Appendix A

Survey Methodologies Letters of Acceptance from the Agencies

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Craig Smith

From: Craig Smith
Sent: Thursday, December 05, 2002 6:58 PM
To: 'Beeverjw@aol.com'; Dustin_Perkins@fws.gov
Subject: RE: RCW Foraging Survey Methodology, Zemmel Road

Jim:

I have received authorization from SLD to start the survey on Monday morning, December 9, 2002. The survey will be completed on Friday, December 20th. Based on your comments, approval from the FWS, and authorization to proceed from my client I have revised the attached monitoring methodology to reflect a December 20, 2002 completion date. I trust this addresses your concerns and therefore your approval of the methodology. Thanks for your prompt response.

I will ask someone from my office to pick up the disk either Monday of Tuesday afternoon of next week.

Craig

-----Original Message-----
From: Beeverjw@aol.com [mailto:Beeverjw@aol.com]
Sent: Thursday, December 05, 2002 2:32 PM
To: Dustin_Perkins@fws.gov; Csmith@environment.com
Subject: Re: RCW Foraging Survey Methodology, Zemmel Road

I concur with Dusty. Modify your write-up to comply with his request and you will have an approved survey methodology fro FWC. Also do you want to pick up the data disk for the Fairway Woodlands RCW GIS or would you like it mailed to you? Jim Beever

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RED-COCKADED WOODPECKER FORAGING SURVEY METHODOLOGY
427± ACRE ZEMMEL ROAD SLD PROPERTY
(December 5, 2002)

Introduction

The 427± acre Zemmel Road SLD property is located in a portion of Section 30, Township 42 South, Range 24 East, Charlotte County, Florida. The property is bordered to the west by the Charlotte County Landfill, to the east by U.S. 41, to the north by Zemmel Road and county owned conservation lands, and to the south by privately owned undeveloped land.

The U.S. Fish and Wildlife Service (FWS) has provided information on the locations of known RCW cavity trees in the general vicinity of the 427± acre property. The closest cavity tree is located approximately 2.0 miles northeast of the property. Additional cavity trees are located 2.1± miles southeast of the property on the east side of U.S. 41. The status of these cavities (active, inactive, or abandoned) was not provided. The FWC has stated that active RCW cavity trees are present adjacent to the Gator Slough Canal in Lee county (3.1± miles south of the property) and north of Zemmel Road in Section 24, Township 42 South, Range 23 East, Charlotte County. The precise locations of these cavity trees and the current status of the cavities have not been provided by the FWC.

The following documents have been reviewed prior to the preparation of this methodology:

Beever, James W. 2002. Standardized State-Listed Animal Survey Procedures (April 5, 2002 Second Edition) Florida Fish and Wildlife Conservation Commission, Office of Environmental Services.

Florida Game and Fresh Water Fish Commission. 1988. Wildlife Survey Methodology Guidelines for Section 18.D of the Application for Development Approval (January 15, 1988). Office of Environmental Services.

Henry, V. George. 1989. Guidelines for Preparation of Biological Assessments and Evaluations for the Red-cockaded Woodpecker (September 1989). U.S. Fish and Wildlife Service, Southeast Region, Georgia.

U.S. Fish and Wildlife Service. 2002. Red-cockaded Woodpecker Survey Protocol (July 23, 2002 DRAFT). South Florida Ecological Services Office.

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The methodology described below is in substantial compliance with the applicable portions of the documents listed above and is based on Kevin L. Erwin Consulting Ecologist, Inc.'s (KLECE) extensive experience with RCW in southwest Florida.

Methodology

KLECE has previously mapped the major vegetation associations on-site using the 1999 edition of the Florida Land Use, Cover and Forms Classification System (FLUCFCS). A listed species survey was also conducted by KLECE in October 2001. This survey consisted of two ecologists traversing parallel pedestrian-transects through all potential RCW habitats searching for potential RCW cavities and/or start holes. That survey documented that RCW do not nest within the 427± acre property.

KLECE will conduct a one time non nesting season (October 15 - December 20) and nesting season (April 15 - June 15) RCW foraging survey on the 427± acre property. The foraging surveys will be conducted for two consecutive weeks (Monday through Friday) from sunrise to noon. Each survey event will consist of a qualified ecologist walking meandering transects through potential RCW foraging habitat. The location and direction of these transects will vary on a daily basis and will be recorded on an aerial vegetation map. The ecologist will stop at 5± minute intervals, play a 30 second continuous RCW vocal call tape, and listen for RCW vocalizations. The location and number of RCW's seen/heard (if any) will also be recorded on the aerial vegetation map. In the event RCW's are found on-site, the meandering transects will be discontinued and the birds followed on-site. Locations of RCW's will then be noted at 15± minute intervals.

Reporting

A summary report will be prepared at the completion of the non nesting and nesting season surveys. The report will document the survey methodology and the location, number, and frequency (if any) of RCW observed or heard on-site.

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Craig Smith
From: Dustin_Perkins@fws.gov
Sent: Friday, December 06, 2002 6:56 AM
To: Craig Smith
Subject: RE: RCW Foraging Survey Methodology, Zemmel Road

Sounds good to me.

Dusty Perkins
Wildlife Biologist
U.S. Fish and Wildlife Service
3860 Tollgate Boulevard, Suite 300
Naples, FL 34114
Phone: 239-353-2814
Fax: 239-353-8640

Craig Smith <Csmith@environment.com> 12/05/2002 06:47 PM

To: "'Dustin_Perkins@fws.gov'" <Dustin_Perkins@fws.gov>
cc: "Jim Beever (E-mail)" <beeverjw@aol.com>
Subject: RE: RCW Foraging Survey Methodology, Zemmel Road

Dusty:

I have received authorization from SLD to start the surveys this coming Monday (December 9, 2002) morning. The two weeks of survey will be completed Friday December 20th. I trust this meets your requirements. Thanks for your quick response.

Craig

-----Original Message-----

From: Dustin_Perkins@fws.gov [mailto:Dustin_Perkins@fws.gov]
Sent: Thursday, December 05, 2002 8:15 AM
To: Craig Smith
Cc: Jim Beever (E-mail)
Subject: Re: RCW Foraging Survey Methodology, Zemmel Road

<< File: RCW survey methodology.doc >>

The survey methodology looked fine except our non-nesting foraging survey guidelines suggest they be completed by December 15, as opposed to January 30 outlined in your methodology. I realize that circumstances may make it difficult to complete all surveys by December 15, however efforts should be made to start the surveys before December 15 and conclude as soon as possible (while still completing surveys on 14 days) after this date.

Dusty

Dusty Perkins

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Wildlife Biologist
U.S. Fish and Wildlife Service
3860 Tollgate Boulevard, Suite 300
Naples, FL 34114
Phone: 239-353-2814
Fax: 239-353-8640

Craig Smith <Csmith@environment.com>

To: "Jim Beever (E-mail)" <beeverjw@aol.com>, "Dusty Perkins (E-mail)" <Dustin_Perkins@fws.gov>

cc:

12/04/2002 01:07 PM

Subject: RCW Foraging Survey Methodology, Zemmel Road

Gentlemen:

On November 5, 2002 we met to discuss the future permitting of the expansion of the existing Southwest Land Developers (SLD) Construction and Demolition Debris and Recycling Facility. SLD is planning to expand its current operations within the portion of Section 30, Township 42 South, Range 24 East, Charlotte County located west of U.S. 41. During that meeting it was agreed that the results of a nesting and non nesting season red-cockaded woodpecker (RCW) foraging survey, using approved U.S. Fish and Wildlife Service (FWS) and Florida Fish and Wildlife Conservation Commission (FWC) methodology, would be used by all parties to determine the use or non use of the 427± acre property as foraging habitat by RCW. It was also agreed that the FWC and FWS would send me information on the location of known RCW cavity trees in the vicinity of the 427± acre property as well as existing RCW foraging survey protocol.

I have received and reviewed information provided by the FWS but have not received information from the FWC. In order to conduct the non nesting season foraging survey prior to the 2003 nesting season I have prepared the attached RCW Foraging Survey Methodology 427± Acre Zemmel Road SLD Property based on the information I have received to date. (I have also faxed you a hard copy.) Please review the attached methodology and confirm that it is acceptable as soon as possible. Based on the FWS seasonal requirements we need to initiate the non nesting season survey the second and third week of December 2002 (i.e. next week).

Please call me if you have any questions. Thank you for your assistance with this project.

Craig

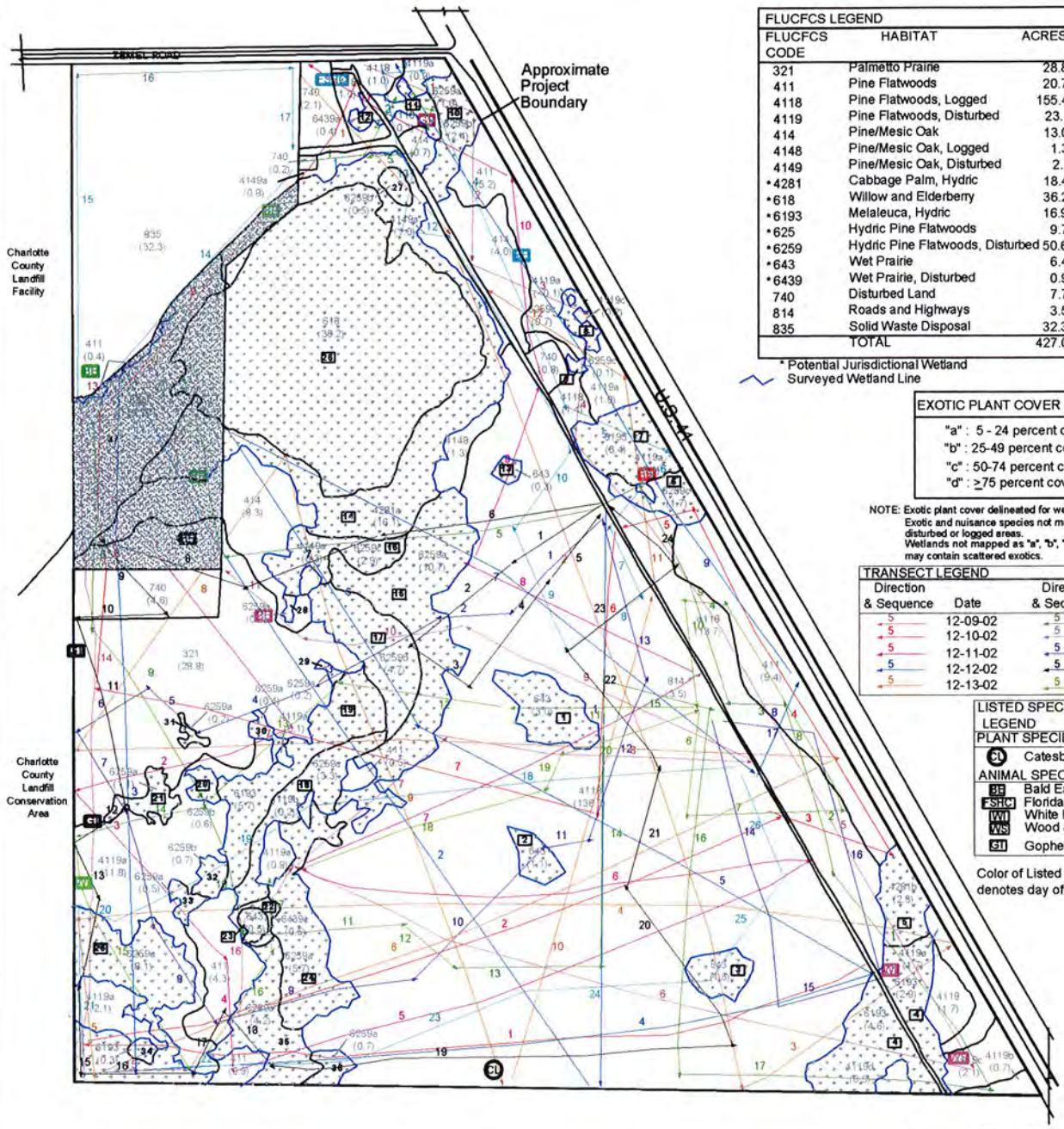
<<RCW survey methodology.doc>>
(See attached file: RCW survey methodology.doc)

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Appendix B

Cumulative RCW Survey Transect Locations

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FLUCFCS LEGEND			
FLUCFCS CODE	HABITAT	ACRES	% OF TOTAL
321	Palmetto Prairie	28.8	6.7%
411	Pine Flatwoods	20.7	4.8%
4118	Pine Flatwoods, Logged	155.4	36.4%
4119	Pine Flatwoods, Disturbed	23.1	5.4%
414	Pine/Mesic Oak	13.0	3.0%
4148	Pine/Mesic Oak, Logged	1.3	0.3%
4149	Pine/Mesic Oak, Disturbed	2.1	0.5%
*4281	Cabbage Palm, Hydric	18.4	4.3%
*618	Willow and Elderberry	36.2	8.5%
*6193	Melaleuca, Hydric	16.9	4.0%
*625	Hydric Pine Flatwoods	9.7	2.4%
*6259	Hydric Pine Flatwoods, Disturbed	50.6	11.8%
*643	Wet Prairie	6.4	1.5%
*6439	Wet Prairie, Disturbed	0.9	0.2%
740	Disturbed Land	7.7	1.8%
814	Roads and Highways	3.5	0.8%
835	Solid Waste Disposal	32.3	7.6%
	TOTAL	427.0	100.0%

* Potential Jurisdictional Wetland
Surveyed Wetland Line

EXOTIC PLANT COVER LEGEND
"a" : 5 - 24 percent cover
"b" : 25-49 percent cover
"c" : 50-74 percent cover
"d" : ≥75 percent cover

NOTE: Exotic plant cover delineated for wetland areas only. Exotic and nuisance species not mapped in disturbed or logged areas. Wetlands not mapped as "a", "b", "c", or "d" may contain scattered exotics.

TRANSECT LEGEND			
Direction & Sequence	Date	Direction & Sequence	Date
5	12-09-02	5	12-16-02
5	12-10-02	5	12-17-02
5	12-11-02	5	12-18-02
5	12-12-02	5	12-19-02
5	12-13-02	5	12-20-02

LISTED SPECIES SIGHTINGS LEGEND	
PLANT SPECIES	
CL	Catesby's Lily
ANIMAL SPECIES	
BE	Bald Eagle
FSHC	Florida Sand Hill Crane
WI	White Ibis
WS	Wood Stork
GT	Gopher Tortoise

Color of Listed Species Symbol denotes day of sighting.

HATCH LEGEND
Wetland
Upland
Existing Conservation Area (22.9± acres)

Notes:

1. Mapping based on photo interpretation of April 2001 1"=200' scale rectified aerial photography and groundtruthing in January and February 2003.
2. Mapping of potential jurisdictional wetlands based on flagging by KLECE and surveyed flag locations provided by Robert South. Extent of jusridictional wetlands has not been verified by the appropriate agencies.
3. Property boundary based on information provided by SLD and transferred to the rectified aerials based upon recognizable features (i.e., fence lines, roads, etc.).
4. Vegetation mapping is subject to field review and approval by all appropriate agencies and is intended for general planning purposes only.
5. Transect and wildlife locations are approximate.

200 0 200
100 100

Kevin L. Erwin
Consulting Ecologist, Inc.
2077 Bayside Parkway Fort Myers Florida 33901 (239) 337-1505

Project SLDZR106	File: transect	Date 12-24-02	Drawn By MGW
Charlotte County	Township 42 S	Range 24 E	Section(s) 30
Revision Date	Comments		Verified By
4-29-03	Revise vegetation mapping to current		CMS

Exhibit B. Cumulative RCW Survey Transect Locations

Exhibit B.1.d

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W. Dexter Bender & Associates, Inc.

Environmental & Marine Consultants

2052 Virginia Avenue ■ Fort Myers, Florida 33901 ■ (239) 334-3680 ■ (239) 334-8714 Fax

July 2, 2003

Mr. James Beever
Florida Fish and Wildlife Conservation Commission
29200 Tucker Grade
Punta Gorda, FL 33955

Mr. Dusty Perkins
U.S. Fish and Wildlife Service
South Florida Ecological Services
3860 Tollgate Boulevard
Naples, FL 34113

Re: Zemel Road SLD Property
Red-Cockaded Woodpecker Survey

Dear Mr. Beever and Mr. Perkins:

On November 5, 2002 we met to discuss the future permitting of the expansion of the existing Southwest Land Developers (SLD) Construction and Demolition Debris and Recycling Facility. SLD is planning to expand its current operations within the portion of Section 30, Township 42 South, Range 24 East, in Charlotte County that is located west of U.S. 41 and south of Zemel Road. During that meeting it was agreed that the results of a nesting and a non-nesting season red-cockaded woodpecker (RCW) foraging survey, using approved U.S. Fish and Wildlife Service (FWS) and Florida Fish and Wildlife Conservation Commission (FWC) methodology, would be used by all parties to determine the use or non use of the 427± acre property as foraging habitat by RCW. The 2002 RCW non nesting season survey was completed by Kevin L. Erwin Consulting Ecologist, Inc. (KLECE) and submitted to you on May 2, 2003.

As you recall, I was the project manager for this project at KLECE and over saw the preparation of the RCW survey methodology, undertaking of the field RCW survey, and preparation of the resulting report. SLD has requested that I continue as project manager through my present employer, W. Dexter Bender & Associates, Inc. (DBA). As such I have completed the agreed upon 2003 nesting season RCW foraging survey using FWS and FCW approved survey methodology. The enclosed monitoring report describes the methodology that was used and the results of the nesting season RCW foraging survey conducted by DBA in May and June 2003.

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The wildlife surveys that have been conducted on the site to-date by both KLECE and DBA indicate that RCWs do not use the site for foraging or nesting. During the December 2002 non-nesting season foraging survey and the subsequent May – June 2003 RCW nesting season foraging survey no RCWs were seen or heard on or immediately adjacent to the site. No RCW cavity or start hole trees were found on the site. Therefore, pursuant to our agreement reached during our November 5, 2002 meeting, the RCW will not be an issue during the state and federal wetland permitting process.

SLD is in the process of preparing the required materials for the state Environmental Resource Permit/Solid Waste Disposal Facility Permit and federal Section 404 Dredge and Fill Permit applications. Given the amount of information required to prepare the applications for the construction and demolition debris and recycling facility, the applications are unlikely to be submitted to the Florida Department of Environmental Protection and U.S. Army Corps of Engineers prior to the fall of 2003.

Please call me if you have any questions regarding the enclosed report or the conclusions that have been reached. Thank you for your assistance in this matter.

Sincerely,
W. Dexter Bender & Associates, Inc.

Craig M. Smith
Ecologist

Enclosure

cc: Bruce Laishley, w/enclosure

CRAIG/E/PROJECTS/SLD-1/RCW REPT COVER LETTER

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427.0± ACRE ZEMEL ROAD PROPERTY
RED-COCKADED WOODPECKER
2003 NESTING SEASON
SURVEY REPORT

June 2003

Prepared for:

Southwest Land Developers, Inc.
5445 Williamsburg Dr.
Punta Gorda, FL 33982

Prepared by:

W. Dexter Bender & Associates, Inc.
2052 Virginia Avenue
Fort Myers, FL 33901

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INTRODUCTION

W. Dexter Bender & Associates, Inc. (DBA) has conducted a red-cockaded woodpecker (RCW) nesting season survey of the 427.3± acre property located south of Zemel Road within a portion of Section 30, Township 49 South, Range 24 East, Charlotte County, Florida. The property is bordered to the north by Zemel Road, to the east by US 41, to the south by undeveloped land, and to the west by the Charlotte County Landfill. The goal of this survey was to determine if RCW's utilize areas of the property as foraging habitat. The Florida Fish and Wildlife Conservation Commission (FWC) has provided information showing the approximate locations of several RCW colonies in the general vicinity of the subject property (Figure 1). The closest two reported RCW colonies are approximately one-half mile and one mile northwest of the 427.3± acre property. Additional colonies were reported to be located two miles to the northeast, two miles to the southeast, and five miles to the south. The current activity status of these five colonies is not known.

Prior to DBA's involvement with this project, Kevin L. Erwin Consulting Ecologist, Inc. (KLECE) had spent a significant amount of time on the subject property beginning in September 1996. During the permitting of the initial SLD facility in the northwest corner of the 427.3± acre site, more than 90 man-hours were spent on-site from September 1996 through July 1997 conducting various environmental tasks. This consisted of activities such as two listed species survey events, vegetation mapping, wetland delineation, and agency site inspections. KLECE monitored the wetland mitigation site in April 1999, January 2001, and January 2002. Their ecologists spent over 60 man-hours on-site between June 2000 and February 2002 performing various environmental tasks over the entire 427.3± acre site. In addition, KLECE conducted a three day listed species survey of the 427.3± acre property in October 2001. That survey consisted of two ecologists traversing parallel pedestrian transacts through all potential RCW habitats searching for potential RCW cavities and/or start holes. Approximately 58 man-hours were spent on-site conducting the survey. No evidence of current or historic RCW nesting activity within the 427.3± acre property was found. KLECE conducted a one-time non-nesting season (October 15 - December 20, 2002) RCW foraging survey on the 427.3± acre property (KLECE 2003). The foraging survey was conducted for two consecutive weeks (December 9 - 13 and December 16 - 21, 2002) from sunrise to noon. In total, KLECE ecologists have spent over 285 man-hours on-site conducting various environmental tasks. Approximately 50 percent of that time was devoted specifically to listed species. However, during all times on-site the ecologists have made an effort to observe RCW's and would have seen or heard them had the birds been present on-site. Throughout this time period (September 1996 - December 2002) KLECE ecologists never observed an RCW nesting or foraging on the 427.3± acre site.

METHODOLOGY

DBA conducted a one-time nesting season (April 15th through June 15th) RCW foraging survey on the subject property. The survey was conducted on May 19 - May 30 and June 3 and 4, 2003 (14 days) from approximately 6:30 a.m. to 10:30 a.m. Each survey event consisted of a qualified ecologist walking meandering transacts through potential RCW foraging habitat. The location

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and direction of these transacts varied on a daily basis and were recorded on an aerial vegetation map (Figures 2 and 3). The ecologist stopped at 5± minute intervals, played a 30 second continuous RCW vocal call tape, and listened for RCW vocalizations. The location and number of RCW's seen/heard (if any) were also recorded on the aerial vegetation map.

The following documents have been reviewed prior to the preparation of this RCW survey methodology:

Beever, James W. 2002. Standardized State-Listed Animal Survey Procedures (April 5, 2002 Second Edition) Florida Fish and Wildlife Conservation Commission, Office of Environmental Services.

