, as described above under management of pine flatwoods and scrub habitat. The burn plan will adhere to applicable regulatory guidelines and will be coordinated with the appropriate Fire District and the State of Florida Division of Forestry.

**TABLE 1 - ESTIMATED GOPHER TORTOISE POPULATION
BY HABITAT TYPE (D.R.I. INCREMENTS I & II)**

HABITAT (FLUCCS)	NUMBER OF BURROWS OBSERVED (A+I)	ESTIMATED ON-SITE BURROWS ((A+I) ÷ 0.70)*	ESTIMATED TORTOISE POPULATION **	HABITAT ACREAGE	TORTOISE DENSITY (TORTOISE/ ACRE)
PINE FLATWOODS (411) (INCREMENT I)	-	-	+16%	175.0	0.09
PINE FLATWOODS (411)	1	1.4	0.6	14.8	0.04
PALMETTO PRAIRIE (321)	3	4.3	1.7	11.8	0.14
SCRUB OAK (325)	67	95.7	(38.3-10)=28.3%	47.4	0.60
SCRUBBY FLATWOODS (415)	25	35.7	(14.2-6)=8.2%	49.0	0.17
PINE/OAK DISTURBED (4231 D)	1	1.4	0.6	4.6	0.13
TOTAL	97		56		

* Estimated on-site burrows = total number of burrows observed ÷ 0.70 (per 70% habitat observed).

** Estimated tortoise population = estimated on-site burrows x 0.40 conversion factor.

%% Note: Relocated Increment I tortoises subtracted from Increment II 325 and 415 habitats and shown in 411 Increment I row in estimated tortoise population column.