Florida Game and Fresh Water Fish Commission. 1988. Wildlife Survey Methodology Guidelines for Section 18.D of the Application for Development Approval (January 15, 1988). Office of Environmental Services.

Henry, V. George. 1989. Guidelines for Preparation of Biological Assessments and Evaluations for the Red-cockaded Woodpecker (September 1989). U.S. Fish and Wildlife Service, Southeast Region, Georgia.

Kevin L. Erwin Consulting Ecologist, Inc. 2003. 427.0± Acre Zemel Road Property Red-Cockaded Woodpecker 2002 Non-Nesting Season Survey Report.

U.S. Fish and Wildlife Service. 2002. Red-cockaded Woodpecker Survey Protocol (July 23, 2002 DRAFT). South Florida Ecological Services Office.

Prior to KLECE conducting the December 2002 survey, the methodology was approved by Mr. Dusty Perkins (U.S. Fish and Wildlife Service, FWS) on December 6, 2002, and by Mr. Jim Beever (FWC) on December 5, 2002 (see Appendix A). The resulting report was submitted to the FWC and FWS on May 2, 2003. Based on comments received by DBA from the agencies, the methodology was modified slightly to consist of 14 days of surveys. This modification was approved by both the FWC and the FWS (Appendix A).

RESULTS

Vegetative Communities

KLECE has mapped the major upland and wetland communities based on photo interpretation of 2001 1"=200' scale rectified aerial photography. WDBA updated the vegetation mapping based additional groundtruthing in 2003. The Florida Land Use, Cover and Forms Classification System (FLUCCS) was used to label the identified land uses and plant communities. Modifiers were added to denote the extent of exotic species infestation.

At the time this property was purchased by SLD from the Zemel family it was zoned by Charlotte County as Agricultural with an exemption for logging. As such, the site and adjacent lands to the south have been periodically logged by the Zemel family over the past several decades. SLD logged a portion of the site in October - November 2001. That logging was

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undertaken subsequent to a listed species survey of the site (see Item B.1 above) and in full compliance with applicable Charlotte County regulations.

A total of 25 vegetation communities (i.e., FLUCCS Codes) were identified within the 427.3 acre property (Figure 2). The acreages of habitats are summarized by FLUCCS code in the following table. The dominant characteristics of each habitat type are described below:

Vegetation Associations and Land Use Acreages

FLUCCS CODE	HABITAT TYPE	ACRES
321	Palmetto Prairies	28.8
411	Pine Flatwoods	20.9
411L	Logged Pine Flatwoods	150.6
411M1	Pine Flatwoods invaded by Melaleuca (10-25%)	19.5
411M2	Pine Flatwoods invaded by Melaleuca (26-50%)	1.0
411M3	Pine Flatwoods invaded by Melaleuca (51-75%)	2.3
411M4	Pine Flatwoods invaded by Melaleuca (76-90%)	0.5
414	Pine - Mesic Oak	13.0
414BP1	Pine - Mesic Oak invaded by Brazilian Pepper (10-25%)	1.0
414L	Logged Pine - Mesic Oak	1.3
414M1	Pine - Mesic Oak invaded by Melaleuce (10-25%)	1.1
*428HBP1	Hydric Cabbage Palm invaded by Brazilian Pepper (10-25%)	16.1
*428HBPM2	Hydric Cabbage Palm invaded by Brazilian Pepper (26-50%)	2.3
*618	Willow and Elderberry	36.2
*619M	Hydric Melaleuca	15.9
*625	Hydric Pine Flatwoods	9.8
*625BP2	Hydric Pine Flatwoods invaded by Brazilian Pepper (26-50%)	0.5
*625M1	Hydric Pine Flatwoods invaded by Melaleuca (10-25%)	18.1
*625M2	Hydric Pine Flatwoods invaded by Melaleuca (26-50%)	19.3
*625M3	Hydric Pine Flatwoods invaded by Melaleuca (51-75%)	12.9
*643	Wet Prairies	2.1
*643M1	Wet Prairie invaded by Melaleuca (10-25%)	10.1
*643M2	Wet Prairie invaded by Melaleuca (26-50%)	0.5
740	Disturbed Land	8.3
814	Roads and Highways	3.5
835	Solid Waste Disposal	31.7
Upland subtotal		283.5
Wetland subtotal		143.8
TOTAL		427.3

* Jurisdictional wetland

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Palmetto Prairies (FLUFCS Code 321)

Palmetto prairie occurs in the western portion of the site. The canopy consists of very widely scattered slash pine (*Pinus elliottii*) and live oak (*Quercus virginiana*). The midstory is vegetated by shrubs such as wax-myrtle (*Myrica cerifera*) and stagger bush (*Lyonia fruticosa*) as well as smaller pines and oaks. Saw palmetto (*Serenoa repens*) is the dominant plant species in this community type. Additional ground cover species include dwarf wax-myrtle (*Myrica pusilla*), penny royal *(Piloblephis rigida*), gall berry (*flex glabra*), bracken fern (*Pteridium aquilinum*), and Virginia chain fern (*Woodwardia virginica*).

Pine Flatwoods (FLUCCS Code 411)

This upland community is similar to the palmetto prairie described above with the exception of a greater abundance of slash pines in the canopy and midstory. Wax-myrtle, tarflower (*Befaria racemosa*), and stagger bush are also present. The majority of this habitat type appears to have been logged in the past prior to SLD purchasing the property. However, these areas currently contain scattered slash pines in excess of 10 inches diameter at breast height (DBH) and a larger number of slash pines less than 6 inches DBH. Within this community type there are numerous poorly defined and irregularly shaped areas dominated by ground cover species other than saw palmetto. In these areas ground cover species such as wire grass (*Aristida stricta*), nut rush (*Scleria reticularius*), muhly grass *(Muhlenbergia capillary)*, sundew (*Drosera* sp.), and various sedges are common. Varying densities of melaleuca (*Melaleuca quinquenervia*) are also present within the upland pine flatwoods. The approximate extent of these exotics is delineated by the 411M1, 411M2, and 411M3 FLUCCS codes. In areas of high melaleuca density, native shrub and ground cover diversity and density is low. Areas with less melaleuca have a better developed shrub and ground cover strata.

Logged Pine Flatwoods (FLUCCS Code 411L)

Upland pine flatwoods that was logged by SLD in October - November 2001 has been delineated as FLUCCS Code 411L. Prior to the logging, the density and distribution of slash pines was similar to the pine flatwoods described above (i.e. consisted of slash pines primarily less than 6 inches DSH). As documented above, the logging was done in accordance with the existing zoning and all applicable Charlotte County code requirements. These areas are now dominated by saw palmetto and scattered shrubs with a variety of additional ground cover species such as wiregrass, dwarf wax-myrtle, flat-top goldenrod (*Euthamia minor*), nut rush, gopher apple (*Licania michauxii*), running oak (*Quercus pumila*), sundew, and sunbonnet (*Chaptalia tomentosa*). A moderate density of small slash pine (i.e. less than 3 inches DBH) and melaleuca are also present. Melaleuca is also present throughout this area.

Pine - Mesic Oak (FLUCCS Code 414)

Pine - mesic oak habitat is located adjacent to the large willow (*Salix* sp.) dominated depressional wetland on-site. The canopy is dominated by live oak, laurel oak (*Quercus laurifolia*), and slash pine. These species also occur in the midstory along with cabbage palm (*Sabal palmetto*), wax-myrtle, myrsine (*Rapanea punctata*), and dahoon holly (*Ilex cassine*). The ground cover stratum is variable and consists of species such as saw palmetto, cabbage palm, swamp fern (*Blechnum serrulatum*), Boston fern (*Nephrolepis* sp.), poison ivy (*Toxicodendron radicans*), and grape vine (*Vitis* sp.). Varying densities of melaleuca and Brazilian pepper (*Schinus terebinthifolius*) are also present within this habitat type. The approximate extent of these exotics is delineated by the 414BP1 and 414M1 FLUCCS codes.

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Logged Pine - Mesic Oak (FLUCCS Code 414L)
This upland community was logged by SLD in October - November 2001. Prior to the logging, the density and distribution of slash pines and oaks were similar to the pine-mesic oak described above. The majority of the pines have been removed from the area while the oak trees remain.

Hydric Cabbage Palm (FLUCCS Code 428H)
The perimeter of the large willow dominated wetland is vegetated by a mosaic of cabbage palm, laurel oak, live oak, and very widely scattered slash pine. Cabbage palm and wax-myrtle often forms a dense midstory. Ground cover species include swamp fern, coinwort (*Centella asiatica*), marsh pennywort (*Hydrocotyle umbellata*), flat-topped goldenrod, grape vine, and scattered grasses and sedges. The degree of exotics within this habitat is denoted by FLUCCS code 428HBP1 and 428HBPM2.

Willow and Elderberry (FLUCCS Code 618)
A large depressional wetland dominated by willow is present in the northern portion of the property. This area was historically most likely a freshwater marsh that has been negatively affected by the drainage ditch that drains this wetland off-site to the southwest and by fire suppression. Species that are found within the wetland in addition to willow and primrose willow (*Ludwigia peruviana*) include white vine (*Sarcostemma clausum*), arrowhead (*Sagittaria* sp.), saw grass (*Cladium jamaicense*), Virginia chain fern, swamp hibiscus (*Hibiscus grandiflorus*), and sand cordgrass (*Spartina bakeri*).

Hydric Melaleuca (FLUCCS Code 6193)
This highly disturbed wetland community is located primarily in the southeast corner of the site. The area appears to have been a hydric pine flatwoods that has been completely overgrown by melaleuca. This exotic species is the dominant vegetation in all three strata and thereby substantially decreases the diversity of native species in the area.

Hydric Pine Flatwoods (FLUCCS Code 625)
A portion of the conservation area for the existing SLD C & D facility consists of this transitional wetland community. Exotics, primarily melaleuca, have been removed from this area. Slash pine and scattered laurel oaks dominate the canopy and midstory. The ground cover consists of a variety of wetland species such as wire grass, red root (*Lachnanthes caroliniana*), bushy bluestem (*Andropogon glomeratus*), beakrush (*Rhynchospora* spp.), panic grass (*Panicum* sp.), sand cord grass, and Virginia chain fern. Varying densities of melaleuca are present within the wetland pine flatwoods throughout the remainder of the site. The approximate extent of these exotics is delineated by the 625M1, 625M2, and 625M3 FLUCCS codes. In areas of high melaleuca density, native shrub and ground cover diversity and density is low. Areas with less melaleuca have a better developed shrub and ground cover strata.

Wet Prairie (FLUCCS Code 643)
Several small wet prairies occur on-site. These areas are similar in vegetation to the hydric pine flatwoods with the exception that the pine overstory is absent or greatly reduced. Common ground cover species include hatpin (*Eriocaulon decangulare*), beakrush, yellow-eyed grass (*Xyris sp.*), wiregrass, broomsedge (*Andropogon spp.*), sandweed (*Hypericum fasciculatum*), nut rush, and sundew. Scattered clumps of saw palmetto are also present. The majority of these

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wetlands occur as isolated wetlands. Varying densities of melaleuca are present within the wet prairies on-site. The approximate extent of these exotics is delineated by the 643M1 and 643M2 FLUCCS codes. In areas of higher melaleuca density, native shrub and ground cover diversity and density is low. Areas with less melaleuca have a better developed shrub and ground cover strata.

Disturbed Land (FLUCCS Code 740)
Areas of disturbed land are located adjacent to the west property line, U.S. 41, and Zemel Road. These areas have been cleared and are currently being used for the land spreading of horticultural mulch material in accordance with DEP regulations.

Roads and Highways (FLUCCS Code 814)
Several dirt trails occur on-site. ORV traffic, illegally entering the property from the south, frequently occurs on-site through both wetland and upland habitats. Only the major north - south trail (apparently an old power line alignment) and an above grade east - west dirt road have been mapped.

Solid Waste Disposal (FLUCCS Code 835)
This FLUCCS code represents the existing construction and demolition debris disposal and recycling facility including the support buildings and surface water management system.

Wildlife

No RCW's were seen or heard on, or immediately adjacent to, the property during the May-June 2003 nesting season foraging survey. During the survey, weather conditions were primarily sunny and warm with scattered rain showers and thereby covered the range of weather conditions that typically occur in southwest Florida in late May - early June. As shown on Figure 3 and Exhibit B the location, orientation, and length of the RCW monitoring transects varied from day to day. For example, the survey conducted on May 19th (shown by the fuchsia transects on Exhibit B) began at the northwest corner of the property and proceeded southwest to the property's southwest corner. The transects then headed north and then east across the center of the site eventually arriving in the southeast property corner. From that point, the transects proceeded north and west, eventually ending at the northeast corner of the site. In contrast, on May 26th (shown by the purple transects on Exhibit B) the survey began near the northeast corner of the hydric flatwoods slough and zigzagged to the south in a series of east-west transects. By varying the transect locations over time, the entire property was adequately surveyed and all potential habitats were surveyed at differing times of the morning. The pattern of transects was designed so that the edges of the property were adequately surveyed insuring any RCWs present immediately adjacent to the site would be detected. The spacing/location of the transacts also allowed the ecologist to confirm that no RCW cavity or start hole trees occur on-site.

During the RCW foraging survey, the ecologist conducting the survey also looked for sign of other listed species such as the gopher tortoise (*Gopherus Polyphemus*), indigo snake (*Drymarchon corais couperi*), Florida black bear (*Ursus americanus floridanus*), Sherman's fox squirrel (*Sciurus niger shermani*), bald eagle (*Haliaeetus leucocephalus*), and various wading birds.

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Bald eagles frequented the existing county landfill facility to the west of the site. As many as five (5) bald eagles and two (2) wood storks were observed foraging on the active disposal face of the County landfill. Eagles were observed roosting in larger pines along the subject property's west boundary. The majority of these trees have been preserved within the existing facility's wetland mitigation and conservation areas. Eagles were also observed roosting in pine trees within the County's conservation area south of the landfill. Widely scattered gopher tortoise burrows were observed in the palmetto prairie and pine flatwoods in the southern section of the property. With the exception of the gopher tortoises, no nesting by listed species were observed on-site.

The fall 2002 non-nesting season survey conducted by KLECE and the 2003 spring nesting season survey conducted by DBA has thoroughly covered all potential RCW foraging habitat on-site (Figure 4 and Appendix C). This includes the conservation area of the existing facility and the project perimeter. The observations made by KLECE in 2002 and by DBA in 2003 are consistent with the results of work undertaken by KLECE from 1996 through 2002. During all of these activities neither KLECE or DBA ecologists have observed any sign of RCW nesting or foraging activity on-site.

CONCLUSION

No RCW's were observed during the 2003 nesting season RCW foraging survey. Given the extensive effort expended over the past eight (8) years and the lack of any RCW sightings, it is concluded that RCW do not forage or nest on this 427.3± acre property.

W:\WPDOCS\SLD-1\RCW Survey Task B.wpd

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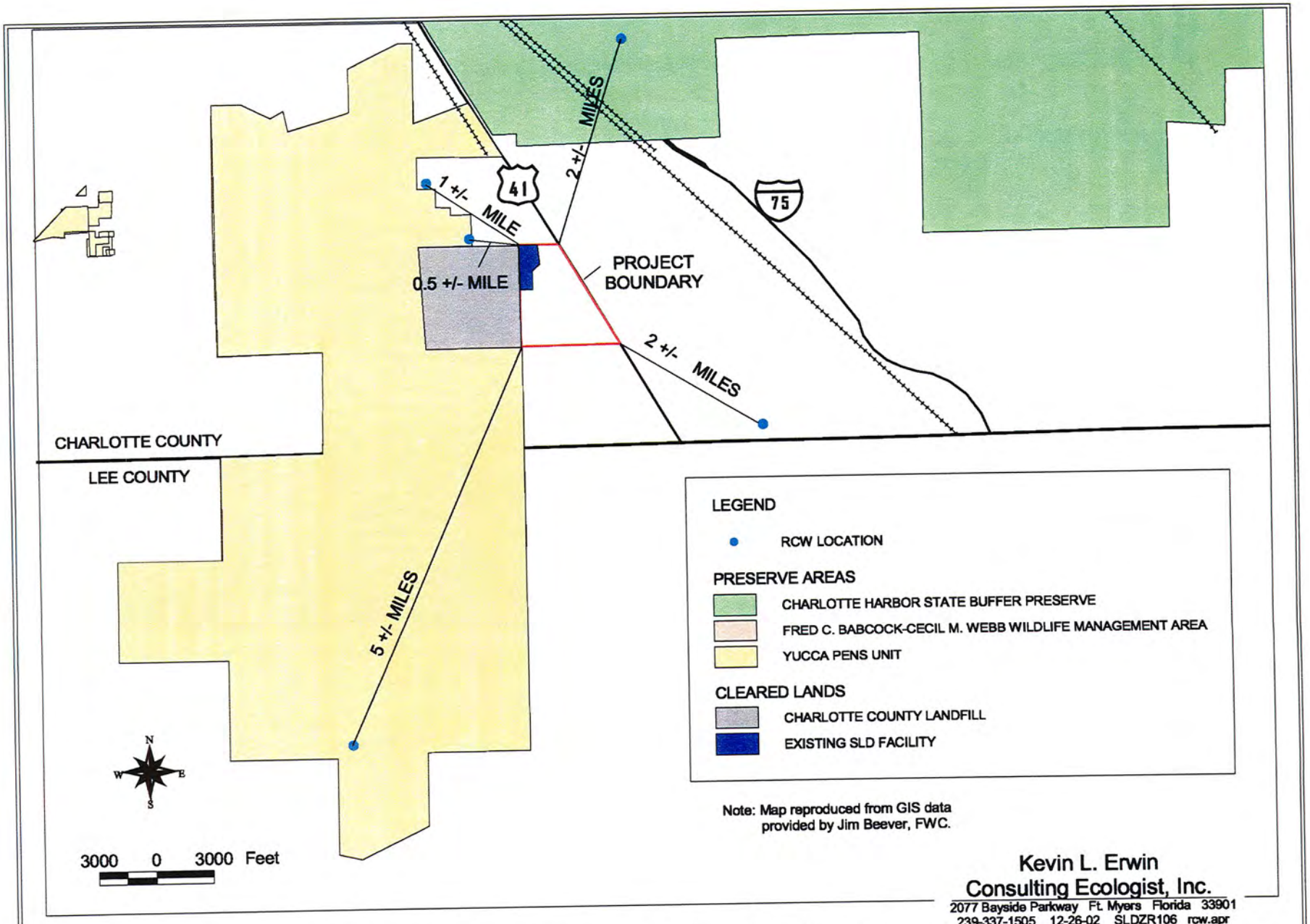
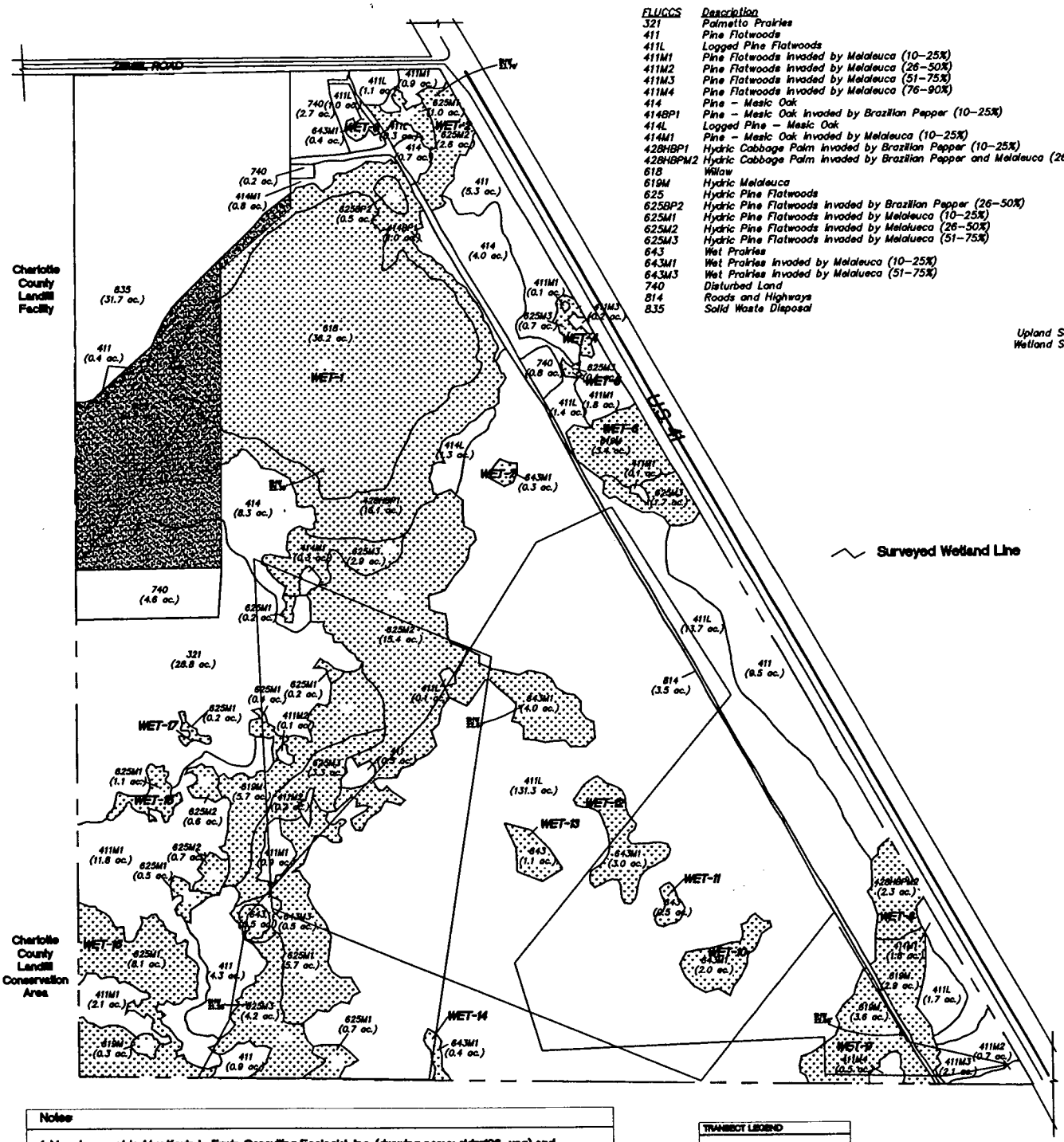


Figure 1. Locations of Known RCW Colonies in the Vicinity of the Southwest Land Developers, Inc. Site



FLUCCS	Description	Acreage
321	Palmetto Prairies	28.8 ac.
411	Pine Flatwoods	20.9 ac.
411L	Logged Pine Flatwoods	150.6 ac.
411M1	Pine Flatwoods invaded by Melaleuca (10–25%)	19.5 ac.
411M2	Pine Flatwoods invaded by Melaleuca (26–50%)	1.0 ac.
411M3	Pine Flatwoods invaded by Melaleuca (51–75%)	2.3 ac.
411M4	Pine Flatwoods invaded by Melaleuca (76–90%)	0.5 ac.
414	Pine – Mesic Oak	13.0 ac.
414BP1	Pine – Mesic Oak invaded by Brazilian Pepper (10–25%)	1.0 ac.
414L	Logged Pine – Mesic Oak	1.3 ac.
414M1	Pine – Mesic Oak invaded by Melaleuca (10–25%)	1.1 ac.
428HBP1	Hydric Cabbage Palm invaded by Brazilian Pepper (10–25%)	16.1 ac.
428HBPM2	Hydric Cabbage Palm invaded by Brazilian Pepper and Melaleuca (26–50%)	2.3 ac.
618	Willow	36.2 ac.
619M	Hydric Melaleuca	15.9 ac.
625	Hydric Pine Flatwoods	9.8 ac.
625BP2	Hydric Pine Flatwoods invaded by Brazilian Pepper (26–50%)	0.5 ac.
625M1	Hydric Pine Flatwoods invaded by Melaleuca (10–25%)	18.1 ac.
625M2	Hydric Pine Flatwoods invaded by Melaleuca (26–50%)	19.3 ac.
625M3	Hydric Pine Flatwoods invaded by Melaleuca (51–75%)	12.9 ac.
643	Wet Prairies	2.1 ac.
643M1	Wet Prairies invaded by Melaleuca (10–25%)	10.1 ac.
643M3	Wet Prairies invaded by Melaleuca (51–75%)	0.5 ac.
740	Disturbed Land	8.3 ac.
814	Roads and Highways	3.5 ac.
835	Solid Waste Disposal	31.7 ac.

Upland Subtotal	283.5 ac.
Wetland Subtotal	143.8 ac.
TOTAL	427.3 ac.

Notes

1. Mapping provided by Kevin L. Erwin Consulting Ecologist, Inc. (drawing name: aldar106 veg) and based on photo interpretation of April 2001 1"=200' scale rectified aerial photography and groundtruthing in January and February 2003.
2. Mapping of potential jurisdictional wetlands based on flagging by KLECE and surveyed flag locations provided by Robert South. Extent of jurisdictional wetlands has not been verified by the appropriate agencies.
3. Vegetation mapping is subject to field review and approval by all appropriate agencies and is intended for general planning purposes only.
4. Transect and wildlife locations are approximate.

TRANSECT LEGEND

Date

5-23-03

HATCH LEGEND

- Wetland
- Upland
- Existing Conservation Area (220± acres)

0 400 800

SCALE FEET

PERMIT USE ONLY, NOT FOR CONSTRUCTION

January 26, 2004 1:59:51 p.m.
Drawing: SLD1COMPOSITESPLNSAMPLE.DWG (SAJ)

W. DEXTER BENDER AND ASSOCIATES
ENVIRONMENTAL & MARINE CONSULTING
FORT MYERS, FL 239 334-3680

FIGURE 2. SAMPLE DAILY RCW SURVEY TRANSECT LOCATIONS

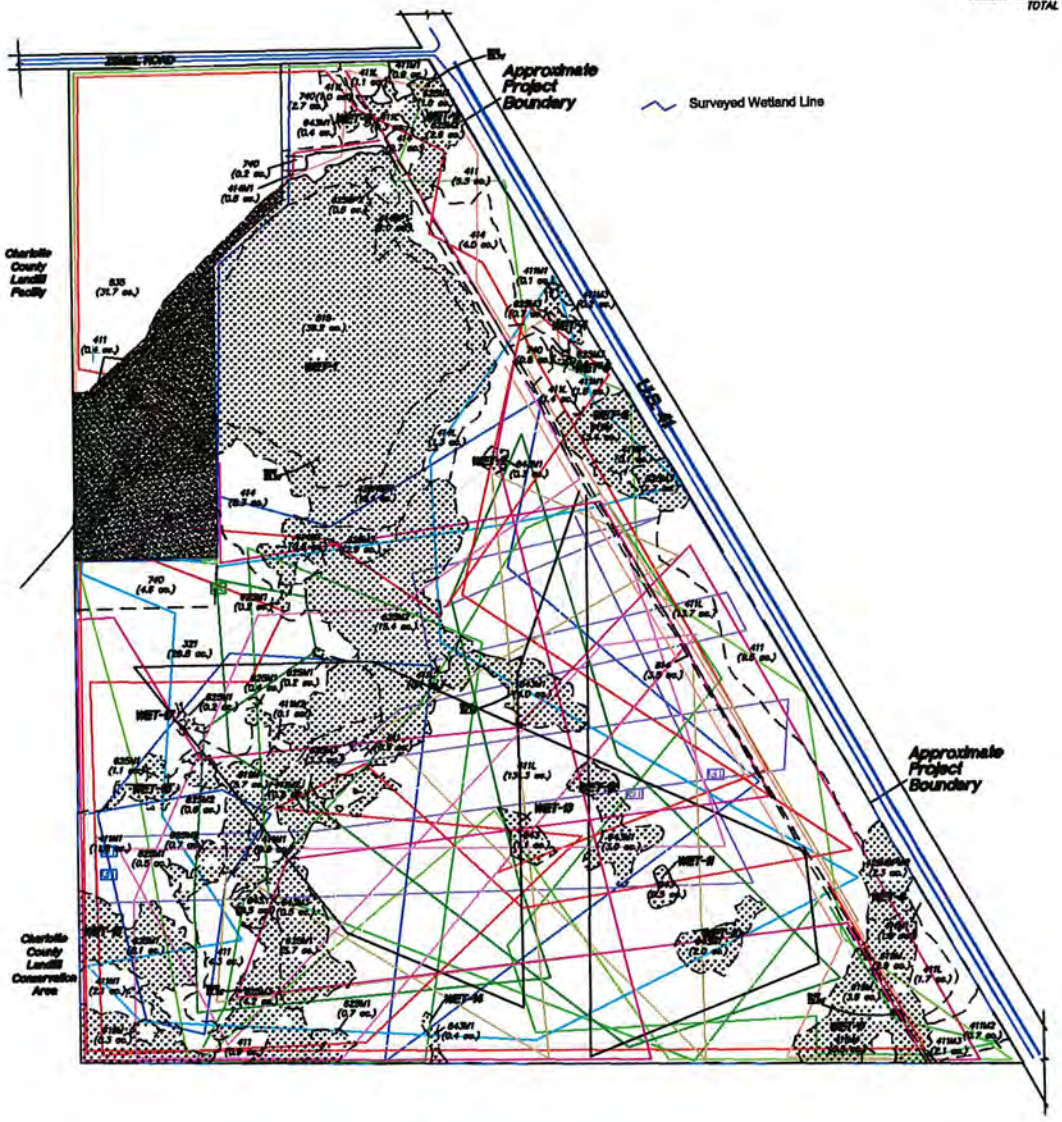
SHEET

Notes:

1. Mapping provided by Kevin L. Erwin Consulting Ecologist, Inc. (drawing name: sldr108 .wor) and based on photo interpretation of April 2001 1"=200' scale rectified aerial photography and groundtruthing in January and February 2003.
2. Mapping of potential jurisdictional wetlands based on flagging by KLECE and surveyed flag locations provided by Robert South. Extent of jurisdictional wetlands has not been verified by the appropriate agencies.
3. Vegetation mapping is subject to field review and approval by all appropriate agencies and is intended for general planning purposes only.
4. Transect and wildlife locations are approximate.

FLUCCS	Description	Acreage
321	Palmetto Prairies	28.8 ac.
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740	Disturbed Land	8.3 ac.
814	Roads and Highways	3.5 ac.
835	Solid Waste Disposal	31.7 ac.
	Upland Subtotal	283.5 ac.
	Wetland Subtotal	143.8 ac.
	TOTAL	427.3 ac.

0 500 1000
SCALE FEET



TRANSECT LEGEND

Date	Date
5-19-03	5-26-03
5-20-03	5-27-03
5-21-03	5-28-03
	5-29-03
5-23-03	5-30-03
5-24-03	6-3-03
5-25-03	6-4-03

Color of Listed Species Symbol denotes day of sighting.

HATCH LEGEND

- Wetland
- Upland
- Existing Conservation Area (22.0± acres)

LISTED SPECIES SIGHTINGS LEGEND

ANIMAL SPECIES
- BE Bald Eagle
- GT Gopher Tortoise

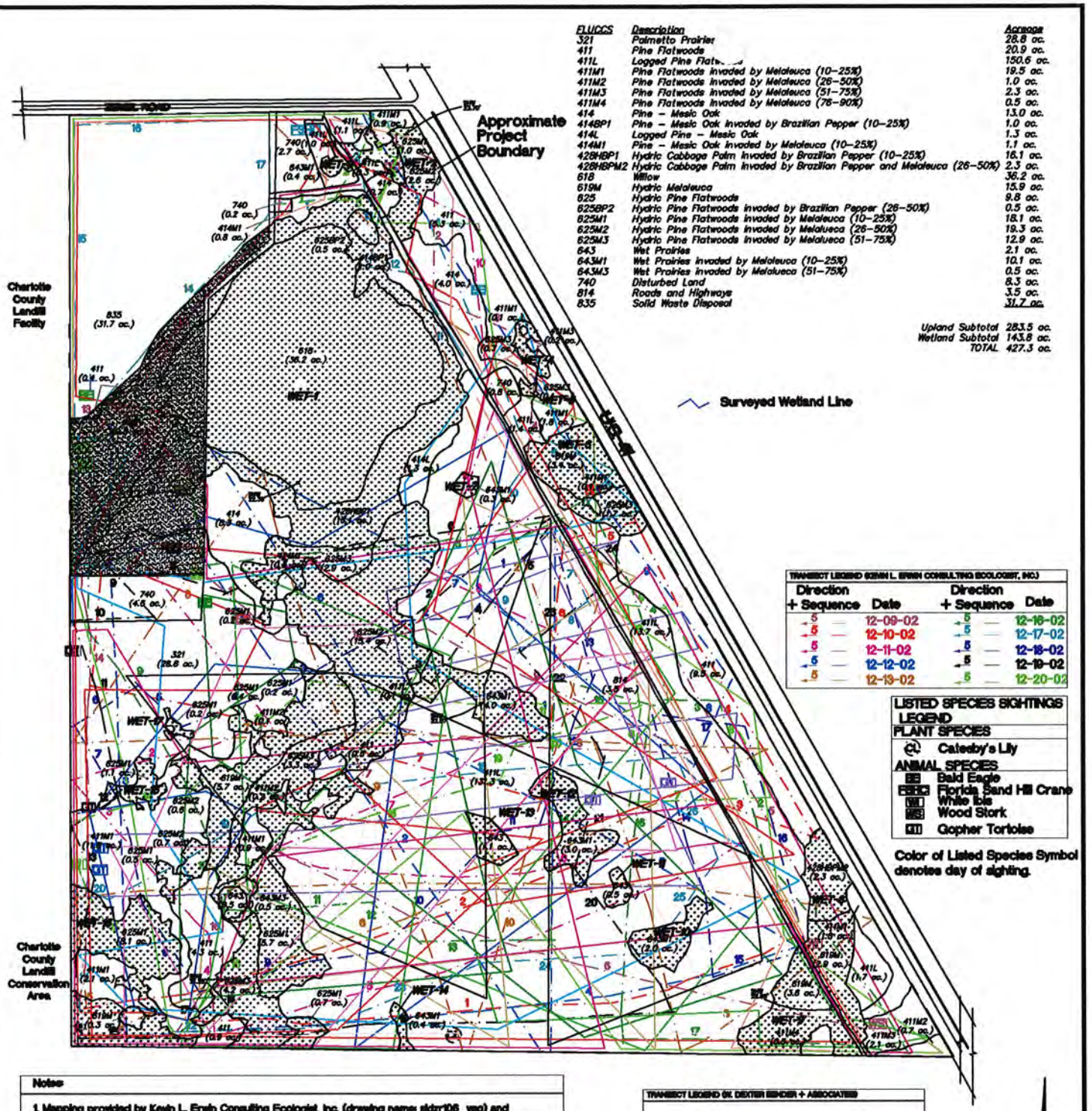
PERMIT USE ONLY, NOT FOR CONSTRUCTION

January 28, 2004 12:46:28 p.m.
Drawing: SLD1SPLN.DWG (SAJ)

W. DEXTER BENDER AND ASSOCIATES
ENVIRONMENTAL & MARINE CONSULTING
FORT MYERS, FL 239 334-3680

FIGURE 3. CUMULATIVE RCW SURVEY TRANSECT LOCATIONS

SHEET



FLUCCS	Description	Acreage
321	Palmetto Prairies	28.8 ac.
411	Pine Flatwoods	20.9 ac.
411L	Logged Pine Flatwoods	150.6 ac.
411M1	Pine Flatwoods invaded by Melaleuca (10–25%)	19.5 ac.
411M2	Pine Flatwoods invaded by Melaleuca (26–50%)	1.0 ac.
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411M4	Pine Flatwoods invaded by Melaleuca (76–90%)	0.5 ac.
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643M3	Wet Prairies invaded by Melaleuca (51–75%)	0.5 ac.
740	Disturbed Land	8.3 ac.
814	Roads and Highways	3.5 ac.
835	Solid Waste Disposal	31.7 ac.

Upland Subtotal	283.5 ac.
Wetland Subtotal	143.8 ac.
TOTAL	427.3 ac.

TRANSECT LEGEND (GINN L. ERWIN CONSULTING ECOLOGIST, INC.)

Direction + Sequence	Date	Direction + Sequence	Date
5	12-09-02	5	12-16-02
5	12-10-02	5	12-17-02
5	12-11-02	5	12-18-02
5	12-12-02	5	12-19-02
5	12-13-02	5	12-20-02

LISTED SPECIES SIGHTINGS LEGEND

PLANT SPECIES
- Catesby's Lily

ANIMAL SPECIES
- Bald Eagle
- Florida Sand Hill Crane
- White Ibis
- Wood Stork
- Gopher Tortoise

Color of Listed Species Symbol denotes day of sighting.

Notes

1. Mapping provided by Kevin L. Erwin Consulting Ecologist, Inc. (drawing name= sldzr106 veg) and based on photo interpretation of April 2001 1"=200' scale rectified aerial photography and groundtruthing in January and February 2003.
2. Mapping of potential jurisdictional wetlands based on flagging by KLECE and surveyed flag locations provided by Robert South. Extent of jurisdictional wetlands has not been verified by the appropriate agencies.
3. Vegetation mapping is subject to field review and approval by all appropriate agencies and is intended for general planning purposes only.
4. Transect and wildlife locations are approximate.

TRANSECT LEGEND (W. DEXTER BENDER + ASSOCIATES)

Date	Date
5-19-03	5-26-03
5-20-03	5-27-03
5-21-03	5-28-03
	5-29-03
5-23-03	5-30-03
5-24-03	6-3-03
5-25-03	6-4-03

HATCH LEGEND
- Wetland
- Upland
- Existing Conservation Area (22.0± acres)

0 400 800
SCALE FEET

PERMIT USE ONLY, NOT FOR CONSTRUCTION

January 26, 2004 1:43:09 p.m.
Drawing: SLD1COMPOSITESPLN.DWG (SAJ)

W. DEXTER BENDER AND ASSOCIATES
ENVIRONMENTAL & MARINE CONSULTING
FORT MYERS, FL 239 334-3680

FIGURE 4. COMBINED 2002 NON-NESTING SEASON AND 2003 NESTING SEASON RCW SURVEY TRANSECT LOCATIONS

SHEET

Appendix A

Survey Methodologies Letters of Acceptance from the Agencies

RECEIVED
JAN 30 2004
D.E.P. - South District

Craig Smith

From: Craig Smith
Sent: Thursday, December 05, 2002 6:58 PM
To: 'Beeverjw@aol.com'; Dustin_Perkins@fws.gov
Subject: RE: RCW Foraging Survey Methodology, Zemmel Road

Jim:

I have received authorization from SLD to start the survey on Monday morning, December 9, 2002. The survey will be completed on Friday, December 20th. Based on your comments, approval from the FWS, and authorization to proceed from my client I have revised the attached monitoring methodology to reflect a December 20, 2002 completion date. I trust this addresses your concerns and therefore your approval of the methodology. Thanks for your prompt response.

I will ask someone from my office to pick up the disk either Monday of Tuesday afternoon of next week.

Craig

----- Original Message -----
From: Beeveow@aol.com [mailto:Beevedw@aol.com]
Sent: Thursday, December 05, 2002 2:32 PM
To: Dustin-Perkins@fws.gov; Csmith@environment.com
Subject: Re: RCW Foraging Survey Methodology, Zemmel Road

I concur with Dusty. Modify your write-up to comply with his request and you will have an approved survey methodology fro FWC. Also do you want to pick up the data disk for the Fairway Woodlands RCW GIS or would you like it mailed to you? Jim Beever

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RED-COCKADED WOODPECKER FORAGING SURVEY METHODOLOGY
427+ ACRE ZEMMEL ROAD SLD PROPERTY
(December 5, 2002)

Introduction

The 427± acre Zemel Road SLD property is located in a portion of Section 30, Township 42 South, Range 24 East, Charlotte County, Florida. The property is bordered to the west by the Charlotte County Landfill, to the east by U.S. 41, to the north by Zemel Road and county owned conservation lands, and to the south by privately owned undeveloped land.

The U.S. Fish and Wildlife Service (FWS) has provided information on the locations of known RCW cavity trees in the general vicinity of the 427± acre property. The closest cavity tree is located approximately 2.0 miles northeast of the property. Additional cavity trees are located 2.1± miles southeast of the property on the east side of U.S. 41. The status of these cavities (active, inactive, or abandoned) was not provided. The FWC has stated that active RCW cavity trees are present adjacent to the Gator Slough Canal in Lee county (3.1± miles south of the property) and north of Zemel Road in Section 24, Township 42 South, Range 23 East, Charlotte County. The precise locations of these cavity trees and the current status of the cavities have not been provided by the FWC.

The following documents have been reviewed prior to the preparation of this methodology:

Beever, James W. 2002. Standardized State-Listed Animal Survey Procedures (April 5, 2002 Second Edition) Florida Fish and Wildlife Conservation Commission, Office of Environmental Services.

Florida Game and Fresh Water Fish Commission. 1988. Wildlife Survey Methodology Guidelines for Section 18.D of the Application for Development Approval (January 15, 1988). Office of Environmental Services.

Henry, V. George. 1989. Guidelines for Preparation of Biological Assessments and Evaluations for the Red-cockaded Woodpecker (September 1989). U.S. Fish and Wildlife Service, Southeast Region, Georgia.

U.S. Fish and Wildlife Service. 2002. Red-cockaded Woodpecker Survey Protocol (July 23, 2002 DRAFT). South Florida Ecological Services Office.

The methodology described below is in substantial compliance with the applicable portions of the documents listed above and is based on IKevin L. Erwin Consulting Ecologist, Inc.'s (KLECE) extensive experience with RCW in ,3outhwest Florida.

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Methodology

KLECE has previously mapped the major vegetation associations on-site using the 1999 edition of the Florida Land Use, Cover and Forms Classification System (FLUCFCS). A listed species survey was also conducted by KLECE in October 2001. This survey consisted of two ecologists traversing parallel pedestrian-transects through all potential RCW habitats searching for potential RCW cavities and/or start holes. That survey documented that RCW do not nest within the 427± acre property.

KLECE will conduct a one time non nesting season (October 15 - December 20) and nesting season (April 15 - June 15) RCW foraging survey on the 427± acre property. The foraging surveys will be conducted for two consecutive weeks (Monday through Friday) from sunrise to noon. Each survey event will consist of a qualified ecologist walking meandering transepts through potential RCW foraging habitat. The location and direction of these transacts will vary on a daily basis and will be recorded on an aerial vegetation map. The ecologist will stop at 5± minute intervals, play a 30 second continuous RCW vocal call tape, and listen for RCW vocalizations. The location and number of RCW's seen/heard (if any) will also be recorded on the aerial vegetation map. In the event RCW's are found on-site, the meandering transacts will be discontinued and the birds followed on-site. Locations of RCW's will then be noted at 15± minute intervals.

Reporting

A summary report will be prepared at the completion of the non nesting and nesting season surveys. The report will document the survey methodology and the location, number, and frequency (if any) of RCW observed or heard on-site.

RECEIVED
JAN 30 2004
D.E.P. - South District

Craig Smith
From: Dustin-Perkins@fws.gov
Sent: Friday, December 06, 2002 6:56 AM
To: Craig Smith
Subject: RE: RCW Foraging Survey Methodology, Zemmel Road

Sounds good to me.

Dusty Perkins
Wildlife Biologist
U.S. Fish and Wildlife Service
3860 Tollgate Boulevard, Suite 300
Naples, FL 34114
Phone: 239-353-2814
Fax: 239-353-8640

Craig Smith

<Csmith@environm To: Dustin Perkins@fws.gov
< Dustin Perkins@fws.gov>
ent.com> cc: "Jim Beever (E-mail)" <beeverjw@aol.com>
12/05/2002 06:47 PM Subject: RE: RCW Foraging Survey Methodology, Zemmel Road

Dusty:

I have received authorization from SLD to start the surveys this coming Monday (December 9, 2002) morning. The two weeks of survey will be completed Friday December 20th. I trust this meets your requirements. Thanks for your quick response.

Craig

----- Original Message -----

From: Dustin Perkins@fws.gov [malito:Dustin Perkins@fws.gov]
Sent: Thursday, December 05, 2002 8:15 AM
To: Craig Smith
Cc: Jim Beever (E-mail)
Subject: Re: RCW Foraging Survey Methodology, Zemmel Road

<< File: RCW survey methodology.doc >>

The survey methodology looked fine except our non-nesting foraging survey guidelines suggest they be completed by December 15, as opposed to January 30 outlined in your methodology. I realize that circumstances may make it difficult to complete all surveys by December 15, however efforts should be made to start the surveys before December 15 and conclude as soon as possible (while still completing surveys on 14 days) after this date.