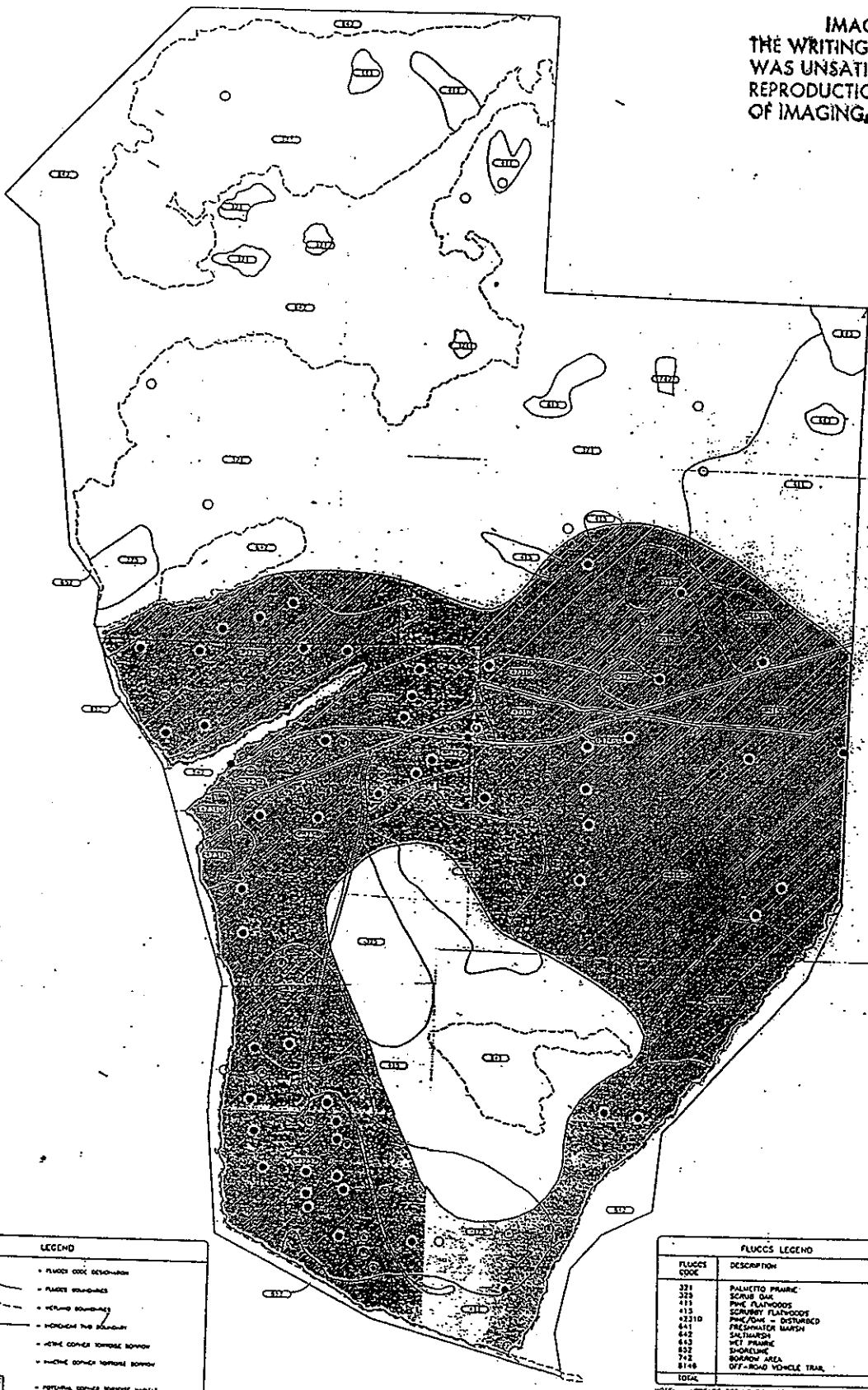
TABLE 2. GOPHER TORTOISE HABITAT PROTECTION
ACREAGE CALCULATION

HABITAT (FLUCCS)	HABITAT ACREAGE	TORTOISE DENSITY (TORTOISE/ ACRE)	HABITAT PROTECTION' FACTOR *	HABITAT PROTECTION ACREAGE **
PINE FLATWOODS (411) (INCREMENT I)	175.0	0.09	0.03	5.25
PINE FLATWOODS (411)	14.8	0.04	0.02	0.30
PALMETTO PRAIRIE (321)	11.8	0.14	0.05	0.60
SCRUB OAK (325)	47.4	0.60	0.15	7.11
SCRUBBY FLATWOODS (415)	49.0	0.17	0.06	2.94
PINE/OAK DISTURBED (4231 D)	4.6	0.13	0.05	0.22
TOTAL	302.6			16.42

* Habitat protection factor = 0.25 if density > 0.8
0.15 if 0.45 < density < 0.8
proportion of 0.15 for density < 0.4

** Habitat protection acreage = habitat protection factor x habitat acreage.

IMAGING MEMO
 THE WRITING/TYPING & PRINTING
 WAS UNSATISFACTORY FOR
 REPRODUCTION AT THE TIME
 OF IMAGING.



LEGEND

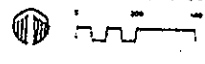
- - - - - PLUGGS CODE BOUNDARIES
- - - - - PLUGGS BOUNDARIES
- - - - - VETLAND BOUNDARIES
- - - - - HIGHLIGHT THE BOUNDARY
- POTENTIAL GOPHER TORTOISE BOWNHOLE
- POTENTIAL GOPHER TORTOISE BOWNHOLE
- POTENTIAL GOPHER TORTOISE HOLE

PLUGGS LEGEND

PLUGGS CODE	DESCRIPTION	ACREAGE
325	BALUCITO PRAIRIE	87 AC
411	SCISSOR GRASS	123 AC
413	PINE FLATWOODS	1 AC
415	SCISSOR FLATWOODS	1 AC
42310	PINE/DOCK - DISTURBED	1 AC
441	FRESHWATER MARSH	1 AC
442	SALT MARSH	1 AC
443	WET PRAIRIE	1 AC
832	SHOULDER	1 AC
742	BROADWAY AREA	1 AC
8148	OFF-ROAD VEHICLE TRAIL	1 AC
TOTAL		312 AC

NOTE: ACREAGE TOTALS DO NOT EQUAL LEGAL DESCRIPTION TOTALS DUE TO DIFFERENCE IN PLUGGS BOUNDARY LINES.