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JAN 30 2004
D.E.P. - South District

Dusty

Dusty Perkins
Wildlife Biologist
U.S. Fish and Wildlife Service
3860 Tollgate Boulevard, Suite 300
Naples, FL 34114
Phone. 239-3-53-2814
Fax.- 239-353-8640

Craig Smith

>Csmith@environm ent.com>

To: 'Jim Beever (E-mail)- <beeverjw@aol.com>, "Dusty Perkins (E- mail)' <Dustin Perkins@fws.gov>

cc:

12/04/2002 01:07 PM

Subject: RCW Foraging Survey Methodology, Zernmel Road

Gentlemen:

On November 5, 2002 we met to discuss the future permitting of the expansion of the existing Southwest Land Developers (SLD) Construction and Demolition Debris and Recycling Facility. SLD is planning to expand its current operations within the portion of Section 30, Township 42 South, Range 24 East, Charlotte County located west of U.S. 41. During that meeting it was agreed that the results of a nesting and non nesting season red-cockaded woodpecker (RCW) foraging survey, using approved U.S. Fish and Wildlife Service (FWS) and Florida Fish and Wildlife Conservation Commission (FWC) methodology, would be used by all parties to determine the use or non use of the 427± acre property as foraging habitat by RCW. It was also agreed that the FWC and FWS would send me information on the location of known RCW cavity trees in the vicinity of the 427± acre property as well as existing RCW foraging survey protocol.

I have received and reviewed information provided by the FWS but have not received information from the FWC. In order to conduct the non nesting season foraging survey prior to the 2003 nesting season I have prepared the attached RCW Foraging Survey Methodology 427± Acre Zemmel Road SLD Property based on the information I have received to date. (I have also faxed you a hard copy.) Please review the attached methodology and confirm that it is acceptable as soon as possible. Based on the FWS seasonal requirements we need to initiate the non nesting season survey the second and third week of December 2002 (i.e. next week).

Please call me if you have any questions. Thank you for your assistance with this project.

Craig

<<RCW survey methodology.doc>>
(See attached file: RCW survey methodology.doc)

RECEIVED
JAN 30 2004
D.E.P. - South District

Craig

From: "Craig" <csmith@dexbender.com>
To: "Dusty Perkins" <Dustin_Perkins@fws.gov>
Cc: "Jim Beever" <beeverjw@aol.com>
Sent: Tuesday, May 20, 2003 1:58 PM
Subject: Zemel Road 427± Acre Property RCW Survey

Dusty

Thank you for reviewing and discussing with me the fall 2002 RCW non nesting season survey prepared by KLECE (dated April 2003) for the Zemel Road 427± acre property. It was agreed that the fall 2002 survey report was acceptable as submitted. It was further agreed that the methodology for the spring 2003 RCW nesting season foraging survey would be slightly modified. This modification consists of expanding the survey to a total of 14 days. These days need not be consecutive (i.e., not including Saturdays or Sundays) but will be completed during a three week time period. The surveys will be conducted from approximately sunrise (6:30 am) to 10:30 am and will therefore consist of 56 man-hours on-site. This is approximately the same number of survey man-hours as the originally proposed 10-day sunrise to noon survey.

I have attempted to discuss this matter with Jim Beever but I understand that he will be out of the office until Friday. Therefore, by copy of this email I am requesting that Jim confirm as soon as possible that the fall 2002 survey report is acceptable as submitted and that the minor modification to the spring 2003 survey methodology is also acceptable to the FWS. The spring 2003 survey was initiated on Monday, May 19th and will be completed as described above. Therefore, please call me immediately (239-470-2812) if I have inadvertently misunderstood our agreement on this matter.

Thanks for your help.

Craig

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Craig

From: <Beeverjw@aol.com>
To: <csmith@dexbender.com>
Sent: Friday, May 23, 2003 10:25 AM
Subject: Re: Zemel Road 427± Acre Property RCW Survey reply

The outlined method is acceptable. Jim Beever

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Craig

From: "Craig" <csmith@dexbender.com>
To: "Dusty Perkins" <Dustin_Perkins@fws.gov>
Sent: Tuesday, May 27, 2003 12:18 PM
Subject: Fw: Zemel Road 427± Acre Property RCW Survey reply

Dusty:

I have received the confirmation below from Jim Beever that the minor methodology adjustment (14 days, approximately 4 hours per day) for the nesting season RCW foraging survey is acceptable to the FWC. Please confirm that this methodology, as summarized in my email to you and Jim dated May 20th, is acceptable to the FWS. The survey has been initiated per our conversation and will be completed next week.

Thanks.

Craig

----- Original Message -----
From: Beeverjw@aol.com
To: csmith@dexbender.com
Sent: Friday, May 23, 2003 10:25 AM
Subject: Re: Zemel Road 427± Acre Property RCW Survey reply

The outlined method is acceptable. Jim Beever

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Appendix B

Cumulative RCW Survey Transect Locations

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Appendix C

Combined 2002 Non-Nesting Season and 2003 Nesting Season RCW Survey Transect Locations

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Exhibit B.3

SOUTHWEST LAND DEVELOPERS, INC.
ZEMEL ROAD CONSTRUCTION AND DEMOLITION DEBRIS DISPOSAL AND RECYCLING FACILITY

Section 30, Township 42 South, Range 24 East
Charlotte County, Florida

Wetland Mitigation, Maintenance, and Monitoring Plan

January 2004

Prepared for:

SOUTHWEST LAND DEVELOPERS, INC.
5445 Williamsburg Dr.
Punta Gorda, FL 33982

Prepared by:

W. DEXTER BENDER AND ASSOCIATES, INC.
2052 Virginia Avenue
Fort Myers, Florida 33901
(239) 334-3680

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I. Introduction

Southwest Land Developers, Inc. ("SLD"), intends to construct and operate a facility that will be used for the recycling and disposal of the construction and demolition ("C & D") debris, yard trash, and land clearing debris generated by the citizens of Charlotte County during the next 30 years. The facility will include C & D disposal areas , a yard waste mulching area, operations and maintenance buildings, parking facilities, roads, landscaping areas, buffers, a surface water management system, and ancillary facilities. The project development will result in 22.8 acres of unavoidable impacts to low quality wetlands.

In order to mitigate for the unavoidable wetland impacts described above the applicant will enhance and preserve 99.6± acres of wetlands and 29.1± acres of uplands (see attached plan). Exotics, which dominate most of the site, will be removed and areas replanted with native vegetation, as needed, to re-establish a functional wetland ecosystem. This report describes SLD's proposed wetland mitigation, maintenance, and monitoring plans to compensate for the proposed wetland impacts.

II Proposed Wetland Mitigation

The proposed site development plan minimizes unavoidable impacts to the major wetland system on-site to the maximum extent practicable. The relatively higher quality (but still somewhat degraded) large willow dominated wetland in the northern portion of the property will be entirely preserved. The site development plan was designed to preserve and enhance 51.7± acres of highly disturbed hydric pine flatwoods wetlands that extend southward from the willow dominated wetland (see attached plan). Currently the hydric pine flatwoods in this area are dominated by problematic exotic plant species. These species have displaced many of the native species that would have otherwise occurred on-site. In addition to the wetland enhancement, native uplands will also be enhanced and preserved. A total of 150.7± acres of uplands and wetlands (not including upland buffers) will be enhanced and preserved on-site. The acreage of each habitat is summarized in the table below.

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On-site Habitat Acreage Summary

FLUCCS CODE	HABITAT TYPE	EXISTING CONSERVATION EASEMENT AREA	PROPOSED WETLAND MITIGATION AREA	TOTAL ON-SITE PRESERVE
321	Palmetto Prairies	3.3	2.3	5.6
411	Pine Flatwoods	0.4	19.4	19.8
414	Pine - Mesic Oak	2.9	7.4	10.3
428H	Hydric Cabbage Palm	3.1	12.9	16.0
618	Willow and Elderberry	2.5	33.7	36.2
625	Hydric Pine Flatwoods	9.8	51.7	61.5
643	Wet Prairies	0.0	1.3	1.3
	Upland subtotal	**6.6**	**29.1**	**35.7**
	Wetland subtotal	**15.4**	**99.6**	**115.0**
	TOTAL	**22.0**	**128.7**	**150.7**

Note: Upland total does not include required upland buffers.

The proposed enhancement activities in the 128.7± acre mitigation area and the elimination of the exotic species seed source will result in a net improvement for the plant communities on-site and on the County managed conservation lands to the west. Each aspect of the plan is described below.

Wetland Enhancement

The willow dominated wetland has become colonized by scattered patches of primrose willow. The primrose willow will be treated with a foliar application of an appropriate herbicide suitable for aquatic application. Care will be taken to minimize non-target damage. It is anticipated that native wetland ground cover species will naturally become re-established once the primrose willow has been treated. If any treated wetland areas have less than 33 percent cover by wetland ground cover species one complete growing season following the primrose willow treatment, native wetland ground cover species will be installed at densities of 4,840± plants per acre. The species to be installed may include sand cordgrass, panicum grasses, spike rush, saw grass, pickerelweed, fire flag, and arrowhead. The final species list will be based upon site specific conditions and on plant material availability at the time of planting.

Significant portions of the hydric pine flatwoods have become dominated by exotic species, primarily melaleuca. In areas of greater than 50 percent cover by exotics, the melaleuca will be controlled via either mechanical clearing or hand cutting. Care will be taken to minimize damage to non-target native vegetation and disturbance to the soil. In areas with less than 50 percent cover by exotics, the exotics will be removed by hand. Exotic trees will be cut just above natural grade and the stump treated with an appropriate herbicide suitable for aquatic application. Treatment will occur within one hour of cutting to ensure maximal uptake of the herbicide. The dead material will either be removed from the

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mitigation area or will be stacked in place and allowed to decompose. If non-woody exotics are present, such as torpedo grass and paragrass, they will be treated by a foliar application of an appropriate herbicide suitable for aquatic application. Herbicides will be used in strict accordance with label directions by trained applicators. Care will be taken to reduce damage to non-target native species to the maximum extent practical.

Once the exotics have been treated, the wetlands will be planted, as needed, with native species. Slash pines will be planted in areas containing less than 200± live trees per acre. The trees will be container grown, approximately three feet in height, and planted in a random pattern at densities of 200± trees per acre. In areas where live native trees are present, those trees will count towards the required planting density. Additional trees, such as cypress, dahoon holly, and laurel oak, may also be planted in certain areas depending on hydrologic conditions. Ground cover species will be installed at densities of 4,840± plants per acre in areas that contain less than 33 percent cover by wetland ground cover species one complete growing season following exotic treatment. The species to be installed may include sand cordgrass, panicum grasses, spike rush, wire grass, saw grass, swamp fern, pickerelweed, and arrowhead. The final species list will be based upon site specific conditions and on plant material availability at the time of planting.

Upland Preservation
Approximately 29.1± acres of native uplands will be preserved adjacent to the preserved wetlands. Treatment of exotics occurring within these areas will also occur as described above. No supplemental plantings are anticipated to occur in the upland preserves.

Upland Buffers
In addition to the 29.1± acres of preserved upland, buffers will be established between the proposed development and the adjacent mitigation areas. Approximately 7.1± acres consists of existing native uplands. Treatment of exotics occurring within these areas will also occur as described above. In those areas substantially devoid of native vegetation following exotic removal, native species such as wax-myrtle, myrsine, saw palmetto, cabbage palm, slash pine, and live oak will be planted on 10 foot centers within the buffer. At locations where the proposed development has impacted a portion of a wetland, the remainder of the wetland will be separated from the development by a structural buffer (side slope of the perimeter berm planted with the species listed above).

III. Wetland Mitigation Maintenance Plan

A routine maintenance plan will be initiated upon the completion of the initial exotic treatment and native plant installation. For the first two years following the initial treatment, the mitigation area will be inspected twice a year and all exotic

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and/or nuisance species will be treated. During these inspections the mitigation area will be qualitatively evaluated, potential problems (if any) identified, and corrective actions recommended. After the second year, inspections and treatments will be conducted annually during the dry season.

It is anticipated that the long term management of the wetlands and uplands in the mitigation areas will be undertaken via prescribed burning, to the extent practicable. The frequency of prescribed burns will be based on fuel loads and will vary across the site. No burning shall occur in areas that contain seed bearing melaleuca trees. It is anticipated that the upland pine flatwoods will be burned at approximately 2 - 5 year intervals. The hydric pine flatwoods and associated wet prairies will be burned at a frequency of approximately 3 - 6 years. The portions of the hydric pine flatwoods containing significant numbers of planted trees will not be burned until there is sufficient fuel to carry the fire and the planted trees have attained a sufficient height (6 to 8 feet) to insure fire induced mortality is negligible. In the event that prescribed burning is not practicable, the applicant may utilize alternate means (i.e. roller chopping, mowing) to maintain an open mid-story within the preserve.

IV. Monitoring Plan

The proposed monitoring of the enhanced wetlands will consist of time-zero monitoring and annual monitoring of vegetation. The time-zero report will document the conditions immediately following wetland enhancement (i.e., exotic removal and supplemental plantings). The annual reports will document the extent of success of the project and, if needed, identify specific actions to be taken to improve conditions within the project area. Sampling stations and methodology of data collection will remain the same for all monitoring events.

Vegetation Monitoring

The vegetation within the wetlands will be monitored using the line intercept methodology. A 300± feet long transect will be established in representative portions of each wetland area (see attached plan). A measuring tape will be stretched along the transect and the plants occurring directly below (ground cover) and above (midstory and canopy) the tape will be recorded at 3 feet intervals along the transect. Ground cover species include woody vegetation less than three feet in height and all non-woody plants. Midstory vegetation consists of all woody plants greater than three feet in height and less than 4 inches DBH. Canopy species consist of woody vegetation greater than 4 inches DBH. Bare ground and open sky will also be recorded in this manner. The resulting data will be used to calculate percent cover of the three strata.

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Wildlife Monitoring
Regular observations of fish and wildlife will be made during all monitoring events by qualified ecologists. This will consist of recording evidence and signs of wildlife (i.e., direct sighting, vocalization, nests, tracks, droppings, etc.).

Photographic Documentation
Permanent fixed-point photograph stations will be established in each of the monitored areas thereby providing physical documentation of the condition and appearance of an area, as well as any changes taking place within it. Panoramic photographs will accompany vegetation data in each report. Locations of photo stations will remain the same throughout the duration of the monitoring program.

Rainfall and Staff Gauge Recordings
A staff gauge will be established in a representative portion of the mitigation area. Water levels will be recorded twice a month during the wet season (June - September) and once a month during the dry season (October - May). A rain gauge will also be established on-.site or monthly rainfall data will be obtained from existing rain gauge stations in the general vicinity of the project.

Report
The methodology and results of each monitoring event will be documented in an annual monitoring report. Data will typically be collected towards the end of the growing season (September - October) and submitted to the agencies with 120 days of data collection.

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SOUTHWEST LAND DEVELOPERS, INC.
ZEMEL ROAD CONSTRUCTION AND DEMOLITION DEBRIS DISPOSAL AND RECYCLING FACILITY

Section 30, Township 42 South, Range 24 East
Charlotte County, Florida

U.S. Army Corps of Engineers
Supplement to Environmental Resource Permit Application

January 2004

Prepared for:

SOUTHWEST LAND DEVELOPERS, INC.
5445 Williamsburg Dr.
Punta Gorda, FL 33982

Prepared by:

W. DEXTER BENDER AND ASSOCIATES, INC.
2052 Virginia Avenue
Fort Myers, Florida 33901
(239) 334-3680

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I. Introduction

Southwest Land Developers, Inc. ("SLD"), owns the Zemel Road Construction and Demolition Debris Disposal and Recycling Facility ("Facility") in Charlotte County, Florida. SLD's Facility is used for the recycling and disposal of construction and demolition ("C & D") debris. The Facility also mulches and disposes of yard trash and land clearing debris. Given the rapid population growth in Charlotte County, there is a significant public demand for the services provided by SLD's Facility.

SLD's Facility is located on a 53.7± acre parcel of land that is next to the Charlotte County Landfill Class I (see attached location map). In light of the long-term public need for SLD's Facility, SLD has acquired additional lands that are adjacent to its Facility. Including the 53.7± acre Facility, SLD currently owns a total of 427.3± acres of contiguous land ("the Site").

SLD now wishes to expand its Facility onto the remainder of the Site. Accordingly, SLD is seeking a permit from the U.S. Army Corps of Engineers ("COE") for the wetland impacts associated with the expansion of SLD's Facility.

This document supplements the application filed by SLD with the Florida Department of Environmental Protection ("DEP") for an Environmental Resource Permit ("ERP"). This document provides information typically required by the COE for the issuance of a permit pursuant to Section 404, but not required by the DEP for the issuance of an ERP. Among other things, this document contains a statement of the project purpose, an alternative sites analysis, archeological information, and 8½" x 11" plans depicting the limits of the COE wetland jurisdiction on the Site. A proposed public notice from the COE is also included.

II. Project and Site Description

As shown on the attached location map, SLD's Site is bordered to the north by Zemel Road, to the east by U.S. 41, to the south by undeveloped land, and to the west by the Charlotte County Class I Landfill. The Site is located within a portion of Section 30, Township 42 South, Range 24 East, in Charlotte County. The Facility currently occupies the northwest corner of the Site.

SLD intends to expand the Facility onto the remainder of the Site so that the Facility can meet Charlotte County's needs for the next 30 years. The new development on the Site will include C & D disposal areas, a yard waste mulching area, operations and maintenance buildings, parking facilities, access roads, a surface water management system, and other ancillary facilities. (See the attached site plan.)

SLD intends to preserve and enhance the largest and most significant wetlands on the Site. SLD plans to remove the exotic vegetation from approximately 99.6± acres of wetlands, which will be preserved with a conservation easement. Approximately 15.4± acres of wetlands on the Site already have been preserved in a conservation easement. Approximately 29.1± acres of uplands will be preserved, and an additional 7.1± acres of uplands will be used as a buffer area. Thus, a total of 157.8± acres of the Site

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(approximately 37%) will be protected against any future development. See attached figures for additional information.

The development of the Site will result in 20.1± acres of impacts to low quality wetlands that are subject to the COE's jurisdiction. In addition, approximately 8.7± acres of isolated wetlands will be affected by the development of the Facility. The impacts to these isolated wetlands are not subject to the COE's jurisdiction (see Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, 531 U.S. 159 [2001]), but these impacts will be reviewed by the FDEP when evaluating SLD's application for an ERP.

III. Project Purpose

The project purpose is to construct and operate a facility that will provide for the recycling and disposal of the C & D debris, yard trash, and land clearing debris generated by the citizens of Charlotte County during the next 30 years.

IV. Project Need

There is a tremendous public need for the services provided by SLD's Facility. SLD has been operating the Facility at its present location since 1997. The Facility currently serves 375 to 400 customers in the area. It receives approximately 2,000 cubic yards of C & D debris each day.

The Facility processes approximately 70% of the C & D debris and 30% of the yard waste generated in Charlotte County. The majority of this material is generated in the western portion of the County.

SLD has a contract with the City of Punta Gorda for recycling the yard waste collected at curbside by the City. The Facility also accepts yard waste from landscape and lawn maintenance companies operating throughout Charlotte County.

SLD's existing Facility has a C & D disposal area that is approximately 20 acres in size. This area is divided into four "cells", and each cell is approximately five acres. Three of the cells already have been filled to 80 percent of their design capacity. Based upon the current rate at which C & D debris is being delivered to the Facility, SLD estimates that the existing C & D disposal area will be filled to its maximum capacity within two or three years.

As the existing Facility approaches its maximum capacity, it is necessary to add additional C & D disposal areas on the Site to meet the current and future needs of Charlotte County. SLD assumes that it will take approximately 12 months to obtain the necessary permits for the construction of the next C & D disposal area. After all of the permits are issued, SLD anticipates that it will take an additional 14-18 months to construct the new C & D disposal area and have it ready to become operational. Thus, the work on this project must proceed promptly if the new C & D disposal area is to be ready in a timely manner.

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C & D disposal sites, like SLD's Facility, are crucial to the public's health, safety, and welfare. C & D debris currently accounts for 60 percent of the solid waste generated in Charlotte County. The availability of SLD's Facility, conveniently located next to the Charlotte County Landfill, has greatly reduced the amount of C & D debris that is deposited in the County's "Class I" landfill. Thus, the valuable capacity of the County's Class I landfill is being preserved for the disposal of household garbage and other waste products that must, by law, be disposed of in a Class I landfill. Additionally, the cost of using SLD's Facility is lower than the cost of using the County's Landfill, making it easier for Charlotte County's citizens to properly dispose of their C & D debris. Without SLD's convenient and economical Facility, there would be a greater risk of illegal dumping on back roads and in forested areas, with the associated environmental and aesthetic degradation.

The need for SLD's Facility is growing rapidly because Charlotte County is experiencing unprecedented growth. The County's current population is 140,700 and it is projected to grow to 155,500 by 2005. Approximately 1,203 new homes were built in 2000. The population growth in Charlotte County is projected to result in the construction of about 7,000 new homes by 2005. This new construction will necessarily increase the amount of C & D debris and yard waste that is destined for recycling and disposal at SLD's Facility.

V. Alternative Sites Analysis

The following paragraphs describe the analytical process that was used by SLD to identify and select the Site as the preferred location for its Facility. From the outset, SLD's site selection process was designed to satisfy all of the applicable environmental regulations, including the COE's permit requirements (33 CFR 320.4(c)(4)), and the Section 404(b)(1) Guidelines in the Clean Water Act (40 CFR 230.10(a)).

The selection of a site for a C & D disposal facility is much more complicated than the selection of a site for typical agricultural, residential, or commercial development projects. Accordingly, SLD identified the following seven factors and used those factors when evaluating whether a potential site could be developed successfully, consistent with the project purpose:

a. Zoning and Local Land Use Requirements: No site can be used for a C & D facility unless it complies with the zoning and land use requirements of Charlotte County. The site and the proposed plan of development also must be consistent with the County's comprehensive land use plan, which will govern the long-term use of the site and nearby areas.

In this case, the Charlotte County Code of Ordinances (Article V., Solid Waste Management Facility Siting) requires a C & D site (or other solid waste disposal site) to meet the following criteria:

* Designated as "Agriculture" (with Planned Development approved for landfill) or "Public/Semi-Public Facilities" on the Charlotte County Future Land Use Map.

* No facility may be constructed in closer proximity to specified land uses or designated areas than the following minimum distances:

  - Within one-half mile of lands which are, at the time of initial application, in residential use at a density in excess of two (2) units per acre;

  - Within one-half mile of any school, park, or hospital;

  - Within two hundred (200) feet of any body of water (except canals used to lower on-site water tables, borrow pits, and other bodies of water contained completely within the site);

  - Within one thousand five hundred (1,500) feet of any wellhead supplying a public water system of a public or private utility company.

* No solid waste facility may be constructed in any special surface water overlay district.

* All solid waste facilities shall be located within five (5) miles of a full-service fire station.

* Access must be provided from nonresidential, major thoroughfares and may not require the use of any residential collector or residential local streets.

These zoning requirements severely limit the number of sites that are available for use in Charlotte County. There are relatively few areas in the County that satisfy these zoning requirements.

b. Ability To Obtain Required Permits: A potential site must be able to comply with a wide variety of local, state, and federal regulations if it is to be suitable for use as a C & D disposal facility. For example, the DEP has established many minimum requirements in Chapter 62-701, Florida Administrative Code ("F.A.C."). Among other things, an applicant must demonstrate that a proposed site satisfies certain geotechnical, hydrological, and surface water requirements. Under DEP's rules, a C & D disposal facility cannot be located within 200 feet of a surface water, or within 500 feet of an existing or approved potable water well, or within 1,000 feet of any existing or approved potable water well serving a community water system, or within 3,000 feet of Class I surface waters. DEP Rule 62-701.320(12), F.A.C., prohibits solid waste management facilities within 10,000 feet of certain airports. Similarly, the rules adopted by the COE make it clear that a potential site cannot be used unless the project will involve only minimal impacts to COE jurisdictional wetlands. The U.S. Fish and Wildlife Service ("FWS") will preclude or severely limit the use of critical habitat for federally listed species. Collectively, these state and federal rules preclude the use of many areas in Charlotte County.

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c. Location: The customer base for SLD's Facility is located primarily in western Charlotte County. The cost to dispose of C & D debris is significantly affected by the distance the material must be hauled from the construction site to the disposal site. Therefore, SLD's Facility must be located within a reasonable distance of SLD's customers in western Charlotte County.

d. Size: To accommodate the construction and operation of a C & D recycling and disposal facility, the site must be large enough to include the disposal area, a surface water management system, landscape buffers and setbacks required by Charlotte County, operations and maintenance buildings, parking, mitigation areas (if required), and other ancillary facilities. To provide a useful life of 30 years, and thus accomplish the project purpose, the site must be at least 200 to 500 acres in size. Parcels less than 200 acres are too small to support a long-term C & D facility.

e. Adjacent Land Uses: The first C & D facility SLD operated in Charlotte County was forced to close because of complaints from adjacent residences (many of whom had moved to the area after the C & D facility was in operation). Given this history, SLD recognizes that a potential site must be located away from existing or potential future residential developments. The project would be most compatible with an existing solid waste disposal facility or an industrial land use.

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f. Access: The project is dependent upon the availability of access to the property by large vehicles such as dump trucks. Convenient access off of main public roadways (e.g., U.S. 41 or US-75) is critical to the project's success. Any potential site located miles from a main roadway or located along a narrow, winding, or unpaved road would not be viable. Also, if the access route for a site passes through residential neighborhoods, the County will not provide the necessary zoning approvals and the site will not be viable.

g. Willing Seller: In order for a site to be considered as a practicable alternative, the property must have been available from a willing seller at a fair market price at the time SLD was searching for additional land. Land that was not available for purchase by SLD for their intended use, or land offered for sale at an inflated price that would render the project not economically viable, is not a practicable alternative.

In 1996, SLD conducted an extensive search for property that could potentially be used for a C & D facility. Charlotte County provided SLD with a list of twelve sites that the County believed would satisfy the County's zoning requirements for a new C & D disposal facility. In addition, SLD searched the real estate index for other alternative sites throughout Charlotte County. SLD used this data to identify eight additional sites that were also evaluated as potential alternative locations. (The approximate location of these 20 sites is shown on the attached figure.) A detailed analysis of the 20 sites was conducted and the results were submitted to the COE on March 18, 1997. SLD's

analysis demonstrated that 19 of the 20 sites were not practicable alternatives. They were rejected for a variety of reasons, such as unwilling sellers, unsuitable adjacent land uses (e.g., municipal airport; single family residences; etc.), high proportion of wetlands, and poor access to major roadways. Based on its analysis, SLD purchased the 53.7± acre property that contains SLD's Facility. The COE accepted SLD's analysis and issued a COE permit for the wetland impacts associated with the construction of the existing Facility. See COE Permit No. 199606840 IP-RW.

In 1996, SLD assumed that its Facility would provide approximately 20 years of capacity for SLD's operations. However, SLD quickly began to receive much more C & D debris and yard trash than SLD had anticipated. By 1999, SLD realized that its Facility was likely to reach its maximum capacity much earlier than SLD had projected and, therefore, the Facility would need to be expanded or moved to a new location in the near future.

Given these facts, SLD recognized that it must find a large site that could be used on a long-term basis; otherwise, SLD would be forced to relocate every few years. Moreover, the demand for SLD's services was growing rapidly, but the number of potentially suitable sites was rapidly declining. The combination of new environmental regulations and new residential development were making it likely that another C & D disposal area might not ever be approved in western Charlotte County. Since there was a long-term need for SLD's services, and since SLD was committed to serving the citizens of Charlotte County, SLD concluded it must find a site that would provide at least 30 years of capacity for its customers.

SLD initiated a search for properties that would meet SLD's project purpose. SLD found four sites that were identified as potentially meeting the current zoning requirements in Charlotte County. SLD also re-evaluated the 19 sites that had been considered in 1997. SLD wanted to determine whether any of the characteristics of those sites had changed, thus causing them to qualify as practicable alternatives.

SLD analyzed each of these 23 sites in light of the 7 factors described in paragraphs (a) through (g), above, and the COE's definition of a practicable alternative (40 CFR 230.10.a.2):

> [a]n alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purpose.

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A summary of SLD's analysis is provided below.

Site A:

Site A is located in the eastern portion of Section 21, Township 42 South, Range 24 East, Charlotte County. The 295 acre site is bordered to the north by undeveloped lands and scattered single family homes along Oil Well Road, to the east by the Charlotte Correctional Facility, and to the south and west by U.S. 75. A majority of the site was vegetated by wetland or transitional wetland species and would likely meet the state and/or federal definition of a jurisdictional wetlands. Potential access points from Oil Well Road also contained

jurisdictional wetlands. Therefore, the development of the site would result in adverse impacts to a substantial number of acres of jurisdictional wetlands. Access to the site is poor. Because of the County's prohibition of C & D facilities within one- half mile of existing residential development, the presence of homes along Oil Well Road would preclude the use of the northern half of the property. Objections by these homeowners would also make it difficult or impossible to obtain the necessary zoning approvals from the County. Given these conditions, Site A is not a practicable alternative to the use of SLD's Site on Zemel Road. Moreover, even if it were practicable to use Site A, the use of Site A would result in substantially greater wetland impacts than the use of SLD's Site on Zemel Road.

Site B:

Site B is located in the northeastern portion of Section 14, Township 41 South, Range 23 East, Charlotte County. The 370 acre site consists primarily of citrus grove and is bordered by the Charlotte County Airport to the west and Charlotte County Ranchettes to the east. While wetland impacts associated with the use of Site B would be minimal, the adjacent land uses raise several major problems. First, the Federal Aviation Administration ("FAA") and DEP have adopted regulations that prohibit solid waste management facilities within two miles of an airport runway and severely restrict the construction of such facilities within five miles of an airport. See DEP Rule 62-701.320(13), F.A.C., and FAA Advisory Circular 150/5200-33. Given these FAA and DEP regulations, the FAA and DEP are likely to prohibit any attempt by SLD to build a new disposal site near the Charlotte County Airport. Second, the only access to the site is via residential roads through the Charlotte County Ranchettes subdivision. Charlotte County's zoning regulations require substantial setbacks from existing residences and they require that access to a landfill must be provided via major roadways. These County requirements preclude the use of this site for SLD's project. Third, the County has zoned this property as a "Regional Commerce Industrial Park". This zoning category does not allow outdoor work activities, such as would occur at a C & D facility. For all of these reasons, Site B is not a practicable alternative to the Site on Zemel Road.

Site C:

Site C is located in the northeastern portion of Section 13, Township 42 South, Range 23 East, Charlotte County. The 187 acre site has good access along U.S. 41. According to a review of the Soil Survey of Charlotte County, a significant portion of the site contains hydric soils and is likely to be jurisdictional wetlands. Indeed, the property has been sold by the owner (Ronald Ansin) to the State of Florida for conservation purposes. Although Mr. Ansin owns additional land in Sections 14 and 15, he was not willing to sell any portion of his land to SLD for their intended purpose. Therefore, Site C is not a practicable alternative.

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Site D:

Site D is located in the northeastern portion of Sections 26 and 35, Township 41 South, Range 23 East, Charlotte County. The 158 acre site has moderate access along Jones Loop Road. According to a review of the Soil Survey of Charlotte County, there are scattered wetlands on-site. More significantly, the property is bisected by the South Prong of Alligator Creek, which has been designated by the State of Florida as a "Class I" water body. Several lakes are also present on-site. Three residences are located within 1,000 feet of the property. The required setbacks from these residences and the water bodies on-site effectively preclude the use of the majority of the site for a C & D facility. Therefore, Site D is not a practicable alternative.

Site E:

This is SLD's proposed Site on Zemel Road. This land includes the remaining property in Section 30 (exclusive of SLD's existing 53.7± acre Facility) that was owned by the Zemel family in 1999.

In 1996, the Zemels were unwilling to sell SLD any lands that were not contiguous with the Charlotte County Landfill. In addition, in 1996, the Zemels were only willing to sell SLD those lands that were directly adjacent to the active disposal area at the County's Landfill (i.e., the north half of the County's property). The Zemels would not sell SLD any lands that were adjacent to the south half of the County's property (i.e., where the County's mitigation area is located). Subsequent to 1996, the Zemels changed their position and decided to sell the lands they owned adjacent to U.S. 41, including the proposed Site.

The Site on Zemel Road has excellent characteristics for its proposed use. The Site is approximately 373.6± acres, which is an acceptable size for SLD's proposed project. Although this Site is located near the southern edge of the area capable of serving SLD's available customer base, access to the Site is excellent via U.S. 41. The Site is located immediately adjacent to SLD's existing Facility and the Charlotte County Landfill and is, therefore, compatible with adjacent land uses. Residential housing is prohibited in the areas north, south and west of the Site. This Site has received the required County zoning approval and the preliminary development approval for a C & D disposal facility (Ordinance # 2001-067). The Site contains sufficient upland areas to allow the project to be constructed and operated with minimal wetland impacts. The proposed Site was available for purchase from a willing seller at a reasonable cost at the time when the site selection process was conducted. For all of these reasons, this property was deemed the best practicable alternative.

Site E was one of the 19 sites evaluated in 1997. The remaining 18 sites identified in 1997 continue to be impracticable alternatives for the reasons discussed in SLD's 1997 permit application to the COE.

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D.E.P. - South District

No site was identified and available in late 1999 or early 2000 that was entirely upland in nature. No available site would allow the applicant to totally avoid wetland impacts. Based on the alternatives analysis that is summarized above, it can be concluded that under the Section 404(b)(1) Guidelines, there is no other practicable alternative for SLD's Facility that would have fewer wetlands impacts. In the professional opinion of WDBA, based the information provided herein, no other site could reasonably be obtained, utilized, expanded or managed in order to fulfill the basic project purpose and have less adverse impact on wetland ecosystems.

Alternative Sites Analysis Summary

	Location				
Evaluation Criteria	**Site A**	**Site B**	**Site C**	**Site D**	**Site E**
Zoning and Local Land Use Requirements	No	No	No	No	Yes
Ability to Obtain Required Permits	No	No	No	No	Yes
Location	Yes	Yes	Yes	Yes	Yes
Size	Yes	Yes	Yes	Yes	Yes
Adjacent Land Uses	No	No	No	No	Yes
Access	No	No	Yes	Yes	Yes
Willing Seller	Yes	Yes	No	Yes	Yes
Practicable Alternative	**No**	**No**	**No**	**No**	**Yes**

VI. Archeological Information

A letter has been submitted to the Florida Master Site File, Florida Department of State, requesting information on any known cultural resources on the Site. The response letter from the Florida Master Site File, Florida Department of State, (dated January 30, 2003) confirmed there are no known cultural resources on the Site. A copy of the response letter is attached.

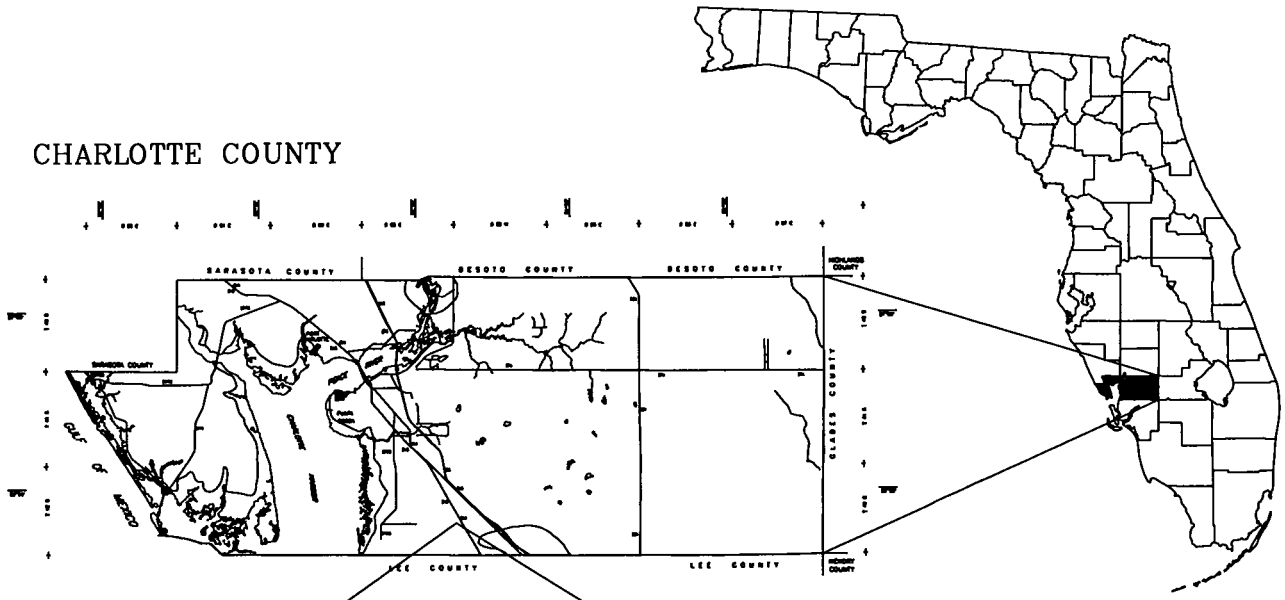
VIII. Public Notice

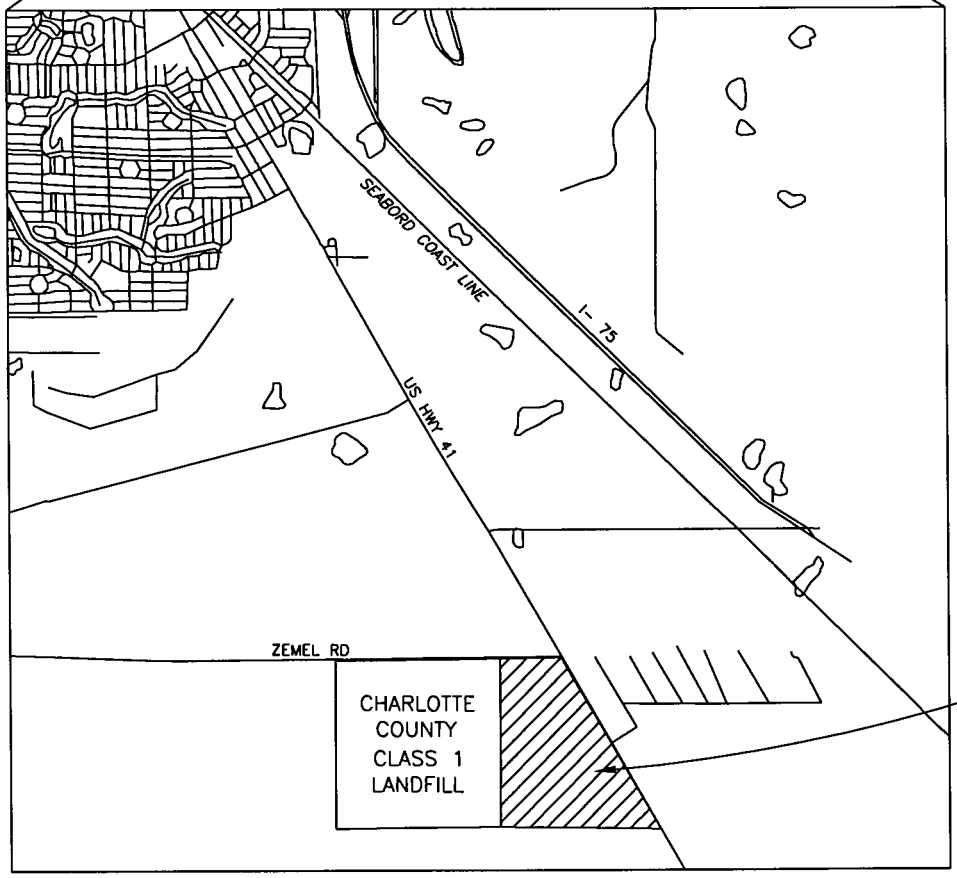
A proposed public notice has been prepared and is attached. This notice provides all of the information required by the COE (project location, description, and purpose; quantification of proposed wetland impacts and compensatory mitigation; summary of listed species issues; 8½ x 11 project drawings) to publish their public notice. The mailing addresses of the adjacent property owners is also attached.

RECEIVED
JAN 30 2004
D.E.P. - South District

Location Map

CHARLOTTE COUNTY





Project Location

PERMIT USE ONLY, NOT FOR CONSTRUCTION

January 28, 2004 1:00:52 p.m.
Drawing: SLD1PROJECT_LOCATION.DWG (SAJ)

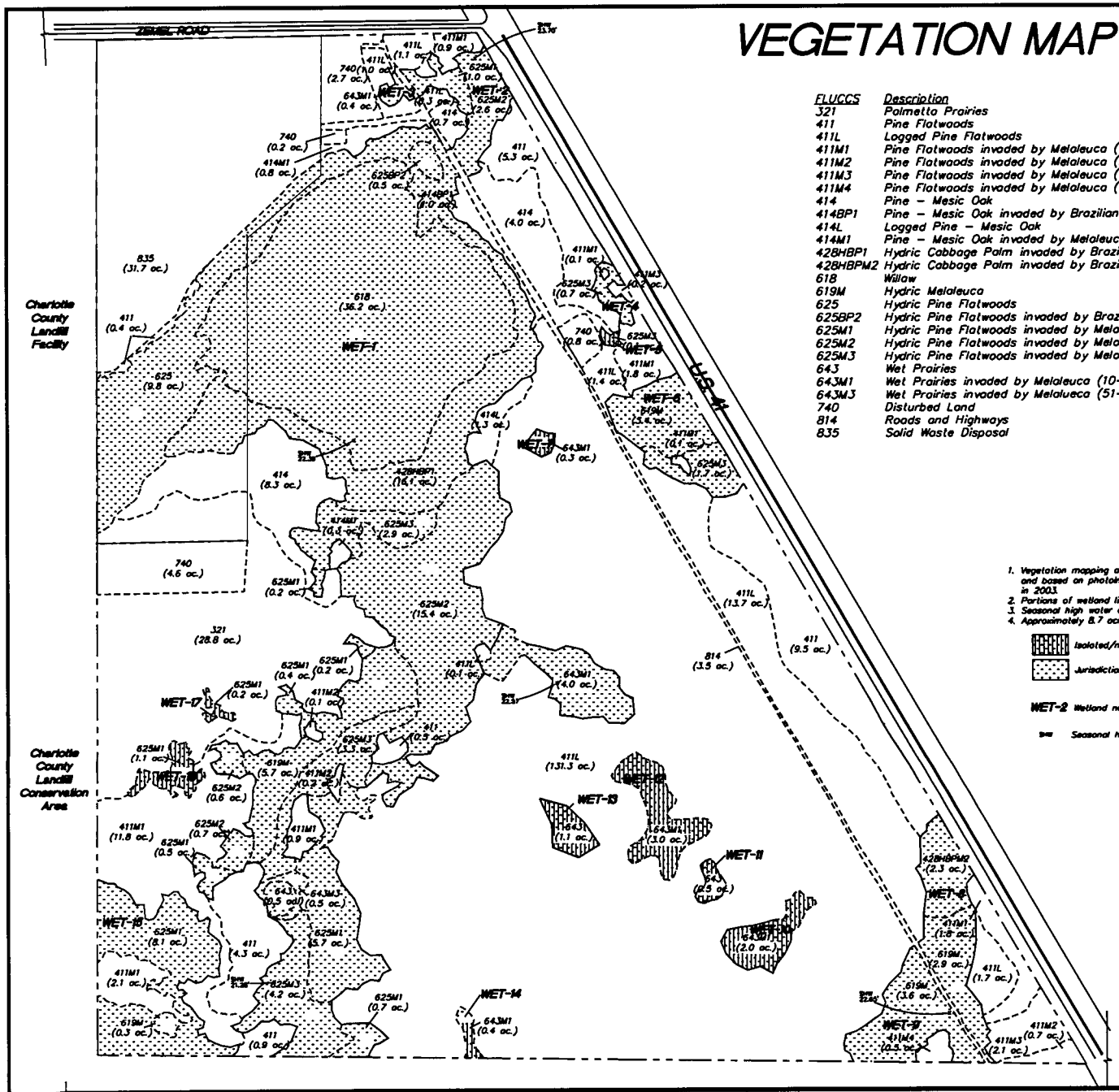
W. DEXTER BENDER AND ASSOCIATES
ENVIRONMENTAL & MARINE CONSULTING
FORT MYERS, FL (941) 334-3680

REVISED:

ZEMEL RAOD CONSTRUCTION AND DEMOLITION DEBRIS DISPOSED AND RECYCLING FACILITY

SHEET

VEGETATION MAP



FLUCCS	Description	Acreage
321	Palmetto Prairies	28.8 ac.
411	Pine Flatwoods	20.9 ac.
411L	Logged Pine Flatwoods	150.6 ac.
411M1	Pine Flatwoods invaded by Melaleuca (10–25%)	19.5 ac.
411M2	Pine Flatwoods invaded by Melaleuca (26–50%)	1.0 ac.
411M3	Pine Flatwoods invaded by Melaleuca (51–75%)	2.3 ac.
411M4	Pine Flatwoods invaded by Melaleuca (76–90%)	0.5 ac.
414	Pine – Mesic Oak	13.0 ac.
414BP1	Pine – Mesic Oak invaded by Brazilian Pepper (10–25%)	1.0 ac.
414L	Logged Pine – Mesic Oak	1.3 ac.
414M1	Pine – Mesic Oak invaded by Melaleuca (10–25%)	1.1 ac.
428HBP1	Hydric Cabbage Palm invaded by Brazilian Pepper (10–25%)	16.1 ac.
428HBPM2	Hydric Cabbage Palm invaded by Brazilian Pepper and Melaleuca (26–50%)	2.3 ac.
618	Willow	36.2 ac.
619M	Hydric Melaleuca	15.9 ac.
625	Hydric Pine Flatwoods	9.8 ac.
625BP2	Hydric Pine Flatwoods invaded by Brazilian Pepper (26–50%)	0.5 ac.
625M1	Hydric Pine Flatwoods invaded by Melaleuca (10–25%)	18.1 ac.
625M2	Hydric Pine Flatwoods invaded by Melaleuca (26–50%)	19.3 ac.
625M3	Hydric Pine Flatwoods invaded by Melaleuca (51–75%)	12.9 ac.
643	Wet Prairies	2.1 ac.
643M1	Wet Prairies invaded by Melaleuca (10–25%)	10.1 ac.
643M3	Wet Prairies invaded by Melaleuca (51–75%)	0.5 ac.
740	Disturbed Land	8.3 ac.
814	Roads and Highways	3.5 ac.
835	Solid Waste Disposal	31.7 ac.