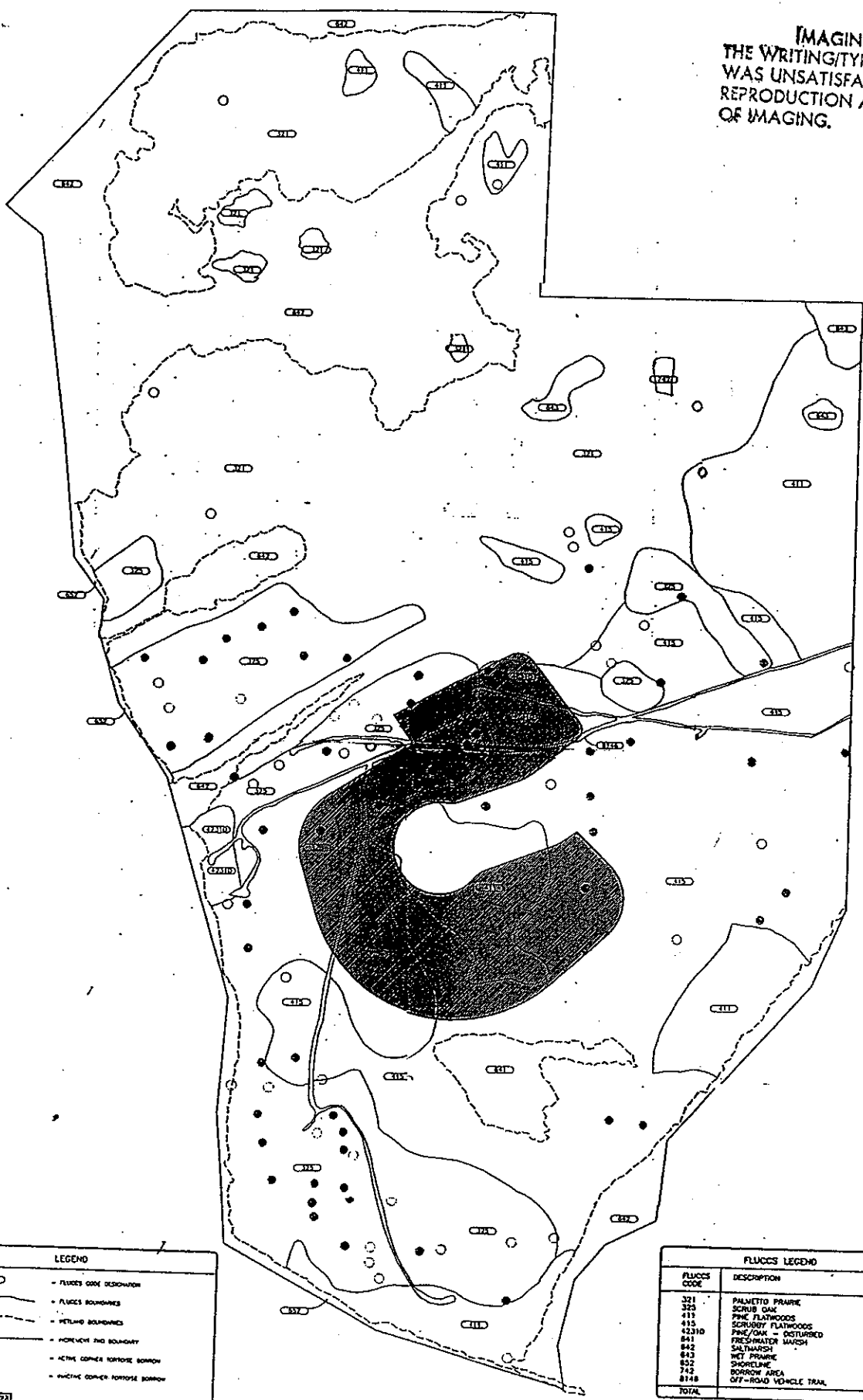
NOTE: VETLAND LINES ARE UNIMPAIRED AND ARE BASED ON AERIAL INTERPRETATION.



**INCREMENT TWO
 POTENTIAL GOPHER
 TORTOISE HABITAT**

PRINTED
 W/CS 5 1996
 WILSON HILLER BARTON
 A 700, P.C.

IMAGING MEMO
 THE WRITING/TYPING & PRINTING
 WAS UNSATISFACTORY FOR
 REPRODUCTION AT THE TIME
 OF IMAGING.



LEGEND

- FLUCCS CODE DESCRIPTION
- FLUCCS BOUNDARIES
- WETLAND BOUNDARIES
- HORIZONTAL 2ND BOUNDARY
- ACTIVE GOPHER TORTOISE BORROW
- INACTIVE GOPHER TORTOISE BORROW
- 25 ACRE PRESERVE FOR GOPHER TORTOISE

FLUCCS LEGEND

FLUCCS CODE	DESCRIPTION	ACREAGE
321	PALMETTO PRAIRIE	2.2
325	SCRUB OAK	2.2
413	PINE FLATWOODS	2.2
415	SCRUBBY FLATWOODS	2.2
42310	PINE/OAK - DISTURBED	2.2
841	FRESHWATER MARSH	2.2
842	SALT MARSH	2.2
843	WET PRAIRIE	2.2
852	SHORELINE	2.2
742	BORROW AREA	2.2
8148	OFF-ROAD VEHICLE TRAIL	2.2
TOTAL		312 AC

NOTE: ACREAGE TOTALS DO NOT EQUAL LEGAL DESCRIPTION TOTALS DUE TO DIFFERENCE IN FLUCCS BOUNDARY LINES.

IMAGED
 2/13/97
 AR

080

INCREMENT TWO
 25 ACRE PRESERVE
 GOPHER/TORTOISE HABITAT

PRINTED
 8 5 1996
 WILSON MILLER BARTON
 & POCOCK, INC.