Upland Subtotal	283.5 ac.
Wetland Subtotal	135.1 ac.
Isolated Wetland Subtotal	8.7 ac.
TOTAL	427.3 ac.

0 400 8'
SCALE FEET

1. Vegetation mapping adapted from preliminary Kevin L Erwin Consulting Ecologist, Inc. (Drawing name SLD2106veg) and based on photointerpretation of April 2001 1"=300' scale rectified color aerial photography in 2003.
2. Portions of wetland line survey located by Robert South.
3. Seasonal high water elevations estimated based on biological indicators and survey located by Robert South
4. Approximately 8.7 acres of wetlands on-site are isolated and therefore not subject to Section 404 wetland regulation.

Isolated/non jurisdictional Wetlands (8.7 ac.)

Jurisdictional Wetlands (142.7 ac.)

WET-2 Wetland number

swe Seasonal high water elevations

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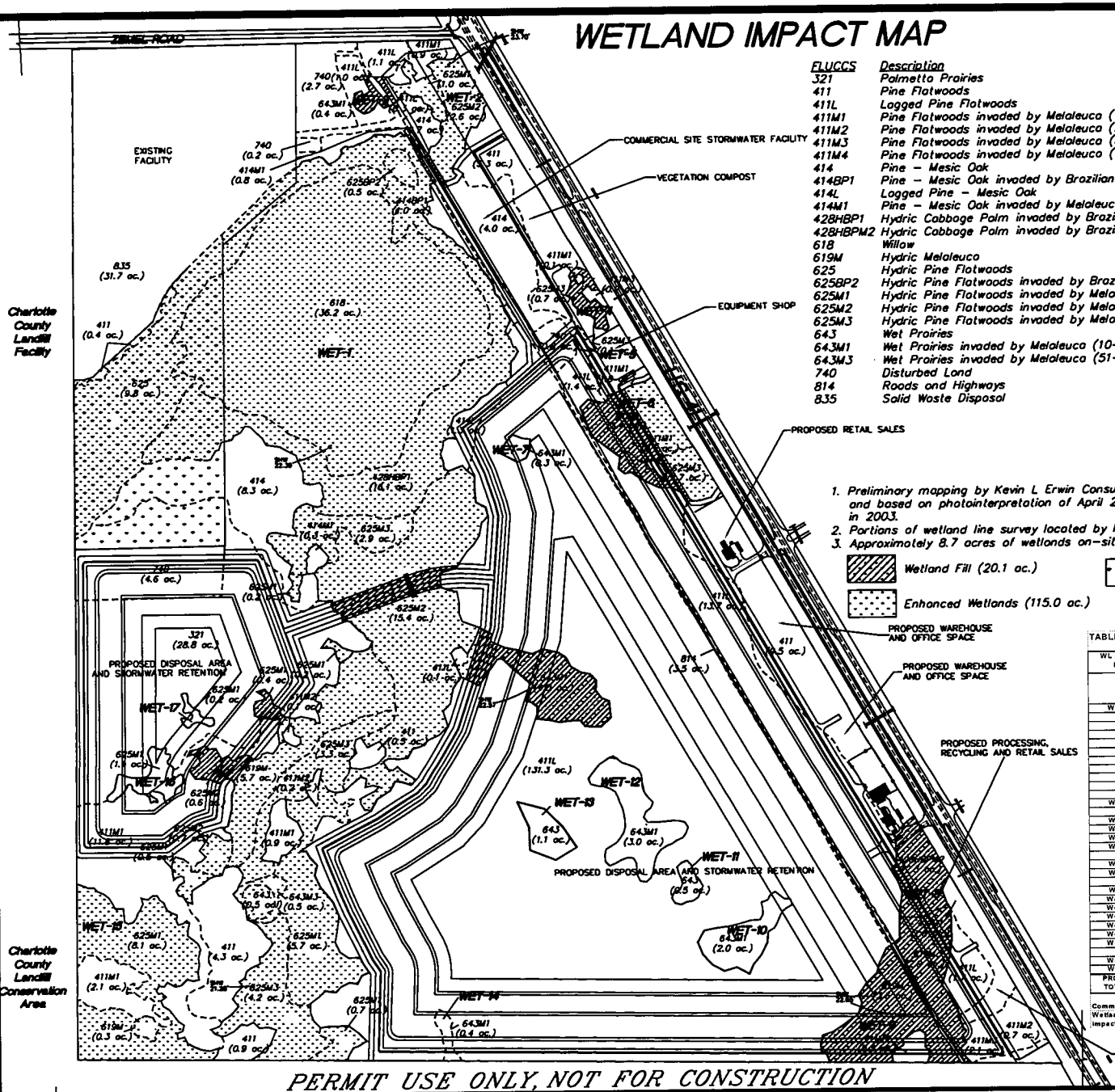
January 23, 2004 3:51:53 p.m.
Drawing: SLD1COEVEG.DWG (DCS)

W. DEXTER BENDER
AND ASSOCIATES
ENVIRONMENTAL & MARINE CONSULTING
FORT MYERS, FL 239 334-3680

ZEMEL ROAD CONSTRUCTION AND DEMOLITION DEBRIS DISPOSED AND RECYCLING FACILITY

SHEET

WETLAND IMPACT MAP



FLUCCS	Description	Acreage
321	Palmetto Prairies	28.8 ac.
411	Pine Flatwoods	20.9 ac.
411L	Logged Pine Flatwoods	150.6 ac.
411M1	Pine Flatwoods invaded by Melaleuca (10–25%)	19.5 oc.
411M2	Pine Flatwoods invaded by Melaleuca (26–50%)	1.0 oc.
411M3	Pine Flatwoods invaded by Melaleuca (51–75%)	2.3 oc.
411M4	Pine Flatwoods invaded by Melaleuca (76–90%)	0.5 oc.
414	Pine – Mesic Oak	13.0 oc.
414BP1	Pine – Mesic Oak invaded by Brazilian Pepper (10–25%)	1.0 oc.
414L	Logged Pine – Mesic Oak	1.3 oc.
414M1	Pine – Mesic Oak invaded by Melaleuca (10–25%)	1.1 oc.
428HBP1	Hydric Cabbage Palm invaded by Brazilian Pepper (10–25%)	16.1 oc.
428HBPM2	Hydric Cabbage Palm invaded by Brazilian Pepper and Melaleuca (26–50%)	2.3 oc.
618	Willow	36.2 oc.
619M	Hydric Melaleuca	15.9 oc.
625	Hydric Pine Flatwoods	9.8 oc.
625BP2	Hydric Pine Flatwoods invaded by Brazilian Pepper (26–50%)	0.5 oc.
625M1	Hydric Pine Flatwoods invaded by Melaleuca (10–25%)	18.1 oc.
625M2	Hydric Pine Flatwoods invaded by Melaleuca (26–50%)	19.3 oc.
625M3	Hydric Pine Flatwoods invaded by Melaleuca (51–75%)	12.9 oc.
643	Wet Prairies	2.1 oc.
643M1	Wet Prairies invaded by Melaleuca (10–25%)	10.1 oc.
643M3	Wet Prairies invaded by Melaleuca (51–75%)	0.5 oc.
740	Disturbed Land	8.3 oc.
814	Roads and Highways	3.5 oc.
835	Solid Waste Disposal	31.7 ac.

Upland Subtotal	283.5 ac.
Wetland Subtotal	135.1 ac.
Isolated Wetland Subtotal	8.7 ac.
TOTAL	427.3 ac.

0 400 800
SCALE FEET

1. Preliminary mapping by Kevin L Erwin Consulting Ecologist, Inc. (Drawing name SLD2106veg) and based on photointerpretation of April 2001 1"=300' scale rectified color aerial photography in 2003.
2. Portions of wetland line survey located by Robert South.
3. Approximately 8.7 acres of wetlands on-site are isolated and therefore not subject to section 404 wetland regulation.

Wetland Fill (20.1 ac.)

Existing Conservation Easement Area (22.0 ac.)

Enhanced Wetlands (115.0 ac.)

WET-2 Wetland number

SHW Seasonal high water elevations

TABLE ONE: PROJECT IMPACT SUMMARY

WL & SW ID	WL & SW TYPE	WL & SW SIZE	WL & SW NOT IMPACTED	TEMPORARY WL & SW IMPACTS			PERMANENT WL & SW IMPACTS			MITIGATION AREA ID
				WL & SW TYPE	IMPACT SIZE	IMPACT TYPE	WL & SW TYPE	IMPACT SIZE	IMPACT TYPE	
Wet-1	428HBP1	16.1	16.0				428HBP1	0.1		
	618	36.2	36.2					0.0		
	619M	5.7	5.3				619M	0.4	F	
	625BP2	0.5	0.5					0.0		
	625	9.8	9.8					0.0		
	625M1	7.7	7.4				625M1	0.3	F	
	625M2	16.7	14.0				625M2	2.7	F	
	625M3	10.4	10.4					0.0		
	643	0.5	0.5					0.0		
	643M1	4.0	0.3				643M1	3.7	F	
	643M3	0.5	0.5					0.0		
Wet-2	625M1	1.0	0.8				625M1	0.2	F	
	625M2	2.6	2.5				625M2	0.1	F	
Wet-3	643M1	0.4	0.0				643M1	0.4	F	
Wet-4	625M3	0.7	0.0				625M3	0.7	F	
Wet-5	NA	NA	NA				NA	NA		
Wet-6	619M	3.4	1.4				619M	2.0	F	
	625M3	1.7	1.0				625M3	0.7	F	
Wet-7	NA	NA	NA				NA	NA		
Wet-8	428HBPM2	2.3	0.0				428HBPM2	2.3	F	
	619M	2.9	0.0				619M	2.9	F	
Wet-9	619M	3.6	0.0				619M	3.6	F	
Wet-10	NA	NA	NA				NA	NA		
Wet-11	NA	NA	NA				NA	NA		
Wet-12	NA	NA	NA				NA	NA		
Wet-13	NA	NA	NA				NA	NA		
Wet-14	NA	NA	NA				NA	NA		
Wet-15	619M	0.3	0.3					0.0		
	625M1	8.1	8.1					0.0		
Wet-16	NA	NA	NA				NA	NA		
Wet-17	NA	NA	NA				NA	NA		
PROJECT TOTALS:		135.1	115.0		0.0			20.1		

Comments:
Wetland Type: From an established wetland classification system
Impact Type: D=dredge; F=fill; H=change hydrology; S=shading; C=clearing; O=other

January 28, 2004 12:59:47 p.m.
Drawing: SLD1COEIMP.DWG (DCS)

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ENVIRONMENTAL & MARINE CONSULTING
FORT MYERS, FL 239 334-3680

ZEMEL ROAD CONSTRUCTION AND DEMOLITION DEBRIS DISPOSED AND RECYCLING FACILITY

SHEET

WETLAND MITIGATION and MONITORING PLAN

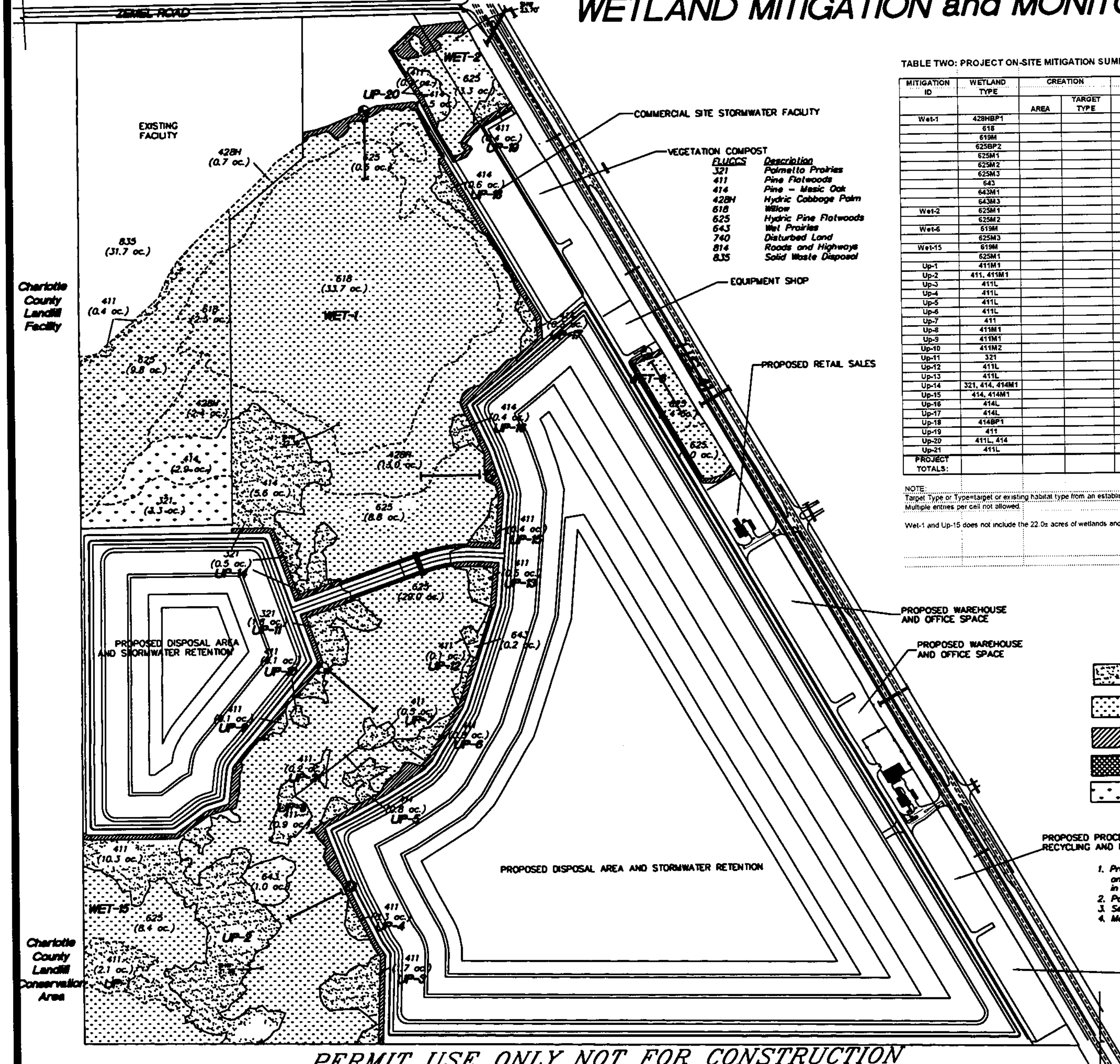


TABLE TWO: PROJECT ON-SITE MITIGATION SUMMARY

MITIGATION ID	WETLAND TYPE	CREATION		RESTORATION		ENHANCEMENT		WETLAND PRESERVE		UPLAND PRESERVE	
		AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE
Wet-1	428HBP1					12.9	428H				
	618					33.7	618				
	619M					5.3	625				
	625BP2					0.5	625				
	625M1					7.4	625				
	625M2					14.0	625				
	625M3					10.4	625				
	643					0.5	643				
	643M1					0.3	643				
	643M3					0.5	643				
Wet-2	625M1					0.8	625				
	625M2					2.5	625				
Wet-6	619M					1.4	625				
	625M3					1.0	625				
Wet-15	619M					0.3	625				
	625M1					8.1	625				
Up-1	411M1									2.1	411
Up-2	411, 411M1									10.3	411
Up-3	411L									1.7	411
Up-4	411L									0.3	411
Up-5	411L									0.8	411
Up-6	411L									0.8	411
Up-7	411									0.5	411
Up-8	411M1									0.9	411
Up-9	411M1									0.1	411
Up-10	411M2									0.1	411
Up-11	321									1.8	321
Up-12	411L									0.1	411
Up-13	411L									0.5	411
Up-14	321, 414, 414M1									6.1	321, 414
Up-15	414, 414M1									0.4	411
Up-16	414L									0.4	414
Up-17	414L									0.3	414
Up-18	414BP1									0.6	414
Up-19	411									0.4	411
Up-20	411L, 414									0.7	411, 414
Up-21	411L									0.2	411
PROJECT TOTALS:						99.6				29.1	

NOTE:
Target Type or Type=target or existing habitat type from an established wetland classification system or land use classification for non-wetland mitigation.
Multiple entries per cell not allowed.

Wet-1 and Up-15 does not include the 22.0± acres of wetlands and uplands in the existing Conservation Easement.

0 400 800
SCALE FEET

Preserved Uplands (29.1 ac.)
Enhanced Wetlands (99.6 ac.)
Upland Buffer (7.1 ac.)
Structural Buffer (1.2 ac.)
Existing Conservation Easement Area (22.0 ac.)
* Acreage in existing conservation easement not included in mitigation summary.

WET-2 Wetland number
UP-13 Upland number
Seasonal high water elevations
Photo Station
Vegetation monitoring transect

1. Preliminary mapping by Kevin L Erwin Consulting Ecologist, Inc. (Drawing name SLD2106veg) and based on photointerpretation of April 2001 1"=300' scale rectified color aerial photography in 2003.
2. Portions of wetland line survey located by Robert South.
3. Seasonal high water elevations estimated based on biological indicators and survey located by Robert South
4. Mechanical removal of exotics may occur within portions of the mitigation area.

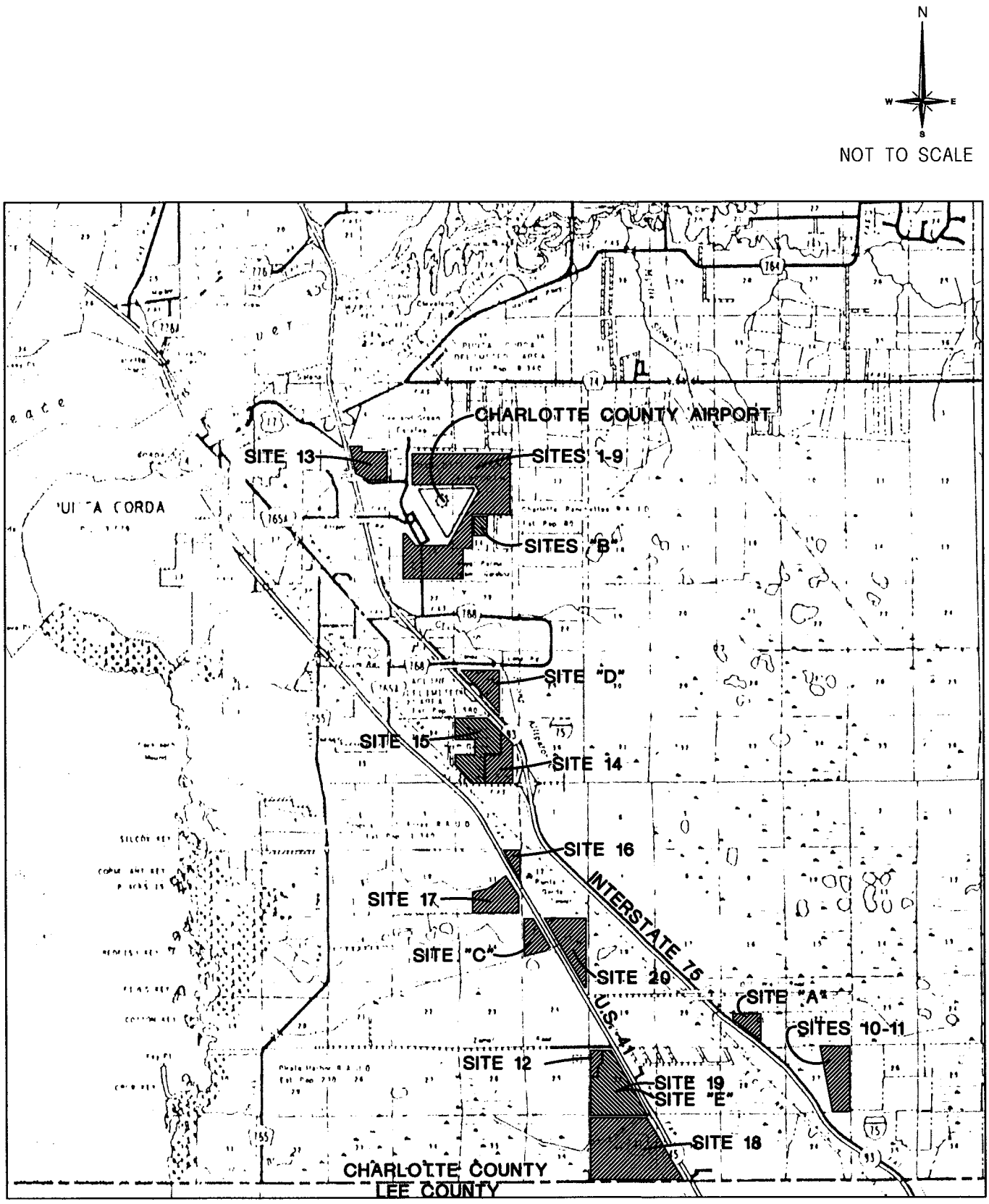
January 27, 2004 3:43:56 p.m.
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ENVIRONMENTAL & MARINE CONSULTING
FORT MYERS, FL 239 334-3680

ZEMEL ROAD CONSTRUCTION AND DEMOLITION DEBRIS DISPOSED AND RECYCLING FACILITY

SHEET



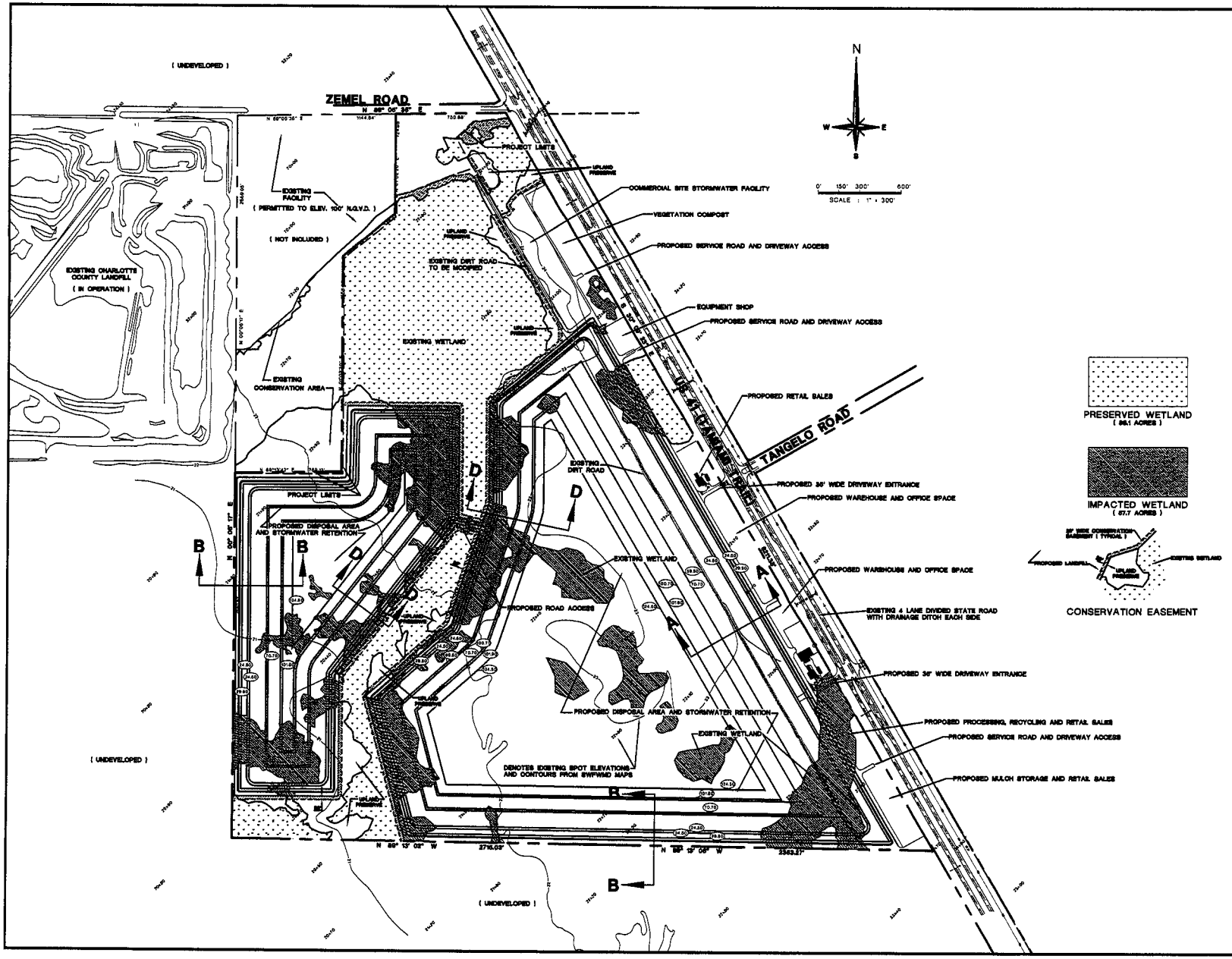
Dufresne-Henry, Inc.

301 North Cattlemen Road, Suite 201 Sarasota, FL 34232
Tel. (941) 366-9600 Fax (941) 366-1922
Email dhsarasota@aol.com

ALTERNATE SITES

SOUTHWEST LAND DEVELOPERS, INC.
C & D RECYCLING AND DISPOSAL FACILITY

FIGURE 3



Dufresne-Henry

INITIAL CONCEPT PLAN
SOUTHWEST LAND DEVELOPERS, INC.
C & D RECYCLING AND DISPOSAL FACILITY
SEC 30, TWP 42 S, RNG 24 E
FLORIDA

NO.	REVISIONS	DATE	BY	CK'D

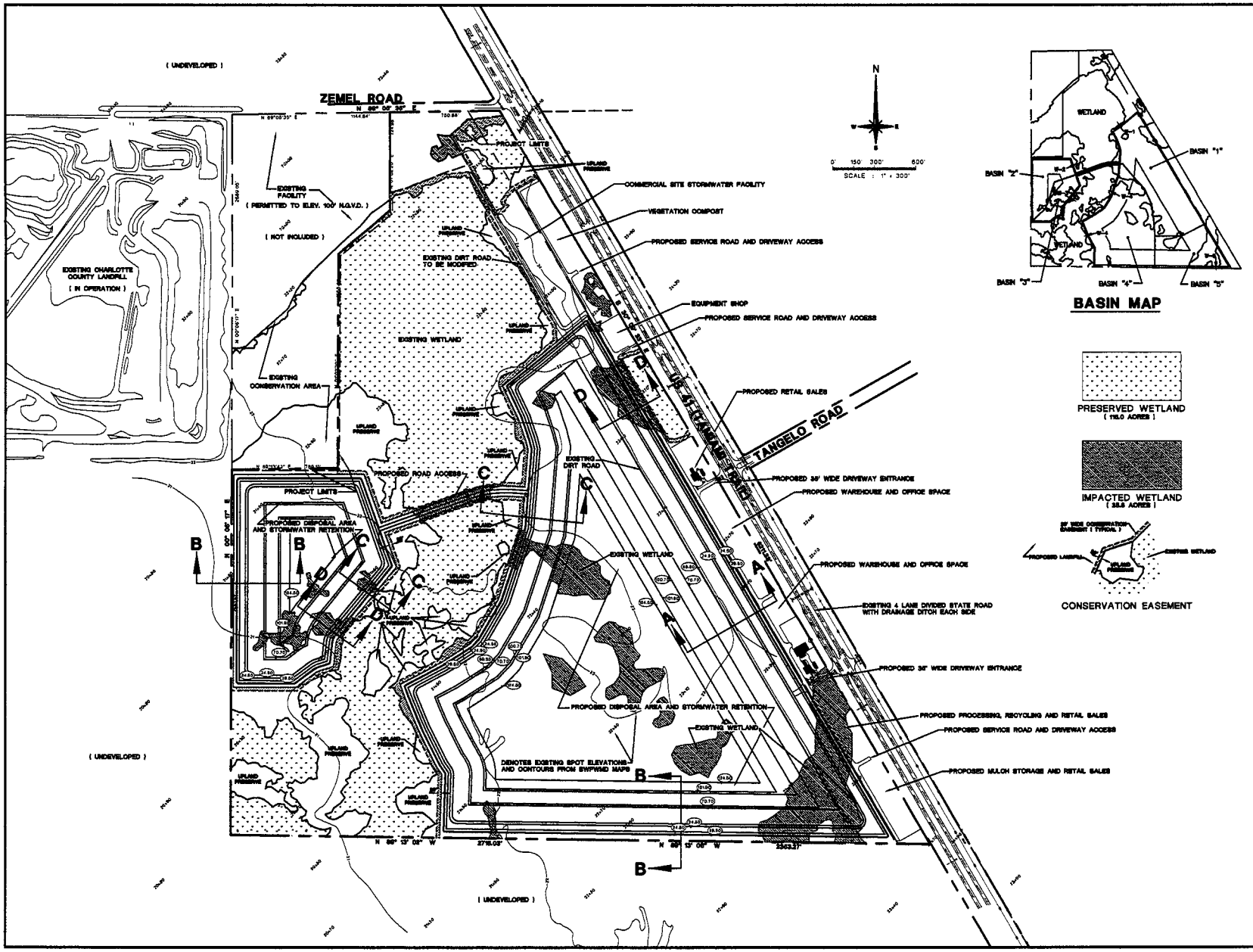
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PROJECT MANAGER: D P C
PROJECT DESIGNER: D F W
DRAWN BY: D F W
CHECKED BY: D P C
SCALE: 1" = 300'
APPROVED: D P C
DATE: AUGUST 28, 2003
FLORIDA CORSA

DAVID P. CRANE
FLORIDA NO. 44215

FLORIDA ENGINEERING BUSINESS NO. 5075

SHEET 08 of 14

D 9528898.01



Dufresne-Henry

PROPOSED SITE PLAN
SOUTHWEST LAND DEVELOPERS, INC.
C & D RECYCLING AND DISPOSAL FACILITY
SEC 30, TWP 42 S, RNG 24 E
PUNTA GORDA FLORIDA

REVISIONS	DATE	BY	CK'D

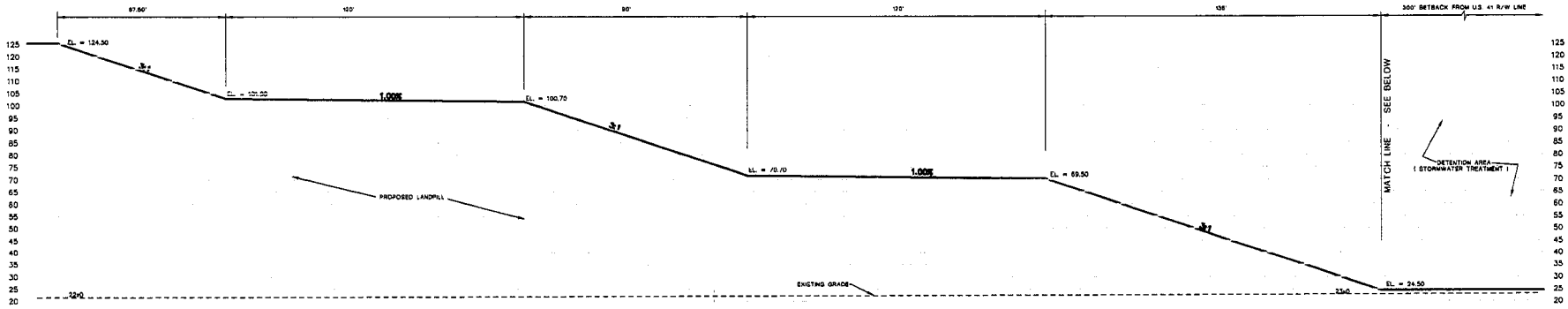
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PROJECT MANAGER: D P C
PROJECT DESIGNER: D P W
DRAWN BY: D P W
CHECKED BY: D P C
SCALE: 1" = 300'
APPROVED: D P C
DATE: AUGUST 25, 2005

DAVID P. CRANE
FLORIDA NO. 44216

FLORIDA ENGINEERING
BUSINESS NO. 6075

SHEET 09 of 14

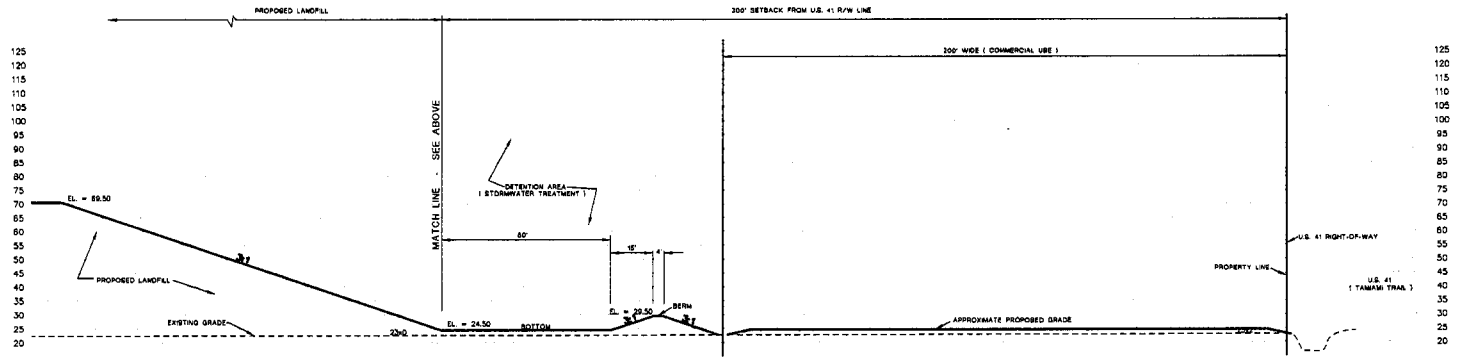
D 9528898.01



LANDFILL FRONTING U.S. 41

SCALE: 1" = 20' HORIZ. & VERT.

(SECTION A - A)



LANDFILL FRONTING U.S. 41

SCALE: 1" = 20' HORIZ. & VERT.

(SECTION A - A)

CROSS SECTIONS FOR C & D RECYCLING AND DISPOSAL FACILITY

SEC 30, TWP 42 S, RNG 24 E

Dufresne-Henry

REVISIONS | BY | CKD | DATE

PROJECT MANAGER: D.P.O.
PROJECT ENGINEER: D.F.W.
DRAWN BY: D.N.W.
DESIGNED: D.P.O.
SCALE: 1" = 20'
APPROVED: D.P.O.
DATE: AUGUST 24, 2005
CADD FILE NO.: 2005-10

DAVID P. CRANE
FLORIDA NO. 44218

FLORIDA ENGINEERING BUSINESS NO. 0975

SHEET 11 of 14

DI 9528898.01

EROSION CONTROL NOTES

1. GENERAL

THE CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT, TOOLS, MATERIALS AND SERVICES NEEDED TO PERFORM AND COMPLETE ALL EROSION CONTROL MEASURES. THESE MEASURES SHALL CONFORM TO THE PLANS AND SPECIFICATIONS AND ALL STATE AND LOCAL REQUIREMENTS.

2. WETLAND PROTECTION

IN AREAS OF CONSTRUCTION ADJACENT TO WETLANDS, THE FOLLOWING SHALL BE PERFORMED:

a) THE ACTUAL WETLAND AND REQUIRED BUFFERS, AS SHOWN ON THE PLANS, MUST BE FLAGGED OFF PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY ADJACENT TO SAID AREAS.

b) PRIOR TO THE PLACEMENT OF ANY FILL MATERIAL ADJACENT TO WETLANDS OR BUFFER AREAS, A SILTATION BARRIER SHALL BE CONSTRUCTED. AN ACCEPTED ALTERNATE BARRIER SHALL BE A LINE OF HAY BALES.

c) NO FILL EXTENDING UP THE WETLANDS SHALL BE PERFORMED. WATER LEVELS IN THE WETLANDS SHOULD BE MAINTAINED.

d) IN AREAS OF WETLANDS IN WHICH WORK IS TO BE PERFORMED, SUCH AREAS MUST BE CLEARLY STAKED AND FLAGGED OFF, ALONG WITH LIMITS, BEFORE ANY EQUIPMENT IS BROUGHT ON SITE. THE USE OF SMALL EQUIPMENT IN THESE AREAS IS RECOMMENDED.

e) THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THESE BARRIERS. BARRIERS SHALL REMAIN IN PLACE UNTIL AREAS ARE STABILIZED.

f) IF DAMAGE IS DONE TO THE WETLAND AREA, THE OWNER SHALL BE NOTIFIED IMMEDIATELY. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO PROTECTED AREAS.

g) IN AREAS WHERE WETLANDS WILL BE PRESERVED IN WET-AREA, SUCH AREAS SHALL BE STAKED OFF BEFORE CLEARING, AND EXCAVATED FOR USE IN THE RE-CREATION OF THESE AREAS ON OR IN LITTORAL ZONES.

3. EARTH MOVING ACTIVITIES

a) THE CONTRACTOR SHALL EXERCISE CARE TO PRESERVE THE NATURAL LANDSCAPE AND SHALL CONDUCT HIS/HER CONSTRUCTION OPERATIONS SO AS TO PREVENT ANY UNNECESSARY DESTRUCTION, SCARRING OR DAMAGE TO THE NATURAL ENVIRONMENT. IN THE VICINITY OF THE WORK AREA, EXCEPT WHERE CLEARING IS PERMITTED FOR PERMANENT WORKS, FOR ACCESS, CONSTRUCTION, STORAGE OF MATERIALS AND TEMPORARY WORKS, ALL TREES, NATIVE SHRUBBERY AND VEGETATION SHALL BE PRESERVED AND SHALL BE PROTECTED FROM DAMAGE MADE BY THE CONTRACTOR'S CONSTRUCTION OPERATIONS AND EQUIPMENT.

b) THE FIRST STAGE OF THE EARTH MOVING ACTIVITY SHALL BE CONFINED TO THE EXCAVATION OF THE STORMWATER FACILITY.

c) TOPSOIL SHOULD BE TAKEN FROM THE CONSTRUCTION AREAS AND SHOULD BE STOCKPILED AT THE REAR OF THE PROPERTIES. STOCKPILED SOILS SHALL BE PLACED SO AS NOT TO ADD ANY ADDITIONAL WEIGHT TO THE CONSTRUCTION. THE STOCKPILES SHOULD BE SEEDED AND/OR MULCHED WHEN EXPOSED BEYOND THIRTY DAY PERIOD.

d) EXPOSED AREAS ARE TO BE SEEDED AND/OR SODDED WITHIN THIRTY DAY PERIOD FOLLOWING FINISH GRADE ELEVATIONS. IF THE TIME OF YEAR IS NOT CONDUCIVE FOR PERMANENT SEEDING, A TEMPORARY SEEDING AND/OR MULCHING SHOULD BE USED.

e) TEMPORARY BARRIERS, ONCE ARRIVED, BARRIERS SHALL BE REMOVED ONLY AFTER THE CONSTRUCTION OF THOSE AREAS DRAINED TO THE BARRIERS HAVE BEEN COMPLETED.

f) THE SILT COLLECTION ZONES SHOULD BE SEEDED AND/OR SEEDLINGS FOR PERMANENT USE, AS THE FINAL GRADING AND SEEDING OVERLAP THE AREA USED BY SAME.

4. FILLS

a) LAND TO BE CUT OR FILLED SHOULD BE CLEARED OF TREES, STUMPS, ROOTS, BRUSH, BOULDERS, SOD AND DEBRIS.

b) FILL AREAS SHOULD BE SCARIFIED, KEYED AND DRAINED.

c) FILL MATERIAL SHOULD BE FREE OF SOD, ROOTS, OR OTHER DECOMPOSABLE MATERIAL.

d) THE PLACING AND SPREADING OF FILL MATERIAL SHOULD BE STARTED AT THE LOWEST POINT.

e) GENERALLY, A 3:1 SLOPE SHOULD BE USED UNLESS SPECIFIC ENGINEERING DATA SHOWS A STEEPER SLOPE IS STABLE. SLOPES OF 4:1 OR FLATTER ARE DESIRABLE FOR EROSION CONTROL AND STABILITY.

f) FILLS SHOULD BE SEEDED AND/OR MULCHED IMMEDIATELY UPON COMPLETION OF EARTH PLACEMENT.

g) WATER MANAGEMENT SYSTEMS SHOULD BE SPONSORED TO PREVENT WATER CONCENTRATION AND ALONG THE FACE OF THE SLOPE. KEEP SURFACE WATER OFF THE FACE OF THE SLOPE.

5. CUTS

a) DITCHING SHOULD BE CONSTRUCTED AT TOP OF THE SLOPES PRIOR TO CUTTING OPERATIONS TO DIVERT WATER FROM FACE OF SLOPE.

b) SLOPINGS OF CUTS WILL VARY WITH SOIL TYPE AND DEPTH. HOWEVER, CUT SLOPES OF 4:1 OR FLATTER ARE DESIRABLE FOR EROSION CONTROL AND STABILITY.

c) CUT SLOPES SHOULD BE SEEDED TO PROVIDE ACCESS FOR SEEDING AND MULCHING EQUIPMENT.

d) CUT SLOPES SHOULD BE SEEDED AND/OR MULCHED IMMEDIATELY AFTER REMOVAL OF EARTH.

6. TEMPORARY SEDIMENT BASIN AND PERMANENT STORMWATER BASINS

a) SITE PREPARATION

AREAS WITHIN THE EMBANKMENT AND ANY STRUCTURAL WORKS SHALL BE CLEARED, GRUBBED AND REMOVED OF TREES, TO PREVENT TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL FROM BECOMING INCORPORATED IN THE EMBANKMENT. THE EMBANKMENT AREA SHEARING AT THE TOP OF THE SPILLWAY WILL BE CLEARED OF ALL BRUSH AND TREES.

b) CUT-OFF TRENCH

A CUT-OFF TRENCH, WITH FOUR FOOTER ARE IS SHOWN OF THESE PLANS, SHALL BE EXCAVATED ALONG THE CENTERLINE OF EARTH FILL EMBANKMENTS. THE MINIMUM DEPTH SHALL BE TWO FEET. THE CLEARED TRENCH SHALL EXTEND UP BOTH ABUTMENTS TO THE NORMAL WATER CONTROL. THE MINIMUM BOTTOM WIDTH SHALL BE FOUR FEET, BUT WIDE ENOUGH TO PERMIT OPERATION OF EXCAVATION AND CONSTRUCTION EQUIPMENT. THE SIDE SLOPES SHALL BE NO STEEPER THAN 1:1 (HORIZONTAL TO VERTICAL). THE TRENCH SHALL BE EXCAVATED AS THERE FOR THE EMBANKMENT. THE TRENCH SHALL BE MAINTAINED DURING THE BACKFILLING-COMPACTION OPERATIONS.

c) EMBANKMENT

THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED BORROW AREAS. IT SHALL BE CLEAN SOIL FREE OF ROOTS, WOODY VEGETATION, OVERSIZED STONES, ROCKS OR OTHER OBJECTIONABLE MATERIAL. AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. FILL MATERIAL SHALL BE PLACED IN SIX TO EIGHT INCHES THICK CONSECUTIVE LAYERS OVER THE ENTIRE LENGTH OF THE FILL. COMPACTION SHALL BE OBTAINED BY ROUTING HAULING EQUIPMENT OVER THE FILL SO THAT THE ENTIRE SURFACE OF EACH LAYER OF THE FILL IS TRAVERSED BY AT LEAST ONE WHEEL OR TRACK TRACK OF THE EQUIPMENT, OR BY THE USE OF A SHEEPSFOOT OR OTHER SUITABLE COMPACTING EQUIPMENT. THE EMBANKMENT SHALL BE CONSTRUCTED TO AN ELEVATION OF THE HEIGHT OVER THE DESIGN HEIGHT TO ALLOW FOR SETTLEMENT IF COMPACTION IS OBTAINED WITH SIMILAR EQUIPMENT. IF CONSTRUCTIONS ARE USED FOR COMPACTION, THE OVERWIDTH MAY BE REDUCED TO NOT LESS THAN SIX.

d) PIPE SPILLWAYS

THE PIPES SHALL BE SECURELY ATTACHED TO THE BARREL OF THE OUTFALL PIPE. THE BARREL AND PIPES SHALL BE PLACED ON A FIRM, SMOOTH SOIL FOUNDATION. THE CONNECTION BETWEEN THE RISER AND PIPES SHALL BE WATERTIGHT. THE FILL MATERIAL AROUND THE PIPE SPILLWAY SHALL BE PLACED IN FOUR INCH LAYERS AND COMPACTED CARE TO PREVENT DAMAGE AND ADVISE THE PIPE TO BY LIFTED OR MOVED BY THE COMPACTION EQUIPMENT. SAND COMPACTED BACKFILL SHALL BE PLACED UNDR THE PIPE SPILLWAY BEFORE ENCOMBER IT WITH CONSTRUCTION EQUIPMENT.

e) EROSION POLLUTION CONTROL

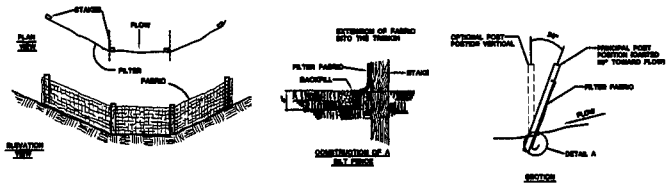
CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION WILL BE MINIMIZED. STATE AND LOCAL LAWS CONCERNING POLLUTION ABATEMENT SHALL BE OBSERVED WITH.

7) MAINTENANCE

a) REPAIR ALL DAMAGE CAUSED BY SOIL EROSION OR CONSTRUCTION EQUIPMENT AT OR BEFORE THE END OF EACH WORK DAY.

b) SEDIMENT SHALL BE REMOVED FROM SILT AREAS. THE SEDIMENT SHALL BE PLACED IN SUCH A MANNER THAT IT WILL NOT WASH FROM THE SITE. THE SEDIMENT SHALL NOT BE DEPOSITED SOMEWHERE FROM THE EMBANKMENT OR IS OR ADJACENT TO A STREAM OR FLOOD PLAIN.

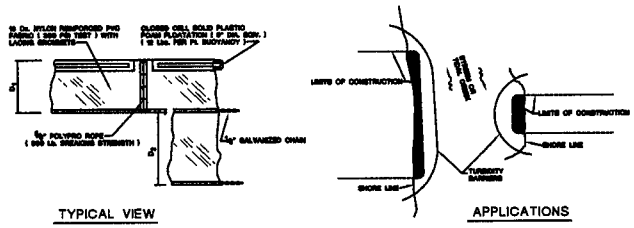
c) AFTER CONSTRUCTION IS COMPLETED AND AREAS ARE SEEDED AND/OR SODDED, MAINTENANCE IS LIMITED TO MOWING, WATERING OR A FERTILIZER APPLICATION. ANY DAMAGE TO THE SEED SHALL BE REPAIRED AT ONCE AND RE-SEEDED AND/OR RE-SODDED. IF THE LAND, OR WATER IS BEING MAINTAINED OVER THE EXPECTED DRAW DOWN TIME, THE OUTFALL SYSTEM SHALL BE CLEANED AND REPAIRED.



1. FILTER BARRIERS MUST BE INSTALLED, AS INDICATED HEREIN, PRIOR TO CONSTRUCTION.
2. FILTER BARRIERS SHALL NOT BE INSTALLED IN ANY CONFIGURATION THAT BLOCKS THE THROAT OF ANY STORMWATER INLET.
3. INSPECTIONS AND REPAIRS TO BARRIERS SHALL BE MADE DAILY.
4. FILTER BARRIERS SHALL BE REMOVED UNTIL APPROVED BY ENGINEER.

STAKED SILT BARRIER

(DURING CONSTRUCTION ONLY) N.T.S.



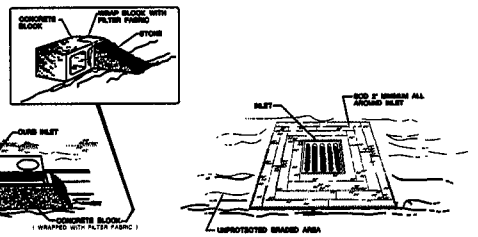
TYPICAL VIEW APPLICATIONS

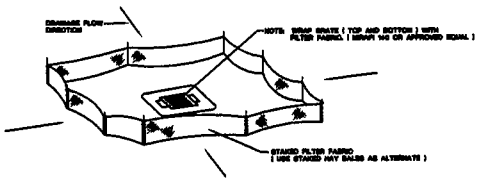
NOTES:

1. D_1 = 9" STANDARD (SINGLE PANEL FOR DEPTH 9" OR LESS), D_1 = 9" STANDARD (ADDITIONAL PANEL FOR DEPTHS OF 1 FOOT TO MAXIMUM DEPTH OF 3 FEET). TWO 24' PANELS TO BE USED FOR DEPTHS EXCEEDING THREE (3) FEET OR GREATER OR AS CONDITIONS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.
2. TURBIDITY BARRIERS ARE TO BE USED IN ALL PERMANENT BODIES OF WATER REGARDLESS OF WATER DEPTH WHEN ADJACENT TO CONSTRUCTION ACTIVITIES.
3. SHAPES AND SPACING OF ANCHORS DEPENDENT ON WATER VELOCITIES.
4. BARRIERS TO REMAIN IN PLACE UNTIL APPROVED FOR REMOVAL BY ENGINEER.

FLOATING TURBIDITY BARRIER

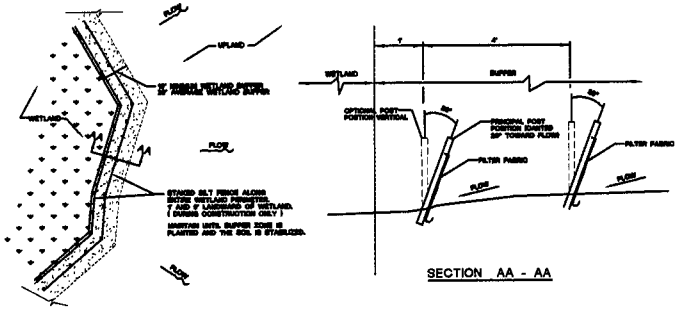
N.T.S.





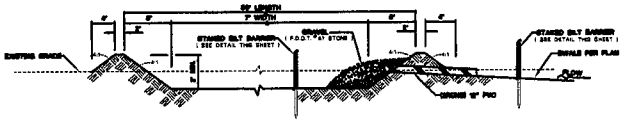
PROTECTION OF INLETS

N.T.S.



WETLAND PROTECTION

N.T.S.



NOTE: SUMP DESIGNED TO USE A 6" DIESEL PUMP @ 2,500 G.P.M. (S.S. O.P.S.)

SILTATION POND DETAILS

N.T.S.

(REQUIRED DURING DEWATERING FOR LAKE EXCAVATION ONLY)

Dufresne-Henry

REVISIONS	DATE	BY	CKD

BEST MANAGEMENT PRACTICES
SOUTHWEST LAND DEVELOPERS, INC.
C & D RECYCLING AND DISPOSAL FACILITY
CHARLOTTE COUNTY, FLORIDA

PROJECT MANAGER: D.P.O.
PROJECT ENGINEER: D.P.W.
DRAWN BY: D.P.W.
CHECKED BY: D.P.O.
SCALE: NOT TO SCALE
APPROVED: D.P.O.
DATE: AUGUST 26, 2000
CADD FILE NO.: 0989-10

DAVID P. ORANE
FLORIDA NO. 44216

FLORIDA ENGINEERING BUSINESS NO. 6075

SHEET 14 of 14

DI 9526998.01

DIVISIONS OF FLORIDA DEPARTMENT OF STATE
Office of the Secretary
Office of International Relations
Division of Elections
Division of Corporations
Division of Cultural Affairs
Division of Historical Resources
Division of Library and Information Services
Division of Licensing
Division of Administrative Services

MEMBER OF THE FLORIDA CABINET
State Board of Education
Trustees of the Internal Improvement Trust Fund
Administration Commission
Florida Land and Water Adjudicatory Commission
Siting Board
Division of Bond Finance
Department of Revenue
Department of Law Enforcement
Department of Highway Safety and Motor Vehicles
Department of Veterans' Affairs

FLORIDA DEPARTMENT OF STATE
DIVISION OF HISTORICAL RESOURCES

January 30, 2003

Craig Smith
Kevin L. Erwin Consulting Ecologist, Inc.
2077 Bayside Parkway
Fort Meyers, Fl. 33901
FAX: 239-337-5983

Dear Mr. Smith:

In response to your inquiry of January 30th, 2003, the Florida Master Site File lists no previously recorded cultural resources or surveys in the following parcels:

T42S, R24E, Sections 30
In interpreting the results of our search, please remember the following points:

- **Areas which have not been completely surveyed, such as yours, may contain unrecorded archaeological sites, unrecorded historically important structures, or both.**
- **As you may know, state and federal laws require formal environmental review for some projects. Record searches by the staff of the Florida Master Site File do not constitute such a review of cultural resources. If your project falls under these laws, you should contact the Compliance Review Section of the Bureau of Historic Preservation at 850-245-6333 or at this address.**

Sincerely,

Patrick Gensler
Data Analyst, Florida Master Site File
Division of Historical Resources
R. A. Gray Building
500 South Bronough Street
Tallahassee, Florida 32399-0250

Phone: 850-245-6440
State SunCom: 205-6440
Fax line: 850-245-6439
Email: *fmsfile@mail.dos.state.fl.us*
Web: *http://www.dos.state.fl.us/dhr/msf/*

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00727000010108 ZZZ 244223 P3
CHARLOTTE COUNTY
18500 MURDOCK CIR
PORT CHARLOTTE FL 33948

00738370000006 ZZZ 314224 P2
ZEMEL JOSEPH
ONE BOLAND DR
WEST ORANGE NJ 07052

00727000000002 ZZZ 244223 P2
TIITF
3900 COMMONWEALTH BLVD
TALLAHASSEE FL 323993000

00738470000004 ZZZ 324224 P4
ZEMEL CHESTER & NN ZEMEL TR
ONE BOLAND DR
WEST ORANGE NJ 07052

00738360000007 ZZZ 314224 P2
ZEMEL ABRAHAM
ONE BOLAND DR
WEST ORANGE NJ 07052

00727040005003 ZZZ 254223 P1
CHARLOTTE COUNTY
18500 MURDOCK CIR
PORT CHARLOTTE FL 339481068

00728230000004 ZZZ 364223 P1
TIITF
3900 COMMONWEALTH BLVD MS 115
TALLAHASSEE FL 32399-300

00738350000008 ZZZ 314224 P2
ZEMEL HORACE & SB ZEMEL &FR TR
ONE BOLAND DR
WEST ORANGE NJ 07052

00736490000004 ZZZ 194224 P2
CHARLOTTE COUNTY
18500 MURDOCK CIR
PORT CHARLOTTE FL 33948

00738380000005 ZZZ 314224 P2
ZEMEL CHESTER & NN ZEMEL TR
ONE BOLAND AVE
WEST ORANGE NJ 07052

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Regulatory Division
South Permits Branch
West Permits Section
Fort Myers Regulatory Office

PUBLIC NOTICE
Permit Application No. _____ (IP-____)

TO WHOM IT MAY CONCERN: This District has received an application for a Department of the Army permit pursuant to Section 404 of the Clean Water Act:

APPLICANT:

Southwest Land Developers, Inc.
5445 Williamsburg Dr.
Punta Gorda, FL 33982

WATERWAY & LOCATION: The project involves freshwater forested and non-forested wetlands and is located in a portion of Section 30, Township 42 South, Range 24 East, Charlotte County, Florida.

DIRECTIONS TO SITE: US 41 north from Lee County – Charlotte County line approximately 2 miles. Turn west onto Zemel Road. Project site is south of Zemel Road, west of US 41, and east of the Charlotte County Landfill.

PROJECT PURPOSE:

Basic: To construct and operate a long term construction and demolition debris landfill facility, yard waste mulching operation, and recycling facility.

Overall: To construct and operate a facility that will be used for the recycling and disposal of the construction and demolition debris, yard trash, and land clearing debris generated by the citizens of Charlotte County during the next 30 years. The facility will include a construction and demolition debris landfill, yard waste mulching area operations and maintenance buildings, parking facilities, roads, landscaping, setback buffers, a surface water management system, and ancillary facilities.

LATITUDE & LONGITUDE: Latitude 26°, 47', 29" N, Longitude 81°, 57', 01" W

WORK AND PURPOSE: The applicant proposes to expand an existing privately owned construction and demolition debris landfill facility. The project site is approximately 427.3± acres in size (including the 31.7± acre existing facility and 22.0± acre existing conservation area) and contains 135.1± acres of wetlands. The applicant proposes to impact 20.1± acres of wetland by discharging 135,000 cubic yards into those wetlands.

MITIGATION PROPOSED: As compensatory mitigation for unavoidable wetland impacts the applicant has proposed to enhance and preserve 99.6± acres of wetlands and 29.1± acres of uplands on-site. The mitigation areas will be placed in a conservation easement granted to the Florida Department of Environmental Protection (DEP). Enhancement activities include the removal of exotic and nuisance vegetation and supplemental native plantings in existing wetlands and uplands. Final details of the compensatory plan, including a wetland functional analysis and adequacy of the compensation, have not been finalized.

THREATENED AND ENDANGERED SPECIES: A survey for listed species has been completed by the applicant. The federal threatened bald eagle (*Haliaeetus leucocephalus*) has been observed perching in pine trees on-site and soaring above the site. No nesting has been documented on or within the immediate vicinity of the site. The use of the property by these eagles is associated with the adjacent Charlotte County Class I Landfill. The applicant has preserved the majority of the perch trees on the applicant's property. Therefore, the Corps has determined that the project may effect, but is not likely to adversely affect the bald eagle.

The endangered wood stork (*Mycteria americana*) has been occasionally observed foraging in the water management system of the applicant's existing facility. The applicant proposes to enhance and preserve 99.6± acres of wetlands on-site to provide potential foraging habitat for wood storks. Therefore, the Corps has determined that the project may effect, but is not likely to adversely affect the wood stork.

The project site contains potential habitat for the federal endangered red-cockaded woodpecker (*Picoides borealis*) (RCW). The closest know RCW sightings have been approximately ½ mile to the west of the applicant's site, in an area that is north of Zemel Road. The potential for nesting on-site is minimal due to periodic logging of the pine flatwoods over the past several decades. Intensive surveys have been conducted by the applicant per the SLOPES guidelines, including nesting season and non-nesting season foraging surveys and cavity tree surveys, but no RCWs or their cavities have been observed on-site. The applicant proposes to enhance and preserve 71.1± acres of wetland and upland flatwoods as part of the compensatory wetland mitigation plan. Therefore, the Corps has determined that the project may effect, but is not likely to adversely affect the RCW.

Widely scattered gopher tortoise (listed as a species of special concern by the State) burrows are present on-site indicating that potential habitat for the federal endangered eastern indigo snake (*Drymarchon corais couperi*) is present on-site. No evidence of this species has been observed on-site by the applicant. The applicant has agreed to the standard construction protection measures for the eastern indigo snake. Therefore, the Corps has determined that the project may effect, but is not likely to adversely affect the eastern indigo snake.

Sign of the State threatened Florida black bear (*Ursus americanus floridanus*) has reportedly been observed on the southern portion of the adjacent Charlotte County Class I Landfill, but not on the applicant's site. Bears are known to visit Class I landfills in search of food (putrescible waste). The applicant is enhancing and preserving over 135± acres of native habitats on-site. Therefore, the Corps has determined that the project may effect, but is not likely to adversely affect the Florida black bear.

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The Corps is unaware of any other threatened or endangered species concerns in the project area. This determination is being coordinated with the U.S. Fish and Wildlife Service via this public notice.

NOTE: This public notice is being issued based on information furnished by the applicant. This information has not been verified. The wetland jurisdictional line has not been verified by Corps personnel.

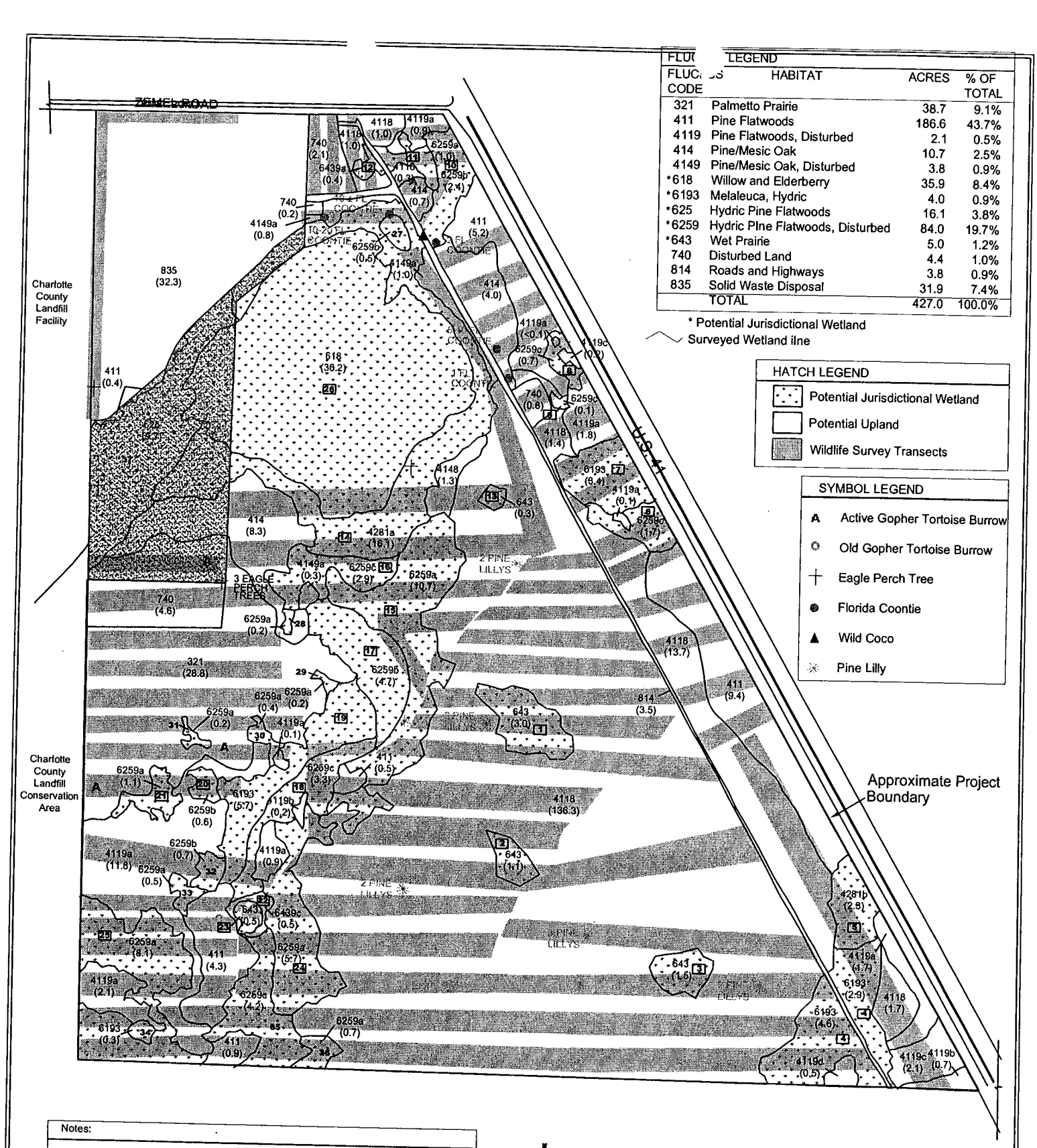
AUTHORIZATION FROM OTHER AGENCIES: A State Water Quality Certification/Permit is required for this project. The DEP is currently processing an application for this project. The DEP application number is _____.

Comments regarding this application should be submitted in writing to the District Engineer at the U.S. Army Corps of Engineers; Fort Myers Regulatory Office; 1520 Royal Palm Square Boulevard; Suite 310; Fort Myers, Florida 33919 within 30 days from the date of this notice.

If you have any questions concerning this application, you may contact _____ at the Fort Myers Regulatory Office, telephone (239) 334-1975 or by email _____.

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FLUC... CODE	LEGEND HABITAT	ACRES	% OF TOTAL
321	Palmetto Prairie	38.7	9.1%
411	Pine Flatwoods	186.6	43.7%
4119	Pine Flatwoods, Disturbed	2.1	0.5%
414	Pine/Mesic Oak	10.7	2.5%
4149	Pine/Mesic Oak, Disturbed	3.8	0.9%
*618	Willow and Elderberry	35.9	8.4%
*6193	Melaleuca, Hydric	4.0	0.9%
*625	Hydric Pine Flatwoods	16.1	3.8%
*6259	Hydric PIne Flatwoods, Disturbed	84.0	19.7%
*643	Wet Prairie	5.0	1.2%
740	Disturbed Land	4.4	1.0%
814	Roads and Highways	3.8	0.9%
835	Solid Waste Disposal	31.9	7.4%
	TOTAL	427.0	100.0%

* Potential Jurisdictional Wetland

Surveyed Wetland line

HATCH LEGEND

- Potential Jurisdictional Wetland
- Potential Upland
- Wildlife Survey Transects

SYMBOL LEGEND

- Active Gopher Tortoise Burrow
- Old Gopher Tortoise Burrow
- Eagle Perch Tree
- Florida Coontie
- Wild Coco
- Pine Lilly

Notes:

1. Mapping based on photo interpretation of April 2001 1"=200' scale rectified aerial photography and groundtruthing in January and February 2003.
2. Mapping of potential jurisdictional wetlands based on flagging by KLECE and surveyed flag locations provided by Robert South. Extent of jurisdictional wetlands has not been verified by the appropriate agencies.
3. Property boundary based on information provided by SLD and transferred to the rectified aerials based upon recognizable features (i.e., fence lines, roads, etc.).
4. Vegetation mapping is subject to field review and approval by all appropriate agencies and is intended for general planning purposes only.
5. Locations of listed species are approximate.

Kevin L. Erwin
Consulting Ecologist, Inc.
2077 Bayside Parkway Fort Myers Florida 33901 (239) 337-1505

Project: SLDZR106	File: listed species	10-31-01	Drawn By: MGW
Collier County	Township 42 S	Range 24 E	Section(s) 30
Revision Date	Comments		Verified By:
4-2-03	new veg lines		CMS

Exhibit B.1.b KLECE Listed Species Survey Map